

TRAFFIC ENGINEERING STUDY

4307 Bull Street Development

Chatham County, GA



COASTAL ENGINEERING

AND CONSULTING

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<i>Title</i>	
4307 Bull Street Development Analysis Chatham County, GA	
<i>Prepared For</i>	<i>Date</i>
Patrick Shay, AIA, LEED AP Gunn Meyerhoff Shay Architects 1719A Abercorn Street Savannah, GA 31401	September 6, 2023
<i>Prepared By</i>	<i>Report By</i>
Coastal Engineering & Consulting 6605 Abercorn Street, Suite 210D Savannah, GA 31401 (912) 964-4509 Ext. 700 / (912) 332-0537	C. Scott Burns, P.E.
This study describes a traffic analysis of the Bull Street corridor to determine improvements necessary based on the proposed development at 4307 Bull Street in Chatham County, Georgia and the existing growth pattern of the corridor. Based on the existing and projected traffic along the corridor, no improvements will be required to the corridor as a part of the proposed project.	

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Introduction

The purpose of this study is to provide traffic projections and capacity analysis to evaluate improvements for the Bull Street corridor as a part of the 4307 Bull Street project in Chatham County, Georgia. Figure 1 shows the project location along Bull Street.

FIGURE 1: PROJECT LOCATION ALONG BULL STREET



Existing Conditions

Existing Geometry

Bull Street is a northeast-southwest roadway that runs from the intersection of Derenne Avenue and White Bluff Road to the northeast to E Park Avenue at Forsyth Park. The roadway picks back up north of Forsyth Park at E Gaston Street and continues through four City squares prior to terminating at the intersection with W Bay Street. For this study, the portion of Bull Street Road to be examined is between E 60th Street and W 59th Street/Columbus Drive. This section of the corridor consists of a two-lane roadway with urban shoulders and sidewalk on the east side of the roadway. The posted speed limit in the project limits is 35 MPH.

Existing Traffic Control

Figure 2 illustrates the existing traffic control along the corridor. The intersections of Bull Street at E 60th Street, Bull Street at W 60th Street and Bull Street at W 59th Street/Columbus Drive are stop-controlled (minor stop).

FIGURE 2: EXISTING TRAFFIC CONTROL



Existing Daily Volumes

Existing daily traffic volume and classification data were collected along Bull Street from Wednesday, August 23, 2023, to Thursday, August 24, 2023. The ADT for the corridor was determined by dividing the total vehicles by the number of days that the counts were taken. Table 1 summarizes existing ADTs along Bull Street. Table 2 provides speed and classification data during the collection period.

TABLE 1: EXISTING DAILY VOLUME

	Bull Street NB	Bull Street SB	TOTAL
South of Columbus Drive	4,727	5,455	10,182

TABLE 2: EXISTING DAILY VOLUME DATA

	Truck Percentage		
	Northbound	Southbound	TOTAL
South of Columbus Drive	0.70%	1.17%	0.95%

Horizon Year Traffic Projections

This section contains traffic projections for the future year to be evaluated.

Historic Traffic Data

The process used to project future traffic uses an examination of past trends along with outputs from models of future land use and travel demand.

The past traffic data was examined at nearby locations where GDOT periodically conducts traffic counts. GDOT count station 051-0558 is a short-term portable counter located on Bull Street, south of Columbus Drive.

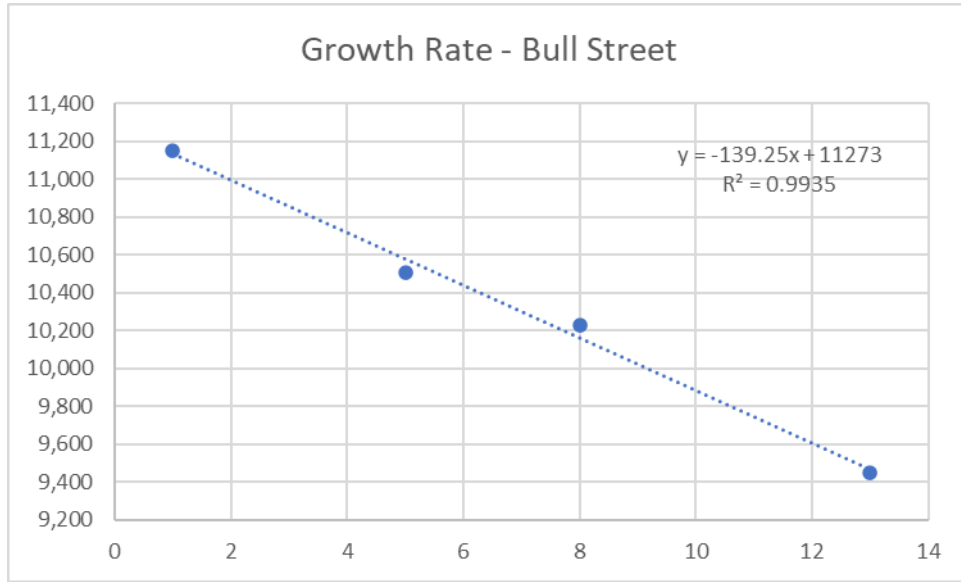
Table 3 summarizes the average annual daily traffic at this location for each year from 2009 to 2022, the most recent year counts are shown.

TABLE 3: HISTORIC TRAFFIC DATA, AADT

Year	AADT
2022	9,446
2021	N/A
2020	N/A
2019	N/A
2018	N/A
2017	10,226
2016	N/A
2015	N/A
2014	10,508
2013	N/A
2012	N/A
2011	N/A
2010	11,151
2009	N/A

Note: Years listed “N/A” were estimated.

FIGURE 3: GROWTH RATE FOR BULL STREET



Growth Rate Calculation

Based on GDOT TADA data previously provided and the data shown in Figure 3, the growth rate for Bull Street was determined to be -1.37%. To avoid negative growth for the analysis, a growth rate of 1.0% per year will be used for Bull Street. Volume projections were developed by applying the growth rate factors using the calculations below as shown for Bull Street to the existing data.

1. Build-Out (2026)

$$F_{2026} = (1 + r)^n = (1+0.01)^3 = 1.0303$$

Since 2026 is three (3) years away from the existing, n = 3.

Note: This factor will be applied to the existing volumes to project Construction Year volumes.

2. Build-Out plus 10 (2036)

$$F_{2036} = (1 + r)^n = (1+0.01)^{13} = 1.1381$$

Since 2036 is thirteen (13) years away from the existing, n = 13.

Note: This factor will be applied to the existing volumes to project Design Year volumes.

TABLE 4: 2036 NO-BUILD PHV – BULL STREET AT E 60TH STREET

	Bull Street NB			Bull Street SB			E 60 th Street WB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	305	5	0	440	0	0	0	15
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	385	0	0	520	0	5	0	30

TABLE 5: 2036 NO-BUILD PHV – BULL STREET AT W 60TH STREET

	Bull Street NB			Bull Street SB			W 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	10	305	0	0	430	0	5	0	10
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	10	400	0	0	510	5	0	0	15

TABLE 6: 2036 NO-BUILD PHV – BULL STREET AT W 59TH STREET/COLUMBUS DR

	Bull Street NB			Bull Street SB			W 59 th Street EB			Columbus Drive WB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	280	30	90	415	0	0	15	10	10	15	30
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	10	380	25	85	475	0	5	20	10	20	35	75

Traffic Projections – Build-Out (2026)

Projected ADT volumes were estimated by applying the previously determined growth factor to the existing ADT volumes. The projected volumes for Build-Out (2026) are shown in Table 7.

