APPENDIX D

TRAFFIC IMPACT STUDY

Traffic Impact Study

Abrams Associates
Transportation • Traffic • Engineering • Planning

Bear River Casino Expansion
in Humboldt County

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AUGUST, 2009

Traffic Impact Study

for the

Bear River Casino

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SECTION 1.0

INTRODUCTION

1.1 PURPOSE AND NEED

The proposed project would be located about a mile southeast of the City of Loleta, in Humboldt County. The proposed project (hereafter referred to as the "Proposed Action") would include an expansion of the existing Bear River Casino that would include a new restaurant, a ballroom/meeting room, and some additional casino-related areas for a net total of 7,300 square feet of new building space. The Proposed Action would also include the construction of a four-story hotel with 105 rooms that would be attached to the casino building.

The purpose of this study is to evaluate the potential transportation impacts of the Proposed Action and to recommend any traffic mitigation measures that may be required. This traffic study also includes a review of the access design, the driveways, and the internal traffic system proposed. This traffic study and the trip generation assumptions were prepared based on guidelines set forth by Humboldt County and the California Department of Transportation's (Caltrans) Guide to the Preparation of Traffic Impact Studies[1]. The location of the existing Bear River Casino and the project study area is shown in **Figure 1**.

1.2 STUDY INTERSECTIONS

For this analysis five (5) study intersections were selected for analysis in this report, based on their proximity to the site, Caltrans guidelines, and their potential to be impacted by the Proposed Action. The location of the project study intersections is shown in **Figure 1**. For this project, all of the project study intersections are controlled by stop signs on the minor approaches.

1. Loleta Drive at the Southbound U.S. 101 Ramps
2. Loleta Drive at the Northbound U.S. 101 Ramps
3. Singley Hill Road/Fernbridge Drive at the Southbound U.S. 101 Ramps
4. Singley Hill Road at the Northbound U.S. 101 Ramps
5. Singley Hill Road at Fearrien Street (Project Entrance) and Bear River Drive

All intersections have been analyzed for the AM peak hour (7:30 – 8:30 AM), and the PM commute peak hour (5:00-6:00 PM). Intersection turning movement data was obtained from the

[1] Guide for the Preparation of Traffic Impact Studies, Caltrans, Sacramento, CA, 2001.

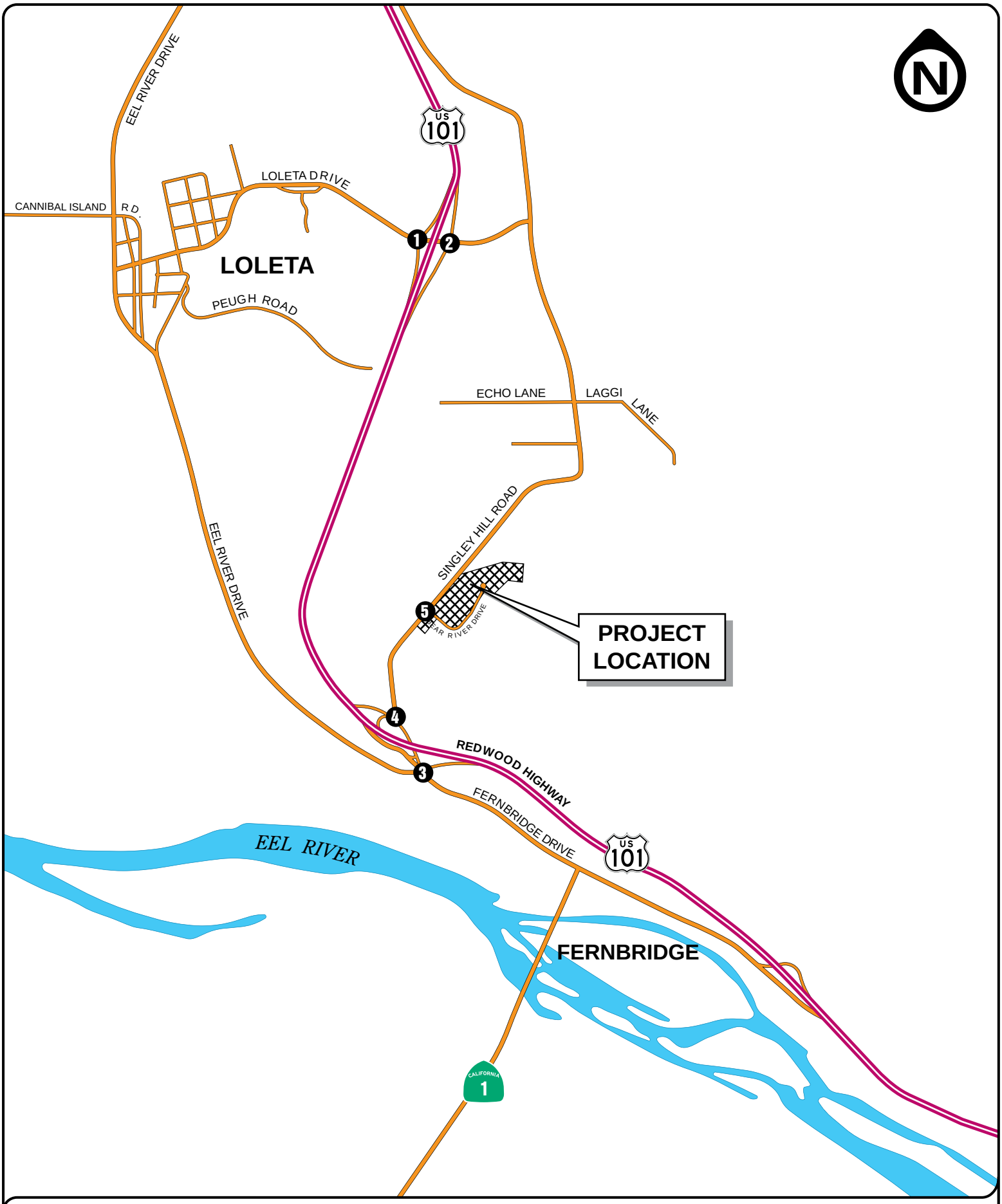

FIGURE 1 | PROJECT LOCATION AND STUDY INTERSECTIONS
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Bear River Casino Expansion
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Rohnerville Rancheria Transportation/Circulation Study and the Fearrrien Property Traffic Impact Study and calibrated with new counts taken in June of 2009. It should be noted that the new counts indicate the traffic volumes in the area have increased by approximately 20% over the past three years.

1.3 PROJECT DESCRIPTION

The Proposed Action is planned to include two components that would generate traffic: 1) The construction of an additional 7,300 square feet of casino-related building space and the restaurant (a total of 12,000 square feet) and, 2) The construction of the four-story hotel with 105 rooms (attached to the casino building). The proposed project site plan is shown on Figure 2.

1.4 TRAFFIC ANALYSIS SCENARIOS

Five study scenarios have been addressed as part of this traffic analysis. These are listed below:

1) ***Existing Conditions*** - This scenario evaluates the level-of-service at the studied intersections for the existing conditions based on traffic counts taken in June of 2009.

1) ***Baseline Conditions*** - This scenario evaluates the level-of-service at the studied intersections for the existing conditions with the addition of traffic from reasonably foreseeable projects in the area. This includes the planned residential project on the adjacent Fearrien Property.

3) ***Baseline Plus Project Conditions*** - This scenario includes analyses of the effects of traffic from the Proposed Action on the Baseline traffic operations.

4) ***2030 Cumulative Conditions*** - This scenario includes the analysis of build-out conditions in the area, projected for the Year 2030, plus other development as defined in the Humboldt County General Plan.

5) ***Cumulative Plus Project Conditions*** - this scenario includes the Cumulative Year 2030 traffic volumes with the addition of the traffic from the Proposed Action.

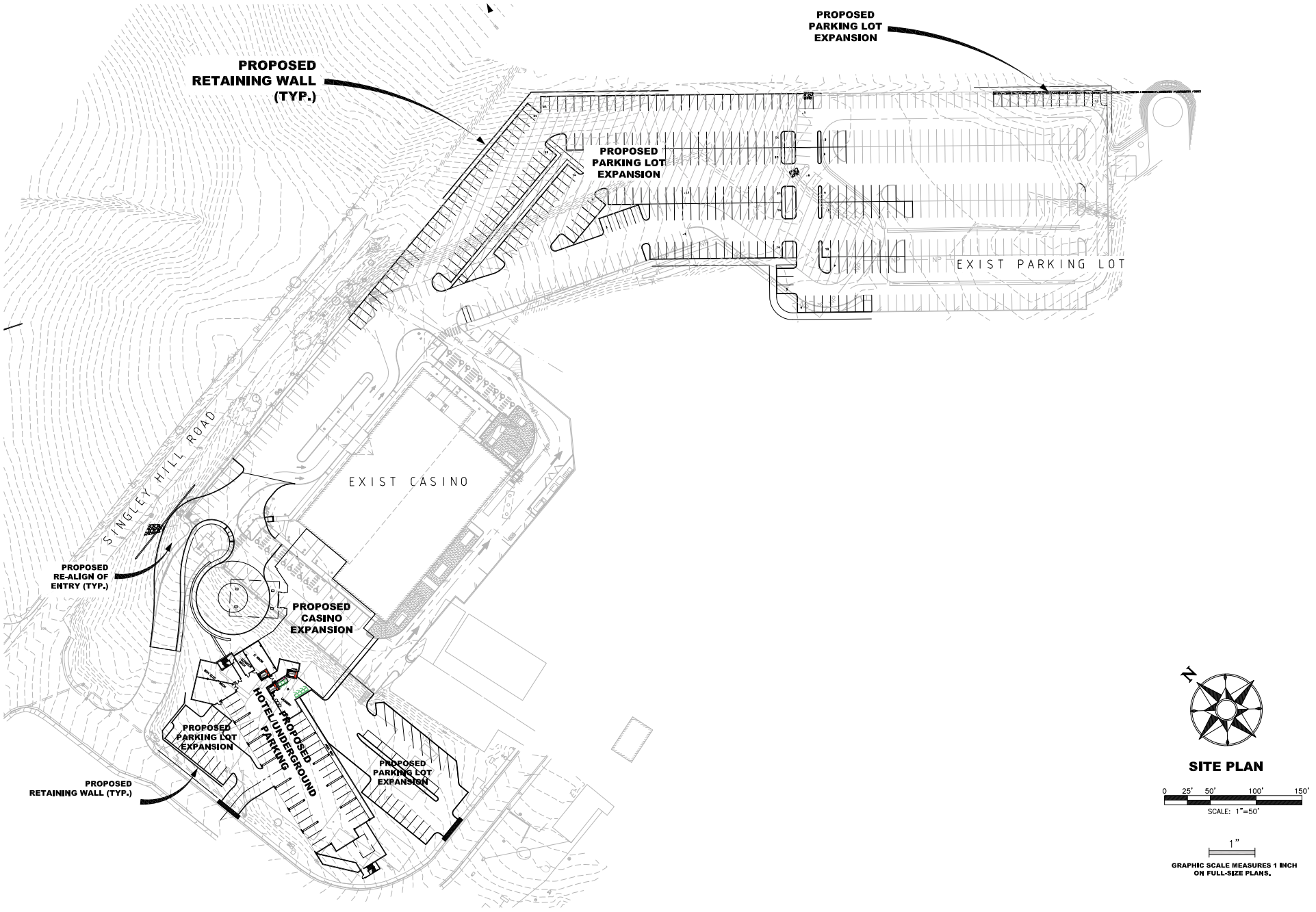

FIGURE 2| CONDEPTUAL SITE PLAN

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SECTION 2.0

EXECUTIVE SUMMARY

2.1 SITE ACCESS

The proposed site plan is expected to function well and not cause any safety or operational problems. The main issue to be addressed regarding site access involves the improvements that will be required at the intersection of Singley Hill Road with the main entrance to the project. Beyond this intersection (Singley Hill Road at Bear River Drive) it has been suggested that Singley Hill Road north of the casino be restricted to local traffic only to minimize the amount of traffic passing by existing residences in that area. To address this issue there is a sign indicating that no right-turns are allowed. However, additional improvement maybe needed to clearly indicate that traffic exiting from the Bear River Casino must turn left onto Singley Hill Road. Based on our review of the roadways in the area closing this roadway would not be required from a traffic safety or operations standpoint and from a local traffic planning standpoint this roadway should clearly remain open to the public. Since this area has no other roadways or parallel routes on this side of the freeway it is our understanding that various public agencies may ultimately oppose the closing of this road to the public.

