SR 69/ 128 Corridor Study

Savannah, TN

Prepared for: City of Savannah, Tennessee



November 15, 2016







CONTENTS

Resolut	ion	3
Executiv	ve Summary	4
Introduc	ction	8
1.1	Study Project Area	9
1.2	Grant Application Background	11
1.3	Vision	12
1.4	Goals	12
1.5	Study Team	13
2. Dat	a Collection and Inventory	14
2.1	Corridor Description	14
2.2	Connectors	16
2.3	Existing Traffic Conditions	19
2.4	Crash Data	23
2.5	Multimodal Opportunities	23
2.6	Existing Land Use and Zoning	26
2.7	Planned Developments	28
2.8	School Access	30
3. Exis	sting Conditions	34
3.1	Traffic Analysis	34
3.2	Crash Analysis	39
3.3	Environmental Overview	47
4. Pub	olic Involvement	59
4.1	Public Meeting #1	59
4.2	Local Officials Meeting	63
4.3	Public Meeting #2	63
4.1	Land Use Planning	66
4.2	Spot Improvements	70
4.3	Multimodal Improvements	74
4.4	Connectivity Improvements	75

4.5	School Access Improvements	75
4.6	Corridor Improvements	76
4.7	Cost Estimates and Project Prioritization	77
4.8	Funding Opportunities	80
APPEND	IX A: Enlarged Figures	
APPEND	IX B: Traffic Data	
APPEND	IX C: Environmental Maps	
APPEND	IX D: Public Meeting Information	
APPEND	IX E: Access Management	
APPEND	IX F: Recommendations	

RESOLUTION

RESOLUTION

RESOLUTION ADOPTING THE SAVANNAH SR 69/128 CORRIDOR STUDY PREPARED FOR THE CITY OF SAVANNAH, TENNESSEE

WHEREAS, the Board of Mayor and Commissioners of the City of Savannah, Tennessee have committed to supporting and improving the area's transportation system for mobility and accessibility of present and future generations of City of Savannah citizens; and,

WHEREAS, the City of Savannah was awarded a TDOT Community Transportation Planning Grant by the State of Tennessee, Department of Transportation to aid with the creation of planning documents that support improvements in traffic flow, safety and overall efficiency of the transportation system to achieve community visions as related to transportation and land use needs that promote economic growth; and,

WHEREAS, the TDOT Consultant (Neel-Schaffer, Inc.) has completed the Savannah SR69/128 Corridor Study per contract guidelines and deliverables providing recommendations for safety, capacity and connectivity within the study area; and,

WHEREAS, the City of Savannah hereby acknowledges receipt of the Savannah SR69/128 Corridor Study for use in sustaining guidance and compatibility with the planning of future development of the transportation network and land use planning within the study area;

NOW, THEREFORE BE IT RESOLVED by the Board of Mayor and Commissioners of the City of Savannah, meeting this the 7th day of November, 2016, that the City of Savannah does hereby adopt the Savannah SR69/128 Corridor Study as a guiding document to be considered in future planning decisions.

READ, ADOPTED, AND APPROVED IN OPEN PUBLIC MEETING THIS $7^{\rm th}$ DAY OF NOVEMBER, 2016.

Signed:

Bob Shutt - Mayor

Attest:

EXECUTIVE SUMMARY

The SR 69/128 Corridor Study was initiated by the City of Savannah, in conjunction with the Tennessee Department of Transportation (TDOT) utilizing TDOT's Tennessee Community Transportation Planning Grant (CTPG) funds. The study developed projects that would meet the City's vision and goals for the study. The three goals for the project were:

- **Goal 1**: Enhance the functionality of the routes for all users through geometric and operational improvements to address access management issues, capacity deficiencies and safety concerns.
- **Goal 2**: Provide for the efficient movement of people and goods from developing industrial and commercial areas south of Savannah into the city.
- **Goal 3**: Ensure compatibility of future development with the transportation network through appropriate land use planning.

The study area includes a portion of the SR 69/128 corridors including areas within the City of Savannah and Hardin County. It begins at the intersection of SR 128 and SR 206, north to SR 15, east to SR 69, and ends at the intersection of SR 69 and SR 206.

The first step of the SR 69/SR 128 Corridor Study was a thorough review of existing data and a public input session to solicit input about the issues in the study area. Next, peak-hour turning movement traffic volumes were collected at 30 key locations throughout the study area. Concurrently, an inventory of basic roadway information was compiled for use in the traffic analyses.

Capacity analysis indicated six intersections operated poorly in the morning and three performed poorly in the afternoon. Future traffic projections to the 2040 planning horizon year were made for intersections in the study area based on anticipated growth rates provided by TDOT. Based on this information traffic on corridors was not expected to grow more than 5% over the 25-year period on either corridor. Even under the added growth scenario, no additional intersections are anticipated to perform at unacceptable levels-of-service.

The analysis also considered crash history based on review of crash data provided by TDOT for the period from January 1, 2013 to December 31, 2015. The majority of the crashes analyzed involved rear end accidents, the second highest type was angle crashes, and the third most prominent type of crash was "No Collision with Vehicle." Although bicycle and pedestrian safety were named as relatively high-ranking concerns from the public input session, there were no recorded crashes involving these users during the analysis period. There were no bike lanes and few sidewalks in the study area at the time of data collection which would curtail

usage of the corridor by these user groups. A preliminary planning level environmental screening was conducted for areas along the study corridors to identify potential environmental constraints. No environmental issues were identified that would impact recommendations.

The study included two public meetings as well as a presentation to the Planning Commission which was also open to the public. At the first public meeting the Study Team sought information on the perceived issues within the corridors. At the Planning Commission meeting draft recommendations were prioritized. At the final public meeting feedback was requested on proposed recommendations. The feedback received indicated that local officials and the general public were supportive of the recommendations.

The CTPG program specifically calls for studies to consider recommendations to address land use and access management, identify transportation improvements, and serve as an overall guide for future implementation. The land use planning suggestions are intended to guide zoning and land development decisions including access management policies for new development, as well as, for retrofitting existing access; spot improvement plan address specific safety and/or operational issues; and new connectors and corridor projects require right-of-way acquisition and more extensive construction. The land use recommendations included the following items:

- Short-Term: Use Access Management as a Land Use Strategy
- Short-Term: Adopt Traffic Impact Analysis Requirements
- Mid Term Action: Adopt Subdivision Regulations
- Mid-Term Action: Adopt goals to guide all land use decisions
- Long-Term: Adopt a Comprehensive Plan

The recommended transportation improvements are included in **Figure E-1** and in **Table E-2** below. The priorities for the project are based upon the benefits derived from the project, as well as, impact as indicated by local officials.

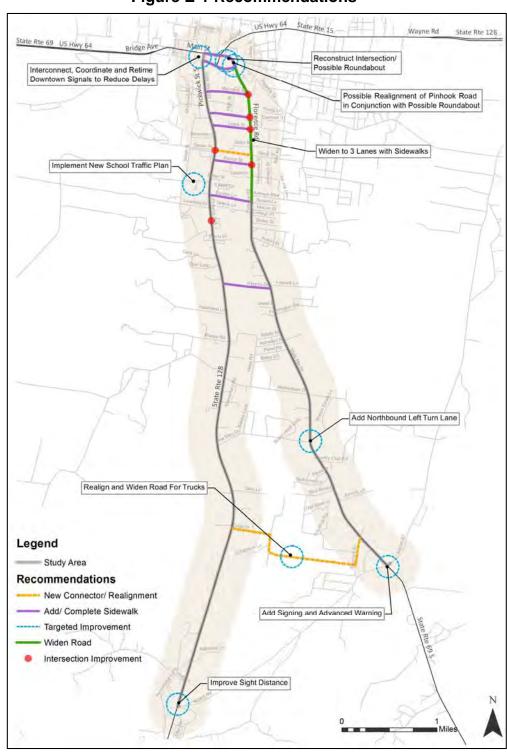


Figure E-1 Recommendations

Table E-2 Improvement Recommendation Priorities and Costs

Improvement Project		Estimated roject Costs	Recommended Priority
SR 128/Dodd Road	\$	70,000	Medium
SR 128/Sevier Street Signal	\$	220,000	High
SR 15/Main Street and Water Street Interconnect, Coordinate and Retime Downtown			
Signals	\$	530,000	High
SR 69/SR 15 Realignment	\$	550,000	Medium
SR 69/SR 203 (Pinhook) Realignment	\$	630,000	High
SR 69/Malcomb Street	\$	70,000	High
SR 69/Lewis Street	\$ ¢	70,000	High
SR 69/Ranch Street	\$ ¢	70,000	High
SR 69/Austin Street	\$ \$	70,000	High
SR 69/One Stop Drive	Ş	100,000	High
SR 69 Curve Improvement South of One Stop	۲.	FF0 000	1 I: -h
Drive	\$	550,000	High
SR 69/SR 226 (Airport Drive)	\$ \$	10,000	High
SR 226 (Airport Drive)/Discount Drive	Ş	10,000	High
Main Street	\$	220,000	Medium
Water Street	\$	180,000	Low
Malcomb Street	\$	470,000	Low
Hickory Street	\$	430,000	Low
Lewis Street	\$	380,000	Low
Ranch Street	\$	410,000	Low
Eureka Lane	\$	420,000	Low
Higgins Drive + North to Opel Loop	\$	500,000	Low
Sevier to Stout Connector	\$	1,540,000	High
Dodd/Discount Drive Connector	\$	2,090,000	Medium
2000 July 2000 Control	Υ	2,030,000	Wicalalli
South Street Improvement	\$	220,000	High
Driveway/Storage Lane Improvements	\$	70,000	Medium
	<u> </u>	. 0,000	
SR 69 Higgins to Main Street	\$	10,920,000	Medium

INTRODUCTION

The City of Savannah and the Tennessee Department of Transportation (TDOT) initiated the SR 69/128 Corridor Study in March 2016 after the City made a successful application for Tennessee Community Transportation Planning Grant (CTPG) funds. This document identifies the vision and goals for the study and presents the findings of the study team in the form of a data inventory, existing conditions review, traffic analysis, future conditions projections, and recommendations for improvements and policy guidance. An overview of public involvement is also included.

Savannah, located in southwestern Tennessee, is a popular destination for tourists and retirees due to its close proximity to the Tennessee River and other recreational sites. The City has all the charm and amenities expected by both groups with the exception of the transportation infrastructure. Like most cities, Savannah is very car-centric, with virtually no safe biking facilities, no public transportation, and incomplete, missing or inaccessible sidewalks. Because of the City's desire to continue to attract retirees and tourists, these multimodal alternatives would further enhance the City's appeal as a destination.

Both SR 128 and SR 69 are important arterials in Savannah, Hardin County and West Tennessee. The two corridors provide connectivity to and from SR 15 (US Hwy 64), which is the primary east-west arterial across the southern part of West and Middle Tennessee. The corridors provide key connectivity to industrial and recreational areas, as well as, activity areas in the adjacent states.

The corridor study and resultant plans will preserve and enhance the operational and safety performance of the SR-128 and SR 69 routes in and around Savannah. The greatest impact of the study on the state transportation system will be preservation of roadway capacity through greater compatibility between future development and the transportation system.

Traffic congestion and safety are primary concerns for citizens of Savannah, particularly in the downtown area along SR 15/Main Street and along SR 128/Pickwick Street near the schools. Outside of school arrival and dismissal times, most of the study area south of downtown is not congested. South of downtown, traffic is generally only restricted on both SR 128 (Pickwick Street) and SR 69 (Florence Road) by turning vehicles (especially left turns) and oversized vehicles. However, during the evening peak hours backups occur along, not only along SR 128 and SR 69 in the downtown area, but also along SR 15 (Main Street) and US 64 (Wayne Road). A major contributing factor to this congestion is the relatively short left-turn lanes and the short spacing between signals in this area, which create gridlock at this time of day.

This gridlock, coupled with the difficulties in turning left at some intersections, poses safety concerns for motorists. At the location of the schools concerns abound due to the congestion, increased turn movements from many driveways and streets, and presence of students either walking down SR 128 or crossing the street without the benefit of a signalized crosswalk.

Two tools that can assist communities in the development of safe and attractive transportation are access management plans and land use plans. Access management plans impact safety by controlling the placement and access of driveways. By consolidating the length or number of driveways, it becomes safer for vehicles to enter a property and for cyclists and pedestrians to pass by a property by reducing conflict points with vehicles. Much of the SR 69 corridor and some parts of the SR 128 corridor lack access control and have curb openings along the entire frontage. Properly implemented, access management measures not only enhance safety, but can add to the attractiveness of roadway facilities.

Land use and zoning allow for compatible uses of property next to one another. Zoning approvals are generally tied to transportation improvements especially sidewalks, controlled entrances and turn lanes, which are needed to improve the capacity and safety of the transportation system based upon the additional impacts of new development.

1.1 Study Project Area

The study area includes a portion of the SR 128/ SR 69 corridors beginning at the intersection of SR 128 and SR 206, north to SR 15, east to SR 69, and ending at the intersection of SR 69 and SR 206. The study area includes areas within the City of Savannah and Hardin County. A detailed map of the study area is included as **Figure 1.1.**

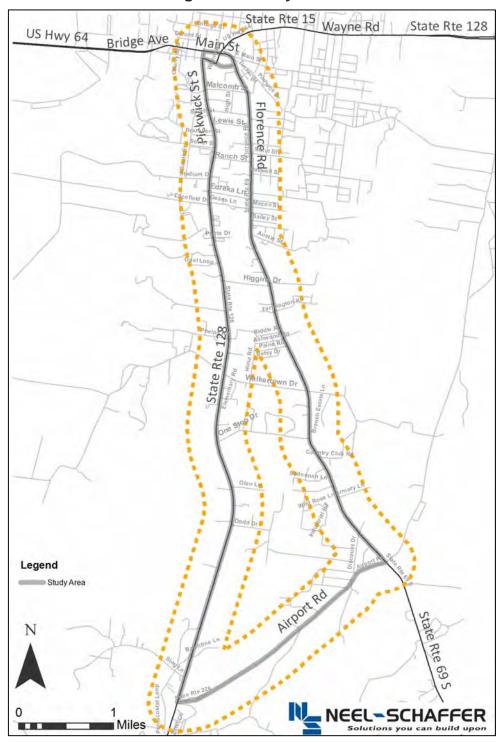


Figure 1.1 Study Area

1.2 Grant Application Background

The purpose of the grant application was to seek funds for a study to identify strategies to improve multimodal transportation operations within the study area for vehicular traffic, pedestrians, bicyclists and freight movement.