TABLE 7: AVERAGE DAILY TRAFFIC (ADT) FOR CONSTRUCTION YEAR (2026)

Location	Northbound (2026)	Southbound (2026)	Total (2026)
Bull Street – South of Columbus Drive	4,875	5,625	10,500

Traffic Projections – Build-Out plus 10 Years (2036)

Projected ADT volumes were estimated by applying the previously determined growth factor to the existing ADT volumes. The projected volumes for the Build-Out plus 10 Years (2036) are shown in Table 8.

TABLE 8: AVERAGE DAILY TRAFFIC (ADT) FOR DESIGN YEAR (2036)

Location	Northbound (2036)	Southbound (2036)	Total (2036)
Bull Street – South of Columbus Drive	5,375	6,200	11,575

Trip Generation Estimate

When evaluating the existing and proposed conditions at this location, the 11th Edition of the ITE Trip Generation Manual was used. The ITE provides several codes to generate the trips for these sites. Once the ITE Code is determined, a unit measure (dwelling units (DU), vehicles, etc.) is used to determine the generated trips to determine the impact through the corridor. Trips generated to/from each site are categorized into three (3) categories.

New Trips

New trips are vehicles that do not currently use the roadway network. These trips add additional volume to the current roadway system. It is typically assumed that these new trips start at an origin, travel to the site, and then return to their original origin. For this study, all trips generated by the apartments are considered new trips with 37% of the trips generated by the strip plaza considered new. These trips were split at a 52% to/from the north, 3% from Columbus Avenue, 40% from/to the south, 2% from W 59th Street, 2% from W 60th Street and 1% from E 60th Street.

Pass By Trips

Pass by Trips are existing users to the roadway network that divert from their route to access the site. Upon exiting the site, these users return to the roadway towards their original destination. These trips do not add volume to the current roadway system, instead these trips typically impact the roadway by modifying the traffic patterns (typically resulting in additional turning traffic). Based on the ITE, the retail plaza would contain 63% pass-by trips.

Internal Capture

Internal capture trips are associated with significant mixed-use developments. Internal capture trips consider vehicles which travel to a mixed-use development and generate trips among multiple different use types or locations within the larger development. This is used to calculate the number of users who are generated by one site but visit another type and therefore should only count as a new trip or pass by trip for one site but not both. An example of internal capture would be a user visiting a restaurant after visiting a retail location on site. Although these vehicles factor in trips to both locations, they only affect the roadway network when they enter and exit the site. Internal capture trips are not calculated for this project.

4307 Bull Street Development Projected Data

The 4307 Bull Street Development is a proposed development located along Bull Street between W 60th Street and W 59th Street in Chatham County, GA. The site will consist of a total of 63 apartments and a total of 2,634-sf of retail space. The site will access Bull Street from both W 60th Street and W 59th Street.

Using the proposed land use, it was determined that ITE Code 220 – Multifamily Housing (Low-Rise) and ITE Code 822 – Strip Retail Plaza (< 40K) were the best options to analyze the proposed data for the site. Table 9 summarizes the site condition using the ITE Trip Generation Manual.

TABLE 9: TRIP GENERATION FOR PROPOSED DEVELOPMENT

	Unit	Qty	Daily Trips	AM Total Trips	AM In	AM Out	Pass By	PM Total Trips	PM In	PM Out	Pass By
220 – Multifamily Housing (Low-Rise)	Dwelling Units	63.000	425	25	7	18	0	32	20	12	0
822 – Strip Retail Plaza (< 40K)	KSF	2.634	143	6	1	1	4	17	3	3	11
TOTAL			568	31	8	19	4	49	23	15	11

Directional Distribution of Development Traffic

Using the methods described in the previous section, traffic volume numbers were generated. The distribution of those traffic volumes is needed to determine the paths of the generated trips. For new trips generated to the site, determining the percentage of trips attracted to the site from an origin is primarily dependent on the connectivity of that origin to potential trip generators.

Developing distribution percentages for pass-by traffic is different from new trips in that it must be developed from existing traffic patterns instead of the potential for producing new trips to the site. Since pass-by trips do not return to the point in which they originated, it is necessary to distribute pass-by traffic volumes according to the origin and destination of existing traffic patterns. This results in a volume of pass-by traffic that under existing conditions travels from Location X to Location Y, but under proposed conditions travels from Location X to the site and then continues to Zone Y.

Capacity Analysis

Capacity analysis techniques were used as described in the Highway Capacity Manual, Special Report 209, published by the Transportation Research Board, 2010. The Synchro Program (Version 10) from Trafficware was used to facilitate the analysis.

The HCM level of service definitions are summarized in Table 10. Capacity analysis results for unsignalized intersections provide estimates of the level of service (LOS) for each minor movement that is required to yield to free flow movements.

TABLE 10: LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	SIGNALIZED INTERSECTIONS	STOP CONTROLLED INTERSECTIONS
	STOPPED DELAY PER VEHICLE (SECONDS)	STOPPED DELAY PER VEHICLE (SECONDS)
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.0	≥ 50.0

Bull Street at E 60TH Street Analysis

The intersection of Bull Street at E 60th Street is a stop-controlled (minor stop) intersection. Currently, Bull Street Northbound contains a shared through-right lane. Bull Street Southbound contains a through lane. Finally, E 60th Street Westbound contains a right turn only lane.

Existing Peak Hour Volumes

The existing peak hour turning movement counts for the intersection of Bull Street at E 60th Street were collected on Thursday, August 24, 2023. Table 11 summarizes the existing peak hour volumes for this period.

TABLE 11: EXISTING PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			E 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	267	3	0	385	0	2	0	11
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	337	2	0	459	0	5	0	25

Proposed Peak Hour Volumes – Bull Street at E 60TH Street

Using the growth rate previously determined, the 2026 and 2036 Peak Hour Volumes for the intersection were determined. Tables 12 and 13 summarize the projected peak hour volumes for these periods.

TABLE 12: 2026 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			E 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	279	5	0	403	0	0	0	10
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	355	0	0	481	0	5	0	25

TABLE 13: 2036 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			E 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	309	5	0	448	0	0	0	15
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	0	395	0	0	526	0	5	0	30

Capacity Analysis Results – Bull Street at E 60TH Street

TABLE 14: CAPACITY ANALYSIS – EXISTING/NO-BUILD

	LOS 2023 AM PEAK	DELAY	LOS 2023 PM PEAK	DELAY	LOS 2036 AM PEAK (NO- BUILD)	DELAY	LOS 2036 PM PEAK (NO- BUILD)	DELAY
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
E 60 TH Street WB RT	B	10.0 s	B	10.9 s	B	10.3 s	B	11.5 s

TABLE 15: CAPACITY ANALYSIS – BUILD-OUT & BUILD-OUT PLUS 10

	LOS 2026 AM PEAK	DELAY	LOS 2026 PM PEAK	DELAY	LOS 2036 AM PEAK	DELAY	LOS 2036 PM PEAK	DELAY
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
E 60 TH Street WB RT	B	10.0 s	B	11.1 s	B	10.3 s	B	11.6 s

This intersection will operate efficiently in both the Build and the No-Build conditions for the duration of the analysis period.

Bull Street at W 60TH Street Analysis

The intersection of Bull Street at W 60th Street is a stop-controlled (minor stop) intersection. Currently, Bull Street Northbound contains a shared left-through lane. Bull Street Southbound contains a through-right turn lane. Finally, W 60th Street Eastbound contains a shared left-right turn lane.

Existing Peak Hour Volumes

The existing peak hour turning movement counts for the intersection of Bull Street at W 60th Street were collected on Thursday, August 24, 2023. Table 16 summarizes the existing peak hour volumes for this period.

