TRAFFIC IMPACT STUDY

Prepared For

PARKER'S KITCHEN

SR 204 PARKER'S KITCHEN

SAVANNAH, GA

March 21, 2022

LUMIN8

TRANSPORTATION TECHNOLOGIES

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CONTENTS

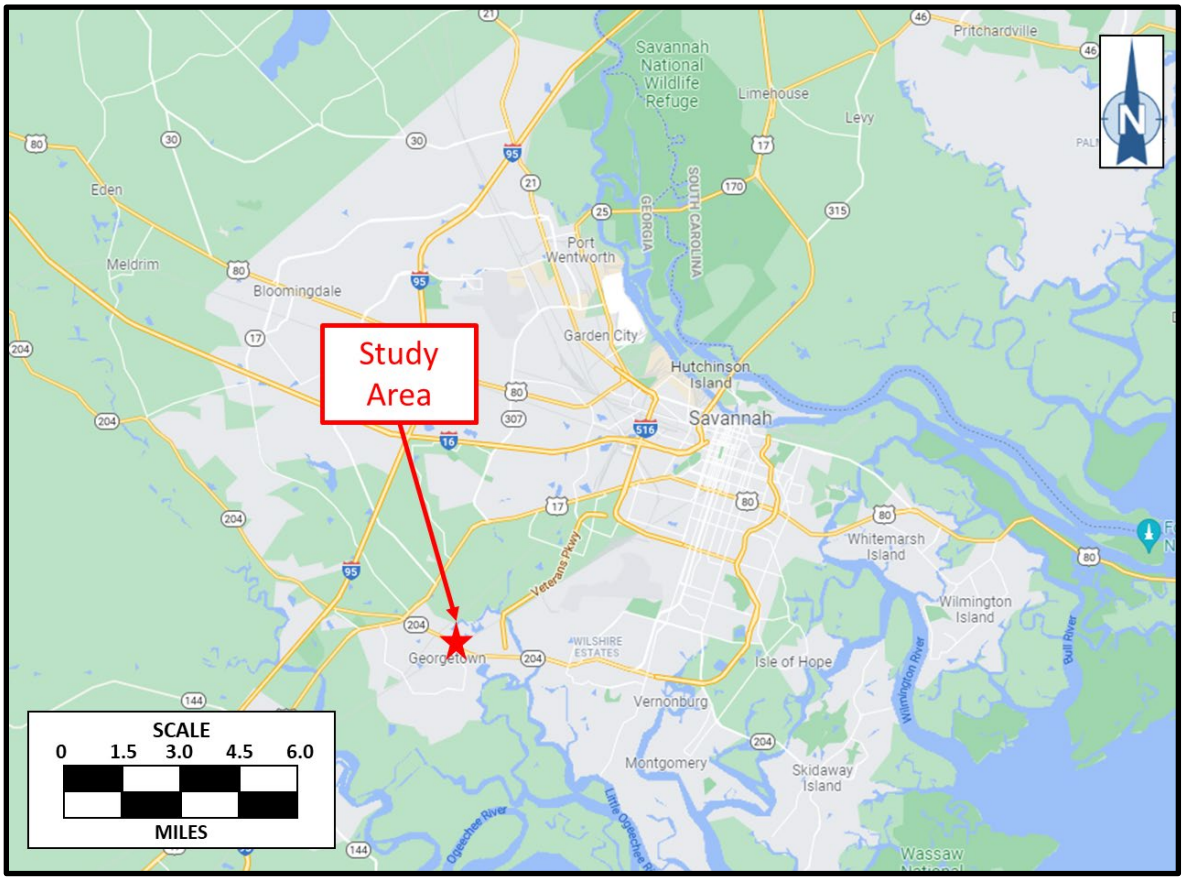
LIST OF ILLUSTRATIONS

LIST OF TABLES

INTRODUCTION

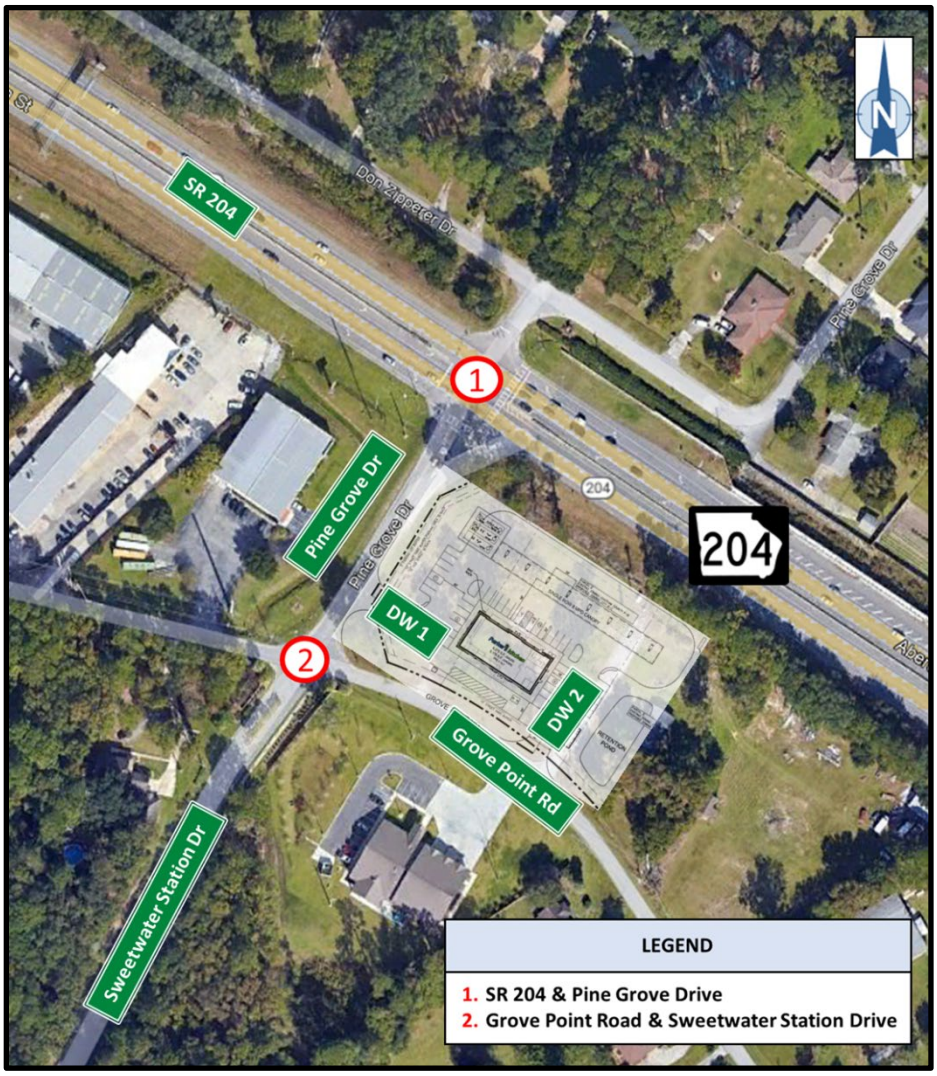
This study includes an analysis of the traffic-related impacts expected from a proposed C-Store development in Savannah, Georgia. The project location is shown in Figure 1.

Figure 1: PROJECT LOCATION MAP



The intersections included in the study are shown in Figure 2.

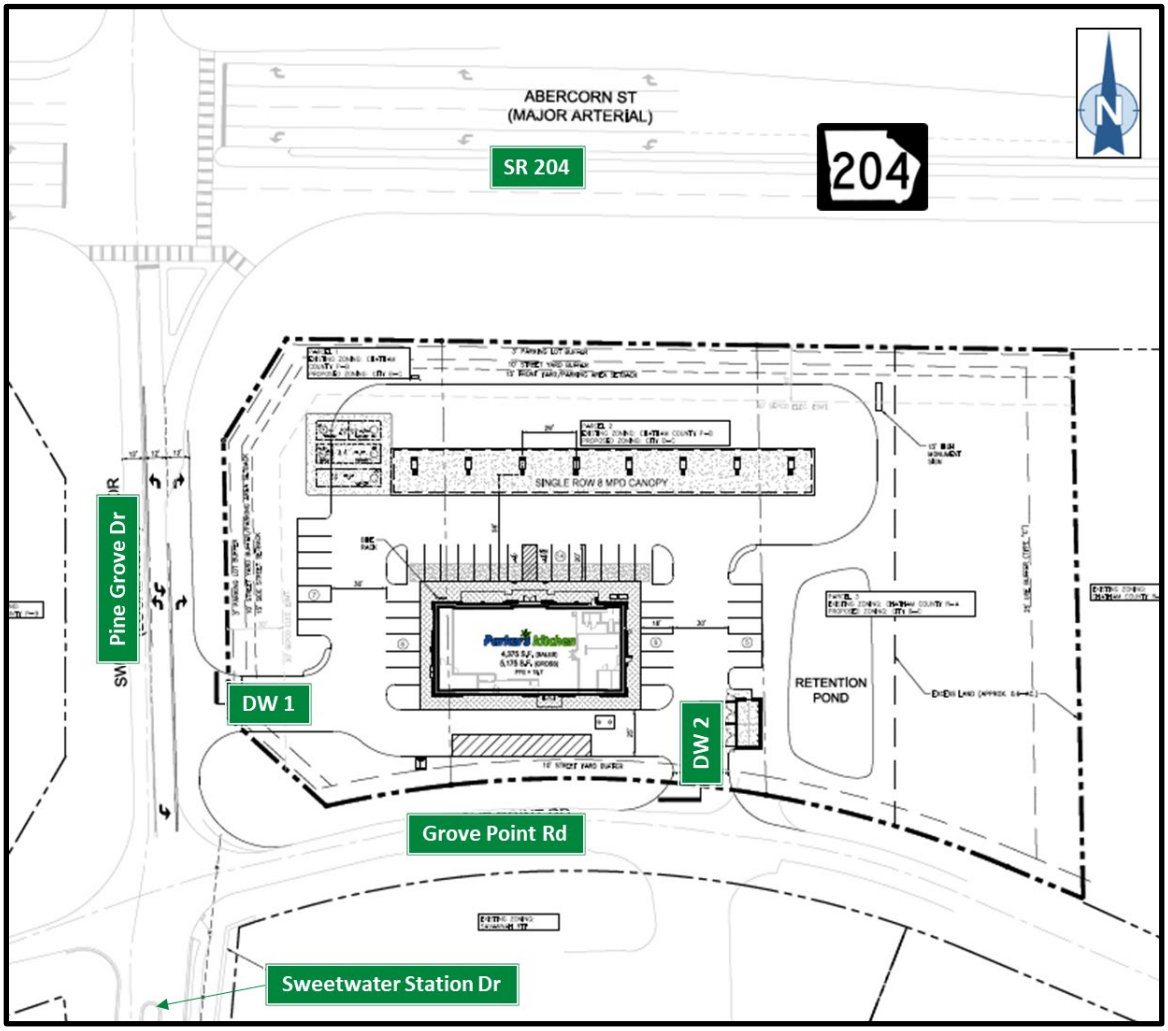
Figure 2: STUDY INTERSECTION MAP



PROPOSED DEVELOPMENT

The proposed C-Store development is planned to be open in 2023. The proposed C-Store is approximately 5.2 KSF and will have 16 fueling positions. The development is proposed to have 2 full-access driveways, one of which intersects Pine Grove Drive, while the other intersects Grove Point Road. The site plan for the proposed development is shown below in Figure 3. The full site plan is located in Appendix A.

Figure 3: SITE PLAN



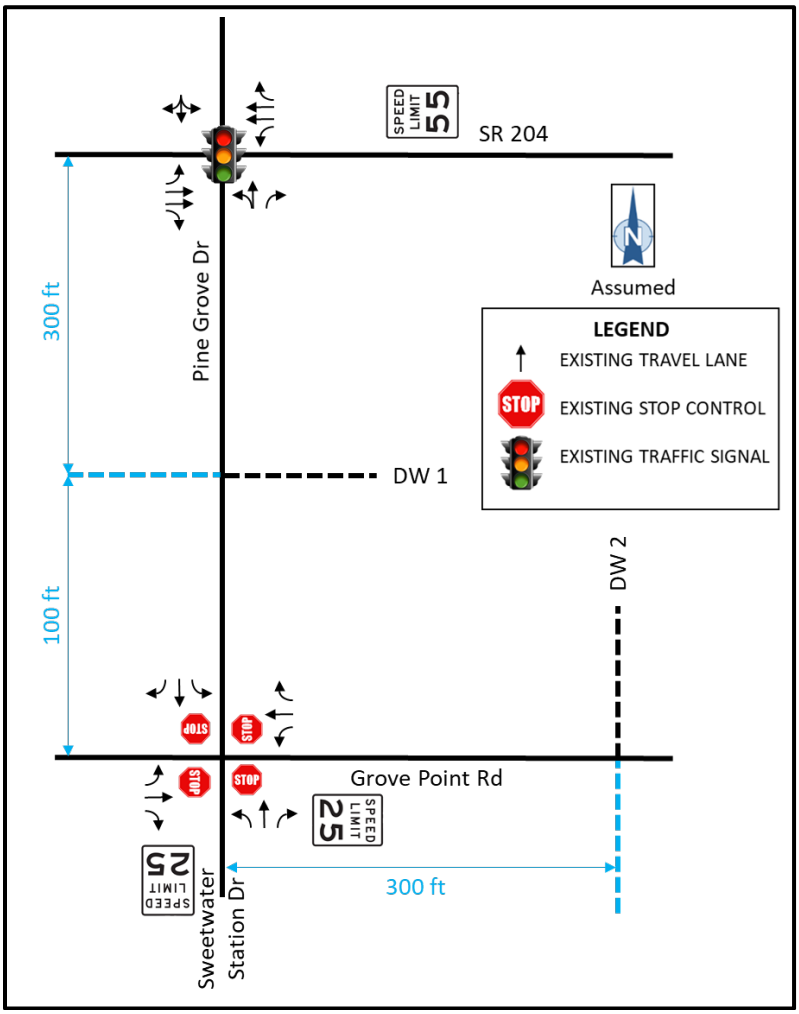
EXISTING CONDITIONS

An inventory was conducted of the current conditions at the study intersections, including roadway geometry, traffic control, and traffic volumes.

INVENTORY OF EXISTING GEOMETRY AND TRAFFIC CONTROL

The existing roadway geometry and traffic control in the study area are shown in Figure 4 below.

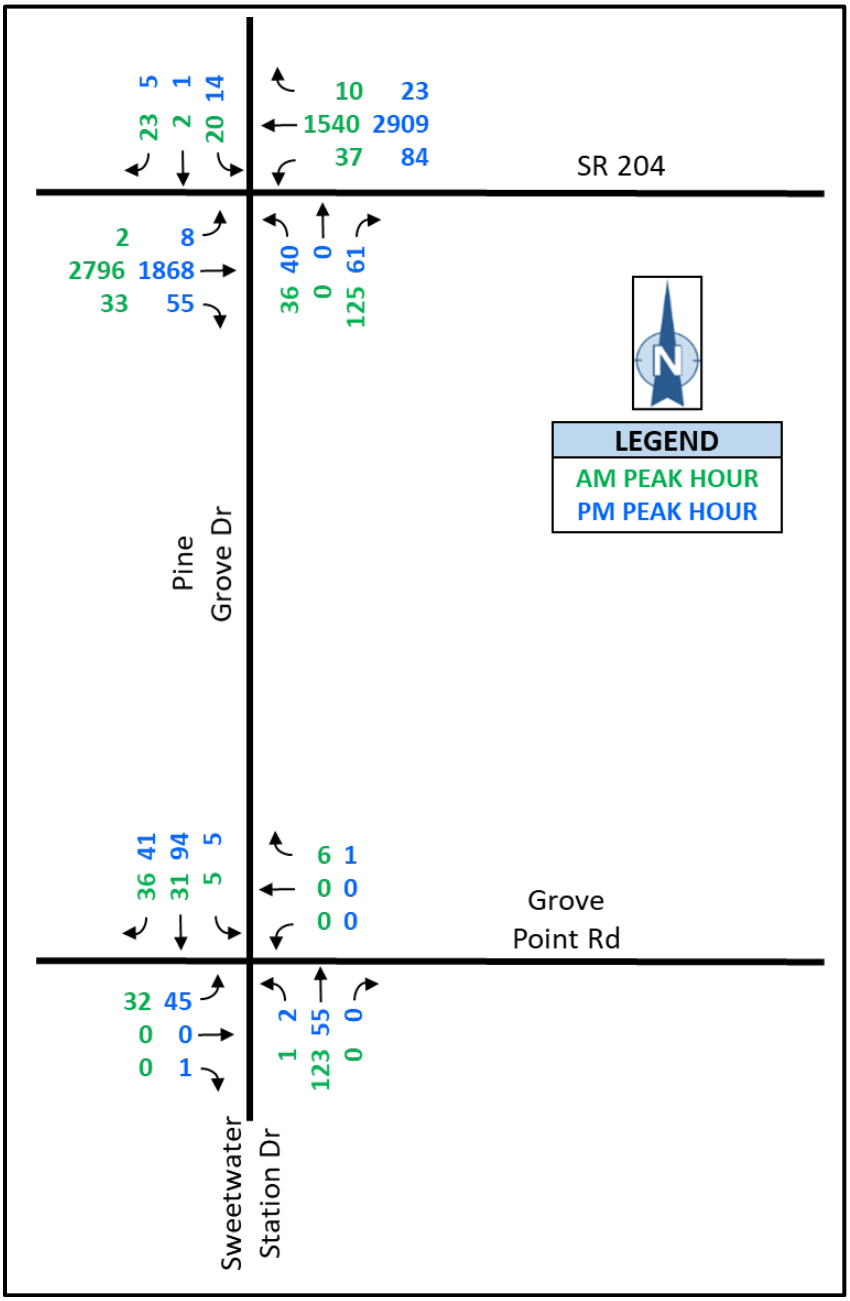
Figure 4: EXISTING CONDITIONS



TURNING MOVEMENT VOLUMES

Turning Movement Counts (TMC's) were conducted at the study intersections on Tuesday, February 8, 2022, from 7:00 to 9:00 AM and 4:30 to 6:30 PM. The observed peak hours are 7:15 to 8:15 AM and 4:30 to 5:30 PM. Balanced existing peak hour turning movement volumes are shown in Figure 5 below. Turning movement data is provided in Appendix B.

Figure 5: EXISTING TRAFFIC VOLUMES (BALANCED)



AUTOMATIC TRAFFIC RECORDER

Automatic Traffic Recorders (ATRs) were placed in the vicinity of the proposed development to collect bi-directional 24-hour traffic data on Tuesday, February 8, 2022. One ATR was placed on Pine Grove Drive south of SR 204, while the other was located was placed on Grove Point Road east of Sweetwater Station Drive. The recorded daily volumes and truck percentages are shown in Figure 6 below. The ATR data can be found in Appendix C.

Figure 6: ATR DATA

SAFETY EVALUATION

CRASH HISTORY

Crash data was analyzed to identify collision-prone movements at the study intersections. Data was obtained from the Georgia Electronic Accident Reporting System (GEARS) for the five most recent years of data.

Table 1 summarizes the crash frequency at the intersection of SR 204 and Pine Grove Drive. Crash data is provided in Appendix D.

Table 1: CRASH DATA SUMMARY, SR 204 & PINE GROVE DR

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT-ANGLE	HEAD ON	REAR END	SIDE-SWIPE	
2017	15	4/7	0	1	0	13	1	0
2018	33	3/4	0	3	0	25	5	0
2019	29	5/6	0	1	0	25	2	1
2020	23	3/3	1	1	0	20	2	0
2021	20	0/0	0	3	0	16	0	1
Total	**120**	**15/20**	**1**	**9**	**0**	**99**	**10**	**2**

According to the crash history, rear end collisions are the most prominent type of crashes, accounting for 83% of the total collisions in the past five years. One fatality was reported during this time period, an angle collision in 2020 caused by a driver driving under the influence (DUI). A minor rear end collision was inaccurately recorded as a fatality in 2021.

Table 2 summarizes the crash frequency at the intersection of Pine Grove Drive/Sweetwater Station Drive & Grove Point Road.

Table 2: CRASH DATA SUMMARY, PINE GROVE DR/SWEETWATER STATION DR & GROVE POINT RD

YEAR	TOTAL CRASHES	INJURY CRASHES/ INJURIES	FATAL -ITIES	COLLISION WITH VEHICLE				COLLISION WITH ANIMAL OR STRUCTURE
				RIGHT-ANGLE	HEAD ON	REAR END	SIDE-SWIPE	
2017	0	0/0	0	0	0	0	0	0
2018	1	0/0	0	1	0	0	0	0
2019	0	0/0	0	0	0	0	0	0
2020	0	0/0	0	0	0	0	0	0
2021	0	0/0	0	0	0	0	0	0
Total	**1**	**0/0**	**0**	**1**	**0**	**0**	**0**	**0**

According to the crash history, one angle collision occurred in the past five years as a hit and run. No fatalities were reported during this time period.

BACKGROUND TRAFFIC PROJECTION METHODOLOGY

The methodology used to estimate future traffic growth included an examination of Chatham County census data and historic trends from GDOT count stations.

CENSUS DATA

Population projections for Chatham County according to the Chatham County – Savannah Comprehensive Plan 2040 are shown in Table 3.

Table 3: CENSUS DATA: CHATHAM COUNTY – SAVANNAH COMPREHENSIVE PLAN 2040

CHATHAM COUNTY			
YEAR	POPULATION	% CHANGE	% CHANGE PER YEAR
2018	290,550	-	-
2040	335,211	15.4	0.65%

Source: Chatham County – Savannah Comprehensive Plan 2040

According to the Comprehensive Plan, the population will see an increase of 15.4%, or a yearly rate of 0.65%, between 2018 and 2040.

TREND ANALYSIS

The GDOT maintains multiple annual traffic count stations in the vicinity of the study intersections. This data was used to establish historic growth rates in the area. The count stations shown in Figure 7 were used. The data found for the count stations can be found in Appendix E.

Figure 7: GDOT COUNT STATIONS

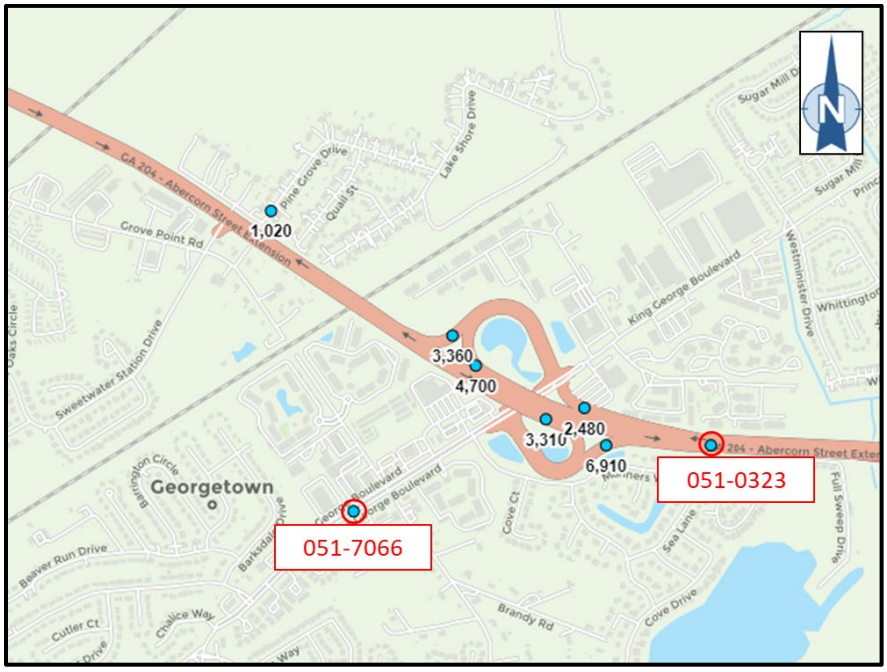


Table 4 summarizes the average annual daily traffic (AADT) reported by the GDOT for each of the years 2009 through 2021.

Table 4: HISTORIC TRAFFIC DATA

Year	GDOT Count Station 051-7066	GDOT Count Station 051-0323
2009	12202	-
2010	-	54470
2011	*11600	*49000
2012	*11500	57406
2013	10574	*52400
2014	*10000	59442
2015	*10400	*55800
2016	12859	*57400
2017	*11100	*57800
2018	*11300	*57300
2019	10891	69223
2020	*9600	*57400
2021	11238	-

Source: GDOT Traffic Analysis & Data Application

*=Estimated counts/anomalies were not used in the trend analysis.

Figures 8 and 9, below and on the following page, show trend line graphs of the historic AADT data as reported by GDOT. A trend line is shown for each count station. Gaps in the graphs represent years for which data was estimated, which are not used in the analysis, per GDOT policy.

Figure 8: 5-YEAR TREND LINES FOR GDOT COUNT STATIONS

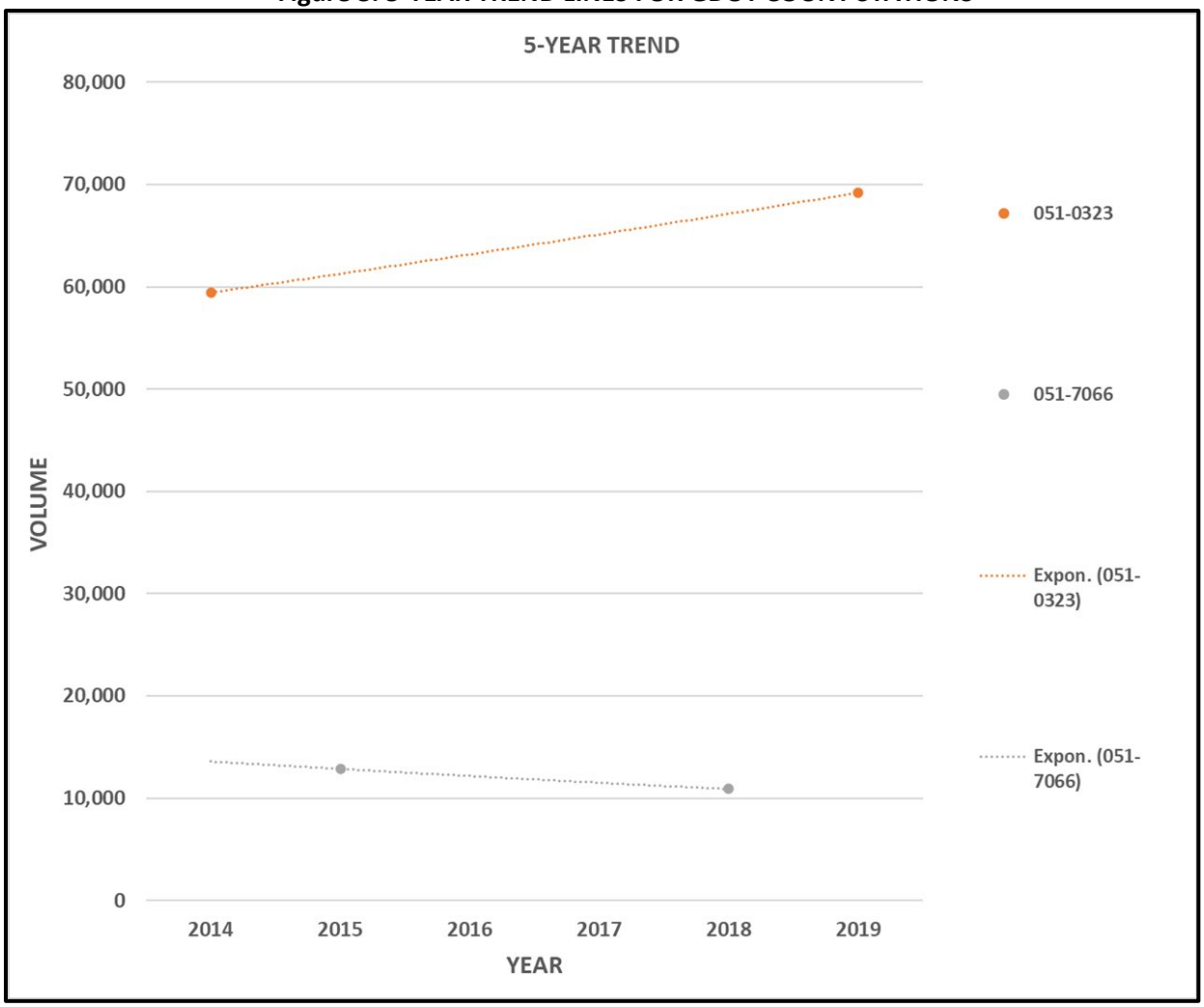


Figure 9: 10-YEAR TREND LINES FOR GDOT COUNT STATIONS

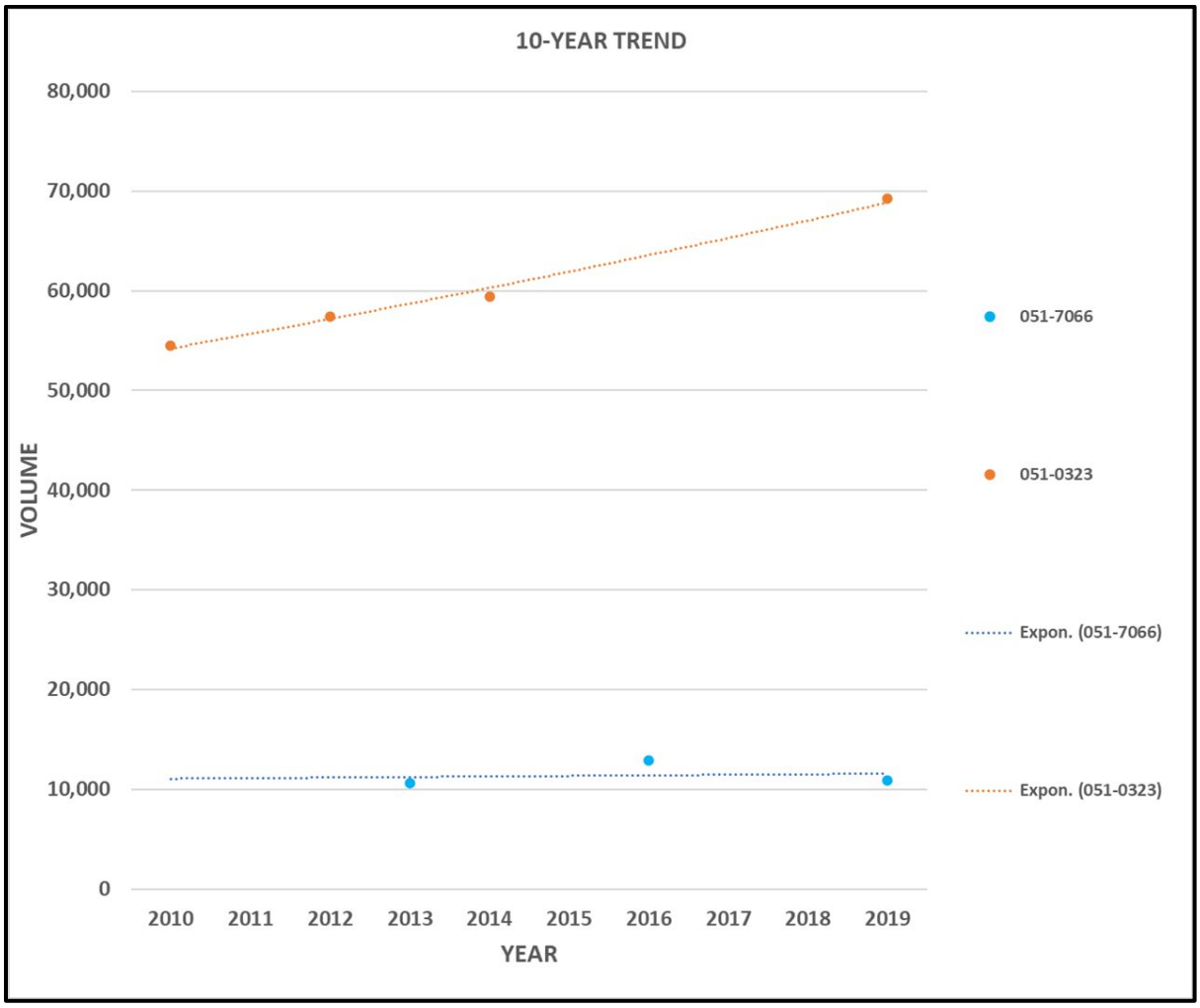


Table 5 shows the resulting trend rates.