It is recommended that this road remain open to the public and improvements such as medians should be constructed in the vicinity of the intersection to direct traffic towards the freeway. The medians would effectively discourage casino patrons from turning right when leaving the casino. This should help minimize the amount of casino traffic traveling past the other residences without actually closing this important part of the local roadway network to the public. Because the volume of traffic that travels beyond the casino on Singley Hill Road is so low there would be no safety or operational problems expected with various non-standard configurations. However, depending on the final design the County may need to consider having a stop sign placed on the southbound Singley Hill Road approach to this intersection to indicate that vehicles have the right-of-way when coming up the hill.

2.2 INTERSECTION AND ROADWAY CAPACITY IMPACTS

Under both existing and cumulative traffic conditions, the addition of traffic from the Proposed Action is not forecast to degrade any intersection beyond LOS B. All intersections would operate within the County's LOS standards (LOS C) and no off-site traffic mitigations would be required.

2.3 FREEWAY IMPACTS

Based on our analysis there would not be any freeway improvements required by the project on the mainline or at any of the ramp intersections that were studied.

SECTION 3.0

AFFECTED ENVIRONMENT

3.1 RESOURCE USE PATTERNS

TRANSPORTATION NETWORKS

ROADWAY SYSTEM

Figure 1 illustrates the roadways in the vicinity of the project site. A brief description of the key roadway facilities in the area is provided below.

U.S. 101

Within the State of California U.S. 101 is a north-south freeway that extends north from Los Angeles along the coast all the way to the Oregon State Line. Within Humboldt County the highway alternates between a 2-lane undivided highway and a four-lane divided highway. Within the project study area the highway is a four-lane divided facility with full interchanges/grade separations at all major cross roads. The average daily traffic (ADT) on U.S. 101 in the vicinity of the project is approximately 23,000 vehicles and the peak hour traffic volume is about 2,200 vehicles.

Singley Hill Road

Singley Hill Road is a north-south rural 2-lane roadway that runs along the western edge of the Rohnerville Rancheria and provides access to the Bear River Casino. This roadway has been improved to a 24-foot cross-section with shoulders between the freeway and the casino. Beyond that the roadway width is approximately 20 feet and has little or no shoulders in most areas.

Fernbridge Drive

Fernbridge Drive is a two-lane road, which runs in a north south direction along the eastern edge of U.S. 101. The primary vehicular access to and from the project site is proposed to be via the U.S. 101 interchange with Fernbridge Drive and Singly Hill Road. To the south, Fernbridge Dr. provides a connection to State Highway 1 and the communities of Fernbridge and Worswick.

EXISTING INTERSECTION TRAFFIC VOLUMES

Figure 3 displays the existing a.m. and p.m. peak-hour turning movements at each study intersection. **Figure 4** displays the existing lane configurations and traffic control devices at each of the project study intersections.

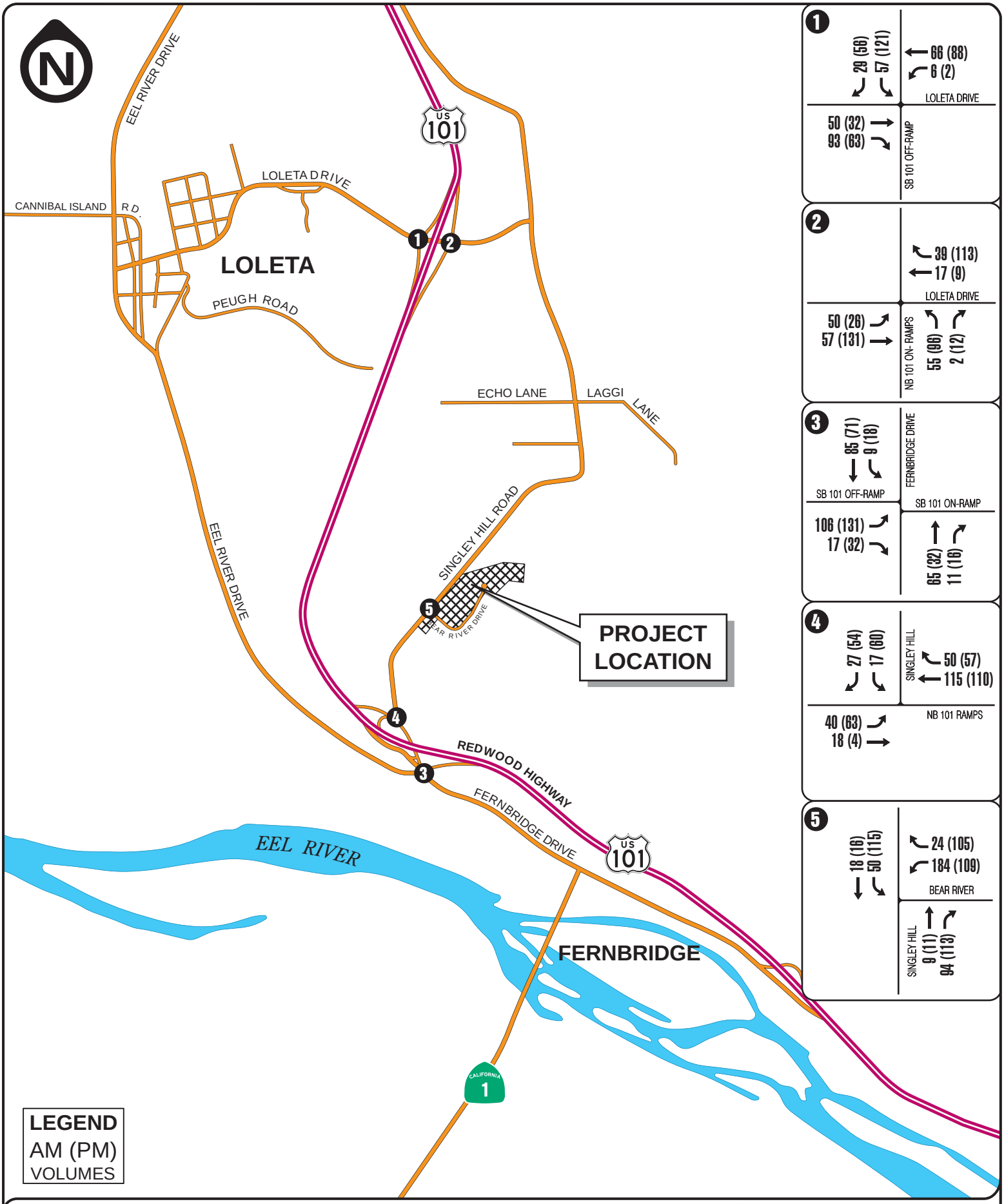

FIGURE 3 | AM (PM) EXISTING PEAK HOUR VOLUMES

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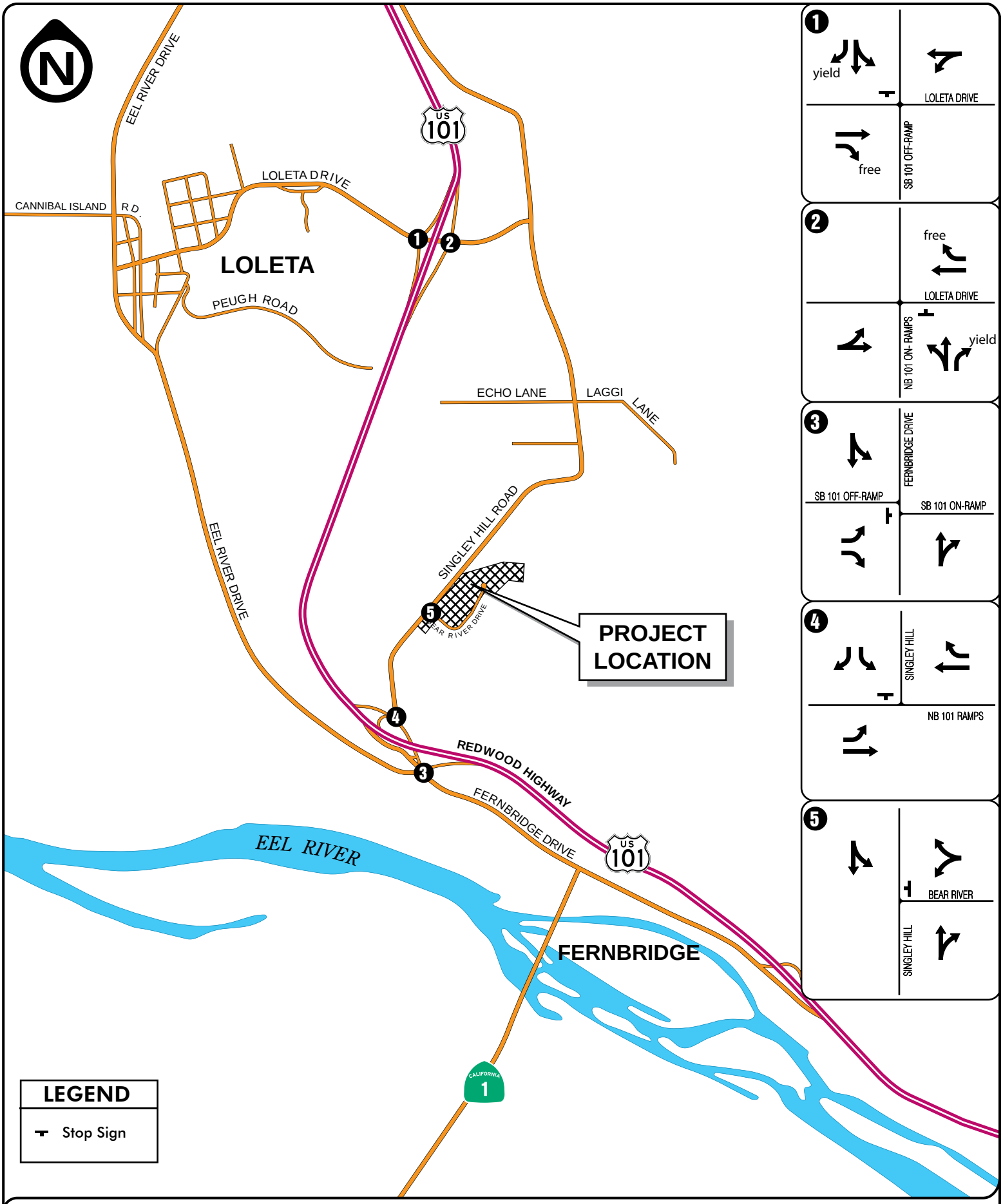

FIGURE 4| EXISTING LANE CONFIGURATIONS

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EXISTING INTERSECTION LEVELS OF SERVICE

Level of service is a qualitative measure reflecting the traffic operation of the intersection. As with signalized intersections, there are six levels of service for unsignalized intersections, A through F, which represent conditions from best to worst, respectively. **Table 1** shows the corresponding average total delay per vehicle at unsignalized intersections for each LOS category from A to F.

TABLE 1
LEVEL-OF-SERVICE FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS)	Ave Total Delay (sec/veh)	Traffic Condition
A	< 10	No Delay
B	>10 - 15	Short Delay
C	>15 – 25	Moderate Delay
D	>25 – 35	Long Delay
E	>35 – 50	Very Long Delay
F	> 50	Volume>Capacity

Table 2 summarizes the existing a.m. and p.m. peak-hour levels of service at each study intersection. As seen in this table all five study intersections currently operate at LOS B or better during both the a.m. and p.m. peak hours. LOS C is considered the minimum acceptable level of service set forth by Humboldt County. Thus each intersection operates acceptably according to the County's level of service standards.