Specifically, the study would analyze

the corridors to identify deficiencies and develop improvement strategies for:

- Safety improvements at intersections and identified high accident locations
- Operational improvements at critical areas
- Accommodation of all travel modes as appropriate
- Access management on developed properties
- Land use plans for undeveloped properties
- General roadway capacity improvements

The benefits to the community will take the form of visible, near-term improvements as well as longer- term improvements through the corridor planning and land-use plan components. Immediate benefits will come from operational modifications and minor construction projects for spot improvements.

The intent of this corridor study is to develop four distinct but related plans: a landuse plan, an access management plan, spot improvement plans, and an overall corridor plan.

- The land use plan portion of the study can be presented to local planning authorities for adoption immediately upon conclusion of the study. Once adopted, the land-use plan will guide zoning and land development decisions as the subject properties develop throughout the life of the plan.
- The access management plan will be implemented both through adoption of access management policies for new development along the corridor, as well as, retrofit of existing access as a series of small projects as funding is available or when opportunities present themselves through redevelopment of properties abutting the routes.
- The spot improvement plans include both operational improvements, as well as, slightly more involved projects, which may require right-of-way

acquisition and more extensive construction than the access management projects. The study will provide adequate information regarding these projects, including functional plans and cost estimates, to allow them to be developed either as locally funded projects, through the TDOT Locally Managed Projects process, or through traditional TDOT project development channels.

 The overall corridor plan will be used to guide implementation of the other phases to ensure that future improvements are done in a way that is logical for the planned future development of the corridor.

1.3 Vision

The vision of the Savannah SR128/69 Corridor Study is to develop a comprehensive transportation plan for the corridors that addresses current deficiencies in capacity and safety, provides guidance for improvements to address existing access management issues, and creates a framework to guide future development and public investment through land use policy and access management policy for the subject routes.

1.4 Goals

Goal 1: Enhance the functionality of the routes for all users through geometric and operational improvements to address access management issues, capacity deficiencies and safety concerns.

The SR 69 and SR 128 corridors suffer from recurring congestion due to inadequate capacity, lack of turn lanes, and poor access management. Design of street intersections in several locations creates serious operational and safety concerns. The plan will identify deficiencies and develop both near-term and long-term solutions to address those issues.

Goal 2: Provide for the efficient movement of people and goods from developing industrial and commercial areas south of Savannah into the city.

SR 128 and SR 69 are both important arterials in Savannah/Hardin County, providing links from the City to the Savannah-Hardin County Airport, the Florence/Muscle Shoals, Alabama area to the southeast, and Pickwick Dam and the industrial facilities along Yellow Creek and

the Tennessee-Tombigbee Waterway in Mississippi. The plan will address improvements needed to support and enhance the ability of the corridor to accommodate anticipated growth in demand in these areas.

Goal 3: Ensure compatibility of future development with the transportation network through appropriate land use planning.

In the southern portion of the study area, traffic operations are presently not a problem since much of the abutting property is currently undeveloped. However, given the presence of the Savannah/Hardin County Airport, major gas and electric transmission lines, and access to the Tennessee River, there is a high potential for rapid development by commercial, industrial, or residential land uses. The plan will develop land-use policy guidance and access management guidance for these areas to ensure that development occurs in a way that is integrated with the ability of the transportation network to support the increasing demand.

1.5 Study Team

Individuals representing TDOT and the City of Savannah comprised the Study Team. A consultant team of Neel-Schaffer, Inc., Younger Associates and Quality Counts assisted in the process. TDOT representatives included Calvin Abram and Nicole Seymour from the Office of Community Transportation. The City's representative on the project was Tom Smith, Project Manager for the City of Savannah. The consultant leads at Neel-Schaffer were Barry Alexander, PE, PTOE, and Karen Mohammadi, PE, AICP, PTOE.

2. DATA COLLECTION AND INVENTORY

The first step of the SR 69/SR 128 Corridor Study was a thorough review of existing data pertaining to the road network and collection of traffic counts at key intersections and driveways.

2.1 Corridor Description

SR 128/Pickwick Street

SR 128 within the study limits is a two-lane roadway with traffic volumes ranging from 11,370 vehicles per day at the northern end of the study area to 4,360 vehicles per day near the southern end of the study area. Sections of two-way left-turn lane are present near Hardin County High School and near the northern end of the study area from Malcomb Street to SR 15 but otherwise it is predominantly two-lane cross section. The roadway is a rural section (no curb-and-gutter) throughout most of its length with a posted speed limit ranging from 35 mph near downtown Savannah to 55 mph in the more rural sections. This corridor has narrow shoulders of less than two feet in the county and widening to full, eight foot shoulders in the city. The terrain is rolling, particularly to the south. There are no major horizontal curve issues with the largest horizontal curve deflection being 20 degrees. No bicycle lanes or significant reaches of sidewalk are present, although pedestrians are often seen on the corridor. The corridor has two signalized intersections at Water Street and at SR 15 (Main Street).

Key properties include River City Concrete Plant, the Hardin County Library, Parris Elementary School, Hardin County Middle School, Hardin County High School and numerous large churches. A major reconstruction project was underway during the course of the study to widen the corridor from SR 15/Main Street south to Opel Loop from two lanes to five lanes including a center turn lane, sidewalks, and shoulders that could accommodate bicyclists. Construction plans exist to widen the corridor in the future from Opel Loop to the City/county line. **Table 2.1** shows the roadway features for the SR 128 corridor by segment.

Table 2.1 SR 128 Roadway Features

Start Point	End Point	Functional Class	Right of Way (ft)	Access Control	Type of Terrain	Land Use	Thru Lanes	Number of Lanes	Speed Limit
Airport Road	One Stop Drive	Rural* Minor Arterial	100	None	Rolling	Rural	2	2	55
One Stop Drive	School Zone North of Walker- town Drive	Rural* Minor Arterial	100	None	Rolling	Rural	2	2	45
School Zone North of Walker- town Drive	City Limits	Rural* Minor Arterial	100	None	Rolling	Mixed Residential & Commercial	2	2	45
City Limits	Stadium Drive	Urban Minor Arterial	100	None	Rolling	Mixed Residential & Commercial	2	2	35
Stadium Drive	South Street	Urban Other Principal Arterial	100	None	Rolling	Mixed Residential & Commercial	2	2	35
South Street	Malcomb Street	Urban Other Principal Arterial	100	None	Rolling	Commercial	2	2	35
Malcomb Street	Water Street	Urban Other Principal Arterial	62	None	Rolling	Commercial	2	2	35
Water Street	Main Street	Urban Other Principal Arterial	60	None	Rolling	Commercial	2	2	35

^{*}TDOT lists these as Urban Minor Arterials

SR 69/Florence Road

SR 69 within the study limits is generally a two-lane roadway with traffic volumes ranging from 9,380 vehicles per day near the intersection with SR 15 in Savannah to 3,100 vehicles per day near the southern end of the study area. The road is two-lane, with a rural section (no curb-and-gutter) throughout most of its length. No bicycle lanes or significant reaches of sidewalk are present. The posted speed limit ranges from 35 mph near the intersection with SR-15 to 50 mph outside of the Savannah city limits. Shoulders are generally less than two feet wide throughout the corridor. SR 69 also has a rolling terrain in the south. The corridor has three signalized intersections, one at SR 15/US 64, one at Water Street and one at Higgins Drive/Freewill Lane.

The north section of the corridor is fairly heavily lined by commercial and light industrial uses. Key facilities along the corridor include the Hardin County Industrial Park, East Hardin Elementary, and the Savannah Health Care and Rehabilitation. The Savannah/Hardin County Airport and Clayton Homes are located just off the corridor near Airport Road. Clayton Homes use wide load semi-trucks along SR 69 to transport manufactured houses. **Table 2.2** shows the roadway features for the SR 69 corridor by segment.

Table 2.2 SR 69 Roadway Features

Start Point	End Point	Functional Class	Right of Way (ft)	Access Control	Type of Terrain	Land Use	Thru Lanes	Number of Lanes	Speed Limit
Airport Road	South of Airport Road	Rural Minor Arterial	120	None	Rolling	Rural	2	2	55
South of Airport Road	Austin Street	Rural Minor Arterial	50	None	Rolling	Rural	2	2	55
Austin Street	Main Street	Rural Minor Arterial	50	None	Rolling	Rural	2	2	35-40
Main Street	SR15/ Wayne Street	Rural Minor Arterial	50	None	Rolling	Rural	2	2	35

2.2 Connectors

The number of connector routes between SR 128 and SR 69 are good, but their usefulness in carrying traffic is limited due to roadway widths and surrounding land uses, as well as, the access points at each end. There are thirteen cross streets as shown in **Figure 2.1**. At the southernmost end of the study area is SR 226/Airport Road. Airport Road is a two lane road with primarily residential land uses. Once SR 128 is reconstructed, it is anticipated that more trucks from Clayton Homes and from the Industrial Park will use SR 128 instead of SR 69.

Cross access between the corridors is lacking near the Industrial Park. Dodd Road off SR 128 connects to Discount Drive at the Industrial Park entrance. Dodd Drive is very narrow, has rough pavement conditions, adjacent ditches, and two ninety degree horizontal turns. It is difficult for cars to pass one another on this road and impossible for trucks to pass any other vehicles. While there is no direct access to the Industrial Park from Dodd Road, the layout of the Industrial Park would allow for additional access points to be developed here relatively easy. In fact, it appears that some vehicles may have previously accessed the road by crossing the unpaved shoulder.

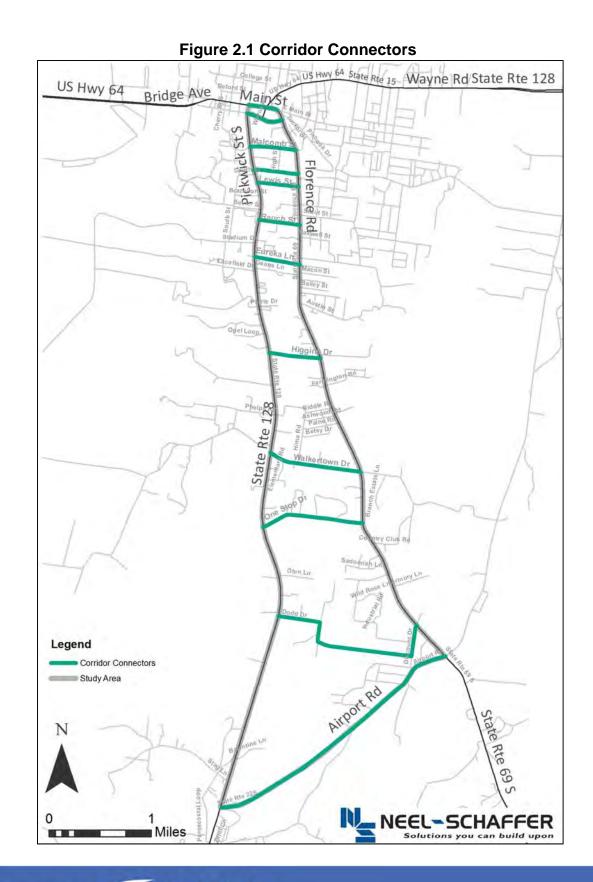
The next connector is One Stop Drive. This two lane roadway provides very good access between SR 128 and SR 69. One Stop Drive primarily serves residential traffic, but is also used as a through route for trucks likely coming from the Industrial Park. Just north of One Stop is Walkertown Drive. It is also two lanes and serves residential traffic.

To the north of Walkertown Drive is Higgins Road. East Hardin Elementary School is located on the southeast corner of SR 69 and Higgins Road. This road is lined with homes and serves residential and school traffic. A signalized intersection at Higgins makes this an attractive connector for those drivers coming from SR 128. The road is also relatively short and straight.

Eureka Street is the next connector. This is a popular connector for those wishing to access the schools on SR 128, as well as, the Hardin County Library. It is located just north of Parris Elementary School and Hardin County Middle School and just south of Hardin County High School. This road is heavily used by school traffic. Ranch Street is also a popular connector for school traffic. It is located directly across from the High School. During the morning school arrivals and afternoon departure this road is very busy and experiences major backups at both intersections. Neither intersection is signalized. Visibility is not good for vehicles turning left from Ranch Street onto SR 128 or SR 69. Poor access management at this location leads to vehicles cutting across the gas station's lot. In addition, the lot blends with the intersection. Overhead utility lines running along the road, a utility power pole on the corner, and a gas station at the SR 69 intersection may make any improvements difficult or expensive.

To the north of Ranch Street are Lewis and Hickory Streets, which also provide access to Kroger and the Tennessee Valley Electric Co-Op. To the north of these streets is Malcomb Street. Malcomb Street is a popular connector since it also connects to Pinhook Drive/SR 203 and, therefore, provides access to east Savannah. Neither end is signalized despite the volume of cross traffic at SR 69.

Water Street is the next connector and provides access to a major shopping center, to Wayne Street and to north Savannah. Water Street is the designated truck route used to keep heavy vehicles off of Main Street. It has signalized intersections with both SR 128, Wayne Street and SR 69. The grade at SR 128 impacts the effectiveness of the signal at that intersection when heavy trucks are present. Water Street has some sidewalks although there are gaps.



The final connector in the study area is SR 15/Main Street. This is a popular destination since City Hall, Veterans Park, and several fast food restaurants are located on this road. The road has two lanes in each direction and left turn lanes. SR 15/Main Street has sidewalks in some locations, but they are not compliant with the Americans with Disability Act (ADA) requirements. Given the attractiveness of the downtown shopping district immediately west of this area, having accessible sidewalks and ramps would allow more shoppers to visit the restaurants and other stores in the study area and provide better access to City Hall.

