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2514 ABERCORN STREET ○ SUITE 110 ○ SAVANNAH GEORGIA 31401 ○ 912-777-3979

GA 8847 SC 5791 FL 17550 AL 6279

June 1, 2021

Mr. John Hunter
Director of Planning, Development & Codes
City of Brunswick
601 Gloucester Street
Brunswick, Georgia 31520

Re: Rezoning Application St. Francis Xavier Catholic School
1129 Grant St.
Brunswick, GA 31520

Mr. Hunter,

Thank you and the members of the Planning and Appeals Commission for your help and review of this project thus far. During the May Planning and Appeals meeting, three items were requested for further study regarding the existing and projected traffic patterns around the school. We have since consulted with our Traffic Engineer to report on these concerns and have the following summary of their findings:

1. Commission's Request: Extend the traffic study to determine impact on Hanover Square.
   Findings: Most exiting vehicles will likely turn right at George Street to then turn onto Bay Street going north. Some traffic will continue around Hanover Square, but the impact is expected to be negligible. See pg. 19 & 20, "Conclusions" and "Recommendation of Improvements" of the attached traffic study.
2. Commission's Request: Extend the afternoon time of the study to 5:00 pm. Will after-school activities impact traffic?
   Findings: After-school activities are not expected to impact traffic in any significant way. The current enrollment experiences +/- 20 cars for pickup from these programs. Parents arrive intermittently and there is never a wait time or queuing. The future peak enrollment of 300 children projects +/- 36 cars and still does not forecast any wait time or queuing. Parents will still arrive intermittently, and the number of cars would be negligible. See pg. 10, Table 15 of the attached traffic study.
3. Commission's Request: Study rotating the drop-off area 90-degrees counter-clockwise around the site, placing the drop-off on Howe Street in lieu of Grant Street. Vehicle queueing would begin at the drop-off on Howe and continue along the shoulder of Bay Street.
   Findings: We have examined this scenario and presented it to GDOT. They have stated that they will not allow stacking on their route and recommends using other available, adjacent streets. The traffic study shows negligible wait times and no significant impact downstream.

Please reference the full traffic report for specific details and results. The Traffic Study shall take precedence over any information in this letter, especially if it is conflicting or unclear.

We trust that you and members of the Planning and Appeals Commission will find our presentation acceptable and along with our client, we look forward to receiving your favorable comments. Please call if you have any questions or if any additional information is required.

Thank you very much,

Ryan Claus, Associate AIA
Project Manager
Felder & Associates

Cc: Owner, File

Attachments:

- Revised Traffic Study
- Correspondence from the City Traffic Engineer and GDOT

TRAFFIC IMPACT STUDY

St. Francis Xavier Catholic School

Glynn County, GA

COASTAL ENGINEERING
AND CONSULTING

May 2021

Title **St. Francis Xavier Catholic School Traffic Impact Study Glynn County, GA**	
Prepared For Ryan Claus, Assoc. AIA Felder & Associates 2514 Abercorn Street Savannah, GA 31401	*Date* May 12, 2021 *Revised: May 28, 2021*
Prepared By Coastal Engineering & Consulting 6605 Abercorn Street, Suite 210D Savannah, GA 31405 (912) 964-4509	*Report By* C. Scott Burns, P.E.
This study describes a traffic analysis to determine if improvements are required along Howe Street near Grant Street due to the proposed relocation of St. Francis Xavier Catholic School in Glynn County, GA. The proposed project will consist of a 300-student K to 8th grade school and associated improvements. Based on the findings in this study, the existing intersections will operate efficiently with the development and additional traffic volumes. In addition, the roadway was observed to meet sight distance requirements.	

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Introduction

The purpose of this study is to provide traffic projections and capacity analysis to evaluate the need for potential improvements along Howe Street between Bay Street and Newcastle Street due to the proposed development in Glynn County, Georgia. Figure 1 shows the project location.

FIGURE 1: PROJECT LIMITS

Existing Conditions

Existing Geometry

Newcastle Street is a north-south roadway that runs from State Route 27/U.S. 341 southward until the roadway intersects 5th Avenue and continues as King and Prince Boulevard. The roadway provides access to multiple commercial, government and residential developments as well as St. Francis Xavier Church within its corridor. In the project limits, the roadway is classified as an Urban Minor Arterial and consists of one lane in each direction separated by a raised grassed median. At the intersection with Howe Street, Newcastle Street traffic does not stop at the intersection. The roadway provides adequate sight distance on all approaches.

Bay Street is a north-south roadway that runs from State Route 27/U.S. 341 southward until the roadway intersects 1st Avenue. The roadway provides access to multiple commercial, residential, and marina as well as a cemetery. In the project limits, the roadway is classified as an Urban Principal Arterial and consists of two lanes in each direction separated by a raised median. At the intersection with Howe Street, Bay Street provides a left turn lane for southbound traffic. The roadway provides adequate sight distance on all approaches.

Grant Street is a north-south roadway that runs from F Street southward to the intersection with 1st Avenue. The roadway provides access to residential properties within its corridor. In the project limits, the roadway is classified as an Urban Local Street and consists of one lane in each direction. At the intersection with Howe Street, Grant Street does not provide access for vehicles to travel northbound. The roadway provides adequate sight distance on all approaches.

Howe Street is an east-west roadway that runs from State Route 27/U.S. 341 eastward to the intersection with Egmont Street. The roadway provides access to residential properties as well as St. Francis Xavier Church. In the project limits, the roadway is a classified as an Urban Local Street and consists of one lane in each direction. The roadway provides adequate sight distance on all approaches.

Existing Daily Volumes

Existing daily traffic volume data was collected along Newcastle Street at Bay Street and Newcastle Street near 4th Avenue between Tuesday, May 4, 2021 and Thursday, May 6, 2021. Additional data was collected on Howe Street between Tuesday, May 18, 2021 and Friday, May 22, 2021. 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 the existing ADTs approaching the intersection.

TABLE 1: EXISTING ADT

	Newcastle Street North of proposed site		**Newcastle Street South of proposed site**		**Howe Street**	
Weekday	10,570		2,675		357	
	Northbound	**Southbound**	**Northbound**	**Southbound**	**Eastbound**	**Westbound**
Weekday	5,554	5,016	1,358	1,317	147	210
Truck %	2.4	2.8	5.8	5.9	9.1	12.4

Existing Peak Hour Volumes

Data was collected at multiple intersections around the site to determine the directional traffic distribution for the site. The data provided in Tables 2 – 7 reflect the peak hour volume at the intersections near the proposed location.

TABLE 2: EXISTING PEAK HOUR VOLUMES – BAY STREET AT HOWE STREET

	Howe Street WB			**Driveway EB**			**Bay Street NB**			**Bay Street SB**		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	1	0	21	2	0	1	5	169	0	34	190	9
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	0	21	8	0	2	1	209	3	2	157	4

TABLE 3: EXISTING PEAK HOUR VOLUMES – GRANT STREET AT HOWE STREET

	Howe Street WB			**Howe Street EB**			**Grant Street NB**			**Grant Street SB**		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	21	0	0	29	5	2	0	1	0	0	0
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	3	17	0	0	3	2	1	0	1	1	1	3

TABLE 4: EXISTING PEAK HOUR VOLUMES – NEWCASTLE STREET AT HOWE STREET

	Howe Street WB			Howe Street EB			Newcastle Street NB			Newcastle Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	1	12	14	7	21	0	7	60	2	4	19	1
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	4	9	1	1	4	0	5	34	0	2	38	6

TABLE 5: EXISTING PEAK HOUR VOLUMES – GRANT STREET AT GEORGE STREET

	Grant Street NB			Grant Street SB			George Street EB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	41	3	0	0	20
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	62	7	0	0	17

TABLE 6: EXISTING PEAK HOUR VOLUMES – BAY STREET AT GEORGE STREET

	Bay Street NB			Bay Street SB			George Street WB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	165	0	27	145	0	1	0	6
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	8	172	1	18	129	0	0	0	10

TABLE 7: EXISTING PEAK HOUR VOLUMES – RICHMOND STREET AT GEORGE STREET

	Richmond Street NB			Richmond Street SB			George Street WB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	48	72	--	--	--	0	0	9
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	56	22	--	--	--	0	0	18

Horizon Year Traffic Projections

This section contains traffic projections for the future years 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 0000127_0392 is a short-term portable counter. This counter was located on Newcastle Street, north of Howe Street. GDOT count station 0000127_0203 is a short-term portable counter that was located along Bay Street, south of Howe Street.

Table 8 summarizes the average annual daily traffic collected at this location between 2010 and 2021. Remaining years were estimated without the installation of additional counters. These years were not added to the table due to a discrepancy in GDOT collected counts and the annual statistic used by GDOT.

TABLE 8: HISTORIC TRAFFIC DATA, AADT

Year	AADT (Newcastle Street)	AADT (Bay Street)
2018	**1,552**	**3,946**
2015	**N/A**	**4,060**
2014	**1,522**	**N/A**
2013	**N/A**	**3,340**
2011	**N/A**	**3,625**
2010	**1,596**	**4,225**

Reviewing data provided between 2010 and 2021 shows the existing traffic volumes used to determine an applicable growth rate for the corridor. Based on the analysis, the traffic volumes along Bay Street decreased over the length of the analysis while the traffic volumes along Newcastle Street showed an increase. Based on the growth from 2014 to 2018, a growth rate of 0.50% will be used for the projected traffic volumes, including the "No Build" scenario provided in Tables 9 – 14.

TABLE 9: PEAK HOUR VOLUMES – BAY STREET AT HOWE STREET – 2042 NO BUILD

	Howe Street WB			Driveway EB			Bay Street NB			Bay Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	0	25	5	0	5	5	190	0	40	215	10
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	0	25	10	0	5	5	235	5	5	180	5

TABLE 10: PEAK HOUR VOLUMES – GRANT STREET AT HOWE STREET – 2042 NO BUILD

	Howe Street WB			Howe Street EB			Grant Street NB			Grant Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	25	0	0	35	5	5	0	5	0	0	0
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	20	0	0	5	5	5	0	5	5	5	5

TABLE 11: PEAK HOUR VOLUMES – NEWCASTLE STREET AT HOWE STREET – 2042 NO BUILD

	Howe Street WB			Howe Street EB			Newcastle Street NB			Newcastle Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	15	15	10	25	0	10	70	5	5	25	5
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	10	5	5	5	0	5	40	0	5	45	10

TABLE 12: PEAK HOUR VOLUMES – GRANT STREET AT GEORGE STREET – 2042 NO BUILD

	Grant Street NB			Grant Street SB			George Street EB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	50	5	0	0	25
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	70	10	0	0	20

TABLE 13: PEAK HOUR VOLUMES – BAY STREET AT GEORGE STREET – 2042 NO BUILD

	Bay Street NB			Bay Street SB			George Street WB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	185	0	30	165	0	5	0	10
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	10	195	5	20	145	0	0	0	15

TABLE 14: PEAK HOUR VOLUMES – RICHMOND STREET AT GEORGE STREET – 2042 NO BUILD

	Richmond Street NB			Richmond Street SB			George Street WB		
AM Peak	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
	0	55	80	--	--	--	0	0	10
PM Peak	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
	0	65	25	--	--	--	0	0	20

Trip Generation Estimate

When evaluating the existing and proposed conditions at this location, the 10th 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 back to their original origin. Due to the location, it is anticipated that 10% of traffic will access the site from the north using Newcastle Street, 35% will access the site from the east along Howe Street, 20% will access the site from the south and 35% will access the site from the west. Vehicles accessing the site from the intersection of Newcastle Street and Howe Street can access Grant Street at two locations, Grant Street and Howe Street or Grant Street and Newcastle 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). The ITE does not recommend a pass by percentage for this facility.

Internal Capture

Internal capture trips are associated with significant mixed-use developments. Internal capture trips take into account 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 for both

locations, they only affect the roadway network when they enter and exit the site. Internal capture trips are not calculated for this project.

St. Francis Xavier Catholic School Projected Data

The St. Francis Xavier Catholic School development is a proposed K to 8th grade private school located along Howe Street at Grant Street in Glynn County, GA. The school will be relocated from the currently location of Howe Street at Union Street where a total of 174 students are currently enrolled. The site will be analyzed based on the design of 300 students.

Using the proposed land use, it was determined that ITE Codes 534 – Private School (K-8) was the best option to analyze the proposed data for the site. Table 15 summarizes the site condition using the ITE Trip Generation Manual. The PM Trips are based on the ITE Time of Day Distribution for the land use used. No pass by trips are generated for this type of development.

TABLE 15: 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
534 – Private School (K-8)	Students	300.000	1,233	273	150	123	0	78	36	42	0
Existing based on ITE Land Use Code 534	Students	174.000	715	158	87	71	0	45	21	24	0

Currently, the school at Union Street has an average of 87 vehicles during the drop-off period and 72 vehicles during the pick-up period. This also includes a bus used to transport approximately 20 students to/from St. Simons Island. Analyzing this data, in comparison to the ITE Trip Generation data above shows that the volumes calculated are in line with actual volumes collected in the field. The data shown for the PM Peak occurs after dismissal. This will include parent pick-up from after-school activities and staff departures.

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 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.

Projected Future Year Traffic Volumes

By combining the existing traffic volumes, the generated traffic volumes, and the pass-by traffic modifications, the forecasted traffic volumes for the proposed conditions are obtained.

Proposed Peak Hour Volumes with the new St. Francis Xavier Catholic School Development

Based on the existing peak hour count data collected near the project and the trips determined by the ITE Trip Generation, the proposed trips have been calculated to determine if improvements to the intersection are necessary. Tables 16 – 21 include the AM and PM Peak Hour traffic volumes for the intersection with the generated trips added.

TABLE 16: PEAK HOUR VOLUMES – BAY STREET AT HOWE STREET (2042)

	Howe Street WB			Driveway EB			Bay Street NB			Bay Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	0	25	5	0	5	5	233	0	92	215	10
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	0	25	10	0	5	5	250	5	17	180	5

TABLE 17: PEAK HOUR VOLUMES – GRANT STREET AT HOWE STREET (2042)

	Howe Street WB			Howe Street EB			Grant Street NB			Grant Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	26	25	0	0	35	57	5	0	5	0	0	0
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	11	20	0	0	5	17	5	0	5	5	5	5

TABLE 18: PEAK HOUR VOLUMES – NEWCASTLE STREET AT HOWE STREET (2042)

	Howe Street WB			Howe Street EB			Newcastle Street NB			Newcastle Street SB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	15	15	37	51	0	10	82	27	5	40	5
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	10	5	12	11	0	5	40	8	5	49	10

TABLE 19: PEAK HOUR VOLUMES – GRANT STREET AT GEORGE STREET (2042)

	Grant Street NB			Grant Street SB			George Street EB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	130	48	0	0	25
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	--	--	--	0	97	25	0	0	20

TABLE 20: PEAK HOUR VOLUMES – BAY STREET AT GEORGE STREET (2042)

	Bay Street NB			Bay Street SB			George Street WB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	5	185	0	30	165	0	5	0	53
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	10	195	5	20	145	0	0	0	30

TABLE 21: PEAK HOUR VOLUMES – RICHMOND STREET AT GEORGE STREET (2042)

	Richmond Street NB			Richmond Street SB			George Street WB		
AM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	119	101	--	--	--	0	0	10
PM	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**	**LT**	**Thru**	**RT**
Peak	0	84	32	--	--	--	0	0	20

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 22. 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. No overall intersection LOS is given for unsignalized intersections.