TABLE 2
PEAK-HOUR INTERSECTION LEVEL OF SERVICE SUMMARY EXISTING CONDITIONS

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Average Delay[1]	Level of Service	Average Delay	Level of Service
1) U.S. 101 Northbound Ramps at Loleta Drive	Stop Sign	9.4 sec	A	9.8 sec	A
2) U.S. 101 Southbound Ramps at Loleta Drive	Stop Sign	10.2 sec	B	10.5 sec	B
3) U.S. 101 Southbound Off-Ramp at Fernbridge Drive	Stop Sign	10.3 sec	B	10.2 sec	B
4) U.S. 101 Northbound Ramps at Singley Hill Road/Fernbridge Drive	Stop Sign	9.5 sec	A	10.1 sec	B
5) Singley Hill Road at Bear River Drive and the Project Entrance	Stop Sign	11.4 sec	B	12.0 sec	B

[1] Average total delay in seconds/vehicle

INTERSECTION SIGNALIZATION NEEDS

Traffic signals are used to provide for an orderly flow of traffic through an intersection. Many times they are needed to provide side street traffic and opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, necessarily increase the capacity of an intersection (i.e., increase the intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at improper locations.

There are eleven possible tests (called "warrants") set forth in the Caltrans Traffic Manual for determining whether a traffic signal should be considered for installation. These tests consider criteria such as traffic volumes and delay, pedestrian volumes, presence of school children, and accident history. Usually, two or more warrants must be met before a signal is installed. If the Peak Hour Volume Warrant (Warrant #11) is met at an intersection that is a strong indication that a more detailed signal warrant analysis covering all possible warrants is appropriate. The requirements for a detailed signal warrant analysis are set forth in Chapter 9 of the California Manual of Uniform Traffic Control Devices (CA MUTCD).

For this analysis observations of peak hour traffic conditions and a test for peak hour volumes was conducted at all unsignalized project study intersections. Our analysis of the existing intersection turning movements found that that none of the locations currently meets the peak hour signal warrants for rural areas. In summary, our review indicated that none of the project study intersections would meet Caltrans warrants for installation of a traffic signal under existing conditions.

EXISTING BICYCLE AND PEDESTRIAN SYSTEM

Singley Hill Road provides no sidewalks to accommodate pedestrian activity. Further, no bike lanes are provided along this road, which has relatively low traffic volumes. Field observations were performed to determine the general level of bicycle and pedestrian activity along Singley Hill Road. The observations indicated that the current level of pedestrian activity is minimal. Bicycle activity is similarly low.

TRANSIT SERVICE

The Humboldt Transit Authority (HTA), which is operated by Humboldt County, provides bus transit service to residents throughout the County and provides connections to regional destinations via Greyhound Bus Lines. In the vicinity of the Proposed Action the nearest bus stop on the HTA's Redwood Transit System is located south of the project site in Fernbridge with additional stops located in the nearby town of Loleta.

BASELINE INTERSECTION LEVELS OF SERVICE

Traffic generated by the planned Fearrien Property residential project was added to the existing a.m. and p.m. peak-hour volumes along with a 15% percent increase in the existing casino traffic volumes. **Table 3** summarizes the a.m. and p.m. peak-hour level of service at each study intersection under the baseline conditions. As seen in this table all project intersections are projected to continue to operate at LOS C or better.

TABLE 3
BASELINE PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Average Delay[a]	Level of Service	Average Delay	Level of Service
1) U.S. 101 Northbound Ramps at Loleta Drive	Stop Sign	9.4 sec	A	9.9 sec	A
2) U.S. 101 Southbound Ramps at Loleta Drive	Stop Sign	10.2 sec	B	10.6 sec	B
3) U.S. 101 Southbound Off-Ramp at Fernbridge Drive	Stop Sign	10.4 sec	B	10.4 sec	B
4) U.S. 101 Northbound Ramps at Singley Hill Road/Fernbridge Drive	Stop Sign	9.6 sec	A	10.6 sec	B
5) Singley Hill Road at Bear River Drive and the Project Entrance	Stop Sign	11.4 sec	B	12.0 sec	B

[1] Average total delay in seconds/vehicle
[2] Level of service

SECTION 4.0

ENVIRONMENTAL CONSEQUENCES

4.1 RESOURCE USE PATTERNS

TRANSPORTATION NETWORKS

A traffic impact analysis was conducted of existing conditions, baseline conditions, and cumulative conditions. Typically, the amount of traffic a project would generate is estimated using empirical data on trip generation published by the Institute of Transportation Engineers (ITE) publication Trip Generation, 7th Edition. This method was used to estimate the traffic generated by the hotel component of the project. However, ITE does not have a standard trip generation rate that would apply to the proposed gaming portion of this project. Therefore, data was collected from multiple existing gaming facilities and also from studies of proposed expansions to gaming facilities. This data was then used to determine an appropriate casino trip generation rate. The studies and documents utilized for establishing the casino trip generation rate were as follows:

1) Shingle Springs Rancheria Hotel-Casino Traffic Study – Trip generation information was reviewed from the "Shingle Springs Interchange DEIR/DEA," completed by David Evans and Associates, Inc. in 2002. The traffic impact study conducted for this EIR was for a proposed 238,500 sq. ft gaming casino with 250 hotel rooms. Trip generation data for this study was determined by collecting peak hour surveys at five California Indian gaming facilities. These five gaming facilities ranged in size from 17,300 sq. ft. to 70,000 sq. ft. Using this data, trip generation rates were established for the weekday AM peak hour, weekday PM peak hour, and weekday daily of 2.95, 4.95, and 39.43 trips per 1,000 sq. ft., respectively. Saturday peak hour and Saturday daily trip generation rates were also established to be 6.90 and 59.07 trips per 1,000 sq. feet.

2) Institute of Transportation Engineers (ITE) Journal Article – An article authored by Paul C. Box and William Bunte titled "Gaming Casino Traffic"is contained in the March, 1998 Institute of Transportation Engineers (ITE) Journal. This article summarizes the results of two traffic volume studies conducted at two different gaming casino locations. The article includes the results of the hourly traffic volume variation for inbound and outbound vehicular traffic for the typical weekday, Saturday, and Sunday. From reviewing this document it was determined that during the typical weekday the AM peak hour generates 1.85 percent of the daily traffic volumes and the PM peak hour generates 6.25 percent of the daily traffic volumes.

3) Enterprise Rancheria Casino-Hotel Traffic Impact Study – Trip generation data was reviewed from the "Enterprise Rancheria Casino-Hotel Traffic Impact Study" completed by LSC Transportation Consultants, Inc 2005. This traffic impact study was conducted for a proposed 207,760 sq. ft. gaming casino with 170 hotel rooms. To establish trip generation rates for the gaming portion of this project, seven sources with similar land uses were utilized. The trip generation rates (trips per 1,000 sq. ft.) found from the seven sources were then plotted with the trip rate vs. casino size (sq. ft.) on a graph with a fitted line curve. Using this data trip generation rates were established for the weekday PM peak hour, Saturday PM peak hour, weekday daily, and Saturday daily of 4.37, 5.91, 43.80 and 59.13 trips per 1,000 sq. ft., respectively.

4) Cowlitz Indian Tribe Casino Project Traffic Impact Study - Trip generation data was reviewed from the "Cowlitz Indian Tribe Casino Project Traffic Impact Study" completed for the Cowlitz Tribe in January, 2006. This traffic impact study was conducted for a proposed 134,150 sq. ft. gaming casino with 250 hotel rooms and a 5,000 seat event center. To establish trip generation rates for the gaming portion of this project, nine sources with similar land uses were utilized. Particularly, empirical data from the Chinook Winds Casino in Lincoln City, Oregon, the Spirit Mountain Casino in Grande Ronde, Oregon, and the Emerald Queen Casino in Tacoma, Washington were used for trip generation comparison. Using this data, trip generation rates were established for the weekday AM peak hour, weekday PM peak hour, Saturday PM peak hour, weekday daily, and Saturday daily of 2.95, 4.95, 6.90, 61.89 and 93.24 trips per 1,000 sq. ft., respectively.

Data was also provided from an independent traffic audit at the Mohegan Sun Casino in Connecticut. This casino included a 10,000-seat event center as well as casino and hotel land uses. The traffic audit provided 24-hour monitoring of traffic entering and leaving the driveways at the site on event and non-event weekdays and weekends. From reviewing this data it was determined that during the non-event weekday the AM peak hour generates 1.1 percent of the daily traffic volumes and the PM peak hour generates 6.2 percent of the daily traffic volumes.

5) Ione Band of Miwok Indians Casino Hotel Traffic Impact Analysis - Trip generation data was reviewed from the "Ione Band of Miwok Indians Casino/Hotel Proposal Traffic Impact Analysis" completed by T.Y. Lin International. This traffic impact study was conducted for a proposed 120,000 sq. ft. gaming casino with 250 hotel rooms. Trip generation rates used for this study were developed by AES through the survey of eight existing casinos. Using the collected survey data, trip generation rates were established for the weekday PM peak hour, Saturday PM peak hour, and the weekday daily of 4.54, 6.25, and 68.24 trips per 1,000 sq. ft., respectively.

It was determined that trip generation rates for the AM and the PM peak hour of 1.98 and 4.95 trips per 1,000 square feet, respectively, were consistent (average) rates used throughout the multiple studies with little variability.

To evaluate the effects of the hotel component of the Proposed Action the peak-hour trip generation was estimated based on information published in Trip Generation (Institute of Transportation Engineers, Seventh Edition, 2003). Based in information contained in the ITE Trip Generation Handbook (Second Edition, June, 2004) and surveys of other casino hotels it was conservatively estimated that approximately 30 percent of the hotel trips would be shared trips by casino patrons and the trips were adjusted accordingly. **Table 4** summarizes the estimated a.m. and p.m. peak-hour trip generation of the Proposed Action. The proposed casino expansion and hotel project is estimated to generate a gross total of approximately 55 a.m. peak-hour trips (35 inbound and 21 outbound) and 80 p.m. peak-hour trips (42 inbound and 38 outbound).

TABLE 4
PROJECT TRIP GENERATION ESTIMATES

		AM Peak-Hour Trips			PM Peak-Hour Trips		
Land Use	**Size**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Casino	7,300 sq. ft.	10	5	14	19	17	36
Casino Hotel	105 rooms	25	16	41	23	21	43
TOTALS		35	21	55	42	38	80

SOURCE: Institute of Transportation Engineers, *Trip Generation*, Seventh Edition, 2003.

TRIP DISTRIBUTION

The distribution of project traffic under the Proposed Action was determined based on existing casino travel patterns and the nature of the roadway system serving the proposed project site. It is estimated that approximately 95 percent of the project trips would access the project from the U.S. 101 Fernbridge Drive/Singley Road interchange and about 5 percent are expected to use the U.S. 101 Loleta Drive interchange. The trips generated by the Propsoed Action are shown on **Figure 5**. It should be noted that we also analyzed a scenario where 35 percent of the trips would use the Loleta Drive interchange. This was conducted to verify that restrictions to turning movements at the main entrance would not be required. Based on the analysis of the different trip distribution assumptions, restricting Singley Hill Road to local traffic only would not be justified by any traffic or safety factors.