2.3 Existing Traffic Conditions

In order to assess and confirm traffic conditions within the study area, traffic counts were conducted in the hours of 7:00–9:00 AM and 4:00-7:00 PM on February 16 and February 17, 2015. The count data was conducted using video cameras and processed in the office manually. The counts included passenger vehicles, heavy trucks and buses, pedestrians and cyclists. The traffic count data was also used to determine the peak hour of travel in both the morning and evening and to calculate truck percentages. The locations of the counts are shown in **Figure 2.2**. The traffic data was recorded on site and manual counts were performed using the footage. The counts are included in **Appendix B.**

TDOT provided the Study Team with Average Daily Traffic for the base year (2016) as well as the future year existing plus committed traffic (2040). The existing plus committed network includes funded projects. These are shown in **Figure 2.3** and **Figure 2.4**. Based on this information traffic on SR 128 is not expected to grow south of Walkertown Drive and is expected to grow 2.10% north of Walkertown Drive. On SR 69 traffic is expected to grow 4.94% south of Walkertown Drive and 3.25% north of Walkertown Drive. Traffic analyses are included in Chapter 3.

19

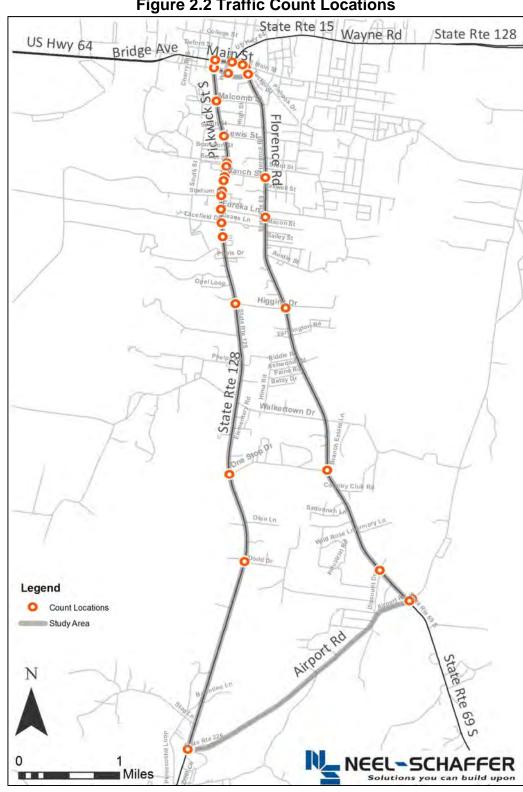


Figure 2.2 Traffic Count Locations

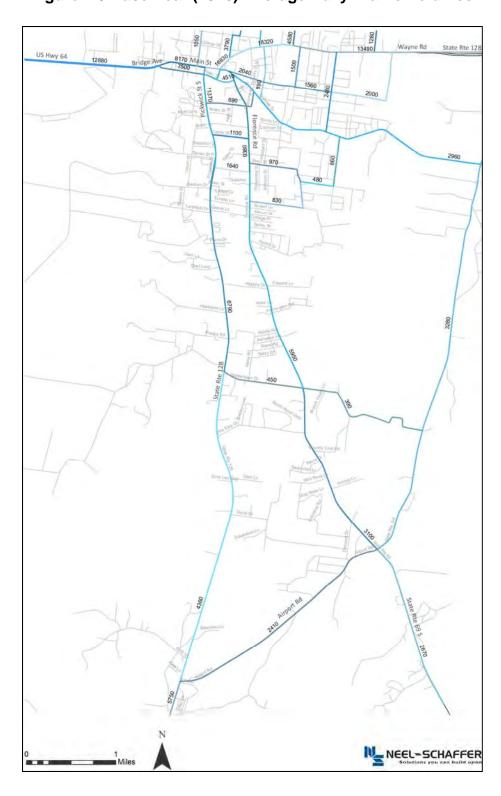


Figure 2.3 Base Year (2016) Average Daily Traffic Volumes

US Hwy 646314 Legend Study Area NEEL-SCHAFFER

Figure 2.4 Future (2040) Existing + Committed Average Daily Traffic Volumes

2.4 Crash Data

The next type of data collected was crash information for the study area. This involved crashes on both SR 128 and SR 69, and other locations within the boundaries of the study area. Crash locations are shown in **Figure 2.5**. Fatal crash locations are shown in **Figure 2.6**. While fatal crashes do not necessarily indicate a roadway concern, they often give insight into the public's perception regarding a given roadway. This crash data includes all reported crashes that occurred over a three year period between January 1, 2013 and December 31, 2015 based on data provided by TDOT. The crash analysis is included in **Chapter 3**.

2.5 Multimodal Opportunities

Based on conversations with the Study Team, bike lanes and pedestrian facilities are desired in the area to make it more attractive to tourists and residents however there are not many current users. Completed peak period traffic counts (AM and PM) indicated that some pedestrians are present during those hours. **Table 2.3** is a list of the pedestrian counts that indicates which side of the intersection they were crossing. There were very few pedestrians noted except at the High School and most of those (68) were in the PM Peak coinciding with school dismissal. There was only one bicycle counted in the entire study area. These pedestrian and bicycle counts were also consistent with the Study Team's field observations. Pedestrians were noted walking on shoulders or in areas adjacent to the roadways including through parking lots. The current design plans for SR-128/Pickwick Street will provide accommodations for pedestrians (sidewalks) and bikes (shoulders), but will not include any new pedestrian signals with crosswalks.

The Hardin County School District and the City have both expressed an interest in the addition of a traffic signal in the area of the High School that would provide for safer pedestrian crossings and allow drivers to safely turn out of the side roads or driveways. Both crossing the street and making safe turns will be a bigger concern when the road is widened to five lanes.

SR-69/Florence lacks any bike or pedestrian amenities. Because the corridor has many driveways with full access across the frontages it is not considered safe for pedestrians and the travel speeds and very narrow shoulders make the corridor not suitable for cyclists as well. Neither the City nor the County has a Bike and Pedestrian Master Plan.

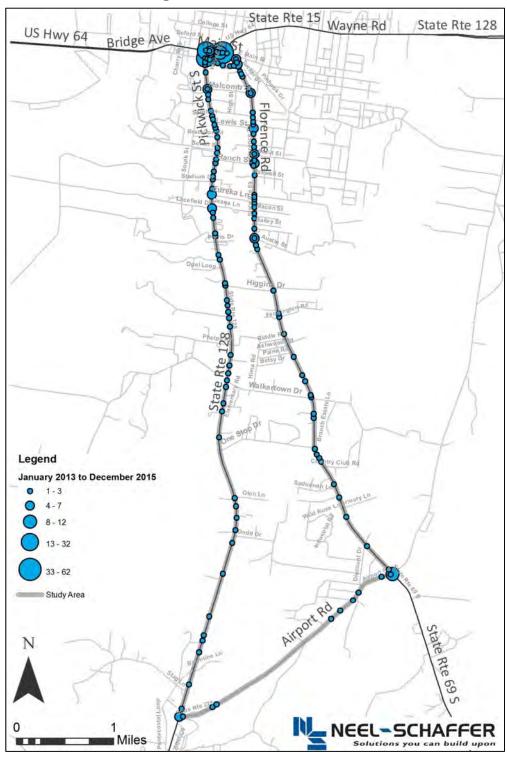


Figure 2.5 Crash Locations

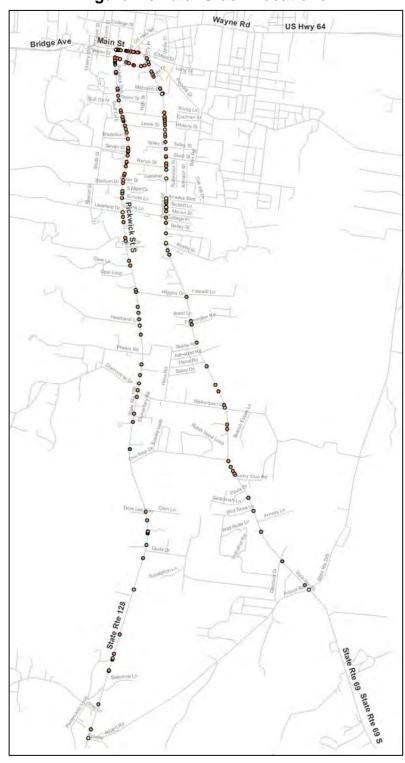


Figure 2.6 Fatal Crash Locations

Table 2.3 Pedestrian Crossings by Location

Intersection	Number of	Crossing Location (Side
	Pedestrians	of Intersection)
SR-128/Eureka Street	2	East
SR-128/Water Street	1	South
SR-128/Main Street	1	South
SR-69/Pinhook Drive	2	South
SR-69/Water Street	3	North
SR-69/Ranch Street	1	North
SR-69/Eureka Street	3	East
SR-128/Elementary School	1	East
Drive-Parris Drive		
SR-128/Hardin County High	11	West
School Drive #1		
SR-128/Hardin County High	71	South
School Drive #2		
SR-128/Hardin County High	2	West
School Drive #3		
SR-128/ Stadium Drive	1	North
SR-128/ Ranch Street	2	South
	1	North
SR-128/ Sevier Street	2	West
SR-128/ Malcomb Street	1	West

2.6 Existing Land Use and Zoning

The City does have a current Land Use and Zoning Map. It was recently updated and is shown in **Figure 2.7**. The land use map is used by transportation planners to determine which areas may be more likely to develop and need transportation infrastructure support for the growth. Coupled with other statistics such as population growth, a picture of how likely growth is to occur develops. Savannah's population has grown 2% since 2000. AS shown in **Figure 2.8** the City's growth has been rather flat which is also reflected in the low traffic growth rates.

Savannah/Hardin County Industrial Park has room for expansion with nine acres of land and two buildings available. In addition, there is another property on SR 69 that was briefly considered for a major manufacturing facility that chose to locate elsewhere. A final key element to growth is the presence of utilities. Sewers exist within the City limits and in the industrial park. An analysis of land use and its impacts on transportation alternatives is included in Chapter 3.

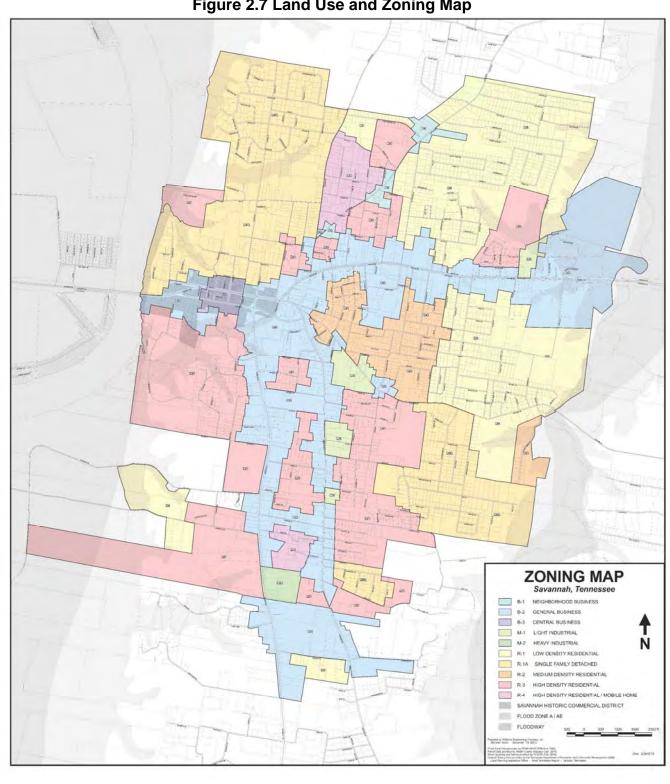


Figure 2.7 Land Use and Zoning Map

7.5k
5k
2.5k
0k
1970 1975 1980 1985 1990 1995 2000 2005 2010

Figure 2.8: Savannah Historic Population Growth

Source: City-Data.com

2.7 Planned Developments

At the onset of the study, development plans were provided to the Study Team. These consisted of several redevelopment projects that would add little or no additional traffic to the corridors, as well as, alternatives developed as part of a bypass study. These are shown in **Figure 2.9.**

The bypass is an unfunded project and not expected to develop into a construction project. As shown in **Figure 2.9**, two different locations were considered for the bypass. Either project, if funded and constructed, would have impacted traffic on both SR 128 and SR 69.

Of more consequence to this study are the industrial parcels discussed in the previous section. Development at these locations could impact truck volumes and cross connectivity between the corridors as a newly widened SR 128 may attract more truck traffic. In addition, the shopping center at Water Street is in a prime location for redevelopment, potentially attracting a "big-box" retailer. Should this happen, it could significantly impact both corridors, as well as, SR 15, Water Street and Wayne Street.

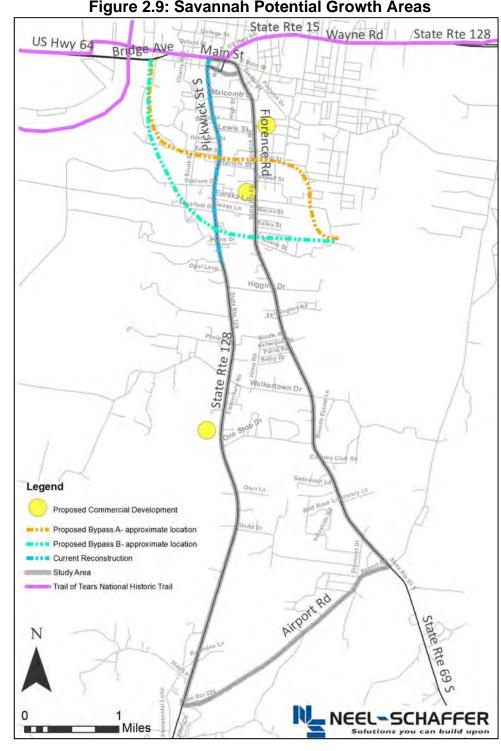


Figure 2.9: Savannah Potential Growth Areas

2.8 School Access

School traffic is generally a problem in most cities given the ever increasing trend of parents electing not to use school bus transportation. The result is congestion on the effected corridors, increases in crashes and more conflicts between vehicles and pedestrians. Exacerbating the situation in Savannah are the facts that three of the schools, Hardin County High School, Hardin County Middle School, and Parris South Elementary School are located in very close proximity along SR 128 and that the schools' start and dismissal times are only separated by minutes. The corridor does contain flashing reduced speed school traffic signs that are somewhat effective. A full understanding of the each school's traffic plans is necessary in order to development any recommendations for this traffic issue. However, internal circulation is beyond the scope of this study. Recommendations for external school access as it affects the corridors is included in **Chapter 5**.