TABLE 22: 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

Future Traffic Conditions for Stop-Controlled Intersections

The 2042 proposed traffic volumes at the intersections were analyzed without signalization. Table 23 provides the LOS for each approach at the intersection of Bay Street at Howe Street with the minor road (Howe Street) in a stop condition. Table 24 provides the LOS for each approach at the intersection of Grant Street at Howe Street with the minor road (Grant Street) in a stop condition. Table 25 provides the LOS for each approach at the intersection of Newcastle Street at Howe Street with the minor road (Howe Street) in a stop condition.

TABLE 23: LOS FOR UNSIGNALIZED INTERSECTION (BAY STREET AT HOWE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Bay Street NB LT	A	7.8 s	A	7.8 s	A	7.7 s	A	7.7 s
Bay Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bay Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bay Street SB LT	A	7.9 s	A	8.2 s	A	7.8 s	A	7.9 s
Bay Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bay Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Driveway EB Shared LT/THRU/RT	B	11.2 s	B	12.7 s	B	12.5 s	B	13.3 s
Howe Street WB Shared LT/THRU/RT	B	11.3 s	B	13.3 s	A	9.3 s	A	9.4 s

TABLE 24: LOS FOR UNSIGNALIZED INTERSECTION (GRANT STREET AT HOWE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Howe Street WB LT	A	0.0 s	A	0.2 s	A	0.0 s	A	0.1 s
Howe Street WB THRU	A	0.0 s	A	3.7 s	A	1.3 s	A	2.3 s
Howe Street EB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Howe Street EB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Grant Street SB Shared LT/THRU/RT	--	--	--	--	A	9.3 s	A	9.4 s
Grant Street NB Shared LT/RT	A	8.9 s	A	9.5 s	A	9.0 s	A	9.1 s

TABLE 25: LOS FOR UNSIGNALIZED INTERSECTION (NEWCASTLE STREET AT HOWE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Howe Street WB LT	A	10.0 s	B	10.8 s	A	9.8 s	A	9.9 s
Howe Street WB THRU	A	10.0 s	B	10.8 s	A	9.8 s	A	9.9 s
Howe Street WB RT	A	10.0 s	B	10.4 s	A	9.8 s	A	9.9 s
Howe Street EB LT	B	10.9 s	B	13.6 s	B	10.2 s	B	10.7 s
Howe Street EB THRU	B	10.9 s	B	13.6 s	B	10.2 s	B	10.7 s
Howe Street EB RT	--	--	--	--	--	--	--	--
Newcastle Street SB Shared LT/THRU/RT	A	0.8 s	A	0.4 s	A	0.7 s	A	0.7 s
Newcastle Street NB Shared LT/THRU/RT	A	1.5 s	A	1.1 s	A	1.1 s	A	1.0 s

TABLE 26: LOS FOR UNSIGNALIZED INTERSECTION (GRANT STREET AT GEORGE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Grant Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Grant Street SB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
George Street EB RT	A	8.9 s	A	9.9 s	A	9.0 s	A	9.3 s

TABLE 27: LOS FOR UNSIGNALIZED INTERSECTION (BAY STREET AT GEORGE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Bay Street NB LT	--	--	--	--	--	--	--	--
Bay Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bay Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Bay Street SB LT	A	7.7 s	A	7.7 s	A	7.8 s	A	7.8 s
Bay Street SB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
George Street WB Shared LT/THRU/RT	B	10.4 s	A	10.0 s	A	9.1 s	A	9.2 s

TABLE 28: LOS FOR UNSIGNALIZED INTERSECTION (RICHMOND STREET AT GEORGE STREET)

	NO BUILD AM LOS	NO BUILD DELAY	LOS AM PEAK	DELAY	NO BUILD PM LOS	NO BUILD DELAY	LOS PM PEAK	DELAY
Richmond Street NB THRU	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
Richmond Street NB RT	A	0.0 s	A	0.0 s	A	0.0 s	A	0.0 s
George Street WB RT	A	9.0 s	A	9.5 s	A	9.0 s	A	9.1 s

Based on the analysis, the stop-controlled intersection in the proposed condition provides an acceptable level of service for the project.

GDOT Turning Lane Requirements

Analysis of intersection improvements included the analysis of the need for auxiliary turn lanes at each intersection. This analysis was completed based on design criteria provided by GDOT in Chapter 4 of the *Regulations for Driveway and Encroachment Control* manual. Determination of turn lane locations is based on the posted speed, number of lanes on the route and the ADT. Table 29 provides the minimum requirements for left turn lanes used for the project. Table 30 provides the minimum requirements for right turn lanes used for the project.

TABLE 29: MINIMUM VOLUMES REQUIRING LEFT TURN LANES

POSTED SPEED	2 LANE ROUTES		MORE THAN 2 LANES ON MAIN ROAD	
	ADT		ADT	
	< 6,000	≥ 6,000	< 10,000	≥ 10,000
35 MPH or LESS	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 TO 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
≥ 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

For unsignalized intersections, GDOT recommends that storage accommodates vehicles arriving during a two-minute period.

TABLE 30: MINIMUM VOLUMES REQUIRING RIGHT TURN LANES

POSTED SPEED	2 LANE ROUTES		MORE THAN 2 LANES ON MAIN ROAD	
	ADT		ADT	
	< 6,000	≥ 6000	< 10,000	≥ 10,000
35 MPH or LESS	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 TO 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 TO 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
≥ 65 MPH	Always	Always	Always	Always

For unsignalized intersections, GDOT recommends the minimum storage length be provided.

School Drop Off/Pick Up Queue Length

Currently there is no standardized method for calculating school zone queues; however, the Municipal School Transportation Assistance (MSTA) of North Carolina has created a spreadsheet that has been reviewed by multiple agencies. This spreadsheet reviews the queues in both the AM and PM Peak hours to determine the overall affect on adjacent roadways. The spreadsheet recommends determining the queue based on the PM Peak Hour as the AM traffic is considered to be more spread out over the AM Peak Hour and the typical drop off occurs much faster than pickup. Based on the spreadsheet, approximately 48.67% of the PM Peak hour entering volume will be in the queue at any one time. Based on the current trip generation, approximately 125 vehicles will be expected during the afternoon pick-up period.

48.67% Trips Entering = 48.67% * 125 vehicles = 61 vehicles

Vehicles * 22.19 feet/vehicle = 61 vehicles * 22.19 feet/vehicle = 1,354 feet

It should be noted that the calculations are based on a 30-minute pick up window. In order to reduce this queue length, the school is currently proposing a 60-minute window pick up window. When determining locations for queuing, Bay Street at Howe Street was examined; however, GDOT has stated that they will not allow stacking on their route and recommends using other adjacent streets. Based on this data, using Grant Street and Howe Street for pick-up queuing would be acceptable.

Conclusions

Based on the data collected from the site, the following conclusions have been made.

- Currently, the total daily volume along Newcastle Street, north of the site, is 10,570 VPD. This includes 5,554 northbound vehicles and 5,016 southbound vehicles. The total daily volume along Newcastle Street, south of the site, is 2,675 VPD. This includes consists of 1,358 northbound vehicles and 1,317 southbound vehicles. The posted speed of the roadway is 55 MPH.
- The proposed project will relocate St Francis Xavier Catholic School from the intersection of Union Street and Howe Street to the intersection of Grant Street and Howe Street. The site will be analyzed based on 300 students. Due to the location, it is anticipated that 10% of traffic will access the site from the north using Newcastle Street, 35% will access the site from the east along Howe Street, 20% will access the site from the south and 35% will access the site from the west. Vehicles accessing the site from the intersection of Newcastle Street and Howe Street can access Grant Street at two locations, Grant Street and Howe Street or Grant Street and Newcastle Street.

Recommendation of Improvements

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

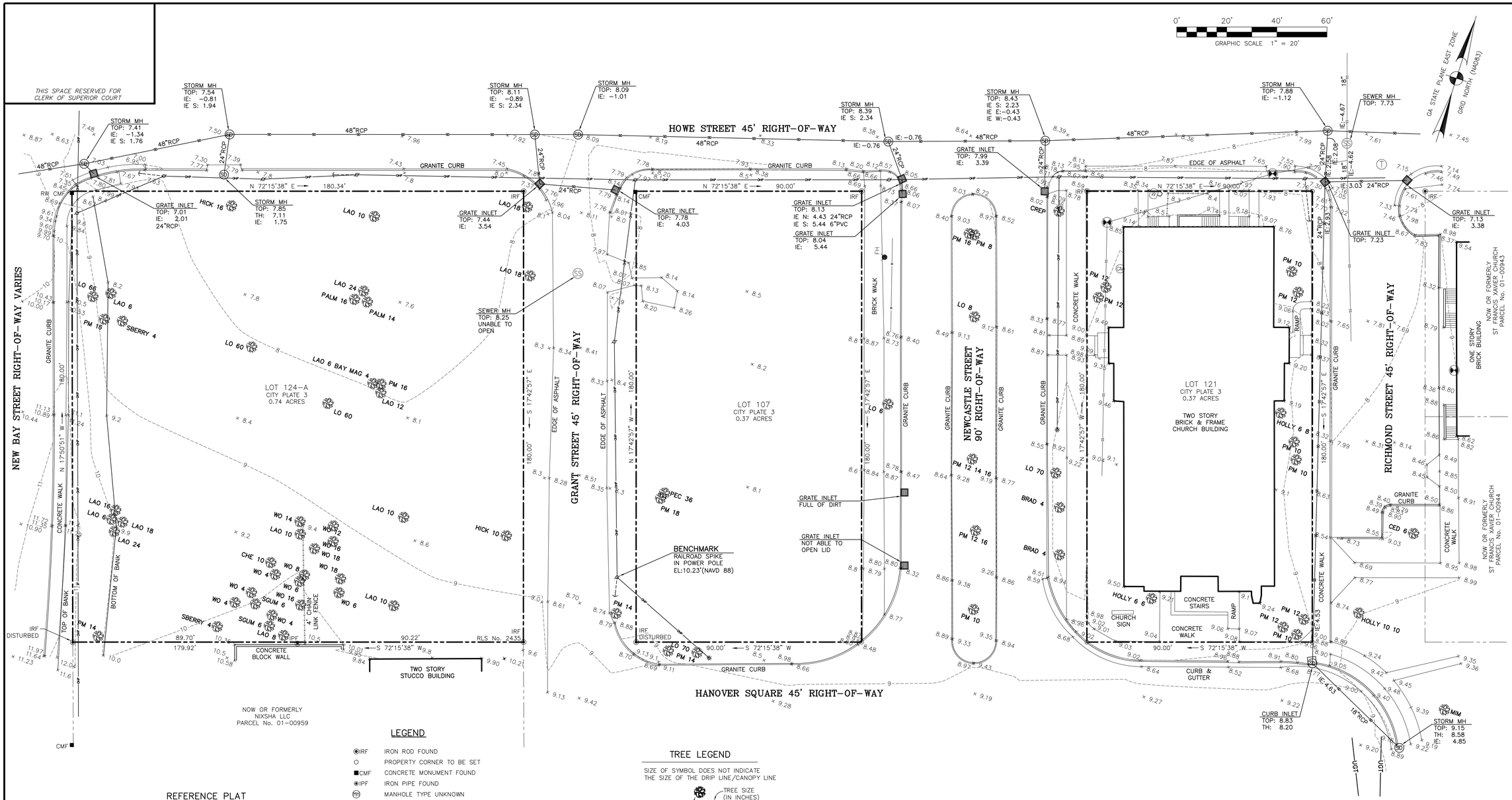
- It is recommended that the intersections of Howe Street and Bay Street, Howe Street and Grant Street, Howe Street and Newcastle Street and Grant Street and George Street continue to operate as minor road stop-controlled intersections.
- It is recommended that drop off queues along Grant Street. This will allow exiting vehicles to turn right at the intersection of Grant Street and George Street and use the intersection of Bay Street at George Street to travel to the north.
- Based on the level of service along the surrounding streets, the development will require no additional improvements along the corridor, including at Hanover Square.
- Due to the block configuration of the surrounding streets, traffic appears to have the ability to disperse within the corridor, as a result, no roadway improvements are recommended as a part of this development.

Recommendation: C. Scott Burns

GEORGIA REGISTERED No. PE035594 PROFESSIONAL ENGINEER C. SCOTT BURNS

APPENDIX

THIS SPACE RESERVED FOR
CLERK OF SUPERIOR COURT



NOW OR FORMERLY
NIXSHA LLC
PARCEL No. 01-00959

REFERENCE PLAT

1. DEED BOOK 3435, PAGE 38.
2. CITY OF BRUNSWICK, GEORGIA
   CITY PLATE 03

LOTS 107, 121 & 124–A

TAX ASSESSOR'S PROPERTY
IDENTIFICATION NUMBER'S
01–00951 THRU 00953

CURRENT ZONING: GR

TAX ASSESSOR'S PROPERTY
IDENTIFICATION NUMBER'S
01–00954 THRU 00958 &
01–00967 THRU 72

CURRENT ZONING: GR–CORE

TOTAL LOT AREA: 1.48 ACRES

LEGEND

◉IRF	IRON ROD FOUND
○	PROPERTY CORNER TO BE SET
■CMF	CONCRETE MONUMENT FOUND
◉IPF	IRON PIPE FOUND
Ⓜ	MANHOLE TYPE UNKNOWN
GM	GAS METER
×13.4	SPOT ELEVATION
▤	GRATE INLET
W	WATER METER
⌀	POWER POLE
←	GUY WIRE
SD	STORM DRAINAGE MANHOLE
SS	SANITARY SEWER MANHOLE
✲	LIGHT POLE
⊗	CLEANOUT
⬠	IRRIGATION CONTROL VALVE
●FH	FIRE HYDRANT
—OHP—	OVERHEAD UTILITY LINE
—18—	CONTOUR LINE
—UGT—	COMUNICATION LINE
—W—	UNDERGROUND WATER LINE
—SS—	UNDERGROUND SEWER LINE
—SD—	UNDERGROUND STORM LINE

TREE LEGEND

SIZE OF SYMBOL DOES NOT INDICATE
THE SIZE OF THE DRIP LINE/CANOPY LINE

LOCATION OF TREE — LO 14 — TREE SIZE (IN INCHES) — TREE TYPE

TREE TYPE ABBREVIATIONS:

BRAD	BRADFORD PEAR
CED	CEDAR
CHE	CHERRY
CREP	CREPE MYRTLE
HICK	HICKORY
HOLLY	HOLLY BERRY
LAO	LAUREL OAK
LO	LIVE OAK
MIM	MIMOSA
PM	PALM
PEC	PECAN
SGUM	SWEET GUM
WO	WATER OAK

ALL OTHERS SPELLED OUT

MULTIPLE TREE SIZES INDICATES COMMON BASE

DEAD TREES NOT LOCATED

SURVEYOR'S NOTES

1. THE ELEVATIONS SHOWN ARE BASED ON NAVD 88 DATUM. THE CONTOUR INTERVAL IS 1 FOOT.
2. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED HAS A CLOSURE RATIO OF 1 FOOT IN 84,731 FEET, AN ANGULAR ERROR OF 2" PER ANGLE POINT, AND WAS ADJUSTED USING THE COMPASS RULE METHOD.
3. THIS PLAT HAS A PRECISION OF ONE FOOT IN 113,169 FEET.
4. ACCORDING TO F.I.R.M. MAP NO. 13127C0238F, REVISED SEPTEMBER 6, 2006, THE PROPERTY SHOWN ON THIS SURVEY LIES IN ZONE AE (BFE 11).
5. ONLY ABOVEGROUND, READILY VISIBLE STRUCTURES AND UTILITIES WERE LOCATED FOR THIS SURVEY. THIS SURVEYOR MAKES NO WARRANTY OR GUARANTEE AS TO THE LOCATION, EXISTENCE, OR NON–EXISTENCE OF ANY BELOWGROUND, NON–VISIBLE UTILITIES OR STRUCTURES.