TABLE 16: EXISTING PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	9	269	0	0	378	1	4	0	7
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	10	352	0	0	448	5	2	0	11

Proposed Peak Hour Volumes – Bull Street at W 60TH Street

Using the growth rate previously determined, the 2026 and 2036 Peak Hour Volumes for the intersection were determined. Tables 17 and 18 summarize the projected peak hour volumes for these periods.

TABLE 17: 2026 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	12	277	0	0	393	3	10	0	10
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	16	369	0	0	462	13	5	0	14

TABLE 18: 2036 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 60 th Street EB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	12	307	0	0	433	3	10	0	15
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	16	404	0	0	512	13	5	0	19

Capacity Analysis Results – Bull Street at W 60TH Street

TABLE 19: CAPACITY ANALYSIS – EXISTING/NO-BUILD

	LOS 2023 AM PEAK	DELAY	LOS 2023 PM PEAK	DELAY	LOS 2036 AM PEAK (NO- BUILD)	DELAY	LOS 2036 PM PEAK (NO- BUILD)	DELAY
Bull Street NB LT	A	8.2 s	A	8.4 s	A	8.3 s	A	8.5 s
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
W 60 TH Street EB Shared LT/RT	B	12.2 s	B	12.4 s	B	12.9 s	A	12.0 s

TABLE 20: CAPACITY ANALYSIS – BUILD-OUT & BUILD-OUT PLUS 10

	LOS 2026 AM PEAK	DELAY	LOS 2026 PM PEAK	DELAY	LOS 2036 AM PEAK	DELAY	LOS 2036 PM PEAK	DELAY
Bull Street NB LT	A	8.2 s	A	8.4 s	A	8.3 s	A	8.6 s
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
W 60 TH Street EB Shared LT/RT	B	13.3 s	B	13.8 s	B	13.7 s	B	14.5 s

This intersection will operate efficiently in both the Build and the No-Build conditions for the duration of the analysis period.

Bull Street at W 59TH Street/Columbus Drive Analysis

The intersection of Bull Street at W 59th Street/Columbus Drive is a stop-controlled (minor stop) intersection. Currently, both Bull Street Northbound and Bull Street Southbound contain a shared left-through-right lane. Columbus Drive Westbound contains a shared left-through-right turn lane with a raised median separating the inbound and outbound lanes. Finally, W 59th Street Eastbound also contains a shared left-through-right turn lane.

Existing Peak Hour Volumes

The existing peak hour turning movement counts for the intersection of Bull Street at W 59th Street/Columbus Drive were collected on Thursday, August 24, 2023. Table 21 summarizes the existing peak hour volumes for this period.

TABLE 21: EXISTING PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 59 th Street EB			Columbus Drive WB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	2	245	28	79	363	2	1	14	7	7	12	27
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	9	333	21	76	418	1	6	17	7	16	29	64

Proposed Peak Hour Volumes – Bull Street at W 59TH Street/Columbus Dr

Using the growth rate previously determined, the 2026 and 2036 Peak Hour Volumes for the intersection were determined. Tables 22 and 23 summarize the projected peak hour volumes for these periods.

TABLE 22: 2026 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 59 th Street EB			Columbus Drive WB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	2	255	30	80	376	3	5	16	10	5	10	30
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	16	349	20	80	434	8	10	21	10	15	30	65

TABLE 23: 2036 DESIGN PEAK HOUR VOLUMES

	Bull Street NB			Bull Street SB			W 59 th Street EB			Columbus Drive WB		
AM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	2	285	30	90	416	3	5	16	15	10	15	30
PM Peak	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
	16	384	25	85	479	8	10	21	15	20	35	75

Capacity Analysis – Bull Street at W 59th Street/Columbus Drive

TABLE 24: CAPACITY ANALYSIS – EXISTING/NO-BUILD

	LOS 2023 AM PEAK	DELAY	LOS 2023 PM PEAK	DELAY	LOS 2036 AM PEAK (NO-BUILD)	DELAY	LOS 2036 PM PEAK (NO-BUILD)	DELAY
Bull Street NB LT	A	8.2 s	A	8.3 s	--	--	A	8.5 s
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB LT	A	8.1 s	A	8.4 s	A	8.2 s	A	8.6 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Columbus Drive WB Shared LT/THRU/RT	C	15.6 s	D	27.4 s	C	19.3 s	F	54.6 s
W 59 th Street EB Shared LT/THRU/RT	C	18.0 s	D	28.7 s	C	19.6 s	E	37.8 s

TABLE 25: CAPACITY ANALYSIS – BUILD-OUT & BUILD-OUT PLUS 10

	LOS 2026 AM PEAK	DELAY	LOS 2026 PM PEAK	DELAY	LOS 2036 AM PEAK	DELAY	LOS 2036 PM PEAK	DELAY
Bull Street NB LT	A	8.2 s	A	8.4 s	A	8.3 s	A	8.6 s
Bull Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB LT	A	8.1 s	A	8.5 s	A	8.2 s	A	8.6 s
Bull Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bull Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Columbus Drive WB Shared LT/THRU/RT	C	14.7 s	D	32.9 s	C	19.9 s	F	55.4 s
W 59 th Street EB Shared LT/THRU/RT	C	19.7 s	E	38.1 s	C	21.7 s	E	49.4 s

It should be noted that while the intersection is failing in the 2036 No-Build and Build conditions, traffic has been decreasing on Bull Street between 2009 and 2022. If traffic on Bull Street continues to decrease at the same rate, it will result in a delay of 26.5 s for the Westbound movement and a delay of 27.3 s for the Eastbound movement for the PM Peak Hour. As a result, if the traffic continues the current trend, the LOS at the intersection will be acceptable.

Conclusions

- During the collection period, Bull Street had an ADT of 10,182 vpd, south of the intersection with W 59th Street/Columbus Drive.
- The site consists of 63 apartments units and a total of 2,634-sf of retail space. The proposed site will have access to Bull Street from both W 59th Street and W 60th Street. The site will generate 568 vpd.
- All new trips generated by the development were split at a 52% to/from the north, 3% from Columbus Drive, 40% from/to the south, 2% from W 59th Street, 2% from W 60th Street and 1% from E 60th Street.

Recommendation of Improvements

Based on the projected traffic data, the following improvements are recommended along the Bull Street corridor.

- It is recommended that the intersection of Bull Street and E 60th Street continue to operate as a stop-controlled (minor-stop) intersection. The intersection will operate efficiently in both the Build and No-Build condition.
- It is recommended that the intersection of Bull Street and W 60th Street continue to operate as a stop-controlled (minor-stop) intersection. The intersection will operate efficiently in both the Build and No-Build condition.
- It is recommended that the intersection of Bull Street and W 59th Street/Columbus Drive continue to operate as a stop-controlled (minor-stop) intersection. The intersection will have the side road movements fail in both the Build and No-Build condition; however, it should be noted that the corridor growth has been negative since GDOT started collecting data in 2010. If this trend continues, this intersection will operate efficiently throughout the analysis period. As a result, this location should be monitored for growth to determine if improvements to the configuration may be warranted.
- Based on the existing and proposed data, Bull Street will operate efficiently as a two-lane roadway within the study period. No additional improvements will be required to the corridor.