Hardin County High School (HCHS)

HCHS is the northern most school campus and includes the main building, several parking lots and athletic facilities. The School District would like to add baseball/soccer/softball fields to the campus in the future. Student parking is located in the northern lot. Student drop offs/pick-ups takes place at the main entrance. Due to limited on-site storage, vehicles line SR 128, primarily on the shoulder, to wait their turn in the pick-up line. Teachers park in the south lot and can leave from a driveway at that location or at Stadium Drive. Buses load and unload students near the gym location and exit onto Stadium Drive. None of the driveways at the school are signalized and there are no crossing guards to assist with traffic control. Some parents opt not to follow school policy and pick up their students from the Savannah Church of Christ parking lot directly across from the school. When available, the security guard does assist the student with crossing, but the guard is neither attired in reflective clothing nor does he carry signs and wands to assist in stopping traffic. **Figure 2.10** shows the traffic patterns at HCHS.

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Figure 2.10 HCHS Existing Traffic Plan

Parents wishing to transport their children to and from HCMS or Parris South Elementary School access the schools via Lacefield Drive. The parents then drive around the school to pick up or drop off their children and exit at the driveway just south of Lacefield Drive. Previously this location had a crossing guard to assist with traffic control. Due to the widening of the corridor the City no longer felt they could safely control this intersection with a crossing guard. **Figure 2.11** shows the traffic patterns at HCMS.

Recommendations for traffic improvements at both schools are discussed in **Chapter 5**.

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Figure 2.11 HCMS/Parris Elementary School Existing Traffic Plan

3. EXISTING CONDITIONS

3.1 Traffic Analysis

To determine how well the intersections within the study area were operating, Highway Capacity Software was used to determine intersection delay and the corresponding level of service (LOS). The image to the right shows how delay corresponds to LOS at intersections that are signalized (traffic lights) and un-signalized (stop signs). Intersection LOS range from A to F. Ranges A through C represent free flowing conditions and are considered desirable LOS. Under LOS D, congestion is occurring, but considered tolerable. Congestion and delay increases under LOS E to a

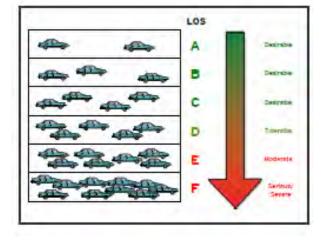
	Traffic lights	Stop signs /roundabout
Level of service	Delay (s/veh)	Delay (s/veh)
A	0-10	0-10
В	10-20	10-15
С	21-35	16-25
D	36-55	26-35
Е	56-80	36-50
F	>80	>50

level that is considered at capacity. LOS F ranks as the least functional level of traffic movement, and is considered serious congestion. The LOS levels are illustrated in the bottom right image.

HCS intersection analyses were completed for 27 locations, including seven

signalized intersection and 20 un-signalized locations. **Figures 3.1 and 3.2** show the LOS for each intersection in the AM and PM peaks respectively for which traffic counts were obtained. Because most of SR 128 was under construction during the course of the study, the analysis for existing LOS was conducted using proposed lane configurations from the widening project.

Growth rates were obtained from TDOT based upon their traffic model. On SR 128 the maximum growth between 2016 and 2040 was 2.10% over 24 years. This growth is expected



to occur north of Walkertown Road. South of Walkertown Road no growth was projected. On SR 69 between Airport Road and Walkertown Drive a growth rate of 4.94% was calculated and between Walkertown Drive and Main Street the growth rate dropped to 3.25%. These growth rates were used to determine Future (2040) LOS for each intersection. **Figures 3.3 and 3.4** show the projected LOS for each peak respectively for the intersections on the corridors.

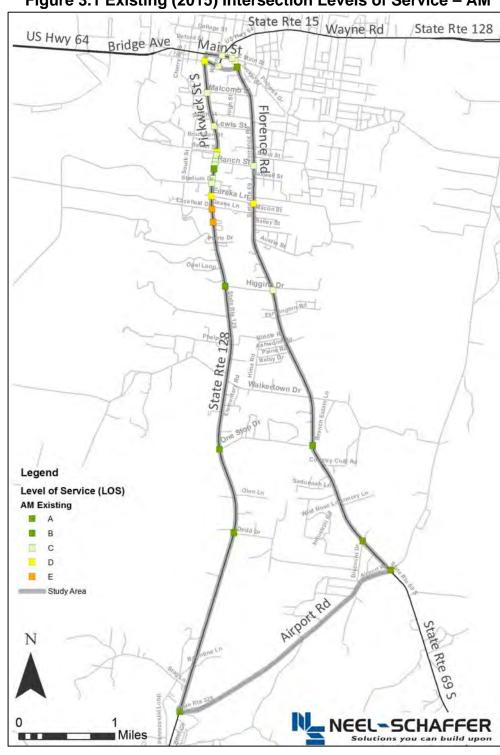


Figure 3.1 Existing (2015) Intersection Levels of Service – AM

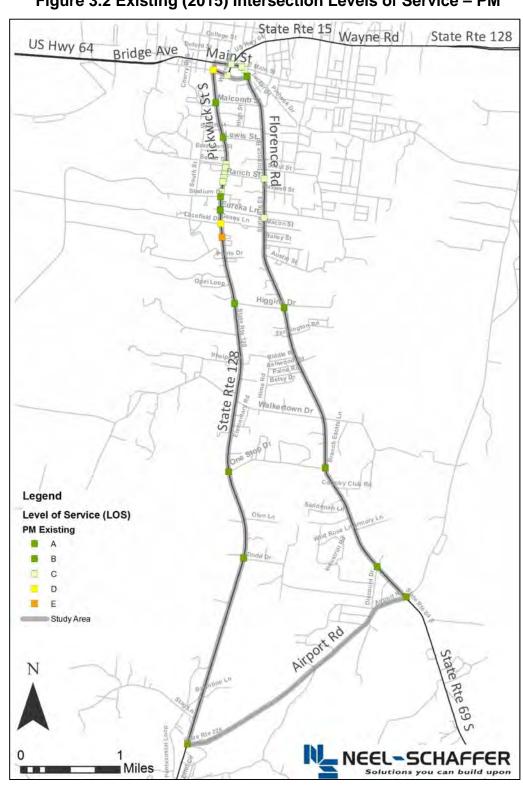


Figure 3.2 Existing (2015) Intersection Levels of Service – PM

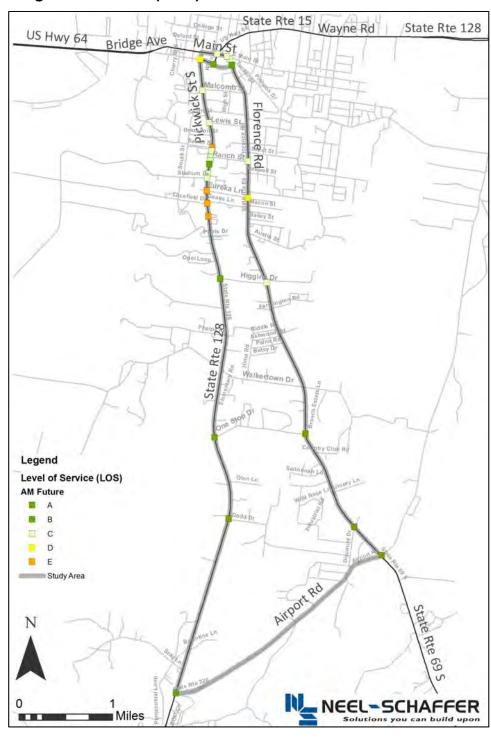


Figure 3.3 Future (2040) Intersection Levels of Service – AM

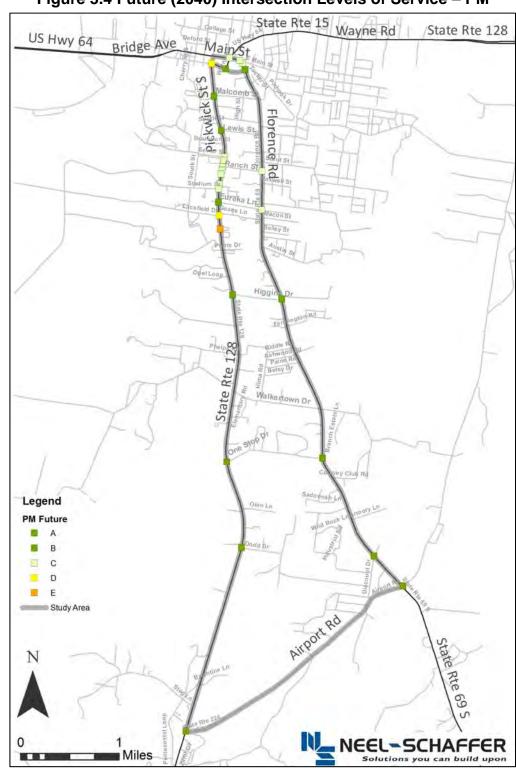


Figure 3.4 Future (2040) Intersection Levels of Service – PM

Traffic counts and intersection design-year (2040) forecasts indicate that at five (5) intersections the side streets are performing at an LOS of D or worse today. These are SR128/Parris South Drive (AM and PM), SR 128/Lacefield Drive (AM and PM), SR 128/Eureka Street (AM), SR 128/Sevier Street (AM), and SR 69/Eureka (AM). As of 2040, without further improvements, the same five intersections in the corridors will be performing poorly. More discussion about these intersections is in Section 5.3.

3.2 Crash Analysis

An extensive review of the crash data, including field reviews with crash information in hand, was completed as part of this study. The tables on the following pages reflect the findings of the analysis. The data represents three years of crash data history (2013-2015).

Table 3.1 shows total crashes by severity for both the study area and for Hardin County, and **Table 3.2** shows the number of total injuries/severities. The numbers in these tables are not identical since one crash resulted in more than one incapacitating injury. The crash severity data resonates most with the public as crashes resulting in fatalities and serious injuries are more memorable. Roadway geometrics did not appear to be a contributing factor in either of the fatality crashes. One occurred on Main Street and one occurred on SR 226/Airport Road. In the six crashes involving incapacitating injuries, three occurred at signalized intersections. The other three occurred on SR 128/Pickwick Street in the area being reconstructed in 2016.

Table 3.1 Crash Severity Events

Level of Severity	Number Of Crashes in Study Area	Crash by Type for Hardin County
Fatal	2	6
Incapacitating Injury	6	
Non-Incapacitating Injury	110	517*
Prop Damage	419	1418
TOTAL	537	1941

^{*}Includes both incapacitating and non-incapacitating injury crashes

Table 3.2 Crash Severities

	Total with	
Total	Incapacitating	Total Other
Killed	Injuries	Injuries
2	7	162

The next part of the analysis involved looking at crashes by type. Given the comments received through the public outreach efforts (see **Chapter 4**) about the difficulties in making turns onto SR 128 and SR 69, as well as, the impacts of vehicles turning left on both streets, it is not surprising that the majority of the crashes (237) involved rear end accidents. The second highest type was angle (124) crashes. The third most prominent type of crash was "No Collision with Vehicle," which are generally single vehicle accidents that are often the results of driver inattention, speeding and animals in the roadway such as deer. The fourth most common type of crash is the sideswipe crash. The same direction sideswipes crashes usually occur when a vehicle is changing lanes although it may also occur with passing vehicles. Both types of behaviors contribute to crashes in the study area although the crashes due to changing lanes are more prominent in the downtown area where there are two lanes in each direction and turning lanes.

Table 3.3 Crashes by Type

Type	Number of Crashes	Percentage
Angle	124	23.09%
Head-On	10	1.86%
No Collision W/ Vehicle	82	15.27%
Other	12	2.23%
Rear-End	237	44.13%
Rear To Rear	2	0.37%
Rear To Side	2	0.37%
Sideswipe, Opposite Direction	16	2.98%
Sideswipe, Same Direction	32	5.96%
Unknown	2	0.37%
Not Specified	18	3.35%
TOTAL	537	

Specific countermeasures should be considered for each type of crash and are reflected in the recommendations section of the report. **Table 3.4** on the following pages reflects countermeasure guidance provided by the American Association of State Highway and Transportation Officials (AASHTO). To reduce rear end and

angle crashes at signalized intersections improvements to the signal timings and the visibility of the traffic signals can be an effective tool. In areas where there are no signals, but significant rear end and angle crashes, adding turn lanes and improving curb radii can be effective in reducing crashes. Advanced warning of signalized intersections, overhead signs and better pavement markings may help in channeling vehicles to the proper lanes and reduce sideswipe crashes in signalized intersection areas.

Specific recommendations are also provided in **Table 3.4** for light conditions and weather conditions. However, since 85.6% of all crashes occur in either daylight or lighted conditions, this does not appear to be a factor in crashes in the study area. (See **Table 3.5**.) Wet or foggy conditions were present for 14.2% of crashes. While this number seems significant, the crashes were not clustered in specific areas signifying that poor or slippery pavement conditions did not likely play a role in the number of crashes. The exception to this was Airport Road (SR 226) where four of the ten reported crashes occurred during rainy conditions. However, even in this location crashes were not concentrated in one specific area.

The concentration of crashes in the downtown area along Main Street are the most prominent in the study area. This also represents the most congested part of the study area. Improvements to the signal timings will help congestion and could reduce crashes.

Over half of the crashes on SR 128/Pickwick Street are rear-end crashes caused mostly by turning vehicles. The current construction project on SR 128 should diminish the number of these crashes on the corridor in the area to be widened. The new two-way left turning lane will also help to reduce angle crashes. However, it should be noted that it may be more difficult for drivers to cross SR 128 with the additional lanes and this could increase some types of crashes.

SR 69/Florence Road also experiences many rear end crashes. Over half of all crashes on this road are rear-end crashes and a quarter are angle crashes. Additional turn lanes and a center turning lane through the developed area of the corridor could reduce these types of crashes.