GEORGIA REGISTERED No. 3022 PROFESSIONAL LAND SURVEYOR JAMES CRAIG BREWER

THIS SURVEY IS A RETRACEMENT OF AN EXISTING PARCEL OF LAND AND DOES NOT SUBDIVIDE OR CREATE A NEW PARCEL. THE RECORDING INFORMATION OF THE DOCUMENT(S), MAP(S), PLAT(S) OR OTHER INSTRUMENT(S) WHICH CREATED THE PARCEL(S) ARE STATED HEREON. RECORDATION OF THIS SURVEY DOES NOT IMPLY APPROVAL OF THE LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS, NOR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. FURTHER, THE UNDERSIGNED LAND SURVEYOR CERTIFIES THAT THIS MAP, PLAT, OR PLAN COMPLIES WITH THE MINIMUM TECHNICAL STANDARDS FOR PROPERTY SURVEYS IN GEORGIA AS SET FORTH IN CHAPTER 180–7 OF THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND AS SET FORTH IN THE GEORGIA PLAT ACT OCGA 15–6–67.

JAMES CRAIG BREWER
GA. REG. LAND SURVEYOR NO. 3022

BREWER
LAND SURVEYING
P.O. Box 441
Pooler, GA 31322
craig@brewersurvey.com
Phone (912) 856-2205
www.BrewerSurvey.com

A BOUNDARY & TOPOGRAPHIC SURVEY OF

LOT 107, 121 & 124-A, CITY PLATE 3

26th G.M. DISTRICT, CITY OF BRUNSWICK, GLYNN COUNTY, GEORGIA

PREPARED FOR:

ST. FRANCIS XAVIER CHURCH

PROJECT #:	170600
FIELD DATE:	11/6/2017
PLAT DATE:	11/20/2017
DRAWN BY:	DJP
CHECKED BY:	JCB
SCALE:	1"=20'

SHEET: 1 OF 1

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Newcastle Street
North of 4th Avenue
Latitude: 0' 0.0000 Undefined

Start Time	05/04/21 Tue	Northbound	Southboun							Total
12:00 AM		*	*							*
12:15		*	*							*
12:30		*	*							*
12:45		*	*							*
01:00		*	*							*
01:15		*	*							*
01:30		*	*							*
01:45		*	*							*
02:00		*	*							*
02:15		*	*							*
02:30		*	*							*
02:45		*	*							*
03:00		*	*							*
03:15		*	*							*
03:30		*	*							*
03:45		*	*							*
04:00		*	*							*
04:15		*	*							*
04:30		*	*							*
04:45		*	*							*
05:00		*	*							*
05:15		*	*							*
05:30		*	*							*
05:45		*	*							*
06:00		*	*							*
06:15		*	*							*
06:30		*	*							*
06:45		*	*							*
07:00		*	*							*
07:15		*	*							*
07:30		*	*							*
07:45		*	*							*
08:00		*	*							*
08:15		*	*							*
08:30		*	*							*
08:45		*	*							*
09:00		*	*							*
09:15		*	*							*
09:30		*	*							*
09:45		*	*							*
10:00		*	*							*
10:15		*	*							*
10:30		*	*							*
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		0	0							0
Percent		0.0%	0.0%							
Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
P.H.F.										

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Start Time	05/04/21 Tue	Northbound	Southboun							Total
12:00 PM		*	*							*
12:15		*	*							*
12:30		*	*							*
12:45		*	*							*
01:00		*	*							*
01:15		*	*							*
01:30		*	*							*
01:45		*	*							*
02:00		*	*							*
02:15		*	*							*
02:30		*	*							*
02:45		*	*							*
03:00		*	*							*
03:15		*	*							*
03:30		*	*							*
03:45		*	*							*
04:00		**36**	23							59
04:15		**28**	15							43
04:30		**49**	**32**							**81**
04:45		**35**	**17**							**52**
05:00		20	**37**							**57**
05:15		29	**26**							**55**
05:30		23	27							50
05:45		17	20							37
06:00		24	18							42
06:15		11	16							27
06:30		16	19							35
06:45		10	16							26
07:00		10	14							24
07:15		22	14							36
07:30		10	9							19
07:45		17	9							26
08:00		5	6							11
08:15		16	6							22
08:30		5	9							14
08:45		0	10							10
09:00		3	12							15
09:15		3	7							10
09:30		9	10							19
09:45		2	5							7
10:00		4	7							11
10:15		6	2							8
10:30		2	5							7
10:45		3	0							3
11:00		1	2							3
11:15		5	3							8
11:30		0	3							3
11:45		3	6							9
Total		424	405							829
Percent		51.1%	48.9%							
Peak	-	16:00	16:30	-	-	-	-	-	-	16:30
Vol.	-	148	112	-	-	-	-	-	-	245
P.H.F.		0.755	0.757							0.756

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Site Code:
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Latitude: 0' 0.0000 Undefined

Start Time	05/05/21 Wed	Northbound	Southboun							Total
12:00 AM		7	2							9
12:15		1	4							5
12:30		4	0							4
12:45		1	1							2
01:00		4	3							7
01:15		2	0							2
01:30		0	1							1
01:45		3	1							4
02:00		1	2							3
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	1							1
03:15		0	0							0
03:30		2	0							2
03:45		4	2							6
04:00		2	0							2
04:15		1	1							2
04:30		4	2							6
04:45		3	5							8
05:00		3	1							4
05:15		2	7							9
05:30		2	8							10
05:45		2	13							15
06:00		3	5							8
06:15		11	18							29
06:30		9	**32**							41
06:45		13	**43**							56
07:00		20	**24**							44
07:15		23	**23**							46
07:30		**31**	29							**60**
07:45		**54**	28							**82**
08:00		**43**	22							**65**
08:15		**28**	19							**47**
08:30		16	11							27
08:45		16	19							35
09:00		15	14							29
09:15		18	15							33
09:30		18	23							41
09:45		14	13							27
10:00		18	15							33
10:15		15	21							36
10:30		17	14							31
10:45		22	20							42
11:00		18	15							33
11:15		26	17							43
11:30		20	20							40
11:45		22	17							39
Total		538	531							1069
Percent		50.3%	49.7%							
Peak	-	07:30	06:30	-	-	-	-	-	-	07:30
Vol.	-	156	122	-	-	-	-	-	-	254
P.H.F.		0.722	0.709							0.774

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Site Code:
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North of 4th Avenue
Latitude: 0' 0.0000 Undefined

Start Time	05/05/21 Wed	Northbound	Southboun							Total
12:00 PM		36	**28**							**64**
12:15		25	**37**							**62**
12:30		26	**31**							**57**
12:45		16	**33**							**49**
01:00		26	24							50
01:15		20	16							36
01:30		23	30							53
01:45		23	18							41
02:00		13	19							32
02:15		15	22							37
02:30		29	16							45
02:45		21	21							42
03:00		23	15							38
03:15		25	18							43
03:30		34	25							59
03:45		**50**	13							63
04:00		**37**	25							62
04:15		**26**	13							39
04:30		**43**	23							66
04:45		14	18							32
05:00		28	36							64
05:15		40	24							64
05:30		32	30							62
05:45		22	20							42
06:00		16	12							28
06:15		14	17							31
06:30		16	12							28
06:45		16	23							39
07:00		21	16							37
07:15		8	15							23
07:30		12	14							26
07:45		9	7							16
08:00		12	17							29
08:15		5	10							15
08:30		12	9							21
08:45		4	9							13
09:00		6	8							14
09:15		4	11							15
09:30		3	5							8
09:45		7	6							13
10:00		3	2							5
10:15		2	4							6
10:30		0	2							2
10:45		6	1							7
11:00		3	3							6
11:15		5	2							7
11:30		4	1							5
11:45		1	3							4
Total		836	764							1600
Percent		52.3%	47.8%							
Peak	-	15:45	12:00	-	-	-	-	-	-	12:00
Vol.	-	156	129	-	-	-	-	-	-	232
P.H.F.		0.780	0.872							0.906

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Latitude: 0' 0.0000 Undefined

Start Time	05/06/21 Thu	Northbound	Southboun							Total
12:00 AM		2	2							4
12:15		0	1							1
12:30		2	2							4
12:45		1	0							1
01:00		3	1							4
01:15		0	1							1
01:30		0	1							1
01:45		0	0							0
02:00		1	1							2
02:15		0	0							0
02:30		1	0							1
02:45		1	1							2
03:00		0	1							1
03:15		0	1							1
03:30		2	0							2
03:45		3	1							4
04:00		2	1							3
04:15		2	1							3
04:30		1	2							3
04:45		1	3							4
05:00		0	2							2
05:15		3	2							5
05:30		3	7							10
05:45		2	13							15
06:00		5	13							18
06:15		12	19							31
06:30		12	**39**							51
06:45		14	**60**							74
07:00		23	**22**							45
07:15		**36**	**29**							**65**
07:30		**54**	28							**82**
07:45		**58**	28							**86**
08:00		**43**	22							**65**
08:15		28	19							47
08:30		21	18							39
08:45		11	14							25
09:00		14	14							28
09:15		17	14							31
09:30		17	22							39
09:45		14	13							27
10:00		18	15							33
10:15		14	20							34
10:30		17	12							29
10:45		23	20							43
11:00		18	15							33
11:15		26	17							43
11:30		20	20							40
11:45		22	17							39
Total		567	554							1121
Percent		50.6%	49.4%							
Peak	-	07:15	06:30	-	-	-	-	-	-	07:15
Vol.	-	191	150	-	-	-	-	-	-	298
P.H.F.		0.823	0.625							0.866

Coastal Engineering & Consulting

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Phone: (912) 964-4509

Site Code:
Station ID:
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North of 4th Avenue
Latitude: 0' 0.0000 Undefined

Start Time	05/06/21 Thu	Northbound	Southboun							Total
12:00 PM		**36**	**28**							**64**
12:15		**24**	**27**							**51**
12:30		**26**	**34**							**60**
12:45		**21**	**33**							**54**
01:00		19	19							38
01:15		11	26							37
01:30		23	14							37
01:45		10	22							32
02:00		21	17							38
02:15		12	17							29
02:30		21	19							40
02:45		25	24							49
03:00		19	23							42
03:15		21	20							41
03:30		28	32							60
03:45		37	25							62
04:00		*	*							*
04:15		*	*							*
04:30		*	*							*
04:45		*	*							*
05:00		*	*							*
05:15		*	*							*
05:30		*	*							*
05:45		*	*							*
06:00		*	*							*
06:15		*	*							*
06:30		*	*							*
06:45		*	*							*
07:00		*	*							*
07:15		*	*							*
07:30		*	*							*
07:45		*	*							*
08:00		*	*							*
08:15		*	*							*
08:30		*	*							*
08:45		*	*							*
09:00		*	*							*
09:15		*	*							*
09:30		*	*							*
09:45		*	*							*
10:00		*	*							*
10:15		*	*							*
10:30		*	*							*
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		354	380							734
Percent		48.2%	51.8%							
Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	107	122	-	-	-	-	-	-	229
P.H.F.		0.743	0.897							0.895
Grand Total		2719	2634							5353
Percent		50.8%	49.2%							

ADT ADT 2,675 AADT 2,675

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/04/21 Tue	Northbound	Southboun							Total
12:00 AM		*	*							*
12:15		*	*							*
12:30		*	*							*
12:45		*	*							*
01:00		*	*							*
01:15		*	*							*
01:30		*	*							*
01:45		*	*							*
02:00		*	*							*
02:15		*	*							*
02:30		*	*							*
02:45		*	*							*
03:00		*	*							*
03:15		*	*							*
03:30		*	*							*
03:45		*	*							*
04:00		*	*							*
04:15		*	*							*
04:30		*	*							*
04:45		*	*							*
05:00		*	*							*
05:15		*	*							*
05:30		*	*							*
05:45		*	*							*
06:00		*	*							*
06:15		*	*							*
06:30		*	*							*
06:45		*	*							*
07:00		*	*							*
07:15		*	*							*
07:30		*	*							*
07:45		*	*							*
08:00		*	*							*
08:15		*	*							*
08:30		*	*							*
08:45		*	*							*
09:00		*	*							*
09:15		*	*							*
09:30		*	*							*
09:45		*	*							*
10:00		*	*							*
10:15		*	*							*
10:30		*	*							*
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		0	0							0
Percent		0.0%	0.0%							
Peak	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	-	-	-	-	-	-	-	-
P.H.F.										

