Stagecoach Tailwaters

Traffic Impact Analysis

Date: January 30, 2024

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1.0 Introduction

The Fox Tuttle Transportation Group has prepared this traffic impact study for the development of the proposed Stagecoach Tailwaters Development project in Routt County, Colorado. The approximately 89±-acre property is located east of the intersection of Routt County Road 18A and Routt County Road 16. The project is proposing to build a new mixed-use development containing approximately 200 residential units and approximately 10,000-20,000 sq. ft. of commercial space. The property is currently vacant and adjacent to existing single-family detached homes and the Stagecoach Reservoir. **Figure 1** provides a vicinity map for the proposed project.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of the Stagecoach Tailwaters Development project. The traffic study addresses existing (Year 2023), buildout (Year 2028), and long-term (Year 2043) peak hour intersection conditions in the study area with and without the project-generated traffic. The information contained in this study is anticipated to be used by the Routt County staff in identifying any intersection or roadway deficiencies and potential improvements for the build-out condition and long-term future scenarios. This study focused on the weekday AM and PM peak hours which represent the periods of highest trip generation for the proposed use and adjacent street traffic.

2.0 Project Description

The Stagecoach Tailwaters Development site is currently zoned for High Density Residential (HDR) use with a Large Lot overlay. It is understood that the project proposes to rezone part of the property to Commercial zoning and remove the Large Lot overlay. The proposed rezone would allow the site to develop in a manner consistent with the Stagecoach Community Master Plan. The development is expected to contain approximately 200 residential dwelling units and up to 20,000 sq. ft. of commercial space.

Access to the site is currently provided by Routt County Road 16 (CR 16), Routt County Road 18A (CR 18A) and Crow Trail. All new accesses are proposed to be full-movement and side-street stop-controlled. The site plan and accesses are provided on **Figure 2**.

3.0 Study Considerations

3.1 Data Collection

Intersection turning movement volumes were collected in August 2023 at CR 16 and CR 18A existing intersections/access locations during the weekday AM and PM peak hours, including pedestrians and bicyclists. Daily traffic volumes were collected adjacent to the project site on CR 18A and on CR 16 north of Routt County Road 212 (CR 212). The daily count on CR 16 was used to factor previous data collected in February 2021 for the nearby Landaulet View Subdivision. Previous count data was factored to account for observed growth from Year 2021 to Year 2023. Count data sheets are provided in the **Appendix**.

3.2 Evaluation Methodology

The traffic operations analysis addressed the unsignalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)*[1]. Existing peak hour factors were applied to the intersections for the existing and future scenarios. Study intersections were evaluated using Synchro software (v11).

3.3 Level of Service Capacity Analysis

A Level of Service analysis was conducted to determine the existing, buildout, and future performance of the study area intersections and accesses to determine the most appropriate intersection traffic controls and auxiliary lanes for future conditions.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as "Level of Service" (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersection's traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and

[1] Highway Capacity Manual, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement.

Typically, LOS A through C is considered to be acceptable for the overall intersection operations and LOS D overall during peak hours is acceptable. Individual movements may be allowed to fall to LOS E/F depending on the circumstances, such as a low-volume side-street approach to an arterial roadway. Criteria contained in the *HCM* was applied for these analyses in order to determine peak hour LOS for each scenario. A more detailed discussion of the LOS methodology is contained in the **Appendix** for reference.

4.0 Existing Conditions

4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The primary public roadways that serve the project site are discussed in the following text and illustrated on **Figure 1**.

Routt County Road 16 (CR 16) is a two-lane arterial that is paved from Routt County Road 14 to Routt County Road 18A. It extends approximately 2.9 miles from Routt County Road 14 to Routt County Road 18A before continuing further south as a gravel road. This roadway provides exclusive access to the Stagecoach area. CR 16 currently serves approximately 1,900 vehicles per day (vpd) south of Routt County Road 14. There are no sidewalks or bicycle lanes on CR 16.

Routt County Road 18A (CR 18A) is a two-lane unpaved collector providing access to the South Shore area of Stagecoach. This roadway extends from CR 16 on the south and provides access to the South Shore residential neighborhood. CR 18A currently serves approximately 225vpd adjacent to the property site. The roadway is a local unpaved street with no sidewalks or dedicated bicycle facilities.

4.2 Pedestrian and Bicycle

There are no sidewalks or bicycle lanes present on any roadways within the study area. Bicyclists are permitted to ride within the travel lanes.

4.3 Transit

There is no transit service currently available or planned in the Stagecoach area.

4.4 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated on **Figure 3**. The details of LOS for each movement are provided in **Table 1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**. **All study intersections currently operate overall at LOS A in both peak hours, with all movements operating at LOS A.**

5.0 Future Conditions

5.1 Annual Growth Factor and Future Volume Methodology

In order to forecast the future peak hour traffic volumes, existing volumes were grown at a 2.0% annual growth rate for future scenarios. The estimated trips generated by the Landaulet residential subdivision to the west of the project site were added on top of the annual growth of existing volumes. This is anticipated to be a conservative growth projection since this area will only have an increase in traffic if additional developments occur or if more recreational activities occur. The 2017 Stagecoach Community Plan recognized that realized growth has been limited in the area due to a variety of constraints.

5.2 Year 2028 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2028 background scenario and to identify any capacity constraints associated with background traffic in the short-term scenario. The short-term background volumes, lane configuration, and traffic control are illustrated on **Figure 4**.

The Level of Service criteria discussed previously were applied to the study area intersections to determine the impacts with the short-term background conditions. The details of LOS for each movement are provided in **Table 1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**. **In summary, the study intersections are expected to continue to operate overall at LOS A in both peak hours, with all movements operating at LOS A.**

5.3 Year 2043 Background Intersection Capacity Analysis

The study area intersections were evaluated to determine baseline operations for the Year 2043 background scenario and to identify any capacity constraints associated with background traffic in the long-term scenario. The long-term background volumes, lane configuration, and traffic control are illustrated on **Figure 5**.

The Level of Service criteria discussed previously was applied to the study area intersection to determine the impacts with the long-term background conditions. The details of LOS for each movement are provided in **Table 1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**. **In summary, the study intersections are expected to operate overall at LOS A in both peak hours. All individual movements during peak hours are expected to operate at LOS B or better.**

6.0 Future Conditions with the Proposed Multi-Use Project

6.1 Proposed Access

The Stagecoach Tailwaters project proposes to provide five (5) accesses on the existing roadway network. The primary access is proposed to be the east leg of the intersection between Routt CR 18A and Routt CR 16. It is proposed that the existing stop sign on the southbound approach (CR 18A) remain, and a stop sign be installed on the northbound approach (CR 16). This intersection will continue to be full-movement.

There will be two (2) secondary accesses on Routt CR 18A and one (1) other access on Routt CR 16. All the listed accesses are proposed to be full-movement with side-street stop-control. The fifth access will be an extension of the existing Crow Trail, which is located on the north side of the property.

It is anticipated that the proposed cross-access to Crow Trail will have minimal new traffic since it is likely to be used by existing residents to access the commercial businesses and by a few future residents that want to recreate at Stagecoach Reservoir at the Morrison Cove Boat Ramp. These trips are expected to occur outside of typical morning and afternoon peak hours for traffic that are analyzed in this report. It is possible that some existing traffic may reroute from CR 18A the new Crow Trail extension, though the impact of changing routes is expected to be minimal. During peak times fewer than 15 vehicles per hour (vph) currently use CR 18A, so even if most drivers reroute to use the new Crow Trail extension, the impact to Crow Trail will be limited.

6.2 Trip Generation

A trip generation estimate was performed to determine the traffic characteristics of the proposed Stagecoach Tailwaters Project. The trip rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*[2] were applied as appropriate to estimate the traffic generated by the project. It

[2] *Trip Generation Handbook, 11th Edition*, Institute of Transportation Engineers, 2021.

should be noted that ITE trip rates were developed for urban and suburban uses and are likely conservatively high for the rural context of the Stagecoach area.

The proposed project is expected to experience mostly new trips, also known as 'primary trips', as well as internal capture trips which are discussed below:

Primary Trips. These trips are made specifically to visit the site and are considered "new" trips. Primary trips would not have been made if the proposed project did not exist. Therefore, this is the only trip type that increases the total number of trips made on a regional basis. For residential uses, it is expected that there will be a reduction in primary trips as compared to ITE rates due to the rural nature of the Stagecoach area. With greater travel distances required, individual trips are more likely to be chained together. This conclusion is supported by the observed traffic counts on CR 18A north of CR 16 where a total of 43 single-family homes generated 223 vehicles per day (vpd) for an observed trip rate of 5.18 daily trips per home. Based on national suburban data, daily trip generation for a single-family home is 9.43 daily trips per home (ITE), nearly two times higher than observed. To be conservative, residential trips were reduced by a 10% rural factor to adjust for the rural nature of the site. It is expected that the commercial land uses will also experience a lower trip rate than suburban areas; however, data was not available to substantiate the reduction for commercial trips.

Internal Capture Trips. These trips occur from one land use or building to another within the site boundaries. Multi-use or multi-purpose trips typically do not affect the exterior site access points, nor add any additional traffic volumes to the adjacent street network. It is anticipated there will be some internal trips within the proposed project site due to the mix of uses, especially between commercial businesses and residential units. It was conservatively estimated that a 5% internal trip capture will occur for this project based on the mix of uses and rural character of surrounding land uses.

Pass-by Trips. Commercial land uses historically have shown to have pass-by trips as indicated by the national data in the ITE *Trip Generation Manual*, which are those vehicles that utilize one of the adjacent roadways to travel between their origin and destination and choose to make a stop within the development site before they continue their route. This is not a reduction of trips, but a redirect of existing/background trips that will become a customer of the new businesses. The ITE *Trip Generation Manual* defines pass-by as "trips made as intermediate stops on the way from an origin to primary trip destination without a route diversion". Since there is minimal traffic on the adjacent roadways, it was assumed that all of the trips will be new trips.

Non-Auto Trips. Non-Auto trips are those that are completed by walking, biking, or transit. Being located in a small community and near the Stagecoach Reservoir, it is likely some patrons of the commercial businesses will walk or bike. For conservative purposes, the non-auto trips were assumed to be included in the internal capture.

Table 2 provides the detailed trip generation estimates for the project (refer to **Appendix**). **The Stagecoach Tailwaters Project, including both the housing and commercial space trips, is estimated to generate approximately 2,266 daily trips with 172 trips in the AM peak hour and 219 trips in the PM peak hour.**

6.3 Trip Distribution and Assignment

The estimated trip volumes were distributed onto the study area street network based on existing traffic characteristics, land uses, and traffic patterns in the area, as well as regional growth and future roadway improvements. It is anticipated that there will be different distributions for the residential homes versus the commercial businesses since the trip purposes are different. The assumed distribution for residential uses is shown on **Figure 6A** and the assumed distribution for commercial uses is shown on **Figure 6B**.

Using these distribution assumptions, the projected site traffic was assigned to the study area roadway network and appropriate accesses for the weekday AM and PM peak hour periods based on the most convenient route. The site-generated volumes are shown on **Figure 6A** and **Figure 6B**.

Combining site-generated volumes for residential and commercial uses, the project is estimated to increase traffic on CR 14 west of CR 16 by approximately 55 vph during the AM peak hour and by approximately 46 vph during the PM peak hour. To/from east CR 14, it was estimated that the project would add approximately 34 vph in the AM peak hour and approximately 35 vph in the PM peak hour.