Traffic Engineering Study – 4307 Bull Street Development

The recommendations provided above were reviewed and approved by:

Recommendation:



C. Scott Burns

Recommendation:

Traffic Engineer

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, Georgia 31405

Site Code:
Station ID:
Bull Street
South of Columbus Drive
Latitude: 0' 0.0000 Undefined

Start Time	24-Aug-23		Total	
	Thu	Northbound		Southbound
12:00 AM		5	13	18
12:15		11	12	23
12:30		8	10	18
12:45		5	7	12
01:00		4	11	15
01:15		5	8	13
01:30		5	8	13
01:45		3	12	15
02:00		8	7	15
02:15		1	9	10
02:30		2	3	5
02:45		1	7	8
03:00		5	5	10
03:15		3	2	5
03:30		4	3	7
03:45		3	4	7
04:00		5	1	6
04:15		3	6	9
04:30		3	1	4
04:45		2	5	7
05:00		6	6	12
05:15		14	5	19
05:30		10	9	19
05:45		14	13	27
06:00		16	17	33
06:15		24	20	44
06:30		35	32	67
06:45		37	50	87
07:00		47	52	99
07:15		52	74	126
07:30		75	82	157
07:45		63	102	165
08:00		67	100	167
08:15		70	93	163
08:30		66	80	146
08:45		69	96	165
09:00		57	92	149
09:15		62	55	117
09:30		68	75	143
09:45		83	85	168
10:00		72	90	162
10:15		72	74	146
10:30		88	59	147
10:45		75	75	150
11:00		67	104	171
11:15		71	78	149
11:30		87	78	165
11:45		69	82	151
Total		1622	1912	3534
Percent		45.9%	54.1%	
Peak	-	09:45	07:30	07:30
Vol.	-	315	377	652
P.H.F.		0.895	0.924	0.976

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, Georgia 31405

Site Code:
Station ID:
Bull Street
South of Columbus Drive
Latitude: 0' 0.0000 Undefined

Start Time	24-Aug-23		Total							
	Thu	Northbound		Southbound						
12:00 PM		77	87	164						
12:15		85	69	154						
12:30		55	87	142						
12:45		105	93	198						
01:00		75	82	157						
01:15		91	101	192						
01:30		58	66	124						
01:45		82	90	172						
02:00		86	91	177						
02:15		90	97	187						
02:30		90	92	182						
02:45		98	106	204						
03:00		94	113	207						
03:15		78	93	171						
03:30		83	94	177						
03:45		90	84	174						
04:00		93	92	185						
04:15		86	103	189						
04:30		106	118	224						
04:45		95	99	194						
05:00		76	121	197						
05:15		74	118	192						
05:30		100	104	204						
05:45		75	102	177						
06:00		73	86	159						
06:15		68	74	142						
06:30		91	88	179						
06:45		69	90	159						
07:00		65	70	135						
07:15		49	58	107						
07:30		54	64	118						
07:45		50	56	106						
08:00		50	56	106						
08:15		46	55	101						
08:30		58	66	124						
08:45		63	50	113						
09:00		45	47	92						
09:15		34	47	81						
09:30		42	37	79						
09:45		30	32	62						
10:00		29	42	71						
10:15		21	44	65						
10:30		24	34	58						
10:45		22	32	54						
11:00		21	32	53						
11:15		20	24	44						
11:30		23	32	55						
11:45		16	25	41						
Total		3105	3543	6648						
Percent		46.7%	53.3%							
Peak	-	16:00	16:30	-	-	-	-	-	-	16:30
Vol.	-	380	456	-	-	-	-	-	-	807
P.H.F.		0.896	0.942							0.901
Grand Total		4727	5455							10182
Percent		46.4%	53.6%							

ADT

ADT 10,182

AADT 10,182

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405
(912) 964-4509

Bull Street at W 59th Street
Turning Movement Counts

File Name : bull street at 59th street
Site Code : _____
Start Date : 8/24/2023
Page No : 1

Groups Printed- Light - Heavy

Start Time	Bull Street From North					Columbus Drive From East					Bull Street From South					W 59th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
06:00 AM	0	15	2	0	17	1	1	2	0	4	0	16	0	0	16	0	0	1	0	1	38
06:15 AM	0	15	3	0	18	3	0	3	0	6	0	23	1	0	24	2	2	0	0	4	52
06:30 AM	0	28	5	0	33	2	1	3	0	6	1	34	0	0	35	1	0	1	0	2	76
06:45 AM	0	45	6	0	51	5	4	2	0	11	4	33	0	0	37	3	5	2	0	10	109
Total	0	103	16	0	119	11	6	10	0	27	5	106	1	0	112	6	7	4	0	17	275
07:00 AM	2	49	3	0	54	5	5	3	0	13	2	45	0	0	47	0	3	0	0	3	117
07:15 AM	1	69	19	0	89	7	3	2	0	12	3	49	0	0	52	3	3	0	0	6	159
07:30 AM	2	77	18	0	97	3	4	1	1	9	12	62	1	0	75	4	3	1	0	8	189
07:45 AM	0	99	20	0	119	11	3	2	0	16	6	57	0	0	63	1	4	0	0	5	203
Total	5	294	60	0	359	26	15	8	1	50	23	213	1	0	237	8	13	1	0	22	668
08:00 AM	0	98	29	0	127	8	3	2	0	13	5	62	0	0	67	0	1	0	0	1	208
08:15 AM	0	89	12	0	101	5	2	2	0	9	5	64	1	0	70	2	6	0	0	8	188
08:30 AM	0	75	14	0	89	9	4	4	0	17	5	61	0	0	66	1	5	1	0	7	179
08:45 AM	1	90	16	0	107	11	3	3	0	17	2	65	2	0	69	3	4	1	0	8	201
Total	1	352	71	0	424	33	12	11	0	56	17	252	3	0	272	6	16	2	0	24	776
09:00 AM	1	88	13	0	102	10	3	2	0	15	0	56	1	0	57	2	2	1	0	5	179
09:15 AM	1	51	1	0	53	6	6	0	0	12	2	59	1	0	62	4	6	1	0	11	138
09:30 AM	1	70	10	0	81	12	1	2	0	15	1	67	0	0	68	3	0	2	0	5	169
09:45 AM	1	81	7	0	89	8	3	1	0	12	2	80	1	0	83	3	1	0	0	4	188
Total	4	290	31	0	325	36	13	5	0	54	5	262	3	0	270	12	9	4	0	25	674
10:00 AM	0	84	8	0	92	8	1	3	2	14	2	70	0	0	72	3	4	1	0	8	186
10:15 AM	0	66	7	0	73	6	1	6	0	13	5	65	2	0	72	2	0	1	0	3	161
10:30 AM	2	57	1	0	60	10	4	2	0	16	3	83	2	0	88	0	1	1	0	2	166
10:45 AM	0	70	5	0	75	9	1	2	0	12	1	70	4	0	75	3	3	1	0	7	169
Total	2	277	21	0	300	33	7	13	2	55	11	288	8	0	307	8	8	4	0	20	682
11:00 AM	1	94	8	0	103	9	3	7	0	19	2	64	1	0	67	3	0	3	0	6	195
11:15 AM	0	73	9	0	82	5	3	5	0	13	2	68	1	0	71	0	0	0	0	0	166
11:30 AM	2	75	14	0	91	9	2	1	0	12	2	82	3	0	87	2	2	0	0	4	194
11:45 AM	1	76	17	0	94	6	2	5	0	13	0	69	0	0	69	1	3	1	0	5	181
Total	4	318	48	0	370	29	10	18	0	57	6	283	5	0	294	6	5	4	0	15	736