Coastal Engineering & Consulting

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Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/04/21 Tue	Northbound	Southboun							Total
12:00 PM		*	*							*
12:15		*	*							*
12:30		*	*							*
12:45		*	*							*
01:00		*	*							*
01:15		*	*							*
01:30		*	*							*
01:45		*	*							*
02:00		*	*							*
02:15		*	*							*
02:30		*	*							*
02:45		*	*							*
03:00		*	*							*
03:15		*	*							*
03:30		*	*							*
03:45		*	*							*
04:00		126	87							213
04:15		**124**	66							190
04:30		**153**	**87**							**240**
04:45		**114**	**87**							**201**
05:00		**184**	**85**							**269**
05:15		122	**74**							**196**
05:30		109	81							190
05:45		102	73							175
06:00		91	55							146
06:15		65	63							128
06:30		81	52							133
06:45		62	57							119
07:00		82	35							117
07:15		50	56							106
07:30		53	38							91
07:45		51	39							90
08:00		54	29							83
08:15		51	31							82
08:30		50	30							80
08:45		27	23							50
09:00		46	26							72
09:15		34	34							68
09:30		34	25							59
09:45		17	27							44
10:00		13	21							34
10:15		16	16							32
10:30		15	16							31
10:45		21	10							31
11:00		22	16							38
11:15		15	8							23
11:30		9	14							23
11:45		10	7							17
Total		2003	1368							3371
Percent		59.4%	40.6%							
Peak	-	16:15	16:30	-	-	-	-	-	-	16:30
Vol.	-	575	333	-	-	-	-	-	-	906
P.H.F.		0.781	0.957							0.842

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Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/05/21 Wed	Northbound	Southboun							Total
12:00 AM		16	9							25
12:15		5	8							13
12:30		9	3							12
12:45		7	5							12
01:00		4	7							11
01:15		5	0							5
01:30		9	9							18
01:45		2	7							9
02:00		10	3							13
02:15		10	1							11
02:30		2	6							8
02:45		1	2							3
03:00		2	2							4
03:15		2	3							5
03:30		2	2							4
03:45		10	11							21
04:00		4	2							6
04:15		1	3							4
04:30		4	7							11
04:45		6	10							16
05:00		10	19							29
05:15		13	13							26
05:30		8	17							25
05:45		7	19							26
06:00		21	19							40
06:15		27	37							64
06:30		33	55							88
06:45		35	87							122
07:00		52	63							115
07:15		39	**111**							150
07:30		64	**142**							**206**
07:45		90	**148**							**238**
08:00		77	**142**							**219**
08:15		70	107							**177**
08:30		79	91							170
08:45		65	92							157
09:00		59	95							154
09:15		69	79							148
09:30		57	79							136
09:45		92	59							151
10:00		76	78							154
10:15		77	91							168
10:30		100	81							181
10:45		84	72							156
11:00		**100**	71							171
11:15		**93**	79							172
11:30		**112**	82							194
11:45		**121**	85							206
Total		1841	2213							4054
Percent		45.4%	54.6%							
Peak	-	11:00	07:15	-	-	-	-	-	-	07:30
Vol.	-	426	543	-	-	-	-	-	-	840
P.H.F.		0.880	0.917							0.882

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Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/05/21 Wed	Northbound	Southboun							Total
12:00 PM		123	72							195
12:15		90	77							167
12:30		107	**93**							200
12:45		81	**108**							189
01:00		112	**82**							194
01:15		70	**101**							171
01:30		100	88							188
01:45		104	73							177
02:00		82	76							158
02:15		90	79							169
02:30		83	65							148
02:45		101	94							195
03:00		120	93							213
03:15		109	98							**207**
03:30		**159**	92							**251**
03:45		**168**	97							**265**
04:00		**142**	76							**218**
04:15		**113**	85							198
04:30		117	93							210
04:45		127	102							229
05:00		166	84							250
05:15		148	90							238
05:30		120	82							202
05:45		83	74							157
06:00		94	58							152
06:15		74	76							150
06:30		83	69							152
06:45		69	60							129
07:00		83	44							127
07:15		52	54							106
07:30		85	25							110
07:45		50	46							96
08:00		60	36							96
08:15		50	34							84
08:30		41	32							73
08:45		42	31							73
09:00		37	28							65
09:15		28	19							47
09:30		34	17							51
09:45		25	16							41
10:00		25	14							39
10:15		19	17							36
10:30		18	11							29
10:45		14	14							28
11:00		10	16							26
11:15		13	13							26
11:30		8	16							24
11:45		12	6							18
Total		3741	2826							6567
Percent		57.0%	43.0%							
Peak	-	15:30	12:30	-	-	-	-	-	-	15:15
Vol.	-	582	384	-	-	-	-	-	-	941
P.H.F.		0.866	0.889							0.888

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Phone: (912) 964-4509

Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/06/21 Thu	Northbound	Southboun							Total
12:00 AM		8	6							14
12:15		9	12							21
12:30		7	11							18
12:45		6	8							14
01:00		11	5							16
01:15		4	4							8
01:30		3	5							8
01:45		5	5							10
02:00		8	1							9
02:15		1	2							3
02:30		3	3							6
02:45		8	4							12
03:00		3	3							6
03:15		2	4							6
03:30		1	2							3
03:45		5	3							8
04:00		2	4							6
04:15		2	2							4
04:30		9	10							19
04:45		9	5							14
05:00		2	6							8
05:15		9	8							17
05:30		15	17							32
05:45		12	19							31
06:00		23	25							48
06:15		22	47							69
06:30		33	68							101
06:45		43	112							155
07:00		33	64							97
07:15		51	**107**							158
07:30		68	**158**							**226**
07:45		89	**137**							**226**
08:00		79	**126**							**205**
08:15		77	96							**173**
08:30		62	113							175
08:45		75	78							153
09:00		43	96							139
09:15		62	76							138
09:30		60	63							123
09:45		78	81							159
10:00		71	63							134
10:15		71	60							131
10:30		71	65							136
10:45		75	79							154
11:00		**87**	71							158
11:15		**82**	75							157
11:30		**116**	112							228
11:45		**126**	115							241
Total		1741	2236							3977
Percent		43.8%	56.2%							
Peak	-	11:00	07:15	-	-	-	-	-	-	07:30
Vol.	-	411	528	-	-	-	-	-	-	830
P.H.F.		0.815	0.835							0.918

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Newcastle Street
North of Bay Street
Latitude: 0' 0.0000 Undefined

Start Time	05/06/21 Thu	Northbound	Southboun							Total
12:00 PM		136	82							218
12:15		100	80							180
12:30		107	90							197
12:45		110	96							206
01:00		93	102							195
01:15		100	64							164
01:30		121	94							215
01:45		103	84							187
02:00		111	72							183
02:15		99	79							178
02:30		92	71							163
02:45		91	**116**							207
03:00		**118**	**94**							**212**
03:15		**105**	**89**							**194**
03:30		**139**	**90**							**229**
03:45		**157**	87							**244**
04:00		*	*							*
04:15		*	*							*
04:30		*	*							*
04:45		*	*							*
05:00		*	*							*
05:15		*	*							*
05:30		*	*							*
05:45		*	*							*
06:00		*	*							*
06:15		*	*							*
06:30		*	*							*
06:45		*	*							*
07:00		*	*							*
07:15		*	*							*
07:30		*	*							*
07:45		*	*							*
08:00		*	*							*
08:15		*	*							*
08:30		*	*							*
08:45		*	*							*
09:00		*	*							*
09:15		*	*							*
09:30		*	*							*
09:45		*	*							*
10:00		*	*							*
10:15		*	*							*
10:30		*	*							*
10:45		*	*							*
11:00		*	*							*
11:15		*	*							*
11:30		*	*							*
11:45		*	*							*
Total		1782	1390							3172
Percent		56.2%	43.8%							
Peak	-	15:00	14:45	-	-	-	-	-	-	15:00
Vol.	-	519	389	-	-	-	-	-	-	879
P.H.F.		0.826	0.838							0.901
Grand Total		11108	10033							21141
Percent		52.5%	47.5%							

ADT ADT 10,570 AADT 10,570

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/18/21 Tue	Eastbound	Westbound							Total
12:00 AM		1	0							1
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	1							1
01:30		2	0							2
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		0	0							0
04:00		0	0							0
04:15		0	0							0
04:30		0	0							0
04:45		1	0							1
05:00		1	0							1
05:15		0	0							0
05:30		0	0							0
05:45		0	0							0
06:00		1	1							2
06:15		0	0							0
06:30		0	2							2
06:45		1	0							1
07:00		1	0							1
07:15		1	0							1
07:30		**14**	**7**							**21**
07:45		**15**	**4**							**19**
08:00		**6**	**6**							**12**
08:15		**3**	**4**							**7**
08:30		2	3							5
08:45		2	2							4
09:00		1	1							2
09:15		4	6							10
09:30		4	2							6
09:45		0	2							2
10:00		4	2							6
10:15		3	4							7
10:30		1	2							3
10:45		3	2							5
11:00		0	2							2
11:15		2	0							2
11:30		6	5							11
11:45		4	7							11
Total		83	65							148
Percent		56.1%	43.9%							
Peak	-	07:30	07:30	-	-	-	-	-	-	07:30
Vol.	-	38	21	-	-	-	-	-	-	59
P.H.F.		0.633	0.750							0.702

Coastal Engineering & Consulting

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Savannah, GA 31405
Phone: (912) 964-4509

Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/18/21 Tue	Eastbound	Westbound							Total
12:00 PM		1	4							5
12:15		2	4							6
12:30		0	8							8
12:45		3	5							8
01:00		3	3							6
01:15		1	4							5
01:30		4	2							6
01:45		2	2							4
02:00		4	5							9
02:15		2	2							4
02:30		2	1							3
02:45		**5**	1							6
03:00		**3**	**11**							**14**
03:15		**5**	**9**							**14**
03:30		**4**	**18**							**22**
03:45		2	**5**							**7**
04:00		1	8							9
04:15		1	3							4
04:30		2	4							6
04:45		2	5							7
05:00		2	11							13
05:15		1	3							4
05:30		3	5							8
05:45		1	6							7
06:00		4	0							4
06:15		1	0							1
06:30		0	0							0
06:45		2	1							3
07:00		10	8							18
07:15		1	0							1
07:30		0	3							3
07:45		3	2							5
08:00		3	0							3
08:15		0	0							0
08:30		0	1							1
08:45		0	2							2
09:00		0	0							0
09:15		0	0							0
09:30		1	1							2
09:45		0	1							1
10:00		0	0							0
10:15		1	0							1
10:30		0	0							0
10:45		0	0							0
11:00		0	0							0
11:15		0	1							1
11:30		0	0							0
11:45		0	0							0
Total		82	149							231
Percent		35.5%	64.5%							
Peak	-	14:45	15:00	-	-	-	-	-	-	15:00
Vol.	-	17	43	-	-	-	-	-	-	57
P.H.F.		0.850	0.597							0.648

Coastal Engineering & Consulting

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/19/21 Wed	Eastbound	Westbound							Total
12:00 AM		0	0							0
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	0							0
01:30		0	0							0
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		1	0							1
04:00		0	0							0
04:15		0	0							0
04:30		2	0							2
04:45		0	3							3
05:00		0	2							2
05:15		0	1							1
05:30		0	0							0
05:45		3	1							4
06:00		0	1							1
06:15		0	2							2
06:30		1	1							2
06:45		0	0							0
07:00		1	2							3
07:15		**1**	3							4
07:30		**8**	9							**17**
07:45		**14**	7							**21**
08:00		**7**	4							**11**
08:15		1	6							**7**
08:30		1	1							2
08:45		3	1							4
09:00		1	1							2
09:15		0	3							3
09:30		1	2							3
09:45		2	3							5
10:00		0	3							3
10:15		0	5							5
10:30		0	4							4
10:45		0	6							6
11:00		2	**7**							9
11:15		4	**1**							5
11:30		1	**8**							9
11:45		3	**11**							14
Total		57	98							155
Percent		36.8%	63.2%							
Peak	-	07:15	11:00	-	-	-	-	-	-	07:30
Vol.	-	30	27	-	-	-	-	-	-	56
P.H.F.		0.536	0.614							0.667

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/19/21 Wed	Eastbound	Westbound							Total
12:00 PM		2	9							11
12:15		**4**	4							8
12:30		**5**	4							9
12:45		**2**	3							5
01:00		**5**	3							8
01:15		4	4							8
01:30		3	2							5
01:45		1	2							3
02:00		3	7							10
02:15		0	7							7
02:30		2	4							6
02:45		3	3							**6**
03:00		3	**9**							**12**
03:15		0	**16**							**16**
03:30		4	**17**							**21**
03:45		1	**5**							6
04:00		2	4							6
04:15		1	1							2
04:30		2	2							4
04:45		2	2							4
05:00		2	7							9
05:15		0	4							4
05:30		1	4							5
05:45		2	0							2
06:00		0	1							1
06:15		3	0							3
06:30		2	2							4
06:45		0	4							4
07:00		0	1							1
07:15		2	1							3
07:30		1	1							2
07:45		0	2							2
08:00		0	0							0
08:15		0	1							1
08:30		0	0							0
08:45		2	4							6
09:00		0	1							1
09:15		0	0							0
09:30		0	1							1
09:45		0	1							1
10:00		0	1							1
10:15		0	0							0
10:30		0	1							1
10:45		0	2							2
11:00		0	0							0
11:15		0	0							0
11:30		0	0							0
11:45		0	0							0
Total		64	147							211
Percent		30.3%	69.7%							
Peak	-	12:15	15:00	-	-	-	-	-	-	14:45
Vol.	-	16	47	-	-	-	-	-	-	55
P.H.F.		0.800	0.691							0.655

Coastal Engineering & Consulting

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/20/21 Thu	Eastbound	Westbound							Total
12:00 AM		0	0							0
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	0							0
01:30		0	0							0
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		1	0							1
04:00		0	0							0
04:15		0	0							0
04:30		0	0							0
04:45		0	0							0
05:00		1	0							1
05:15		0	2							2
05:30		0	0							0
05:45		0	0							0
06:00		0	0							0
06:15		1	0							1
06:30		1	3							4
06:45		3	0							3
07:00		1	0							1
07:15		**2**	1							3
07:30		**10**	9							**19**
07:45		**14**	**6**							**20**
08:00		**6**	**1**							**7**
08:15		2	**2**							**4**
08:30		1	**13**							14
08:45		4	2							6
09:00		6	5							11
09:15		1	2							3
09:30		1	5							6
09:45		1	2							3
10:00		4	5							9
10:15		5	3							8
10:30		6	4							10
10:45		7	9							16
11:00		3	3							6
11:15		2	3							5
11:30		2	7							9
11:45		8	4							12
Total		93	91							184
Percent		50.5%	49.5%							
Peak	-	07:15	07:45	-	-	-	-	-	-	07:30
Vol.	-	32	22	-	-	-	-	-	-	50
P.H.F.		0.571	0.423							0.625

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/20/21 Thu	Eastbound	Westbound							Total
12:00 PM		3	8							11
12:15		**3**	2							5
12:30		**3**	4							7
12:45		**4**	2							6
01:00		**4**	1							5
01:15		1	3							4
01:30		1	4							5
01:45		3	4							7
02:00		1	0							1
02:15		0	2							2
02:30		3	5							8
02:45		5	**7**							**12**
03:00		3	**7**							**10**
03:15		0	**7**							**7**
03:30		2	**16**							**18**
03:45		4	4							8
04:00		2	5							7
04:15		2	3							5
04:30		0	6							6
04:45		3	6							9
05:00		2	7							9
05:15		2	3							5
05:30		2	3							5
05:45		3	2							5
06:00		2	3							5
06:15		0	2							2
06:30		1	5							6
06:45		0	1							1
07:00		2	1							3
07:15		1	3							4
07:30		1	1							2
07:45		0	0							0
08:00		2	5							7
08:15		1	2							3
08:30		1	0							1
08:45		1	0							1
09:00		0	1							1
09:15		0	0							0
09:30		0	0							0
09:45		0	0							0
10:00		0	0							0
10:15		1	1							2
10:30		0	3							3
10:45		0	2							2
11:00		2	0							2
11:15		0	0							0
11:30		0	0							0
11:45		0	0							0
Total		71	141							212
Percent		33.5%	66.5%							
Peak	-	12:15	14:45	-	-	-	-	-	-	14:45
Vol.	-	14	37	-	-	-	-	-	-	47
P.H.F.		0.875	0.578							0.653