6.4 Year 2028 + Project Intersection Capacity Analysis

This section discusses impacts associated with the addition of the project trips in the short-term scenario. The site-generated volumes were added to the Year 2028 background volumes and are illustrated on **Figure 7**. This figure also illustrates the proposed traffic control and lane configurations for the five (5) proposed accesses. The details of LOS for each movement are provided in **Table 1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**.

The addition of the project trips was estimated to have little to no impact on the performance of the study intersections compared to the Year 2028 background scenario (overall LOS B or better in both

peak hours, all movements operating at LOS B or better). The proposed new accesses are estimated to operate at LOS A overall for both peak hours, with all movements operating at LOS B or better.

6.5 Year 2043 Background + Project Intersection Capacity Analysis

This section discusses impacts associated with the addition of the proposed project trips in the long-term scenario. The site-generated volumes were added to the Year 2043 background volumes and are illustrated on **Figure 8**. This figure also illustrates the proposed traffic control and lane configurations for the five (5) accesses. The details of LOS for each movement are provided in **Table 1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**.

The addition of the project generated trips was estimated to have minimal impact on the performance of the study intersections compared to the Year 2043 background scenario. All study intersections are estimated to operate at LOS A overall and all movements are estimated to operate at LOS D or better in both peak hours. The proposed accesses are anticipated to operate overall at LOS A in both peak hours with all the movements operating at LOS B or better.

7.0 Conclusions

The Stagecoach Tailwaters Project proposes to construct a mixed-use community with a range of housing types and commercial uses at the intersection of CR 16 and CR 18A. The project proposes three (3) full-movement, side-street stop-controlled accesses and a full-movement side-street stop-controlled intersection at CR 16 and CR 18A, as well as a fifth access by the extension of Crow Trail. The project is estimated to generate approximately 2,266 daily trips with about 172 trips occurring in the AM peak hour and 219 trips occurring in the PM peak hour.

It was determined that the existing roadway system can adequately accommodate the projected traffic volumes in the near-term and long-term scenarios. Based on the volumes and performance, it is anticipated that auxiliary lanes will not be needed at any of the study intersections and access intersections.

Tables and Figures:

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Table 1 - Peak Hour Intersection Level of Service Summary

Intersection and Cricital Lane Groups	Year 2023 Existing				Year 2028 Background				Year 2028 Bkgrd + Project Trips				Year 2043 Background				Year 2043 Bkgrd + Project Trips			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
YIELD CONTROL																				
1. Routt Cty Road 16 at Routt Cty Road 14	**8**	**A**	**5**	**A**	**8**	**A**	**6**	**A**	**9**	**A**	**7**	**A**	**8**	**A**	**6**	**A**	**10**	**A**	**8**	**A**
Eastbound Through+Right	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*
Westbound Left	*7*	*A*	*8*	*A*	*7*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*	*8*	*A*
Westbound Through	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*
Northbound Left+Right	*9*	*A*	*10*	*A*	*10*	*A*	*10*	*A*	*12*	*B*	*13*	*B*	*11*	*B*	*11*	*B*	*13*	*B*	*16*	*C*
2. Routt Cty Road 16 at Routt Cty Road 212	**6**	**A**	**5**	**A**	**6**	**A**	**6**	**A**	**8**	**A**	**8**	**A**	**6**	**A**	**6**	**A**	**9**	**A**	**8**	**A**
Westbound Left+Right	*9*	*A*	*9*	*A*	*10*	*A*	*9*	*A*	*11*	*B*	*10*	*A*	*11*	*B*	*10*	*A*	*13*	*B*	*11*	*B*
Northbound Through+Right	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*
Southbound Left+Through	*3*	*A*	*5*	*A*	*4*	*A*	*5*	*A*	*7*	*A*	*6*	*A*	*4*	*A*	*5*	*A*	*6*	*A*	*6*	*A*
STOP SIGN CONTROL																				
3. Routt Cty Road 16 at Routt Cty Road 18A and Project Access	**2**	**A**	**3**	**A**	**2**	**A**	**3**	**A**	**4**	**A**	**3**	**A**	**2**	**A**	**3**	**A**	**5**	**A**	**4**	**A**
Eastbound Left+Right	*7*	*A*	*7*	*A*	*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*				
Eastbound Left+Through+Right									*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*
Westbound Left+Through+Right									*7*	*A*	*8*	*A*					*8*	*A*	*8*	*A*
Northbound Left+Through	*0*	*A*	*0*	*A*	*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*				
Northbound Left+Through+Right									*10*	*B*	*10*	*B*					*11*	*B*	*11*	*B*
Southbound Left+Through	*9*	*A*	*8*	*A*	*9*	*A*	*8*	*A*					*9*	*A*	*8*	*A*				
Southbound Left+Through+Right									*9*	*A*	*9*	*A*					*9*	*A*	*10*	*A*
4. Routt Cty Road 18A at MF Access									**1**	**A**	**1**	**A**					**3**	**A**	**2**	**A**
Westbound Left+Right	*Project Access*				*Project Access*				*9*	*A*	*9*	*A*	*Project Access*				*9*	*A*	*9*	*A*
Northbound Through+Right									*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*
Southbound Left+Through									*0*	*A*	*0*	*A*					*7*	*A*	*7*	*A*

Table 1 - Peak Hour Intersection Level of Service Summary

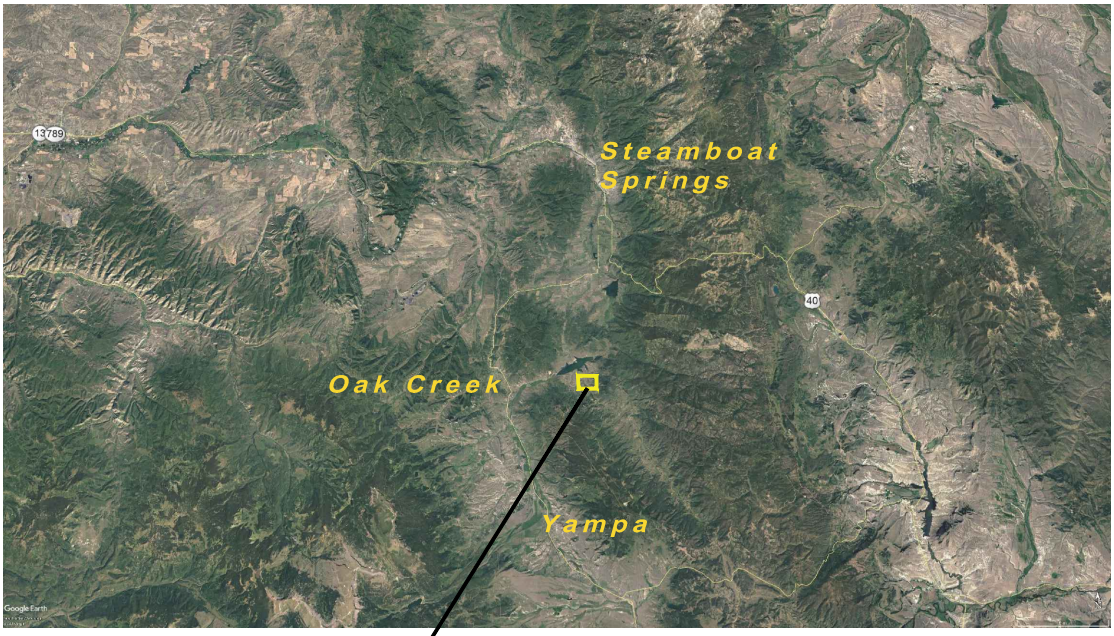
Intersection and Cricital Lane Groups	Year 2023 Existing				Year 2028 Background				Year 2028 Bkgrd + Project Trips				Year 2043 Background				Year 2043 Bkgrd + Project Trips			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
5. Routt Cty Road 18A at North SF Access									**3**	**A**	**2**	**A**					**3**	**A**	**3**	**A**
Westbound Left+Right	*Project Access*				*Project Access*				*9*	*A*	*9*	*A*	*Project Access*				*9*	*A*	*9*	*A*
Northbound Through+Right									*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*
Southbound Left+Through									*0*	*A*	*0*	*A*					*7*	*A*	*7*	*A*
6. Routt Cty Road 16 at Middle Access									**3**	**A**	**3**	**A**					**3**	**A**	**3**	**A**
Westbound Left+Right	*Project Access*				*Project Access*				*9*	*A*	*9*	*A*	*Project Access*				*9*	*A*	*9*	*A*
Northbound Through+Right									*0*	*A*	*0*	*A*					*0*	*A*	*0*	*A*
Southbound Left+Through									*7*	*A*	*7*	*A*					*7*	*A*	*7*	*A*

Note: Delay represented in average seconds per vehicle.

Table 2 - Trip Generation Summary

Land Use	Size	Unit	Internal Capture	Non-Auto Factor	Rural Factor	Average Daily Trips				AM Peak Hour Trips				PM Peak Hour Trips			
						Rate	Total	In	Out	Rate	Total	In	Out	Rate	Total	In	Out
ITE 210: Single-Family Detached Housing	90	DU	0.95	1.00	0.90	9.43	726	363	363	0.70	54	14	40	0.94	72	45	27
ITE 215: Single-Family Attached Housing	106	DU	0.95	1.00	0.90	7.20	653	327	326	0.48	44	14	30	0.57	52	30	22
ITE 220: Multifamily Housing (Low-Rise)	4	DU	0.95	1.00	0.90	6.74	23	12	11	0.40	1	0	1	0.51	2	1	1
Total Residential Trips							***1,402***	***702***	***700***		***99***	***28***	***71***		***126***	***76***	***50***
ITE 850: Supermarket	3.5	1000 SF	0.95	1.00	1.00	93.84	312	156	156	2.89	10	6	4	8.95	30	15	15
ITE 932: High-Turnover (Sit-Down) Restaurant	4	1000 SF	0.95	1.00	1.00	107.20	407	204	203	9.57	36	20	16	9.05	34	21	13
ITE 565: Day Care Center	2	1000 SF	0.95	1.00	1.00	47.62	90	45	45	11.00	21	11	10	11.12	21	10	11
ITE 712: Small Office Building	4	1000 SF	0.95	1.00	1.00	14.39	55	28	27	1.67	6	5	1	2.16	8	3	5
Total Commercial Trips							***864***	***433***	***431***		***73***	***42***	***31***		***93***	***49***	***44***
Total Site Trips							***2,266***	***1,135***	***1,131***		***172***	***70***	***102***		***219***	***125***	***94***

Source : ITE Trip Generation 11th Edition, 2021.