Table 3.4 Crash Countermeasures*

Crash Pattern	Probable Cause	General Countermeasure
Right-angle collisions at unsignalized intersections	Restricted sight distance	Remove sight obstructions Restrict parking near corners Install stop signs (see MUTCD) Install warning signs (see MUTCD) Install/improve street lighting Reduce speed limit on approaches* Install signals (see MUTCD) Channelize intersection
	Large total intersection volume	Install signals (see MUTCD)
	High approach speed	Reduce speed limit on approaches* Install rumble strips
Right-angle collisions at signalized intersections	Poor visibility of signals Inadequate signal timing	Install advanced warning devices (see MUTCD Install 12-in. signal lenses (see MUTCD) Install overhead signals Install visors Install back plates Improve location of signal heads Add additional signal heads Reduce speed limit on approaches* Adjust Change interval Provide all-red clearance interval Install signal actuation
		Retime signals Provide progression through a set of signalized intersections
Rear-end collisions at unsignalized intersections	Driver not aware of intersection	Install/improve warning signs
	Slippery surface	Overlay pavement Provide adequate drainage Groove pavement Reduce speed limit on approaches* Provide "SLIPPERY WHEN WET" signs
	Large numbers of turning vehicles	Create left-or right-turn lanes Prohibit turns Increase curb radii

^{*} Spot speed study should be conducted to justify speed limit reduction.

Table 3.4 Crash Countermeasures (cont.)*

Crash Pattern	Probable Cause	General Countermeasure
Rear-end collisions at	Poor visibility of signals	Install/improve advance warning
signalized intersections		devices
		Install overhead signals
		Install 12 in. signal lenses (see
		MUTCD)
		Install visors
		Install back plates
		Relocate signals
		Add additional signal heads
		Remove obstacles
		Reduce speed limits on approaches*
	Inadequate signal timing	Adjust change interval
		Provide progression through a set of
		signalized intersections
	Pedestrian crossings	Install/improve signing or marking of
		pedestrian crosswalks
		Provide pedestrian "WALK" signal
		indication
	Slippery surface	Overlay pavement
		Provide adequate drainage
		Groove pavement
		Reduce speed limit on approaches*
		Provide "SLIPPERY WHEN WET"
		signs
	Unwarranted signals	Remove signals (see MUTCD)
	Large turning volumes	Create left or right-turn lanes
		Prohibit turns
		Increase curb radii
Left-turn collisions at	Large volume of left turns	Provide left-turn signal phases
intersections		Prohibit left turns
		Reroute left-turn traffic
		Channelize intersection
		Install STOP signs (see MUTCD)
		Create one-way streets
	Restricted sight distance	Remove obstacles
		Install warning signs
		Reduce speed limit on approaches*
Right-turn collisions at intersections	Short turning radii	Increase curb radii
Fixed-object collisions	Objects near traveled way	Remove obstacles near roadway
_	1	Install barrier curbing
		Install breakaway feature to light poles,
		signposts, etc.
		Protect objects with guardrail

Table 3.4 Crash Countermeasures (cont.)*

Crash Pattern	Probable Cause	General Countermeasure
Fixed-object collisions	Slippery pavement	Overlay existing pavement
and/or vehicles running off		Provide adequate drainage
roadway		Groove existing pavement
		Reduce speed limit*
		Provide "SLIPPERY WHEN WET"
		signs
	Roadway design inadequate	Widen lanes
	for traffic conditions	Relocate islands
		Close curb lane
	Poor delineation	Improve/install pavement markings
		Install roadside delineators
		Install advance warning signs (e.g.,
		curves)
Sideswipe collisions	Roadway design inadequate	Install/improve pavement markings
between vehicles traveling	for traffic conditions	Channelize intersections
in opposite directions or		Create one-way streets
head-on collisions		Install median divider
		Widen lanes
Collisions between vehicles	Roadway design inadequate	Widen lanes
traveling in same direction	for traffic conditions	Channelize intersections
such as sideswipe, turning		Provide turning bays
or lane changing		Install advance route or street signs
		Install/improve pavement lane lines
		Remove parking
		Reduce speed limit*

^{*} Spot speed study should be conducted to justify speed limit reduction.

Table 3.4 Crash Countermeasures (cont.)*

Crash Pattern	Probable Cause	General Countermeasure	
Collisions at driveways	Left-turning vehicles	Install median divider	
		Install two-way left-turn lanes	
	Improperly located driveway	Regulate minimum spacing of	
		driveways	
		Regulate minimum corner clearance	
		Move driveway to side street	
		Install curbing to define driveway	
		location	
		Consolidate adjacent driveways	
	Right-turning vehicles	Provide right-turn lanes	
		Restrict parking near driveways	
		Increase the width of the driveway	
		Widen through lanes	
		Increase curb radii	
	Large volume of through	Move driveway to side street	
	traffic	Construct a local service road	
		Reroute through traffic	
	Large volume of driveway	Signalize driveway	
	traffic	Provide acceleration and deceleration	
		lanes	
		Channelize driveway	
	Restricted sight distance	Remove sight obstructions	
		Restrict parking near driveway	
		Install/improve street lighting	
		Reduce speed limit*	
Night accidents	Poor visibility	Install/improve street lighting	
		Install/improve delineation markings	
		Install/improve warning signs	
Wet pavement accidents	Slippery pavement	Overlay existing pavement	
		Provide adequate drainage	
		Groove existing pavement	
		Reduce speed limit*	
		Provide "SLIPPERY WHEN WET"	
	l ha annahuntad ta iuntifu annad li	signs	

^{*} Spot speed study should be conducted to justify speed limit reduction. *Source: AASHTO

Table 3.5 Crashes by Light Conditions

Light Condition	Number	Percent
Daylight	410	76.4%
Dark-Not Lighted	45	8.38%
Dark-Lighted	50	9.31%
Dawn	5	0.93%
Dusk	8	1.49%
Not Specified	19	3.54%
TOTAL	537	

Table 3.6 Crashes by Weather Conditions

Weather Condition	Number	Percent
Not Specified	20	22.36%
Rain	71	13.22%
Clear	338	62.94%
Cloudy	102	18.99%
Sleet/Hail	2	0.37%
Fog	3	0.56%
Unknown	1	0.19%
TOTAL	537	

3.3 Environmental Overview

A preliminary environmental screening for areas of land along the study corridors was conducted on a planning level to identify potential environmental constraints within the project area.

Potential wetlands exist along streams and in low-lying areas within the proposed project corridor. Current and potential historic architectural structures and districts, as well as, hazardous sites were also identified within the proposed project corridor. Endangered and sensitive species could potentially be located within or near the proposed project corridor and could be impacted by proposed activities. As part of the project development for any proposed improvements in **Chapter 5**, appropriate environmental reviews through state and federal agencies should be performed to ensure these sensitive resources will not be affected as a result of construction activities.

Maps of the environmental review are included in the **Appendix C.**

Right-Of-Way

The amount of land to be acquired as a result of any proposed improvements has not yet been determined. The potential for the acquisition of more than one acre of right-of-way and/or the displacement of any commercial or residential occupants is still under review. Once the project limits have been determined, these criteria along with temporary easement locations should be presented to the Tennessee Department of Transportation (TDOT) point of contact (POC) for further recommendations.

Streams/Wetlands

According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Digital Wetlands Mapper, no wetlands exist within the proposed project area corridor. However, the potential exists for the presence of wetland indicators along existing streams and in low-lying areas throughout the project corridor.

The following streams should be evaluated for the presence of potential wetlands:

- Town Branch (SR-128, SR-15, and Water Street crossings)
- Hima Branch (SR-69 crossing)
- Ross Branch (SR-69 crossing)
- Barnhill Branch (SR-69 crossing), and
- Six unnamed tributaries (SR-128 and SR-69 crossings).

Hima Branch, Ross Branch, and Barnhill Branch flow into Horse Creek located to the east of the study area and SR-69. Town Branch flows directly into the Tennessee River located approximately 3,500 feet west of SR-128. The Tennessee River is designated as a navigable waterway by the United States Army Corps of Engineers (USACE) Nashville District. Obstructions to Town Branch, as well as other crossings and low-lying areas within the project corridor, could be subject to regulations in accordance with the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The USACE Nashville District should be consulted prior to proposed corridor actions.

The study area is located in the Lower Tennessee-Beech watershed, U.S. Geological Service (USGS) hydrologic unit code (HUC) 06040001. The Lower Tennessee-Beech watershed is a subbasin of the Lower Tennessee basin, HUC 060400.

Endangered Species

The Tennessee Department of Environment and Conservation (TDEC) maintains an online database of federal and state-listed rare, threatened, and endangered species. The results of the database search are show in **Table 3.7**. The USFWS and TDEC should be contacted prior to work along the corridor for a determination of the presence of listed species along the corridor and the impact to those species in accordance with the Clean Water Act, the Endangered Species Act, Fish and Wildlife coordination Act, Executive Order 11988, Floodplain Management, Executive Order 11990, Protection of Wetlands, Tennessee Non-game and Endangered or Threatened Wildlife Species Conservation Act of 1974, Tennessee Rare Plant Protection and Conservation Act of 1985, and the Tennessee Water Quality Control Act of 1977.

Table 3.7 State and Federally Listed Rare, Threatened, or Endangered Species

Scientific Name	Common Name	Federal	State Ranking
		Ranking	
Myotis grisescens	Gray Myotis Bat	Listed Endangered	Endangered
Orconectes wright	Hardin Crayfish		Endangered
Noturus fasciatus	Saddled Madtom		Threatened
Pleurobema clava	Clubshell	Listed Endangered	Endangered
Etheostoma Tuscumbia	Tuscumbia Darter		Deemed In Need of Management
Clycleptus elongates	Blue Sucker		Threatened
Acris gryllus	Southern Cricket Frog		Status Not Listed
Heron rookery	Heron Rookery		Status Not Listed
Apios priceana	Price's Potato- bean	Listed Threatened	Endangered
Hemistena lata	Cracking Pearlymussel	Listed Endangered	Endangered
Zapatus hudsonius	Meadow Jumping Mouse		Deemed In Need of Management
Sorex longirostris	Southeastern Shrew		Deemed In Need of Management
Notorus gladiator	Piebald Madtom		Deemed In Need of Management
Thryomanes bewickii	Bewick's Wren		Endangered
Haliaeetus leucocephatus	Bald Eagle		Deemed In Need of Management
Silene ovata	Ovate Catchfly		Endangered

Table 3.7 State and Federally Listed Rare, Threatened, or Endangered Species (cont.)

Scientific Name	eatened, or Endange Common Name	Federal	State Ranking
		Ranking	_
Ophiogomphus acumiatus	Acuminate Snaketail		Status Not Listed
Sisturus milarius streckeri	Western Pygmy Rattlesnake		Threatened
Melanthium virginicum	Virginia Bunchflower		Endangered
Pleurobema plenum	Rough Pigtoe		Endangered
Orconectes alabamensis	Alabama Crayfish		Deemed In Need of Management
Typhlichthys subterraneus	Southern Cavefish		Deemed In Need of Management
Egretta caerulea	Little Blue Heron		Deemed In Need of Management
Erythronium rostratum	Beaked Trout-lily		Special Concern
Symplocos tinctoria	Horse-sugar		Special Concern
Polygala mariana	Maryland Milkwort		Special Concern
Carex lacustris	Lake-bank Sedge		Threatened
Didplis diandra	Water-purslane		Threatened
Plethobasus cyphyrus	Sheepnose	Listed Endangered	Status Not Listed
Lampsilis abrupta	Pink Mucket	Listed Endangered	Endangered
Cumberlandia monodonta	Spectaclecase	Listed Endangered	Status Not Listed
Carpiodes velifer	Highfin Carpsucker		Deemed In Need of Management
Chondestes grammacus	Lark Sparrow		Threatened

Table 3.7 State and Federally Listed Rare, Threatened, or Endangered Species (cont.)

Scientific Name	Common Name	Federal Ranking	State Ranking
Limnothlypis swainsonii	Swainson's Warbler		Deemed In Need of Management
Myotis sodalis	Indiana bat	Endangered	Endangered
Myotis septentrionalis	Northern Long- eared bat	Endangered	Endangered
Hottonia inflate	Featherfoil		Special Concern
Lithasia salebrosa	Muddy Rocksnail		Status Not Listed
Hemitremia flammea	Flame Chub		Deemed In Need of Management
Ichthyomyzon gagel	Southern Brook Lamprey		Deemed In Need of Management
Cryptobranchus alleganiensis	Hellbender		Deemed In Need of Management
Quadrula cylindrical	Rabbitsfoot	Listed Threatened	Status Not Listed
Iris brevicaulis	Lamance Iris		Endangered
Lysimachia fraseri	Fraser's Loosestrife		Endangered
Salvia azurea var grandiflora	Blue Sage		Special Concern
Panax quinquefolius	American Ginseng		Special Concern
Plethobasus cooperianus	Orangefoot Pimpleback	Listed Endangered – Non-essential Experimental Population in Portion of Range	Endangered

Table 3.7 State and Federally Listed Rare, Threatened, or Endangered Species (cont.)

Scientific Name	Common Name	Federal Ranking	State Ranking
Plethobasus cicatricosus	White Wartyback	Listed Endangered – Non-essential Experimental Population in Portion of Range	Endangered
Obovaria refusa	Ring Pink	Listed Endangered – Non-essential Experimental Population in Portion of Range	Endangered
Cyprogenia stegaria	Fanshell	Listed Endangered	Endangered
Orconectes wright	Hardin Crayfish		Endangered

Floodplain/Floodway

Portions of SR-128, SR-15/Main Street, and Water Street were located in the 100 year floodplain of Town Branch according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). The USACE Nashville District and TDOT POC should be contacted for direction prior to work being performed within the corridor.

Farmland

The Natural Resources Conservation Service (NRCS) Web Soil Survey indicated soil units of prime farmland throughout the project corridor. During the site reconnaissance, no areas of cultivated land were identified within the project corridor buffer. The majority of soil units suitable for prime farm land and indicated on the soil maps within the project area have previously been developed by roadway, residential, commercial, or industrial construction.

Wild and Scenic Rivers

The Tennessee Wildlife Resources Agency (TWRA) and TDEC maintain a list of state and federal-listed scenic rivers located throughout Tennessee. Wild and Scenic Rivers were not identified within the proposed corridor buffer.

Air Quality

An air quality analysis will be conducted upon the release of proposed corridor plans. The air quality analysis should include transportation conformity and Mobile Source Air Toxics (MSATs) for all projects, and pertinent information provided to the POC.

Noise

A noise study and abatement measures analysis will be conducted upon the release of proposed corridor plans, if required.

Cultural and Historic Resources

The National Park Service (NPS) maintains an online database of registered historic archaeological and architectural resources. One architectural structure, the Graham James House, is located adjacent to, and southeast of, the intersection of SR-226 (Airport Road) and SR-69. The Savannah Historic District, listed on the National Register of Historic Places, is located adjacent to the north of the proposed corridor along Main Street. The Trail of Tears National Historic Trail is also indicated as being a part of SR-15/Main Street within the proposed project corridor.