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405
(912) 964-4509

File Name : bull street at 59th street

Site Code : _____

Start Date : 8/24/2023

Page No : 2

Groups Printed- Light - Heavy

Start Time	Bull Street From North					Columbus Drive From East					Bull Street From South					W 59th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
12:00 PM	2	86	8	0	96	5	2	1	0	8	4	72	1	0	77	0	5	0	0	5	186
12:15 PM	2	66	9	0	77	9	1	2	1	13	2	83	0	0	85	1	1	2	0	4	179
12:30 PM	1	85	11	0	97	7	5	1	0	13	2	51	2	0	55	1	1	2	0	4	169
12:45 PM	0	87	11	0	98	10	3	5	0	18	6	96	3	0	105	1	1	1	0	3	224
Total	5	324	39	0	368	31	11	9	1	52	14	302	6	0	322	3	8	5	0	16	758
01:00 PM	0	80	9	0	89	10	1	0	0	11	4	70	1	0	75	2	3	1	0	6	181
01:15 PM	4	99	19	0	122	9	3	1	0	13	3	88	0	0	91	1	3	3	0	7	233
01:30 PM	2	61	8	0	71	7	4	2	0	13	3	53	2	0	58	3	3	2	0	8	150
01:45 PM	1	86	10	0	97	9	0	3	0	12	5	76	1	0	82	1	4	1	0	6	197
Total	7	326	46	0	379	35	8	6	0	49	15	287	4	0	306	7	13	7	0	27	761
02:00 PM	1	85	9	0	95	12	7	2	0	21	4	81	1	0	86	4	1	0	0	5	207
02:15 PM	3	90	6	0	99	14	4	4	0	22	5	82	3	0	90	3	1	1	0	5	216
02:30 PM	2	84	20	0	106	5	5	4	0	14	8	80	2	0	90	4	2	1	0	7	217
02:45 PM	3	96	12	0	111	14	4	8	2	28	4	93	1	0	98	2	3	2	0	7	244
Total	9	355	47	0	411	45	20	18	2	85	21	336	7	0	364	13	7	4	0	24	884
03:00 PM	1	107	9	0	117	19	6	3	0	28	4	88	2	0	94	3	3	0	0	6	245
03:15 PM	2	88	14	0	104	12	3	3	0	18	7	68	3	0	78	2	2	2	0	6	206
03:30 PM	2	90	12	0	104	17	5	4	1	27	2	79	2	0	83	0	1	2	0	3	217
03:45 PM	0	79	14	0	93	18	7	5	0	30	7	78	5	0	90	0	4	1	0	5	218
Total	5	364	49	0	418	66	21	15	1	103	20	313	12	0	345	5	10	5	0	20	886
04:00 PM	1	87	15	0	103	19	3	4	1	27	5	87	1	0	93	1	0	0	0	1	224
04:15 PM	0	96	20	0	116	11	13	6	0	30	9	76	1	0	86	1	2	2	0	5	237
04:30 PM	0	115	13	0	128	19	3	1	0	23	2	100	4	0	106	2	8	2	0	12	269
04:45 PM	0	93	18	0	111	11	2	4	2	19	7	86	2	0	95	2	4	1	0	7	232
Total	1	391	66	0	458	60	21	15	3	99	23	349	8	0	380	6	14	5	0	25	962
05:00 PM	1	114	25	0	140	23	11	5	1	40	3	71	2	0	76	2	3	1	0	6	262
05:15 PM	4	111	15	0	130	16	8	5	0	29	3	70	1	0	74	2	1	1	0	4	237
05:30 PM	4	100	8	0	112	9	4	3	1	17	7	91	2	0	100	1	4	0	0	5	234
05:45 PM	2	91	9	0	102	13	1	8	0	22	1	72	2	0	75	3	5	2	0	10	209
Total	11	416	57	0	484	61	24	21	2	108	14	304	7	0	325	8	13	4	0	25	942
06:00 PM	4	79	6	0	89	7	3	7	0	17	3	66	4	0	73	0	2	2	0	4	183
06:15 PM	1	72	6	0	79	5	6	1	0	12	5	62	1	0	68	1	0	0	0	1	160
06:30 PM	3	86	4	0	93	10	3	2	0	15	2	79	10	0	91	0	4	0	0	4	203
06:45 PM	2	81	6	0	89	4	4	3	0	11	2	65	2	0	69	6	2	0	0	8	177
Total	10	318	22	0	350	26	16	13	0	55	12	272	17	0	301	7	8	2	0	17	723

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
 Savannah, GA 31405
 (912) 964-4509

File Name : bull street at 59th street
 Site Code : _____
 Start Date : 8/24/2023
 Page No : 3

Groups Printed- Light - Heavy

	Bull Street From North					Columbus Drive From East					Bull Street From South					W 59th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
Grand Total	64	4128	573	0	4765	492	184	162	12	850	186	3567	82	0	3835	95	131	51	0	277	9727
Apprch %	1.3	86.6	12	0		57.9	21.6	19.1	1.4		4.9	93	2.1	0		34.3	47.3	18.4	0		
Total %	0.7	42.4	5.9	0	49	5.1	1.9	1.7	0.1	8.7	1.9	36.7	0.8	0	39.4	1	1.3	0.5	0	2.8	
Light	60	4077	561	0	4698	485	183	160	12	840	186	3539	79	0	3804	93	130	50	0	273	9615
% Light	93.8	98.8	97.9	0	98.6	98.6	99.5	98.8	100	98.8	100	99.2	96.3	0	99.2	97.9	99.2	98	0	98.6	98.8
Heavy	4	51	12	0	67	7	1	2	0	10	0	28	3	0	31	2	1	1	0	4	112
% Heavy	6.2	1.2	2.1	0	1.4	1.4	0.5	1.2	0	1.2	0	0.8	3.7	0	0.8	2.1	0.8	2	0	1.4	1.2

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405
(912) 964-4509

File Name : bull street at 59th street
Site Code : _____
Start Date : 8/24/2023
Page No : 4

Start Time	Bull Street From North					Columbus Drive From East					Bull Street From South					W 59th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	2	77	18	0	97	3	4	1	1	9	12	62	1	0	75	4	3	1	0	8	189
07:45 AM	0	99	20	0	119	11	3	2	0	16	6	57	0	0	63	1	4	0	0	5	203
08:00 AM	0	98	29	0	127	8	3	2	0	13	5	62	0	0	67	0	1	0	0	1	208
08:15 AM	0	89	12	0	101	5	2	2	0	9	5	64	1	0	70	2	6	0	0	8	188
Total Volume	2	363	79	0	444	27	12	7	1	47	28	245	2	0	275	7	14	1	0	22	788
% App. Total	0.5	81.8	17.8	0		57.4	25.5	14.9	2.1		10.2	89.1	0.7	0		31.8	63.6	4.5	0		
PHF	.250	.917	.681	.000	.874	.614	.750	.875	.250	.734	.583	.957	.500	.000	.917	.438	.583	.250	.000	.688	.947
Light	2	355	75	0	432	27	11	7	1	46	28	244	2	0	274	6	14	1	0	21	773
% Light	100	97.8	94.9	0	97.3	100	91.7	100	100	97.9	100	99.6	100	0	99.6	85.7	100	100	0	95.5	98.1
Heavy	0	8	4	0	12	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	15
% Heavy	0	2.2	5.1	0	2.7	0	8.3	0	0	2.1	0	0.4	0	0	0.4	14.3	0	0	0	4.5	1.9
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	96	20	0	116	11	13	6	0	30	9	76	1	0	86	1	2	2	0	5	237
04:30 PM	0	115	13	0	128	19	3	1	0	23	2	100	4	0	106	2	8	2	0	12	269
04:45 PM	0	93	18	0	111	11	2	4	2	19	7	86	2	0	95	2	4	1	0	7	232
05:00 PM	1	114	25	0	140	23	11	5	1	40	3	71	2	0	76	2	3	1	0	6	262
Total Volume	1	418	76	0	495	64	29	16	3	112	21	333	9	0	363	7	17	6	0	30	1000
% App. Total	0.2	84.4	15.4	0		57.1	25.9	14.3	2.7		5.8	91.7	2.5	0		23.3	56.7	20	0		
PHF	.250	.909	.760	.000	.884	.696	.558	.667	.375	.700	.583	.833	.563	.000	.856	.875	.531	.750	.000	.625	.929
Light	1	416	74	0	491	64	29	16	3	112	21	328	8	0	357	6	17	6	0	29	989
% Light	100	99.5	97.4	0	99.2	100	100	100	100	100	100	98.5	88.9	0	98.3	85.7	100	100	0	96.7	98.9
Heavy	0	2	2	0	4	0	0	0	0	0	0	5	1	0	6	1	0	0	0	1	11
% Heavy	0	0.5	2.6	0	0.8	0	0	0	0	0	0	1.5	11.1	0	1.7	14.3	0	0	0	3.3	1.1