PROJECT SITE

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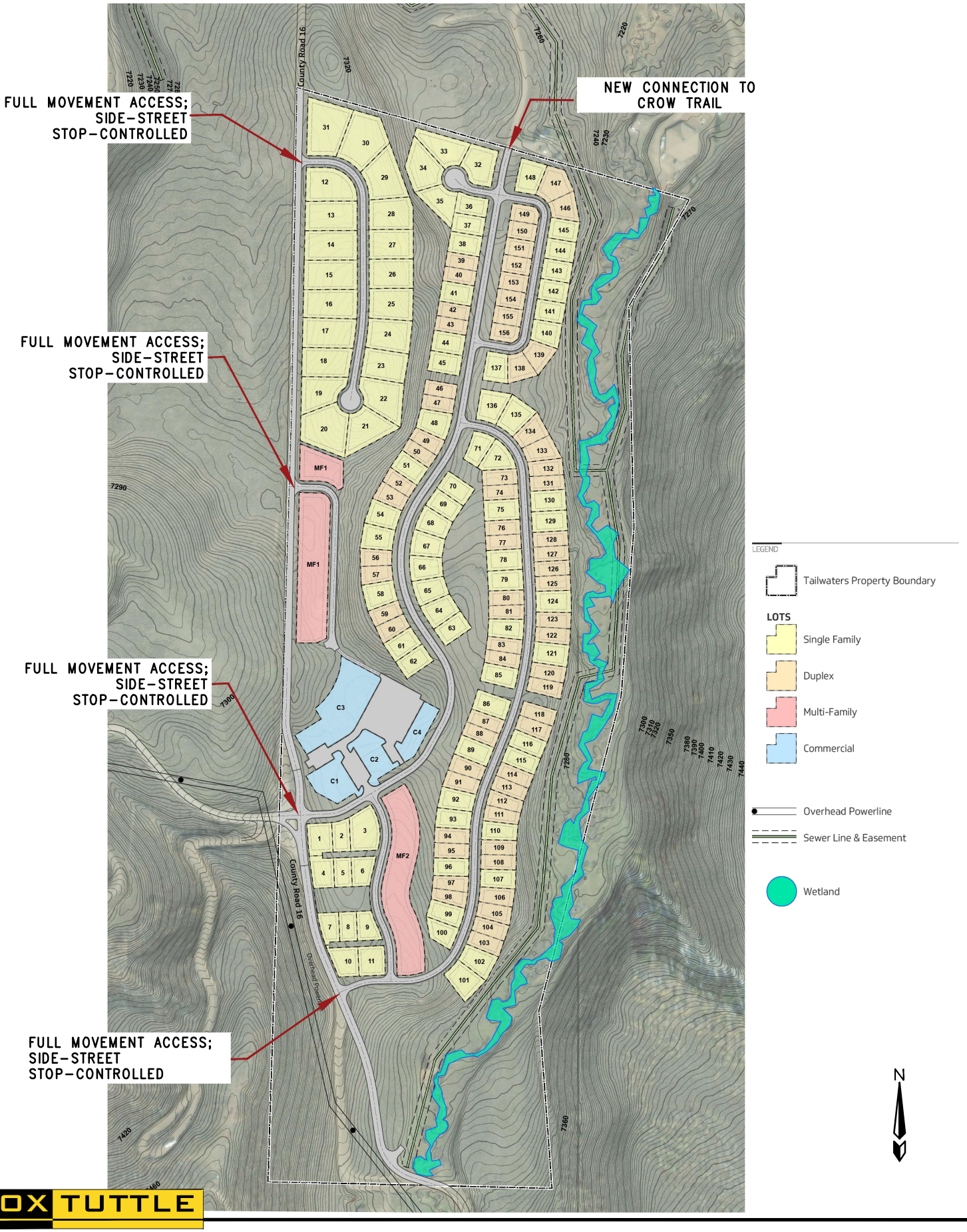
STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

VICINITY MAP

Project #	23069	Original Scale	NTS	Date	9/8/2023	Drawn by	SKK	Figure #	1



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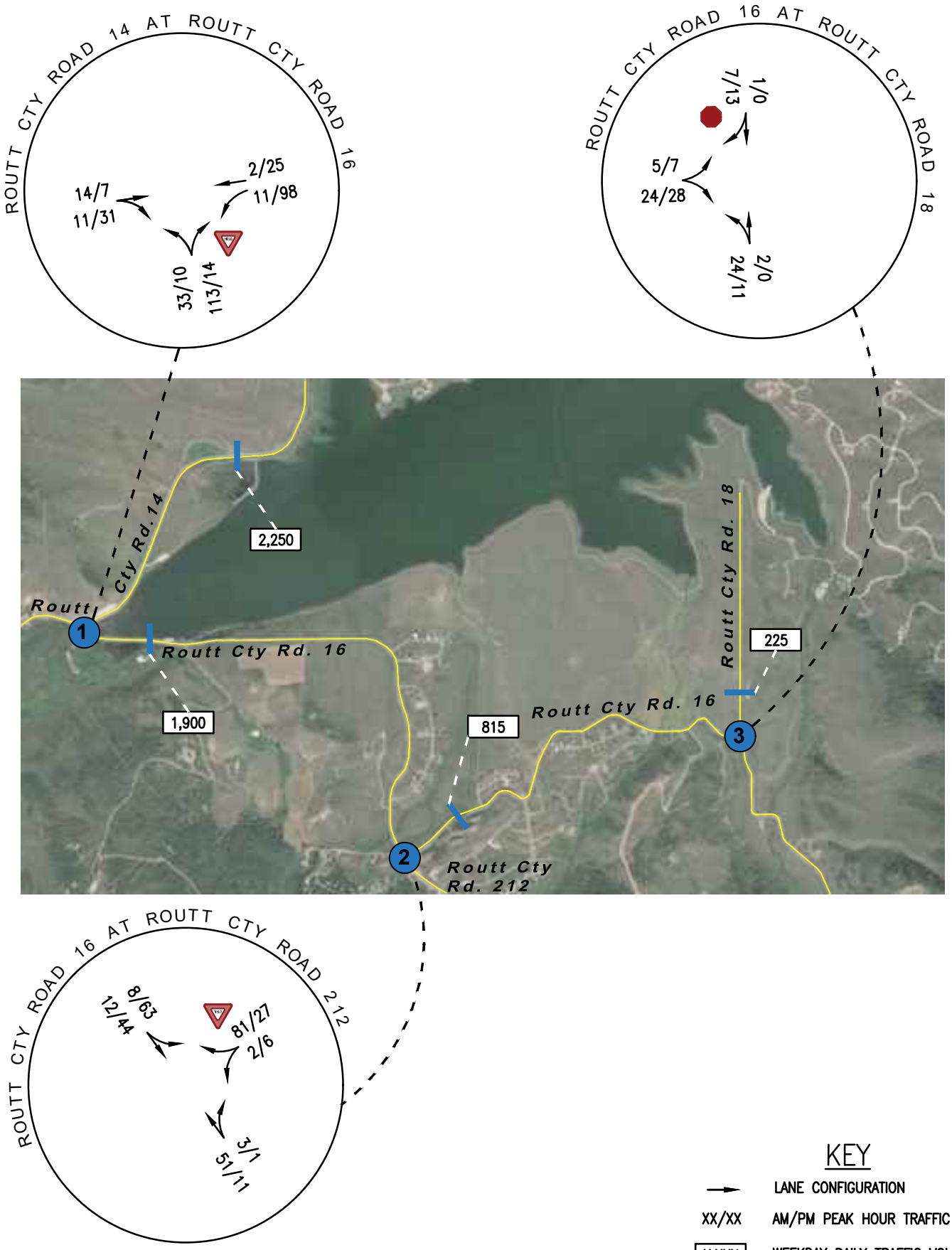
STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

CONCEPTUAL SITE PLAN AND ACCESS

Project #	23069	Original Scale	NTS	Date	12/14/2023	Drawn by	SKK	Figure #	2



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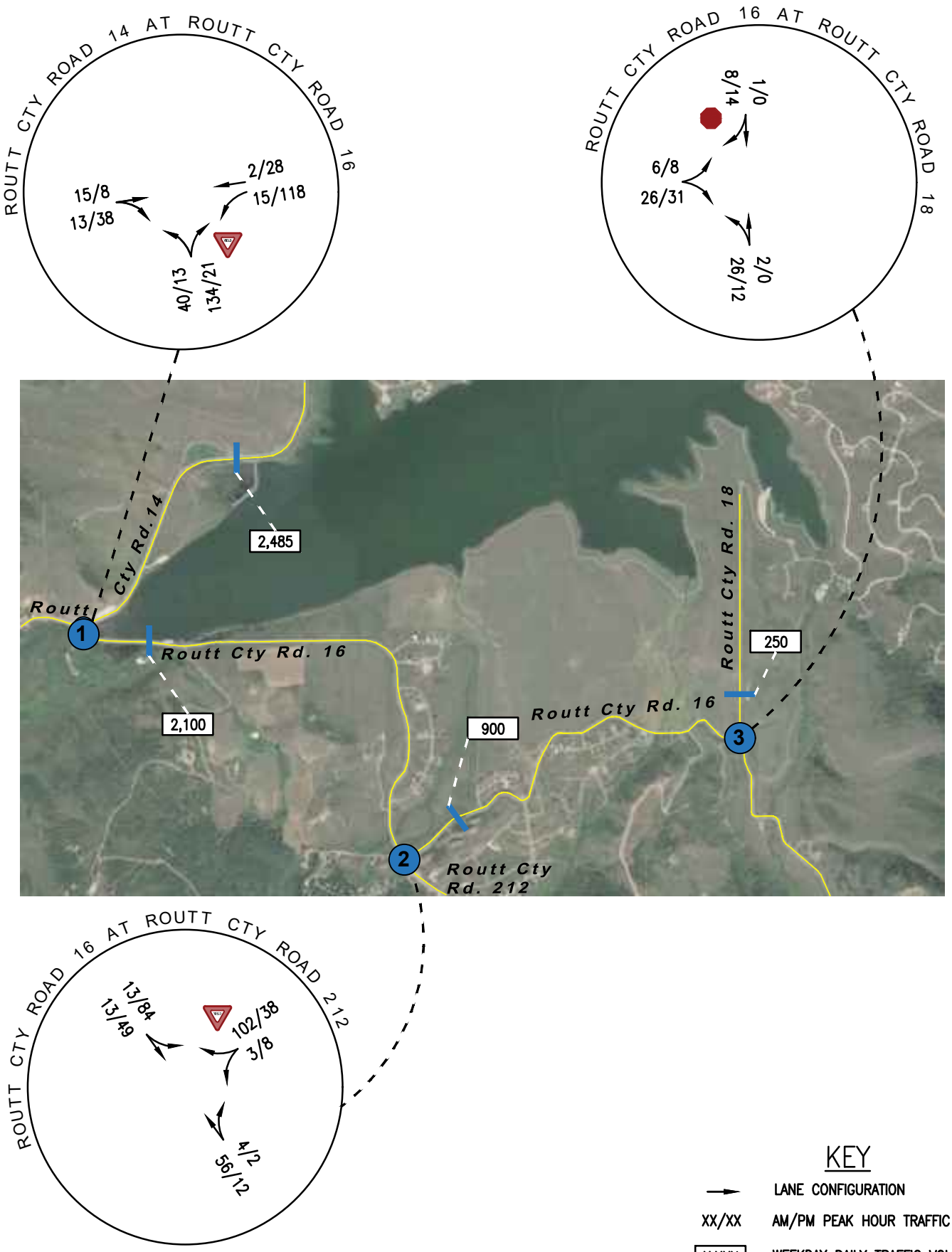
STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

YEAR 2023 EXISTING TRAFFIC VOLUMES

Project #	23069	Original Scale	NTS	Date	9/7/2023	Drawn by	SKK	Figure #	3



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STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