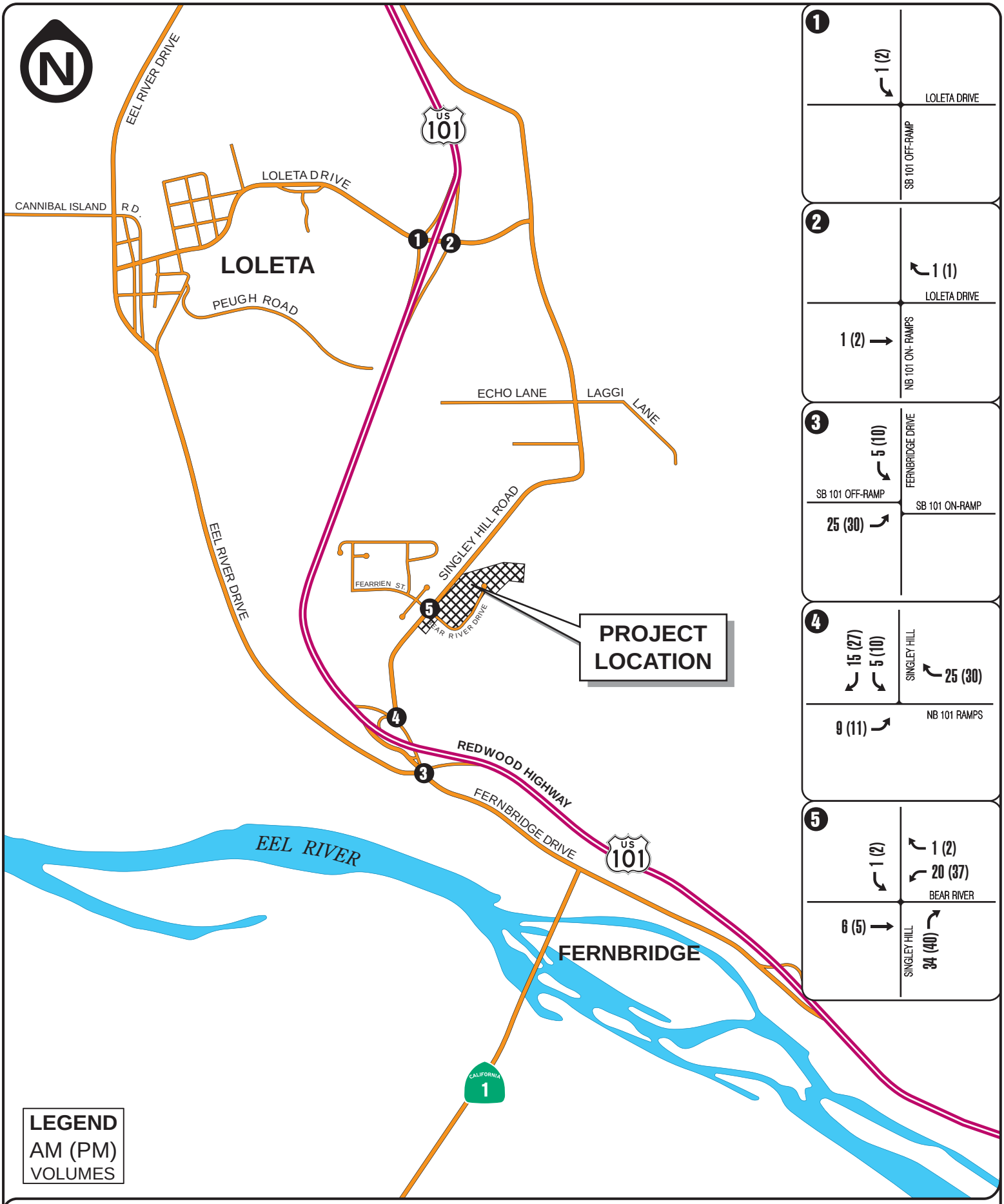

FIGURE 5 | AM (PM) PROJECT TRIPS PEAK HOUR VOLUMES

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Bear River Casino Expansion

Humboldt County

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BASELINE PLUS PROJECT INTERSECTION LEVELS OF SERVICE

Traffic generated by the Proposed Action was added to the existing a.m. and p.m. peak-hour volumes based on the distribution percentages described above. **Table 5** summarizes the a.m. and p.m. peak-hour level of service at each study intersection under baseline plus project conditions. . The results of this process for the a.m. and p.m. peak hours are illustrated in **Figure 6.** As seen in this table all project intersections are projected to continue to operate at LOS C or better. Thus with the addition of project traffic to existing volumes, all of the intersections are projected to operate at acceptable levels of service and the project's traffic impacts would be less than significant.

TABLE 5
BASELINE PLUS PROJECT PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Traffic Control	AM Peak Hour				PM Peak Hour			
		Baseline Conditions		Baseline Plus Project		Baseline Conditions		Baseline Plus Project	
		Average Delay[1]	LOS[2]	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS
1) U.S. 101 Northbound Ramps at Loleta Drive	Stop Sign	9.4 sec	A	9.5 sec	A	9.9 sec	A	9.9 sec	A
2) U.S. 101 Southbound Ramps at Loleta Drive	Stop Sign	10.2 sec	B	10.2 sec	B	10.6 sec	B	10.7 sec	B
3) U.S. 101 Southbound Off-Ramp at Fernbridge Drive	Stop Sign	10.4 sec	B	10.8 sec	B	10.4 sec	B	11.0 sec	B
4) U.S. 101 NB Ramps at Singley Hill/ Fernbridge Dr	Stop Sign	9.6 sec	A	9.7 sec	A	10.6 sec	B	10.8 sec	B
5) Singley Hill Rd at Bear River Dr & the Project Entr.	Stop Sign	11.4 sec	B	11.9 sec	B	12.0 sec	B	13.6sec	B

[1] Average total delay in seconds/vehicle
[2] Level of service

The study area roadways currently carry relatively low traffic volumes. For example, the traffic counts conducted near the project site indicate Singley Hill Road carries less than 400 vehicles per hour (vph) in both the a.m. and p.m. peak hours. As noted earlier, the Proposed Action would add about 55 vehicle-trips to these roadways in the a.m. peak hour and 80 vehicle-trips in the p.m. peak hour. The level of service analysis described above indicated only minor increases in intersection delays due to the project-generated traffic.

The added traffic is equivalent to approximately one to two additional vehicles per minute in the peak hours. However, a substantial amount of surplus capacity is available on the study area roads and the additional traffic would consume a small portion of that capacity. Furthermore, there is no reason to expect substantial safety problems in connection with the addition of the

project-generated traffic. Thus the impact of the proposed traffic on study area roadway operations is expected to be less than significant.

SITE ACCESS

The proposed site plan is expected to function well and not cause any safety or operational problems. The main issue to be addressed regarding site access involves the improvements that will be required at the intersection of Singley Hill Road with the main entrance to the project. Beyond this intersection (Singley Hill Road at Bear River Drive) it has been suggested that Singley Hill Road north of the casino be restricted to local traffic only to minimize the amount of traffic passing by existing residences in that area. To address this issue there is a sign indicating that no right-turns are allowed. However, additional improvement maybe needed to clearly indicate that traffic exiting from the Bear River Casino must turn left onto Singley Hill Road. Based on our review of the roadways in the area closing this roadway would not be required from a traffic safety or operations standpoint and from a local traffic planning standpoint this roadway should clearly remain open to the public. Since this area has no other roadways or parallel routes on this side of the freeway it is our understanding that various public agencies may ultimately oppose the closing of this road to the public.

It is recommended that this road remain open to the public and improvements such as medians should be constructed in the vicinity of the intersection to direct traffic towards the freeway. The medians would effectively discourage casino patrons from turning right when leaving the casino. This should help minimize the amount of casino traffic traveling past the other residences without actually closing this important part of the local roadway network to the public. Because the volume of traffic that travels beyond the casino on Singley Hill Road is so low there would be no safety or operational problems expected with various non-standard configurations. However, depending on the final design the County may need to consider having a stop sign placed on the southbound Singley Hill Road approach to this intersection to indicate that vehicles have the right-of-way when coming up the hill.

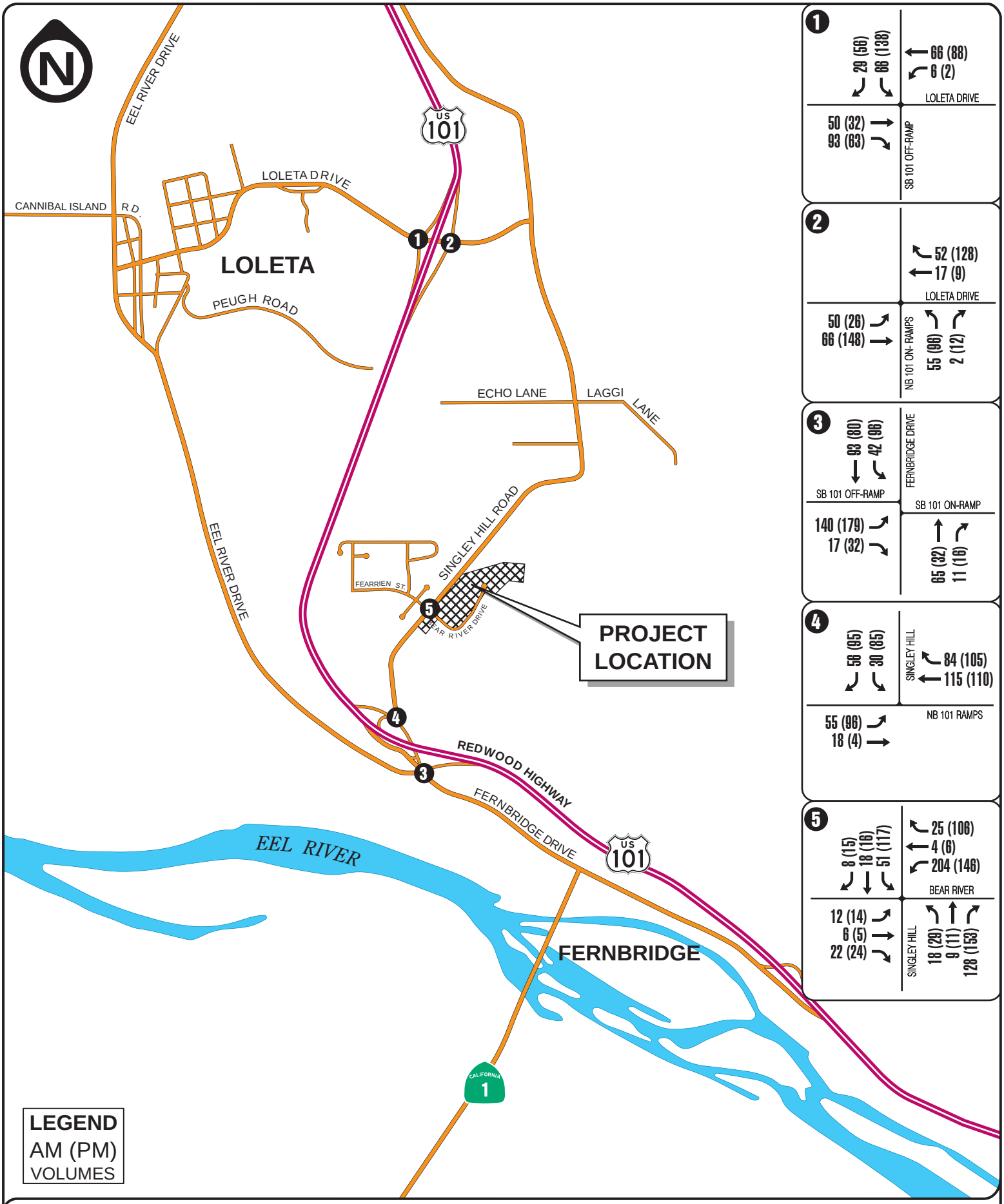

FIGURE 6 | AM (PM) BASELINE PLUS PROJECT VOLUMES

TRAFFIC IMPACT STUDY

Bear River Casino Expansion

Humboldt County

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PEDESTRIAN AND BICYCLE IMPACTS

Since the project would not generate a substantial increase in bicycling activity and, further, is not expected to impact the existing or planned bicycle system in the vicinity of the project site adversely, no significant impacts are anticipated.