Numerous architectural resources with potential for listing on the National Register are located within, and adjacent to, the proposed project corridor buffer. These resources include the Savannah Cemetery, located adjacent to the proposed project corridor buffer east of SR-128, and a historic district designated by the City of Savannah as shown on **Figure 3.6**, encompassing the nationally registered Savannah Historic District. Hardin County Schools Annex and Barnhill United Methodist Church are located further south along SR-128 and appear to potentially be eligible for listing in the National Register. The City of Savannah, the Tennessee Historical Commission, and the NPS should be contacted prior to work performed along the corridor area to identify any potential or unrecorded historic properties that could be affected by construction or for any undesired impacts to known resources. An assessment of architectural structures located within and adjacent to the proposed project area will most likely be required to determine the current National Register eligibility of these resources and to update records at the Tennessee Historical Commission.

Parks or Recreational Resources

One park, Veteran's Park, was identified on SR-64 between Main Street and Water Street. The boundaries of this park were within the 100 foot buffer area of both streets along the northern portion of the corridor study. The location of Veteran's Park is shown on **Figure 3.7**. No wildlife refugees were located within the project area. The TDEC Recreational Educational Services Division, Grants Program Office should be contacted prior to construction activities for a potential impact analysis of the proposed work.

Native American Coordination

Native American coordination will be required if the project involves acquisition of new ROW on previously undisturbed land. This coordination will most likely involve a cultural resources assessment conducted by an archaeologist meeting the Secretary of the Interior's requirements. Consultation with the TDOT POC should be conducted once the proposed project plans are available to determine if any undisturbed ROW will be impacted.

Hazardous Materials

Numerous businesses with underground storage tanks (USTs) and bulk storage, or businesses that use or transport hazardous materials are located within the 100 foot buffer of, or adjacent to, the project corridor. The Former Rick's Quick Stop, located at 128 Main Street, was present on the TDEC list of UST facilities as "closure monitoring." This facility is the only facility identified as currently being monitored within the proposed project corridor. However, the exact location of this site could not be identified. The general location of this site is shown in the maps in **Appendix C**. The Savannah Hardin County Industrial Park is located along the southern end of the SR-69 corridor.

No National Priorities List (NPL), proposed NPL, Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), CERCLIS - No Further Remedial Action Planned (NFRAP), or Solid Waste Landfill (SWLF) sites were identified as being located within the proposed project corridor buffer area through desktop applications. Several commercial and industrial sites were observed along the proposed corridor route during site reconnaissance, in addition to the current and abandoned UST sites stated above.

The sites listed in **Table 3.8** were listed on the Environmental Protection Agency's (EPA's) website as being located within one mile of the proposed project corridor as having generated, handled, or transported hazardous materials/waste (RCRA) or other toxic releases.

Prior to work within the study area, a thorough Phase I Environmental Site Assessment should be conducted to identify any hazardous sites through

documents and avenues not readily available through the preliminary screening process that could potentially impact or have previously impacted the project area.

Environmental Justice

The majority of the project area is located along business routes and would primarily impact businesses and single family residences. The project will not have significant impacts to minority and low-income populations.

Environmental Summary

In conclusion, NSI has performed this preliminary environmental screening of the proposed project corridors to identify any sensitive resources that could be impacted by construction activities. Potential wetlands, historic architectural structures and districts, a national trail, and sites with hazardous materials utilization and storage are located within the proposed project area buffer area and adjacent to the buffer area. Prior to development of the proposed roadway project, thorough assessments and review of sensitive resources in the area are recommended to ensure these resources will not be affected by proposed construction activities.

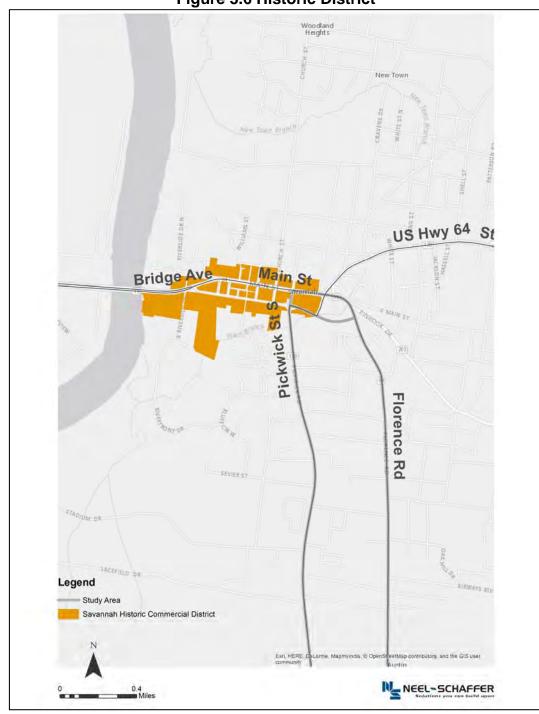


Figure 3.6 Historic District

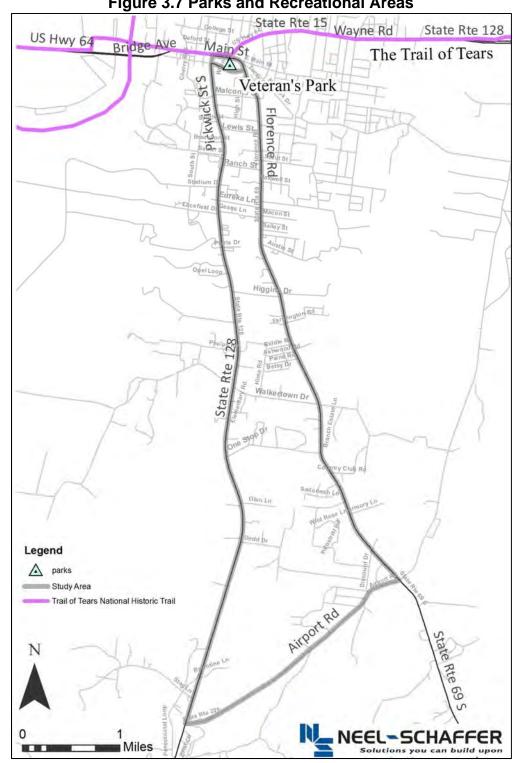


Figure 3.7 Parks and Recreational Areas

Table 3.8 Facilities with Hazardous Materials Located Within One Mile of the Corridor

Facility Name	Address	Lat/Long	Designation
Former Rick's Quick Stop	128 Main Street	Not Available	LUST
Brown Shoe Co.	160 Brown Circle	Lat: 35.22328	RCRA
		Long: -88.23544	
Custom Production	Address Not Available	Lat: 35.227399	RCRA
		Long:- 88.233162	
CVS Pharmacy #10072855	Wayne Road	Lat: 35.22785	RCRA
		Long: -88.23167	
Design Team Sign	350 Pinhook Drive	Lat: 35.21886	RCRA
Company, LLC		Long: -88.23791	
Jones Motor Co, Inc.	508 Florence Road	Lat: 35.2166	RCRA
		Long: -88.23947	
Parris Manufacturing Co.,	128 South	Lat: 35.219742	AFS, TRI
Inc.		Long: - 88.246277	
Savannah, Hardin County	808 Shell Street	Lat: 35.231534	AFS, TRI
Landfill		Long: -88.23348	
South Central Bell	106 N. Pickwick	Lat: 35.225347	RCRA
	Street	Long: - 88.246246	
Tractor Supply Company #138195	Water Street, Ste. A	Lat: 35.22221 Long: -88.2434	RCRA
William's Cabinet Shop, Inc.	Industrial Road	Not Available	RCRA
Praxis Industries LLC	Industrial Road	Not Available	RCRA

AFS: Air Facility System

LUST: Leaking Underground Storage Tank RCRA: Resource Conservation and Recovery Act

TRI: Toxic Release Inventory

4. PUBLIC INVOLVEMENT

4.1 Public Meeting #1

An Action Plan for the first public meeting was developed in order to effectively and efficiently disseminate information to the general public, as well as, solicit valuable feedback. The target audience was determined to be area residents, area businesses, local elected officials, emergency service providers, and school officials. The objective of the first public meeting was to determine local needs and concerns within the study area. For this purpose, a Comment Form was developed in both English and Spanish. The meeting was held on May 12, 2016 at the Savannah City Hall in conjunction with the Planning Commission Meeting.

The Comment Form was handed out at the first public meeting and placed on the City's website. Comments were accepted up to one month after the meeting. Twenty-Four (24) comment forms were collected. **Figure 4.1** shows the English version of the Comment Form and **Figure 4.2** shows the Spanish version of the Comment Form. Of the comments received 54.2% of the responders stated that they work along the corridors and 54.2% use other facilities along the corridors. In addition, 41.7% are on these corridors daily. Respondents were asked to rank the items shows in **Table 4.1** in order of importance with a 1 being of low importance and a 10 being of high importance. Their scores were then averaged.

Table 4.1 Public Meeting #1 Comments Summary

Truck	School	Intersection	Roadway	Bicyclist	Pedestrian	Number of
Traffic	Traffic	Congestion	Congestion	Safety	Safety	Driveways
4.8	7.1	7.6	7.9	6.2	7.0	4.8

Based on the rankings above, roadway congestion is of the greatest concern followed closely by intersection congestion. School traffic and pedestrian safety also received high rankings. Of lesser concern were truck traffic, bicyclist safety and number of driveways. However, it should be noted that some respondents gave these a ranking of 10 meaning they are of high importance to some people.

Respondents were also given the opportunity to share what they perceive to be challenges along the corridors and other information they wished the Study Team to know. Those comments are summarized below. Comments not pertinent to the study, such as those regarding the construction issues on SR 128 were omitted from this list.

- Hickory/Lewis need signal to help Electric Co-op trucks and Kroger Delivery trucks to safely pull onto SR 69
- Encourage walking and cycling with improvements
- Need more sidewalks
- Too much stopping and starting in traffic
- Synchronize signals better
- Pedestrian safety at intersections an issue on Main Street
- Florence Road needs left turn lanes
- Ranch Street is problematic during school arrival/dismissal hours
- Congestion on Florence Street a problem for emergency vehicles
- Difficult to pull out of Stout Street
- Difficult to pull out of Tennessee Valley Electric Co-op
- Traffic flow is heavy during school opening and closing hours at the schools
- There are not enough passing lanes
- It is not safe for people to walk
- Sight distance is poor on side roads
- Difficult to pull out of side roads due to congestion
- The intersection of Pinhook and SR 69 is congested during noon hours.
- Difficult for people in wheelchairs to get around
- Slow moving cars are a problem in some areas
- Congestion and backups at signals

City Hall was selected as the meeting place due to its familiar location and ability to accommodate a large group. Notice of the meeting was published in the Savannah Newspaper, The Courier. Approximately twelve (12) people attended the meeting including the Planning Commission members. Citizens in attendance voiced many concerns and suggestions for the project study corridor. Safety was the number one concern expressed by the participants in regards to school traffic.

Figure 4.1 Comment Form (English)

		and a knowledge of free place of the same
	nk you for your interest in the SR 69 (Florence Road)/SR 1: ments.	28 (Pickwick Street) Corridor Study. We appreciate your
1.	What do you primarily use the corridors for?	Service Str. South Str. 15 CO. Provide
	☐ Live along the corridors	BASSE ST. THAN SE
	☐ Work along the corridors	
	 Attend school or take children to school 	
	☐ Use of other facilities	
	No. 15 - 91 - 1 - 95 - 19 10 - 13 - 3	(2 d
2.	How often do you travel through the corridors?	
	☐ Multiple times throughout the day	
	☐ Twice daily ☐ Couple of times a week	
	☐ Once a week	
	Less than once a week	
	Esse Midil Office of Water	
3.	What challenges, if any, do you encounter while on the	Å ///
	corridors?	Legend
		9 100
	-	SR69/128
		SAVANNAH SR69/128
	Please rank each of the following factors in order of impo	ortance on a scale of 1 - 10 (1 = lower importance, 10 = high
4.		
4.	importance).	
4.		Bicyclist Safety
4.	importance).	Bicyclist Safety Pedestrian Safety
4.	importance) Truck Traffic	
4.	importance). Truck Traffic School Traffic	Pedestrian Safety
4.	importance). Truck Traffic School Traffic Intersection Congestion	Pedestrian Safety
	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion	Pedestrian Safety
	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion Is there anything else that you would like to share with one	Pedestrian Safety Number of Driveway
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	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion Is there anything else that you would like to share with corridors that our team should be aware of? Please proving remain in contact with you throughout the study:	Pedestrian Safety Number of Driveway our team or are there any unique considerations about the
	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion Is there anything else that you would like to share with corridors that our team should be aware of? Please prov may remain in contact with you throughout the study: Name	Pedestrian Safety Number of Driveway our team or are there any unique considerations about the vide your complete contact information (optional) so that we
	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion Is there anything else that you would like to share with corridors that our team should be aware of? Please prov may remain in contact with you throughout the study: Name Street	Pedestrian Safety Number of Driveway our team or are there any unique considerations about the vide your complete contact information (optional) so that we Thank you for your interest and participation!
	importance). Truck Traffic School Traffic Intersection Congestion Roadway Congestion Is there anything else that you would like to share with corridors that our team should be aware of? Please prov may remain in contact with you throughout the study: Name	Pedestrian Safety Number of Driveway our team or are there any unique considerations about the vide your complete contact information (optional) so that we

Figure 4.2 Comment Form (Spanish)