YEAR 2028 BACKGROUND TRAFFIC VOLUMES

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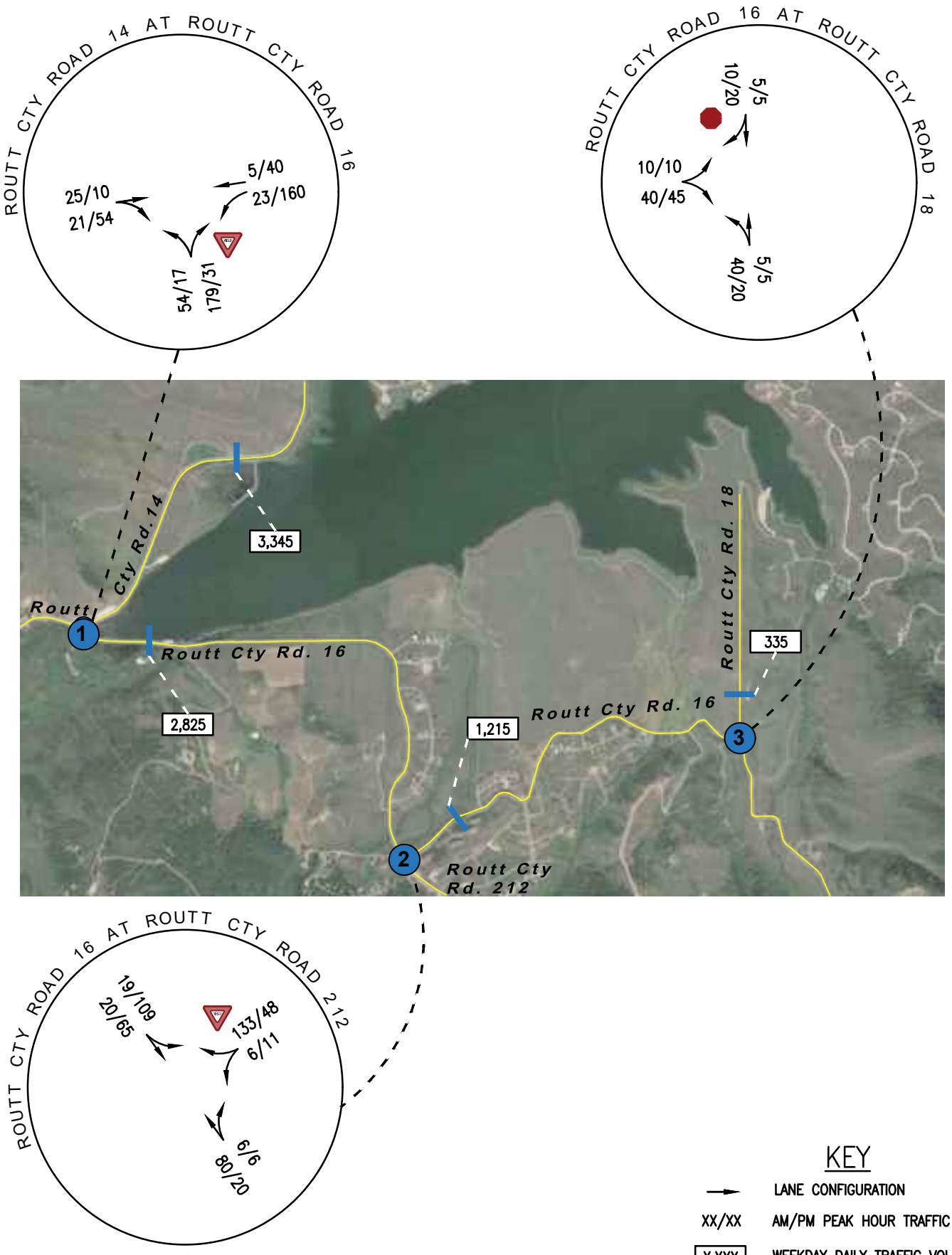

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STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

YEAR 2043 BACKGROUND TRAFFIC VOLUMES

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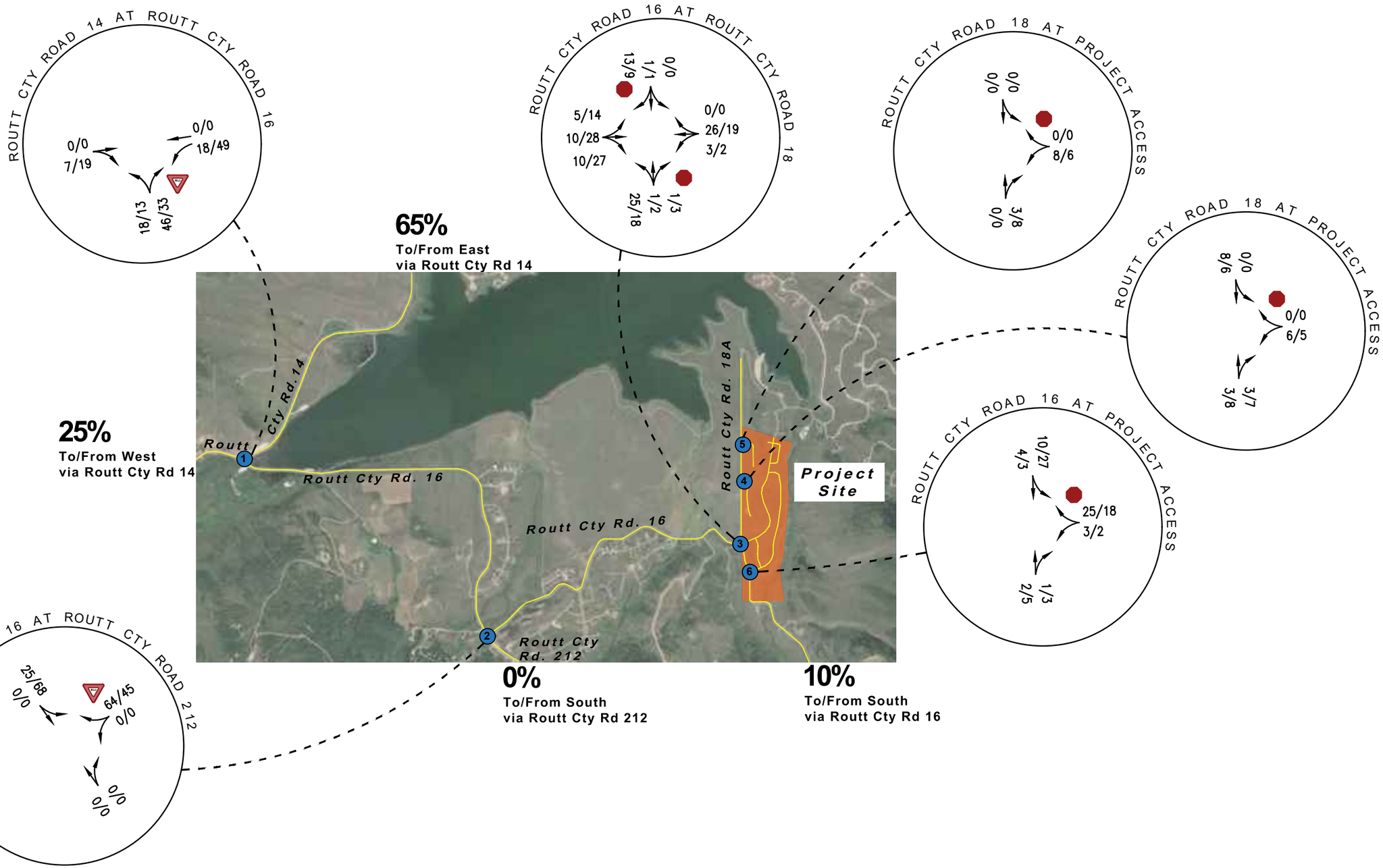

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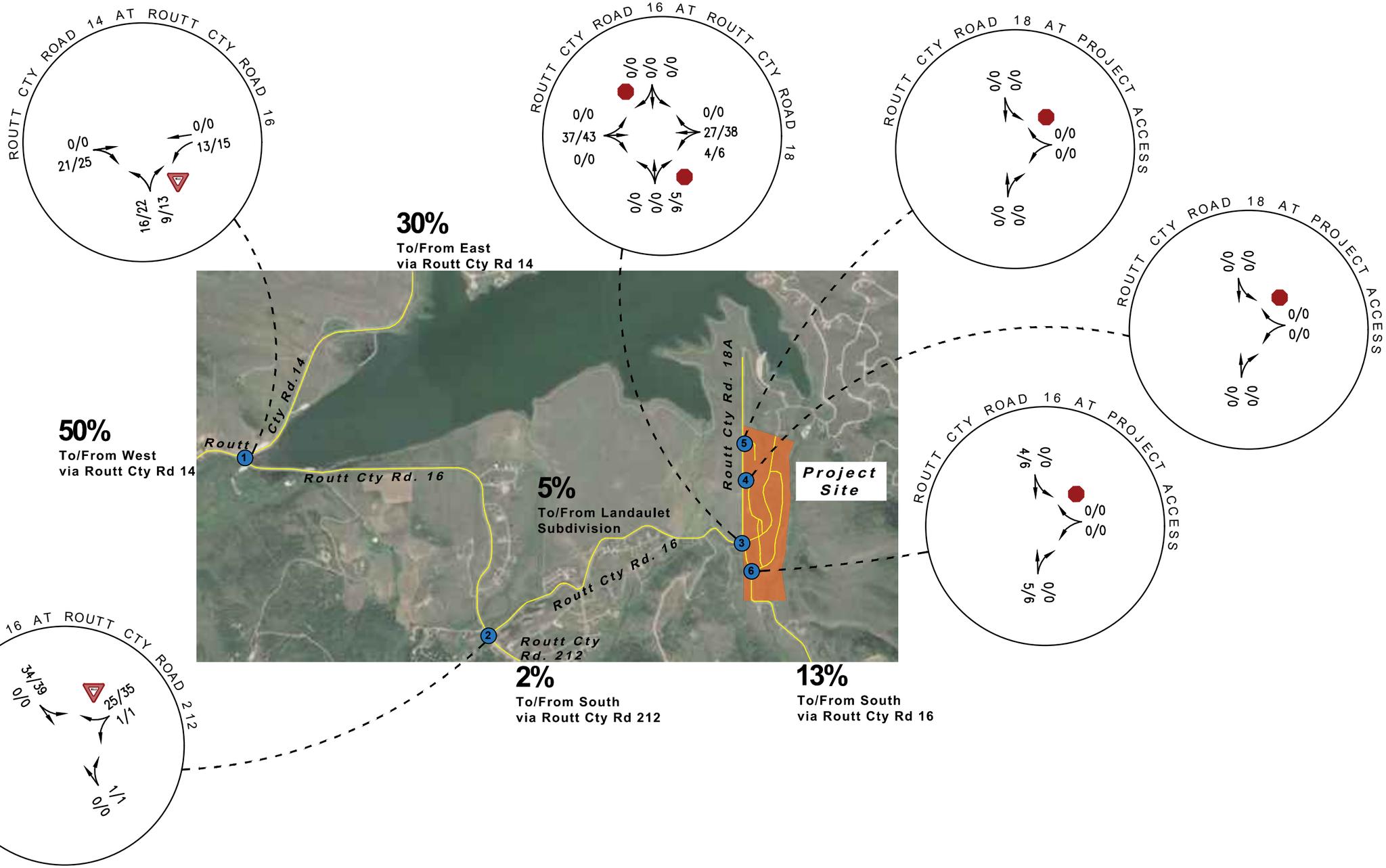
STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