Table 5: TREND ANALYSIS FOR COUNT STATION DATA

GDOT Count Stations	5-year	10-year
051-7066	-3.27%	-1.13%
051-0323	3.09%	2.43%
Blended Trend Rates from Count Stations	2.06%	1.85%

Note: Rates are calculated based on annual compounding.

BACKGROUND GROWTH RATE

The Chatham County – Savannah Comprehensive Plan 2040 projects annual population growth rate to be 0.65% for the county. The annual growth rate was averaged between the two traffic volume count stations in the study area and calculated to be 2.06% for the past five years, and a 1.85% growth rate for the past ten years. Based on these rates and the surrounding area, the annual traffic growth rate was established to be **2.0%** for the purposes of the study.

BACKGROUND GROWTH FACTORS

A growth factor was established by applying the growth rates to the following equation, shown below.

$$\boldsymbol{Growth\ Factor} = \ (\mathbf{1} + \boldsymbol{r})^{\boldsymbol{n}}$$

Where:
r = *growth rate*
n = *number of years*

The volumes projections were calculated using the following values as 'n', taken as the time period between the Existing (2022) and Design (2042) Year.

- Existing Year (2022) to Base Year (2023) = 1
- Existing Year (2022) to Design Year (2043) – n= 21

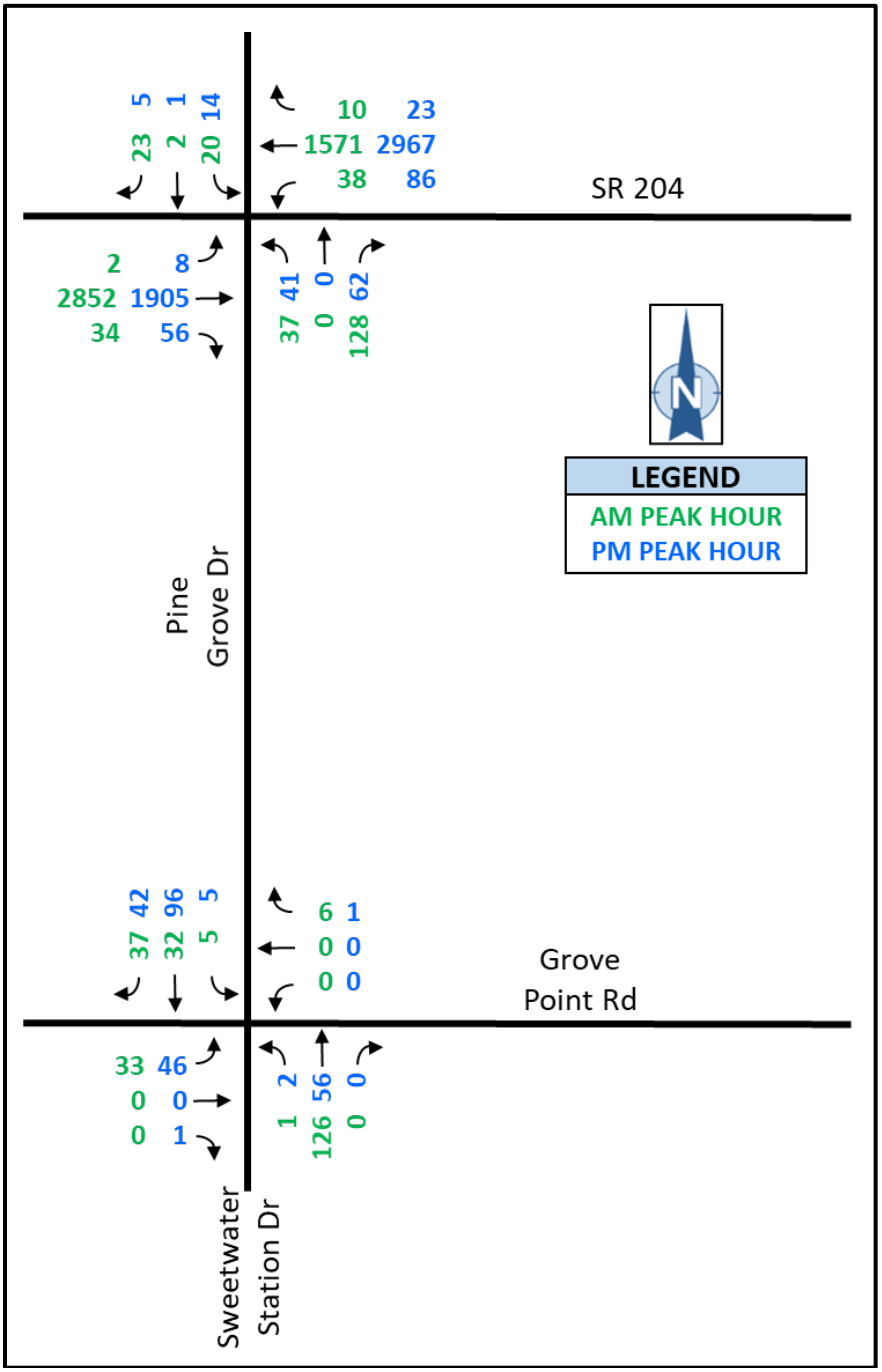
The growth factors for the study area are provided in Table 6.

Table 6: GROWTH FACTORS

PROJECTED GROWTH FACTORS	
2023	**2043**
1.02	1.52

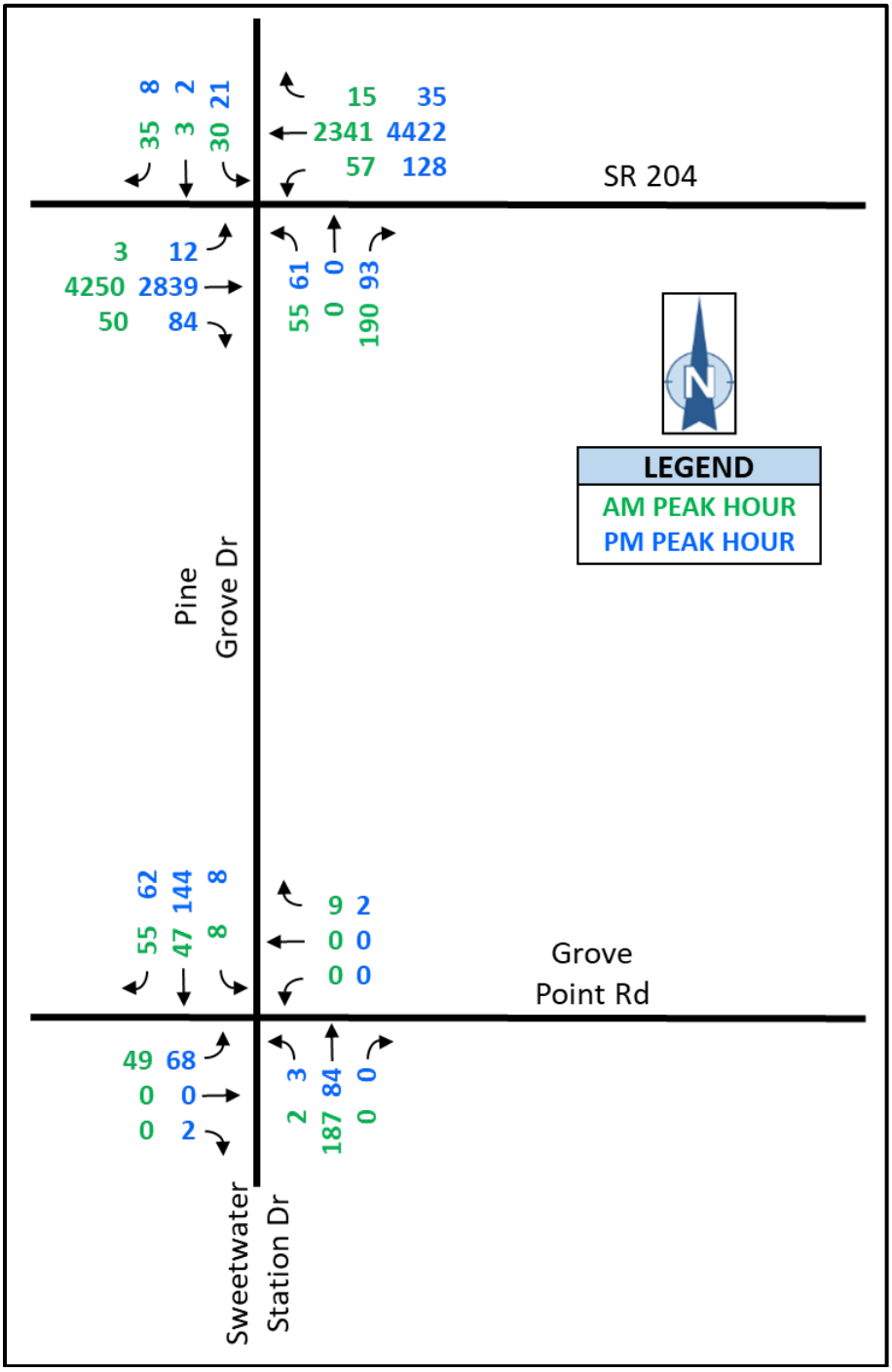
The Projected 2023 No-Build Volumes are shown in Figure 10.

Figure 10: PROJECTED 2023 NO-BUILD VOLUMES



The Projected 2043 No-Build Volumes are shown in Figure 11.

Figure 11: PROJECTED 2043 NO-BUILD VOLUMES



PROJECTED CONDITIONS

TRIP GENERATION

The trips generated by the proposed C-store development were estimated using trip generation rates found in ITE's publication *Trip Generation, 10*th Edition. *TripGen 10* software from Trafficware was used to facilitate the calculation. The trip generation publication contains multiple associated trip rates for each of the uses listed. The rate that resulted in the larger trip generation was used for this study. Pass-by trips are trips taken from the adjacent road's existing traffic and brought into the development.

The weekday AM and PM Peak Hour trip generation estimates correspond to the peak hour of the adjacent street. Table 7 summarizes the trip generation. The trip generation data is provided in Appendix F.

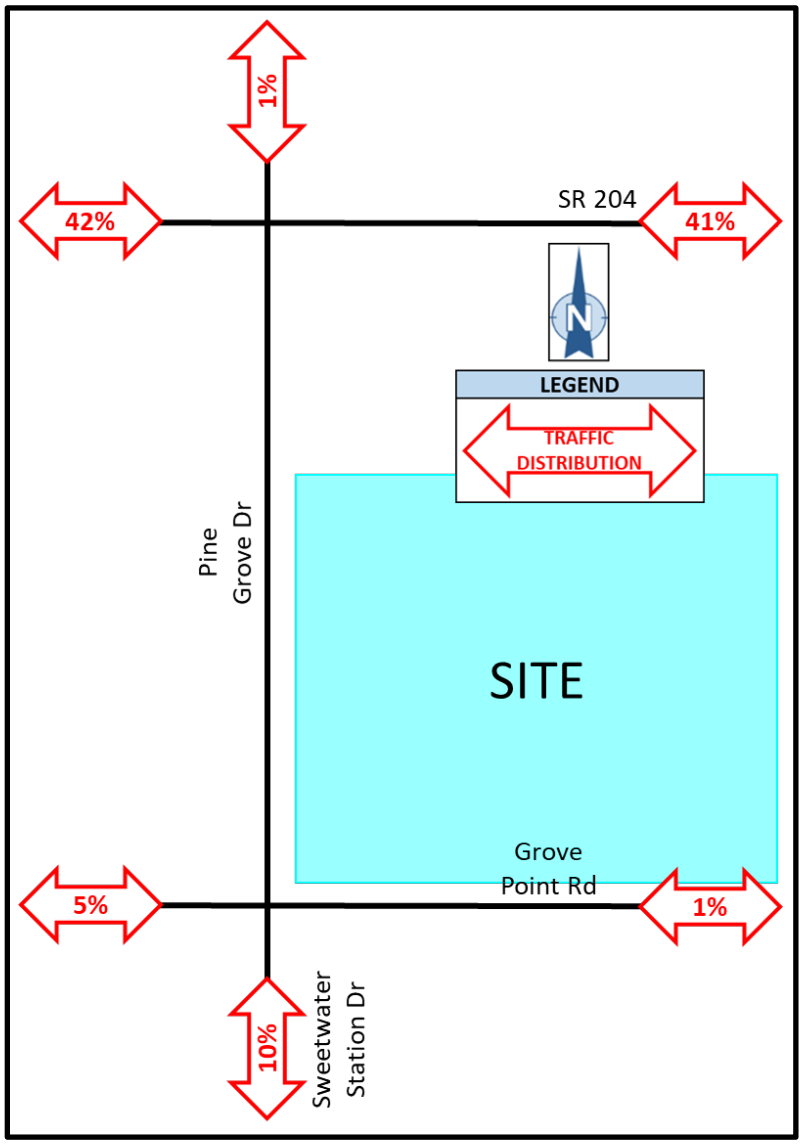
Table 7: TRIP GENERATION

ITE CODE	SIZE	DAILY 2-WAY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
			ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
945	16 Fueling Stations	3286	106	101	207	114	110	224
UNADJUSTED VOLUME		3286	106	101	207	114	110	224
PASS-BY TRIPS		-1936	-64	-64	-128	-63	-63	-126
ADJUSTED VOLUME (TOTAL NEW TRIPS)		**1350**	**42**	**37**	**79**	**51**	**47**	**98**

TRIP DISTRIBUTION

In order to develop a distribution pattern for trips generated by the development, the TMC data was analyzed and used to determine the percentage of traffic entering and exiting the proposed driveways from each direction. Distribution percentages were developed by observing the traffic patterns during the peak hours. It was assumed that these patterns would best represent the traffic distribution. Figure 12 shows the resulting trip distribution pattern that was used to assign the new generated traffic for the development.

Figure 12: TRIP DISTRIBUTION PERCENTAGES



TRAFFIC ASSIGNMENT

The generated traffic was assigned to the road network based on the trip distribution patterns shown in Figure 12. Table 8 shows how the assigned trips are expected to reach the development, according to the direction traveled.

Table 8: NEW TRIPS ASSIGNMENT

To & From	AM		PM	
	IN	OUT	IN	OUT
SR 204 (West)	18	16	21	20
SR 204 (East)	17	15	21	19
Pine Grove Dr (North)	0	0	0	0
Sweetwater Station Drive (South)	4	4	5	5
Grove Point Road (West)	2	2	3	2
Grove Point Road (East)	1	0	1	1
Total Trips	**42**	**37**	**51**	**47**

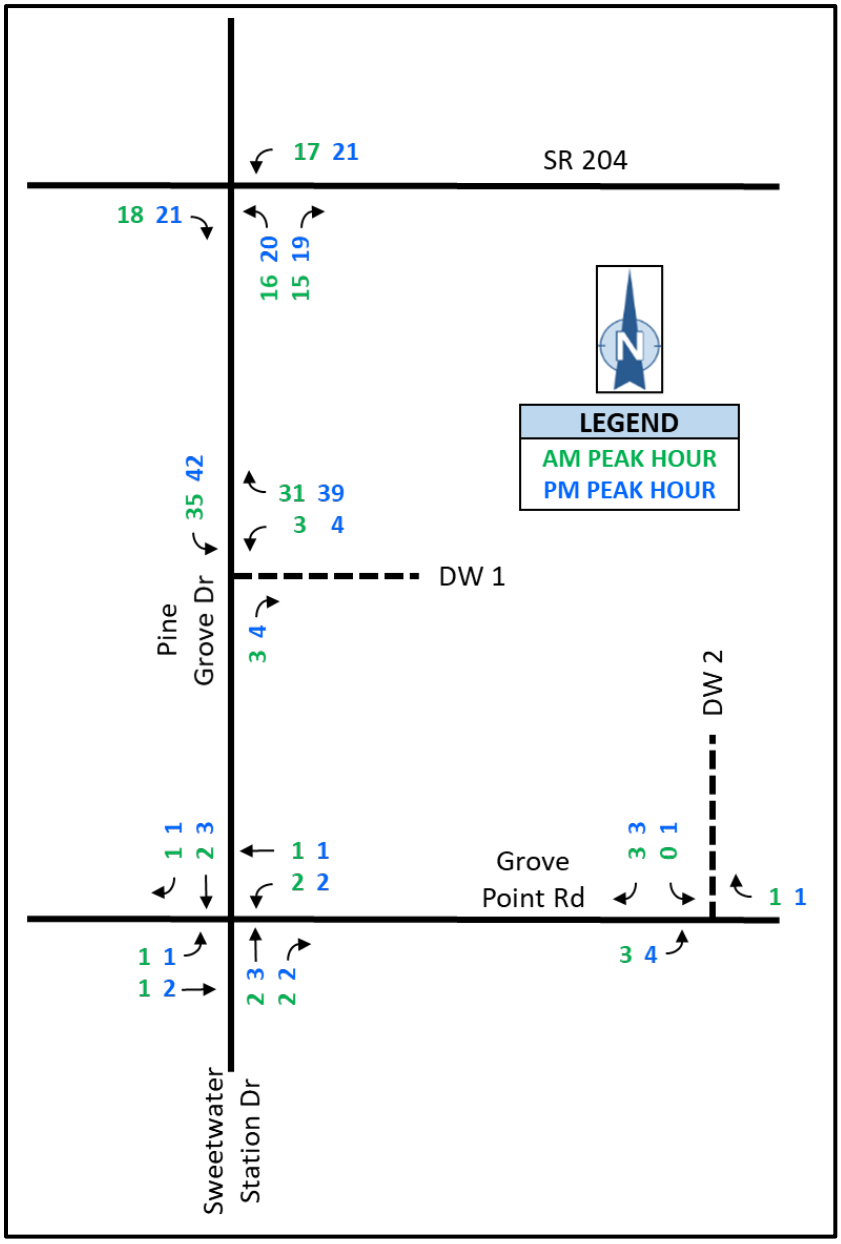
The following assumptions were made for the new trips:

- ENTERING
  - All trips from SR 204/Pine Grove Drive will enter via Driveway 1.
  - All trips from Sweetwater Station Drive (south) will enter via Driveway 1 and 2 equally (50/50 split).
  - All trips from Grove Point Road (west) will enter via Driveway 1 and 2 equally (50/50 split).
  - All trips from Grove Point Road (east) will enter via Driveway 2.
- EXITING
  - All trips traveling to SR 204/Pine Grove Drive will exit via Driveway 1.
  - All trips traveling to Sweetwater Station Drive (south) will exit via Driveway 1 and 2 equally (50/50 split).
  - All trips traveling to Grove Point Road (west) will exit via Driveway 1 and 2 equally (50/50 split).
  - All trips traveling to Grove Point Road (east) will exit via Driveway 2.
- The pass-by trips followed these same assumptions.

New Trips

The new trips generated by the development for each peak hour are shown in Figure 13.

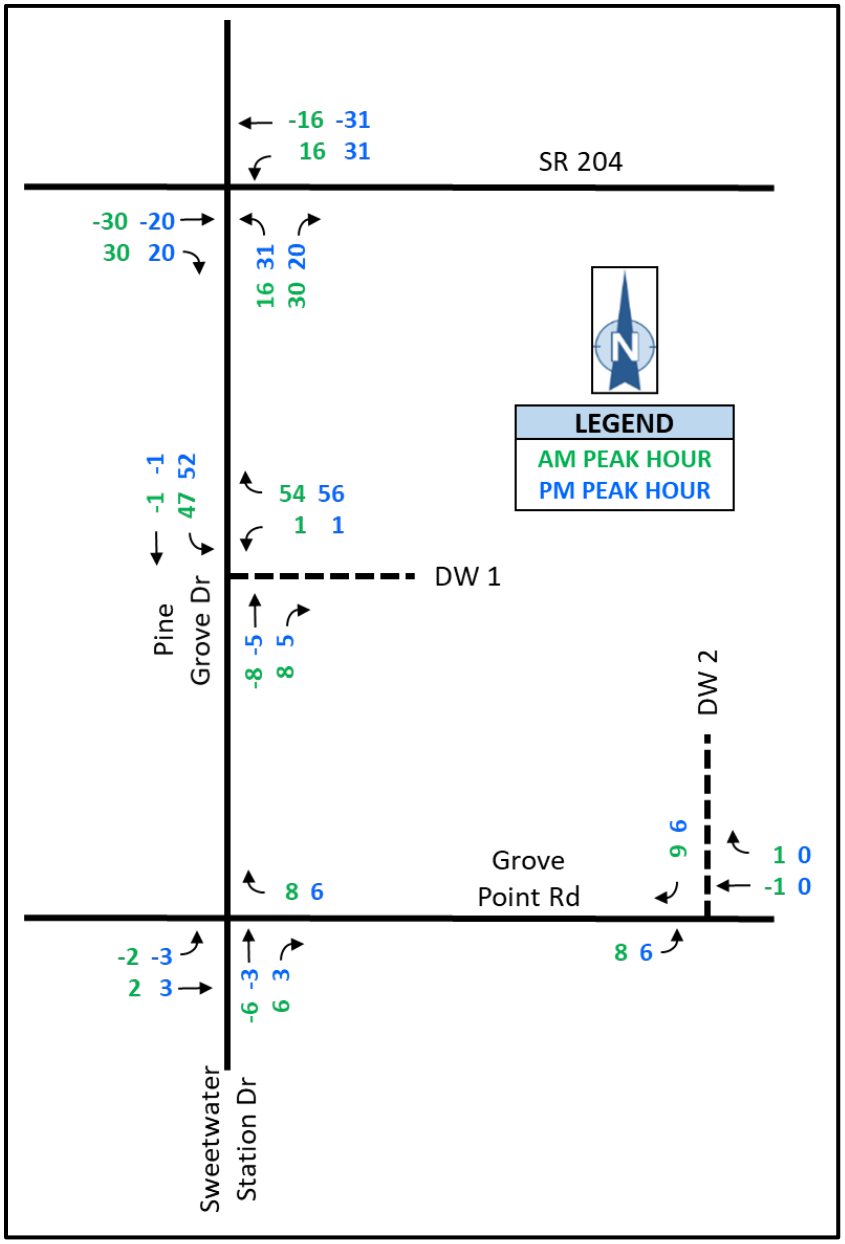
Figure 13: NEW TRIPS



Pass-By Trips

Figure 14 illustrates the pass-by trips produced by the development.

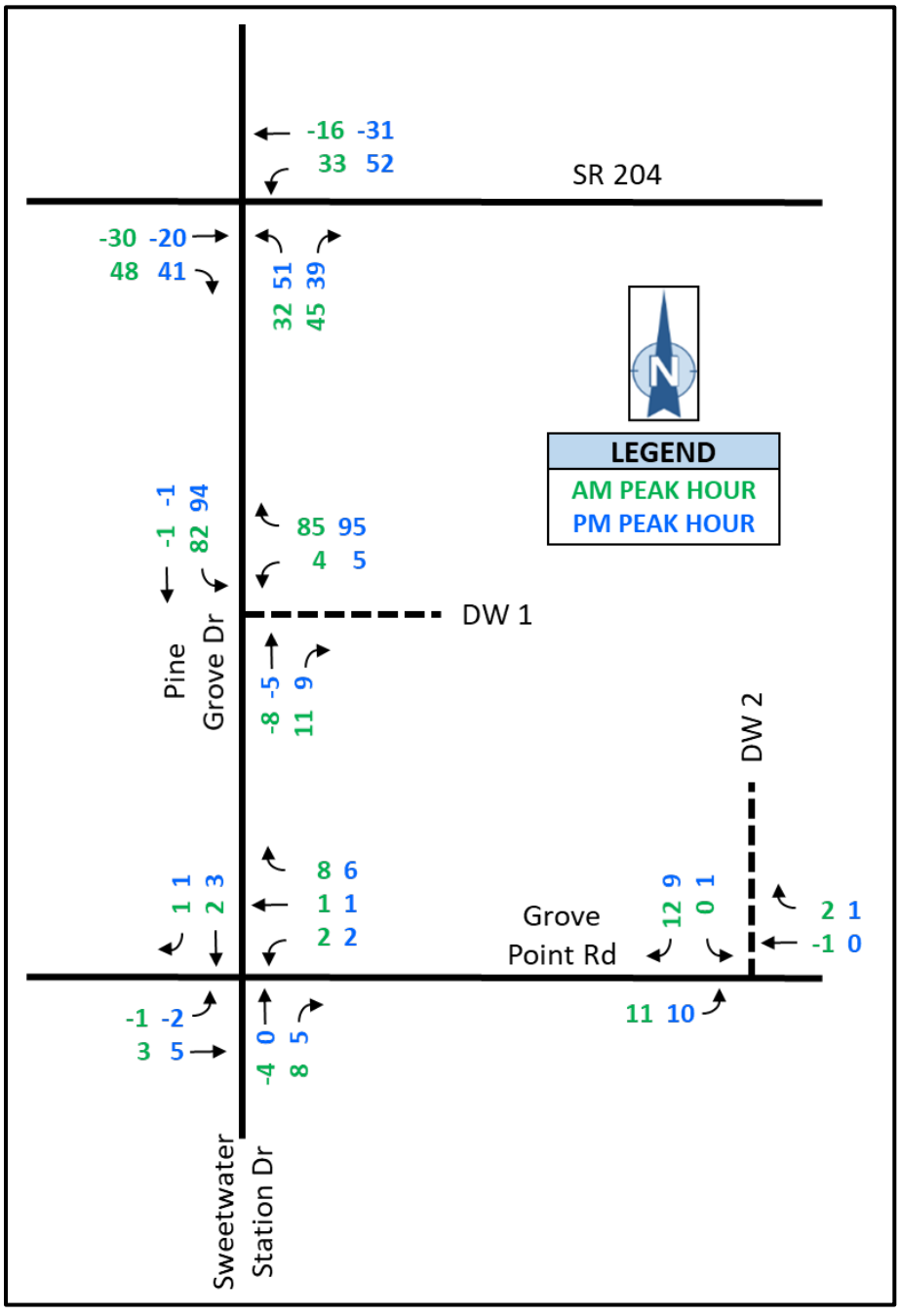
Figure 14: PASS-BY TRIPS



Total Trips

Figure 15 illustrates the total trips produced by the development (new and pass-by trips combined).