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405
(912) 964-4509

Bull Street at 60th Street
Turning Movement Counts

File Name : bull street at 60th street
Site Code : _____
Start Date : 8/24/2023
Page No : 1

Groups Printed- Light - Heavy

Start Time	Bull Street From North					E 60th Street From East					Bull Street From South					W 60th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
*** BREAK ***																					
07:00 AM	0	52	0	0	52	1	0	0	0	1	1	45	0	0	46	0	0	0	0	0	99
07:15 AM	2	71	0	0	73	0	0	1	0	1	2	52	0	0	54	1	0	0	0	1	129
07:30 AM	0	81	0	0	81	2	1	1	0	4	0	73	1	0	74	1	0	3	0	4	163
07:45 AM	0	103	0	0	103	1	1	0	0	2	1	58	1	0	60	2	0	0	0	2	167
Total	2	307	0	0	309	4	2	2	0	8	4	228	2	0	234	4	0	3	0	7	558
08:00 AM	0	99	0	0	99	1	1	0	0	2	1	66	2	0	69	1	0	0	0	1	171
08:15 AM	1	95	0	0	96	4	0	1	0	5	1	64	2	0	67	3	0	1	0	4	172
08:30 AM	2	78	0	0	80	1	0	0	0	1	2	67	1	0	70	3	0	0	0	3	154
08:45 AM	0	97	0	0	97	6	0	0	0	6	1	59	2	0	62	3	0	1	0	4	169
Total	3	369	0	0	372	12	1	1	0	14	5	256	7	0	268	10	0	2	0	12	666
*** BREAK ***																					
04:00 PM	0	92	0	0	92	5	1	1	0	7	1	86	0	0	87	4	0	3	0	7	193
04:15 PM	1	101	0	0	102	3	1	0	0	4	0	82	2	0	84	2	0	2	0	4	194
04:30 PM	0	117	0	0	117	5	3	1	0	9	1	103	0	0	104	2	0	1	0	3	233
04:45 PM	2	98	0	0	100	5	0	0	0	5	0	90	2	0	92	2	0	0	0	2	199
Total	3	408	0	0	411	18	5	2	0	25	2	361	4	0	367	10	0	6	0	16	819
05:00 PM	0	119	0	0	119	4	1	1	0	6	0	72	1	0	73	1	0	1	0	2	200
05:15 PM	3	114	0	0	117	5	2	2	0	9	1	68	1	0	70	6	0	0	0	6	202
05:30 PM	1	103	0	0	104	6	1	2	0	9	0	90	0	0	90	4	0	4	0	8	211
05:45 PM	0	100	0	0	100	4	0	2	0	6	0	70	1	0	71	1	0	2	0	3	180
Total	4	436	0	0	440	19	4	7	0	30	1	300	3	0	304	12	0	7	0	19	793
*** BREAK ***																					
Grand Total	12	1520	0	0	1532	53	12	12	0	77	12	1145	16	0	1173	36	0	18	0	54	2836
Apprch %	0.8	99.2	0	0		68.8	15.6	15.6	0		1	97.6	1.4	0		66.7	0	33.3	0		
Total %	0.4	53.6	0	0	54	1.9	0.4	0.4	0	2.7	0.4	40.4	0.6	0	41.4	1.3	0	0.6	0	1.9	
Light	12	1504	0	0	1516	53	12	12	0	77	12	1135	16	0	1163	36	0	18	0	54	2810
% Light	100	98.9	0	0	99	100	100	100	0	100	100	99.1	100	0	99.1	100	0	100	0	100	99.1
Heavy	0	16	0	0	16	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	26
% Heavy	0	1.1	0	0	1	0	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	0	0.9

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405
(912) 964-4509

File Name : bull street at 60th street
Site Code : _____
Start Date : 8/24/2023
Page No : 3

Start Time	Bull Street From North					E 60th Street From East					Bull Street From South					W 60th Street From West					Int. Total
	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	Right	Thru	Left	U Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	81	0	0	81	2	1	1	0	4	0	73	1	0	74	1	0	3	0	4	163
07:45 AM	0	103	0	0	103	1	1	0	0	2	1	58	1	0	60	2	0	0	0	2	167
08:00 AM	0	99	0	0	99	1	1	0	0	2	1	66	2	0	69	1	0	0	0	1	171
08:15 AM	1	95	0	0	96	4	0	1	0	5	1	64	2	0	67	3	0	1	0	4	172
Total Volume	1	378	0	0	379	8	3	2	0	13	3	261	6	0	270	7	0	4	0	11	673
% App. Total	0.3	99.7	0	0		61.5	23.1	15.4	0		1.1	96.7	2.2	0		63.6	0	36.4	0		
PHF	.250	.917	.000	.000	.920	.500	.750	.500	.000	.650	.750	.894	.750	.000	.912	.583	.000	.333	.000	.688	.978
Light	1	369	0	0	370	8	3	2	0	13	3	259	6	0	268	7	0	4	0	11	662
% Light	100	97.6	0	0	97.6	100	100	100	0	100	100	99.2	100	0	99.3	100	0	100	0	100	98.4
Heavy	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	11
% Heavy	0	2.4	0	0	2.4	0	0	0	0	0	0	0.8	0	0	0.7	0	0	0	0	0	1.6
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	117	0	0	117	5	3	1	0	9	1	103	0	0	104	2	0	1	0	3	233
04:45 PM	2	98	0	0	100	5	0	0	0	5	0	90	2	0	92	2	0	0	0	2	199
05:00 PM	0	119	0	0	119	4	1	1	0	6	0	72	1	0	73	1	0	1	0	2	200
05:15 PM	3	114	0	0	117	5	2	2	0	9	1	68	1	0	70	6	0	0	0	6	202
Total Volume	5	448	0	0	453	19	6	4	0	29	2	333	4	0	339	11	0	2	0	13	834
% App. Total	1.1	98.9	0	0		65.5	20.7	13.8	0		0.6	98.2	1.2	0		84.6	0	15.4	0		
PHF	.417	.941	.000	.000	.952	.950	.500	.500	.000	.806	.500	.808	.500	.000	.815	.458	.000	.500	.000	.542	.895
Light	5	445	0	0	450	19	6	4	0	29	2	330	4	0	336	11	0	2	0	13	828
% Light	100	99.3	0	0	99.3	100	100	100	0	100	100	99.1	100	0	99.1	100	0	100	0	100	99.3
Heavy	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
% Heavy	0	0.7	0	0	0.7	0	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	0	0.7

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↑
Traffic Vol, veh/h	2	11	267	3	0	385
Future Vol, veh/h	2	11	267	3	0	385
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	17	293	3	0	418

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	713	295	0	0	-	-
Stage 1	295	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	398	744	-	-	0	-
Stage 1	755	-	-	-	0	-
Stage 2	664	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	398	744	-	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	664	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	744
HCM Lane V/C Ratio	-	-	0.023
HCM Control Delay (s)	-	-	10
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	4	25	337	2	0	459
Future Vol, veh/h	4	25	337	2	0	459
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	31	411	2	0	483