RESIDENTIAL TRIP DISTRIBUTION AND ASSIGNMENT

FT Project #	23069	Original Scale	NTS	Date	1/8/2024	Drawn by	SKK	Figure #	6A

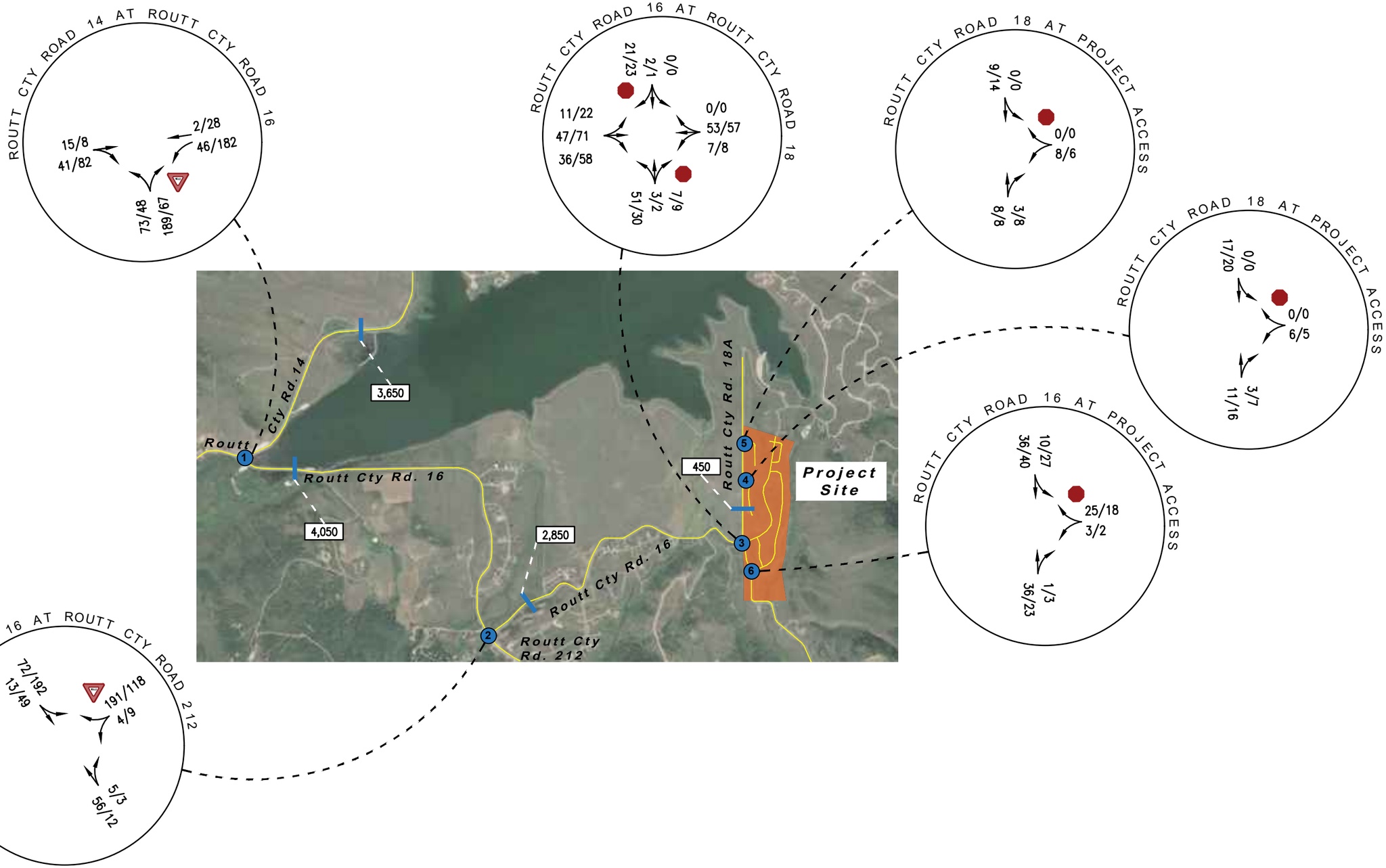


FOX TUTTLE
TRANSPORTATION GROUP

STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

COMMERCIAL TRIP DISTRIBUTION AND ASSIGNMENT

FT Project #	23069	Original Scale	NTS	Date	1/8/2024	Drawn by	SKK	Figure #	6B

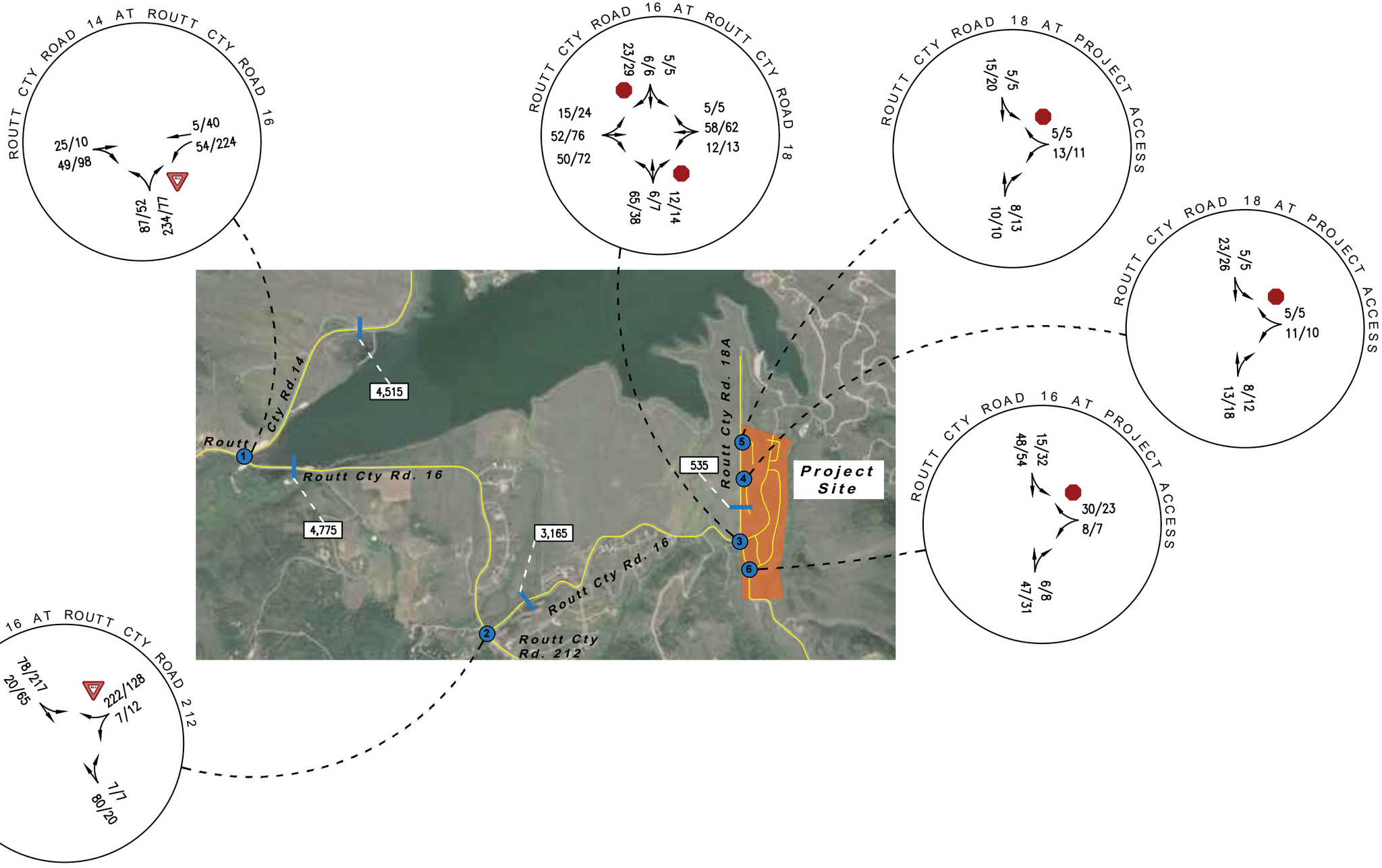


FOX TUTTLE
TRANSPORTATION GROUP

STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

2028 BACKGROUND + PROJECT VOLUMES

FT Project #	23069	Original Scale	NTS	Date	1/8/2024	Drawn by	SKK	Figure #	7



FOX TUTTLE
TRANSPORTATION GROUP

STAGECOACH TAILWATERS TRAFFIC IMPACT STUDY

2043 BACKGROUND + PROJECT VOLUMES

FT Project #	23069	Original Scale	NTS	Date	1/8/2024	Drawn by	SKK	Figure #	8

Appendix:

Level of Service Definitions

Existing Traffic Data

Intersection Capacity Worksheets

Level of Service Definitions

LEVEL OF SERVICE (LOS) DEFINITIONS

In rating roadway and intersection operating conditions with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle*		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers can maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome, and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however, the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion.

** Delay ranges based on 2010 Highway Capacity Manual Criteria*

Existing Traffic Data

Location: CR 18A N/O CR 16
Date Range: 8/17/2023 - 8/23/2023
Site Code: 01

Time	Thursday 8/17/2023			Friday 8/18/2023			Saturday 8/19/2023			Sunday 8/20/2023			Monday 8/21/2023			Tuesday 8/22/2023			Wednesday 8/23/2023			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
1:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
2:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
3:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
4:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
5:00 AM	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
6:00 AM	7	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	9
7:00 AM	3	9	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	12
8:00 AM	7	11	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	11	18
9:00 AM	6	7	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7	13
10:00 AM	6	8	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	8	14
11:00 AM	**8**	**12**	**20**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**8**	**12**	**20**
12:00 PM	3	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7	10
1:00 PM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	10
2:00 PM	10	8	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	8	18
3:00 PM	7	4	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	4	11
4:00 PM	7	6	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	6	13
5:00 PM	7	**13**	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	**13**	20
6:00 PM	**14**	7	**21**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**14**	7	**21**
7:00 PM	9	6	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	6	15
8:00 PM	5	5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	10
9:00 PM	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0	3
10:00 PM	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0	3
11:00 PM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Total	**111**	**112**	**223**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**111**	**112**	**223**
Percent	**50%**	**50%**		-	-		-	-		-	-		-	-		-	-		-	-		**50%**	**50%**	
AM Peak	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11:00	11:00	11:00
Vol.	8	12	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	12	20
PM Peak	18:00	17:00	18:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18:00	17:00	18:00
Vol.	14	13	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	13	21

1. Mid-week average includes data between Tuesday and Thursday.

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Location: CR 16 N/O CR 212 - Rock Point Trail
Date Range: 8/17/2023 - 8/23/2023
Site Code: 02

Time	Thursday 8/17/2023			Friday 8/18/2023			Saturday 8/19/2023			Sunday 8/20/2023			Monday 8/21/2023			Tuesday 8/22/2023			Wednesday 8/23/2023			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	1	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	5
1:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
2:00 AM	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	2
3:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
4:00 AM	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	2
5:00 AM	25	1	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	1	26
6:00 AM	56	21	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	21	77
7:00 AM	**125**	31	**156**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**125**	31	**156**
8:00 AM	89	**49**	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	**49**	138
9:00 AM	71	31	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	31	102
10:00 AM	52	43	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	43	95
11:00 AM	69	41	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	41	110
12:00 PM	61	63	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	63	124
1:00 PM	55	52	107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	52	107
2:00 PM	56	56	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	56	112
3:00 PM	**68**	60	128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**68**	60	128
4:00 PM	56	76	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	76	132
5:00 PM	62	**122**	**184**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	**122**	**184**
6:00 PM	52	102	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	102	154
7:00 PM	20	70	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	70	90
8:00 PM	10	54	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	54	64
9:00 PM	6	42	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	42	48
10:00 PM	4	18	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	18	22
11:00 PM	1	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	8
Total	**941**	**947**	**1,888**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**941**	**947**	**1,888**
Percent	**50%**	**50%**		-	-		-	-		-	-		-	-		-	-		-	-		**50%**	**50%**	
AM Peak	07:00	08:00	07:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	07:00	08:00	07:00
Vol.	125	49	156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	49	156
PM Peak	15:00	17:00	17:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15:00	17:00	17:00
Vol.	68	122	184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	122	184