CC	OMENTARIOS SAVANNAI	H SR69/128 CORRIDOR STUDY
	ias por su interés en el estudio del corredor de la SR 69 (Carretera Flo entarios.	rencia) /SR 128 (Calle Pickwick). Apreciamos sus
1.	¿Para qué principalmente usa estas carreteras? ☐ Vivo a lo largo de las carreteras ☐ Trabajo a lo largo de las carreteras ☐ Asistir a la escuela o llevar a los niños a la escuela ☐ El uso de otras instalaciones	Access to the same of the same
2.	¿Con qué frecuencia viaja por estas carreteras? Varias veces durante el día Dos veces diarias Par de veces a la semana Una vez a la semana Menos de una vez por semana	
3.	¿Qué desafíos, si alguno, ha encontrado mientras esta a lo largo de estas carreteras?	Legend Legend SAVANNAH SRESF/138
	·	
	Tráfico de Escuela Seguri	dad ciclista dad de los Peatones ro de entradas o equipo o hay consideraciones únicas sobre las one la información completa de contacto
	importancia, 10 = mayor importancia). Tráfico de Camiones Seguri Tráfico de Escuela Seguri Congestión de Intersección Núme Congestión Vial 5. ¿Existe cualquier otra cosa que le gustaría compartir con nuestr carreteras que nuestro equipo debe tener en cuenta? Proporcio	dad ciclista dad de los Peatones ro de entradas o equipo o hay consideraciones únicas sobre las one la información completa de contacto
No	importancia, 10 = mayor importancia). Tráfico de Camiones Seguri Tráfico de Escuela Seguri Congestión de Intersección Núme Congestión Vial 5. ¿Existe cualquier otra cosa que le gustaría compartir con nuestr carreteras que nuestro equipo debe tener en cuenta? Proporcio	dad ciclista dad de los Peatones ro de entradas o equipo o hay consideraciones únicas sobre las one la información completa de contacto
_	importancia, 10 = mayor importancia). Tráfico de Camiones Seguri Tráfico de Escuela Seguri Congestión de Intersección Núme Congestión Vial 5. ¿Existe cualquier otra cosa que le gustaría compartir con nuestr carreteras que nuestro equipo debe tener en cuenta? Proporcic (opcional) para que podamos permanecer en contacto con uste	dad ciclista dad de los Peatones ro de entradas o equipo o hay consideraciones únicas sobre las one la información completa de contacto
Ca	importancia, 10 = mayor importancia). Tráfico de Camiones Seguri Tráfico de Escuela Seguri Congestión de Intersección Núme Congestión Vial 5. ¿Existe cualquier otra cosa que le gustaría compartir con nuestr carreteras que nuestro equipo debe tener en cuenta? Proporcic (opcional) para que podamos permanecer en contacto con uste	dad ciclista dad de los Peatones ro de entradas o equipo o hay consideraciones únicas sobre las one la información completa de contacto d durante todo el estudio:
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4.2 Local Officials Meeting

Prior to the second public meeting the Study Team met with the Planning Commission to present the findings of the study and to obtain input into the periodization of the recommendations. The meeting was open to the public. Projects were prioritized in low, medium and high categories. This is explained more in Section 5.7. The handout used is shown in Figure 4.3 and Figure 4.4. For the most part, the Study Team's recommendations for prioritization were accepted. Three projects had their priorities raised from medium to high.

4.3 Public Meeting #2

The second public meeting was held on November 7, 2016 at the Savannah City Hall in conjunction with the City Commission Meeting. lt was immediately preceded by an Open House format meeting during which the public and elected officials could review maps of the proposed recommendations and ask questions of the Study Team. During the City Commission meeting the Study Team made a presentation of the study



including the recommendations. Seventeen participants were present at the meeting in addition to the Study Team. At the conclusion of the meeting, the City Commission was asked to support a resolution accepting the study results. This is shown on Page 3 of this report. It was then signed by the Mayor of Savannah.

Advertisement of the meetings and presentations made at each meeting are included in **Appendix D**.

Figure 4.2 Prioritization Exercise Front Page

SURVEY FORM

SAVANNAH



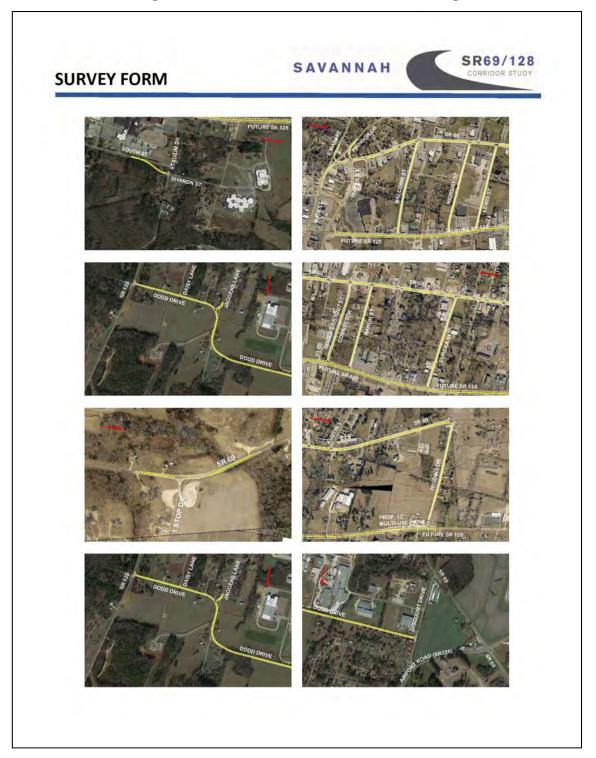
Thank you for your interest in the SR 69 (Florence Road)/SR 128 (Pickwick Street) Corridor Study. We appreciate your comments. The build recommendations are included on the back of this form. The priorities used were low, medium and high. "Low" priorities reflect long range projects to be completed 10 or more years in the future. " Medium" priority projects are those that should be completed in the next 5 to 10 years. "High" priority projects are those that should be accomplished in the next five years. Please use the last column to tell us how you think the projects should be prioritized. If you do not feel a project should be included, write "None" in the square.

Improvement Project		stimated Ject Costs	Recommended Priority	Your Recommended Priority
Spot Improvements				
SR 128/Dodd Road	\$	70,000	Medium	
SR 128/Sevier Street Signal	\$	220,000	High	
SR 15/Main Street and Water Street Interconnect, Coordinate and Retime Downtown Signals	\$	530,000	High	
SR 69/SR 15 Realignment	\$	550,000	Medium	
SR 69/SR 203 (Pinhook) Realignment	\$	630,000	High	
SR 69/Malcomb Street	\$	70,000	High	
SR 69/Lewis Street	\$	70,000	High	
SR 69/Ranch Street	\$	70,000	High	
SR 69/Austin Street	\$	70,000	High	
SR 69/One Stop Drive	\$	100,000	High	
SR 69 Curve Improvement South of One Stop Drive	\$	550,000	Medium	
SR 69/SR 226 (Airport Drive)	\$	10,000	High	
SR 226 (Airport Drive)/Discount Drive	\$	10,000	Hlgh	
Multimodal Improvements				
Main Street	\$	220,000	Medium	
Water Street	\$	180,000	Low	
Malcomb Street	\$	470,000	Low	
Hickory Street	\$	430,000	Low	
LewisStreet	\$	380,000	Low	
Ranch Street	\$	410,000	Low	
Eureka Lane	\$	420,000	Low	
Higgins Drive + North to Opel Loop	\$	500,000	Low	
Connectivity Improvements				
Sevier to Stout Connector	\$	1,540,000	Medium	
Dodd/Discount Drive Connector	\$	2,090,000	Medium	
School Access Improvements				
South Street Improvement	\$	220,000	Hìgh	
Driveway/Storage Lane Improvements	\$	70,000	Medium	
Corridor Improvements				
SR 69 Higgins to Main Street	S	10,920,000	Medium	

Thank you for your interest and participation!
FOR MORE INFORMATION CONTACT STUDY TEAM LEADER TOM SMITH:

(731) 925-3300 ext. 156 tsmith@cityofsavannah.org

Figure 4.2 Prioritization Exercise Back Page



5.0 RECOMMENDATIONS

The Community Transportation and Planning Grant specifically called for recommendations that would address land use and access management, identify transportation improvements, and serve as an overall guide for future implementation. The following sections include land use planning suggestions to guide zoning and land development decisions including access management policies for new development as well as for retrofitting existing access; spot improvement plans to address specific safety and/or operational issues; and, new connectors and corridor projects, which require right-of-way acquisition and more extensive construction.

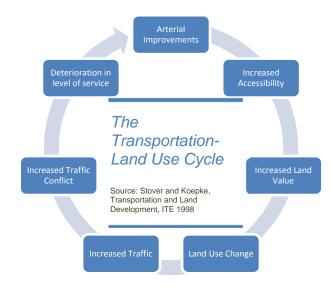
In addition to the discussion of the recommendations, priorities for each of the improvements, as well as probable costs, are included in this Chapter. The project priorities are based on the transportation needs of the corridors according to the traffic and crash analysis as well as public input. This information is intended to assist the City in in scheduling the improvements and seeking necessary funds.

It should be noted again that most of the study area operates at good levels of service throughout the day. The peak period of congestion on the corridors is relatively short and impacted by school traffic. Any recommendations that improve traffic flow associated with the schools will help overall operations on both SR 128 and SR 69.

5.1 Land Use Planning

Adequate land use policies and controls can prevent congestion along arterials, increase levels of service, reduce difficult left turns and improve sight clearance at corners. When combined successfully, these policies and controls can reduce the need for costly retrofitting measures. As areas grow, traffic will increase and improvements may be needed as shown in this Chapter.

The City of Savannah does not currently have a Land Use Plan, although the City recently updated its Zoning Map (shown in Figure 2.7). This section of the recommendations provides guidance to the City for the development of formal land use policies that can be adopted by the Planning Commission and be incorporated into the City's Municipal Code. The land use recommendations below support recommendations of the study and can guide the form and pattern of future development. Land use policies are to be used as reference auides when considering rezonings, annexations, subdivisions and site plans. They also support public infrastructure investments and aid decisions for private sector investment.



The land use recommendations section is divided into short, mid and long-term actions. The recommendations are presented with the aim of encouraging residential, commercial and light industrial growth in Savannah, while providing regulatory guidance that ensures that the future growth is compatible with the quality of life the community desires. Additionally, the recommendations promote pedestrian-friendly connectivity and neighborhoods connected by pedestrian walkways to the commercial and school areas.

Beyond the desire for new residential and commercial growth, two land use/transportation issues rose to the top as concerns along the corridors in Savannah. First is the issue of pedestrian connectivity and the need for safe and accessible sidewalks, especially in the areas north of Higgins Road. And second, the issue of traffic impacts due to off-site circulation from light-industrial uses along the corridors.

The land use recommendations presented here are meant to work hand-in-hand with the traffic and connectivity recommendations presented later in this chapter.

Short-Term: Use Access Management as a Land Use Strategy

Access management is essential to successful land use and transportation strategies along the corridors. Access management supports dense development patterns, efficient travel and safe access to and from developments for all modes of transportation. Access management is a broad term that can consist of many of traffic measures, including

- Promoting internal cross access connections between adjacent land uses;
- Requirements for developments to be designed with onsite circulation;

- Pedestrian circulation plans for new developments or redevelopments ensuring safe access to and around a site;
- Coordinated road improvements to alleviate congestion and limit access onto the main Corridors;
- Policies and guidelines relative to nontraversable medians and median opening spacing standards; and
- Requirements for driveway consolidation and unified access.

Access Control is addressed in Section 11-310 of the Savannah Zoning Ordinance and Chapter 14, Section 311 of the Savannah Municipal Code. Additional access and circulation regulations are also addressed within the Zoning Ordinance and the Municipal Code.

The existing Ordinance as well as suggested revisions to Savannah's Access Control sections of the Zoning Ordinance and Municipal Code are included in **Appendix E** of this report.

Short-Term: Adopt Traffic Impact Analysis Requirements

Traffic impact analysis is a study of the effects a proposed development will have on transportation needs and traffic on the current and future transportation network. Traffic impact analyses work with access controls to promote safety and minimize congestion. Regulations would define a development threshold for when a traffic impact analysis would be required and suggest when developer contributions to road improvements are appropriate. Large developments, rezonings or annexations that will generate more than 100 new peak hour vehicle trips may benefit from the requirement (Williams and Marshall).

Savannah's Municipal Code ordinance should be amended to require large developments to perform traffic impact analysis to determine if improvements are needed to the transportation network as a result of the development.

Mid Term Action: Adopt Subdivision Regulations

The City of Savannah anticipates residential growth over the next twenty years. As this growth occurs, thought is needed in terms of where and how new residential development happens.

The creation of subdivision regulations can guide proper layout of internal streets, adequate space for emergency access and utility infrastructure and appropriate site design. As properties subdivide the number of access points increases and lots may be created that cannot meet regulatory requirements for development such as sufficient width or access to roadways. Undesirable lots, such as flag lots or lots with environmental constraints are also an issue (lots with limited road frontage that widen after a long distance from a roadway are called flag lots). Subdivision regulations set a threshold for when review is needed, for example the

creation of 5 or more lots could require a review. The regulations then determines what the review process entails.

The following list of issues should be addressed during the subdivision review process (Listokin and Walker, 1989):

- Is the road system designed to meet the projected traffic demand and does the road network consist of hierarchy of roads designed according to function?
- Is access properly placed in relation to sight distance, driveway spacing and other related considerations?
- Do units front on residential access streets rather than major roadways?
- Does the project avoid areas unsuitable for development?
- Does the pedestrian path system link buildings with parking areas, entrances to the development, open space, and recreational and other community facilities?
- Have utilities been properly placed?

Mid-Term Action: Adopt goals to guide all land use decisions

To guide and strengthen Savannah's existing zoning and land use regulations, the Purpose Section (14-203) of the Municipal Code should be expanded to include a set of goals that will guide future land use decisions. The goals should be developed by the Planning Commission with community input.

The following are examples of goals that support compatible land uses:

- Preserve and maintain the City's attractive visual appearance for residents and visitors:
- Preserve the City's environmental resources and provide access to outdoor recreational opportunities;
- Manage City's growth and development to maintain and enhance Savannah's high quality of life;
- Provide adequate, high quality, and well-maintained public services, amenities, and facilities;
- Provide a comprehensive multi-modal transportation system for Savannah including bicycle, pedestrian, public transportation and vehicular transportation amenities;
- Support balanced, appropriate economic development and provide infrastructure support that encourages businesses and residents to flourish;
- Promote and sustain a progressive and positive planning process for Savannah;

- Balance maintenance of existing infrastructure and with support for future growth areas; and
- Increase safety and accessibility.

Long-Term: Adopt a Comprehensive Plan

A comprehensive plan "[guides] the physical, social, and economic development, both private and public for the development of the community" (Tennessee Planning Commissioner Handbook). When it is the first step in the planning process, it provides a strong foundation for future plans. Because a comprehensive plan is based on community determined goals and objectives and quantitative data it serves as a tool for decision making for future developments and capital improvements. Those decisions have more buy in and support from the community and have a stronger legal foundation when challenged.