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	895	412	0	0	-	-
Stage 1	412	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	311	640	-	-	0	-
Stage 1	669	-	-	-	0	-
Stage 2	620	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	311	640	-	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	620	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	640
HCM Lane V/C Ratio	-	-	0.048
HCM Control Delay (s)	-	-	10.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	4	7	9	269	378	1
Future Vol, veh/h	4	7	9	269	378	1
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	69	69	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	10	10	296	411	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	728	412	412	0	-	0
Stage 1	412	-	-	-	-	-
Stage 2	316	-	-	-	-	-
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	390	640	1147	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	386	640	1147	-	-	-
Mov Cap-2 Maneuver	386	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1147	-	516	-	-
HCM Lane V/C Ratio	0.009	-	0.031	-	-
HCM Control Delay (s)	8.2	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	11	10	352	448	5
Future Vol, veh/h	2	11	10	352	448	5
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	54	54	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	20	12	429	472	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	928	475	477	0	-	0
Stage 1	475	-	-	-	-	-
Stage 2	453	-	-	-	-	-
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	297	590	1085	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	293	590	1085	-	-	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1085	-	510	-	-
HCM Lane V/C Ratio	0.011	-	0.047	-	-
HCM Control Delay (s)	8.4	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	14	7	7	12	27	2	245	28	79	363	2
Future Vol, veh/h	1	14	7	7	12	27	2	245	28	79	363	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	73	73	73	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	20	10	10	16	37	2	266	30	91	417	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	912	900	418	900	886	281	419	0	0	296	0	0
Stage 1	600	600	-	285	285	-	-	-	-	-	-	-
Stage 2	312	300	-	615	601	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	255	278	635	259	284	758	1140	-	-	1265	-	-
Stage 1	488	490	-	722	676	-	-	-	-	-	-	-
Stage 2	699	666	-	479	489	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	214	251	635	222	257	758	1140	-	-	1265	-	-
Mov Cap-2 Maneuver	214	251	-	222	257	-	-	-	-	-	-	-
Stage 1	487	444	-	721	675	-	-	-	-	-	-	-
Stage 2	647	665	-	408	443	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18		15.6		0.1		1.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1140	-	-	308	404	1265	-	-
HCM Lane V/C Ratio	0.002	-	-	0.104	0.156	0.072	-	-
HCM Control Delay (s)	8.2	0	-	18	15.6	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.5	0.2	-	-

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	17	7	16	29	64	9	333	21	76	418	1
Future Vol, veh/h	6	17	7	16	29	64	9	333	21	76	418	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	70	70	70	86	86	86	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	27	11	23	41	91	10	387	24	86	475	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1133	1079	476	1086	1067	399	476	0	0	411	0	0
Stage 1	648	648	-	419	419	-	-	-	-	-	-	-
Stage 2	485	431	-	667	648	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	180	218	589	194	222	651	1086	-	-	1148	-	-
Stage 1	459	466	-	612	590	-	-	-	-	-	-	-
Stage 2	563	583	-	448	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	119	193	589	156	197	651	1086	-	-	1148	-	-
Mov Cap-2 Maneuver	119	193	-	156	197	-	-	-	-	-	-	-
Stage 1	453	418	-	605	583	-	-	-	-	-	-	-
Stage 2	444	576	-	369	418	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	28.7		27.4		0.2		1.3	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1086	-	-	199	313	1148	-	-
HCM Lane V/C Ratio	0.01	-	-	0.239	0.497	0.075	-	-
HCM Control Delay (s)	8.3	0	-	28.7	27.4	8.4	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	2.6	0.2	-	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	0	10	279	5	0	403
Future Vol, veh/h	0	10	279	5	0	403
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	307	5	0	438

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	310	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	730	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	730	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	730
HCM Lane V/C Ratio	-	-	0.021
HCM Control Delay (s)	-	-	10
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	5	25	355	0	0	481
Future Vol, veh/h	5	25	355	0	0	481
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	31	433	0	0	506

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	939	433	0	0	-	-
Stage 1	433	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	293	623	-	-	0	-
Stage 1	654	-	-	-	0	-
Stage 2	606	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	293	623	-	-	-	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	606	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	623
HCM Lane V/C Ratio	-	-	0.05
HCM Control Delay (s)	-	-	11.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	10	10	12	277	393	3
Future Vol, veh/h	10	10	12	277	393	3
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	69	69	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	14	13	304	427	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	759	429	430	0	-	0
Stage 1	429	-	-	-	-	-
Stage 2	330	-	-	-	-	-
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	374	626	1129	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	626	1129	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1129	-	464	-	-
HCM Lane V/C Ratio	0.012	-	0.062	-	-
HCM Control Delay (s)	8.2	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	5	14	16	369	462	13
Future Vol, veh/h	5	14	16	369	462	13
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	54	54	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	26	20	450	486	14

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	983	493	500	0	-	0
Stage 1	493	-	-	-	-	-
Stage 2	490	-	-	-	-	-
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	276	576	1064	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	576	1064	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1064	-	443	-	-
HCM Lane V/C Ratio	0.018	-	0.079	-	-
HCM Control Delay (s)	8.4	0	13.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	16	10	5	10	30	2	250	30	80	376	3
Future Vol, veh/h	5	16	10	5	10	30	2	250	30	80	376	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	73	73	73	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	23	14	7	14	41	2	272	33	92	432	3

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	938	927	434	929	912	289	435	0	0	305	0	0
Stage 1	618	618	-	293	293	-	-	-	-	-	-	-
Stage 2	320	309	-	636	619	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	244	268	622	248	274	750	1125	-	-	1256	-	-
Stage 1	477	481	-	715	670	-	-	-	-	-	-	-
Stage 2	692	660	-	466	480	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	204	241	622	208	247	750	1125	-	-	1256	-	-
Mov Cap-2 Maneuver	204	241	-	208	247	-	-	-	-	-	-	-
Stage 1	476	434	-	714	669	-	-	-	-	-	-	-
Stage 2	639	659	-	389	433	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.7		14.7		0.1		1.4	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	290	431	1256	-	-
HCM Lane V/C Ratio	0.002	-	-	0.155	0.143	0.073	-	-
HCM Control Delay (s)	8.2	0	-	19.7	14.7	8.1	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.5	0.2	-	-

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	21	10	15	30	65	16	349	20	80	434	8
Future Vol, veh/h	10	21	10	15	30	65	16	349	20	80	434	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	70	70	70	86	86	86	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	33	16	21	43	93	19	406	23	91	493	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1204	1147	498	1160	1140	418	502	0	0	429	0	0
Stage 1	680	680	-	456	456	-	-	-	-	-	-	-
Stage 2	524	467	-	704	684	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	161	199	572	172	201	635	1062	-	-	1130	-	-
Stage 1	441	451	-	584	568	-	-	-	-	-	-	-
Stage 2	537	562	-	428	449	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	100	173	572	128	174	635	1062	-	-	1130	-	-
Mov Cap-2 Maneuver	100	173	-	128	174	-	-	-	-	-	-	-
Stage 1	430	400	-	570	554	-	-	-	-	-	-	-
Stage 2	413	549	-	339	399	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38.1		32.9		0.4		1.3	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1062	-	-	172	281	1130	-	-
HCM Lane V/C Ratio	0.018	-	-	0.378	0.559	0.08	-	-
HCM Control Delay (s)	8.4	0	-	38.1	32.9	8.5	0	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	3.2	0.3	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	0	15	305	5	0	440
Future Vol, veh/h	0	15	305	5	0	440
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	23	335	5	0	478

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	338	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-
Pot Cap-1 Maneuver	0	704	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	704	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	704
HCM Lane V/C Ratio	-	-	0.033
HCM Control Delay (s)	-	-	10.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↑
Traffic Vol, veh/h	5	30	385	0	0	520
Future Vol, veh/h	5	30	385	0	0	520
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	37	470	0	0	547