Figure 15: TOTAL TRIPS

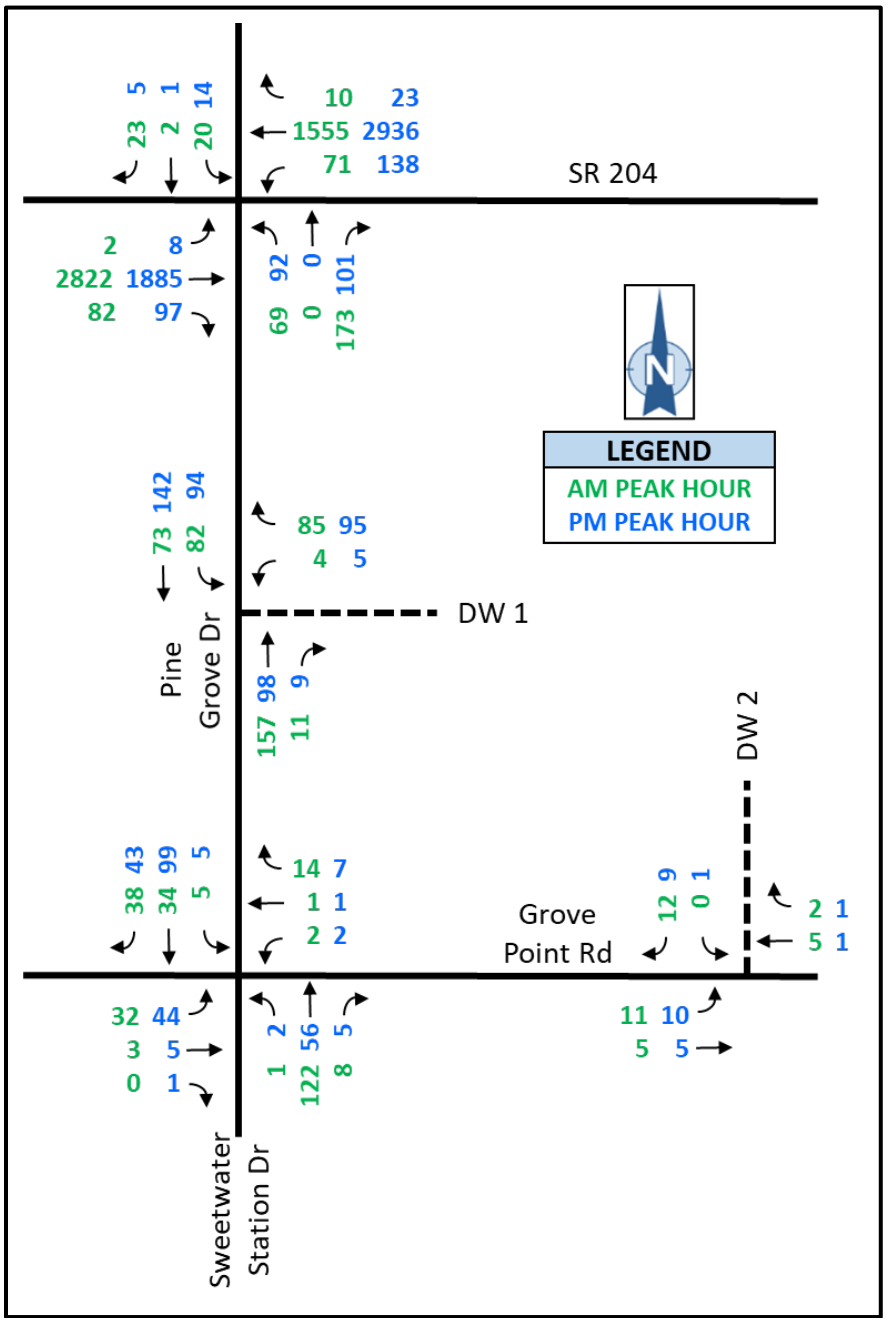


Projected Peak Hour Traffic Volumes

Figures 16 illustrates the Projected 2023 Build Volumes.

- The total trips from Figure 15 were added to the Projected 2023 No-Build Volumes (Figure 10).

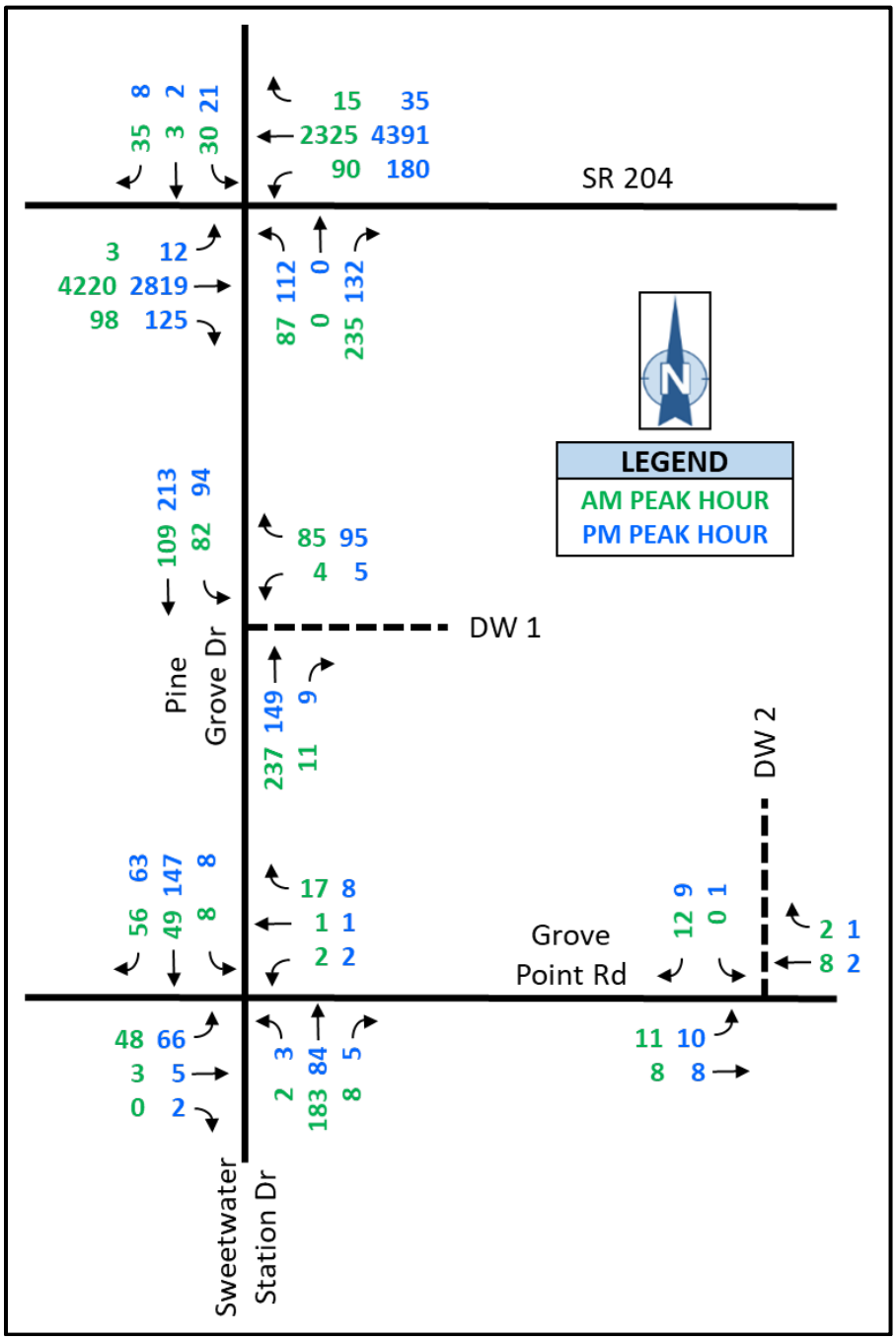
Figure 16: PROJECTED 2023 BUILD VOLUMES



Figures 17 illustrates the Projected 2043 Build Volumes.

- The total trips from Figure 15 were added to the Projected 2043 No-Build Volumes (Figure 11).

Figure 17: PROJECTED 2043 BUILD VOLUMES



CAPACITY ANALYSIS

Existing and projected conditions were evaluated using capacity analysis techniques described in the *Highway Capacity Manual, Special Report 209*, published by the Transportation Research Board, 6th Edition, and with the use of *Synchro 10* from Trafficware. HCM Level of Service (LOS) definitions are shown in Table 9.

Table 9: LEVEL OF SERVICE CRITERIA

LEVEL OF SERVICE	DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
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 79.9	35.1 to 49.9
F	>80.0	>50.0

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, 6th Edition

EXISTING CONDITIONS

The intersections were first evaluated under existing conditions. The results of the capacity analysis are summarized in Table 10 below. For each condition, the level of service is shown, followed parenthetically by the average delay per vehicle, in seconds. Capacity analysis reports for existing conditions can be found in Appendix G.

Table 10: CAPACITY ANALYSIS RESULTS, EXISTING CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	EXISTING CONDITIONS	
		AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	Intersection	D (35.9)	C (33.9)
Pine Grove Dr/Sweetwater Station Dr & Grove Point Rd	EB-L/T/R	A (8.0)	A (8.0)
	WB-L/T/R	A (6.9)	A (6.8)
	NB-L/T/R	A (8.0)	A (8.5)
	SB-L/T/R	A (7.3)	A (7.7)

Capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive currently operates at LOS D or better during both peak hours, while all movements at the unsignalized intersection currently operate at LOS A during both peak hours.

Table 11 below shows the 95th percentile queue length in feet for the study intersections under existing conditions.

Table 11: 95TH PERCENTILE QUEUE LENGTH (FT), EXISTING CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	EXISTING CONDITIONS	
		AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	EB-L	8	20
	EB-T	**1688**	**583**
	EB-R	10	20
	WB-L	90	185
	WB-T	310	**1610**
	WB-R	3	5
	NB-L/T	75	80
	NB-R	--	--
	SB-L/T/R	93	38
Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd	EB-L/T/R	5	5
	WB-L/T/R	--	--
	NB-L/T/R	18	8
	SB-L/T/R	8	15

25 ft = 1 car

-- = 0 ft

PROJECTED NO-BUILD CONDITIONS

The intersections were evaluated under projected no-build conditions, with existing geometry and projected 2023/2043 no-build traffic volumes. The results of the capacity analysis are summarized in Table 12 below. Capacity analysis reports for projected no-build conditions can be found in Appendix H.

Table 12: CAPACITY ANALYSIS RESULTS, PROJECTED NO-BUILD CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	2023 NO-BUILD		2043 NO-BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	Intersection	D (41.1)	C (38.5)	**F (195.8)**	**F (203.8)**
Pine Grove Dr/Sweetwater Station Dr & Grove Point Rd	EB-L/T/R	A (8.1)	A (8.0)	A (8.6)	A (8.5)
	WB-L/T/R	A (6.9)	A (6.8)	A (7.3)	A (7.2)
	NB-L/T/R	A (8.1)	A (8.5)	A (9.0)	A (9.0)
	SB-L/T/R	A (7.3)	A (7.7)	A (7.8)	A (8.5)

Capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive is expected to operate at LOS D or better during both peak hours in 2023, while operating at LOS F during both peak hours in 2043 under projected no-build conditions. The 2043 level of service is most likely due to the high mainline volume. All movements at the unsignalized intersection are expected to operate at LOS A during both peak hours in 2023 and 2043.

Table 13 below shows the 95th percentile queue length in feet for the study intersections under projected no-build conditions.

Table 13: 95TH PERCENTILE QUEUE LENGTH (FT), PROJECTED NO-BUILD CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	2023 NO-BUILD		2043 NO-BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	EB-L	8	20	10	28
	EB-T	**1815**	**608**	**5843**	**2233**
	EB-R	10	23	18	38
	WB-L	90	188	130	255
	WB-T	320	**1735**	**745**	**5763**
	WB-R	3	5	5	10
	NB-L/T	75	83	115	125
	NB-R	--	--	--	--
	SB-L/T/R	93	38	140	63
Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd	EB-L/T/R	5	5	8	8
	WB-L/T/R	--	--	--	--
	NB-L/T/R	18	8	30	13
	SB-L/T/R	8	15	15	25

25 ft = 1 car

-- = 0 ft

PROJECTED BUILD CONDITIONS

The intersections were evaluated under projected build conditions, with projected geometry and projected 2023/2043 build traffic volumes. The results of the capacity analysis are summarized in Table 14 below. Capacity analysis reports for projected build conditions can be found in Appendix I.

Based on GDOT's *Regulations for Driveway & Encroachment Control Manual*, the following turn lane was added based on the proposed development's projected turning volumes:

- Pine Grove Drive and Driveway 1
    - Southbound left turn lane

Table 14: CAPACITY ANALYSIS RESULTS, PROJECTED BUILD CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	Intersection	D (47.5)	D (40.9)	**F (209.4)**	**F (220.9)**
Pine Grove Dr/Sweetwater Station Dr & Grove Point Rd	EB-L/T/R	A (8.1)	A (8.0)	A (8.6)	A (8.5)
	WB-L/T/R	A (7.2)	A (7.1)	A (7.5)	A (7.4)
	NB-L/T/R	A (8.1)	A (8.5)	A (9.1)	A (9.1)
	SB-L/T/R	A (7.4)	A (7.8)	A (7.9)	A (8.6)
Pine Grove Dr & DW 1	WB-L/R	A (9.8)	A (9.5)	B (10.5)	A (9.9)
	NB-T/R	--	--	--	--
	SB-L	A (7.7)	A (7.6)	A (8.0)	A (7.7)
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L/T	A (7.2)	A (7.2)	A (7.2)	A (7.2)
	WB-T/R	--	--	--	--
	SB-L/R	A (8.4)	A (8.4)	A (8.4)	A (8.4)

-- = A (0.0)

Capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive is expected to operate at LOS D during both peak hours in 2023, while operating at LOS F during both peak hours in 2043 under projected build conditions. The operation in 2043, as stated before, is most likely due to the high mainline volume. All movements at the unsignalized intersections, including the proposed driveways, are expected to operate at LOS B or better during both peak hours in 2023 and 2043.

The analysis indicates that the development will have minor impacts to the operation of each of the intersections, and that the signalized intersection of SR 204 and Pine Grove Drive is expected to experience poor operations regardless of the construction of the proposed C-Store.

Table 15 below shows the 95th percentile queue length in feet for the study intersections under projected build conditions.

Table 15: 95TH PERCENTILE QUEUE LENGTH (FT), PROJECTED BUILD CONDITIONS

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	EB-L	8	20	10	28
	EB-T	**1958**	**715**	**6088**	**2603**
	EB-R	30	48	43	73
	WB-L	160	270	210	335
	WB-T	318	**1745**	**775**	**5900**
	WB-R	3	8	5	13
	NB-L/T	145	195	190	233
	NB-R	--	--	--	--
	SB-L/T/R	93	38	138	60
Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd	EB-L/T/R	5	5	8	10
	WB-L/T/R	3	--	3	--
	NB-L/T/R	18	8	30	13
	SB-L/T/R	10	15	15	28
Pine Grove Dr & DW 1	WB-L/R	10	10	10	10
	NB-T/R	--	--	--	--
	SB-L	5	5	5	5
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L/T	--	--	--	--
	WB-T/R	--	--	--	--
	SB-L/R	--	--	--	--

25 ft = 1 car

-- = 0 ft

GDOT INTERSECTION CONTROL EVALUATION (ICE)

The GDOT Intersection Control Evaluation (ICE) tool is used to evaluate potential traffic control alternates for new driveways and intersections, on state routes, adversely affected by the generated trips of a new development.

The capacity analysis indicated that the signalized intersection of SR 204 and Pine Grove Drive is expected to operate acceptably (LOS D or better) during both peak hours in 2023 under both projected no-build and build conditions. The intersection is expected to operate at LOS F during both peak hours in 2043 under both projected no-build and build conditions.

Based on these results, the proposed development is not expected to cause major impacts to the intersection of SR 204 and Pine Grove Drive. The unacceptable operation in 2043 is due to the high mainline volume and SR 204's capacity. Since the intersection is also already signalized, SR 204 and Pine Grove Drive was waived from ICE.

The ICE spreadsheets are provided in Appendix J.

OTHER IMPROVEMENTS

SR 204 & PINE GROVE ROAD

The capacity analysis results indicate that the intersection of SR 204 and Pine Grove Road is expected to experience unacceptable levels of service by the design year of 2043 in projected no-build conditions. The main cause for concern seems to be SR 204's capacity, as the Projected 2043 No-Build Volumes (Figure 11) show 7,261 trips traveling through the intersection on SR 204 in the PM peak hour (4,422 westbound trips and 2,839 eastbound trips).

The existing and projected daily two-way volumes were estimated for SR 204 both west and east of its intersection with Pine Grove Road. The highest peak hour (PM peak hour) was divided by the K-factor (9%, taken from a nearby GDOT count station) in order to calculate the estimated daily volume. Table 16 below shows the estimated daily volumes for SR 204, a 4-lane divided State Arterial Class I. Figure 18 below shows the level of service based on capacity and daily volumes for a State Arterial Class I.

Figure 18: STATE ARTERIAL CLASS I – LEVEL OF SERVICE

Class I (> 2 signalized intersections per mile)

Lanes	Level of Service				
/Divided	A**	B	C	D***	E***
2/undivided	N/A	10,800	15,600	16,600	16,600
4/divided	N/A	23,500	33,200	35,000	35,000
6/divided	N/A	35,800	49,900	52,500	52,500
8/divided	N/A	45,300	61,400	64,400	64,400

Table 16: SR 204 – ESTIMATED DAILY VOLUMES

SR 204 LOCATION	2022 EXISTING	2023 NO-BUILD	2023 BUILD	2043 NO-BUILD	2043 BUILD
West of Pine Grove Dr	54,278	55,356	55,811	82,511	82,967
East of Pine Grove Dr	55,100	56,189	56,633	83,756	84,200

As shown above, SR 204 is currently estimated to have enough daily volume to warrant an 8-lane divided highway. This is based on a 6-lane divided highway beginning to become oversaturated by the estimated daily vehicles. Through interpolation, it was determined that SR 204 would begin to have approximately 64,400 vehicles in 2029 under both no-build and build conditions. This marks when an 8-lane divided highway would begin to experience oversaturation.

The following improvements were implemented in an attempt to resolve the expected failing levels of service:

- Widening of SR 204 from four lanes to six lanes
- Timing improvements (including increasing the cycle length from 170 to 180)

Tables 17 and 18 below show the capacity analysis results and 95th percentile queue lengths in feet, respectively, for the intersection of SR 204 and Pine Grove Road if SR 204 is widened to six lanes. The capacity analysis reports can be found in Appendix K.

Table 17: CAPACITY ANALYSIS RESULTS, SR 204 & PINE GROVE RD W/ 6 LANES

INTERSECTION	APPROACH-MOVEMENT	2043 NO-BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	Intersection	D (52.2)	D (46.9)	**E (65.3)**	D (54.5)

Table 18: 95TH PERCENTILE QUEUE LENGTH (FT), SR 204 & PINE GROVE RD W/ 6 LANES

INTERSECTION	APPROACH-MOVEMENT	2043 NO-BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	EB-L	10	30	10	30
	EB-T	**2108**	**733**	**2368**	**882**
	EB-R	18	40	45	75
	WB-L	138	268	223	358
	WB-T	328	**1955**	358	**2090**
	WB-R	5	10	5	13
	NB-L/T	123	135	200	248
	NB-R	--	--	--	--
	SB-L/T/R	150	65	145	65

25 ft = 1 car

-- = 0 ft

Although the widening to six lanes did improve the intersection's operations greatly, the analysis indicates that the intersection may still experience LOS F in the AM Peak Hour. Therefore, SR 204 and Pine Grove Road was also evaluated if SR 204 was widened to eight lanes rather than six.

Tables 19 and 20 below show the capacity analysis results and 95th percentile queue lengths in feet, respectively, for the intersection of SR 204 and Pine Grove Road if SR 204 is widened to eight lanes.

Table 19: CAPACITY ANALYSIS RESULTS, SR 204 & PINE GROVE RD W/ 8 LANES

INTERSECTION	APPROACH-MOVEMENT	2043 NO-BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	Intersection	B (14.6)	B (15.1)	B (19.1)	B (19.2)

Table 20: 95TH PERCENTILE QUEUE LENGTH (FT), SR 204 & PINE GROVE RD W/ 8 LANES

INTERSECTION	APPROACH-MOVEMENT	2043 NO-BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SR 204 & Pine Grove Dr	EB-L	10	30	10	30
	EB-T	**865**	458	**1023**	**550**
	EB-R	18	40	45	75
	WB-L	138	268	223	358
	WB-T	225	**755**	245	**838**
	WB-R	5	10	5	13
	NB-L/T	123	135	200	248
	NB-R	--	--	--	--
	SB-L/T/R	150	65	145	65

25 ft = 1 car

-- = 0 ft

Based on capacity analysis results of both configurations, SR 204 being widened to a six-lane section is expected to achieve LOS D during both peak hours under 2043 no-build conditions and during the PM peak hour under 2043 build conditions. SR 204 being widened to an eight-lane section is expected to achieve LOS B during both peak hours under 2043 no-build and build conditions.

PROPOSED DRIVEWAYS

Due to Driveway 1's location and low exiting left turn volume, it was evaluated as an RCUT. This would push the exiting left turn volumes at Driveway 1 to Driveway 2. Traffic coming from SR 204 would still enter via the proposed southbound left turn lane at Driveway 1. The possible issue with this configuration is that widening Pine Grove Drive for the southbound left turn lane may lead to affecting the south leg at the intersection of SR 204 and Pine Grove Drive enough to warrant a signal modification. Tables 21 and 22 below show the capacity analysis results and 95th percentile queue in feet, respectively, for the RCUT configuration. The capacity analysis results can also be found in Appendix K.

Table 21: CAPACITY ANALYSIS RESULTS, DW 1 RCUT CONFIGURATION

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Pine Grove Dr/Sweetwater Station Dr & Grove Point Rd	EB-L/T/R	A (8.1)	A (8.0)	A (8.6)	A (8.5)
	WB-L/T/R	A (7.3)	A (7.3)	A (7.7)	A (7.7)
	NB-L/T/R	A (8.1)	A (8.5)	A (9.1)	A (9.1)
	SB-L/T/R	A (7.4)	A (7.8)	A (7.9)	A (8.6)
Pine Grove Dr & DW 1	WB-R	A (9.6)	A (9.3)	B (10.2)	A (9.6)
	NB-T/R	--	--	--	--
	SB-L	A (7.7)	A (7.6)	A (8.0)	A (7.7)
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L/T	A (7.2)	A (7.2)	A (7.2)	A (7.2)
	WB-T/R	--	--	--	--
	SB-L/R	A (8.4)	A (8.4)	A (8.4)	A (8.4)

-- = A (0.0)

Table 22: 95TH PERCENTILE QUEUE LENGTH (FT), DW 1 RCUT CONFIGURATION

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd	EB-L/T/R	5	5	8	10
	WB-L/T/R	3	3	3	3
	NB-L/T/R	18	8	30	13
	SB-L/T/R	8	15	15	25
Pine Grove Dr & DW 1	WB-L/R	10	10	10	10
	NB-T/R	--	--	--	--
	SB-L	5	5	5	5
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L/T	--	--	--	--
	WB-T/R	--	--	--	--
	SB-L/R	--	--	--	--

25 ft = 1 car

-- = 0 ft

Another configuration that could introduce safer operation, along with avoiding a potential signal modification at SR 204 and Pine Grove Road, would include installing Driveway 1 as a right-in/right-out (RIRO) and installing an eastbound left turn lane at Driveway 2. This would cause all entering and exiting left turn volumes at Driveway 1 to relocate to Driveway 2. Tables 23 and 24 below show the capacity analysis results and 95th percentile queue in feet, respectively, for the RIRO configuration.

Table 23: CAPACITY ANALYSIS RESULTS, DW 1 RIRO CONFIGURATION

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Pine Grove Dr/Sweetwater Station Dr & Grove Point Rd	EB-L/T/R	A (8.4)	A (8.3)	A (8.9)	A (8.8)
	WB-L/T/R	A (7.6)	A (7.6)	A (8.0)	A (7.9)
	NB-L/T/R	A (8.3)	A (8.7)	A (9.3)	A (9.2)
	SB-L/T/R	A (8.5)	A (8.8)	A (9.2)	A (9.9)
Pine Grove Dr & DW 1	WB-R	A (9.6)	A (9.3)	B (10.2)	A (9.6)
	NB-T/R	--	--	--	--
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L	A (7.4)	A (7.4)	A (7.4)	A (7.4)
	EB-T	--	--	--	--
	WB-T/R	--	--	--	--
	SB-L/R	A (8.4)	A (8.5)	A (8.4)	A (8.5)

-- = A (0.0)

Table 24: 95TH PERCENTILE QUEUE LENGTH (FT), DW 1 RIRO CONFIGURATION

INTERSECTION	APPROACH-MOVEMENT	2023 BUILD		2043 BUILD	
		AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd	EB-L/T/R	5	5	8	10
	WB-L/T/R	3	3	3	3
	NB-L/T/R	18	8	33	13
	SB-L/T/R	23	30	33	45
Pine Grove Dr & DW 1	WB-L/R	10	10	10	10
	NB-T/R	--	--	--	--
	SB-T	--	--	--	--
Grove Point Rd & DW 2	EB-L	5	5	5	5
	EB-T	--	--	--	--
	WB-T/R	--	--	--	--
	SB-L/R	--	--	--	--

25 ft = 1 car

-- = 0 ft

Based on the capacity analysis results, all movements at the unsignalized intersections are expected to operate at LOS B or better during both peak hours in 2023 and 2043 with both the RCUT and RIRO configurations at Driveway 1.

SUMMARY OF FINDINGS

- The proposed development is planned to be built out in 2023. The development consists of a 5.2 KSF C-Store with 16 fueling positions.

- The site is planned on the southeast corner of SR 204 and Pine Grove Road, in Chatham County. The development is proposed to have two full-access driveways, one on Pine Grove Drive and the other on Grove Point Road. No access is proposed directly on SR 204.

- Turning movement counts were collected at the study intersections on Tuesday, February 8, 2022. The AM Peak Hour was observed to be 7:15 AM to 8:15 AM, and the PM Peak Hour was observed to be 4:30 PM to 5:30 PM.

- Bi-directional 24-hour traffic data was collected on both Pine Grove Drive and Grove Point Road, near the proposed driveways, on Tuesday, February 8, 2022.
    - Pine Grove Drive
        - Northbound: 1,573 vehicles per day (7.9% trucks) with an 85th percentile speed of 23 MPH
        - Southbound: 1,591 vehicles per day (6.8% trucks) with an 85th percentile speed of 19 MPH
    - Grove Point Road
        - Eastbound: 66 vehicles per day (3.1% trucks) with an 85th percentile speed of 28 MPH
        - Westbound: 73 vehicles per day (4.1% trucks) with an 85th percentile speed of 24 MPH

- Crash data was obtained for the five most recent years of data for the study intersections.
    - SR 204 & Pine Grove Drive: 120 total collisions, 83% rear ends, 1 fatality
        - The fatality was an angle collision in 2020 caused by a driver driving under the influence.
    - Pine Grove Drive/Sweetwater Station Drive & Grove Point Road: 1 angle collision

- Based on the census data from the Chatham County – Savannah Comprehensive Plan 2040 and the trend analysis for nearby GDOT Count Stations, an annual growth rate of 2.00% was established.

- The C-Store development is expected to generate an estimated 1,350 new daily trips (675 entering, 675 exiting), 79 new AM peak hour trips (42 entering, 37 exiting) and 98 new PM peak hour trips (51 entering, 47 exiting). Attraction of existing traffic on the adjacent roadways (pass-by trips) is also expected by the development: 1,936 daily trips (968 entering, 968 exiting), 128 AM Peak Hour Trips (64 entering, 64 exiting), and 126 PM Peak Hour Trips (63 entering, 63 exiting).

- Under Existing 2022 conditions, capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive currently operates at LOS D or better during both peak hours, while all movements at the unsignalized intersection currently operate at LOS A during both peak hours.

- Under Projected 2023/2043 No-Build conditions, capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive is expected to operate at LOS D or better during both peak hours in 2023, while operating at LOS F during both peak hours in 2043 under projected no-build conditions. The failing level of service is due to high mainline volume. All movements at the unsignalized intersection are expected to operate at LOS A during both peak hours in 2023 and 2043.

- Based on GDOT's *Regulations for Driveway & Encroachment Control Manual*, a southbound left turn lane was added at the intersection of Pine Grove Drive and Driveway 1 for the projected build conditions.

- Under Projected 2023/2043 Build conditions, capacity analysis results indicate that the signalized intersection of SR 204 and Pine Grove Drive is expected to operate at LOS D during both peak hours in 2023, while operating at LOS F during both peak hours in 2043 under projected build conditions. The failing operation, as stated before, is due to high mainline volume. All movements at the unsignalized intersections, including the proposed driveways, are expected to operate at LOS B or better during both peak hours in 2023 and 2043.

- The proposed development is not expected to cause any major impacts at the intersection of SR 204 and Pine Grove Drive, as it is expected to operate at LOS D during both peak hours in 2023 under build conditions. Therefore, the intersection was waived from ICE.

- SR 204 currently has enough estimated daily volume to warrant being an 8-lane divided highway.

- Two improvement scenarios were evaluated for the intersection of SR 204 and Pine Grove Drive:
  - SR 204 widened to 6 lanes and timing improvements.
    - The 6-lane widening is expected to achieve LOS D during both peak hours under 2043 no-build conditions and during the PM peak hour under 2043 build conditions.
  - SR 204 widened to 8 lanes and timing improvements.
    - The 8-lane widening is expected to achieve LOS B during both peak hours under 2043 no-build and build conditions.