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/21/21 Fri	Eastbound	Westbound							Total
12:00 AM		0	0							0
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	1							1
01:30		0	0							0
01:45		0	1							1
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		1	0							1
04:00		0	0							0
04:15		0	2							2
04:30		0	0							0
04:45		1	0							1
05:00		0	7							7
05:15		0	0							0
05:30		0	0							0
05:45		0	0							0
06:00		1	0							1
06:15		0	0							0
06:30		0	3							3
06:45		2	0							2
07:00		0	0							0
07:15		**5**	**3**							**8**
07:30		**5**	**7**							**12**
07:45		**5**	**8**							**13**
08:00		**4**	**2**							**6**
08:15		2	2							4
08:30		2	2							4
08:45		5	6							11
09:00		3	4							7
09:15		3	2							5
09:30		1	2							3
09:45		3	4							7
10:00		4	4							8
10:15		1	7							8
10:30		6	2							8
10:45		2	5							7
11:00		4	4							8
11:15		4	4							8
11:30		2	5							7
11:45		3	5							8
Total		69	92							161
Percent		42.9%	57.1%							
Peak	-	07:15	07:15	-	-	-	-	-	-	07:15
Vol.	-	19	20	-	-	-	-	-	-	39
P.H.F.		0.950	0.625							0.750

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/21/21 Fri	Eastbound	Westbound							Total
12:00 PM		0	4							4
12:15		0	2							2
12:30		2	6							8
12:45		3	4							7
01:00		2	2							4
01:15		2	4							6
01:30		3	2							5
01:45		0	3							3
02:00		2	3							5
02:15		2	2							4
02:30		1	2							3
02:45		3	3							6
03:00		5	**5**							**10**
03:15		2	**5**							**7**
03:30		4	**11**							**15**
03:45		2	**7**							**9**
04:00		2	3							5
04:15		3	4							7
04:30		0	5							5
04:45		1	2							3
05:00		3	6							9
05:15		2	1							3
05:30		6	4							10
05:45		1	6							7
06:00		2	1							3
06:15		2	1							3
06:30		0	1							1
06:45		1	3							4
07:00		**4**	0							4
07:15		**1**	1							2
07:30		**9**	3							12
07:45		**10**	2							12
08:00		0	0							0
08:15		1	3							4
08:30		0	2							2
08:45		0	1							1
09:00		0	1							1
09:15		2	1							3
09:30		0	1							1
09:45		0	0							0
10:00		0	1							1
10:15		0	0							0
10:30		0	0							0
10:45		0	1							1
11:00		1	0							1
11:15		0	0							0
11:30		0	0							0
11:45		0	0							0
Total		84	119							203
Percent		41.4%	58.6%							
Peak	-	19:00	15:00	-	-	-	-	-	-	15:00
Vol.	-	24	28	-	-	-	-	-	-	41
P.H.F.		0.600	0.636							0.683

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/22/21 Sat	Eastbound	Westbound							Total
12:00 AM		0	0							0
12:15		0	0							0
12:30		1	0							1
12:45		0	0							0
01:00		0	0							0
01:15		1	0							1
01:30		0	0							0
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		0	0							0
04:00		0	0							0
04:15		0	0							0
04:30		0	1							1
04:45		0	0							0
05:00		0	0							0
05:15		0	0							0
05:30		0	1							1
05:45		0	0							0
06:00		0	0							0
06:15		0	0							0
06:30		0	0							0
06:45		0	0							0
07:00		0	1							1
07:15		0	0							0
07:30		0	0							0
07:45		0	3							3
08:00		1	1							2
08:15		1	1							2
08:30		2	**1**							3
08:45		0	**3**							3
09:00		1	**0**							1
09:15		0	**3**							3
09:30		0	0							0
09:45		**3**	3							**6**
10:00		**1**	0							**1**
10:15		**1**	2							**3**
10:30		**1**	0							**1**
10:45		1	1							2
11:00		0	0							0
11:15		2	2							4
11:30		1	3							4
11:45		1	0							1
Total		18	26							44
Percent		40.9%	59.1%							
Peak	-	09:45	08:30	-	-	-	-	-	-	09:45
Vol.	-	6	7	-	-	-	-	-	-	11
P.H.F.		0.500	0.583							0.458

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Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/22/21 Sat	Eastbound	Westbound							Total
12:00 PM		2	1							3
12:15		2	1							3
12:30		2	1							3
12:45		1	1							2
01:00		1	1							2
01:15		2	4							6
01:30		3	1							4
01:45		2	1							3
02:00		1	1							2
02:15		0	1							1
02:30		0	3							3
02:45		0	1							1
03:00		1	1							2
03:15		0	0							0
03:30		1	0							1
03:45		2	3							5
04:00		0	1							1
04:15		3	4							7
04:30		9	1							10
04:45		3	7							10
05:00		1	3							4
05:15		0	**1**							1
05:30		0	**3**							3
05:45		**11**	**8**							**19**
06:00		**4**	**4**							**8**
06:15		**3**	1							**4**
06:30		**3**	2							**5**
06:45		1	1							2
07:00		1	3							4
07:15		1	0							1
07:30		0	0							0
07:45		0	5							5
08:00		3	0							3
08:15		0	3							3
08:30		3	1							4
08:45		2	1							3
09:00		1	1							2
09:15		0	0							0
09:30		1	1							2
09:45		1	0							1
10:00		0	0							0
10:15		1	0							1
10:30		0	0							0
10:45		1	0							1
11:00		0	1							1
11:15		1	4							5
11:30		4	0							4
11:45		0	1							1
Total		78	78							156
Percent		50.0%	50.0%							
Peak	-	17:45	17:15	-	-	-	-	-	-	17:45
Vol.	-	21	16	-	-	-	-	-	-	36
P.H.F.		0.477	0.500							0.474

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Site Code:
Station ID:
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West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/23/21 Sun	Eastbound	Westbound							Total
12:00 AM		0	1							1
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		1	0							1
01:15		0	0							0
01:30		0	0							0
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		0	0							0
03:15		0	0							0
03:30		0	0							0
03:45		0	0							0
04:00		0	0							0
04:15		1	0							1
04:30		0	0							0
04:45		0	0							0
05:00		0	0							0
05:15		0	0							0
05:30		0	0							0
05:45		0	0							0
06:00		0	0							0
06:15		0	0							0
06:30		0	0							0
06:45		0	0							0
07:00		0	0							0
07:15		0	0							0
07:30		1	0							1
07:45		0	1							1
08:00		3	3							6
08:15		10	5							15
08:30		1	0							1
08:45		2	2							4
09:00		1	1							2
09:15		1	3							4
09:30		10	**11**							21
09:45		3	**3**							6
10:00		3	**3**							6
10:15		**4**	**7**							**11**
10:30		**7**	4							**11**
10:45		**14**	10							**24**
11:00		**4**	3							**7**
11:15		2	0							2
11:30		3	0							3
11:45		1	5							6
Total		72	62							134
Percent		53.7%	46.3%							
Peak	-	10:15	09:30	-	-	-	-	-	-	10:15
Vol.	-	29	24	-	-	-	-	-	-	53
P.H.F.		0.518	0.545							0.552

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Site Code:
Station ID:
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West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/23/21 Sun	Eastbound	Westbound							Total
12:00 PM		**11**	7							**18**
12:15		**6**	3							**9**
12:30		**2**	4							**6**
12:45		**1**	0							**1**
01:00		1	2							3
01:15		1	0							1
01:30		1	3							4
01:45		2	1							3
02:00		0	2							2
02:15		0	2							2
02:30		3	3							6
02:45		1	0							1
03:00		2	0							2
03:15		0	0							0
03:30		1	1							2
03:45		3	2							5
04:00		0	3							3
04:15		0	1							1
04:30		0	1							1
04:45		1	0							1
05:00		0	1							1
05:15		1	**3**							4
05:30		2	**3**							5
05:45		0	**5**							5
06:00		1	**9**							10
06:15		0	0							0
06:30		2	1							3
06:45		0	0							0
07:00		0	0							0
07:15		9	4							13
07:30		1	3							4
07:45		2	1							3
08:00		0	0							0
08:15		1	1							2
08:30		0	0							0
08:45		0	0							0
09:00		0	2							2
09:15		0	0							0
09:30		1	0							1
09:45		0	0							0
10:00		0	1							1
10:15		0	0							0
10:30		0	0							0
10:45		0	1							1
11:00		0	0							0
11:15		0	0							0
11:30		0	0							0
11:45		0	0							0
Total		56	70							126
Percent		44.4%	55.6%							
Peak	-	12:00	17:15	-	-	-	-	-	-	12:00
Vol.	-	20	20	-	-	-	-	-	-	34
P.H.F.		0.455	0.556							0.472

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Site Code:
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West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/24/21 Mon	Eastbound	Westbound							Total
12:00 AM		1	0							1
12:15		0	0							0
12:30		0	0							0
12:45		0	0							0
01:00		0	0							0
01:15		0	0							0
01:30		1	0							1
01:45		0	0							0
02:00		0	0							0
02:15		0	0							0
02:30		0	0							0
02:45		0	0							0
03:00		1	0							1
03:15		0	0							0
03:30		0	0							0
03:45		0	0							0
04:00		0	0							0
04:15		1	0							1
04:30		1	0							1
04:45		1	0							1
05:00		0	2							2
05:15		0	0							0
05:30		0	0							0
05:45		0	0							0
06:00		0	0							0
06:15		0	0							0
06:30		0	1							1
06:45		2	1							3
07:00		3	1							4
07:15		1	**3**							4
07:30		4	**8**							**12**
07:45		7	**7**							**14**
08:00		9	**7**							**16**
08:15		3	3							**6**
08:30		2	2							4
08:45		5	4							9
09:00		0	1							1
09:15		0	4							4
09:30		0	3							3
09:45		0	1							1
10:00		6	6							12
10:15		2	5							7
10:30		1	3							4
10:45		**9**	5							14
11:00		**6**	3							9
11:15		**7**	3							10
11:30		**5**	10							15
11:45		4	5							9
Total		82	88							170
Percent		48.2%	51.8%							
Peak	-	10:45	07:15	-	-	-	-	-	-	07:30
Vol.	-	27	25	-	-	-	-	-	-	48
P.H.F.		0.750	0.781							0.750

Coastal Engineering & Consulting

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

Site Code:
Station ID:
Howe Street
West of Newcastle Street
Latitude: 0' 0.0000 Undefined

Start Time	05/24/21 Mon	Eastbound	Westbound							Total
12:00 PM		5	**7**							**12**
12:15		1	**5**							**6**
12:30		**3**	**8**							**11**
12:45		**5**	**6**							**11**
01:00		**7**	4							11
01:15		**3**	3							6
01:30		2	2							4
01:45		3	0							3
02:00		3	2							5
02:15		1	3							4
02:30		3	3							6
02:45		1	2							3
03:00		11	4							15
03:15		2	9							11
03:30		0	0							0
03:45		0	0							0
04:00		0	0							0
04:15		0	0							0
04:30		0	0							0
04:45		0	0							0
05:00		0	0							0
05:15		0	0							0
05:30		0	0							0
05:45		0	0							0
06:00		0	1							1
06:15		0	0							0
06:30		0	0							0
06:45		0	0							0
07:00		0	0							0
07:15		0	0							0
07:30		0	0							0
07:45		0	0							0
08:00		0	0							0
08:15		0	0							0
08:30		0	0							0
08:45		0	0							0
09:00		0	0							0
09:15		0	0							0
09:30		0	0							0
09:45		0	0							0
10:00		0	0							0
10:15		0	0							0
10:30		0	0							0
10:45		0	0							0
11:00		0	0							0
11:15		0	0							0
11:30		0	0							0
11:45		0	0							0
Total		50	59							109
Percent		45.9%	54.1%							
Peak	-	12:30	12:00	-	-	-	-	-	-	12:00
Vol.	-	18	26	-	-	-	-	-	-	40
P.H.F.		0.643	0.813							0.833
Grand Total		959	1285							2244
Percent		42.7%	57.3%							

ADT ADT 321 AADT 321

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Bay Street at Howe Street
AM Turning Movement Counts

File Name : bay st at howe st AM
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Bay Street From North					Howe Street From East					Bay Street From South					Driveway From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
07:00 AM	2	26	4	0	32	0	0	0	0	0	1	33	0	1	35	1	0	0	0	1	68
07:15 AM	3	45	3	0	51	0	0	1	0	1	1	29	0	0	30	0	0	0	0	0	82
07:30 AM	13	47	2	0	62	1	0	8	0	9	1	55	0	0	56	0	0	0	0	0	127
07:45 AM	11	43	2	0	56	0	0	7	0	7	2	53	0	0	55	1	0	1	0	2	120
Total	29	161	11	0	201	1	0	16	0	17	5	170	0	1	176	2	0	1	0	3	397
08:00 AM	7	55	2	0	64	0	0	5	0	5	1	32	0	0	33	1	0	0	0	1	103
08:15 AM	3	28	0	0	31	0	0	4	0	4	0	38	0	0	38	1	0	0	0	1	74
08:30 AM	2	33	3	0	38	0	0	4	0	4	0	37	1	0	38	1	0	2	0	3	83
08:45 AM	4	29	1	1	35	0	0	3	0	3	1	30	0	0	31	3	0	0	0	3	72
Total	16	145	6	1	168	0	0	16	0	16	2	137	1	0	140	6	0	2	0	8	332
Grand Total	45	306	17	1	369	1	0	32	0	33	7	307	1	1	316	8	0	3	0	11	729
Apprch %	12.2	82.9	4.6	0.3		3	0	97	0		2.2	97.2	0.3	0.3		72.7	0	27.3	0		
Total %	6.2	42	2.3	0.1	50.6	0.1	0	4.4	0	4.5	1	42.1	0.1	0.1	43.3	1.1	0	0.4	0	1.5	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Bay Street at Howe Street
PM Turning Movement Counts

File Name : bay st at howe st PM
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Bay Street From North					Howe Street From East					Bay Street From South					Driveway From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
03:00 PM	3	42	0	0	45	0	0	5	0	5	1	32	0	0	33	2	0	0	0	2	85
03:15 PM	0	44	3	0	47	0	0	15	0	15	0	44	0	0	44	3	0	0	0	3	109
03:30 PM	2	32	1	0	35	1	0	12	0	13	1	43	1	0	45	3	0	2	0	5	98
03:45 PM	4	45	0	0	49	0	0	4	0	4	3	51	0	0	54	2	0	2	0	4	111
Total	9	163	4	0	176	1	0	36	0	37	5	170	1	0	176	10	0	4	0	14	403
04:00 PM	4	43	1	0	48	1	0	5	0	6	0	42	2	0	44	0	0	1	0	1	99
04:15 PM	2	38	2	0	42	0	0	2	0	2	0	43	0	1	44	0	0	1	0	1	89
04:30 PM	2	30	0	1	33	0	0	4	0	4	0	45	0	0	45	2	0	1	0	3	85
04:45 PM	2	44	2	0	48	1	0	3	0	4	1	48	1	0	50	3	0	0	0	3	105
Total	10	155	5	1	171	2	0	14	0	16	1	178	3	1	183	5	0	3	0	8	378
05:00 PM	1	42	0	0	43	0	0	11	0	11	1	51	1	0	53	1	0	0	0	1	108
05:15 PM	0	38	1	0	39	0	0	3	0	3	0	60	0	0	60	5	0	1	0	6	108
05:30 PM	1	48	1	0	50	0	0	6	0	6	0	51	0	0	51	2	0	0	0	2	109
05:45 PM	0	29	2	0	31	0	0	1	0	1	0	47	2	0	49	0	0	1	0	1	82
Total	2	157	4	0	163	0	0	21	0	21	1	209	3	0	213	8	0	2	0	10	407
Grand Total	21	475	13	1	510	3	0	71	0	74	7	557	7	1	572	23	0	9	0	32	1188
Apprch %	4.1	93.1	2.5	0.2		4.1	0	95.9	0		1.2	97.4	1.2	0.2		71.9	0	28.1	0		
Total %	1.8	40	1.1	0.1	42.9	0.3	0	6	0	6.2	0.6	46.9	0.6	0.1	48.1	1.9	0	0.8	0	2.7	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at Howe Street
AM Turning Movement Counts