1. Mid-week average includes data between Tuesday and Thursday.

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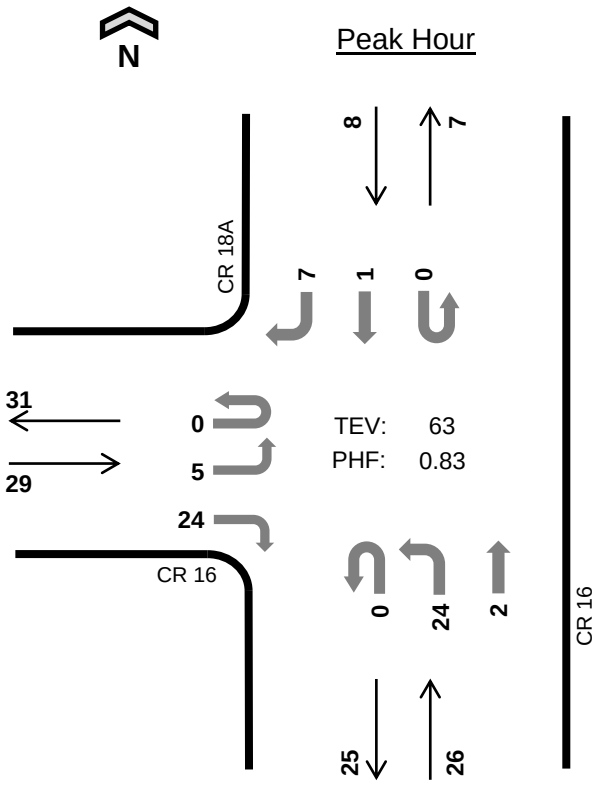
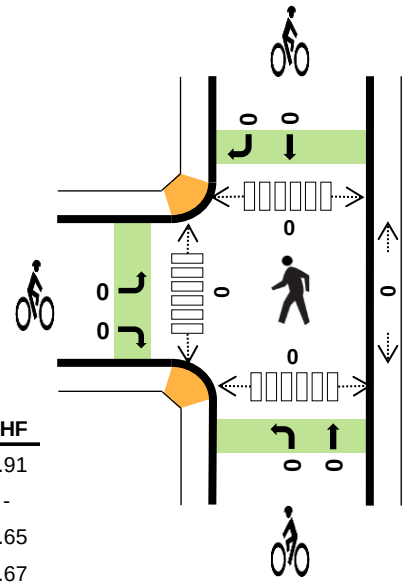
CR 16
CR 18A

Peak Hour

Date: 08/17/2023
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	24.1%	0.91
WB	-	-
NB	7.7%	0.65
SB	12.5%	0.67
TOTAL	15.9%	0.83



Two-Hour Count Summaries

Interval Start	CR 16 Eastbound				n/a Westbound				CR 16 Northbound				CR 18A Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	1	7	0
7:15 AM	**0**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**0**	**2**	**19**	0
7:30 AM	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**2**	**14**	0
7:45 AM	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**3**	**17**	57
8:00 AM	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**63**
8:15 AM	0	1	0	3	0	0	0	0	0	6	0	0	0	0	1	3	14	58
8:30 AM	0	0	0	7	0	0	0	0	0	4	0	0	0	0	0	4	15	59
8:45 AM	0	2	0	3	0	0	0	0	0	2	0	0	0	0	0	2	9	51
Count Total	0	8	0	37	0	0	0	0	0	42	2	0	0	0	2	17	108	0
Peak Hour All	**0**	**5**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**24**	**2**	**0**	**0**	**0**	**1**	**7**	**63**	**0**
Peak Hour HV	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**10**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**29%**	**-**	**-**	**-**	**-**	**-**	**8%**	**0%**	**-**	**-**	**-**	**0%**	**14%**	**16%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**4**	**0**	**1**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**2**	**0**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:15 AM	1	0	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	2	0	0	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	1	0	1	0	*2*	3	0	0	0	*3*	0	0	0	0	*0*
Count Total	11	0	4	2	*17*	3	0	0	0	*3*	0	0	0	0	*0*
Peak Hr	**7**	**0**	**2**	**1**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	CR 16 Eastbound				n/a Westbound				CR 16 Northbound				CR 18A Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	0
7:30 AM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	0
7:45 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	10
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**
8:15 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	10
8:30 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	8
8:45 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	7
Count Total	0	1	0	10	0	0	0	0	0	4	0	0	0	0	0	2	17	0
Peak Hour	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**10**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	CR 16 Eastbound			n/a Westbound			CR 16 Northbound			CR 18A Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	3	0	0	0	0	0	0	0	0	0	0	0	3	3
Count Total	3	0	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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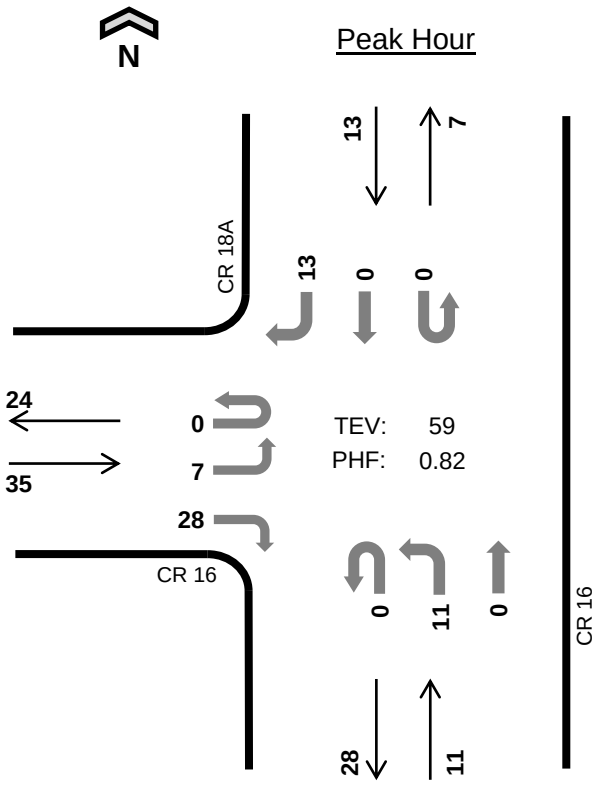
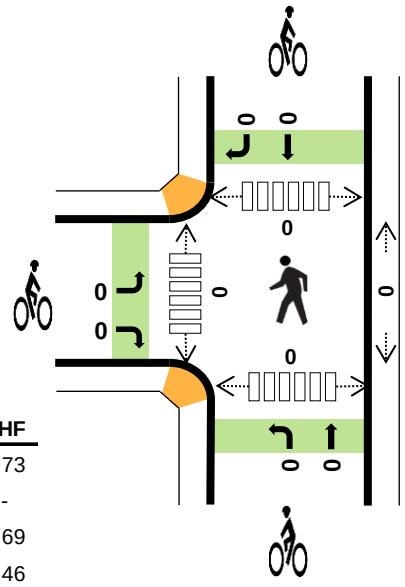
CR 16
CR 18A

Peak Hour



Date: 08/17/2023
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	5.7%	0.73
WB	-	-
NB	9.1%	0.69
SB	15.4%	0.46
TOTAL	8.5%	0.82

Two-Hour Count Summaries

Interval Start	CR 16 Eastbound				n/a Westbound				CR 16 Northbound				CR 18A Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	9	0	0	0	0	0	12	0	0	0	0	0	3	24	0
4:15 PM	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	6	0
4:30 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7	0
4:45 PM	0	1	0	6	0	0	0	0	0	6	1	0	0	0	0	2	16	53
5:00 PM	**0**	**3**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**2**	**16**	45
5:15 PM	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**7**	46
5:30 PM	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**7**	**18**	57
5:45 PM	**0**	**3**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**2**	**18**	**59**
Count Total	0	13	0	46	0	0	0	0	0	33	1	0	0	0	0	19	112	0
Peak Hour All	**0**	**7**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**13**	**59**	**0**
Peak Hour HV	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**
Peak Hour HV%	**-**	**14%**	**-**	**4%**	**-**	**-**	**-**	**-**	**-**	**9%**	**-**	**-**	**-**	**-**	**-**	**15%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	1	0	0	0	*1*	1	0	0	0	*1*	0	0	0	0	*0*
5:00 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:45 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	5	0	1	2	*8*	1	0	0	0	*1*	0	0	0	0	*0*
Peak Hr	**2**	**0**	**1**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	CR 16 Eastbound				n/a Westbound				CR 16 Northbound				CR 18A Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	5
5:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**
Count Total	0	2	0	3	0	0	0	0	0	1	0	0	0	0	0	2	8	0
Peak Hour	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	CR 16 Eastbound			n/a Westbound			CR 16 Northbound			CR 18A Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Intersection Capacity Worksheets: Existing

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	24	24	2	1	7
Future Vol, veh/h	5	24	24	2	1	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	26	26	2	1	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	28	0	-	0	63	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	36	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1585	-	-	-	943	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	940	1048
Mov Cap-2 Maneuver	-	-	-	-	940	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	986	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	1033
HCM Lane V/C Ratio	0.003	-	-	-	0.008
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	14	11	11	2	33	113
Future Volume (Veh/h)	14	11	11	2	33	113
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.61	0.61	0.60	0.60	0.72	0.72
Hourly flow rate (vph)	23	18	18	3	46	157
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			41		71	32
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			41		71	32
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			99		95	85
cM capacity (veh/h)			1530		922	1042

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	41	18	3	203
Volume Left	0	18	0	46
Volume Right	18	0	0	157
cSH	1700	1530	1700	1012
Volume to Capacity	0.02	0.01	0.00	0.20
Queue Length 95th (ft)	0	1	0	19
Control Delay (s)	0.0	7.4	0.0	9.4
Lane LOS		A		A
Approach Delay (s)	0.0	6.3		9.4
Approach LOS				A

Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	81	51	3	8	12
Future Volume (Veh/h)	2	81	51	3	8	12
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.62	0.62	0.64	0.64
Hourly flow rate (vph)	4	147	82	5	12	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	128	84			87	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	84			87	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	85			99	
cM capacity (veh/h)	858	972			1484	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	151	87	31
Volume Left	4	0	12
Volume Right	147	5	0
cSH	968	1700	1484
Volume to Capacity	0.16	0.05	0.01
Queue Length 95th (ft)	14	0	1
Control Delay (s)	9.4	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	9.4	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	28	11	0	0	13
Future Vol, veh/h	7	28	11	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	30	12	0	0	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	12	0	-	0	58	12
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1607	-	-	-	949	1069
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	976	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1607	-	-	-	944	1069
Mov Cap-2 Maneuver	-	-	-	-	944	-
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	976	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1607	-	-	-	1069
HCM Lane V/C Ratio	0.005	-	-	-	0.013
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	7	31	98	25	10	14
Future Volume (Veh/h)	7	31	98	25	10	14
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.81	0.81	0.66	0.66
Hourly flow rate (vph)	9	41	121	31	15	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			50		302	30
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			50		302	30
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			92		98	98
cM capacity (veh/h)			1570		614	1012