- Two scenarios were evaluated for the proposed driveways:
  - Driveway 1 as an RCUT
  - Driveway 1 as a RIRO, with a left turn lane into Driveway 2
    - Both scenarios are expected to result in all movements at the unsignalized intersections operating at LOS B or better during both peak hours in 2023 and 2043.

RECOMMENDATIONS

Based on the findings of the study, the recommendations for the C-Store development (refer to Figure 19 on the following page) are as follows:

Improvements that should be the developer's responsibility will be in red text, while improvements that should be the GDOT/local jurisdiction's responsibility will be in blue text.

- Pine Grove Drive and Driveway 1
  - Install Driveway 1 under RCUT control.
  - Install a southbound left turn lane with a minimum storage length of 100 feet.

- Grove Point Road and Driveway 2
  - Install Driveway 2 as full access under side street stop control.

- Pine Grove Drive/Sweetwater Station Drive and Grove Point Road
  - Maintain all-way stop control.

- SR 204 and Pine Grove Drive
  - Maintain traffic signal control.
  - The intersection is expected to break down due to background growth volumes with the development providing only minor impact on its operation.
  - Widen SR 204 to be an 8-lane divided highway in the future.
  - Extend the westbound left turn lane to a minimum storage length of 350 feet. The westbound left turn lane is not currently up to the GDOT standard of 310 feet based on the 55 MPH speed limit.
  - Extend the eastbound right turn lane to a minimum storage length of 250 feet. The eastbound right turn lane is not currently up to the GDOT standard of 250 feet based on the 55 MPH speed limit.
  - Extend the northbound right turn lane's storage length by 50 feet.

If the installation of a southbound left turn lane for Driveway 1 triggers a signal modification, the following recommendations for the proposed driveways (refer to Figure 20 on page 38) may be implemented instead:

- Pine Grove Drive and Driveway 1
  - Install Driveway 1 under RIRO control.
  - Install a raised median on Pine Grove Drive to prevent left turns in.

- Grove Point Road and Driveway 2
  - Install Driveway 2 as full access under side street stop control.
  - Install an eastbound left turn lane with a minimum storage length of 100 feet.

Figure 19: RECOMMENDATIONS – DW 1 AS RCUT

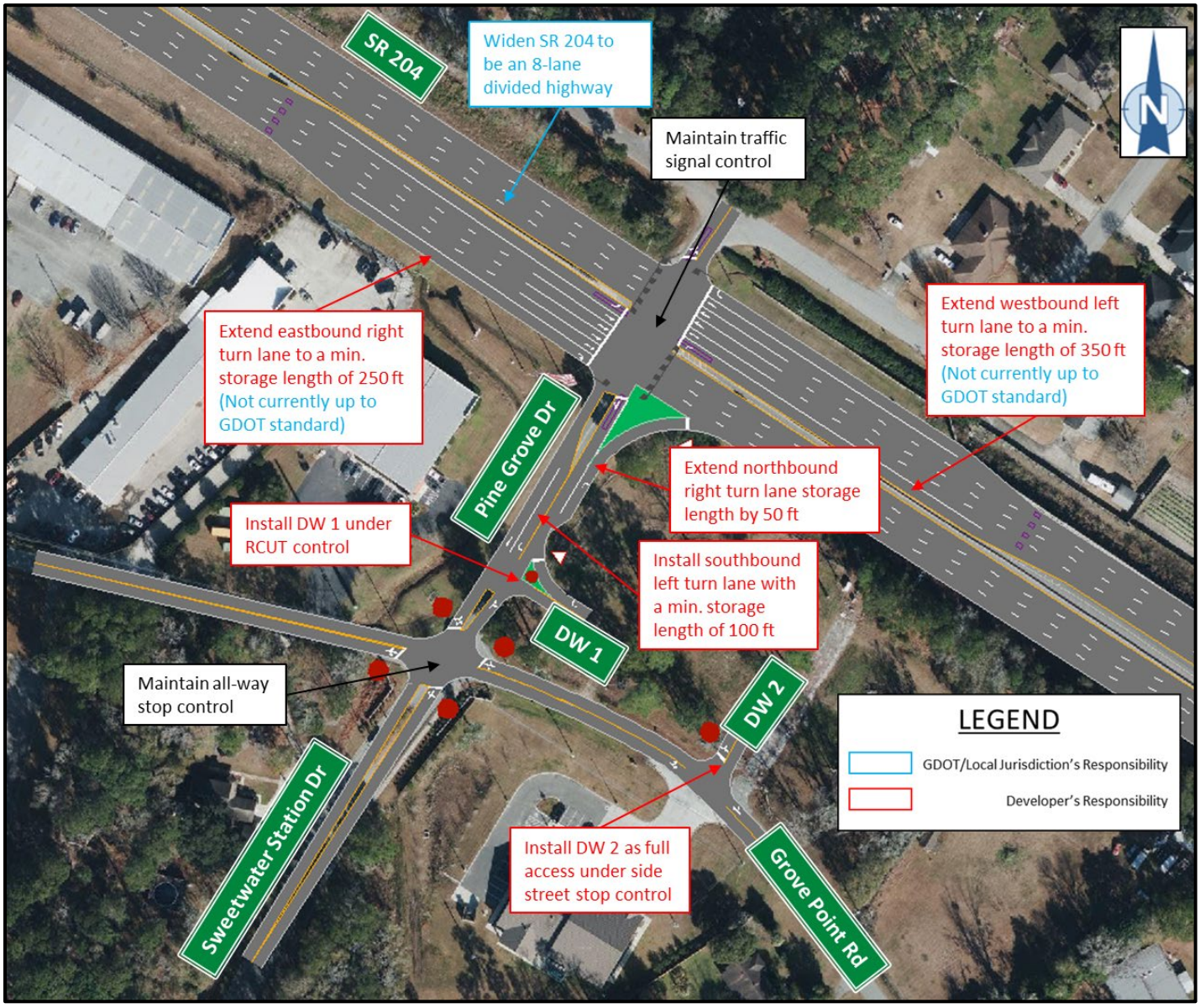
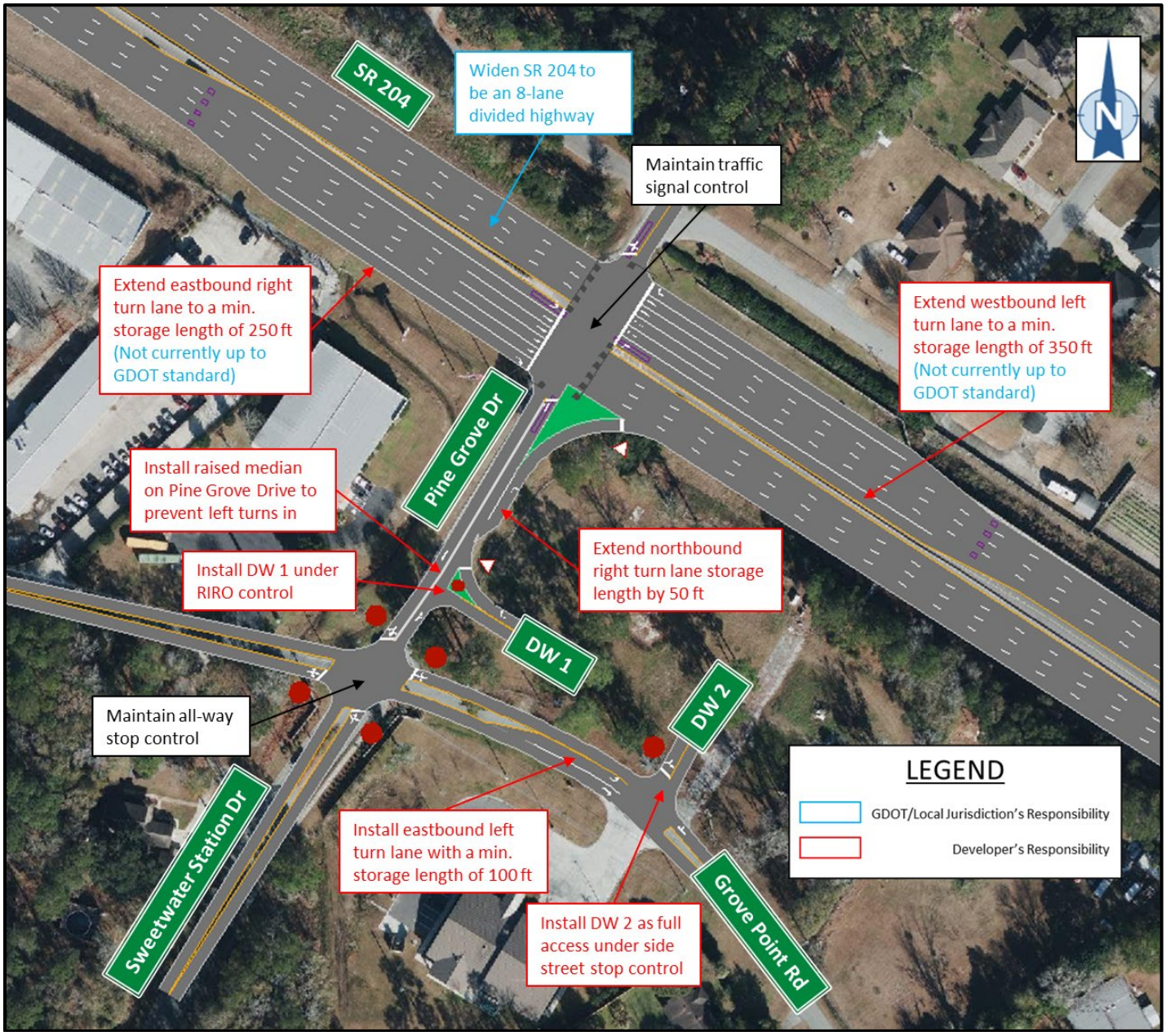


Figure 20: RECOMMENDATIONS – DW 1 AS RIRO

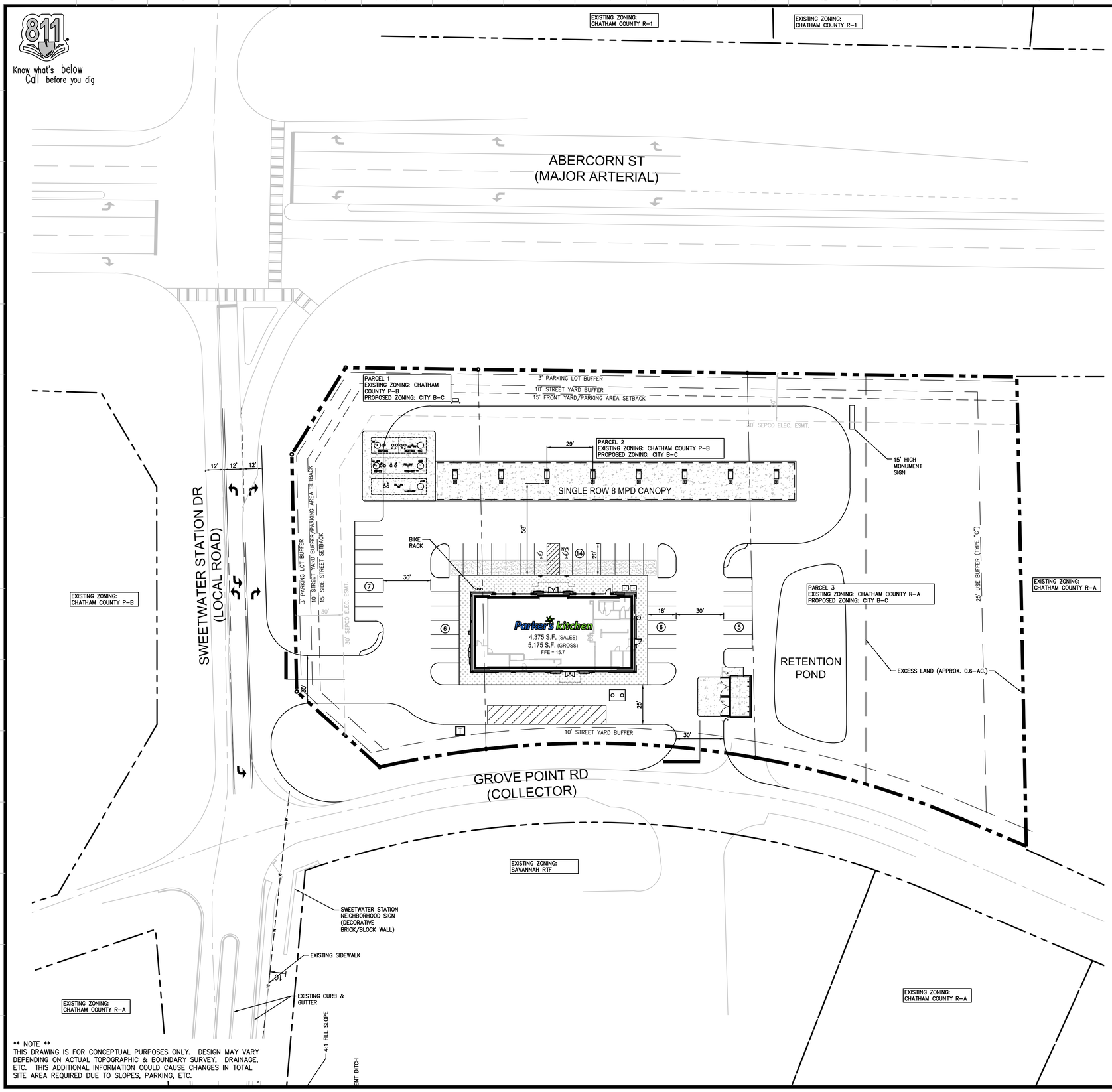


APPENDICES

APPENDIX A

SITE PLAN

Know what's below
Call before you dig



SITE ANALYSIS

PARKER'S	5,175 S.F.
TOTAL PARKING	38 SPACES
RATIO PROVIDED	7.34/1,000 S.F.
PARKING REQUIRED	21 SPACES
SITE AREA	2.59 ± AC.

NOTE:
THIS CHART IS FOR CONCEPTUAL PURPOSES ONLY. ACREAGE ARE APPROXIMATE AND MAY VARY DEPENDING ON ACTUAL BOUNDARY SURVEY.

DUE DILIGENCE NOTES

AUTHORITY HAVING JURISDICTION	CURRENTLY: CHATHAM COUNTY; PROPOSED: SAVANNAH
ZONING	
CURRENT ZONING	P-B PLANNED BUSINESS (COUNTY) AND R-A RESIDENTIAL AGRICULTURAL (COUNTY)
ANNEXATION REQUIRED?	YES (IN ORDER TO TIE INTO CITY WATER/SEWER)
PROPOSED ZONING	B-C COMMUNITY BUSINESS (CITY)
IS PROPOSED USE A PERMITTED USE?	YES (B-C ALLOWS CONVENIENCE AS A LIMITED USE)
ZONING OF ADJACENT PROPERTIES	
NORTH	R-1 (COUNTY) ACROSS ABERCORN ST
SOUTH	RTF (CITY)
EAST	R-A (COUNTY)
WEST	P-B (COUNTY) ACROSS SWEETWATER STATION DR
NOTE: ALL REQUIREMENTS SHOWN BELOW ARE BASED ON CITY B-C ZONING (ASSUMES ANNEXATION)	
BUILDING SETBACKS	
FRONT YARD	15' (5.16.6)
SIDE YARD (STREET)	15' (5.16.6)
SIDE YARD (INTERIOR)	NONE (5.16.6)
REAR YARD	NONE (5.16.6)
FUEL CANOPY SETBACK	SAME AS BUILDING SETBACK (8.4.14.a)
PARKING AREA SETBACKS	
FROM COLLECTOR AND ARTERIAL R/W	15' (5.16.6)
FROM LOCAL STREET R/W	10' (5.16.6)
ABUTTING LANE OR ACCESS EASEMENT	5' (5.16.6)
PARKING REQUIREMENTS	
90 DEGREE STALL DIMENSIONS	9' x 17.5' (9.3.5) 8' x 20' (ADA PARKING PER CITY DETAIL)
TWO WAY DRIVE AISLE DIMENSIONS	26' / 20' IF NO PARKING (9.3.5)
ONE WAY DRIVE AISLE DIMENSIONS	26' / 10' IF NO PARKING (9.3.5)
MINIMUM PARKING RATIO REQUIRED	RETAIL: 1/250 GROSS S.F. (9.3.4)
MAXIMUM PARKING RATIO ALLOWED	NONE
BICYCLE PARKING	5% OF VEHICLE PARKING (9.3.4)
LANDSCAPE REQUIREMENTS	LANDSCAPE & TREE PROTECTION ORDINANCE
% OF PARKING LOT	1,200 TREE QUALITY POINTS PER ACRE
INTERIOR ISLAND SPACING	NO MORE THAN 12 CONTIGUOUS PARKING SPACES
ARE END CAP ISLANDS REQUIRED?	YES
MINIMUM ISLAND SIZE	400 S.F.
MAXIMUM IMPERVIOUS AREA	80% (SEE BELOW)
GREEN SPACE REQUIRED	20% OF TOTAL LAND AREA (8-11008(1)(b)(i))
BUFFERS/LANDSCAPE STRIPS	(9.5.4)
STREAM BUFFER REQUIRED	N/A
PLANTED USE BUFFER (BETWEEN DISSIMILAR USES)	TYPE C: 20' W/ OPAQUE WALL, 25' W/OUT WALL (9.5.4)
PLANTED PARKING LOT BUFFER	3' (NOT REQUIRED IN A USE BUFFER)
PLANTED STREET YARD BUFFER	10' ALONG ARTERIAL OR COLLECTOR ROADS, NONE ALONG LOCAL ROADS (UNLESS OPPOSITE RSF OR RTF)
MISCELLANEOUS ITEMS	
MAXIMUM BUILDING HEIGHT	75' (5.16.6)
FAR REQUIREMENTS	N/A (5.16.6)
MAXIMUM LIGHT POLE HEIGHT	35' CUTOFF FIXTURE, 15' NON-CUTOFF FIXTURE (9.8.6.a)
OVERLAY DISTRICT?	NO
VARIANCES	TBD
SIGNS	
MONUMENT OR PYLON?	MONUMENT OR PYLON
NUMBER OF SIGNS ALLOWED	1 GROUND SIGN EVERY 400' OF FRONTAGE ROAD ONLY 1 ON ABERCORN SINCE THERE IS NO ACCESS
MAXIMUM HEIGHT	15' MONUMENT OR 20' PYLON ALONG ABERCORN 10' MONUMENT OR PYLON ELSEWHERE
MAXIMUM SQUARE FEET	75 SF MONUMENT OR 50 SF PYLON ALONG ABERCORN 25 SF MONUMENT OR 20 SF PYLON ELSEWHERE

LEGEND FOR PROPOSED IMPROVEMENTS

- PROPOSED BUILDING
- PROPOSED CURB AND GUTTER
- PROPOSED GUIDERAIL
- PROPOSED CHAINLINK FENCE
- PAINTED TRAFFIC DIRECTION ARROW
- (5) PROPOSED PARKING SPACES
- PROPOSED SIDEWALK
- STANDARD DUTY ASPHALTIC PAVEMENT
- HEAVY DUTY ASPHALTIC PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- DUMPSTER APRON
- ARCHITECTURAL CONCRETE REFER TO ARCH PLANS FOR LIMITS AND DETAILS.
- PUBLIC ROADWAY ASPHALTIC PAVEMENT

** NOTE **
THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DESIGN MAY VARY DEPENDING ON ACTUAL TOPOGRAPHIC & BOUNDARY SURVEY, DRAINAGE, ETC. THIS ADDITIONAL INFORMATION COULD CAUSE CHANGES IN TOTAL SITE AREA REQUIRED DUE TO SLOPES, PARKING, ETC.

Not For Construction

CONCEPTUAL SITE PLAN

SCALE IN FEET
30' 15' 0 30' 60' 90'

BDG Buckel Design Group, LLC
3471 DONAVILLE ST
DULUTH, GA 30096
PHONE: 404-567-5701
FAX: 404-567-5703
WWW.BDGSE.COM

STAMP

PROPOSED: Parker's kitchen
SAVANNAH, CHATHAM COUNTY, GA

FOR:
DRAYTON-PARKER COMPANIES, LLC
SAVANNAH, GA 31401

REVISION	BY

DRAWN GDL
CHECKED ADB
ISSUED DATE 01/21/22
ISSUED FOR CONCEPTUAL REVIEW
PROJECT NO. 21-197
FILE 21-197 P-6
SHEET P-6

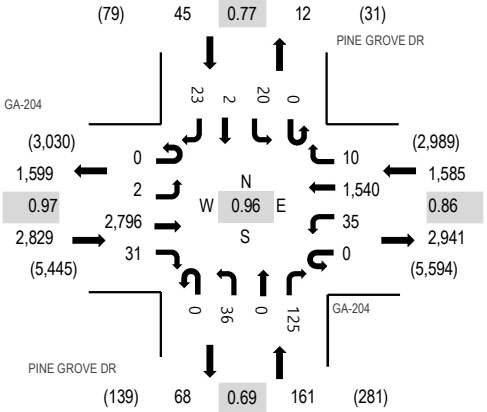
APPENDIX B

TURNING MOVEMENT DATA

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

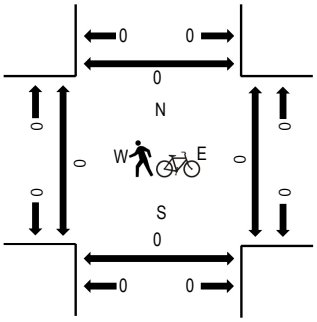
Location: 1 PINE GROVE DR & GA-204 AM
Date: Tuesday, February 8, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	GA-204 Eastbound				GA-204 Westbound				PINE GROVE DR Northbound				PINE GROVE DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	3	721	5	0	5	300	2	0	13	0	16	0	6	0	3	1,074	4,598	1	0	0	0
7:15 AM	0	0	698	6	0	9	369	2	0	16	0	42	0	3	1	4	1,150	4,620	0	0	0	0
7:30 AM	0	0	689	4	0	12	445	4	0	10	0	31	0	3	0	11	1,209	4,508	0	0	0	0
7:45 AM	0	1	727	14	0	5	375	4	0	6	0	25	0	4	1	3	1,165	4,320	0	0	0	0
8:00 AM	0	1	682	7	0	9	351	0	0	4	0	27	0	10	0	5	1,096	4,196	0	0	0	0
8:15 AM	0	0	623	11	1	8	347	2	0	12	0	25	0	4	0	5	1,038		0	0	0	0
8:30 AM	0	4	589	13	0	14	367	1	0	12	0	13	0	4	0	4	1,021		0	0	0	0
8:45 AM	1	3	630	13	0	2	351	4	0	10	0	19	0	2	0	6	1,041		0	0	0	0

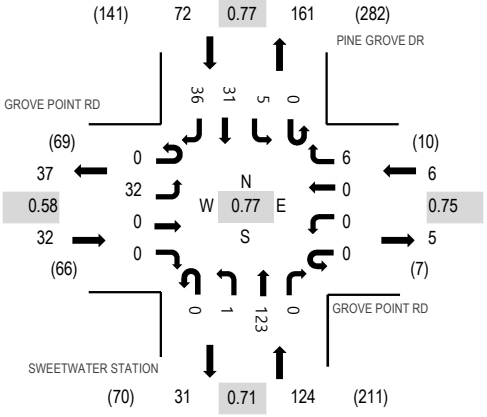
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	35	1	0	0	17	0	0	0	0	0	0	0	0	0	53
Lights	0	2	2,734	28	0	33	1,491	9	0	36	0	122	0	20	2	23	4,500
Mediums	0	0	27	2	0	2	32	1	0	0	0	3	0	0	0	0	67
Total	0	2	2,796	31	0	35	1,540	10	0	36	0	125	0	20	2	23	4,620

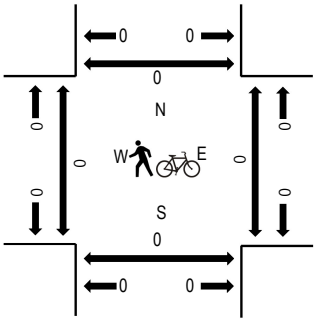
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 SWEETWATER STATION & GROVE POINT RD AM
Date: Tuesday, February 8, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - Motorized Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	GROVE POINT RD Eastbound				GROVE POINT RD Westbound				SWEETWATER STATION Northbound				PINE GROVE DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	0	0	0	0	0	1	0	0	23	0	0	0	4	7	42	229	0	0	0	0
7:15 AM	0	11	0	0	0	0	0	2	0	0	45	0	0	0	11	7	76	234	0	0	0	0
7:30 AM	0	5	0	0	0	0	0	2	0	0	28	0	0	3	5	7	50	212	0	0	0	0
7:45 AM	0	7	0	0	0	0	0	1	0	1	31	0	0	2	8	11	61	215	0	0	0	0
8:00 AM	0	9	0	0	0	0	0	1	0	0	19	0	0	0	7	11	47	199	0	0	0	0
8:15 AM	0	15	0	1	0	0	0	0	0	0	21	0	0	0	6	11	54		0	0	0	0
8:30 AM	0	3	1	0	0	1	0	1	0	1	19	0	0	1	16	10	53		0	0	0	0
8:45 AM	0	7	0	0	0	0	0	1	0	0	23	0	0	0	11	3	45		0	0	0	0

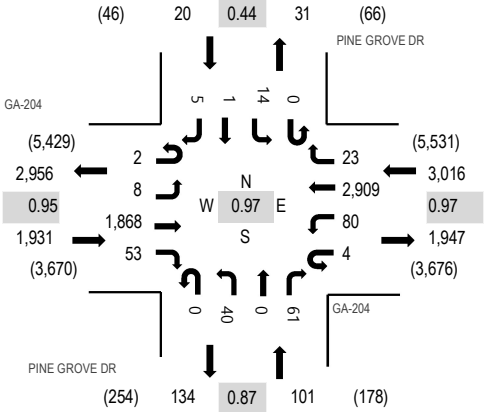
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lights	0	30	0	0	0	0	0	6	0	1	122	0	0	5	29	32	225
Mediums	0	2	0	0	0	0	0	0	0	0	1	0	0	0	2	3	8
Total	0	32	0	0	0	0	0	6	0	1	123	0	0	5	31	36	234

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

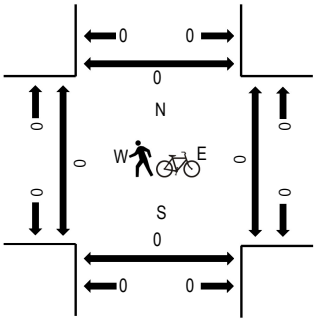
Location: 1 PINE GROVE DR & GA-204 PM
Date: Tuesday, February 8, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	GA-204 Eastbound				GA-204 Westbound				PINE GROVE DR Northbound				PINE GROVE DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:30 PM	1	1	474	9	0	20	717	6	0	12	0	16	0	3	0	1	1,260	5,068	0	0	0	0
4:45 PM	0	2	452	15	1	17	729	8	0	9	0	20	0	4	1	1	1,259	5,013	0	0	0	0
5:00 PM	0	2	490	15	0	20	752	4	0	13	0	11	0	4	0	1	1,312	4,792	0	0	0	0
5:15 PM	1	3	452	14	3	23	711	5	0	6	0	14	0	3	0	2	1,237	4,436	0	0	0	0
5:30 PM	2	3	464	7	0	23	680	4	0	7	0	12	0	1	0	2	1,205	4,357	0	0	0	0
5:45 PM	0	8	434	8	0	18	548	6	0	4	0	8	0	2	0	2	1,038		0	0	0	0
6:00 PM	1	1	372	16	0	18	502	6	0	10	0	14	0	3	0	13	956		0	0	0	0
6:15 PM	3	4	406	10	1	20	686	3	0	12	0	10	0	2	0	1	1,158		0	0	0	0

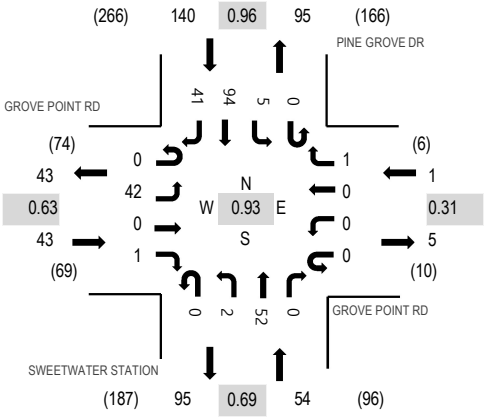
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	0	9	0	0	0	0	0	0	0	0	0	16
Lights	1	8	1,839	52	4	79	2,876	22	0	40	0	59	0	14	1	5	5,000
Mediums	1	0	22	1	0	1	24	1	0	0	0	2	0	0	0	0	52
Total	2	8	1,868	53	4	80	2,909	23	0	40	0	61	0	14	1	5	5,068

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

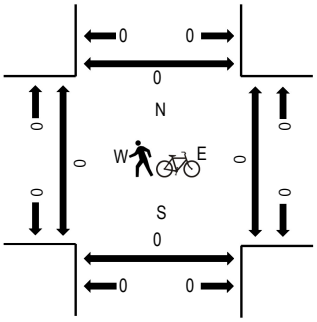
Location: 2 SWEETWATER STATION & GROVE POINT RD PM
Date: Tuesday, February 8, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - Motorized Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts - Motorized Vehicles