File Name : grant st at howe st AM
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Grant Street From North					Howe Street From East					Grant Street From South					Howe Street From West					
Start Time	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Int. Total**
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
07:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	6
07:30 AM	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	0	9	4	0	13	21
07:45 AM	0	0	0	0	0	0	6	0	0	6	1	0	1	0	2	0	11	0	0	11	19
Total	0	0	0	0	0	0	17	0	0	17	2	0	1	0	3	0	24	5	0	29	49
08:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	7	0	0	7	12
08:15 AM	0	0	0	0	0	0	3	1	0	4	1	1	0	0	2	0	3	0	0	3	9
08:30 AM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	1	2	0	0	3	7
08:45 AM	0	2	0	0	2	0	3	0	0	3	0	0	0	0	0	0	2	2	0	4	9
Total	0	2	0	0	2	0	14	1	0	15	2	1	0	0	3	1	14	2	0	17	37
Grand Total	0	2	0	0	2	0	31	1	0	32	4	1	1	0	6	1	38	7	0	46	86
Apprch %	0	100	0	0		0	96.9	3.1	0		66.7	16.7	16.7	0		2.2	82.6	15.2	0		
Total %	0	2.3	0	0	2.3	0	36	1.2	0	37.2	4.7	1.2	1.2	0	7	1.2	44.2	8.1	0	53.5	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at Howe Street
PM Turning Movement Counts

File Name : grant st at howe st PM
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Grant Street From North					Howe Street From East					Grant Street From South					Howe Street From West					
Start Time	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Left**	**Thru**	**Right**	**Peds**	**App. Total**	**Int. Total**
03:00 PM	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	2	1	0	3	9
03:15 PM	0	0	1	0	1	1	13	0	0	14	1	0	0	0	1	0	0	0	0	0	16
03:30 PM	1	0	0	0	1	1	12	0	0	13	1	0	1	0	2	0	3	0	0	3	19
03:45 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	8
Total	2	0	2	0	4	2	33	0	0	35	2	0	1	0	3	0	8	2	0	10	52
04:00 PM	0	2	1	0	3	1	5	0	0	6	0	0	0	0	0	0	4	2	0	6	15
04:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	1	1	0	2	5
04:30 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	2	0	0	2	7
04:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	3	0	0	3	8
Total	0	2	1	0	3	2	14	0	0	16	1	0	2	0	3	0	10	3	0	13	35
05:00 PM	0	1	3	0	4	1	7	0	0	8	1	0	0	0	1	0	1	1	0	2	15
05:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
05:30 PM	1	0	0	0	1	1	6	0	0	7	0	0	1	0	1	0	0	1	0	1	10
05:45 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Total	1	1	3	0	5	3	17	0	0	20	1	0	1	0	2	0	3	2	0	5	32
Grand Total	3	3	6	0	12	7	64	0	0	71	4	0	4	0	8	0	21	7	0	28	119
Apprch %	25	25	50	0		9.9	90.1	0	0		50	0	50	0		0	75	25	0		
Total %	2.5	2.5	5	0	10.1	5.9	53.8	0	0	59.7	3.4	0	3.4	0	6.7	0	17.6	5.9	0	23.5	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Newcastle Street at Howe Street
AM Turning Movement Counts

File Name : newcastle st at howe st am
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Newcastle Street From North					Howe Street From East					Newcastle Street From South					Howe Street From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
07:00 AM	1	0	0	1	2	0	1	0	0	1	0	6	0	0	6	1	1	0	0	2	11
07:15 AM	0	5	0	0	5	0	3	0	0	3	0	11	0	0	11	0	2	0	0	2	21
07:30 AM	1	7	0	0	8	0	4	9	0	13	1	18	0	0	19	2	5	0	0	7	47
07:45 AM	1	4	0	1	6	1	3	5	0	9	4	16	1	0	21	4	8	0	0	12	48
Total	3	16	0	2	21	1	11	14	0	26	5	51	1	0	57	7	16	0	0	23	127
08:00 AM	1	3	1	0	5	0	2	0	0	2	2	15	1	0	18	1	6	0	0	7	32
08:15 AM	0	8	0	1	9	0	0	2	0	2	3	15	2	0	20	0	3	0	0	3	34
08:30 AM	0	3	0	1	4	0	1	0	0	1	0	9	0	1	10	0	1	0	0	1	16
08:45 AM	0	6	0	0	6	0	1	0	0	1	2	5	0	0	7	1	2	0	0	3	17
Total	1	20	1	2	24	0	4	2	0	6	7	44	3	1	55	2	12	0	0	14	99
Grand Total	4	36	1	4	45	1	15	16	0	32	12	95	4	1	112	9	28	0	0	37	226
Apprch %	8.9	80	2.2	8.9		3.1	46.9	50	0		10.7	84.8	3.6	0.9		24.3	75.7	0	0		
Total %	1.8	15.9	0.4	1.8	19.9	0.4	6.6	7.1	0	14.2	5.3	42	1.8	0.4	49.6	4	12.4	0	0	16.4	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Newcastle Street at Howe Street
PM Turning Movement Counts

File Name : newcastle st at howe st pm
Site Code : 00000000
Start Date : 5/11/2021
Page No : 1

Groups Printed- Vehicles

	Newcastle Street From North					Howe Street From East					Newcastle Street From South					Howe Street From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
03:00 PM	1	11	0	0	12	3	4	3	0	10	2	9	1	0	12	0	3	0	0	3	37
03:15 PM	7	6	1	0	14	1	11	7	0	19	2	7	0	0	9	0	0	0	0	0	42
03:30 PM	2	7	2	0	11	3	11	2	0	16	1	11	1	0	13	1	3	0	0	4	44
03:45 PM	1	9	1	0	11	1	4	2	0	7	0	14	0	0	14	1	2	0	0	3	35
Total	11	33	4	0	48	8	30	14	0	52	5	41	2	0	48	2	8	0	0	10	158
04:00 PM	0	3	0	1	4	1	5	0	0	6	1	8	1	0	10	1	1	1	0	3	23
04:15 PM	0	6	0	1	7	1	1	4	0	6	0	14	0	0	14	1	1	0	0	2	29
04:30 PM	0	6	1	1	8	1	1	3	0	5	3	13	1	0	17	0	1	1	0	2	32
04:45 PM	1	7	0	1	9	1	2	2	0	5	2	5	2	0	9	0	3	1	0	4	27
Total	1	22	1	4	28	4	9	9	0	22	6	40	4	0	50	2	6	3	0	11	111
05:00 PM	0	15	4	0	19	3	2	1	0	6	2	8	0	0	10	0	1	0	0	1	36
05:15 PM	0	7	1	1	9	0	1	0	0	1	1	7	0	0	8	0	0	0	0	0	18
05:30 PM	0	10	1	0	11	0	5	0	0	5	1	10	0	0	11	1	1	0	0	2	29
05:45 PM	0	6	0	1	7	1	1	0	0	2	1	9	0	0	10	0	2	0	0	2	21
Total	0	38	6	2	46	4	9	1	0	14	5	34	0	0	39	1	4	0	0	5	104
Grand Total	12	93	11	6	122	16	48	24	0	88	16	115	6	0	137	5	18	3	0	26	373
Apprch %	9.8	76.2	9	4.9		18.2	54.5	27.3	0		11.7	83.9	4.4	0		19.2	69.2	11.5	0		
Total %	3.2	24.9	2.9	1.6	32.7	4.3	12.9	6.4	0	23.6	4.3	30.8	1.6	0	36.7	1.3	4.8	0.8	0	7	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at George Street
AM Turning Movement Counts

File Name : grant st at george st AM
Site Code : 00000000
Start Date : 5/18/2021
Page No : 1

Groups Printed- Vehicles

	Grant Street From North					From East					From South					George Street From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
07:00 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	7
07:15 AM	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	15
07:30 AM	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	14
07:45 AM	0	12	3	0	15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	20
Total	0	28	5	0	33	0	0	0	0	0	0	0	0	0	0	0	0	23	0	23	56
08:00 AM	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	15
08:15 AM	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	7
08:30 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
08:45 AM	0	5	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	7
Total	0	21	4	0	25	0	0	0	0	0	0	0	0	0	0	1	0	7	0	8	33
Grand Total	0	49	9	0	58	0	0	0	0	0	0	0	0	0	0	1	0	30	0	31	89
Apprch %	0	84.5	15.5	0		0	0	0	0		0	0	0	0		3.2	0	96.8	0		
Total %	0	55.1	10.1	0	65.2	0	0	0	0	0	0	0	0	0	0	1.1	0	33.7	0	34.8	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at George Street
PM Turning Movement Counts

File Name : grant st at george st PM
Site Code : 00000000
Start Date : 5/18/2021
Page No : 1

Groups Printed- Vehicles

	Grant Street From North					From East					From South					George Street From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
04:00 PM	0	17	1	0	18	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	21
04:15 PM	0	7	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	12
04:30 PM	0	11	3	0	14	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	21
04:45 PM	0	17	2	0	19	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	25
Total	0	52	7	0	59	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	79
05:00 PM	0	26	3	0	29	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	32
05:15 PM	0	16	2	0	18	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	23
05:30 PM	0	10	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	17
05:45 PM	0	10	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	14
Total	0	62	7	0	69	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	86
Grand Total	0	114	14	0	128	0	0	0	0	0	0	0	0	0	0	0	0	37	0	37	165
Apprch %	0	89.1	10.9	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	69.1	8.5	0	77.6	0	0	0	0	0	0	0	0	0	0	0	0	22.4	0	22.4	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Bay Street at George Street
Turning Movement Counts

File Name : bay st at george st
Site Code : 00000000
Start Date : 5/18/2021

Groups Printed- Light - Heavy

	Bay Street From North					George Street From East					Bay Street From South					From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
06:00 AM	1	9	0	0	10	0	0	1	0	1	0	15	0	0	15	0	0	0	0	0	26
06:15 AM	0	24	0	0	24	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	36
06:30 AM	1	39	0	0	40	0	0	1	0	1	0	25	0	0	25	0	0	0	0	0	66
06:45 AM	1	61	0	0	62	0	0	0	0	0	0	26	0	6	32	0	0	0	0	0	94
Total	3	133	0	0	136	0	0	2	0	2	0	78	0	6	84	0	0	0	0	0	222
07:00 AM	3	28	0	0	31	1	0	2	0	3	0	26	0	8	34	0	0	0	0	0	68
07:15 AM	10	38	0	0	48	1	0	3	0	4	0	35	0	3	38	0	0	0	0	0	90
07:30 AM	5	36	0	0	41	0	0	0	0	0	0	39	0	0	39	0	0	0	0	0	80
07:45 AM	6	41	0	0	47	0	0	1	0	1	0	46	0	1	47	0	0	0	0	0	95
Total	24	143	0	0	167	2	0	6	0	8	0	146	0	12	158	0	0	0	0	0	333
08:00 AM	6	30	0	0	36	0	0	2	0	2	0	45	0	1	46	0	0	0	0	0	84
08:15 AM	3	37	0	0	40	2	0	2	0	4	0	42	1	0	43	0	0	0	0	0	87
08:30 AM	1	25	0	0	26	0	0	3	0	3	0	28	1	0	29	0	0	0	0	0	58
08:45 AM	2	39	0	0	41	0	0	1	0	1	0	38	0	0	38	0	0	0	0	0	80
Total	12	131	0	0	143	2	0	8	0	10	0	153	2	1	156	0	0	0	0	0	309
09:00 AM	3	21	0	0	24	0	0	1	0	1	0	43	0	0	43	0	0	0	0	0	68
09:15 AM	7	33	0	0	40	0	0	4	0	4	0	31	0	1	32	0	0	0	0	0	76
09:30 AM	4	40	0	0	44	0	0	0	0	0	0	34	0	2	36	0	0	0	0	0	80
09:45 AM	1	22	0	0	23	0	0	1	0	1	0	25	0	0	25	0	0	0	0	0	49
Total	15	116	0	0	131	0	0	6	0	6	0	133	0	3	136	0	0	0	0	0	273
10:00 AM	2	29	0	0	31	0	0	3	0	3	0	35	0	0	35	0	0	0	0	0	69
10:15 AM	1	26	0	0	27	0	0	1	0	1	0	30	0	0	30	0	0	0	0	0	58
10:30 AM	2	29	0	0	31	0	0	3	0	3	0	36	0	1	37	0	0	0	0	0	71
10:45 AM	0	28	0	0	28	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	52
Total	5	112	0	0	117	0	0	7	0	7	0	125	0	1	126	0	0	0	0	0	250

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

File Name : bay st at george st
Site Code : 00000000
Start Date : 5/18/2021
Page No : 2