The project is not expected to generate a large number of new pedestrian trips along Singley Hill Road or the other public roads in the area. Moreover, it is not expected to adversely impact the existing or future pedestrian system in the vicinity of the project site. Thus no significant pedestrian system impacts are projected as a result of the Proposed Action.

TRANSIT IMPACTS

Implementation of the project is not anticipated to generate any substantial amount of additional transit riders, given the limited transit service in the vicinity of the site. Thus no adverse transit impacts are anticipated.

FREEWAY IMPACTS

Based on our analysis there would not be any freeway improvements required by the project on the mainline or at any of the ramp intersections that were studied. Due to the limited amount of traffic the project would add to an one freeway segment in the area, further analysis was not required.

CUMULATIVE CONDITIONS

Cumulative traffic forecasts for this study were based on information obtained from the Humboldt County General Plan. A growth rate of one half a percent per year was used for this area. This increase is generally consistent with the growth and land use changes that are expected in the County's General Plan. With these changes there would be no significant impacts and the estimated cumulative intersection LOS would be as shown in **Table 6**.

CUMULATIVE PLUS PROJECT CONDITIONS

The estimated a.m. and p.m. peak-hour trips under the Proposed Action were added to the cumulative condition volumes described above. This resulted in the estimated traffic volumes on the study area roadway system under cumulative plus project conditions. With the addition of traffic from the Proposed Action there would be no significant impacts results of this process for the a.m. and p.m. peak hours are illustrated in **Figure 7**.

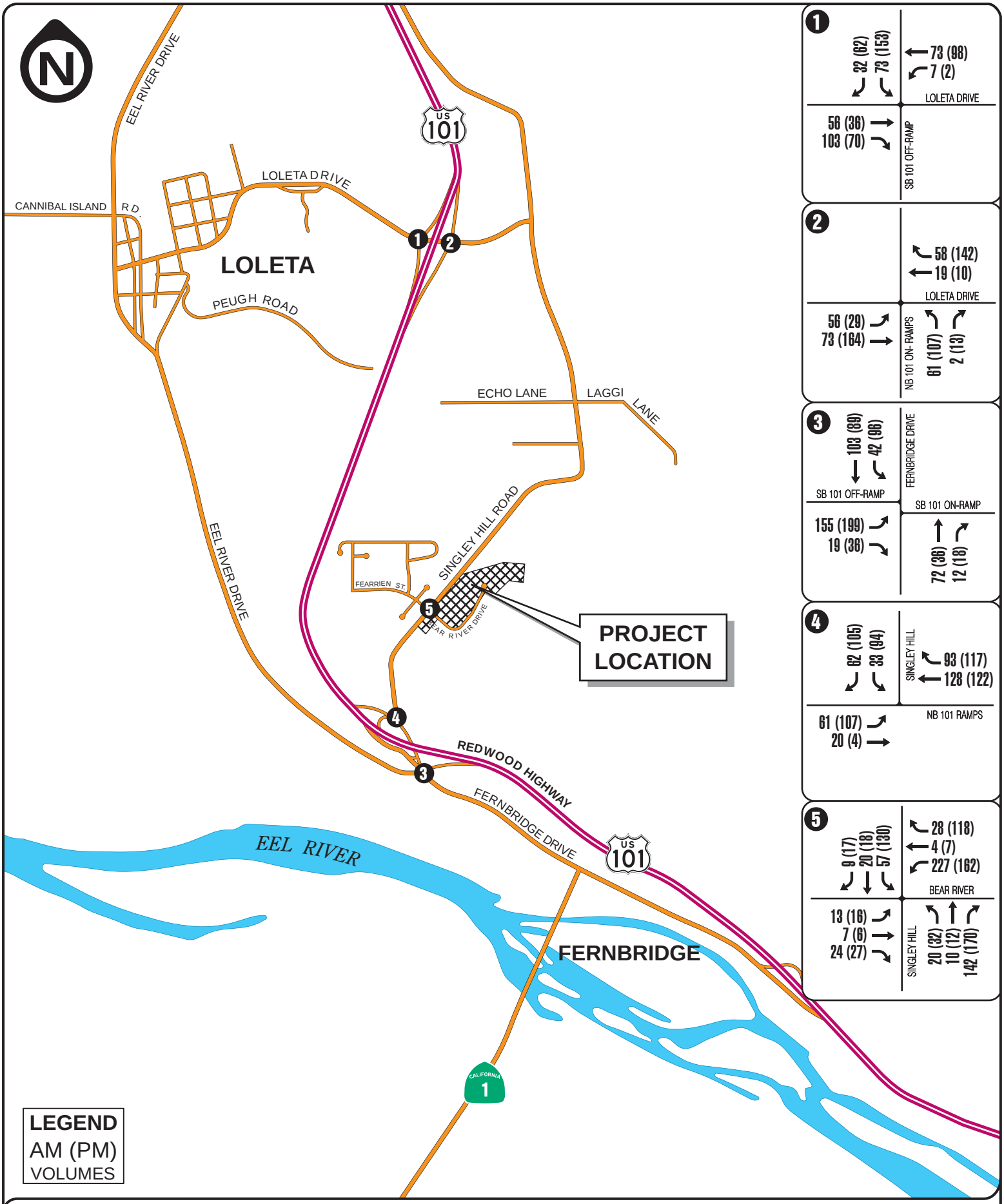

FIGURE 7 | AM (PM) CUMULATIVE PLUS PROJECT VOLUMES

TRAFFIC IMPACT STUDY

Bear River Casino Expansion

Humboldt County

Abrams Associates
TRAFFIC ENGINEERING, INC.

The level of service at the study intersections was tested using the estimated a.m. and p.m. peak-hour traffic volumes for cumulative plus project conditions. **Table 6** summarizes the results of that process.

TABLE 6
PEAK HOUR INTERSECTION LEVEL OF SERVICE SUMMARY CUMULATIVE PLUS PROJECT

Intersection	Traffic Control	AM Peak Hour				PM Peak Hour			
		Cumulative No Project		Cumulative Plus Project		Cumulative No Project		Cumulative Plus Project	
		Average Delay[1]	LOS[2]	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS
1) U.S. 101 Northbound Ramps at Loleta Drive	Stop Sign	9.6 sec	A	9.6 sec	A	10.1 sec	B	10.1 sec	B
2) U.S. 101 Southbound Ramps at Loleta Drive	Stop Sign	10.5 sec	B	10.5 sec	B	11.0 sec	B	11.0 sec	B
3) U.S. 101 Southbound Off-Ramp at Fernbridge Drive	Stop Sign	10.8 sec	B	11.3 sec	B	10.8 sec	B	11.5 sec	B
4) U.S. 101 NB Ramps at Singley Hill/ Fernbridge Dr	Stop Sign	9.8 sec	A	9.9 sec	A	10.9 sec	B	11.2 sec	B
5) Singley Hill Rd at Bear River Dr & the Project Entr.	Stop Sign	12.0 sec	B	12.7 sec	B	12.9 sec	B	15.1 sec	C

[1] Average total delay in seconds/ vehicle
[2] Level of service
SOURCE: Abrams Associates, 2009

The project is not expected to result in a substantial increase in bicycling activity or to adversely impact the existing or planned bicycle system in the vicinity of the project site under cumulative plus project conditions. Thus no significant adverse impacts on conditions for bicycles are projected.

The project would not adversely impact the existing or planned pedestrian system in the vicinity of the project site under cumulative plus Proposed Action conditions. No significant adverse impacts on pedestrians are, therefore, anticipated in connection with the Proposed Action.

Implementation of the Proposed Action is not expected to generate additional transit riders under cumulative plus project conditions. Therefore, no adverse transit impacts are anticipated.

SECTION 5.0

MITIGATION MEASURES

5.1 RESOURCE USE PATTERNS

TRANSPORTATION NETWORKS

Under both existing and cumulative traffic conditions, the addition of traffic from the Proposed Action is not forecast to degrade any intersection beyond LOS C. Therefore, all intersections would continue to operate well within the County's LOS standard (LOS C) and no off-site traffic mitigations would be required.

Although the project would increase the traffic on Singley Hill Road the added traffic would be equivalent to an average of no more than approximately two additional vehicles per minute in the peak hours. However, a substantial amount of surplus capacity is available on the study area roads, and the additional traffic would consume only a small portion of that capacity. Further, there is no reason to expect substantial safety problems in connection with the addition of the project-generated traffic. Thus the impact of the proposed traffic on study area roadway operations is expected to be less than significant and no traffic mitigation measures would be required.

APPENDIX

BEAR RIVER CASINO EXPANSION in Humboldt County

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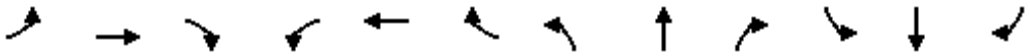
TRAFFIC ENGINEERING, INC.

AUGUST, 2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	50	93	6	66	0	0	0	0	57	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	101	7	72	0	0	0	0	62	0	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	72			54			139	139	54	139	139	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	72			54			139	139	54	139	139	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	93	100	97
cM capacity (veh/h)	1528			1551			802	749	1013	829	749	991

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	54	101	78	62	32
Volume Left	0	0	7	62	0
Volume Right	0	101	0	0	32
cSH	1700	1700	1551	829	991
Volume to Capacity	0.03	0.06	0.00	0.07	0.03
Queue Length (ft)	0	0	0	6	2
Control Delay (s)	0.0	0.0	0.6	9.7	8.8
Lane LOS			A	A	A
Approach Delay (s)	0.0		0.6	9.4	
Approach LOS				A	

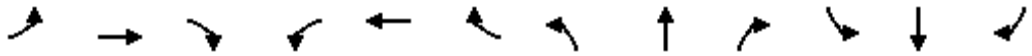
Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	22.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	57	0	0	17	39	55	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	62	0	0	18	42	60	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	18			62			189	189	62	189	189	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			62			189	189	62	189	189	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			92	100	100	100	100	100
cM capacity (veh/h)	1598			1541			751	682	1003	749	682	1060

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	116	18	42	60	2
Volume Left	54	0	0	60	0
Volume Right	0	0	42	0	2
cSH	1598	1700	1700	751	1003
Volume to Capacity	0.03	0.01	0.02	0.08	0.00
Queue Length (ft)	3	0	0	6	0
Control Delay (s)	3.6	0.0	0.0	10.2	8.6
Lane LOS	A			B	A
Approach Delay (s)	3.6	0.0		10.2	
Approach LOS				B	

Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	22.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	106	0	17	0	0	0	0	65	11	9	85	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	115	0	18	0	0	0	0	71	12	10	92	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	189	195	92	207	189	77	92			83		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	189	195	92	207	189	77	92			83		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	98	100	100	100	100			99		
cM capacity (veh/h)	768	696	965	732	702	984	1502			1515		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	115	18	83	102
Volume Left	115	0	0	10
Volume Right	0	18	12	0
cSH	768	965	1700	1515
Volume to Capacity	0.15	0.02	0.05	0.01
Queue Length (ft)	13	1	0	0
Control Delay (s)	10.5	8.8	0.0	0.8
Lane LOS	B	A		A
Approach Delay (s)	10.3		0.0	0.8
Approach LOS	B			

Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	24.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	40	18	0	0	115	50	0	0	0	17	0	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	20	0	0	125	54	0	0	0	18	0	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	179			20			261	286	20	232	232	125
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	179			20			261	286	20	232	232	125
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	100	100	97	100	97
cM capacity (veh/h)	1396			1597			654	604	1058	706	648	926

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	43	20	125	54	18	29
Volume Left	43	0	0	0	18	0
Volume Right	0	0	0	54	0	29
cSH	1396	1700	1700	1700	706	926
Volume to Capacity	0.03	0.01	0.07	0.03	0.03	0.03
Queue Length (ft)	2	0	0	0	2	2
Control Delay (s)	7.7	0.0	0.0	0.0	10.2	9.0
Lane LOS	A				B	A
Approach Delay (s)	5.3		0.0		9.5	
Approach LOS					A	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	184	24	9	94	50	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	200	26	10	102	54	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	189	61			112	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	189	61			112	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	97			96	
cM capacity (veh/h)	770	1004			1478	