Interval Start Time	GROVE POINT RD Eastbound				GROVE POINT RD Westbound				SWEETWATER STATION Northbound				PINE GROVE DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:30 PM	0	16	0	1	0	0	0	0	0	1	10	0	0	1	18	13	60	238	0	0	0	0
4:45 PM	0	10	0	0	0	0	0	0	0	0	20	0	0	1	25	8	64	232	0	0	0	0
5:00 PM	0	8	0	0	0	0	0	1	0	0	11	0	0	1	27	9	57	207	0	0	0	0
5:15 PM	0	8	0	0	0	0	0	0	0	1	11	0	0	2	24	11	57	203	0	0	0	0
5:30 PM	0	8	0	0	0	0	0	0	0	0	12	0	0	0	25	9	54	199	0	0	1	0
5:45 PM	0	4	0	0	0	0	0	0	0	0	7	0	0	1	20	7	39		0	0	0	0
6:00 PM	0	6	1	0	0	0	1	3	0	0	11	0	0	1	22	8	53		0	0	0	0
6:15 PM	0	7	0	0	0	0	0	1	0	0	12	0	0	2	25	6	53		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lights	0	40	0	1	0	0	0	1	0	1	52	0	0	5	94	39	233
Mediums	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4
Total	0	42	0	1	0	0	0	1	0	2	52	0	0	5	94	41	238

APPENDIX C

ATR DATA

All Traffic Data Services

www.alltrafficdata.net

Site Code: 1
Station ID: 1
PINE GROVE DR S.O GA-204

Latitude: 0' 0.0000 Undefined

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	0	3	2	0	0	0	0	0	0	0	0	0	0	5
01:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	8	3	0	1	0	0	0	0	0	0	0	0	12
04:00	0	10	5	0	0	0	0	0	0	0	0	0	0	15
05:00	0	25	14	0	2	0	0	0	0	0	0	0	0	41
06:00	1	49	25	2	7	0	0	**1**	0	0	0	0	0	85
07:00	1	**112**	22	**4**	5	0	0	0	**1**	0	0	0	0	**145**
08:00	**2**	79	24	3	2	0	0	0	0	0	**1**	0	0	111
09:00	1	65	15	3	6	**1**	0	1	1	0	0	0	0	93
10:00	0	60	**31**	0	**13**	1	0	1	0	0	0	0	0	106
11:00	2	76	31	4	8	0	0	0	1	0	0	0	0	122
12 PM	1	45	**38**	1	5	0	0	0	**1**	0	0	0	0	91
13:00	1	62	23	1	**9**	0	0	0	1	0	0	0	0	97
14:00	1	77	28	2	9	0	0	0	1	0	0	0	0	118
15:00	2	75	24	**3**	3	0	0	0	1	0	0	0	0	108
16:00	2	**83**	29	3	4	**1**	0	0	0	0	0	0	0	**122**
17:00	0	52	17	0	2	0	0	**1**	0	0	0	0	0	72
18:00	1	57	17	0	3	0	0	0	0	0	0	0	0	78
19:00	**3**	46	11	0	0	0	0	0	0	0	0	0	0	60
20:00	0	34	11	0	1	0	0	0	0	0	0	0	0	46
21:00	0	17	5	0	0	0	0	0	0	0	0	0	0	22
22:00	0	10	2	0	1	0	0	0	0	0	0	0	0	13
23:00	0	3	1	0	1	0	0	0	0	0	0	0	0	5
Day Total	18	1054	378	26	82	3	0	4	7	0	1	0	0	1573
Percent	1.1%	67.0%	24.0%	1.7%	5.2%	0.2%	0.0%	0.3%	0.4%	0.0%	0.1%	0.0%	0.0%	
AM Peak	08:00	07:00	10:00	07:00	10:00	09:00		06:00	07:00		08:00			07:00
Vol.	2	112	31	4	13	1		1	1		1			145
PM Peak	19:00	16:00	12:00	15:00	13:00	16:00		17:00	12:00					16:00
Vol.	3	83	38	3	9	1		1	1					122
Grand Total	18	1054	378	26	82	3	0	4	7	0	1	0	0	1573
Percent	1.1%	67.0%	24.0%	1.7%	5.2%	0.2%	0.0%	0.3%	0.4%	0.0%	0.1%	0.0%	0.0%	

All Traffic Data Services

www.alltrafficdata.net

Site Code: 1
Station ID: 1
PINE GROVE DR S.O GA-204

Latitude: 0' 0.0000 Undefined

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	1	5	2	0	0	0	0	0	0	0	0	0	0	8
01:00	0	8	3	0	0	0	0	0	0	0	0	0	0	11
02:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
03:00	0	4	4	0	0	0	0	0	0	0	0	0	0	8
04:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:00	0	4	5	0	0	0	0	0	0	0	0	0	0	9
06:00	0	26	8	3	3	0	0	0	0	0	0	0	0	40
07:00	3	45	11	2	1	0	**1**	0	0	0	0	0	0	63
08:00	2	56	9	2	1	**1**	0	**1**	0	0	0	0	0	72
09:00	1	50	22	7	4	0	0	0	0	0	0	0	0	84
10:00	**6**	**65**	21	**10**	**5**	0	0	0	0	0	0	0	0	**107**
11:00	1	65	**23**	8	3	0	0	0	0	0	0	0	0	100
12 PM	1	75	15	2	**4**	0	0	0	0	0	0	0	0	97
13:00	2	79	**23**	7	3	0	0	**1**	**1**	0	0	0	0	116
14:00	**4**	62	13	**14**	3	0	0	0	0	0	0	0	0	96
15:00	4	104	17	0	1	0	0	0	0	0	0	0	0	126
16:00	2	**114**	21	2	2	0	0	0	0	0	0	0	0	**141**
17:00	0	107	19	4	1	0	0	0	0	0	0	0	0	131
18:00	2	82	20	2	3	0	0	0	0	0	0	0	0	109
19:00	0	79	9	4	0	0	0	0	0	0	0	0	0	92
20:00	0	61	10	2	0	0	0	0	0	0	0	0	0	73
21:00	0	40	2	0	0	0	0	0	0	0	0	0	0	42
22:00	0	29	6	0	0	0	0	0	0	0	0	0	0	35
23:00	0	15	5	0	0	0	0	0	0	0	0	0	0	20
Day Total	29	1183	271	69	34	1	1	2	1	0	0	0	0	1591
Percent	1.8%	74.4%	17.0%	4.3%	2.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	10:00	11:00	10:00	10:00	08:00	07:00	08:00						10:00
Vol.	6	65	23	10	5	1	1	1						107
PM Peak	14:00	16:00	13:00	14:00	12:00			13:00	13:00					16:00
Vol.	4	114	23	14	4			1	1					141
Grand Total	29	1183	271	69	34	1	1	2	1	0	0	0	0	1591
Percent	1.8%	74.4%	17.0%	4.3%	2.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services

www.alltrafficdata.net

Site Code: 1
Station ID: 1
PINE GROVE DR S.O GA-204

Latitude: 0' 0.0000 Undefined

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
02/08/22	0	1	4	0	0	0	0	0	0	0	0	0	0	0	5	16-25	5
01:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	13-22	2
02:00	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
03:00	0	3	7	1	**1**	0	0	0	0	0	0	0	0	0	12	16-25	10
04:00	1	8	2	4	0	0	0	0	0	0	0	0	0	0	15	15-24	10
05:00	1	13	24	3	0	0	0	0	0	0	0	0	0	0	41	16-25	37
06:00	6	32	**43**	4	0	0	0	0	0	0	0	0	0	0	85	16-25	75
07:00	29	**72**	40	**6**	0	0	0	0	0	0	0	0	0	0	**147**	16-25	112
08:00	**34**	46	38	3	0	0	0	0	0	0	0	0	0	0	121	16-25	84
09:00	14	39	38	3	0	0	0	0	0	0	0	0	0	0	94	16-25	77
10:00	13	47	43	5	0	0	0	0	0	0	0	0	0	0	108	16-25	90
11:00	28	56	33	6	1	0	0	0	0	0	0	0	0	0	124	16-25	89
12 PM	5	40	44	3	0	0	0	0	0	0	0	0	0	0	92	16-25	84
13:00	9	**52**	38	3	0	0	0	0	0	0	0	0	0	0	102	16-25	90
14:00	**29**	51	42	5	0	0	0	0	0	0	0	0	0	0	**127**	16-25	93
15:00	15	46	41	**7**	0	0	0	0	0	0	0	0	0	0	109	16-25	87
16:00	20	45	**57**	5	0	0	0	0	0	0	0	0	0	0	127	16-25	102
17:00	3	23	40	6	0	0	0	0	0	0	0	0	0	0	72	16-25	63
18:00	9	26	37	4	0	0	0	0	0	0	0	0	0	0	76	16-25	63
19:00	4	18	34	4	0	0	0	0	0	0	0	0	0	0	60	16-25	52
20:00	1	16	28	1	0	0	0	0	0	0	0	0	0	0	46	16-25	44
21:00	0	5	13	4	0	0	0	0	0	0	0	0	0	0	22	16-25	18
22:00	1	3	9	1	0	0	0	0	0	0	0	0	0	0	14	16-25	12
23:00	0	2	2	1	0	0	0	0	0	0	0	0	0	0	5	16-25	4
Total	223	645	661	79	2	0	0	0	0	0	0	0	0	0	1610		
Percent	13.9%	40.1%	41.1%	4.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	07:00	06:00	07:00	03:00										07:00		
Vol.	34	72	43	6	1										147		
PM Peak	14:00	13:00	16:00	15:00											14:00		
Vol.	29	52	57	7											127		
Total	223	645	661	79	2	0	0	0	0	0	0	0	0	0	1610		
Percent	13.9%	40.1%	41.1%	4.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	15 MPH
	50th Percentile :	19 MPH
	85th Percentile :	23 MPH
	95th Percentile :	25 MPH
Stats	10 MPH Pace Speed :	16-25 MPH
	Number in Pace :	1306
	Percent in Pace :	81.1%
	Number of Vehicles > 25 MPH :	81
	Percent of Vehicles > 25 MPH :	5.0%
	Mean Speed(Average) :	19 MPH

All Traffic Data Services

www.alltrafficdata.net

Site Code: 1
Station ID: 1
PINE GROVE DR S.O GA-204

Latitude: 0' 0.0000 Undefined

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
02/08/22	2	4	2	0	0	0	0	0	0	0	0	0	0	0	8	15-24	6
01:00	1	6	4	0	0	0	0	0	0	0	0	0	0	0	11	16-25	10
02:00	1	6	2	0	0	0	0	0	0	0	0	0	0	0	9	16-25	8
03:00	1	5	2	0	0	0	0	0	0	0	0	0	0	0	8	16-25	7
04:00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
05:00	3	5	1	**1**	0	0	0	0	0	0	0	0	0	0	10	14-23	6
06:00	11	20	10	0	0	0	0	0	0	0	0	0	0	0	41	16-25	30
07:00	35	31	4	0	0	0	0	0	0	0	0	0	0	0	70	11-20	43
08:00	44	31	13	0	0	0	0	0	0	0	0	0	0	0	88	11-20	46
09:00	33	**52**	9	0	0	0	0	0	0	0	0	0	0	0	94	11-20	63
10:00	**59**	47	**15**	0	0	0	0	0	0	0	0	0	0	0	**121**	11-20	67
11:00	54	47	8	1	0	0	0	0	0	0	0	0	0	0	110	11-20	65
12 PM	67	44	6	0	0	0	0	0	0	0	0	0	0	0	117	11-20	66
13:00	52	**57**	**18**	1	0	0	0	0	0	0	0	0	0	0	128	13-22	75
14:00	59	43	11	**2**	0	0	0	0	0	0	0	0	0	0	115	11-20	63
15:00	83	50	8	0	0	0	0	0	0	0	0	0	0	0	141	11-20	78
16:00	**98**	35	17	1	0	0	0	0	0	0	0	0	0	0	**151**	11-20	68
17:00	92	42	12	1	0	0	0	0	0	0	0	0	0	0	147	11-20	73
18:00	68	43	13	0	0	0	0	0	0	0	0	0	0	0	124	11-20	66
19:00	37	45	17	1	0	0	0	0	0	0	0	0	0	0	100	16-25	62
20:00	24	38	16	0	0	0	0	0	0	0	0	0	0	0	78	16-25	54
21:00	10	30	6	1	0	0	0	0	0	0	0	0	0	0	47	16-25	36
22:00	7	18	10	0	0	0	0	0	0	0	0	0	0	0	35	16-25	28
23:00	3	14	4	0	0	0	0	0	0	0	0	0	0	0	21	16-25	18
Total	845	714	208	9	0	0	0	0	0	0	0	0	0	0	1776		
Percent	47.6%	40.2%	11.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	09:00	10:00	05:00											10:00		
Vol.	59	52	15	1											121		
PM Peak	16:00	13:00	13:00	14:00											16:00		
Vol.	98	57	18	2											151		
Total	845	714	208	9	0	0	0	0	0	0	0	0	0	0	1776		
Percent	47.6%	40.2%	11.7%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	4 MPH
	50th Percentile :	15 MPH
	85th Percentile :	19 MPH
	95th Percentile :	23 MPH
Stats	10 MPH Pace Speed :	11-20 MPH
	Number in Pace :	996
	Percent in Pace :	56.1%
	Number of Vehicles > 25 MPH :	9
	Percent of Vehicles > 25 MPH :	0.5%
	Mean Speed(Average) :	14 MPH

All Traffic Data Services

www.alltrafficdata.net

Site Code: 2
Station ID: 2
GROVE POINT RD E.O SWEETWATER STATION

Latitude: 0' 0.0000 Undefined
Longitude: 0' 0.0000 Undefined

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
07:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
09:00	0	**6**	0	0	0	0	0	0	0	0	0	0	0	**6**
10:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
11:00	0	2	**2**	0	0	0	0	0	0	0	0	0	0	4
12 PM	0	**5**	2	0	0	0	0	0	0	0	0	0	0	**7**
13:00	0	2	0	0	**2**	0	0	0	0	0	0	0	0	4
14:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
15:00	0	4	**3**	0	0	0	0	0	0	0	0	0	0	7
16:00	0	2	3	0	0	0	0	0	0	0	0	0	0	5
17:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
18:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
19:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
20:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Day Total	0	48	16	0	2	0	0	0	0	0	0	0	0	66
Percent	0.0%	72.7%	24.2%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		09:00	11:00											09:00
Vol.		6	2											6
PM Peak		12:00	15:00		13:00									12:00
Vol.		5	3		2									7
Grand Total	0	48	16	0	2	0	0	0	0	0	0	0	0	66
Percent	0.0%	72.7%	24.2%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services

www.alltrafficdata.net

Site Code: 2
Station ID: 2
GROVE POINT RD E.O SWEETWATER STATION

Latitude: 0' 0.0000 Undefined
Longitude: 0' 0.0000 Undefined

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	1	2	0	0	0	0	0	0	0	0	0	0	3
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
07:00	**2**	1	0	0	0	0	0	0	0	0	0	0	0	3
08:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
09:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
10:00	0	1	2	0	0	0	0	0	0	0	0	0	0	3
11:00	0	**4**	**4**	0	0	0	0	0	0	0	0	0	0	**8**
12 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
13:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
14:00	0	**7**	2	**1**	0	0	0	0	0	0	0	0	0	**10**
15:00	0	5	2	1	0	0	0	0	0	0	0	0	0	8
16:00	0	2	**4**	0	0	0	0	0	0	0	0	0	0	6
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
18:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
19:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
20:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Day Total	2	48	20	3	0	0	0	0	0	0	0	0	0	73
Percent	2.7%	65.8%	27.4%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	11:00	11:00											11:00
Vol.	2	4	4											8
PM Peak		14:00	16:00	14:00										14:00
Vol.		7	4	1										10
Grand Total	2	48	20	3	0	0	0	0	0	0	0	0	0	73
Percent	2.7%	65.8%	27.4%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

All Traffic Data Services

www.alltrafficdata.net

Site Code: 2
Station ID: 2
GROVE POINT RD E.O SWEETWATER STATION

Latitude: 0' 0.0000 Undefined

EB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
02/08/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
06:00	0	0	**2**	0	0	0	0	0	0	0	0	0	0	0	2	15-24	2
07:00	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	2	*	1
08:00	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	2	14-23	2
09:00	1	0	2	**2**	**1**	0	0	0	0	0	0	0	0	0	**6**	21-30	4
10:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14-23	1
11:00	0	1	1	2	0	0	0	0	0	0	0	0	0	0	4	19-28	3
12 PM	0	**3**	0	**3**	**1**	0	0	0	0	0	0	0	0	0	**7**	26-35	4
13:00	1	0	2	1	0	0	0	0	0	0	0	0	0	0	4	19-28	3
14:00	**2**	2	1	1	1	0	0	0	0	0	0	0	0	0	7	16-25	3
15:00	1	2	**4**	0	0	0	0	0	0	0	0	0	0	0	7	16-25	6
16:00	0	2	0	3	0	0	0	0	0	0	0	0	0	0	5	26-35	3
17:00	1	1	1	2	0	0	0	0	0	0	0	0	0	0	5	19-28	3
18:00	1	2	2	0	1	0	0	0	0	0	0	0	0	0	6	16-25	4
19:00	1	1	0	2	0	0	0	0	0	0	0	0	0	0	4	19-28	2
20:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14-23	1
21:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14-23	1
22:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
23:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	9-18	1
Total	9	16	19	21	4	0	0	0	0	0	0	0	0	0	69		
Percent	13.0%	23.2%	27.5%	30.4%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	06:00	09:00	09:00										09:00		
Vol.	1	1	2	2	1										6		
PM Peak	14:00	12:00	15:00	12:00	12:00										12:00		
Vol.	2	3	4	3	1										7		
Total	9	16	19	21	4	0	0	0	0	0	0	0	0	0	69		
Percent	13.0%	23.2%	27.5%	30.4%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	15 MPH
	50th Percentile :	22 MPH
	85th Percentile :	28 MPH
	95th Percentile :	30 MPH
Stats	10 MPH Pace Speed :	21-30 MPH
	Number in Pace :	40
	Percent in Pace :	58.0%
	Number of Vehicles > 25 MPH :	25
	Percent of Vehicles > 25 MPH :	36.2%
	Mean Speed(Average) :	22 MPH

All Traffic Data Services

www.alltrafficdata.net

Site Code: 2
Station ID: 2
GROVE POINT RD E.O SWEETWATER STATION

Latitude: 0' 0.0000 Undefined

WB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
02/08/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	*	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	1	0	1	1	0	0	0	0	0	0	0	0	0	0	3	19-28	2
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
05:00	1	**1**	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
06:00	4	0	**3**	0	0	0	0	0	0	0	0	0	0	0	7	21-30	3
07:00	3	0	1	1	0	0	0	0	0	0	0	0	0	0	5	21-30	2
08:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4	9-18	2
09:00	4	1	2	0	0	0	0	0	0	0	0	0	0	0	7	16-25	3
10:00	2	1	1	0	0	0	0	0	0	0	0	0	0	0	4	9-18	2
11:00	**5**	0	3	**2**	**1**	0	0	0	0	0	0	0	0	0	**11**	21-30	5
12 PM	5	1	3	1	0	0	0	0	0	0	0	0	0	0	10	21-30	4
13:00	4	1	0	**2**	**1**	0	0	0	0	0	0	0	0	0	8	26-35	3
14:00	**8**	**4**	3	1	0	0	0	0	0	0	0	0	0	0	**16**	11-20	7
15:00	6	2	**4**	1	0	0	0	0	0	0	0	0	0	0	13	15-24	6
16:00	5	1	1	0	0	0	0	0	0	0	0	0	0	0	7	8-17	3
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
18:00	5	2	2	1	0	0	0	0	0	0	0	0	0	0	10	16-25	4
19:00	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
20:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14-23	1
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
22:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	*	1
23:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	*	1
Total	60	15	27	13	3	0	0	0	0	0	0	0	0	0	118		
Percent	50.8%	12.7%	22.9%	11.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	05:00	06:00	11:00	11:00										11:00		
Vol.	5	1	3	2	1										11		
PM Peak	14:00	14:00	15:00	13:00	13:00										14:00		
Vol.	8	4	4	2	1										16		
Total	60	15	27	13	3	0	0	0	0	0	0	0	0	0	118		
Percent	50.8%	12.7%	22.9%	11.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

	15th Percentile :	4 MPH
	50th Percentile :	14 MPH
	85th Percentile :	24 MPH
	95th Percentile :	28 MPH
Stats	10 MPH Pace Speed :	16-25 MPH
	Number in Pace :	42
	Percent in Pace :	35.6%
	Number of Vehicles > 25 MPH :	16
	Percent of Vehicles > 25 MPH :	13.6%
	Mean Speed(Average) :	16 MPH

APPENDIX D

CRASH DATA

SR 204 & PINE GROVE DR

AccidentNo	Date	County	Route	IntersectingRoute	CrashSeverity	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors
6113584	2/10/2017	CHATHAM	HWY 204	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
6117878	2/14/2017	CHATHAM	SR 204	SWEETWATER ST	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
6129865	2/25/2017	CHATHAM	SWEETWATER STATION DR	ABERCORN ST	O		0	0 Rear End	Daylight	Dry	North	North	Straight	Stopped		2 Following too Close	No Contributing Factors
6181436	4/6/2017	CHATHAM	SR 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Wet	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
6183655	4/7/2017	CHATHAM	ABERCORN ST	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
6267556	6/8/2017	CHATHAM	ABERCORN ST	SWEETWATER STATION DR	C		2	0 Angle	DarkLighted	Dry	East	West	Straight	Straight		2 Failed to Yield	Failed to Yield
6341955	8/5/2017	CHATHAM	SR 204	FORT ARGYLE RD	O		0	0 Rear End	Daylight	Wet	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
6343994	8/7/2017	CHATHAM	ABERCORN ST	SWEETWATER STATION DR	C		1	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
6348501	8/10/2017	CHATHAM	SWEETWATER STATION DR	204	O		0	0 Rear End	Daylight	Dry	North	North	Turning Right	Turning Right		2 Following too Close	No Contributing Factors
6417869	10/5/2017	CHATHAM	SR 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		3 Following too Close	No Contributing Factors
6418474	10/6/2017	CHATHAM	204	SWEETWATER STATION DR	C		2	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		3 Following too Close;Vision Obscured	No Contributing Factors
6452741	10/31/2017	CHATHAM	ABERCORN ST	SWEETWATER STATION DR	O		0	0 Sideswipe-Opposite Direction	Daylight	Dry	East	East	Backing	Changing Lanes		2 Not Visible (Object, Person, o	Not Visible (Object, Person, o
6456551	11/2/2017	CHATHAM	SR 204	SWEETWATER STA	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		3 Following too Close	No Contributing Factors
6457929	11/3/2017	CHATHAM	SWEETWATER STATION DR	GROVE POINT RD	B		2	0 Rear End	Daylight	Dry	North	North	Straight	Stopped		2 Following too Close	No Contributing Factors
6481589	11/20/2017	CHATHAM	HWY 204	SWEETWATER STA	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
6566813	1/24/2018	CHATHAM	SR 204	PINE GROVE DR	C		1	0 Rear End	Daylight	Dry	West	West	Straight	Straight		3 Driver Condition	No Contributing Factors
6570384	1/29/2018	CHATHAM	FORT ARGYLE RD	SR 204	B		1	0 Rear End	Daylight	Wet	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
6616455	2/17/2018	CHATHAM	GA HWY 204 WESTBOUND	SWEETWATER STATION	O		0	0 Sideswipe-Same Direction	Dusk	Dry	West	West	Changing Lanes	Straight		2 Changed Lanes Improperly;Misjudged Clearance;Inattentive or Other Distracti	No Contributing Factors
6616504	2/20/2018	CHATHAM	GROVE POINT RD	HWY 204	O		0	0 Rear End	Daylight	Dry	East	East	Turning Right	Turning Right		2 Following too Close	No Contributing Factors
6631906	3/12/2018	CHATHAM	SR 204	SWEETWATER STATION DRIVE	O		0	0 Angle	DarkNot Lighted	Wet	North	East	Turning Right	Changing Lanes		3 Failed to Yield	Changed Lanes Improperly
6635736	3/14/2018	CHATHAM	SR 204	PINE GROVE DR	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
6686084	3/22/2018	CHATHAM	HWY 204 EAST BOUND	GROVE POINT RD	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
6691488	5/1/2018	CHATHAM	GA HWY 204 EB	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Stopped	Straight		3 Following too Close	Following too Close
6722147	5/14/2018	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		2 Following too Close;Other	No Contributing Factors
6741338	6/8/2018	CHATHAM	SR 204	SWEETWATER STATION	O		0	0 Rear End	Daylight	Wet	West	West	Straight	Straight		2 Following too Close	No Contributing Factors
6743579	6/11/2018	CHATHAM	GROVE POINT ROAD	HIGHWAY 204 EAST	O		0	0 Rear End	Daylight	Dry	South	South	Turning Right	Stopped		2 Following too Close	No Contributing Factors
6747336	6/13/2018	CHATHAM	WB ABERCORN ST	SWEETWATER STATION DR.	O		0	0 Angle	Daylight	Wet	West	South	Straight	Turning Left		2 No Contributing Factors	No Contributing Factors
6749451	6/7/2018	CHATHAM	WEST BOUND ABERCORN	SWEETWATER RD	O		0	0 Rear End	DarkLighted	Dry	West	West	Changing Lanes	Straight		2 Following too Close	No Contributing Factors
6758998	6/18/2018	CHATHAM	EB ABERCORN ST	SWEETWATER STATION DR.	O		0	0 Rear End	Daylight	Dry	N/A	N/A	N/A	N/A		1 N/A	N/A
6761038	6/18/2018	CHATHAM	EB ABERCORN ST	SWEETWATER STATION DR.	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		3 Following too Close	Following too Close
6814144	8/1/2018	CHATHAM	HWY 204	SWEETWATER STATION RD	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
6831328	8/12/2018	CHATHAM	GA. HWY 204	SWEETWATER STATION DR	C		0	0 Rear End	DarkNot Lighted	Dry	West	West	Straight	N/A		2 Following too Close	No Contributing Factors
6873174	9/6/2018	CHATHAM	HWY 204 EB	GROVE POINT ROAD	O		0	0 Sideswipe-Same Direction	Daylight	Dry	North	East	Turning Right	Straight		2 Failed to Yield	No Contributing Factors
6878858	9/17/2018	CHATHAM	GA HWY 204	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
6879244	9/18/2018	CHATHAM	GA HWY 204 EB	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	Reaction to Object or Animal
6905200	10/7/2018	CHATHAM	GA HWY 204	SWEET WATER STATION DR	C		2	0 Angle	Daylight	Dry	East	South	Straight	Turning Left		2 Disregard Stop Sign/Signal	No Contributing Factors
6905209	10/8/2018	CHATHAM	ABERCORN ST	SWEETWATER STATION DR.	B		0	0 Rear End	Dawn	Wet	East	East	Straight	Straight		4 Too Fast For Conditions	No Contributing Factors
6936680	10/30/2018	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
6936695	10/30/2018	CHATHAM	E ABERCORN ST	DON ZIPPERER DR	O		0	0 Rear End	Daylight	Dry	South	East	Straight	Stopped		2 Following too Close	No Contributing Factors
6941620	11/2/2018	CHATHAM	SWEETWATER STATION DR	GA HWY 204	C		0	0 Rear End	Dusk	Dry	North	North	Straight	Stopped		2 Following too Close	No Contributing Factors
6944044	11/3/2018	CHATHAM	GA HWY 204	GROVE POINT RD	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Changing Lanes		2 No Contributing Factors	No Contributing Factors
6970228	8/20/2018	CHATHAM	SWEETWATER STATION	GA HWY 204	O		0	0 Rear End	Daylight	Dry	East	East	Turning Right	Turning Right		2 Following too Close	No Contributing Factors
6971650	11/21/2018	CHATHAM	GA HWY 204 WB	SWEETWATER STATION	O		0	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Passing		2 Other	No Contributing Factors
6985183	12/2/2018	CHATHAM	HWY 204	SWEETWATER STATION	O		0	0 Sideswipe-Same Direction	DarkLighted	Wet	West	West	Changing Lanes	Straight		2 Changed Lanes Improperly	Too Fast For Conditions
6990586	12/6/2018	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Sideswipe-Same Direction	Dusk	Dry	East	East	Changing Lanes	Straight		2 No Contributing Factors	No Contributing Factors
6990967	12/6/2018	CHATHAM	GA 204 E	SWEETWATER STATION	B		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
7043716	12/14/2018	CHATHAM	GA HWY 204	SWEETWATER STATION DRIVE	O		0	0 Rear End	DarkNot Lighted	Wet	West	West	Straight	Straight		2 Following too Close	No Contributing Factors
7044144	12/28/2018	CHATHAM	GA HWY 204 WB	SWEET WATER STATION DRIVE	O		0	0 Rear End	DarkLighted	Wet	West	West	Straight	Straight		2 No Contributing Factors;Following too Close	No Contributing Factors
7048838	1/17/2019	CHATHAM	GA HWY 204 EB	SWEET WATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		3 Following too Close	Following too Close
7114198	3/5/2019	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Wet	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
7115669	3/8/2019	CHATHAM	GA. HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		3 Following too Close	No Contributing Factors
7120012	3/7/2019	CHATHAM	ABERCORN EXTENSION	SWEETWATER STATION DRIVE	B		1	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		4 Following too Close	No Contributing Factors
7147796	4/1/2019	CHATHAM	GA HWY 204 WB	SWEETWATER STATION	O		0	0 Sideswipe-Same Direction	Daylight	Dry	East	West	Turning Right	Stopped		2 Improper Turn;Misjudged Clearance	No Contributing Factors
7150222	4/3/2019	CHATHAM	ABERCORN	SWEETWATER RD	O		0	0 Rear End	DarkLighted	Dry	East	East	Stopped	Making U-turn		2 No Contributing Factors;Following too Close	No Contributing Factors
7162326	4/13/2019	CHATHAM	ABERCORN EXT	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
7162347	4/13/2019	CHATHAM	ABERCORN EXT.	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
7162348	4/13/2019	CHATHAM	HWY 204 WB	SWEETWATER STATION	C		1	0 Rear End	Daylight	Dry	None	West	N/A	Stopped		2 N/A	N/A
7167871	4/17/2019	CHATHAM	ABERCORN ST WB	SWEETWATER STATION DR	O		0	0 Rear End	DarkNot Lighted	Dry	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
7177209	4/24/2019	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Straight		2 No Contributing Factors;Following too Close	No Contributing Factors
7181031	4/28/2019	CHATHAM	HWY 204	SWEETWATER STATION DRIVE	B		1	0 Angle	Daylight	Dry	East	West	Straight	Turning Left		2 Disregard Stop Sign/Signal	No Contributing Factors
7231706	5/30/2019	CHATHAM	GA HWY 204 W	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
7232863	5/29/2019	CHATHAM	GA HWY 204 E	FORD AVE	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
7238779	6/7/2019	CHATHAM	GA HWY 204 W	SWEETWATER STATION DR	C		0	0 Rear End	Daylight	Wet	West	West	Straight	Stopped		2 No Contributing Factors;Following too Close	No Contributing Factors
7258713	6/20/2019	CHATHAM	GA HWY 204	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Backing	Stopped		2 Improper Backing	No Contributing Factors
7265810	6/29/2019	CHATHAM	GA HWY 204 EB	SWEET WATER STATION DR	O		0	0 Sideswipe-Same Direction	Daylight	Dry	East	East	Changing Lanes	Straight		2 Changed Lanes Improperly;Reaction to Object or Animal	No Contributing Factors
7336646	8/28/2019	CHATHAM	GA HWY 204 EB	SWEETWATER STATION	O		1	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
7336707	8/24/2019	CHATHAM	SWEETWATER STATION DR	GA HWY 204	O		0	0 Rear End	Daylight	Dry	West	West	Turning Right	Turning Right		2 Following too Close	No Contributing Factors
7346656	9/6/2019	CHATHAM	GA HIGHWAY 204	SWEETWATER STATION	O		0	0 Rear End	DarkLighted	Dry	West	West	Straight	Straight		3 Changed Lanes Improperly	No Contributing Factors
7366042	9/24/2019	CHATHAM	GA HWY 204 E	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close;Failed to Yield	N/A
7377889	10/2/2019	CHATHAM	GA HWY 204	SWEETWATER STATION	C		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		3 Following too Close	No Contributing Factors
7388828	10/12/2019	CHATHAM	HWY 204 WB	SWEETWATER	B		0	0 Not A Collision with Motor Vehicle	Dusk	Dry	West	N/A	Turning Left	N/A		1 Improper Turn	N/A
7433361	11/10/2019	CHATHAM	GA HWY 204	SWEETWATER STATION DR	C		0	0 Rear End	DarkLighted	Dry	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
7435013	11/14/2019	CHATHAM	GA HWY 204	SWEETWATER STATION RD	O		0	0 Rear End	Dusk	Wet	West	West	Straight	Straight		2 Following too Close	No Contributing Factors
7435018	11/14/2019	CHATHAM	GA HWY 204	SWEETWATER STATION DR	C		0	0 Rear End	DarkLighted	Dry	East	East	Straight	Changing Lanes		2 Following too Close	No Contributing Factors
7475829	12/13/2019	CHATHAM	GA HWY 204 WB	GROVE POINT RD	O		0	0 Rear End	Daylight	Wet	East	East	Straight	Stopped		2 N/A	No Contributing Factors
7494571	12/26/2019	CHATHAM	GA 204 EAST	MM 12	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		3 No Contributing Factors;Following too Close;Inattentive or Other Distracti	No Contributing Factors
7495084	12/24/2019	CHATHAM	GA HWY 204 EB	SWEETWATER STATION	C		2	0 Rear End	Daylight	Wet	East	East	Straight	Stopped		2 Following too Close	No Contributing Factors
7502563	1/3/2020	CHATHAM	GA HWY 204	SWEETWATER RD	O		0	0 Sideswipe-Same Direction	Daylight	Dry	West	West	Changing Lanes	Changing Lanes		2 Changed Lanes Improperly	No Contributing Factors
7553792	2/13/2020	CHATHAM	SWEETWATER STATION DR	GA HWY 204	O		0	0 Rear End	Daylight	Dry	East	East	Turning Right	Turning Right		2 Following too Close	No Contributing Factors
7561671	2/24/2020	CHATHAM	GA HWY 204	SWEETWATER STATION	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
7565955	2/28/2020	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O		0	0 Rear End	Daylight	Dry	East	East	Straight	Straight		2 Following too Close	No Contributing Factors
7577195	3/6/2020	CHATHAM	GA HWY 204	SWEETWATER STATION	O		0	0 Rear End	DarkLighted	Dry	West	West	Straight	Stopped		2 Following too Close	No Contributing Factors
7580889	3/9/2020	CHATHAM	SWEETWATER STATION DRIVE	GA 204 WEST	K		0	1 Angle	Daylight	Dry	West	South	Straight	Straight		2 Disregard Stop Sign/Signal	No Contributing Factors
7645826	5/21/2020	CHATHAM	GA HWY 204	SWEETWATER STATION	C		0	0 Rear End	Daylight	Dry	West	West	Straight	Straight		3 Following too Close;Inattentive or Other Distracti	Other