Groups Printed- Light - Heavy

	Bay Street From North					George Street From East					Bay Street From South					From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
11:00 AM	4	38	0	0	42	0	0	2	0	2	0	34	0	0	34	0	0	0	0	0	78
11:15 AM	0	34	0	0	34	0	0	0	0	0	0	34	0	2	36	0	0	0	0	0	70
11:30 AM	3	33	0	1	37	0	0	2	0	2	0	31	0	2	33	0	0	0	0	0	72
11:45 AM	2	27	0	0	29	1	0	3	0	4	0	32	0	2	34	0	0	0	0	0	67
Total	9	132	0	1	142	1	0	7	0	8	0	131	0	6	137	0	0	0	0	0	287
12:00 PM	4	43	0	0	47	0	0	4	0	4	0	55	0	0	55	0	0	0	0	0	106
12:15 PM	1	37	0	1	39	1	0	2	0	3	0	41	2	2	45	0	0	0	0	0	87
12:30 PM	3	48	0	0	51	0	0	2	0	2	0	41	1	3	45	0	0	0	0	0	98
12:45 PM	3	41	0	0	44	0	0	3	0	3	0	41	0	2	43	0	0	0	0	0	90
Total	11	169	0	1	181	1	0	11	0	12	0	178	3	7	188	0	0	0	0	0	381
01:00 PM	3	33	0	0	36	0	0	1	0	1	0	35	0	2	37	0	0	0	0	0	74
01:15 PM	3	41	0	0	44	2	0	0	0	2	0	39	0	0	39	0	0	0	0	0	85
01:30 PM	1	30	0	0	31	0	0	0	0	0	0	44	0	0	44	0	0	0	0	0	75
01:45 PM	5	38	0	0	43	0	0	2	0	2	0	47	0	3	50	0	0	0	0	0	95
Total	12	142	0	0	154	2	0	3	0	5	0	165	0	5	170	0	0	0	0	0	329
02:00 PM	0	31	0	0	31	0	0	3	0	3	0	35	1	0	36	0	0	0	0	0	70
02:15 PM	3	35	0	0	38	0	0	2	0	2	0	37	0	1	38	0	0	0	0	0	78
02:30 PM	6	35	0	0	41	0	0	2	0	2	0	36	0	1	37	0	0	0	0	0	80
02:45 PM	11	45	0	1	57	0	0	4	0	4	0	43	0	0	43	0	0	0	0	0	104
Total	20	146	0	1	167	0	0	11	0	11	0	151	1	2	154	0	0	0	0	0	332
03:00 PM	6	45	0	0	51	1	0	1	0	2	0	28	0	1	29	0	0	0	0	0	82
03:15 PM	3	29	0	0	32	0	0	3	0	3	0	44	1	1	46	0	0	0	0	0	81
03:30 PM	3	44	0	0	47	0	0	3	0	3	0	51	0	0	51	0	0	0	0	0	101
03:45 PM	2	31	0	0	33	0	0	4	0	4	0	47	1	0	48	0	0	0	0	0	85
Total	14	149	0	0	163	1	0	11	0	12	0	170	2	2	174	0	0	0	0	0	349
04:00 PM	3	36	0	0	39	0	0	2	0	2	0	43	0	0	43	0	0	0	0	0	84
04:15 PM	7	28	0	0	35	0	0	3	0	3	0	51	1	1	53	0	0	0	0	0	91
04:30 PM	5	40	0	0	45	0	0	4	0	4	0	54	0	1	55	0	0	0	0	0	104
04:45 PM	6	31	0	0	37	0	0	1	0	1	0	45	1	0	46	0	0	0	0	0	84
Total	21	135	0	0	156	0	0	10	0	10	0	193	2	2	197	0	0	0	0	0	363

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

File Name : bay st at george st
Site Code : 00000000
Start Date : 5/18/2021
Page No : 3

Groups Printed- Light - Heavy

	Bay Street From North					George Street From East					Bay Street From South					From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
05:00 PM	4	40	0	0	44	0	0	3	0	3	0	53	1	4	58	0	0	0	0	0	105
05:15 PM	5	33	0	0	38	0	0	3	0	3	0	52	0	1	53	0	0	0	0	0	94
05:30 PM	5	33	0	0	38	0	0	1	0	1	0	35	0	2	37	0	0	0	0	0	76
05:45 PM	4	23	0	0	27	0	0	3	0	3	0	32	0	1	33	0	0	0	0	0	63
Total	18	129	0	0	147	0	0	10	0	10	0	172	1	8	181	0	0	0	0	0	338
06:00 PM	4	25	0	0	29	0	0	2	0	2	0	34	0	0	34	0	0	0	0	0	65
06:15 PM	1	30	0	0	31	0	0	4	0	4	0	27	0	2	29	0	0	0	0	0	64
06:30 PM	1	29	0	0	30	0	0	0	0	0	0	24	1	0	25	0	0	0	0	0	55
06:45 PM	3	32	0	0	35	0	0	1	0	1	0	18	0	1	19	0	0	0	0	0	55
Total	9	116	0	0	125	0	0	7	0	7	0	103	1	3	107	0	0	0	0	0	239
Grand Total	173	1753	0	3	1929	9	0	99	0	108	0	1898	12	58	1968	0	0	0	0	0	4005
Apprch %	9	90.9	0	0.2		8.3	0	91.7	0		0	96.4	0.6	2.9		0	0	0	0		
Total %	4.3	43.8	0	0.1	48.2	0.2	0	2.5	0	2.7	0	47.4	0.3	1.4	49.1	0	0	0	0	0	
Light	168	1469	0	2	1639	8	0	98	0	106	0	1608	12	58	1678	0	0	0	0	0	3423
% Light	97.1	83.8	0	66.7	85	88.9	0	99	0	98.1	0	84.7	100	100	85.3	0	0	0	0	0	85.5
Heavy	5	284	0	1	290	1	0	1	0	2	0	290	0	0	290	0	0	0	0	0	582
% Heavy	2.9	16.2	0	33.3	15	11.1	0	1	0	1.9	0	15.3	0	0	14.7	0	0	0	0	0	14.5

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at George Street
AM Turning Movement Counts

File Name : richmond st at george st AM
Site Code : 00000000
Start Date : 5/18/2021
Page No : 1

Groups Printed- Vehicles

	From North					George Street From East					Richmond Street From South					From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	6	0	15	0	0	0	0	0	15
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	10	13	0	23	0	0	0	0	0	23
07:30 AM	0	0	0	0	0	0	0	2	0	2	0	11	22	0	33	0	0	0	0	0	35
07:45 AM	0	0	0	0	0	0	0	4	0	4	0	10	21	0	31	0	0	0	0	0	35
Total	0	0	0	0	0	0	0	6	0	6	0	40	62	0	102	0	0	0	0	0	108
08:00 AM	0	0	0	0	0	0	0	3	0	3	0	17	16	0	33	0	0	0	0	0	36
08:15 AM	0	0	0	0	0	0	0	6	0	6	0	6	2	0	8	0	0	0	0	0	14
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	9	3	0	12	0	0	0	0	0	12
08:45 AM	0	0	0	0	0	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	7
Total	0	0	0	0	0	0	0	11	0	11	0	37	21	0	58	0	0	0	0	0	69
Grand Total	0	0	0	0	0	0	0	17	0	17	0	77	83	0	160	0	0	0	0	0	177
Apprch %	0	0	0	0		0	0	100	0		0	48.1	51.9	0		0	0	0	0		
Total %	0	0	0	0	0	0	0	9.6	0	9.6	0	43.5	46.9	0	90.4	0	0	0	0	0	

Coastal Engineering & Consulting

6605 Abercorn Street, Suite 210D
Savannah, GA 31405

Grant Street at George Street
PM Turning Movement Counts

File Name : richmond st at george st pm
Site Code : 00000000
Start Date : 5/18/2021
Page No : 1

Groups Printed- Vehicles

	From North					George Street From East					Richmond Street From South					From West					
Start Time	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Left**	**Thru**	**Right**	**U Turn**	**App. Total**	**Int. Total**
04:00 PM	0	0	0	0	0	0	0	3	0	3	0	13	2	0	15	0	0	0	0	0	18
04:15 PM	0	0	0	0	0	0	0	4	0	4	0	9	4	0	13	0	0	0	0	0	17
04:30 PM	0	0	0	0	0	0	0	3	0	3	0	12	3	0	15	0	0	0	0	0	18
04:45 PM	0	0	0	0	0	0	0	4	0	4	0	21	3	0	24	0	0	0	0	0	28
Total	0	0	0	0	0	0	0	14	0	14	0	55	12	0	67	0	0	0	0	0	81
05:00 PM	0	0	0	0	0	0	0	6	0	6	0	17	3	0	20	0	0	0	0	0	26
05:15 PM	0	0	0	0	0	0	0	4	0	4	0	14	4	0	18	0	0	0	0	0	22
05:30 PM	0	0	0	0	0	0	0	5	0	5	0	10	6	0	16	0	0	0	0	0	21
05:45 PM	0	0	0	0	0	0	0	3	0	3	0	15	9	0	24	0	0	0	0	0	27
Total	0	0	0	0	0	0	0	18	0	18	0	56	22	0	78	0	0	0	0	0	96
Grand Total	0	0	0	0	0	0	0	32	0	32	0	111	34	0	145	0	0	0	0	0	177
Apprch %	0	0	0	0		0	0	100	0		0	76.6	23.4	0		0	0	0	0		
Total %	0	0	0	0	0	0	0	18.1	0	18.1	0	62.7	19.2	0	81.9	0	0	0	0	0	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	5	0	25	5	190	0	40	215	10
Future Vol, veh/h	5	0	5	5	0	25	5	190	0	40	215	10
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	25	25	92	66	63	77	92	65	86	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	20	20	0	38	8	247	0	62	250	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	521	644	132	512	650	124	263	0	0	247	0	0
Stage 1	381	381	-	263	263	-	-	-	-	-	-	-
Stage 2	140	263	-	249	387	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	438	390	893	445	387	904	1298	-	-	1316	-	-
Stage 1	613	612	-	719	689	-	-	-	-	-	-	-
Stage 2	849	689	-	733	608	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	403	369	893	417	366	904	1298	-	-	1316	-	-
Mov Cap-2 Maneuver	403	369	-	417	366	-	-	-	-	-	-	-
Stage 1	609	583	-	715	685	-	-	-	-	-	-	-
Stage 2	808	685	-	683	579	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	11.1	0.2	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1298	-	-	635	644	1316	-	-
HCM Lane V/C Ratio	0.006	-	-	0.047	0.09	0.047	-	-
HCM Control Delay (s)	7.8	-	-	11	11.1	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	35	5	0	25	0	5	0	5	0	0	0
Future Vol, veh/h	0	35	5	0	25	0	5	0	5	0	0	0
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	66	31	92	75	92	50	92	25	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	16	0	33	0	10	0	20	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	69	0	0	94	94	61	104	102	33
Stage 1	-	-	-	-	-	-	61	61	-	33	33	-
Stage 2	-	-	-	-	-	-	33	33	-	71	69	-
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	1579	-	-	1532	-	-	889	796	1004	876	788	1041
Stage 1	-	-	-	-	-	-	950	844	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	939	837	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1532	-	-	889	796	1004	858	788	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	889	796	-	858	788	-
Stage 1	-	-	-	-	-	-	950	844	-	983	868	-
Stage 2	-	-	-	-	-	-	983	868	-	920	837	-

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

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	962	1579	-	-	1532	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-	-	-	-	-
HCM Control Delay (s)	8.9	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	25	0	5	15	15	10	70	5	5	25	5
Future Vol, veh/h	10	25	0	5	15	15	10	70	5	5	25	5
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	44	67	92	25	75	39	44	83	50	75	68	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	37	0	20	20	38	23	84	10	7	37	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	225	201	47	215	206	89	57	0	0	94	0	0
Stage 1	61	61	-	135	135	-	-	-	-	-	-	-
Stage 2	164	140	-	80	71	-	-	-	-	-	-	-
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	730	695	1022	742	691	969	1547	-	-	1500	-	-
Stage 1	950	844	-	868	785	-	-	-	-	-	-	-
Stage 2	838	781	-	929	836	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	675	680	1022	700	676	969	1547	-	-	1500	-	-
Mov Cap-2 Maneuver	675	680	-	700	676	-	-	-	-	-	-	-
Stage 1	935	840	-	854	772	-	-	-	-	-	-	-
Stage 2	771	769	-	883	832	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	10	1.4	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1547	-	-	678	802	1500	-	-
HCM Lane V/C Ratio	0.015	-	-	0.089	0.098	0.004	-	-
HCM Control Delay (s)	7.4	0	-	10.8	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	0	0	70	10
Future Vol, veh/h	0	20	0	0	70	10
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	63	92	92	79	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	0	0	89	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	109	109	129	0	-	0
Stage 1	109	-	-	-	-	-
Stage 2	0	-	-	-	-	-
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	888	945	1457	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	888	945	1457	-	-	-
Mov Cap-2 Maneuver	888	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1457	-	945	-	-
HCM Lane V/C Ratio	-	-	0.034	-	-
HCM Control Delay (s)	0	-	8.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	5	10	5	185	0	30	165
Future Vol, veh/h	5	10	5	185	0	30	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	25	50	42	90	92	68	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	20	20	12	206	0	44	188

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	412	103	188	0	0	206	0
Stage 1	230	-	-	-	-	-	-
Stage 2	182	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	568	932	1089	-	-	1363	-
Stage 1	786	-	-	-	-	-	-
Stage 2	831	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	543	932	1089	-	-	1363	-
Mov Cap-2 Maneuver	543	-	-	-	-	-	-
Stage 1	751	-	-	-	-	-	-
Stage 2	831	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0.6	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	686	1363	-
HCM Lane V/C Ratio	-	-	0.058	0.032	-
HCM Control Delay (s)	0.1	-	10.6	7.7	-
HCM Lane LOS	A	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	55	80	0	0
Future Vol, veh/h	0	10	55	80	0	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	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	56	71	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	77	98	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	126	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	924	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	924	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	924
HCM Lane V/C Ratio	-	-	0.019
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	5	0	0	25	5	235	5	5	180	5
Future Vol, veh/h	10	0	5	0	0	25	5	235	5	5	180	5
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	92	50	92	92	48	25	87	38	50	82	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	10	0	0	52	20	270	13	10	220	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	420	568	115	447	567	142	230	0	0	283	0	0
Stage 1	245	245	-	317	317	-	-	-	-	-	-	-
Stage 2	175	323	-	130	250	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	517	431	916	495	432	880	1335	-	-	1276	-	-
Stage 1	737	702	-	669	653	-	-	-	-	-	-	-
Stage 2	810	649	-	860	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	478	421	916	481	422	880	1335	-	-	1276	-	-
Mov Cap-2 Maneuver	478	421	-	481	422	-	-	-	-	-	-	-
Stage 1	726	696	-	659	643	-	-	-	-	-	-	-
Stage 2	751	639	-	844	693	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.9	9.3	0.5	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	554	880	1276	-	-
HCM Lane V/C Ratio	0.015	-	-	0.063	0.059	0.008	-	-
HCM Control Delay (s)	7.7	-	-	11.9	9.3	7.8	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	5	5	5	20	0	5	0	5	5	5	5
Future Vol, veh/h	0	5	5	5	20	0	5	0	5	5	5	5
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	38	50	75	61	92	25	92	25	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	10	7	33	0	20	0	20	20	20	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	23	0	0	85	65	18	75	70	33
Stage 1	-	-	-	-	-	-	18	18	-	47	47	-
Stage 2	-	-	-	-	-	-	67	47	-	28	23	-
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	1579	-	-	1592	-	-	901	826	1061	915	821	1041
Stage 1	-	-	-	-	-	-	1001	880	-	967	856	-
Stage 2	-	-	-	-	-	-	943	856	-	989	876	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1592	-	-	865	823	1061	895	818	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	865	823	-	895	818	-
Stage 1	-	-	-	-	-	-	1001	880	-	967	853	-
Stage 2	-	-	-	-	-	-	900	853	-	970	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.2	8.9	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	953	1579	-	-	1592	-	-	909
HCM Lane V/C Ratio	0.042	-	-	-	0.004	-	-	0.066
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	9.2
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