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1017	470	0	0	-	-
Stage 1	470	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	263	594	-	-	0	-
Stage 1	629	-	-	-	0	-
Stage 2	580	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	263	594	-	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	594
HCM Lane V/C Ratio	-	-	0.062
HCM Control Delay (s)	-	-	11.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	5	10	10	305	430	0
Future Vol, veh/h	5	10	10	305	430	0
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	69	69	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	14	11	335	467	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	824	467	467	0	-	0
Stage 1	467	-	-	-	-	-
Stage 2	357	-	-	-	-	-
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	343	596	1094	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	339	596	1094	-	-	-
Mov Cap-2 Maneuver	339	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1094	-	476	-	-
HCM Lane V/C Ratio	0.01	-	0.046	-	-
HCM Control Delay (s)	8.3	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	15	10	400	510	5
Future Vol, veh/h	0	15	10	400	510	5
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	54	54	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	12	488	537	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1052	540	542	0	-	0
Stage 1	540	-	-	-	-	-
Stage 2	512	-	-	-	-	-
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	251	542	1027	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	247	542	1027	-	-	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	602	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1027	-	542	-	-
HCM Lane V/C Ratio	0.012	-	0.051	-	-
HCM Control Delay (s)	8.5	0	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	15	10	10	15	30	0	280	30	90	415	0
Future Vol, veh/h	0	15	10	10	15	30	0	280	30	90	415	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	73	73	73	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	14	14	21	41	0	304	33	103	477	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1035	1020	477	1022	1004	321	477	0	0	337	0	0
Stage 1	683	683	-	321	321	-	-	-	-	-	-	-
Stage 2	352	337	-	701	683	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	210	237	588	214	242	720	1085	-	-	1222	-	-
Stage 1	439	449	-	691	652	-	-	-	-	-	-	-
Stage 2	665	641	-	429	449	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	168	210	588	175	214	720	1085	-	-	1222	-	-
Mov Cap-2 Maneuver	168	210	-	175	214	-	-	-	-	-	-	-
Stage 1	439	397	-	691	652	-	-	-	-	-	-	-
Stage 2	607	641	-	350	397	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	19.6		19.3		0			1.5		
HCM LOS	C		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	283	326	1222	-	-
HCM Lane V/C Ratio	-	-	-	0.128	0.231	0.085	-	-
HCM Control Delay (s)	0	-	-	19.6	19.3	8.2	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.9	0.3	-	-

Intersection												
Int Delay, s/veh	9.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	20	10	20	35	75	10	380	25	85	475	0
Future Vol, veh/h	5	20	10	20	35	75	10	380	25	85	475	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	70	70	70	86	86	86	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	32	16	29	50	107	12	442	29	97	540	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1293	1229	540	1239	1215	457	540	0	0	471	0	0
Stage 1	734	734	-	481	481	-	-	-	-	-	-	-
Stage 2	559	495	-	758	734	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	140	178	542	152	181	604	1028	-	-	1091	-	-
Stage 1	412	426	-	566	554	-	-	-	-	-	-	-
Stage 2	513	546	-	399	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	78	153	542	111	155	604	1028	-	-	1091	-	-
Mov Cap-2 Maneuver	78	153	-	111	155	-	-	-	-	-	-	-
Stage 1	405	372	-	557	545	-	-	-	-	-	-	-
Stage 2	377	537	-	309	372	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	37.8		54.6		0.2		1.3	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1028	-	-	164	245	1091	-
HCM Lane V/C Ratio	0.011	-	-	0.339	0.758	0.089	-
HCM Control Delay (s)	8.5	0	-	37.8	54.6	8.6	0
HCM Lane LOS	A	A	-	E	F	A	A
HCM 95th %tile Q(veh)	0	-	-	1.4	5.4	0.3	-

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↗
Traffic Vol, veh/h	0	15	309	5	0	448
Future Vol, veh/h	0	15	309	5	0	448
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	65	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	23	340	5	0	487

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	343	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	700	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	700	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	700
HCM Lane V/C Ratio	-	-	0.033
HCM Control Delay (s)	-	-	10.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	5	30	395	0	0	526
Future Vol, veh/h	5	30	395	0	0	526
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	37	482	0	0	554

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1036	482	0	0	-	-
Stage 1	482	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	256	584	-	-	0	-
Stage 1	621	-	-	-	0	-
Stage 2	575	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	256	584	-	-	-	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	575	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	584
HCM Lane V/C Ratio	-	-	0.063
HCM Control Delay (s)	-	-	11.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	10	15	12	307	433	3
Future Vol, veh/h	10	15	12	307	433	3
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	69	69	91	91	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	22	13	337	471	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	836	473	474	0	-	0
Stage 1	473	-	-	-	-	-
Stage 2	363	-	-	-	-	-
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	337	591	1088	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	332	591	1088	-	-	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	704	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1088	-	450	-	-
HCM Lane V/C Ratio	0.012	-	0.081	-	-
HCM Control Delay (s)	8.3	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	19	16	404	512	13
Future Vol, veh/h	5	19	16	404	512	13
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	54	54	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	35	20	493	539	14

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1079	546	553	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	533	-	-	-	-	-
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	242	538	1017	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	538	1017	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1017	-	424	-	-
HCM Lane V/C Ratio	0.019	-	0.105	-	-
HCM Control Delay (s)	8.6	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	16	15	10	15	30	2	285	30	90	416	3
Future Vol, veh/h	5	16	15	10	15	30	2	285	30	90	416	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	73	73	73	92	92	92	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	23	22	14	21	41	2	310	33	103	478	3

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1048	1033	480	1039	1018	327	481	0	0	343	0	0
Stage 1	686	686	-	331	331	-	-	-	-	-	-	-
Stage 2	362	347	-	708	687	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	206	232	586	209	237	714	1082	-	-	1216	-	-
Stage 1	438	448	-	682	645	-	-	-	-	-	-	-
Stage 2	657	635	-	426	447	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	164	205	586	168	209	714	1082	-	-	1216	-	-
Mov Cap-2 Maneuver	164	205	-	168	209	-	-	-	-	-	-	-
Stage 1	437	396	-	681	644	-	-	-	-	-	-	-
Stage 2	598	634	-	341	395	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	21.7		19.9		0.1		1.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1082	-	-	268	317	1216	-	-
HCM Lane V/C Ratio	0.002	-	-	0.195	0.238	0.085	-	-
HCM Control Delay (s)	8.3	0	-	21.7	19.9	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.9	0.3	-	-

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	21	15	20	30	75	16	384	25	85	479	8
Future Vol, veh/h	10	21	15	20	30	75	16	384	25	85	479	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	70	70	70	86	86	86	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	33	24	29	43	107	19	447	29	97	544	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1318	1257	549	1271	1247	462	553	0	0	476	0	0
Stage 1	743	743	-	500	500	-	-	-	-	-	-	-
Stage 2	575	514	-	771	747	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	134	171	535	145	173	600	1017	-	-	1086	-	-
Stage 1	407	422	-	553	543	-	-	-	-	-	-	-
Stage 2	503	535	-	393	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	76	145	535	101	147	600	1017	-	-	1086	-	-
Mov Cap-2 Maneuver	76	145	-	101	147	-	-	-	-	-	-	-
Stage 1	396	368	-	539	529	-	-	-	-	-	-	-
Stage 2	370	521	-	297	366	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	49.4		55.4		0.3		1.3	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1017	-	-	151	237	1086	-	-
HCM Lane V/C Ratio	0.018	-	-	0.484	0.753	0.089	-	-
HCM Control Delay (s)	8.6	0	-	49.4	55.4	8.6	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.3	5.3	0.3	-	-