7657222	6/5/2020	CHATHAM	GA HWY 204 E	SWEETWATER STATION DR	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2 Following too Close	No Contributing Factors
7658205	6/7/2020	CHATHAM	GA 204	SWEETWATER STATION DRIVE	O	0	0	Rear End	Daylight	Dry	West	West	Straight	Stopped	2 Other Activity - Mobile Device	No Contributing Factors
7669100	6/18/2020	CHATHAM	SWEETWATER STATION DR	GA HWY 204	C	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2 Following too Close	No Contributing Factors
7698754	7/16/2020	CHATHAM	GA HIGHWAY 204	SWEETWATER STATION	C	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2 Following too Close	No Contributing Factors
7699739	7/13/2020	CHATHAM	EB GA HWY 204	SWEETWATER STATION DR	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
7741362	7/13/2020	CHATHAM	EB GA HWY 204	SWEETWATER STATION	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
7747537	8/18/2020	CHATHAM	SWEETWATER STATION	GA HWY 204 EB	O	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2 Following too Close	No Contributing Factors
7764154	9/4/2020	CHATHAM	GA HIGHWAY 204	SWEET WATER STATION DRIVE	O	0	0	Rear End	Daylight	Dry	West	West	N/A	Straight	2 Following too Close	No Contributing Factors
7771214	9/11/2020	CHATHAM	HWY 204	SWEETWATER STATION	O	0	0	Rear End	Daylight	Dry	East	East	Changing Lanes	Straight	2 Changed Lanes Improperly	No Contributing Factors
7787039	9/25/2020	CHATHAM	WB ABERCORN ST	PINE GROVE DR	O	0	0	Rear End	DarkLighted	Wet	West	West	Straight	Straight	2 Other	Other
7799637	10/6/2020	CHATHAM	GA HWY 204	SWEETWATER STATION	A	1	0	Rear End	Daylight	Dry	East	East	Straight	Other	2 Following too Close	No Contributing Factors
7831671	10/22/2020	CHATHAM	GA HIGHWAY 204	GROVE POINT ROAD	B	1	0	Rear End	Daylight	Dry	East	East	Straight	Straight	3 Following too Close	No Contributing Factors
7852640	11/14/2020	CHATHAM	GA HWY 204 EB	SWEET WATER STATION	O	0	0	Rear End	Daylight	Dry	East	East	Stopped	Straight	2 Following too Close	No Contributing Factors
7873049	12/2/2020	CHATHAM	SWEETWATER STATION	GA. HWY 204	O	0	0	Sideswipe-Same Direction	DarkLighted	Dry	East	East	Turning Right	Straight	2 No Contributing Factors	No Contributing Factors
7876618	12/4/2020	CHATHAM	GA HWY 204 E	SWEETWATER STATION DR	O	0	0	Rear End	DarkNot Lighted	Wet	East	East	Straight	Straight	2 Following too Close	No Contributing Factors
7901238	12/25/2020	CHATHAM	GA HWY 204	SWEETWATER STATION DR	B	1	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2 Following too Close	No Contributing Factors
7914078	1/7/2021	CHATHAM	SWEETWATER STATION	GA HWY 204	O	0	0	Rear End	Daylight	Dry	East	East	Turning Right	Stopped	2 Following too Close	No Contributing Factors
7919971	1/10/2021	CHATHAM	GA HIGHWAY 204	SWEETWATER STATION DR	O	0	0	Angle	Daylight	Dry	East	West	Straight	Turning Left	2 Disregard Other Traffic Contro	No Contributing Factors
7930692	1/23/2021	CHATHAM	GA HWY 204 EB	SWEETWATER STATION	O	0	0	Angle	Daylight	Dry	East	East	Straight	Straight	2 Disregard Stop Sign/Signal;Vision Obscured	No Contributing Factors
7948402	2/3/2021	CHATHAM	GA HWY 204	SWEETWATER STATION	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Vision Obscured	No Contributing Factors
7957302	2/15/2021	CHATHAM	GA HWY 204	SWEETWATER STATION DR.	O	0	0	Rear End	DarkNot Lighted	Wet	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors
7957888	2/10/2021	CHATHAM	GA HWY 204	PINE GROVE DR.	O	0	0	Rear End	Daylight	Wet	None	West	N/A	Straight	2 N/A	No Contributing Factors
7966484	2/24/2021	CHATHAM	GA HWY 204 EB	SWEETWATER STATION DR	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
7968213	2/26/2021	CHATHAM	HWY 204	SWEETWATER STATION	O	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2 Following too Close	No Contributing Factors
7983934	3/12/2021	CHATHAM	ABERCORN STREET	SWEET WATER STATION	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
8017777	3/31/2021	CHATHAM	GA HWY 204 E	SWEETWATER STATION DR	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
8023746	4/9/2021	CHATHAM	GA HWY 204	SWEETWATER STATION DR.	O	0	0	Rear End	Daylight	Wet	West	West	Straight	Stopped	2 Following too Close	No Contributing Factors
8037101	4/25/2021	CHATHAM	SWEETWATER STATION DR	GA HWY 204	O	0	0	Rear End	DarkNot Lighted	Dry	North	North	Turning Right	Turning Right	2 Following too Close	No Contributing Factors
8069422	5/18/2021	CHATHAM	WB ABERCORN STREET	SWEETWATER STATION DRIVE	O	0	0	Rear End	Daylight	Dry	West	West	Straight	Straight	2 Following too Close	No Contributing Factors
8091848	6/8/2021	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O	0	0	Not A Collision with Motor Vehicle	Daylight	Dry	East	N/A	Straight	N/A	1 Disregard Stop Sign/Signal;Too Fast For Conditions	N/A
8132881	7/9/2021	CHATHAM	GA HWY 204	SWEETWATER STATION DR	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Straight	2 Following too Close	No Contributing Factors
8149911	7/15/2021	CHATHAM	ABERCORN ST	SWEETWATER STATION DR	O	0	0	Angle	Daylight	Dry	East	East	Straight	Straight	2 Following too Close	No Contributing Factors
8253946	10/2/2021	CHATHAM	GA HWY 204 E	SWEETWATER STATION DR.	O	0	0	Rear End	Daylight	Dry	East	East	Straight	Stopped	2 Following too Close	No Contributing Factors
8316778	11/9/2021	CHATHAM	GA HWY 204	SWEETWATER STATION DR	K	0	1	Rear End	Daylight	Dry	East	East	Turning Right	Turning Right	2 Following too Close	No Contributing Factors
8318541	11/19/2021	CHATHAM	SWEETWATER STATION DRIVE	ABERCORN STREET	O	0	0	Rear End	Daylight	Dry	North	North	Turning Right	Turning Right	2 Following too Close	No Contributing Factors
8341617	12/4/2021	CHATHAM	GA 204E	SWEETWATER STATION DR	O	0	0	Rear End	DarkNot Lighted	Dry	East	East	Straight	Stopped	2 No Contributing Factors;Following too Close	No Contributing Factors

PINE GROVE DR/SWEETWATER STATION DR & GROVE POINT RD

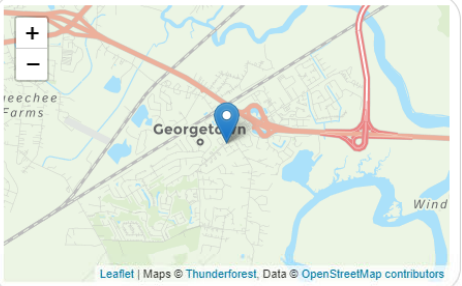
AccidentNo	AgencyName	Date	County	Route	IntersectingRoute	CrashSeverity	Injuries	Fatalities	MannerOfCollision	Light	Surface	DirVeh1	DirVeh2	MnvrVeh1	MnvrVeh2	NumberOfVehicles	U1Factors	U2Factors
6763911	Chatham Co Police Department	6/16/2018	CHATHAM	GROVE POINT RD	PINE GROVE POINT	O		0	0 Angle	Daylight	Wet	East	South	Turning Left	Straight	2	Misjudged Clearance	No Contributing Factors

APPENDIX E

GDOT COUNT STATION DATA

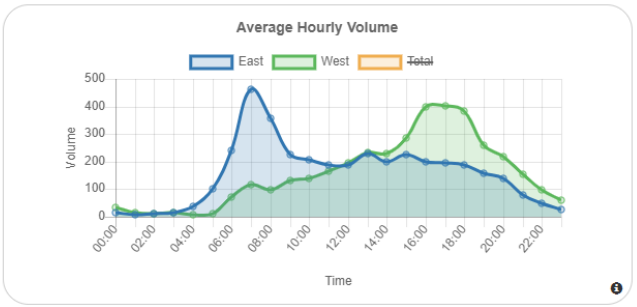
0000051_7066 - 051-7066
Description: CRT 119500 R
County: Chatham
Route number: 00007100
LRS section: 0512007100
Functional class: 7U - Local (Urban)
Coordinates: 31.9830834523015, -81.2229145502734

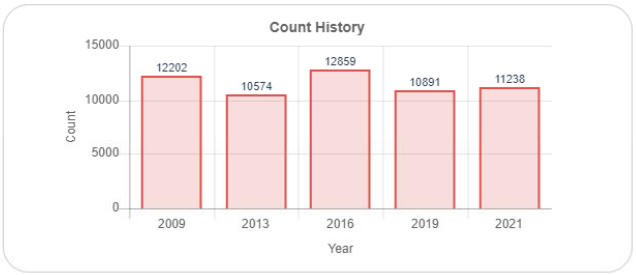
Site Data



Count History

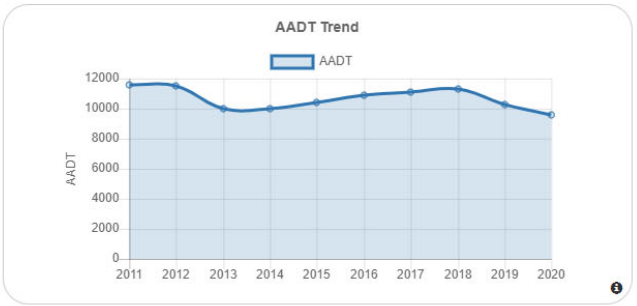
Year	Month	Count type	Duration	Count
2021	May	Volume	48 hours	11238
2019	June	Volume	48 hours	10891
2016	March	Volume	48 hours	12859
2013	January	Volume	48 hours	10574
2009	January	Volume	48 hours	12202





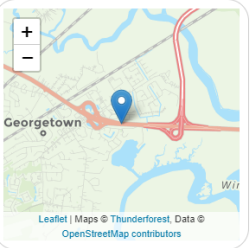
Annual Statistics

Data Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Statistics type	-	-	-	-	Estimated	Actual	Estimated	Estimated	Actual	**Estimated**
AADT	11600	11500	10000	10000	10400	10900	11100	11300	10300	**9600**
K-Factor	-	-	0.090	0.090	0.090	0.125	-	-	0.105	**0.105**
D-Factor	-	-	0.800	0.800	0.800	0.800	-	-	0.700	**0.700**
Future AADT	-	-	-	-	-	13100	14000	14200	13000	**13000**



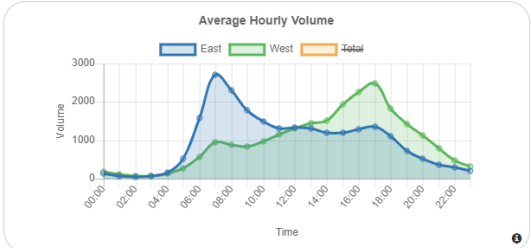
0000051_0323 - 051-0323
Description: BRH 051-0072-0
City: Savannah **County:** Chatham
Route number: 00020400
LRS section: 0511020400
Functional class: 3U - Principal Arterial - Other (Urban)
Coordinates: 31.98483276, -81.21173168

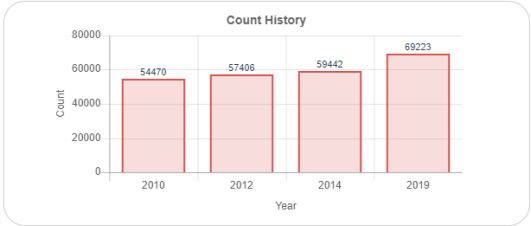
Site Data

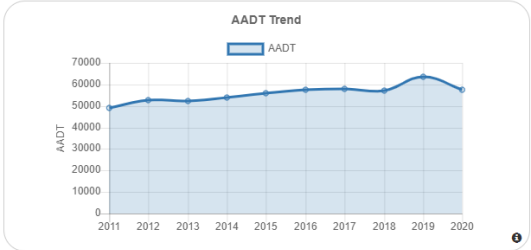


Count History

Year	Month	Count type	Duration	Count
2019	October	Class	48 hours	69223
2014	September	Class	48 hours	59442
2012	April	Class	48 hours	57406
2010	February	Volume	48 hours	54470







Annual Statistics

Data Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Statistics type	-	-	-	-	Estimated	Estimated	Estimated	Estimated	Actual	**Estimated**
AADT	49000	52600	52400	54000	55800	57400	57800	57300	63500	**57400**
K-Factor	-	-	-	0.086	0.086	0.086	-	-	0.094	**0.094**
D-Factor	-	-	-	0.700	0.700	0.700	-	-	0.650	**0.650**
Future AADT	-	-	-	-	-	86100	97700	94300	88500	**88500**

FHWA Vehicle Classification

1. Motorcycles 2 axles, 2 or 3 wheels.	**0.20%**
2. Passenger cars 2 axles. Can have 1- or 2-axle trailers.	**80.72%**
3. Pickups, panels, vans 2-axle, 4-tire single units. Can have 1- or 2-axle trailers.	**15.81%**
4. Buses 2- or 3-axle, full length.	**0.30%**
5. Single-unit trucks 2-axle, 6-tire, (dual rear tires), single-unit trucks.	**2.08%**
6. Single-unit trucks 3-axle, single-unit trucks.	**0.37%**
7. Single-unit trucks 4 or more axle, single-unit trucks.	**0.05%**
8. Single-trailer trucks 3- or 4-axle, single-trailer trucks.	**0.20%**
9. Single-trailer trucks 5-axle, single-trailer trucks.	**0.21%**
10. Single-trailer trucks 6 or more axle, single-trailer trucks.	**0.03%**
11. Multi-trailer trucks 5 or less axle, multi-trailer trucks.	**0%**
12. Multi-trailer trucks 6-axle, multi-trailer trucks.	**0%**
13. Multi-trailer trucks 7 or more axle, multi-trailer trucks.	**0.03%**

APPENDIX F

TRIP GENERATION DATA

Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: Abercorn St Parker`s Kitchen

Open Date: 2/16/2022
Analysis Date: 2/16/2022

ITE	Land Use	*	Weekday Average Daily Trips Enter	Exit	Total	*	Weekday AM Peak Hour of Adjacent Street Traffic Enter	Exit	Total	*	Weekday PM Peak Hour of Adjacent Street Traffic Enter	Exit	Total
945	GASSTATION-CONV 1		1643	1643	3286		106	101	207		114	110	224
	16 Vehicle Fueling Positions												
Unadjusted Volume			1643	1643	3286		106	101	207		114	110	224
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			968	968	1936		64	64	128		63	63	126
Volume Added to Adjacent Streets			675	675	1350		42	37	79		51	47	98

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition
TRIP GENERATION 10, TRAFFICWARE, LLC

APPENDIX G

CAPACITY ANALYSIS REPORTS, EXISTING CONDITIONS

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2796	33	37	1540	10	36	0	125	20	2	23
Future Volume (veh/h)	2	2796	33	37	1540	10	36	0	125	20	2	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1752	1811	1856	1752	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	2	2912	34	39	1604	10	38	0	0	21	2	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	10	6	3	10	0	0	2	0	0	0
Cap, veh/h	5	2776	1160	50	2847	1199	146	0		70	16	57
Arrive On Green	0.00	0.78	0.78	0.03	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1485	1725	3526	1485	1499	0	1585	564	227	825
Grp Volume(v), veh/h	2	2912	34	39	1604	10	38	0	0	47	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1485	1725	1763	1485	1499	0	1585	1616	0	0
Q Serve(g_s), s	0.2	132.8	0.9	3.8	27.3	0.2	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.2	132.8	0.9	3.8	27.3	0.2	3.7	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.45		0.51
Lane Grp Cap(c), veh/h	5	2776	1160	50	2847	1199	146	0		143	0	0
V/C Ratio(X)	0.42	1.05	0.03	0.78	0.56	0.01	0.26	0.00		0.33	0.00	0.00
Avail Cap(c_a), veh/h	149	2776	1160	142	2847	1199	173	0		172	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.6	18.6	4.2	82.0	5.8	3.2	75.4	0.0	0.0	75.6	0.0	0.0
Incr Delay (d2), s/veh	48.9	31.7	0.0	22.6	0.8	0.0	0.9	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	67.5	0.4	3.6	12.4	0.1	3.0	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.5	50.3	4.2	104.6	6.6	3.2	76.3	0.0	0.0	77.0	0.0	0.0
LnGrp LOS	F	F	A	F	A	A	E	A		E	A	A
Approach Vol, veh/h		2948			1653			38	A		47	
Approach Delay, s/veh		49.8			8.9			76.3			77.0	
Approach LOS		D			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	144.8		18.8	10.9	140.3		18.8				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	14.0	120.5		15.0				
Max Q Clear Time (g_c+I1), s	2.2	29.3		6.4	5.8	134.8		5.7				
Green Ext Time (p_c), s	0.0	84.4		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	35.9	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	0	0	0	0	6	1	123	0	5	31	36
Future Vol, veh/h	32	0	0	0	0	6	1	123	0	5	31	36
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	42	0	0	0	0	8	1	160	0	6	40	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	6.9	8	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	100%	0%	7%
Vol Thru, %	99%	0%	0%	43%
Vol Right, %	0%	0%	100%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	32	6	72
LT Vol	1	32	0	5
Through Vol	123	0	0	31
RT Vol	0	0	6	36
Lane Flow Rate	161	42	8	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.182	0.055	0.008	0.099
Departure Headway (Hd)	4.058	4.75	3.888	3.821
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	878	758	926	926
Service Time	2.11	2.75	1.889	1.893
HCM Lane V/C Ratio	0.183	0.055	0.009	0.102
HCM Control Delay	8	8	6.9	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0	0.3

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1868	55	84	2909	23	40	0	61	14	1	5
Future Volume (veh/h)	8	1868	55	84	2909	23	40	0	61	14	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1841	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	8	1926	57	87	2999	24	41	0	0	14	1	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	1	1	4	0	0	3	0	0	0
Cap, veh/h	17	2676	1193	107	2878	1253	142	0		105	12	27
Arrive On Green	0.01	0.75	0.75	0.06	0.80	0.80	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1585	1795	3582	1560	1491	0	1572	1039	177	405
Grp Volume(v), veh/h	8	1926	57	87	2999	24	41	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1585	1795	1791	1560	1491	0	1572	1622	0	0
Q Serve(g_s), s	0.7	49.7	1.6	8.1	136.6	0.5	2.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	49.7	1.6	8.1	136.6	0.5	4.2	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.70		0.25
Lane Grp Cap(c), veh/h	17	2676	1193	107	2878	1253	142	0		144	0	0
V/C Ratio(X)	0.48	0.72	0.05	0.81	1.04	0.02	0.29	0.00		0.14	0.00	0.00
Avail Cap(c_a), veh/h	149	2676	1193	359	2878	1253	173	0		176	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.8	11.3	5.4	79.0	16.7	3.3	75.9	0.0	0.0	74.9	0.0	0.0
Incr Delay (d2), s/veh	19.6	1.2	0.0	13.3	29.0	0.0	1.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	23.3	0.8	7.4	64.4	0.2	3.2	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.4	12.5	5.4	92.3	45.7	3.4	77.0	0.0	0.0	75.3	0.0	0.0
LnGrp LOS	F	B	A	F	F	A	E	A		E	A	A
Approach Vol, veh/h		1991			3110			41	A		20	
Approach Delay, s/veh		12.7			46.7			77.0			75.3	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	144.1		18.3	16.2	135.5		18.3				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	34.0	100.5		15.0				
Max Q Clear Time (g_c+I1), s	2.7	138.6		3.8	10.1	51.7		6.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.2	48.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	33.9	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	0	1	0	0	1	2	55	0	5	94	41
Future Vol, veh/h	45	0	1	0	0	1	2	55	0	5	94	41
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	48	0	1	0	0	1	2	59	0	5	101	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	6.8	8.5	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	98%	0%	4%
Vol Thru, %	96%	0%	0%	67%
Vol Right, %	0%	2%	100%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	46	1	140
LT Vol	2	45	0	5
Through Vol	55	0	0	94
RT Vol	0	1	1	41
Lane Flow Rate	61	49	1	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.084	0.064	0.001	0.162
Departure Headway (Hd)	4.961	4.642	3.829	3.865
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	776	940	918
Service Time	3.026	2.642	1.831	1.931
HCM Lane V/C Ratio	0.085	0.063	0.001	0.164
HCM Control Delay	8.5	8	6.8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0	0.6

APPENDIX H

CAPACITY ANALYSIS REPORTS, NO-BUILD CONDITIONS

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2852	34	38	1571	10	37	0	128	20	2	23
Future Volume (veh/h)	2	2852	34	38	1571	10	37	0	128	20	2	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1752	1811	1856	1752	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	2	2971	35	40	1636	10	39	0	0	21	2	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	10	6	3	10	0	0	2	0	0	0
Cap, veh/h	5	2773	1158	51	2846	1199	146	0		70	16	57
Arrive On Green	0.00	0.78	0.78	0.03	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1485	1725	3526	1485	1500	0	1585	565	227	826
Grp Volume(v), veh/h	2	2971	35	40	1636	10	39	0	0	47	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1485	1725	1763	1485	1500	0	1585	1618	0	0
Q Serve(g_s), s	0.2	132.7	0.9	3.9	28.4	0.2	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	132.7	0.9	3.9	28.4	0.2	3.8	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.45		0.51
Lane Grp Cap(c), veh/h	5	2773	1158	51	2846	1199	146	0		143	0	0
V/C Ratio(X)	0.42	1.07	0.03	0.78	0.57	0.01	0.27	0.00		0.33	0.00	0.00
Avail Cap(c_a), veh/h	149	2773	1158	142	2846	1199	173	0		172	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.6	18.7	4.2	81.9	5.9	3.2	75.4	0.0	0.0	75.6	0.0	0.0
Incr Delay (d2), s/veh	48.9	39.9	0.0	22.1	0.9	0.0	1.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	72.6	0.4	3.6	12.8	0.1	3.0	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.5	58.6	4.2	104.0	6.7	3.2	76.3	0.0	0.0	77.0	0.0	0.0
LnGrp LOS	F	F	A	F	A	A	E	A		E	A	A
Approach Vol, veh/h		3008			1686			39	A		47	
Approach Delay, s/veh		58.0			9.0			76.3			77.0	
Approach LOS		E			A			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	144.8		18.8	11.0	140.2		18.8				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	14.0	120.5		15.0				
Max Q Clear Time (g_c+I1), s	2.2	30.4		6.4	5.9	134.7		5.8				
Green Ext Time (p_c), s	0.0	84.2		0.1	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	0	0	0	6	1	126	0	5	32	37
Future Vol, veh/h	33	0	0	0	0	6	1	126	0	5	32	37
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	43	0	0	0	0	8	1	164	0	6	42	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	6.9	8.1	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	100%	0%	7%
Vol Thru, %	99%	0%	0%	43%
Vol Right, %	0%	0%	100%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	33	6	74
LT Vol	1	33	0	5
Through Vol	126	0	0	32
RT Vol	0	0	6	37
Lane Flow Rate	165	43	8	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.057	0.008	0.102
Departure Headway (Hd)	4.062	4.763	3.902	3.826
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	877	756	922	925
Service Time	2.116	2.763	1.904	1.9
HCM Lane V/C Ratio	0.188	0.057	0.009	0.104
HCM Control Delay	8.1	8.1	6.9	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0	0.3