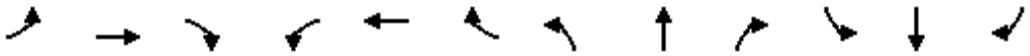
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	226	112	74
Volume Left	200	0	54
Volume Right	26	102	0
cSH	792	1700	1478
Volume to Capacity	0.29	0.07	0.04
Queue Length (ft)	29	0	3
Control Delay (s)	11.4	0.0	5.6
Lane LOS	B		A
Approach Delay (s)	11.4	0.0	5.6
Approach LOS	B		

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	32	63	2	88	0	0	0	0	121	0	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	68	2	96	0	0	0	0	132	0	61
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	96			35			135	135	35	135	135	96
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	96			35			135	135	35	135	135	96
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	84	100	94
cM capacity (veh/h)	1498			1577			783	755	1038	836	755	961

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	35	68	98	132	61
Volume Left	0	0	2	132	0
Volume Right	0	68	0	0	61
cSH	1700	1700	1577	836	961
Volume to Capacity	0.02	0.04	0.00	0.16	0.06
Queue Length (ft)	0	0	0	14	5
Control Delay (s)	0.0	0.0	0.2	10.1	9.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.2	9.8	
Approach LOS				A	

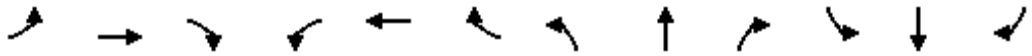
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	26	131	0	0	9	113	96	0	12	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	142	0	0	10	123	104	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	10			142			209	209	142	209	209	10
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			142			209	209	142	209	209	10
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			86	100	99	100	100	100
cM capacity (veh/h)	1610			1440			739	676	905	728	676	1072

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	171	10	123	104	13
Volume Left	28	0	0	104	0
Volume Right	0	0	123	0	13
cSH	1610	1700	1700	739	905
Volume to Capacity	0.02	0.01	0.07	0.14	0.01
Queue Length (ft)	1	0	0	12	1
Control Delay (s)	1.3	0.0	0.0	10.7	9.0
Lane LOS	A			B	A
Approach Delay (s)	1.3	0.0		10.5	
Approach LOS				B	

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	30.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	131	0	32	0	0	0	0	32	16	18	71	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	142	0	35	0	0	0	0	35	17	20	77	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	160	168	77	195	160	43	77			52		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	160	168	77	195	160	43	77			52		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	100	96	100	100	100	100			99		
cM capacity (veh/h)	798	715	984	731	723	1027	1521			1554		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	142	35	52	97
Volume Left	142	0	0	20
Volume Right	0	35	17	0
cSH	798	984	1700	1554
Volume to Capacity	0.18	0.04	0.03	0.01
Queue Length (ft)	16	3	0	1
Control Delay (s)	10.5	8.8	0.0	1.6
Lane LOS	B	A		A
Approach Delay (s)	10.2		0.0	1.6
Approach LOS	B			

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	25.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	63	4	0	0	110	57	0	0	0	60	0	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	68	4	0	0	120	62	0	0	0	65	0	59
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	182			4			320	323	4	261	261	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	182			4			320	323	4	261	261	120
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			100	100	100	90	100	94
cM capacity (veh/h)	1394			1617			571	565	1079	666	612	932

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	68	4	120	62	65	59
Volume Left	68	0	0	0	65	0
Volume Right	0	0	0	62	0	59
cSH	1394	1700	1700	1700	666	932
Volume to Capacity	0.05	0.00	0.07	0.04	0.10	0.06
Queue Length (ft)	4	0	0	0	8	5
Control Delay (s)	7.7	0.0	0.0	0.0	11.0	9.1
Lane LOS	A				B	A
Approach Delay (s)	7.3		0.0		10.1	
Approach LOS					B	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	109	105	11	113	115	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	118	114	12	123	125	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	341	73			135	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	341	73			135	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	80	88			91	
cM capacity (veh/h)	599	988			1450	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	233	135	142
Volume Left	118	0	125
Volume Right	114	123	0
cSH	742	1700	1450
Volume to Capacity	0.31	0.08	0.09
Queue Length (ft)	34	0	7
Control Delay (s)	12.0	0.0	6.9
Lane LOS	B		A
Approach Delay (s)	12.0	0.0	6.9
Approach LOS	B		

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	50	93	6	66	0	0	0	0	65	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	101	7	72	0	0	0	0	71	0	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	72			54			139	139	54	139	139	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	72			54			139	139	54	139	139	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	91	100	97
cM capacity (veh/h)	1528			1551			802	749	1013	829	749	991

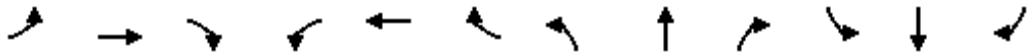
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	54	101	78	71	32
Volume Left	0	0	7	71	0
Volume Right	0	101	0	0	32
cSH	1700	1700	1551	829	991
Volume to Capacity	0.03	0.06	0.00	0.09	0.03
Queue Length (ft)	0	0	0	7	2
Control Delay (s)	0.0	0.0	0.6	9.7	8.8
Lane LOS			A	A	A
Approach Delay (s)	0.0		0.6	9.4	
Approach LOS				A	

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	23.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	65	0	0	17	51	55	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	71	0	0	18	55	60	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	18			71			198	198	71	198	198	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			71			198	198	71	198	198	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			92	100	100	100	100	100
cM capacity (veh/h)	1598			1530			741	674	992	740	674	1060

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	125	18	55	60	2
Volume Left	54	0	0	60	0
Volume Right	0	0	55	0	2
cSH	1598	1700	1700	741	992
Volume to Capacity	0.03	0.01	0.03	0.08	0.00
Queue Length (ft)	3	0	0	7	0
Control Delay (s)	3.3	0.0	0.0	10.3	8.6
Lane LOS	A			B	A
Approach Delay (s)	3.3	0.0		10.2	
Approach LOS				B	

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	22.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	115	0	17	0	0	0	0	65	11	9	93	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	125	0	18	0	0	0	0	71	12	10	101	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	197	203	101	216	197	77	101			83		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	197	203	101	216	197	77	101			83		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	100	98	100	100	100	100			99		
cM capacity (veh/h)	758	689	954	723	694	984	1491			1515		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	125	18	83	111
Volume Left	125	0	0	10
Volume Right	0	18	12	0
cSH	758	954	1700	1515
Volume to Capacity	0.16	0.02	0.05	0.01
Queue Length (ft)	15	1	0	0
Control Delay (s)	10.7	8.8	0.0	0.7
Lane LOS	B	A		A
Approach Delay (s)	10.4		0.0	0.7
Approach LOS	B			

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	46	18	0	0	115	59	0	0	0	25	0	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	20	0	0	125	64	0	0	0	27	0	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	189			20			289	309	20	245	245	125
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	189			20			289	309	20	245	245	125
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			100	100	100	96	100	95
cM capacity (veh/h)	1385			1597			614	584	1058	690	634	926

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	50	20	125	64	27	45
Volume Left	50	0	0	0	27	0
Volume Right	0	0	0	64	0	45
cSH	1385	1700	1700	1700	690	926
Volume to Capacity	0.04	0.01	0.07	0.04	0.04	0.05
Queue Length (ft)	3	0	0	0	3	4
Control Delay (s)	7.7	0.0	0.0	0.0	10.4	9.1
Lane LOS	A				B	A
Approach Delay (s)	5.5		0.0		9.6	
Approach LOS					A	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	184	24	9	94	50	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	200	26	10	102	54	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	189	61			112	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	189	61			112	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	74	97			96	
cM capacity (veh/h)	770	1004			1478	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	226	112	74
Volume Left	200	0	54
Volume Right	26	102	0
cSH	792	1700	1478
Volume to Capacity	0.29	0.07	0.04
Queue Length (ft)	29	0	3
Control Delay (s)	11.4	0.0	5.6
Lane LOS	B		A
Approach Delay (s)	11.4	0.0	5.6
Approach LOS	B		

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	32	63	2	88	0	0	0	0	136	0	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	68	2	96	0	0	0	0	148	0	61
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	96			35			135	135	35	135	135	96
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	96			35			135	135	35	135	135	96
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	82	100	94
cM capacity (veh/h)	1498			1577			783	755	1038	836	755	961

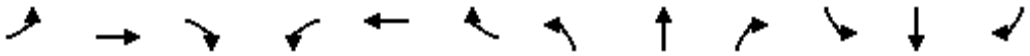
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	35	68	98	148	61
Volume Left	0	0	2	148	0
Volume Right	0	68	0	0	61
cSH	1700	1700	1577	836	961
Volume to Capacity	0.02	0.04	0.00	0.18	0.06
Queue Length (ft)	0	0	0	16	5
Control Delay (s)	0.0	0.0	0.2	10.2	9.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.2	9.9	
Approach LOS				A	

Intersection Summary				
Average Delay	5.1			
Intersection Capacity Utilization	26.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	26	146	0	0	9	127	96	0	12	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	159	0	0	10	138	104	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	10			159			225	225	159	225	225	10
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			159			225	225	159	225	225	10
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			86	100	99	100	100	100
cM capacity (veh/h)	1610			1421			721	662	887	710	662	1072

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	187	10	138	104	13
Volume Left	28	0	0	104	0
Volume Right	0	0	138	0	13
cSH	1610	1700	1700	721	887
Volume to Capacity	0.02	0.01	0.08	0.14	0.01
Queue Length (ft)	1	0	0	13	1
Control Delay (s)	1.2	0.0	0.0	10.8	9.1
Lane LOS	A			B	A
Approach Delay (s)	1.2	0.0		10.6	
Approach LOS				B	

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	32.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	149	0	32	0	0	0	0	32	16	18	80	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	162	0	35	0	0	0	0	35	17	20	87	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	170	178	87	204	170	43	87			52		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	170	178	87	204	170	43	87			52		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	100	96	100	100	100	100			99		
cM capacity (veh/h)	786	706	972	720	714	1027	1509			1554		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	162	35	52	107
Volume Left	162	0	0	20
Volume Right	0	35	17	0
cSH	786	972	1700	1554
Volume to Capacity	0.21	0.04	0.03	0.01
Queue Length (ft)	19	3	0	1
Control Delay (s)	10.8	8.8	0.0	1.4
Lane LOS	B	A		A
Approach Delay (s)	10.4		0.0	1.4
Approach LOS	B			

Intersection Summary				
Average Delay			6.2	
Intersection Capacity Utilization			26.8%	ICU Level of Service A
Analysis Period (min)			15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	85	4	0	0	110	75	0	0	0	75	0	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	92	4	0	0	120	82	0	0	0	82	0	74
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	201			4			383	390	4	309	309	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	201			4			383	390	4	309	309	120
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	100	87	100	92
cM capacity (veh/h)	1371			1617			503	508	1079	611	565	932

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	92	4	120	82	82	74
Volume Left	92	0	0	0	82	0
Volume Right	0	0	0	82	0	74
cSH	1371	1700	1700	1700	611	932
Volume to Capacity	0.07	0.00	0.07	0.05	0.13	0.08
Queue Length (ft)	5	0	0	0	11	6
Control Delay (s)	7.8	0.0	0.0	0.0	11.8	9.2
Lane LOS	A				B	A
Approach Delay (s)	7.5		0.0		10.6	
Approach LOS					B	

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	109	105	11	113	115	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	118	114	12	123	125	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	341	73			135	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	341	73			135	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	80	88			91	
cM capacity (veh/h)	599	988			1450	

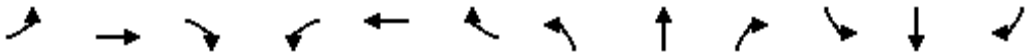
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	233	135	142
Volume Left	118	0	125
Volume Right	114	123	0
cSH	742	1700	1450
Volume to Capacity	0.31	0.08	0.09
Queue Length (ft)	34	0	7
Control Delay (s)	12.0	0.0	6.9
Lane LOS	B		A
Approach Delay (s)	12.0	0.0	6.9
Approach LOS	B		