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	50	121	31	36
Volume Left	0	121	0	15
Volume Right	41	0	0	21
cSH	1700	1570	1700	796
Volume to Capacity	0.03	0.08	0.02	0.05
Queue Length 95th (ft)	0	6	0	4
Control Delay (s)	0.0	7.5	0.0	9.7
Lane LOS		A		A
Approach Delay (s)	0.0	6.0		9.7
Approach LOS				A

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	27	11	1	63	44
Future Volume (Veh/h)	6	27	11	1	63	44
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.55	0.55	0.73	0.73
Hourly flow rate (vph)	10	47	20	2	86	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	253	21			22	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	253	21			22	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	96			95	
cM capacity (veh/h)	700	1062			1593	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	57	22	146
Volume Left	10	0	86
Volume Right	47	2	0
cSH	974	1700	1593
Volume to Capacity	0.06	0.01	0.05
Queue Length 95th (ft)	5	0	4
Control Delay (s)	8.9	0.0	4.5
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	4.5
Approach LOS	A		

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Capacity Worksheets: 2028 Background

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	26	26	2	1	8
Future Vol, veh/h	6	26	26	2	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	28	28	2	1	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	30	0	-	0	71	29
Stage 1	-	-	-	-	29	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1583	-	-	-	933	1046
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	980	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1583	-	-	-	929	1046
Mov Cap-2 Maneuver	-	-	-	-	929	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	1032
HCM Lane V/C Ratio	0.004	-	-	-	0.009
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	15	13	15	2	40	134
Future Volume (Veh/h)	15	13	15	2	40	134
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.61	0.61	0.60	0.60	0.72	0.72
Hourly flow rate (vph)	25	21	25	3	56	186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			46		88	36
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			46		88	36
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			98		94	82
cM capacity (veh/h)			1524		897	1037

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	46	25	3	242
Volume Left	0	25	0	56
Volume Right	21	0	0	186
cSH	1700	1524	1700	1001
Volume to Capacity	0.03	0.02	0.00	0.24
Queue Length 95th (ft)	0	1	0	24
Control Delay (s)	0.0	7.4	0.0	9.7
Lane LOS		A		A
Approach Delay (s)	0.0	6.6		9.7
Approach LOS				A

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	3	102	56	4	13	13
Future Volume (Veh/h)	3	102	56	4	13	13
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.62	0.62	0.64	0.64
Hourly flow rate (vph)	5	185	90	6	20	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	153	93			96	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	153	93			96	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	99	81			99	
cM capacity (veh/h)	825	961			1473	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	190	96	40
Volume Left	5	0	20
Volume Right	185	6	0
cSH	957	1700	1473
Volume to Capacity	0.20	0.06	0.01
Queue Length 95th (ft)	18	0	1
Control Delay (s)	9.7	0.0	3.8
Lane LOS	A		A
Approach Delay (s)	9.7	0.0	3.8
Approach LOS	A		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	31	12	0	0	14
Future Vol, veh/h	8	31	12	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	34	13	0	0	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	13	0	-	0	65	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1606	-	-	-	941	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1606	-	-	-	935	1067
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	970	-

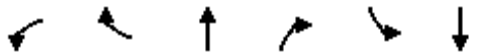
Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1606	-	-	-	1067
HCM Lane V/C Ratio	0.005	-	-	-	0.014
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	8	38	118	28	13	21
Future Volume (Veh/h)	8	38	118	28	13	21
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.81	0.81	0.66	0.66
Hourly flow rate (vph)	11	51	146	35	20	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)						
pX, platoon unblocked						
vC, conflicting volume			62		364	36
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			62		364	36
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			91		96	97
cM capacity (veh/h)			1554		555	1003

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	62	146	35	52
Volume Left	0	146	0	20
Volume Right	51	0	0	32
cSH	1700	1554	1700	765
Volume to Capacity	0.04	0.09	0.02	0.07
Queue Length 95th (ft)	0	8	0	5
Control Delay (s)	0.0	7.6	0.0	10.0
Lane LOS		A		B
Approach Delay (s)	0.0	6.1		10.0
Approach LOS				B

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	38	12	2	84	49
Future Volume (Veh/h)	8	38	12	2	84	49
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.55	0.55	0.73	0.73
Hourly flow rate (vph)	14	66	22	4	115	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)						
pX, platoon unblocked						
vC, conflicting volume	321	24			26	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	321	24			26	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	94			93	
cM capacity (veh/h)	628	1058			1588	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	80	26	182
Volume Left	14	0	115
Volume Right	66	4	0
cSH	945	1700	1588
Volume to Capacity	0.08	0.02	0.07
Queue Length 95th (ft)	7	0	6
Control Delay (s)	9.2	0.0	4.9
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	4.9
Approach LOS	A		

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Capacity Worksheets: 2043 Background

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	40	40	5	5	10
Future Vol, veh/h	10	40	40	5	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	43	43	5	5	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	48	0	-	0	111	46
Stage 1	-	-	-	-	46	-
Stage 2	-	-	-	-	65	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1559	-	-	-	886	1023
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1559	-	-	-	880	1023
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1559	-	-	-	970
HCM Lane V/C Ratio	0.007	-	-	-	0.017
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	21	23	5	54	179
Future Volume (Veh/h)	25	21	23	5	54	179
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.61	0.61	0.60	0.60	0.72	0.72
Hourly flow rate (vph)	41	34	38	8	75	249
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			75		142	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			75		142	58
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			97		91	75
cM capacity (veh/h)			1487		829	1008

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	75	38	8	324
Volume Left	0	38	0	75
Volume Right	34	0	0	249
cSH	1700	1487	1700	960
Volume to Capacity	0.04	0.03	0.00	0.34
Queue Length 95th (ft)	0	2	0	37
Control Delay (s)	0.0	7.5	0.0	10.6
Lane LOS		A		B
Approach Delay (s)	0.0	6.2		10.6
Approach LOS				B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	133	80	6	19	20
Future Volume (Veh/h)	6	133	80	6	19	20
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.62	0.62	0.64	0.64
Hourly flow rate (vph)	11	242	129	10	30	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	225	134			139	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	225	134			139	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	99	73			98	
cM capacity (veh/h)	745	912			1420	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	253	139	61
Volume Left	11	0	30
Volume Right	242	10	0
cSH	904	1700	1420
Volume to Capacity	0.28	0.08	0.02
Queue Length 95th (ft)	29	0	2
Control Delay (s)	10.5	0.0	3.8
Lane LOS	B		A
Approach Delay (s)	10.5	0.0	3.8
Approach LOS	B		

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	45	20	5	5	20
Future Vol, veh/h	10	45	20	5	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	49	22	5	5	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	96	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	71	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1587	-	-	-	903	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	952	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	897	1051
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	1016
HCM Lane V/C Ratio	0.007	-	-	-	0.027
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	10	54	160	40	17	31
Future Volume (Veh/h)	10	54	160	40	17	31
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.81	0.81	0.66	0.66
Hourly flow rate (vph)	13	72	198	49	26	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			85		494	49
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			85		494	49
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			87		94	95
cM capacity (veh/h)			1524		447	987

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	85	198	49	73
Volume Left	0	198	0	26
Volume Right	72	0	0	47
cSH	1700	1524	1700	690
Volume to Capacity	0.05	0.13	0.03	0.11
Queue Length 95th (ft)	0	11	0	9
Control Delay (s)	0.0	7.7	0.0	10.8
Lane LOS		A		B
Approach Delay (s)	0.0	6.2		10.8
Approach LOS				B

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	48	20	6	109	65
Future Volume (Veh/h)	11	48	20	6	109	65
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.55	0.55	0.73	0.73
Hourly flow rate (vph)	19	83	36	11	149	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	428	42			47	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	428	42			47	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	92			90	
cM capacity (veh/h)	531	1035			1560	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	102	47	238
Volume Left	19	0	149
Volume Right	83	11	0
cSH	880	1700	1560
Volume to Capacity	0.12	0.03	0.10
Queue Length 95th (ft)	10	0	8
Control Delay (s)	9.6	0.0	5.0
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	5.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Capacity Worksheets: 2028 Background + Project

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	15	41	46	2	73	189
Future Volume (Veh/h)	15	41	46	2	73	189
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.61	0.61	0.60	0.60	0.72	0.72
Hourly flow rate (vph)	25	67	77	3	101	262
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			92		216	58
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			92		216	58
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			95		86	74
cM capacity (veh/h)			1466		732	1007

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	92	77	3	363
Volume Left	0	77	0	101
Volume Right	67	0	0	262
cSH	1700	1466	1700	912
Volume to Capacity	0.05	0.05	0.00	0.40
Queue Length 95th (ft)	0	4	0	48
Control Delay (s)	0.0	7.6	0.0	11.5
Lane LOS		A		B
Approach Delay (s)	0.0	7.3		11.5
Approach LOS				B

Intersection Summary			
Average Delay	8.9		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	4	191	56	5	72	13
Future Volume (Veh/h)	4	191	56	5	72	13
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.62	0.62	0.64	0.64
Hourly flow rate (vph)	7	347	90	8	112	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	338	94			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338	94			98	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	99	64			92	
cM capacity (veh/h)	606	960			1470	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	354	98	132
Volume Left	7	0	112
Volume Right	347	8	0
cSH	949	1700	1470
Volume to Capacity	0.37	0.06	0.08
Queue Length 95th (ft)	44	0	6
Control Delay (s)	11.0	0.0	6.6
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	6.6
Approach LOS	B		

Intersection Summary			
Average Delay		8.2	
Intersection Capacity Utilization		30.0%	ICU Level of Service A
Analysis Period (min)		15	

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	47	36	7	53	0	51	3	7	0	2	21
Future Vol, veh/h	11	47	36	7	53	0	51	3	7	0	2	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	51	39	8	58	0	55	3	8	0	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	90	0	0	182	169	71	174	188	58
Stage 1	-	-	-	-	-	-	95	95	-	74	74	-
Stage 2	-	-	-	-	-	-	87	74	-	100	114	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1546	-	-	1505	-	-	779	724	991	789	707	1008
Stage 1	-	-	-	-	-	-	912	816	-	935	833	-
Stage 2	-	-	-	-	-	-	921	833	-	906	801	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1505	-	-	752	715	991	772	698	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	752	715	-	772	698	-
Stage 1	-	-	-	-	-	-	905	809	-	928	829	-
Stage 2	-	-	-	-	-	-	893	829	-	888	795	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.9	10.1	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	771	1546	-	-	1505	-	-	971
HCM Lane V/C Ratio	0.086	0.008	-	-	0.005	-	-	0.026
HCM Control Delay (s)	10.1	7.3	0	-	7.4	0	-	8.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	11	3	0	17
Future Vol, veh/h	6	0	11	3	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	12	3	0	18

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	32	14	0	0	15	0
Stage 1	14	-	-	-	-	-
Stage 2	18	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	982	1066	-	-	1603	-
Stage 1	1009	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	982	1066	-	-	1603	-
Mov Cap-2 Maneuver	982	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1005	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	982	1603	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	0	8	3	0	9
Future Vol, veh/h	8	0	8	3	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	9	3	0	10