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1905	56	86	2967	23	41	0	62	14	1	5
Future Volume (veh/h)	8	1905	56	86	2967	23	41	0	62	14	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1841	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	8	1964	58	89	3059	24	42	0	0	14	1	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	1	1	4	0	0	3	0	0	0
Cap, veh/h	17	2671	1191	110	2877	1253	142	0		106	12	27
Arrive On Green	0.01	0.75	0.75	0.06	0.80	0.80	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1585	1795	3582	1560	1491	0	1572	1041	177	406
Grp Volume(v), veh/h	8	1964	58	89	3059	24	42	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1585	1795	1791	1560	1491	0	1572	1625	0	0
Q Serve(g_s), s	0.7	52.2	1.6	8.3	136.6	0.5	2.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	52.2	1.6	8.3	136.6	0.5	4.3	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.70		0.25
Lane Grp Cap(c), veh/h	17	2671	1191	110	2877	1253	142	0		145	0	0
V/C Ratio(X)	0.48	0.74	0.05	0.81	1.06	0.02	0.30	0.00		0.14	0.00	0.00
Avail Cap(c_a), veh/h	149	2671	1191	359	2877	1253	173	0		177	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.8	11.7	5.4	78.8	16.7	3.3	75.9	0.0	0.0	74.8	0.0	0.0
Incr Delay (d2), s/veh	19.6	1.3	0.0	13.2	36.6	0.0	1.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	24.3	0.9	7.5	69.4	0.2	3.3	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.4	13.1	5.5	92.1	53.3	3.4	77.1	0.0	0.0	75.3	0.0	0.0
LnGrp LOS	F	B	A	F	F	A	E	A		E	A	A
Approach Vol, veh/h		2030			3172			42	A		20	
Approach Delay, s/veh		13.2			54.0			77.1			75.3	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	144.1		18.4	16.4	135.3		18.4				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	34.0	100.5		15.0				
Max Q Clear Time (g_c+I1), s	2.7	138.6		3.8	10.3	54.2		6.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.2	45.8		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	38.5	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

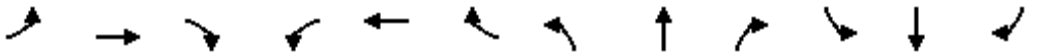
Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	0	1	0	0	1	2	56	0	5	96	42
Future Vol, veh/h	46	0	1	0	0	1	2	56	0	5	96	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	49	0	1	0	0	1	2	60	0	5	103	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	6.8	8.5	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	98%	0%	3%
Vol Thru, %	97%	0%	0%	67%
Vol Right, %	0%	2%	100%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	47	1	143
LT Vol	2	46	0	5
Through Vol	56	0	0	96
RT Vol	0	1	1	42
Lane Flow Rate	62	51	1	154
Geometry Grp	1	1	1	1
Degree of Util (X)	0.086	0.065	0.001	0.165
Departure Headway (Hd)	4.966	4.652	3.84	3.868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	775	937	918
Service Time	3.031	2.652	1.841	1.934
HCM Lane V/C Ratio	0.086	0.066	0.001	0.168
HCM Control Delay	8.5	8	6.8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0	0.6

1: Pine Grove Dr & SR 204



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Future Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1752	1811	1856	1752	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	3	4427	52	59	2439	16	57	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	10	6	3	10	0	0	2	0	0	0
Cap, veh/h	7	2722	1137	74	2838	1195	137	0		75	14	62
Arrive On Green	0.00	0.77	0.77	0.04	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1485	1725	3526	1485	1348	0	1585	628	203	879
Grp Volume(v), veh/h	3	4427	52	59	2439	16	57	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1485	1725	1763	1485	1348	0	1585	1710	0	0
Q Serve(g_s), s	0.3	130.2	1.4	5.8	74.4	0.4	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	130.2	1.4	5.8	74.4	0.4	7.1	0.0	0.0	6.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	2722	1137	74	2838	1195	137	0		151	0	0
V/C Ratio(X)	0.43	1.63	0.05	0.79	0.86	0.01	0.42	0.00		0.46	0.00	0.00
Avail Cap(c_a), veh/h	149	2722	1137	142	2838	1195	162	0		178	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.5	19.9	4.8	80.6	10.5	3.3	76.8	0.0	0.0	76.4	0.0	0.0
Incr Delay (d2), s/veh	36.1	283.6	0.0	17.0	3.7	0.0	2.0	0.0	0.0	2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	233.7	0.7	5.2	29.8	0.2	4.6	0.0	0.0	5.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.6	303.5	4.9	97.6	14.1	3.3	78.8	0.0	0.0	78.6	0.0	0.0
LnGrp LOS	F	F	A	F	B	A	E	A		E	A	A
Approach Vol, veh/h		4482			2514			57	A		70	
Approach Delay, s/veh		300.0			16.0			78.8			78.6	
Approach LOS		F			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	144.4		19.0	13.3	137.7		19.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	14.0	120.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	76.4		8.3	7.8	132.2		9.1				
Green Ext Time (p_c), s	0.0	44.1		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	195.8	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	0	0	0	0	9	2	187	0	8	47	55
Future Vol, veh/h	49	0	0	0	0	9	2	187	0	8	47	55
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	64	0	0	0	0	12	3	243	0	10	61	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.3	9	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	100%	0%	7%
Vol Thru, %	99%	0%	0%	43%
Vol Right, %	0%	0%	100%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	49	9	110
LT Vol	2	49	0	8
Through Vol	187	0	0	47
RT Vol	0	0	9	55
Lane Flow Rate	245	64	12	143
Geometry Grp	1	1	1	1
Degree of Util (X)	0.289	0.089	0.014	0.161
Departure Headway (Hd)	4.245	5.046	4.215	4.054
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	852	711	849	887
Service Time	2.245	3.069	2.24	2.068
HCM Lane V/C Ratio	0.288	0.09	0.014	0.161
HCM Control Delay	9	8.6	7.3	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.3	0	0.6

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Future Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1841	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	12	2927	87	132	4559	36	63	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	1	1	4	0	0	3	0	0	0
Cap, veh/h	23	2571	1147	154	2854	1243	148	0		110	14	29
Arrive On Green	0.01	0.72	0.72	0.09	0.80	0.80	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1585	1795	3582	1560	1518	0	1572	1062	201	421
Grp Volume(v), veh/h	12	2927	87	132	4559	36	63	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1585	1795	1791	1560	1518	0	1572	1685	0	0
Q Serve(g_s), s	1.1	123.0	2.7	12.3	135.5	0.8	3.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	123.0	2.7	12.3	135.5	0.8	6.5	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	2571	1147	154	2854	1243	148	0		153	0	0
V/C Ratio(X)	0.52	1.14	0.08	0.85	1.60	0.03	0.42	0.00		0.21	0.00	0.00
Avail Cap(c_a), veh/h	149	2571	1147	359	2854	1243	175	0		181	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.4	23.5	6.9	76.6	17.3	3.6	76.4	0.0	0.0	74.9	0.0	0.0
Incr Delay (d2), s/veh	17.0	67.6	0.1	12.4	270.4	0.0	1.9	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	89.3	1.5	10.2	230.5	0.4	5.0	0.0	0.0	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.4	91.0	6.9	89.1	287.7	3.6	78.3	0.0	0.0	75.5	0.0	0.0
LnGrp LOS	F	F	A	F	F	A	E	A		E	A	A
Approach Vol, veh/h		3026			4727			63	A		32	
Approach Delay, s/veh		88.7			280.0			78.3			75.5	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	143.0		18.9	20.6	130.5		18.9				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	34.0	100.5		15.0				
Max Q Clear Time (g_c+I1), s	3.1	137.5		4.8	14.3	125.0		8.5				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.3	0.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		203.8
HCM 6th LOS		F

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	0	2	0	0	2	3	84	0	8	144	62
Future Vol, veh/h	68	0	2	0	0	2	3	84	0	8	144	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	73	0	2	0	0	2	3	90	0	9	155	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

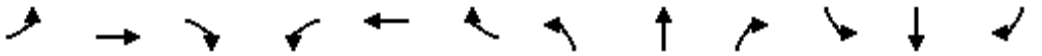
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.2	9	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	97%	0%	4%
Vol Thru, %	97%	0%	0%	67%
Vol Right, %	0%	3%	100%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	70	2	214
LT Vol	3	68	0	8
Through Vol	84	0	0	144
RT Vol	0	2	2	62
Lane Flow Rate	94	75	2	230
Geometry Grp	1	1	1	1
Degree of Util (X)	0.135	0.102	0.002	0.259
Departure Headway (Hd)	5.179	4.896	4.127	4.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	695	734	868	891
Service Time	3.192	2.914	2.149	2.055
HCM Lane V/C Ratio	0.135	0.102	0.002	0.258
HCM Control Delay	9	8.5	7.2	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0	1

APPENDIX I

CAPACITY ANALYSIS REPORTS, BUILD CONDITIONS

1: Pine Grove Dr & SR 204



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2822	82	71	1555	10	69	0	173	20	2	23
Future Volume (veh/h)	2	2822	82	71	1555	10	69	0	173	20	2	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1870	1856	1752	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	2	2940	85	74	1620	10	72	0	0	21	2	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	3	2	3	10	0	0	1	0	0	0
Cap, veh/h	5	2692	1191	92	2843	1197	148	0		74	16	62
Arrive On Green	0.00	0.76	0.76	0.05	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1572	1781	3526	1485	1506	0	1598	612	230	878
Grp Volume(v), veh/h	2	2940	85	74	1620	10	72	0	0	47	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1572	1781	1763	1485	1506	0	1598	1719	0	0
Q Serve(g_s), s	0.2	128.8	2.4	7.0	28.0	0.2	3.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	128.8	2.4	7.0	28.0	0.2	7.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.45		0.51
Lane Grp Cap(c), veh/h	5	2692	1191	92	2843	1197	148	0		152	0	0
V/C Ratio(X)	0.42	1.09	0.07	0.81	0.57	0.01	0.49	0.00		0.31	0.00	0.00
Avail Cap(c_a), veh/h	149	2692	1191	147	2843	1197	173	0		179	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.6	20.6	5.3	79.8	5.9	3.2	76.8	0.0	0.0	75.5	0.0	0.0
Incr Delay (d2), s/veh	48.9	48.3	0.1	15.4	0.8	0.0	2.4	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	78.3	1.2	6.4	12.7	0.1	5.8	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.5	68.9	5.3	95.1	6.7	3.2	79.3	0.0	0.0	76.6	0.0	0.0
LnGrp LOS	F	F	A	F	A	A	E	A		E	A	A
Approach Vol, veh/h		3027			1704			72	A		47	
Approach Delay, s/veh		67.2			10.5			79.3			76.6	
Approach LOS		E			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	144.6		19.0	14.8	136.3		19.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	14.0	120.5		15.0				
Max Q Clear Time (g_c+I1), s	2.2	30.0		6.3	9.0	130.8		9.6				
Green Ext Time (p_c), s	0.0	84.2		0.1	0.1	0.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	47.5	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	3	0	2	1	14	1	122	8	5	34	38
Future Vol, veh/h	32	3	0	2	1	14	1	122	8	5	34	38
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	42	4	0	3	1	18	1	158	10	6	44	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.2	8.1	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	91%	12%	6%
Vol Thru, %	93%	9%	6%	44%
Vol Right, %	6%	0%	82%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	35	17	77
LT Vol	1	32	2	5
Through Vol	122	3	1	34
RT Vol	8	0	14	38
Lane Flow Rate	170	45	22	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.192	0.06	0.025	0.107
Departure Headway (Hd)	4.058	4.782	4.057	3.863
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	876	753	888	913
Service Time	2.124	2.783	2.058	1.949
HCM Lane V/C Ratio	0.194	0.06	0.025	0.11
HCM Control Delay	8.1	8.1	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0.1	0.4

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	85	157	11	82	73
Future Vol, veh/h	4	85	157	11	82	73
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	4	92	171	12	89	79

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	434	177	0	0	183	0
Stage 1	177	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	583	871	-	-	1404	-
Stage 1	859	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	546	871	-	-	1404	-
Mov Cap-2 Maneuver	546	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	848	1404	-
HCM Lane V/C Ratio	-	-	0.114	0.063	-
HCM Control Delay (s)	-	-	9.8	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	5	5	2	0	12
Future Vol, veh/h	11	5	5	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	5	2	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	7	0	-	0	35	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1627	-	-	-	983	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1627	-	-	-	976	1083
Mov Cap-2 Maneuver	-	-	-	-	976	-
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	SB
HCM Control Delay, s	5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1627	-	-	-	1083
HCM Lane V/C Ratio	0.007	-	-	-	0.012
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1885	97	138	2936	23	92	0	101	14	1	5
Future Volume (veh/h)	8	1885	97	138	2936	23	92	0	101	14	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1885	1841	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	8	1943	100	142	3027	24	95	0	0	14	1	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	1	1	1	4	0	0	2	0	0	0
Cap, veh/h	17	2534	1139	165	2850	1241	153	0		123	13	33
Arrive On Green	0.01	0.71	0.71	0.09	0.80	0.80	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	3554	1598	1795	3582	1560	1484	0	1585	1161	175	445
Grp Volume(v), veh/h	8	1943	100	142	3027	24	95	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1598	1795	1791	1560	1484	0	1585	1781	0	0
Q Serve(g_s), s	0.7	58.8	3.3	13.3	135.3	0.5	8.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	58.8	3.3	13.3	135.3	0.5	10.7	0.0	0.0	1.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.70		0.25
Lane Grp Cap(c), veh/h	17	2534	1139	165	2850	1241	153	0		169	0	0
V/C Ratio(X)	0.48	0.77	0.09	0.86	1.06	0.02	0.62	0.00		0.12	0.00	0.00
Avail Cap(c_a), veh/h	149	2534	1139	359	2850	1241	173	0		189	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.8	15.4	7.5	76.1	17.4	3.6	77.6	0.0	0.0	73.6	0.0	0.0
Incr Delay (d2), s/veh	19.6	1.7	0.1	12.3	36.3	0.0	5.5	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	28.6	1.9	10.8	69.8	0.3	7.8	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.4	17.2	7.5	88.5	53.7	3.6	83.1	0.0	0.0	73.9	0.0	0.0
LnGrp LOS	F	B	A	F	F	A	F	A		E	A	A
Approach Vol, veh/h		2051			3193			95	A		20	
Approach Delay, s/veh		17.0			54.9			83.1			73.9	
Approach LOS		B			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	142.8		19.7	21.6	128.7		19.7				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	34.0	100.5		15.0				
Max Q Clear Time (g_c+I1), s	2.7	137.3		3.7	15.3	60.8		12.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.4	39.2		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	5	1	2	1	7	2	56	5	5	99	43
Future Vol, veh/h	44	5	1	2	1	7	2	56	5	5	99	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	47	5	1	2	1	8	2	60	5	5	106	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.1	8.5	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	88%	20%	3%
Vol Thru, %	89%	10%	10%	67%
Vol Right, %	8%	2%	70%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	50	10	147
LT Vol	2	44	2	5
Through Vol	56	5	1	99
RT Vol	5	1	7	43
Lane Flow Rate	68	54	11	158
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.07	0.012	0.171
Departure Headway (Hd)	4.945	4.668	4.09	3.896
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	718	772	880	909
Service Time	3.02	2.668	2.092	1.972
HCM Lane V/C Ratio	0.095	0.07	0.013	0.174
HCM Control Delay	8.5	8	7.1	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0	0.6

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	95	98	9	94	142
Future Vol, veh/h	5	95	98	9	94	142
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	5	103	107	10	102	154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	470	112	0	0	117	0
Stage 1	112	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	556	947	-	-	1484	-
Stage 1	918	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	518	947	-	-	1484	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	663	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	909	1484	-
HCM Lane V/C Ratio	-	-	0.12	0.069	-
HCM Control Delay (s)	-	-	9.5	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	5.8

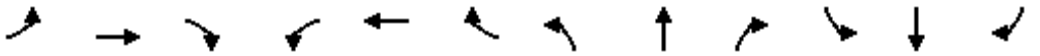
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	1	1	1	9
Future Vol, veh/h	10	5	1	1	1	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	5	1	1	1	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2	0	-	0	29	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1634	-	-	-	991	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1634	-	-	-	984	1088
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1634	-	-	-	1077
HCM Lane V/C Ratio	0.007	-	-	-	0.01
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

1: Pine Grove Dr & SR 204



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Future Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1870	1856	1752	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	3	4396	102	94	2422	16	91	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	3	2	3	10	0	0	1	0	0	0
Cap, veh/h	7	2620	1159	113	2809	1183	149	0		82	17	72
Arrive On Green	0.00	0.74	0.74	0.06	0.80	0.80	0.08	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1810	3554	1572	1781	3526	1485	1354	0	1598	650	219	920
Grp Volume(v), veh/h	3	4396	102	94	2422	16	91	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1572	1781	1763	1485	1354	0	1598	1788	0	0
Q Serve(g_s), s	0.3	125.3	3.1	8.9	75.8	0.4	5.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	125.3	3.1	8.9	75.8	0.4	11.3	0.0	0.0	6.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	2620	1159	113	2809	1183	149	0		171	0	0
V/C Ratio(X)	0.43	1.68	0.09	0.83	0.86	0.01	0.61	0.00		0.41	0.00	0.00
Avail Cap(c_a), veh/h	149	2620	1159	147	2809	1183	162	0		186	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	84.5	22.3	6.3	78.7	11.2	3.5	77.5	0.0	0.0	75.1	0.0	0.0
Incr Delay (d2), s/veh	36.1	306.7	0.1	25.6	3.8	0.0	5.7	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	243.5	1.7	8.4	31.0	0.2	7.6	0.0	0.0	5.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.6	329.0	6.3	104.3	15.0	3.6	83.2	0.0	0.0	76.7	0.0	0.0
LnGrp LOS	F	F	A	F	B	A	F	A		E	A	A
Approach Vol, veh/h		4501			2532			91	A		70	
Approach Delay, s/veh		321.6			18.2			83.2			76.7	
Approach LOS		F			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	143.0		20.4	16.8	132.8		20.4				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	14.0	120.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	77.8		8.3	10.9	127.3		13.3				
Green Ext Time (p_c), s	0.0	42.7		0.1	0.1	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	209.4	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	3	0	2	1	17	2	183	8	8	49	56
Future Vol, veh/h	48	3	0	2	1	17	2	183	8	8	49	56
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	62	4	0	3	1	22	3	238	10	10	64	73
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.5	9.1	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	94%	10%	7%
Vol Thru, %	95%	6%	5%	43%
Vol Right, %	4%	0%	85%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	51	20	113
LT Vol	2	48	2	8
Through Vol	183	3	1	49
RT Vol	8	0	17	56
Lane Flow Rate	251	66	26	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.296	0.093	0.031	0.167
Departure Headway (Hd)	4.254	5.076	4.354	4.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	847	707	822	876
Service Time	2.267	3.099	2.38	2.12
HCM Lane V/C Ratio	0.296	0.093	0.032	0.168
HCM Control Delay	9.1	8.6	7.5	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.3	0.1	0.6

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	85	237	11	82	109
Future Vol, veh/h	4	85	237	11	82	109
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	4	92	258	12	89	118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	560	264	0	0	270	0
Stage 1	264	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	493	780	-	-	1305	-
Stage 1	785	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	459	780	-	-	1305	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	785	-	-	-	-	-
Stage 2	707	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	3.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	756	1305	-
HCM Lane V/C Ratio	-	-	0.128	0.068	-
HCM Control Delay (s)	-	-	10.5	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	4.4

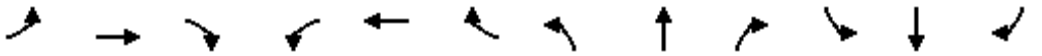
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	8	8	2	0	12
Future Vol, veh/h	11	8	8	2	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	9	9	2	0	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	43	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1621	-	-	-	973	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1621	-	-	-	966	1077
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1621	-	-	-	1077
HCM Lane V/C Ratio	0.007	-	-	-	0.012
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

1: Pine Grove Dr & SR 204



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Future Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1885	1841	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	12	2906	129	186	4527	36	115	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	1	1	1	4	0	0	2	0	0	0
Cap, veh/h	23	2402	1080	209	2793	1216	173	0		136	16	39
Arrive On Green	0.01	0.68	0.68	0.12	0.78	0.78	0.09	0.00	0.00	0.09	0.09	0.09
Sat Flow, veh/h	1810	3554	1598	1795	3582	1560	1498	0	1585	1154	189	448
Grp Volume(v), veh/h	12	2906	129	186	4527	36	115	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1598	1795	1791	1560	1498	0	1585	1791	0	0
Q Serve(g_s), s	1.1	114.9	4.8	17.4	132.5	0.9	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	114.9	4.8	17.4	132.5	0.9	12.8	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	2402	1080	209	2793	1216	173	0		192	0	0
V/C Ratio(X)	0.52	1.21	0.12	0.89	1.62	0.03	0.67	0.00		0.17	0.00	0.00
Avail Cap(c_a), veh/h	149	2402	1080	359	2793	1216	174	0		193	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	83.4	27.5	9.7	74.0	18.7	4.2	76.4	0.0	0.0	72.1	0.0	0.0
Incr Delay (d2), s/veh	17.0	98.6	0.1	13.3	281.1	0.0	9.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	104.1	2.9	13.4	236.0	0.5	9.3	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.4	126.1	9.8	87.4	299.9	4.3	85.5	0.0	0.0	72.5	0.0	0.0
LnGrp LOS	F	F	A	F	F	A	F	A		E	A	A
Approach Vol, veh/h		3047			4749			115	A		32	
Approach Delay, s/veh		121.1			289.3			85.5			72.5	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	140.0		21.8	25.8	122.4		21.8				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	120.5		15.0	34.0	100.5		15.0				
Max Q Clear Time (g_c+I1), s	3.1	134.5		4.8	19.4	116.9		14.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.4	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	220.9	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	5	2	2	1	8	3	84	5	8	147	63
Future Vol, veh/h	66	5	2	2	1	8	3	84	5	8	147	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	71	5	2	2	1	9	3	90	5	9	158	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.4	9.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	90%	18%	4%
Vol Thru, %	91%	7%	9%	67%
Vol Right, %	5%	3%	73%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	73	11	218
LT Vol	3	66	2	8
Through Vol	84	5	1	147
RT Vol	5	2	8	63
Lane Flow Rate	99	78	12	234
Geometry Grp	1	1	1	1
Degree of Util (X)	0.142	0.107	0.014	0.266
Departure Headway (Hd)	5.184	4.919	4.357	4.085
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	693	730	822	884
Service Time	3.2	2.939	2.382	2.095
HCM Lane V/C Ratio	0.143	0.107	0.015	0.265
HCM Control Delay	9.1	8.5	7.4	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0	1.1

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	95	149	9	94	213
Future Vol, veh/h	5	95	149	9	94	213
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	5	103	162	10	102	232

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	603	167	0	0	172	0
Stage 1	167	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	465	882	-	-	1417	-
Stage 1	867	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	432	882	-	-	1417	-
Mov Cap-2 Maneuver	432	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	838	1417	-
HCM Lane V/C Ratio	-	-	0.13	0.072	-
HCM Control Delay (s)	-	-	9.9	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	8	2	1	1	9
Future Vol, veh/h	10	8	2	1	1	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	9	2	1	1	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	34	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1632	-	-	-	984	1087
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1632	-	-	-	977	1087
Mov Cap-2 Maneuver	-	-	-	-	977	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1632	-	-	-	1075
HCM Lane V/C Ratio	0.007	-	-	-	0.01
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

APPENDIX J

ICE SPREADSHEETS

GDOT INTERSECTION CONTROL EVALUATION (ICE) TOOL

ICE Version 2.15 | Revised 07/01/2019

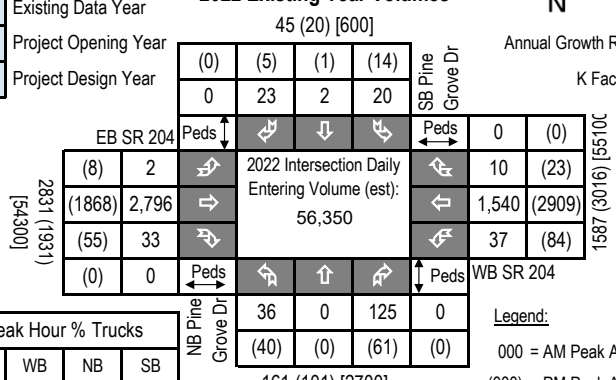
GDOT PI # (or N/A):		Request By:	Parker's Kitchen
County:	Chatham	GDOT District:	5 - Jesup
Major (State) Road:	SR 204	Speed Limit:	55 mph
Minor (Crossing) ST:	Pine Grove Dr	Speed Limit:	< 35 mph
Major ST Direction:	East/West	Area Type:	Urban
Intersection Control:	Signal (turn lanes on mainline)		
Prepared By:	Lumin8	Analyst:	CR
Date:	3/18/2022	Project ID:	
Project Purpose:	Evaluate impacts on intersection due to proposed C-store development.		

2022	Existing Data Year
2023	Project Opening Year
2043	Project Design Year

Annual Growth Rate: 2.0%

K Factor*: 9%

2022 Existing Year Volumes



Peak Hour % Trucks			
EB	WB	NB	SB
2%	2%	2%	0%

Legend:

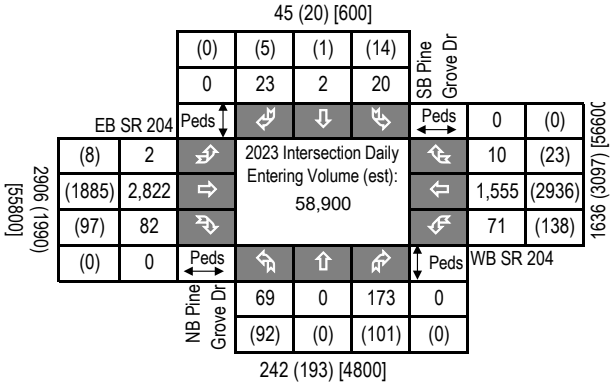
000 = AM Peak Approach Vol

(000) = PM Peak Approach Vol

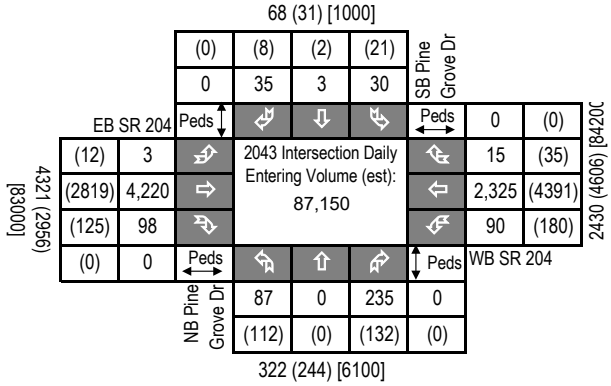
[000] = ADT Volume (Estimate)

Approach Splits: SR 204 - 0.97 / Pine Grove Dr - 0.03

2023 Opening Year Volumes



2043 Design Year Volumes



Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

Tool Goal: The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

Requirements: An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the "**Waiver**" tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

Two-Stage Process: A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

Stage 1: Screening Decision Record Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

Stage 2: Alternative Selection Decision Record Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.15 | Revised 07/01/2019

Waiver Request - N/A

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection consists of a public roadway intersecting a divided, multilane roadway where the access will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
   - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
   - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
   - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
   - The proposed changes are not expected to adversely affect safety

If only one alternative is determined to be feasible from the ICE Stage 1, then a waiver may be submitted in lieu of completing ICE Stage 2. The waiver must clearly explain why there is no other feasible alternative. A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

Project Information:

Location:	SR 204 @ Pine Grove Dr	GDOT PI # (or N/A):	0000000
County:	Chatham	Requested By:	Parker's Kitchen
GDOT District:	5 - Jesup	Prepared By:	Lumin8
Area Type:	Urban	Analyst:	CR
Existing Intersection Control:	Signal (turn lanes on mainline)	Date:	3/18/2022
		Waiver Request Type:	--- select one ---

Traffic and Operations Data:[1]

Intersection meets signal/AWS warrants?	Meets Signal Warrants	
Traffic Analysis Type:	Intersection Delay	
Existing Avg Daily Traffic (Major Street):	54,700	
Existing Avg Daily Traffic (Minor Street):	2,700	
Analysis Period:	AM Peak	PM Peak
2023 Opening Yr Peak Hour Intersection Delay:	79.3 sec	83.1 sec
2023 Opening Yr Peak Hour Intersection V/C:	1.09	1.06
2043 Design Yr Peak Hour Intersection Delay:	321.6 sec	289.3 sec
2043 Design Yr Peak Hour Intersection V/C:	1.68	1.62

[1]Crash data required for all existing intersections. ADT's required if available (from data collected or nearest GDOT count station site). Capacity data is optional unless needed to justify basis of the waiver request.