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	50	93	6	66	0	0	0	0	66	0	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	54	101	7	72	0	0	0	0	72	0	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	72			54			139	139	54	139	139	72
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	72			54			139	139	54	139	139	72
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	91	100	97
cM capacity (veh/h)	1528			1551			802	749	1013	829	749	991

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	54	101	78	72	32
Volume Left	0	0	7	72	0
Volume Right	0	101	0	0	32
cSH	1700	1700	1551	829	991
Volume to Capacity	0.03	0.06	0.00	0.09	0.03
Queue Length (ft)	0	0	0	7	2
Control Delay (s)	0.0	0.0	0.6	9.8	8.8
Lane LOS			A	A	A
Approach Delay (s)	0.0		0.6	9.5	
Approach LOS				A	

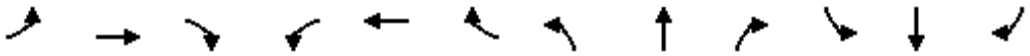
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	23.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	50	66	0	0	17	52	55	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	72	0	0	18	57	60	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	18			72			199	199	72	199	199	18
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	18			72			199	199	72	199	199	18
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			92	100	100	100	100	100
cM capacity (veh/h)	1598			1528			740	673	991	738	673	1060

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	126	18	57	60	2
Volume Left	54	0	0	60	0
Volume Right	0	0	57	0	2
cSH	1598	1700	1700	740	991
Volume to Capacity	0.03	0.01	0.03	0.08	0.00
Queue Length (ft)	3	0	0	7	0
Control Delay (s)	3.3	0.0	0.0	10.3	8.6
Lane LOS	A			B	A
Approach Delay (s)	3.3	0.0		10.2	
Approach LOS				B	

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	22.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	140	0	17	0	0	0	0	65	11	14	93	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	152	0	18	0	0	0	0	71	12	15	101	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	208	214	101	227	208	77	101			83		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	208	214	101	227	208	77	101			83		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	80	100	98	100	100	100	100			99		
cM capacity (veh/h)	744	677	954	709	682	984	1491			1515		

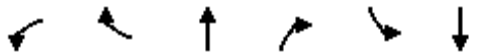
Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	152	18	83	116
Volume Left	152	0	0	15
Volume Right	0	18	12	0
cSH	744	954	1700	1515
Volume to Capacity	0.20	0.02	0.05	0.01
Queue Length (ft)	19	1	0	1
Control Delay (s)	11.1	8.8	0.0	1.0
Lane LOS	B	A		A
Approach Delay (s)	10.8		0.0	1.0
Approach LOS	B			

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	26.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	55	18	0	0	115	84	0	0	0	30	0	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	20	0	0	125	91	0	0	0	33	0	61
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	216			20			325	355	20	264	264	125
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	216			20			325	355	20	264	264	125
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			100	100	100	95	100	93
cM capacity (veh/h)	1353			1597			567	545	1058	665	613	926

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	60	20	125	91	33	61
Volume Left	60	0	0	0	33	0
Volume Right	0	0	0	91	0	61
cSH	1353	1700	1700	1700	665	926
Volume to Capacity	0.04	0.01	0.07	0.05	0.05	0.07
Queue Length (ft)	3	0	0	0	4	5
Control Delay (s)	7.8	0.0	0.0	0.0	10.7	9.2
Lane LOS	A				B	A
Approach Delay (s)	5.9		0.0		9.7	
Approach LOS					A	

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	19.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	204	25	9	128	51	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	222	27	10	139	55	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	210	79			149	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	210	79			149	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	70	97			96	
cM capacity (veh/h)	748	981			1433	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	249	149	75
Volume Left	222	0	55
Volume Right	27	139	0
cSH	768	1700	1433
Volume to Capacity	0.32	0.09	0.04
Queue Length (ft)	35	0	3
Control Delay (s)	11.9	0.0	5.7
Lane LOS	B		A
Approach Delay (s)	11.9	0.0	5.7
Approach LOS	B		

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	32	63	2	88	0	0	0	0	138	0	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	35	68	2	96	0	0	0	0	150	0	61
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	96			35			135	135	35	135	135	96
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	96			35			135	135	35	135	135	96
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	82	100	94
cM capacity (veh/h)	1498			1577			783	755	1038	836	755	961

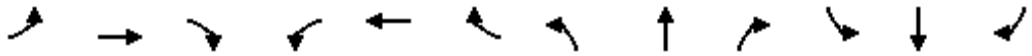
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	35	68	98	150	61
Volume Left	0	0	2	150	0
Volume Right	0	68	0	0	61
cSH	1700	1700	1577	836	961
Volume to Capacity	0.02	0.04	0.00	0.18	0.06
Queue Length (ft)	0	0	0	16	5
Control Delay (s)	0.0	0.0	0.2	10.2	9.0
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.2	9.9	
Approach LOS				A	

Intersection Summary				
Average Delay	5.1			
Intersection Capacity Utilization	26.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	26	148	0	0	9	128	96	0	12	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	161	0	0	10	139	104	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	10			161			227	227	161	227	227	10
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	10			161			227	227	161	227	227	10
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			85	100	99	100	100	100
cM capacity (veh/h)	1610			1418			718	660	884	708	660	1072

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	189	10	139	104	13
Volume Left	28	0	0	104	0
Volume Right	0	0	139	0	13
cSH	1610	1700	1700	718	884
Volume to Capacity	0.02	0.01	0.08	0.15	0.01
Queue Length (ft)	1	0	0	13	1
Control Delay (s)	1.2	0.0	0.0	10.9	9.1
Lane LOS	A			B	A
Approach Delay (s)	1.2	0.0		10.7	
Approach LOS				B	

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	179	0	32	0	0	0	0	32	16	28	80	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	195	0	35	0	0	0	0	35	17	30	87	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	191	200	87	226	191	43	87			52		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	191	200	87	226	191	43	87			52		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	74	100	96	100	100	100	100			98		
cM capacity (veh/h)	757	682	972	693	690	1027	1509			1554		

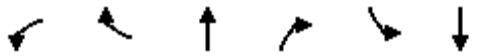
Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	195	35	52	117
Volume Left	195	0	0	30
Volume Right	0	35	17	0
cSH	757	972	1700	1554
Volume to Capacity	0.26	0.04	0.03	0.02
Queue Length (ft)	26	3	0	1
Control Delay (s)	11.4	8.8	0.0	2.0
Lane LOS	B	A		A
Approach Delay (s)	11.0		0.0	2.0
Approach LOS	B			

Intersection Summary				
Average Delay			6.9	
Intersection Capacity Utilization			29.0%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	96	4	0	0	110	105	0	0	0	85	0	95
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	104	4	0	0	120	114	0	0	0	92	0	103
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	234			4			436	447	4	333	333	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	234			4			436	447	4	333	333	120
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			100	100	100	84	100	89
cM capacity (veh/h)	1334			1617			444	467	1079	584	541	932

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	104	4	120	114	92	103
Volume Left	104	0	0	0	92	0
Volume Right	0	0	0	114	0	103
cSH	1334	1700	1700	1700	584	932
Volume to Capacity	0.08	0.00	0.07	0.07	0.16	0.11
Queue Length (ft)	6	0	0	0	14	9
Control Delay (s)	7.9	0.0	0.0	0.0	12.3	9.3
Lane LOS	A				B	A
Approach Delay (s)	7.6		0.0		10.8	
Approach LOS					B	

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	146	106	11	153	117	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	115	12	166	127	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	367	95			178	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	367	95			178	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	88			91	
cM capacity (veh/h)	575	962			1398	

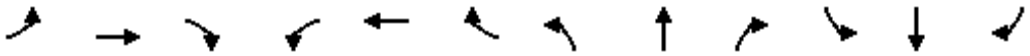
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	274	178	145
Volume Left	159	0	127
Volume Right	115	166	0
cSH	692	1700	1398
Volume to Capacity	0.40	0.10	0.09
Queue Length (ft)	47	0	7
Control Delay (s)	13.6	0.0	7.0
Lane LOS	B		A
Approach Delay (s)	13.6	0.0	7.0
Approach LOS	B		

Intersection Summary			
Average Delay	7.9		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	56	103	7	73	0	0	0	0	72	0	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	61	112	8	79	0	0	0	0	78	0	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	79			61			155	155	61	155	155	79
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			61			155	155	61	155	155	79
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	90	100	96
cM capacity (veh/h)	1519			1542			779	733	1004	808	733	981

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	61	112	87	78	35
Volume Left	0	0	8	78	0
Volume Right	0	112	0	0	35
cSH	1700	1700	1542	808	981
Volume to Capacity	0.04	0.07	0.00	0.10	0.04
Queue Length (ft)	0	0	0	8	3
Control Delay (s)	0.0	0.0	0.7	9.9	8.8
Lane LOS			A	A	A
Approach Delay (s)	0.0		0.7	9.6	
Approach LOS				A	

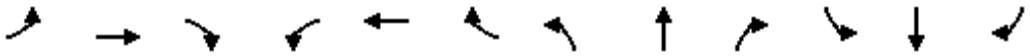
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	24.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	56	72	0	0	19	57	61	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	78	0	0	21	62	66	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	21			78			221	221	78	221	221	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			78			221	221	78	221	221	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			91	100	100	100	100	100
cM capacity (veh/h)	1595			1520			714	652	982	712	652	1057

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	139	21	62	66	2
Volume Left	61	0	0	66	0
Volume Right	0	0	62	0	2
cSH	1595	1700	1700	714	982
Volume to Capacity	0.04	0.01	0.04	0.09	0.00
Queue Length (ft)	3	0	0	8	0
Control Delay (s)	3.4	0.0	0.0	10.6	8.7
Lane LOS	A			B	A
Approach Delay (s)	3.4	0.0		10.5	
Approach LOS				B	

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	128	0	19	0	0	0	0	72	12	10	103	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	139	0	21	0	0	0	0	78	13	11	112	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	218	225	112	239	218	85	112			91		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	218	225	112	239	218	85	112			91		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	100	98	100	100	100	100			99		
cM capacity (veh/h)	734	669	941	696	675	974	1478			1504		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	139	21	91	123
Volume Left	139	0	0	11
Volume Right	0	21	13	0
cSH	734	941	1700	1504
Volume to Capacity	0.19	0.02	0.05	0.01
Queue Length (ft)	17	2	0	1
Control Delay (s)	11.1	8.9	0.0	0.7
Lane LOS	B	A		A
Approach Delay (s)	10.8		0.0	0.7
Approach LOS	B			

Intersection Summary				
Average Delay			4.8	
Intersection Capacity Utilization			26.4%	ICU Level of Service
Analysis Period (min)			15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	51	20	0	0	128	66	0	0	0	28	0	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	22	0	0	139	72	0	0	0	30	0	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	211			22			322	343	22	272	272	139
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	211			22			322	343	22	272	272	139
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			100	100	100	95	100	94
cM capacity (veh/h)	1360			1594			578	555	1055	660	609	909

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	55	22	139	72	30	50
Volume Left	55	0	0	0	30	0
Volume Right	0	0	0	72	0	50
cSH	1360	1700	1700	1700	660	909
Volume to Capacity	0.04	0.01	0.08	0.04	0.05	0.06
Queue Length (ft)	3	0	0	0	4	4
Control Delay (s)	7.8	0.0	0.0	0.0	10.7	9.2
Lane LOS	A				B	A
Approach Delay (s)	5.6		0.0		9.8	
Approach LOS					A	

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	23.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	204	27	10	104	56	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	222	29	11	113	61	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	211	67			124	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211	67			124	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	70	97			96	
cM capacity (veh/h)	745	996			1463	