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	11	0	0	12	0
Stage 1	11	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	996	1070	-	-	1607	-
Stage 1	1012	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	996	1070	-	-	1607	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1013	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1607	-
HCM Lane V/C Ratio	-	-	0.009	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	25	36	1	10	36
Future Vol, veh/h	3	25	36	1	10	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	27	39	1	11	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	101	40	0	0	40	0
Stage 1	40	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	898	1031	-	-	1570	-
Stage 1	982	-	-	-	-	-
Stage 2	962	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	892	1031	-	-	1570	-
Mov Cap-2 Maneuver	892	-	-	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	955	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1014	1570	-
HCM Lane V/C Ratio	-	-	0.03	0.007	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	8	82	182	28	48	67
Future Volume (Veh/h)	8	82	182	28	48	67
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.81	0.81	0.66	0.66
Hourly flow rate (vph)	11	109	225	35	73	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			120		550	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			120		550	66
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			85		82	89
cM capacity (veh/h)			1480		403	966

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	120	225	35	175
Volume Left	0	225	0	73
Volume Right	109	0	0	102
cSH	1700	1480	1700	611
Volume to Capacity	0.07	0.15	0.02	0.29
Queue Length 95th (ft)	0	13	0	29
Control Delay (s)	0.0	7.9	0.0	13.2
Lane LOS		A		B
Approach Delay (s)	0.0	6.8		13.2
Approach LOS				B

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	118	12	3	192	49
Future Volume (Veh/h)	9	118	12	3	192	49
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.55	0.55	0.73	0.73
Hourly flow rate (vph)	16	203	22	5	263	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)						
pX, platoon unblocked						
vC, conflicting volume	618	24			27	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	618	24			27	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	81			83	
cM capacity (veh/h)	381	1058			1587	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	219	27	330
Volume Left	16	0	263
Volume Right	203	5	0
cSH	936	1700	1587
Volume to Capacity	0.23	0.02	0.17
Queue Length 95th (ft)	23	0	15
Control Delay (s)	10.0	0.0	6.4
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	6.4
Approach LOS	B		

Intersection Summary			
Average Delay		7.5	
Intersection Capacity Utilization		34.3%	ICU Level of Service
Analysis Period (min)		15	

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	71	58	8	57	0	30	2	9	0	1	23
Future Vol, veh/h	22	71	58	8	57	0	30	2	9	0	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	77	63	9	62	0	33	2	10	0	1	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	62	0	0	140	0	0	250	237	109	243	268	62
Stage 1	-	-	-	-	-	-	157	157	-	80	80	-
Stage 2	-	-	-	-	-	-	93	80	-	163	188	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1541	-	-	1443	-	-	703	664	945	711	638	1003
Stage 1	-	-	-	-	-	-	845	768	-	929	828	-
Stage 2	-	-	-	-	-	-	914	828	-	839	745	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1541	-	-	1443	-	-	673	649	945	690	623	1003
Mov Cap-2 Maneuver	-	-	-	-	-	-	673	649	-	690	623	-
Stage 1	-	-	-	-	-	-	831	755	-	913	823	-
Stage 2	-	-	-	-	-	-	885	823	-	814	732	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.9	10.4	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	717	1541	-	-	1443	-	-	978
HCM Lane V/C Ratio	0.062	0.016	-	-	0.006	-	-	0.027
HCM Control Delay (s)	10.4	7.4	0	-	7.5	0	-	8.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	0	16	7	0	20
Future Vol, veh/h	5	0	16	7	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	17	8	0	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	43	21	0	0	25	0
Stage 1	21	-	-	-	-	-
Stage 2	22	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	968	1056	-	-	1589	-
Stage 1	1002	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1056	-	-	1589	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	1001	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1589	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	8	8	0	14
Future Vol, veh/h	6	0	8	8	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	9	9	0	15

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	29	14	0	0	18	0
Stage 1	14	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	986	1066	-	-	1599	-
Stage 1	1009	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	986	1066	-	-	1599	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	986	1599	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	18	23	3	27	40
Future Vol, veh/h	2	18	23	3	27	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	20	25	3	29	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	128	27	0	0	28	0
Stage 1	27	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	866	1048	-	-	1585	-
Stage 1	996	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	850	1048	-	-	1585	-
Mov Cap-2 Maneuver	850	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	905	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	2.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1024	1585	-
HCM Lane V/C Ratio	-	-	0.021	0.019	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection Capacity Worksheets: 2043 Background + Project

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	49	54	5	87	234
Future Volume (Veh/h)	25	49	54	5	87	234
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.61	0.61	0.60	0.60	0.72	0.72
Hourly flow rate (vph)	41	80	90	8	121	325
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			121		269	81
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			121		269	81
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			94		82	67
cM capacity (veh/h)			1430		675	979

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	121	90	8	446
Volume Left	0	90	0	121
Volume Right	80	0	0	325
cSH	1700	1430	1700	872
Volume to Capacity	0.07	0.06	0.00	0.51
Queue Length 95th (ft)	0	5	0	74
Control Delay (s)	0.0	7.7	0.0	13.4
Lane LOS		A		B
Approach Delay (s)	0.0	7.1		13.4
Approach LOS				B

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	222	80	7	78	20
Future Volume (Veh/h)	7	222	80	7	78	20
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.62	0.62	0.64	0.64
Hourly flow rate (vph)	13	404	129	11	122	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	410	134			140	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	410	134			140	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	98	56			91	
cM capacity (veh/h)	545	912			1419	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	417	140	153
Volume Left	13	0	122
Volume Right	404	11	0
cSH	893	1700	1419
Volume to Capacity	0.47	0.08	0.09
Queue Length 95th (ft)	63	0	7
Control Delay (s)	12.5	0.0	6.3
Lane LOS	B		A
Approach Delay (s)	12.5	0.0	6.3
Approach LOS	B		

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	52	50	12	58	5	65	6	12	5	6	23
Future Vol, veh/h	15	52	50	12	58	5	65	6	12	5	6	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	57	54	13	63	5	71	7	13	5	7	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	111	0	0	224	210	84	218	235	66
Stage 1	-	-	-	-	-	-	116	116	-	92	92	-
Stage 2	-	-	-	-	-	-	108	94	-	126	143	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1479	-	-	732	687	975	738	666	998
Stage 1	-	-	-	-	-	-	889	800	-	915	819	-
Stage 2	-	-	-	-	-	-	897	817	-	878	779	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1479	-	-	698	673	975	711	653	998
Mov Cap-2 Maneuver	-	-	-	-	-	-	698	673	-	711	653	-
Stage 1	-	-	-	-	-	-	879	791	-	905	812	-
Stage 2	-	-	-	-	-	-	860	810	-	850	770	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	1.2	10.7	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	726	1533	-	-	1479	-	-	866
HCM Lane V/C Ratio	0.124	0.011	-	-	0.009	-	-	0.043
HCM Control Delay (s)	10.7	7.4	0	-	7.5	0	-	9.3
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	13	8	5	23
Future Vol, veh/h	11	5	13	8	5	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	5	14	9	5	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	54	19	0	0	23	0
Stage 1	19	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	954	1059	-	-	1592	-
Stage 1	1004	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	951	1059	-	-	1592	-
Mov Cap-2 Maneuver	951	-	-	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	984	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	982	1592	-
HCM Lane V/C Ratio	-	-	0.018	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	5	10	8	5	15
Future Vol, veh/h	13	5	10	8	5	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	5	11	9	5	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	42	16	0	0	20	0
Stage 1	16	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	969	1063	-	-	1596	-
Stage 1	1007	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	966	1063	-	-	1596	-
Mov Cap-2 Maneuver	966	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	991	1596	-
HCM Lane V/C Ratio	-	-	0.02	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	30	47	6	15	48
Future Vol, veh/h	8	30	47	6	15	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	33	51	7	16	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	139	55	0	0	58	0
Stage 1	55	-	-	-	-	-
Stage 2	84	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	854	1012	-	-	1546	-
Stage 1	968	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	845	1012	-	-	1546	-
Mov Cap-2 Maneuver	845	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	929	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	972	1546	-
HCM Lane V/C Ratio	-	-	0.042	0.011	-
HCM Control Delay (s)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	10	98	224	40	52	77
Future Volume (Veh/h)	10	98	224	40	52	77
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.75	0.75	0.81	0.81	0.66	0.66
Hourly flow rate (vph)	13	131	277	49	79	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			144		682	78
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			144		682	78
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			81		75	88
cM capacity (veh/h)			1451		322	950

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	144	277	49	196
Volume Left	0	277	0	79
Volume Right	131	0	0	117
cSH	1700	1451	1700	532
Volume to Capacity	0.08	0.19	0.03	0.37
Queue Length 95th (ft)	0	18	0	42
Control Delay (s)	0.0	8.1	0.0	15.7
Lane LOS		A		C
Approach Delay (s)	0.0	6.9		15.7
Approach LOS				C

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	12	128	20	7	217	65
Future Volume (Veh/h)	12	128	20	7	217	65
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.58	0.58	0.55	0.55	0.73	0.73
Hourly flow rate (vph)	21	221	36	13	297	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	726	42			49	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	726	42			49	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	79			81	
cM capacity (veh/h)	319	1034			1558	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	242	49	386
Volume Left	21	0	297
Volume Right	221	13	0
cSH	866	1700	1558
Volume to Capacity	0.28	0.03	0.19
Queue Length 95th (ft)	29	0	18
Control Delay (s)	10.8	0.0	6.4
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	6.4
Approach LOS	B		

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	76	72	13	62	5	38	7	14	5	6	29
Future Vol, veh/h	24	76	72	13	62	5	38	7	14	5	6	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	83	78	14	67	5	41	8	15	5	7	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	72	0	0	161	0	0	291	274	122	284	311	70
Stage 1	-	-	-	-	-	-	174	174	-	98	98	-
Stage 2	-	-	-	-	-	-	117	100	-	186	213	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1528	-	-	1418	-	-	661	633	929	668	604	993
Stage 1	-	-	-	-	-	-	828	755	-	908	814	-
Stage 2	-	-	-	-	-	-	888	812	-	816	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1528	-	-	1418	-	-	621	615	929	637	586	993
Mov Cap-2 Maneuver	-	-	-	-	-	-	621	615	-	637	586	-
Stage 1	-	-	-	-	-	-	812	741	-	891	806	-
Stage 2	-	-	-	-	-	-	844	804	-	779	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	1.2	10.9	9.5
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	673	1528	-	-	1418	-	-	846
HCM Lane V/C Ratio	0.095	0.017	-	-	0.01	-	-	0.051
HCM Control Delay (s)	10.9	7.4	0	-	7.6	0	-	9.5
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	18	12	5	26
Future Vol, veh/h	10	5	18	12	5	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	5	20	13	5	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	65	27	0	0	33	0
Stage 1	27	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	941	1048	-	-	1579	-
Stage 1	996	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	938	1048	-	-	1579	-
Mov Cap-2 Maneuver	938	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	981	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	972	1579	-
HCM Lane V/C Ratio	-	-	0.017	0.003	-
HCM Control Delay (s)	-	-	8.8	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	5	10	13	5	20
Future Vol, veh/h	11	5	10	13	5	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	5	11	14	5	22

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	50	18	0	0	25	0
Stage 1	18	-	-	-	-	-
Stage 2	32	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	959	1061	-	-	1589	-
Stage 1	1005	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	956	1061	-	-	1589	-
Mov Cap-2 Maneuver	956	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	1589	-
HCM Lane V/C Ratio	-	-	0.018	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	23	31	8	32	54
Future Vol, veh/h	7	23	31	8	32	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	25	34	9	35	59

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	168	39	0	0	43	0
Stage 1	39	-	-	-	-	-
Stage 2	129	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	822	1033	-	-	1566	-
Stage 1	983	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	803	1033	-	-	1566	-
Mov Cap-2 Maneuver	803	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	876	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	2.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1566	-
HCM Lane V/C Ratio	-	-	0.034	0.022	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-