Crash Data (Required):[1]

Crash Type	**Crash Data:** Enter most recent 5 years of crash data	*Crash Severity* PDO	Injury Crash*	Fatal Crash*	
	Angle	5	3	1	<-
	Head-On	0	0	0	
	Rear End	87	12	0	
	Sideswipe - same	9	0	0	
	Sideswipe - opposite	1	0	0	
	Not Collision w/Motor Veh	2	0	0	
	TOTALS:	**104**	**15**	**1**	

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):	The proposed C-store development is expected to have minor impacts on the intersection of SR 204 and Pine Grove Road. The intersection maintains an acceptable LOS between 2023 no-build and build conditions. The main reason for the intersection beginning to fail is SR 204 being oversaturated with not enough capacity. The delay results above are based on worst approach.
Proposed Intersection Control:	Traffic Signal

REQUESTED BY: _____ Date: _____

Title: _____

APPROVED BY: _____ Date: _____

Name: _____

District Engineer or (Approved Delegate)

APPENDIX K

CAPACITY ANALYSIS REPORTS, OTHER IMPROVEMENTS

SR 204 & PINE GROVE DR
6-LANES

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Future Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1752	1811	1856	1752	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	3	4427	52	59	2439	16	57	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	10	6	3	10	0	0	2	0	0	0
Cap, veh/h	7	3966	1153	74	4132	1211	128	0		72	13	59
Arrive On Green	0.00	0.78	0.78	0.04	0.82	0.82	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	5106	1485	1725	5066	1485	1322	0	1585	646	194	889
Grp Volume(v), veh/h	3	4427	52	59	2439	16	57	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1485	1725	1689	1485	1322	0	1585	1729	0	0
Q Serve(g_s), s	0.3	139.8	1.5	6.1	30.8	0.4	1.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	139.8	1.5	6.1	30.8	0.4	7.8	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	3966	1153	74	4132	1211	128	0		144	0	0
V/C Ratio(X)	0.43	1.12	0.05	0.80	0.59	0.01	0.45	0.00		0.49	0.00	0.00
Avail Cap(c_a), veh/h	141	3966	1153	134	4132	1211	151	0		170	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	89.5	20.1	4.7	85.4	5.9	3.1	82.1	0.0	0.0	81.6	0.0	0.0
Incr Delay (d2), s/veh	36.5	56.4	0.0	17.4	0.6	0.0	2.4	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	84.3	0.7	5.5	13.1	0.2	4.9	0.0	0.0	6.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.9	76.5	4.7	102.7	6.5	3.1	84.5	0.0	0.0	84.1	0.0	0.0
LnGrp LOS	F	F	A	F	A	A	F	A		F	A	A
Approach Vol, veh/h		4482			2514			57	A		70	
Approach Delay, s/veh		75.7			8.8			84.5			84.1	
Approach LOS		E			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	154.3		19.0	13.7	147.3		19.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	14.0	130.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	32.8		8.7	8.1	141.8		9.8				
Green Ext Time (p_c), s	0.0	97.1		0.1	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	52.2	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Future Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1841	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	12	2927	87	132	4559	36	63	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	1	1	4	0	0	3	0	0	0
Cap, veh/h	23	3751	1164	153	4156	1260	141	0		104	13	28
Arrive On Green	0.01	0.73	0.73	0.09	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	5106	1585	1795	5147	1560	1523	0	1572	1070	201	424
Grp Volume(v), veh/h	12	2927	87	132	4559	36	63	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1585	1795	1716	1560	1523	0	1572	1696	0	0
Q Serve(g_s), s	1.2	64.2	2.8	13.1	145.3	0.8	3.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	64.2	2.8	13.1	145.3	0.8	6.9	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	3751	1164	153	4156	1260	141	0		146	0	0
V/C Ratio(X)	0.53	0.78	0.07	0.86	1.10	0.03	0.45	0.00		0.22	0.00	0.00
Avail Cap(c_a), veh/h	141	3751	1164	339	4156	1260	165	0		172	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	88.3	14.8	6.7	81.3	17.3	3.4	81.5	0.0	0.0	79.9	0.0	0.0
Incr Delay (d2), s/veh	17.8	1.3	0.1	13.0	48.1	0.0	2.2	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	29.3	1.6	10.7	78.2	0.4	5.4	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	16.1	6.8	94.3	65.4	3.5	83.8	0.0	0.0	80.6	0.0	0.0
LnGrp LOS	F	B	A	F	F	A	F	A		F	A	A
Approach Vol, veh/h		3026			4727			63	A		32	
Approach Delay, s/veh		16.2			65.8			83.8			80.6	
Approach LOS		B			E			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	152.8		18.9	21.4	139.7		18.9				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	34.0	110.5		15.0				
Max Q Clear Time (g_c+I1), s	3.2	147.3		5.0	15.1	66.2		8.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.3	44.3		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	46.9	
HCM 6th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Future Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1870	1856	1752	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	3	4396	102	94	2422	16	91	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	3	2	3	10	0	0	1	0	0	0
Cap, veh/h	7	3800	1170	112	4069	1192	146	0		81	17	73
Arrive On Green	0.00	0.74	0.74	0.06	0.80	0.80	0.08	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1810	5106	1572	1781	5066	1485	1336	0	1598	660	211	922
Grp Volume(v), veh/h	3	4396	102	94	2422	16	91	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1572	1781	1689	1485	1336	0	1598	1793	0	0
Q Serve(g_s), s	0.3	133.9	3.2	9.4	32.4	0.4	5.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	133.9	3.2	9.4	32.4	0.4	12.2	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	3800	1170	112	4069	1192	146	0		171	0	0
V/C Ratio(X)	0.43	1.16	0.09	0.84	0.60	0.01	0.63	0.00		0.41	0.00	0.00
Avail Cap(c_a), veh/h	141	3800	1170	139	4069	1192	152	0		177	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	89.5	23.0	6.3	83.4	6.7	3.5	82.1	0.0	0.0	79.5	0.0	0.0
Incr Delay (d2), s/veh	36.5	74.0	0.1	29.3	0.6	0.0	7.4	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	94.7	1.8	8.9	14.3	0.2	8.0	0.0	0.0	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.9	97.0	6.4	112.7	7.3	3.5	89.5	0.0	0.0	81.0	0.0	0.0
LnGrp LOS	F	F	A	F	A	A	F	A		F	A	A
Approach Vol, veh/h		4501			2532			91	A		70	
Approach Delay, s/veh		95.0			11.2			89.5			81.0	
Approach LOS		F			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	152.1		21.2	17.3	141.4		21.2				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	14.0	130.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	34.4		8.7	11.4	135.9		14.2				
Green Ext Time (p_c), s	0.0	95.5		0.1	0.0	0.0		0.0				

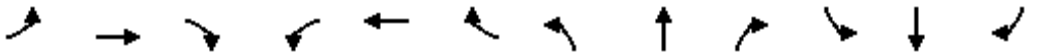
Intersection Summary		
HCM 6th Ctrl Delay		65.3
HCM 6th LOS		E

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Future Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1885	1841	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	12	2906	129	186	4527	36	115	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	1	1	1	4	0	0	2	0	0	0
Cap, veh/h	23	3508	1098	208	4067	1233	165	0		131	16	38
Arrive On Green	0.01	0.69	0.69	0.12	0.79	0.79	0.08	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1810	5106	1598	1795	5147	1560	1502	0	1585	1165	189	451
Grp Volume(v), veh/h	12	2906	129	186	4527	36	115	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1598	1795	1716	1560	1502	0	1585	1805	0	0
Q Serve(g_s), s	1.2	74.4	4.9	18.4	142.2	0.9	10.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	74.4	4.9	18.4	142.2	0.9	13.6	0.0	0.0	2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	3508	1098	208	4067	1233	165	0		184	0	0
V/C Ratio(X)	0.53	0.83	0.12	0.90	1.11	0.03	0.70	0.00		0.17	0.00	0.00
Avail Cap(c_a), veh/h	141	3508	1098	339	4067	1233	165	0		184	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	88.3	20.5	9.6	78.5	18.9	4.1	81.6	0.0	0.0	77.0	0.0	0.0
Incr Delay (d2), s/veh	17.8	2.0	0.1	16.1	54.9	0.0	12.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	35.3	3.0	14.3	83.6	0.5	9.9	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	22.4	9.7	94.7	73.8	4.1	93.6	0.0	0.0	77.4	0.0	0.0
LnGrp LOS	F	C	A	F	F	A	F	A		E	A	A
Approach Vol, veh/h		3047			4749			115	A		32	
Approach Delay, s/veh		22.2			74.1			93.6			77.4	
Approach LOS		C			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	149.7		22.0	26.8	131.2		22.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	34.0	110.5		15.0				
Max Q Clear Time (g_c+I1), s	3.2	144.2		4.9	20.4	76.4		15.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.4	34.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	54.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

SISR 204 & PINE GROVE DR
8-LANES

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Future Volume (veh/h)	3	4250	50	57	2341	15	55	0	190	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1752	1811	1856	1752	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	3	4427	52	59	2439	16	57	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	10	6	3	10	0	0	2	0	0	0
Cap, veh/h	7	4997	1153	74	5207	1211	128	0		72	13	59
Arrive On Green	0.00	0.78	0.78	0.04	0.82	0.82	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	6434	1485	1725	6383	1485	1322	0	1585	646	194	889
Grp Volume(v), veh/h	3	4427	52	59	2439	16	57	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1609	1485	1725	1596	1485	1322	0	1585	1729	0	0
Q Serve(g_s), s	0.3	88.7	1.5	6.1	20.5	0.4	1.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	88.7	1.5	6.1	20.5	0.4	7.8	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	4997	1153	74	5207	1211	128	0		144	0	0
V/C Ratio(X)	0.43	0.89	0.05	0.80	0.47	0.01	0.45	0.00		0.49	0.00	0.00
Avail Cap(c_a), veh/h	141	4997	1153	134	5207	1211	151	0		170	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	89.5	14.4	4.7	85.4	4.9	3.1	82.1	0.0	0.0	81.6	0.0	0.0
Incr Delay (d2), s/veh	36.5	2.3	0.0	17.4	0.3	0.0	2.4	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	34.6	0.7	5.5	9.0	0.2	4.9	0.0	0.0	6.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.9	16.7	4.7	102.7	5.3	3.1	84.5	0.0	0.0	84.1	0.0	0.0
LnGrp LOS	F	B	A	F	A	A	F	A		F	A	A
Approach Vol, veh/h		4482			2514			57	A		70	
Approach Delay, s/veh		16.7			7.5			84.5			84.1	
Approach LOS		B			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	154.3		19.0	13.7	147.3		19.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	14.0	130.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	22.5		8.7	8.1	90.7		9.8				
Green Ext Time (p_c), s	0.0	107.3		0.1	0.0	39.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	14.6	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Future Volume (veh/h)	12	2839	84	128	4422	35	61	0	93	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1841	1900	1900	1856	1900	1900	1900
Adj Flow Rate, veh/h	12	2927	87	132	4559	36	63	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	1	1	4	0	0	3	0	0	0
Cap, veh/h	23	4727	1164	153	5237	1260	141	0		104	13	28
Arrive On Green	0.01	0.73	0.73	0.09	0.81	0.81	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1810	6434	1585	1795	6485	1560	1523	0	1572	1070	201	424
Grp Volume(v), veh/h	12	2927	87	132	4559	36	63	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1609	1585	1795	1621	1560	1523	0	1572	1696	0	0
Q Serve(g_s), s	1.2	39.9	2.8	13.1	82.0	0.8	3.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	39.9	2.8	13.1	82.0	0.8	6.9	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	4727	1164	153	5237	1260	141	0		146	0	0
V/C Ratio(X)	0.53	0.62	0.07	0.86	0.87	0.03	0.45	0.00		0.22	0.00	0.00
Avail Cap(c_a), veh/h	141	4727	1164	339	5237	1260	165	0		172	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	88.3	11.6	6.7	81.3	11.2	3.4	81.5	0.0	0.0	79.9	0.0	0.0
Incr Delay (d2), s/veh	17.8	0.4	0.1	13.0	2.2	0.0	2.2	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	18.3	1.6	10.7	30.2	0.4	5.4	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	12.0	6.8	94.3	13.5	3.5	83.8	0.0	0.0	80.6	0.0	0.0
LnGrp LOS	F	B	A	F	B	A	F	A		F	A	A
Approach Vol, veh/h		3026			4727			63	A		32	
Approach Delay, s/veh		12.2			15.6			83.8			80.6	
Approach LOS		B			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	152.8		18.9	21.4	139.7		18.9				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	34.0	110.5		15.0				
Max Q Clear Time (g_c+I1), s	3.2	84.0		5.0	15.1	41.9		8.9				
Green Ext Time (p_c), s	0.0	46.3		0.0	0.3	68.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay	15.1	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Future Volume (veh/h)	3	4220	98	90	2325	15	87	0	235	30	3	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1870	1856	1752	1900	1900	1885	1900	1900	1900
Adj Flow Rate, veh/h	3	4396	102	94	2422	16	91	0	0	31	3	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	3	2	3	10	0	0	1	0	0	0
Cap, veh/h	7	4788	1170	112	5127	1192	146	0		81	17	73
Arrive On Green	0.00	0.74	0.74	0.06	0.80	0.80	0.08	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1810	6434	1572	1781	6383	1485	1336	0	1598	660	211	922
Grp Volume(v), veh/h	3	4396	102	94	2422	16	91	0	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1810	1609	1572	1781	1596	1485	1336	0	1598	1793	0	0
Q Serve(g_s), s	0.3	99.3	3.2	9.4	21.7	0.4	5.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	99.3	3.2	9.4	21.7	0.4	12.2	0.0	0.0	6.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.44		0.51
Lane Grp Cap(c), veh/h	7	4788	1170	112	5127	1192	146	0		171	0	0
V/C Ratio(X)	0.43	0.92	0.09	0.84	0.47	0.01	0.63	0.00		0.41	0.00	0.00
Avail Cap(c_a), veh/h	141	4788	1170	139	5127	1192	152	0		177	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	89.5	18.6	6.3	83.4	5.6	3.5	82.1	0.0	0.0	79.5	0.0	0.0
Incr Delay (d2), s/veh	36.5	3.5	0.1	29.3	0.3	0.0	7.4	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	40.9	1.8	8.9	9.8	0.2	8.0	0.0	0.0	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.9	22.1	6.4	112.7	5.9	3.5	89.5	0.0	0.0	81.0	0.0	0.0
LnGrp LOS	F	C	A	F	A	A	F	A		F	A	A
Approach Vol, veh/h		4501			2532			91	A		70	
Approach Delay, s/veh		21.8			9.9			89.5			81.0	
Approach LOS		C			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	152.1		21.2	17.3	141.4		21.2				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	14.0	130.5		15.0				
Max Q Clear Time (g_c+I1), s	2.3	23.7		8.7	11.4	101.3		14.2				
Green Ext Time (p_c), s	0.0	106.1		0.1	0.0	29.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

1: Pine Grove Dr & SR 204

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Future Volume (veh/h)	12	2819	125	180	4391	35	112	0	132	21	2	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1885	1885	1885	1841	1900	1900	1870	1900	1900	1900
Adj Flow Rate, veh/h	12	2906	129	186	4527	36	115	0	0	22	2	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	2	1	1	1	4	0	0	2	0	0	0
Cap, veh/h	23	4421	1098	208	5125	1233	165	0		131	16	38
Arrive On Green	0.01	0.69	0.69	0.12	0.79	0.79	0.08	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1810	6434	1598	1795	6485	1560	1502	0	1585	1165	189	451
Grp Volume(v), veh/h	12	2906	129	186	4527	36	115	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1609	1598	1795	1621	1560	1502	0	1585	1805	0	0
Q Serve(g_s), s	1.2	46.4	4.9	18.4	87.3	0.9	10.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	46.4	4.9	18.4	87.3	0.9	13.6	0.0	0.0	2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.69		0.25
Lane Grp Cap(c), veh/h	23	4421	1098	208	5125	1233	165	0		184	0	0
V/C Ratio(X)	0.53	0.66	0.12	0.90	0.88	0.03	0.70	0.00		0.17	0.00	0.00
Avail Cap(c_a), veh/h	141	4421	1098	339	5125	1233	165	0		184	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	88.3	16.1	9.6	78.5	13.1	4.1	81.6	0.0	0.0	77.0	0.0	0.0
Incr Delay (d2), s/veh	17.8	0.5	0.1	16.1	2.5	0.0	12.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	22.0	3.0	14.3	33.5	0.5	9.9	0.0	0.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	16.6	9.7	94.7	15.7	4.1	93.6	0.0	0.0	77.4	0.0	0.0
LnGrp LOS	F	B	A	F	B	A	F	A		E	A	A
Approach Vol, veh/h		3047			4749			115	A		32	
Approach Delay, s/veh		16.6			18.7			93.6			77.4	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	149.7		22.0	26.8	131.2		22.0				
Change Period (Y+Rc), s	6.0	7.5		7.0	6.0	7.5		7.0				
Max Green Setting (Gmax), s	14.0	130.5		15.0	34.0	110.5		15.0				
Max Q Clear Time (g_c+I1), s	3.2	89.3		4.9	20.4	48.4		15.6				
Green Ext Time (p_c), s	0.0	41.1		0.0	0.4	61.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	19.2	
HCM 6th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

PROPOSED DRIVEWAYS
DW 1 AS RCUT

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	3	0	5	2	14	1	122	8	5	31	37
Future Vol, veh/h	32	3	0	5	2	14	1	122	8	5	31	37
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	42	4	0	6	3	18	1	158	10	6	40	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.3	8.1	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	91%	24%	7%
Vol Thru, %	93%	9%	10%	42%
Vol Right, %	6%	0%	67%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	35	21	73
LT Vol	1	32	5	5
Through Vol	122	3	2	31
RT Vol	8	0	14	37
Lane Flow Rate	170	45	27	95
Geometry Grp	1	1	1	1
Degree of Util (X)	0.192	0.06	0.032	0.102
Departure Headway (Hd)	4.062	4.779	4.166	3.864
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	873	754	864	912
Service Time	2.133	2.78	2.167	1.955
HCM Lane V/C Ratio	0.195	0.06	0.031	0.104
HCM Control Delay	8.1	8.1	7.3	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0.1	0.3

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	157	11	82	73
Future Vol, veh/h	0	85	157	11	82	73
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	0	92	171	12	89	79

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	177	0	0	183	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	871	-	-	1404	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	871	-	-	1404	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	4.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	871	1404	-
HCM Lane V/C Ratio	-	-	0.106	0.063	-
HCM Control Delay (s)	-	-	9.6	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	5	5	2	0	16
Future Vol, veh/h	11	5	5	2	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	5	5	2	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	7	0	-	0	35	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1627	-	-	-	983	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1627	-	-	-	976	1083
Mov Cap-2 Maneuver	-	-	-	-	976	-
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	SB
HCM Control Delay, s	5	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1627	-	-	-	1083
HCM Lane V/C Ratio	0.007	-	-	-	0.016
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	5	1	6	2	7	2	56	5	5	95	42
Future Vol, veh/h	44	5	1	6	2	7	2	56	5	5	95	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	47	5	1	6	2	8	2	60	5	5	102	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.3	8.5	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	88%	40%	4%
Vol Thru, %	89%	10%	13%	67%
Vol Right, %	8%	2%	47%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	50	15	142
LT Vol	2	44	6	5
Through Vol	56	5	2	95
RT Vol	5	1	7	42
Lane Flow Rate	68	54	16	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.07	0.019	0.165
Departure Headway (Hd)	4.949	4.662	4.259	3.902
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	773	845	905
Service Time	3.029	2.663	2.261	1.984
HCM Lane V/C Ratio	0.095	0.07	0.019	0.169
HCM Control Delay	8.5	8	7.3	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.6

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	95	98	9	94	142
Future Vol, veh/h	0	95	98	9	94	142
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	103	107	10	102	154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	112	0	0	117	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	947	-	-	1484	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	947	-	-	1484	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	947	1484	-
HCM Lane V/C Ratio	-	-	0.109	0.069	-
HCM Control Delay (s)	-	-	9.3	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	5	1	1	1	14
Future Vol, veh/h	10	5	1	1	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	5	1	1	1	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2	0	-	0	29	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1634	-	-	-	991	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1634	-	-	-	984	1088
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1634	-	-	-	1080
HCM Lane V/C Ratio	0.007	-	-	-	0.015
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	3	0	5	2	17	2	183	8	8	46	55
Future Vol, veh/h	48	3	0	5	2	17	2	183	8	8	46	55
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	62	4	0	6	3	22	3	238	10	10	60	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.7	9.1	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	94%	21%	7%
Vol Thru, %	95%	6%	8%	42%
Vol Right, %	4%	0%	71%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	51	24	109
LT Vol	2	48	5	8
Through Vol	183	3	2	46
RT Vol	8	0	17	55
Lane Flow Rate	251	66	31	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.297	0.093	0.039	0.162
Departure Headway (Hd)	4.263	5.073	4.451	4.115
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	845	707	804	873
Service Time	2.278	3.101	2.48	2.132
HCM Lane V/C Ratio	0.297	0.093	0.039	0.163
HCM Control Delay	9.1	8.6	7.7	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.3	0.1	0.6

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	237	11	82	109
Future Vol, veh/h	0	85	237	11	82	109
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	0	92	258	12	89	118

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	264	0	0	270	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	780	-	-	1305	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	780	-	-	1305	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	3.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	780	1305	-
HCM Lane V/C Ratio	-	-	0.118	0.068	-
HCM Control Delay (s)	-	-	10.2	8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	8	8	2	0	16
Future Vol, veh/h	11	8	8	2	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	12	9	9	2	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	43	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	33	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1621	-	-	-	973	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1621	-	-	-	966	1077
Mov Cap-2 Maneuver	-	-	-	-	966	-
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1621	-	-	-	1077
HCM Lane V/C Ratio	0.007	-	-	-	0.016
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	5	2	6	2	8	3	84	5	8	143	62
Future Vol, veh/h	66	5	2	6	2	8	3	84	5	8	143	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	71	5	2	6	2	9	3	90	5	9	154	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.7	9.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	90%	38%	4%
Vol Thru, %	91%	7%	12%	67%
Vol Right, %	5%	3%	50%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	73	16	213
LT Vol	3	66	6	8
Through Vol	84	5	2	143
RT Vol	5	2	8	62
Lane Flow Rate	99	78	17	229
Geometry Grp	1	1	1	1
Degree of Util (X)	0.143	0.107	0.022	0.261
Departure Headway (Hd)	5.194	4.917	4.524	4.097
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	730	791	879
Service Time	3.212	2.94	2.551	2.111
HCM Lane V/C Ratio	0.143	0.107	0.021	0.261
HCM Control Delay	9.1	8.5	7.7	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.1	1

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	95	149	9	94	213
Future Vol, veh/h	0	95	149	9	94	213
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	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	103	162	10	102	232

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	167	0	0	172	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	4.1	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	0	882	-	-	1417	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	882	-	-	1417	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	2.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	1417	-
HCM Lane V/C Ratio	-	-	0.117	0.072	-
HCM Control Delay (s)	-	-	9.6	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	8	2	1	1	14
Future Vol, veh/h	10	8	2	1	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	11	9	2	1	1	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	34	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1632	-	-	-	984	1087
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	997	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1632	-	-	-	977	1087
Mov Cap-2 Maneuver	-	-	-	-	977	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1632	-	-	-	1079
HCM Lane V/C Ratio	0.007	-	-	-	0.015
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

PROPOSED DRIVEWAYS
DW 1 AS RIRO

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	3	0	5	2	14	1	122	8	87	31	37
Future Vol, veh/h	32	3	0	5	2	14	1	122	8	87	31	37
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	42	4	0	6	3	18	1	158	10	113	40	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.6	8.3	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	91%	24%	56%
Vol Thru, %	93%	9%	10%	20%
Vol Right, %	6%	0%	67%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	131	35	21	155
LT Vol	1	32	5	87
Through Vol	122	3	2	31
RT Vol	8	0	14	37
Lane Flow Rate	170	45	27	201
Geometry Grp	1	1	1	1
Degree of Util (X)	0.201	0.063	0.033	0.237
Departure Headway (Hd)	4.248	5.027	4.415	4.232
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	847	714	812	854
Service Time	2.259	3.048	2.438	2.232
HCM Lane V/C Ratio	0.201	0.063	0.033	0.235
HCM Control Delay	8.3	8.4	7.6	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.2	0.1	0.9

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	157	11	0	155
Future Vol, veh/h	0	85	157	11	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	0	92	171	12	0	168

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	177	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	871	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	871	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	871	-
HCM Lane V/C Ratio	-	-	0.106	-
HCM Control Delay (s)	-	-	9.6	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.4	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	93	5	5	2	0	16
Future Vol, veh/h	93	5	5	2	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	101	5	5	2	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	7	0	-	0	213	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1627	-	-	-	780	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1627	-	-	-	732	1083
Mov Cap-2 Maneuver	-	-	-	-	732	-
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	832	-

Approach	EB	WB	SB
HCM Control Delay, s	7	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1627	-	-	-	1083
HCM Lane V/C Ratio	0.062	-	-	-	0.016
HCM Control Delay (s)	7.4	-	-	-	8.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	5	1	6	2	7	2	56	5	99	95	42
Future Vol, veh/h	44	5	1	6	2	7	2	56	5	99	95	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	47	5	1	6	2	8	2	60	5	106	102	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.6	8.7	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	88%	40%	42%
Vol Thru, %	89%	10%	13%	40%
Vol Right, %	8%	2%	47%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	50	15	236
LT Vol	2	44	6	99
Through Vol	56	5	2	95
RT Vol	5	1	7	42
Lane Flow Rate	68	54	16	254
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.073	0.02	0.285
Departure Headway (Hd)	5.134	4.896	4.496	4.05
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	701	735	800	873
Service Time	3.143	2.901	2.503	2.143
HCM Lane V/C Ratio	0.097	0.073	0.02	0.291
HCM Control Delay	8.7	8.3	7.6	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	1.2

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	95	98	9	0	236
Future Vol, veh/h	0	95	98	9	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	103	107	10	0	257

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	112	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	947	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	947	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	947	-
HCM Lane V/C Ratio	-	-	0.109	-
HCM Control Delay (s)	-	-	9.3	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.4	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	5	1	1	1	14
Future Vol, veh/h	104	5	1	1	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	113	5	1	1	1	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2	0	-	0	233	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	231	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1634	-	-	-	760	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	812	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1634	-	-	-	708	1088
Mov Cap-2 Maneuver	-	-	-	-	708	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	SB
HCM Control Delay, s	7	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1634	-	-	-	1050
HCM Lane V/C Ratio	0.069	-	-	-	0.016
HCM Control Delay (s)	7.4	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	3	0	5	2	17	2	183	8	90	46	55
Future Vol, veh/h	48	3	0	5	2	17	2	183	8	90	46	55
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	6	0	0	0	0	0	0	1	0	0	6	11
Mvmt Flow	62	4	0	6	3	22	3	238	10	117	60	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8	9.3	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	94%	21%	47%
Vol Thru, %	95%	6%	8%	24%
Vol Right, %	4%	0%	71%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	193	51	24	191
LT Vol	2	48	5	90
Through Vol	183	3	2	46
RT Vol	8	0	17	55
Lane Flow Rate	251	66	31	248
Geometry Grp	1	1	1	1
Degree of Util (X)	0.306	0.098	0.041	0.299
Departure Headway (Hd)	4.389	5.322	4.705	4.339
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	820	672	758	828
Service Time	2.415	3.365	2.751	2.365
HCM Lane V/C Ratio	0.306	0.098	0.041	0.3
HCM Control Delay	9.3	8.9	8	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.3	0.1	1.3

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	85	237	11	0	191
Future Vol, veh/h	0	85	237	11	0	191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	8
Mvmt Flow	0	92	258	12	0	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	264	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	780	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	780	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	780	-
HCM Lane V/C Ratio	-	-	0.118	-
HCM Control Delay (s)	-	-	10.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.4	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	93	8	8	2	0	16
Future Vol, veh/h	93	8	8	2	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	101	9	9	2	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	11	0	-	0	221	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	211	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1621	-	-	-	772	1077
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1621	-	-	-	724	1077
Mov Cap-2 Maneuver	-	-	-	-	724	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	829	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1621	-	-	-	1077
HCM Lane V/C Ratio	0.062	-	-	-	0.016
HCM Control Delay (s)	7.4	-	-	-	8.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0

2: Sweetwater Station Dr/Pine Grove Dr & Grove Point Rd

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	5	2	6	2	8	3	84	5	102	143	62
Future Vol, veh/h	66	5	2	6	2	8	3	84	5	102	143	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	5	0	0	0	0	0	50	0	0	0	0	5
Mvmt Flow	71	5	2	6	2	9	3	90	5	110	154	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	7.9	9.2	9.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	90%	38%	33%
Vol Thru, %	91%	7%	12%	47%
Vol Right, %	5%	3%	50%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	73	16	307
LT Vol	3	66	6	102
Through Vol	84	5	2	143
RT Vol	5	2	8	62
Lane Flow Rate	99	78	17	330
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.112	0.023	0.387
Departure Headway (Hd)	5.312	5.15	4.766	4.22
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	695	750	855
Service Time	3.338	3.183	2.804	2.238
HCM Lane V/C Ratio	0.146	0.112	0.023	0.386
HCM Control Delay	9.2	8.8	7.9	9.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.1	1.8

3: Pine Grove Dr & DW 1

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	95	149	9	0	307
Future Vol, veh/h	0	95	149	9	0	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	103	162	10	0	334

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	167	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	882	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	882	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	882	-
HCM Lane V/C Ratio	-	-	0.117	-
HCM Control Delay (s)	-	-	9.6	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.4	-

4: Grove Point Rd & DW 2

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	8	2	1	1	14
Future Vol, veh/h	104	8	2	1	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	113	9	2	1	1	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	3	0	-	0	238	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	235	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1632	-	-	-	755	1087
Stage 1	-	-	-	-	1025	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1632	-	-	-	703	1087
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	SB
HCM Control Delay, s	6.8	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1632	-	-	-	1049
HCM Lane V/C Ratio	0.069	-	-	-	0.016
HCM Control Delay (s)	7.4	-	-	-	8.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0