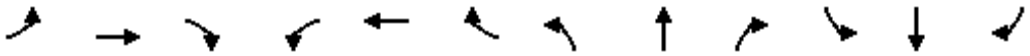
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	251	124	83
Volume Left	222	0	61
Volume Right	29	113	0
cSH	768	1700	1463
Volume to Capacity	0.33	0.07	0.04
Queue Length (ft)	36	0	3
Control Delay (s)	12.0	0.0	5.7
Lane LOS	B		A
Approach Delay (s)	12.0	0.0	5.7
Approach LOS	B		

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	36	70	2	98	0	0	0	0	151	0	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	76	2	107	0	0	0	0	164	0	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	107			39			150	150	39	150	150	107
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	107			39			150	150	39	150	150	107
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	80	100	93
cM capacity (veh/h)	1484			1571			759	741	1032	817	741	948

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	39	76	109	164	67
Volume Left	0	0	2	164	0
Volume Right	0	76	0	0	67
cSH	1700	1700	1571	817	948
Volume to Capacity	0.02	0.04	0.00	0.20	0.07
Queue Length (ft)	0	0	0	19	6
Control Delay (s)	0.0	0.0	0.2	10.5	9.1
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.2	10.1	
Approach LOS				B	

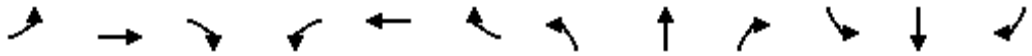
Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	28.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	29	162	0	0	10	141	107	0	13	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	176	0	0	11	153	116	0	14	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	11			176			250	250	176	250	250	11
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	11			176			250	250	176	250	250	11
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			83	100	98	100	100	100
cM capacity (veh/h)	1608			1400			693	640	867	682	640	1070

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	208	11	153	116	14
Volume Left	32	0	0	116	0
Volume Right	0	0	153	0	14
cSH	1608	1700	1700	693	867
Volume to Capacity	0.02	0.01	0.09	0.17	0.02
Queue Length (ft)	1	0	0	15	1
Control Delay (s)	1.2	0.0	0.0	11.2	9.2
Lane LOS	A			B	A
Approach Delay (s)	1.2	0.0		11.0	
Approach LOS				B	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	165	0	36	0	0	0	0	36	18	20	89	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	179	0	39	0	0	0	0	39	20	22	97	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	189	199	97	228	189	49	97			59		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	189	199	97	228	189	49	97			59		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	76	100	96	100	100	100	100			99		
cM capacity (veh/h)	763	687	960	690	696	1020	1497			1545		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	179	39	59	118
Volume Left	179	0	0	22
Volume Right	0	39	20	0
cSH	763	960	1700	1545
Volume to Capacity	0.24	0.04	0.03	0.01
Queue Length (ft)	23	3	0	1
Control Delay (s)	11.2	8.9	0.0	1.4
Lane LOS	B	A		A
Approach Delay (s)	10.8		0.0	1.4
Approach LOS	B			

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	28.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	94	4	0	0	122	83	0	0	0	83	0	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	102	4	0	0	133	90	0	0	0	90	0	83
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	223			4			424	432	4	341	341	133
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	223			4			424	432	4	341	341	133
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			100	100	100	84	100	91
cM capacity (veh/h)	1346			1617			463	478	1079	577	537	917

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	102	4	133	90	90	83
Volume Left	102	0	0	0	90	0
Volume Right	0	0	0	90	0	83
cSH	1346	1700	1700	1700	577	917
Volume to Capacity	0.08	0.00	0.08	0.05	0.16	0.09
Queue Length (ft)	6	0	0	0	14	7
Control Delay (s)	7.9	0.0	0.0	0.0	12.4	9.3
Lane LOS	A				B	A
Approach Delay (s)	7.6		0.0		10.9	
Approach LOS					B	

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	26.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	121	117	12	125	128	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	132	127	13	136	139	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	379	81			149	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	379	81			149	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	87			90	
cM capacity (veh/h)	563	979			1433	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	259	149	159
Volume Left	132	0	139
Volume Right	127	136	0
cSH	711	1700	1433
Volume to Capacity	0.36	0.09	0.10
Queue Length (ft)	42	0	8
Control Delay (s)	12.9	0.0	6.9
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	6.9
Approach LOS	B		

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	56	103	7	73	0	0	0	0	73	0	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	61	112	8	79	0	0	0	0	79	0	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	79			61			155	155	61	155	155	79
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	79			61			155	155	61	155	155	79
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	90	100	96
cM capacity (veh/h)	1519			1542			779	733	1004	808	733	981

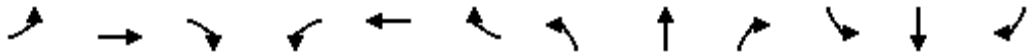
Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	61	112	87	79	35
Volume Left	0	0	8	79	0
Volume Right	0	112	0	0	35
cSH	1700	1700	1542	808	981
Volume to Capacity	0.04	0.07	0.00	0.10	0.04
Queue Length (ft)	0	0	0	8	3
Control Delay (s)	0.0	0.0	0.7	9.9	8.8
Lane LOS			A	A	A
Approach Delay (s)	0.0		0.7	9.6	
Approach LOS				A	

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	24.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	56	73	0	0	19	58	61	0	2	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	79	0	0	21	63	66	0	2	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	21			79			222	222	79	222	222	21
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	21			79			222	222	79	222	222	21
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			91	100	100	100	100	100
cM capacity (veh/h)	1595			1519			713	651	981	711	651	1057

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	140	21	63	66	2
Volume Left	61	0	0	66	0
Volume Right	0	0	63	0	2
cSH	1595	1700	1700	713	981
Volume to Capacity	0.04	0.01	0.04	0.09	0.00
Queue Length (ft)	3	0	0	8	0
Control Delay (s)	3.4	0.0	0.0	10.6	8.7
Lane LOS	A			B	A
Approach Delay (s)	3.4	0.0		10.5	
Approach LOS				B	

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	23.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	155	0	19	0	0	0	0	72	12	16	103	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	168	0	21	0	0	0	0	78	13	17	112	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	232	238	112	252	232	85	112			91		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	232	238	112	252	232	85	112			91		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	77	100	98	100	100	100	100			99		
cM capacity (veh/h)	717	655	941	680	661	974	1478			1504		

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	168	21	91	129
Volume Left	168	0	0	17
Volume Right	0	21	13	0
cSH	717	941	1700	1504
Volume to Capacity	0.23	0.02	0.05	0.01
Queue Length (ft)	23	2	0	1
Control Delay (s)	11.6	8.9	0.0	1.1
Lane LOS	B	A		A
Approach Delay (s)	11.3		0.0	1.1
Approach LOS	B			

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	61	20	0	0	128	93	0	0	0	33	0	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	66	22	0	0	139	101	0	0	0	36	0	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	240			22			361	395	22	293	293	139
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	240			22			361	395	22	293	293	139
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			100	100	100	94	100	93
cM capacity (veh/h)	1326			1594			530	515	1055	634	587	909

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	66	22	139	101	36	67
Volume Left	66	0	0	0	36	0
Volume Right	0	0	0	101	0	67
cSH	1326	1700	1700	1700	634	909
Volume to Capacity	0.05	0.01	0.08	0.06	0.06	0.07
Queue Length (ft)	4	0	0	0	4	6
Control Delay (s)	7.9	0.0	0.0	0.0	11.0	9.3
Lane LOS	A				B	A
Approach Delay (s)	5.9		0.0		9.9	
Approach LOS					A	

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	227	28	10	142	57	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	247	30	11	154	62	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	234	88			165	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	234	88			165	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	66	97			96	
cM capacity (veh/h)	721	970			1413	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	277	165	84
Volume Left	247	0	62
Volume Right	30	154	0
cSH	742	1700	1413
Volume to Capacity	0.37	0.10	0.04
Queue Length (ft)	43	0	3
Control Delay (s)	12.7	0.0	5.8
Lane LOS	B		A
Approach Delay (s)	12.7	0.0	5.8
Approach LOS	B		

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	36	70	2	98	0	0	0	0	153	0	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	39	76	2	107	0	0	0	0	166	0	67
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					210							
pX, platoon unblocked												
vC, conflicting volume	107			39			150	150	39	150	150	107
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	107			39			150	150	39	150	150	107
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	80	100	93
cM capacity (veh/h)	1484			1571			759	741	1032	817	741	948

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	39	76	109	166	67
Volume Left	0	0	2	166	0
Volume Right	0	76	0	0	67
cSH	1700	1700	1571	817	948
Volume to Capacity	0.02	0.04	0.00	0.20	0.07
Queue Length (ft)	0	0	0	19	6
Control Delay (s)	0.0	0.0	0.2	10.5	9.1
Lane LOS			A	B	A
Approach Delay (s)	0.0		0.2	10.1	
Approach LOS				B	

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	28.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	29	164	0	0	10	142	107	0	13	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	178	0	0	11	154	116	0	14	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		341			1303							
pX, platoon unblocked												
vC, conflicting volume	11			178			252	252	178	252	252	11
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	11			178			252	252	178	252	252	11
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			83	100	98	100	100	100
cM capacity (veh/h)	1608			1398			691	638	865	679	638	1070

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	210	11	154	116	14
Volume Left	32	0	0	116	0
Volume Right	0	0	154	0	14
cSH	1608	1700	1700	691	865
Volume to Capacity	0.02	0.01	0.09	0.17	0.02
Queue Length (ft)	1	0	0	15	1
Control Delay (s)	1.2	0.0	0.0	11.3	9.2
Lane LOS	A			B	A
Approach Delay (s)	1.2	0.0		11.0	
Approach LOS				B	

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	199	0	36	0	0	0	0	36	18	31	89	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	216	0	39	0	0	0	0	39	20	34	97	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)								239			214	
pX, platoon unblocked												
vC, conflicting volume	213	223	97	252	213	49	97			59		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	213	223	97	252	213	49	97			59		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	100	96	100	100	100	100			98		
cM capacity (veh/h)	731	661	960	661	670	1020	1497			1545		

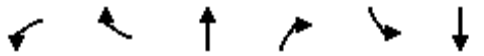
Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	216	39	59	130
Volume Left	216	0	0	34
Volume Right	0	39	20	0
cSH	731	960	1700	1545
Volume to Capacity	0.30	0.04	0.03	0.02
Queue Length (ft)	31	3	0	2
Control Delay (s)	12.0	8.9	0.0	2.0
Lane LOS	B	A		A
Approach Delay (s)	11.5		0.0	2.0
Approach LOS	B			

Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	30.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	107	4	0	0	122	117	0	0	0	94	0	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	116	4	0	0	133	127	0	0	0	102	0	114
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		756			654							
pX, platoon unblocked												
vC, conflicting volume	260			4			484	497	4	370	370	133
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	260			4			484	497	4	370	370	133
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			100			100	100	100	81	100	88
cM capacity (veh/h)	1305			1617			402	432	1079	547	510	917

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1	SB 2
Volume Total	116	4	133	127	102	114
Volume Left	116	0	0	0	102	0
Volume Right	0	0	0	127	0	114
cSH	1305	1700	1700	1700	547	917
Volume to Capacity	0.09	0.00	0.08	0.07	0.19	0.12
Queue Length (ft)	7	0	0	0	17	11
Control Delay (s)	8.0	0.0	0.0	0.0	13.1	9.5
Lane LOS	A				B	A
Approach Delay (s)	7.7		0.0		11.2	
Approach LOS					B	

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	162	118	12	170	130	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	128	13	185	141	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	408	105			198	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	408	105			198	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	67	86			90	
cM capacity (veh/h)	538	949			1375	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	304	198	161
Volume Left	176	0	141
Volume Right	128	185	0
cSH	658	1700	1375
Volume to Capacity	0.46	0.12	0.10
Queue Length (ft)	61	0	9
Control Delay (s)	15.1	0.0	7.1
Lane LOS	C		A
Approach Delay (s)	15.1	0.0	7.1
Approach LOS	C		

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		