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	5	5	0	5	10	5	5	40	0	5	45	10
Future Vol, veh/h	5	5	0	5	10	5	5	40	0	5	45	10
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	25	50	92	33	45	25	63	85	92	50	63	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	10	0	15	22	20	8	47	0	10	71	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	188	167	84	172	180	47	97	0	0	47	0	0
Stage 1	104	104	-	63	63	-	-	-	-	-	-	-
Stage 2	84	63	-	109	117	-	-	-	-	-	-	-
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	772	726	975	791	714	1022	1496	-	-	1560	-	-
Stage 1	902	809	-	948	842	-	-	-	-	-	-	-
Stage 2	924	842	-	896	799	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	732	717	975	775	705	1022	1496	-	-	1560	-	-
Mov Cap-2 Maneuver	732	717	-	775	705	-	-	-	-	-	-	-
Stage 1	897	803	-	943	838	-	-	-	-	-	-	-
Stage 2	877	838	-	879	793	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.8	1.1	0.7
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1496	-	-	727	812	1560	-	-
HCM Lane V/C Ratio	0.005	-	-	0.041	0.071	0.006	-	-
HCM Control Delay (s)	7.4	0	-	10.2	9.8	7.3	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	0	0	70	10
Future Vol, veh/h	0	20	0	0	70	10
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	71	92	92	60	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	0	0	117	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	126	126	134	0	-	0
Stage 1	126	-	-	-	-	-
Stage 2	0	-	-	-	-	-
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	869	924	1451	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	869	924	1451	-	-	-
Mov Cap-2 Maneuver	869	-	-	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1451	-	924	-	-
HCM Lane V/C Ratio	-	-	0.03	-	-
HCM Control Delay (s)	0	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	0	15	10	195	5	20	145
Future Vol, veh/h	0	15	10	195	5	20	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	92	83	50	81	25	90	81
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	18	20	241	20	22	179

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	425	131	179	0	0	261	0
Stage 1	291	-	-	-	-	-	-
Stage 2	134	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	557	894	1103	-	-	1300	-
Stage 1	733	-	-	-	-	-	-
Stage 2	878	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	536	894	1103	-	-	1300	-
Mov Cap-2 Maneuver	536	-	-	-	-	-	-
Stage 1	705	-	-	-	-	-	-
Stage 2	878	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0.7	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1300	-
HCM Lane V/C Ratio	-	-	0.02	0.017	-
HCM Control Delay (s)	0.1	-	9.1	7.8	-
HCM Lane LOS	A	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	65	25	0	0
Future Vol, veh/h	0	20	65	25	0	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	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	56	71	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	92	30	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	107	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	947	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	947	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	947
HCM Lane V/C Ratio	-	-	0.038
HCM Control Delay (s)	-	-	9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	5	5	0	25	5	233	0	92	215	10
Future Vol, veh/h	5	0	5	5	0	25	5	233	0	92	215	10
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	25	25	92	66	63	77	92	65	86	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	20	20	0	38	8	303	0	142	250	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	709	860	132	728	866	152	263	0	0	303	0	0
Stage 1	541	541	-	319	319	-	-	-	-	-	-	-
Stage 2	168	319	-	409	547	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	321	292	893	311	290	867	1298	-	-	1255	-	-
Stage 1	493	519	-	667	652	-	-	-	-	-	-	-
Stage 2	817	652	-	590	516	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	279	258	893	276	256	867	1298	-	-	1255	-	-
Mov Cap-2 Maneuver	279	258	-	276	256	-	-	-	-	-	-	-
Stage 1	490	460	-	663	648	-	-	-	-	-	-	-
Stage 2	776	648	-	512	458	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	13.2	0.2	2.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1298	-	-	515	498	1255	-	-
HCM Lane V/C Ratio	0.006	-	-	0.058	0.116	0.113	-	-
HCM Control Delay (s)	7.8	-	-	12.4	13.2	8.2	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0.4	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	35	57	26	25	0	5	0	5	0	0	0
Future Vol, veh/h	0	35	57	26	25	0	5	0	5	0	0	0
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	66	31	92	75	92	50	92	25	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	184	28	33	0	10	0	20	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	237	0	0	234	234	145	244	326	33
Stage 1	-	-	-	-	-	-	145	145	-	89	89	-
Stage 2	-	-	-	-	-	-	89	89	-	155	237	-
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	1579	-	-	1330	-	-	721	666	902	710	592	1041
Stage 1	-	-	-	-	-	-	858	777	-	918	821	-
Stage 2	-	-	-	-	-	-	918	821	-	847	709	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1330	-	-	709	652	902	683	580	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	709	652	-	683	580	-
Stage 1	-	-	-	-	-	-	858	777	-	918	804	-
Stage 2	-	-	-	-	-	-	899	804	-	828	709	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.6	9.5	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	827	1579	-	-	1330	-	-	-
HCM Lane V/C Ratio	0.036	-	-	-	0.021	-	-	-
HCM Control Delay (s)	9.5	0	-	-	7.8	0	-	0
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	37	51	0	5	15	15	10	82	27	5	40	20
Future Vol, veh/h	37	51	0	5	15	15	10	82	27	5	40	20
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	44	67	92	25	75	39	44	83	50	75	68	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	76	0	20	20	38	23	99	54	7	59	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	314	312	99	323	325	126	139	0	0	153	0	0
Stage 1	113	113	-	172	172	-	-	-	-	-	-	-
Stage 2	201	199	-	151	153	-	-	-	-	-	-	-
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	639	603	957	630	593	924	1445	-	-	1428	-	-
Stage 1	892	802	-	830	756	-	-	-	-	-	-	-
Stage 2	801	736	-	851	771	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	586	589	957	558	579	924	1445	-	-	1428	-	-
Mov Cap-2 Maneuver	586	589	-	558	579	-	-	-	-	-	-	-
Stage 1	876	798	-	815	742	-	-	-	-	-	-	-
Stage 2	734	723	-	766	767	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	10.8	1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1445	-	-	587	700	1428	-	-
HCM Lane V/C Ratio	0.016	-	-	0.273	0.112	0.005	-	-
HCM Control Delay (s)	7.5	0	-	13.4	10.8	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.1	0.4	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	25	0	0	130	48
Future Vol, veh/h	0	25	0	0	130	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	63	92	92	79	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	40	0	0	165	192

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	261	261	357	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	0	-	-	-	-	-
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	728	778	1202	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	728	778	1202	-	-	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1202	-	778	-	-
HCM Lane V/C Ratio	-	-	0.051	-	-
HCM Control Delay (s)	0	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	5	53	5	185	0	30	165
Future Vol, veh/h	5	53	5	185	0	30	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	25	50	42	90	92	68	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	20	106	12	206	0	44	188

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	412	103	188	0	0	206	0
Stage 1	230	-	-	-	-	-	-
Stage 2	182	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	568	932	1089	-	-	1363	-
Stage 1	786	-	-	-	-	-	-
Stage 2	831	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	543	932	1089	-	-	1363	-
Mov Cap-2 Maneuver	543	-	-	-	-	-	-
Stage 1	751	-	-	-	-	-	-
Stage 2	831	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0.6	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	837	1363	-
HCM Lane V/C Ratio	-	-	0.151	0.032	-
HCM Control Delay (s)	0.1	-	10.1	7.7	-
HCM Lane LOS	A	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	119	101	0	0
Future Vol, veh/h	0	10	119	101	0	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	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	56	71	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	168	123	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	230	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	809	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	809	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.6	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	809
HCM Lane V/C Ratio	-	-	0.022
HCM Control Delay (s)	-	-	9.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	5	0	0	25	5	250	5	17	180	5
Future Vol, veh/h	10	0	5	0	0	25	5	250	5	17	180	5
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	-	-	-	-	-	-	200	-	-	200	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	92	50	92	92	48	25	87	38	50	82	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	10	0	0	52	20	287	13	34	220	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	477	633	115	512	632	150	230	0	0	300	0	0
Stage 1	293	293	-	334	334	-	-	-	-	-	-	-
Stage 2	184	340	-	178	298	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	471	395	916	445	396	870	1335	-	-	1258	-	-
Stage 1	691	669	-	653	642	-	-	-	-	-	-	-
Stage 2	800	638	-	806	666	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	429	378	916	426	379	870	1335	-	-	1258	-	-
Mov Cap-2 Maneuver	429	378	-	426	379	-	-	-	-	-	-	-
Stage 1	681	651	-	643	632	-	-	-	-	-	-	-
Stage 2	741	628	-	776	648	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	9.4	0.5	1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	506	870	1258	-	-
HCM Lane V/C Ratio	0.015	-	-	0.069	0.06	0.027	-	-
HCM Control Delay (s)	7.7	-	-	12.6	9.4	7.9	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	5	17	11	20	0	5	0	5	5	5	5
Future Vol, veh/h	0	5	17	11	20	0	5	0	5	5	5	5
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	38	50	75	61	92	25	92	25	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	34	15	33	0	20	0	20	20	20	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	33	0	0	47	0	0	113	93	30	103	110	33
Stage 1	-	-	-	-	-	-	30	30	-	63	63	-
Stage 2	-	-	-	-	-	-	83	63	-	40	47	-
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	1579	-	-	1560	-	-	864	797	1044	877	780	1041
Stage 1	-	-	-	-	-	-	987	870	-	948	842	-
Stage 2	-	-	-	-	-	-	925	842	-	975	856	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1579	-	-	1560	-	-	824	789	1044	853	772	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	824	789	-	853	772	-
Stage 1	-	-	-	-	-	-	987	870	-	948	834	-
Stage 2	-	-	-	-	-	-	877	834	-	956	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.3	9.1	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	921	1579	-	-	1560	-	-	875
HCM Lane V/C Ratio	0.043	-	-	-	0.009	-	-	0.069
HCM Control Delay (s)	9.1	0	-	-	7.3	0	-	9.4
HCM Lane LOS	A	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	11	0	5	10	5	5	40	8	5	49	10
Future Vol, veh/h	12	11	0	5	10	5	5	40	8	5	49	10
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	25	50	92	33	45	25	63	85	92	50	63	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	22	0	15	22	20	8	47	9	10	78	26

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	200	183	91	190	192	52	104	0	0	56	0	0
Stage 1	111	111	-	68	68	-	-	-	-	-	-	-
Stage 2	89	72	-	122	124	-	-	-	-	-	-	-
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	759	711	967	770	703	1016	1488	-	-	1549	-	-
Stage 1	894	804	-	942	838	-	-	-	-	-	-	-
Stage 2	918	835	-	882	793	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	719	702	967	744	694	1016	1488	-	-	1549	-	-
Mov Cap-2 Maneuver	719	702	-	744	694	-	-	-	-	-	-	-
Stage 1	889	798	-	936	833	-	-	-	-	-	-	-
Stage 2	871	830	-	852	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	9.9	0.9	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1488	-	-	714	796	1549	-	-
HCM Lane V/C Ratio	0.005	-	-	0.098	0.072	0.006	-	-
HCM Control Delay (s)	7.4	0	-	10.6	9.9	7.3	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	20	0	0	97	25
Future Vol, veh/h	0	20	0	0	97	25
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	71	92	92	60	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	0	0	162	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	184	184	205	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	0	-	-	-	-	-
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	805	858	1366	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	805	858	1366	-	-	-
Mov Cap-2 Maneuver	805	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1366	-	858	-	-
HCM Lane V/C Ratio	-	-	0.033	-	-
HCM Control Delay (s)	0	-	9.3	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	0	30	10	195	5	20	145
Future Vol, veh/h	0	30	10	195	5	20	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	92	83	50	81	25	90	81
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	0	36	20	241	20	22	179

Major/Minor	Minor1		Major1			Major2	
Conflicting Flow All	425	131	179	0	0	261	0
Stage 1	291	-	-	-	-	-	-
Stage 2	134	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	557	894	1103	-	-	1300	-
Stage 1	733	-	-	-	-	-	-
Stage 2	878	-	-	-	-	-	-
Platoon blocked, %				-	-		-
Mov Cap-1 Maneuver	536	894	1103	-	-	1300	-
Mov Cap-2 Maneuver	536	-	-	-	-	-	-
Stage 1	705	-	-	-	-	-	-
Stage 2	878	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0.7	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1300	-
HCM Lane V/C Ratio	-	-	0.04	0.017	-
HCM Control Delay (s)	0.1	-	9.2	7.8	-
HCM Lane LOS	A	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	84	32	0	0
Future Vol, veh/h	0	20	84	32	0	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	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	56	71	82	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	36	118	39	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	138	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	910	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	910	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.1	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	910
HCM Lane V/C Ratio	-	-	0.039
HCM Control Delay (s)	-	-	9.1
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Ryan Claus

From: Peter Schoenauer <pete@tidewatereng.com>
Sent: Thursday, May 20, 2021 8:33 AM
To: Ryan Claus
Cc: Brian Felder
Subject: FW: St. Francis- Brunswick

Good morning Ryan,

Please see the email below from Doug Stephens with GDOT. Not sure if I told you but I had the same conversation with Garrow Alberson, City of Brunswick Engineer, and he agrees that stacking on Bay Street is not a desirable option.

Thank you,
pete

Peter Schoenauer, PE

Tidewater Engineering, Inc.
200 Plantation Chase, #16
St. Simons Island, GA 31522
(912) 268-2164: office
(912) 289-0361: Fax
www.tidewatereng.com

TIDEWATER ENGINEERING, INC.

From: Stephens, Doug <dstephens@dot.ga.gov>
Sent: Thursday, May 20, 2021 8:29 AM
To: Peter Schoenauer <pete@tidewatereng.com>
Cc: Capello, Joseph R <JCapello@dot.ga.gov>
Subject: RE: St. Francis- Brunswick

Good morning Mr. Pete,

I have reviewed the site plan, we do not recommend the stacking on our route. It seemed there were other streets they could utilized for stacking. If you have any questions please feel free to contact me.

Thanks,

Doug Stephens
Traffic Specialist 2

GDOT Georgia Department of Transportation

District 5 Traffic Operations Office

FELDER ★ ASSOCIATES ARCHITECTURE INTERIOR DESIGN

A TRAFFIC FLOW MAP FOR
ST. FRANCIS XAVIER CATHOLIC SCHOOL

ST. FRANCIS XAVIER CATHOLIC SCHOOL

CURRENT ENROLLMENT

TIME OF DAY	# OF CARS	DURATION
MORNING DROP-OFF	+/- 87 CARS, 1 BUS*	+/- 15 MIN. WINDOW
AFTERNOON PICK-UP	+/- 72 CARS, 1 BUS*	+/- 30 MIN. WINDOW
AFTER-SCHOOL PROGRAMS	+/- 21 CARS	NO WAIT TIME (PARENTS ARRIVE AT DIFFERENT TIMES)

PROJECTED ENROLLMENT (300 CHILDREN)

TIME OF DAY	# OF CARS	DURATION
MORNING DROP-OFF	+/- 150 CARS, 1 BUS*	+/- 30 MIN. WINDOW
AFTERNOON PICK-UP	+/- 123 CARS, 1 BUS*	+/- 60 MIN. WINDOW
AFTER-SCHOOL PROGRAMS	+/- 36 CARS	NO WAIT TIME (PARENTS ARRIVE AT DIFFERENT TIMES)

* (1) BUS IS USED FOR DROP-OFF / PICK-OFF EACH DAY WHICH CARRIES 25 CHILDREN (ELIMINATES +/- 20 CARS)

LEGEND

EXISTING FLOW THROUGH UNION STREET	PROPOSED TRAFFIC FLOW FROM BAY STREET
EXISTING FLOW THROUGH HANOVER SQUARE	PROPOSED TRAFFIC FLOW FROM HOWE STREET