As part of the comprehensive plan, future desired land use patterns should be mapped and used as a basis for transportation plans. Most comprehensive plans also contain a section outlining transportation goals and objectives which identify strategies appropriate for the community and pinpoint areas that may need additional attention. For example, the Land Use and Transportation section can define redevelopment nodes which support compact growth and serve as a basis for policy implementation and inclusion in the public improvements program.

A comprehensive plan usually contains:

- Introduction
- Background for Planning
- Economy and Population
- Land Use and Transportation Plan
- Community Facilities Plan
- Public Improvements Program

Current efforts by the Savannah Industrial Development Corporation and the Hardin County Chamber of Commerce to attract businesses to the industrial park at the southern end of the study area could also be supported by a future land use plan. If the plan identifies the area as an industrial node, infrastructure could then be planned for heavy truck traffic in the area.

5.2 Spot Improvements

Through the process of discussing the corridor with City Officials, reviewing comments from the public, and analyzing traffic and crash data, improvement options have been identified. The first group of improvements are spot improvements, which are generally localized to a small segment of roadway or an

intersection and intended to address a specific operational or safety issue. They could also be low costs improvements that are spread out over an area. The list below includes a brief description of the improvement projects recommended as part of this study. More detailed plan information about these projects is included in **Appendix F**.

SR 128/Dodd Road

This intersection works well operationally with a LOS of A in the AM and a LOS of B in the PM. However, sight distance is poor from Dodd Road looking south. This has been a location of several accidents. It is recommended that the intersection be reconstructed to improve sight distance. This improvement project could be a stand-alone project or could be completed as part of a realignment and widening project for Dodd Road, which is discussed in the next section.

SR 128/Parris South Drive

This intersection is problematic for school traffic and operates at a very poor LOS of E during the morning and afternoon peaks. While the School Board would like for this intersection to be signalized, it does not meet MUTCD signal warrants and would only assist traffic for about one hour each day. As part of the school access plan discussed in the following pages, it is recommended that this road be a right-in/right-in only entrance, at least during peak periods. In order for this to work, additional improvements along South Street and Sevier Street are needed and are discussed in the next sections. These additional improvement would allow drivers wishing to travel north on SR 128 a safer alternative for making left turns.

South Street/Stadium Drive

South Street runs parallel to SR 128 for a portion of the corridor. It also runs behind Hardin County High School. The road is used by school traffic from the Parris South Elementary School and the Hardin County Middle School. To improve the traffic flow and support the school access plan discussed later in this chapter, it is recommended that the offset intersections on Stadium Drive with Sharon Street and South Street be aligned. In addition, South Street should be widened to better accommodate the increased traffic. A figure of this improvement project is shown in **Appendix F**.

The SR 128/Lacefield Drive intersection is also problematic during school dismissal hours and operates at a poor LOS of D during the afternoon peak. By diverting school traffic to South Street and Sevier Street as discussed above, the traffic operations at this location should improve.

During the AM peak the SR 128/Eureka Street intersection operates at a LOS D, which may worsen to an LOS of E by 2040. However, this intersection also does not meet the MUTCD warrant for a signal. An additional turn lane would only slightly improve operations at this location. A new connector at Sevier Street (discussed later) would give drivers on Eureka Street an alternative to reach destinations north on SR 128 and would also provide better access to Hardin County High School.

SR 128/Sevier Street

This intersection is also problematic for school traffic and operates at a poor LOS of D during the morning peak and will decrease to a LOS of E by 2040. All of the other driveways and streets in the vicinity of the High School operate at a LOS of C or better during AM and PM peaks both during the current year and in 2040. Traffic signal warrants are not met at the Sevier Street intersection with current traffic patterns under present or future conditions, however signalization is recommended in conjunction with the modification of school traffic access and development of the Sevier Street connector discussed later. The signal would provide for better traffic flow in this area and would enhance school access measures discussed later in this Chapter. It would also support the new Sevier Street connector recommendation discussed later.

SR 15/Main Street and Water Street Area

This area experiences poor LOS and severe congestion due to the signals and short turning lanes. Geometric improvements are not feasible at this location but the area should be retimed to optimize efficiency. This should include implementation of interconnected signals (preferably fiber optic), coordination for all signals in the downtown area, upgrading pedestrian displays and pushbuttons to current standards, adding pedestrian features where lacking, and repairing or replacing failed detection loops.

SR 69/Pinhook/Main Street

This area experiences congestion because multiple corridors meet at this location. To maximize traffic flow, the intersection should be reconstructed as two distinct intersections. The eastern approach SR 15/Main Street should be reconstructed to join SR 69 at a right angle to allow for better sight distance for left turning vehicles. To reduce the number of approaches, SR 203/Pinhook Road should be relocated to connect to SR 69 at the existing Water Street intersection. A roundabout was also considered at this location, but was rejected for several reasons. The impacts on adjacent properties and the right-of-way costs would be high for a roundabout. This configuration would not work well with the high volume of trucks on this road and would require a plan to re-route trucks onto Water Street to avoid the roundabout. A figure of this improvement project is shown in **Appendix F**.

SR 69/Malcomb, Lewis, Ranch and Austin Streets

Throughout the northern portion of SR 69/Florence Road, many of the side streets share common characteristics that impact traffic flow on the corridor. The entrances to these side streets are narrow, have tight radii, and have deep ditches on either side of the roadway. This causes drivers on SR 69 to slow or even come to a complete stop prior to turning onto side streets. At each of these four locations, the entrances should be widened to allow for safer, swifter turning movements. The intersection projects could be designed to support the SR 69 widening project discussed later in this Chapter or as part of the widening project. These improvement are shown in **Appendix F**.

SR 69/One Stop Drive

This intersection appears to be used by trucks coming from the Industrial Park resulting in northbound left turns at the intersection. The intersection is located just north of a horizontal curve and vehicles cannot see stopped vehicles until they are nearly past the curve. A left turn lane would reduce the collisions between northbound through vehicles and waiting northbound left turning vehicles. A figure of this improvement project is shown in **Appendix F**.

SR 69/Curve South of One Stop Drive

This curve has been the location of several major crashes. It is recommended that the curve be upgraded immediately with improved horizontal curve signing. A second improvement project would be to reconstruct the curve to reduce the degree of curvature and improve the shoulders. A figure of this improvement project is shown in **Appendix F**.

SR 69/SR 226 (Airport Drive)

This intersection is well signed, but, despite these efforts, there are many crashes at this location each year. Additional safety measures that could be added include updating the stop signs with red flashing lights and re-grading the approaches on the south to increase visibility of approaching vehicles that may not stop at the intersection.

SR 226 (Airport Drive)/Discount Drive

Although sight distance appears to be adequate at this location, it has been the site for several crashes. It is recommended that the stop sign on Discount Drive be updated to a larger sign and an advanced warning sign be added on Discount Drive.

5.3 Multimodal Improvements

One of the goals of the project, as well as a need cited by the public, includes improving multimodal options in Savannah. Currently there are few sidewalks available outside of Main Street and Water Streets. The reconstruction of SR 128 will include sidewalks and will have shoulders that may be used by experienced cyclists. There are no bike lanes or trails within the study area.

The vision for the multimodal recommendation is to create a loop around the northern study area that will provide citizens many options for accessing schools, commercial areas, government buildings, churches and other sites by foot or bicycle. The following multimodal improvements should be made to implement the vision:

- Main Street update the existing sidewalks to meet ADA standards and add new sidewalks connections and crosswalks to allow pedestrian access to the commercial areas along Main Street, Veteran's Park and area restaurants.
- Water Street add new sidewalk connections where sidewalks are missing or do not meet ADA standards and install crosswalks to allow safer pedestrian access.
- Malcomb Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists.
- Hickory Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists.
- Lewis Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists.
- Ranch Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists.

74

- Eureka Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists.
- Higgins Street add sidewalk or multi-use trail to accommodate pedestrians and cyclists along Higgins and connect to sidewalk being installed as part of the TDOT improvements along SR 128.

More details on these improvement projects are shown in **Appendix F**.

5.4 Connectivity Improvements

Although there are many existing connector roads between SR 128 and SR 69, the addition of two more would address important needs in the study.

Sevier Street Connector

This connection would go from Sevier Street on SR 128 and connect with Stout Street on SR 69. The Stout Street intersection was identified by City officials as a problematic location. It frequently backs up due to the high volume of left-turning vehicles. It is recommended that a two lane connector be constructed that would join both streets and would accommodate pedestrians and cyclists. The connector should be signalized on both ends to provide for safer turning movements. A figure of this improvement project is shown in **Appendix F**.

Dodd Road Connector

This improvement project supports future growth at the Industrial Park. Currently, truck drivers that leave the Industrial Park, who wish to access SR 128, either take SR 226 (Airport Road) or One Stop Drive. The existing Dodd Lane is very narrow, has deep ditches, and has two sharp horizontal curves. It is not a viable route for truck traffic. A figure of this improvement project is shown in **Appendix F**.

5.5 School Access Improvements

Many of the school access improvements have been discussed in the previous sections. One of the biggest impediments to school traffic flow is the school start and dismissal times. Increasing the amount of time between the Elementary School/Middle School and the High School arrival and dismissal hours by at least 15 minutes could reduce traffic congestion significantly. Providing drivers an alternative to turning left at un-signalized intersections on SR 128, such as Parris Drive, Lacefield Drive, Stadium Drive, the school entrances and Sevier Street would also improve traffic flow in the area. Left turns at these locations could be discouraged with either geometric changes at the intersections (creating right inright out approaches) or by using temporary measures (cones and/or signs) during school hours. Traffic currently using these locations to make left turns would be

redirected to the proposed signalized intersection at Sevier Street through improvement of South Street. Finally, improving the stacking or storage area for those motorists, who are either dropping students off or picking those student up at the High School, could improve the safety in the area. Currently, vehicles wait on the shoulder of SR 128 to turn into the school lot. Oftentimes students walk along the shoulder to find the vehicle picking them up. Connecting the northernmost school driveway with the drive lanes in front of the school and closing the second driveway from the north would add valuable stacking area. These school access improvement are shown in **Appendix F**.

5.6 Corridor Improvements

One of the more common complaints during the course of the study was congestion on SR 69/Florence Road primarily due to the difficulties in turning onto the road and the congestion caused by left turning vehicles on the corridor. The crash analysis also indicated that crashes are an issue, particularly rear end crashes. For these reasons, it is recommended that the corridor be widened to a three lane section with sidewalks and bike lanes from SR-203/Pinhook to Higgins Drive. A typical cross section for this improvement is show in **Figure 6.1**.

S.R. 69 FLORENCE ROAD
TYPICAL SECTION

Figure 6.1 Proposed SR 69 Cross Section

5.7 Cost Estimates and Project Prioritization

All of the recommendations included in this Chapter are listed in **Table 6.1** and shown in **Figure 6.2**. The priorities used were low, medium and high. Low priorities reflect long range projects to be completed 10 or more years in the future. Medium priority projects are those that should be completed in the next 5 to 10 years. High priority projects are those that should be accomplished in the next five years.

The construction costs include planning level design, right-of-way and construction estimates. These estimates reflect 2016 probable costs regardless of their implementation priority schedule.

US Hwy 64 State Rte 15 Wayne Rd State Rte 128 State Rte 69 US Hwy 64 Realignment of SR 15/ Main Street Interconnect, Coordinate and Retime Downtown Signals for US 64/ SR 69/ Bridge Ave to Water Street to Reduce Delays Realignment of Pinhook Road Improve Driveway Widths School Driveway and Storage Lane Improvements Widen to 3 Lanes with Sidewalks Implement New School Traffic Plan Signalize Intersection with Connector Project Improve Driveway Width and Sight Distance Sight Distance Issues Add Northbound Left Turn Lane with Flashing Light Improve Curve Realign and Widen Road For Trucks Add Warning Lights Improve Sight Distance Legend Study Area Recommendations --- New Connector/ Realignment Add/ Complete Sidewalk Targeted Improvement Widen Road Intersection Improvement Add Signing and Advanced Warning Signalize Intersection NEEL-SCHAFFER

Figure 6.2 Recommended Improvements

Table 6.1 Improvement Recommendation Priorities and Costs

Improvement Project		Estimated oject Costs	Recommended Priority
SR 128/Dodd Road	\$	70,000	Medium
SR 128/Sevier Street Signal	\$	220,000	High
SR 15/Main Street and Water Street			
Interconnect, Coordinate and Retime Downtown			
Signals	\$	530,000	High
SR 69/SR 15 Realignment	\$	550,000	Medium
SR 69/SR 203 (Pinhook) Realignment	\$	630,000	High
SR 69/Malcomb Street	\$	70,000	High
SR 69/Lewis Street	\$	70,000	High
SR 69/Ranch Street	\$	70,000	High
SR 69/Austin Street	\$	70,000	High
SR 69/One Stop Drive	\$	100,000	High
SR 69 Curve Improvement South of One Stop			
Drive	\$	550,000	High
SR 69/SR 226 (Airport Drive)	\$	10,000	High
SR 226 (Airport Drive)/Discount Drive	\$	10,000	High
	_	•••	
Main Street	\$	220,000	Medium
Water Street	\$	180,000	Low
Malcomb Street	\$	470,000	Low
Hickory Street	\$	430,000	Low
Lewis Street	\$	380,000	Low
Ranch Street	\$	410,000	Low
Eureka Lane	\$	420,000	Low
Higgins Drive + North to Opel Loop	\$	500,000	Low
Sevier to Stout Connector	\$	1,540,000	High
Dodd/Discount Drive Connector	\$	2,090,000	Medium
Journal of the Commencer	Y	2,030,000	Mediam
South Street Improvement	\$	220,000	High
Driveway/Storage Lane Improvements	\$	70,000	Medium
,,			
SR 69 Higgins to Main Street	\$	10,920,000	Medium

5.8 Funding Opportunities

Funding of the projects in Section 4.7 will require a combination of federal, state and local funds. The table below shows some of the funding sources that may be available to the City of Savannah or Hardin County for implementation of the projects. It should be noted that federal and state funds require a matching ratio to be provided by the City or County. Other than the options below and local funds, funding of the recommended improvements would fall to regular TDOT project funding sources for any projects on state routes.

Table 6.1 Funding Sources

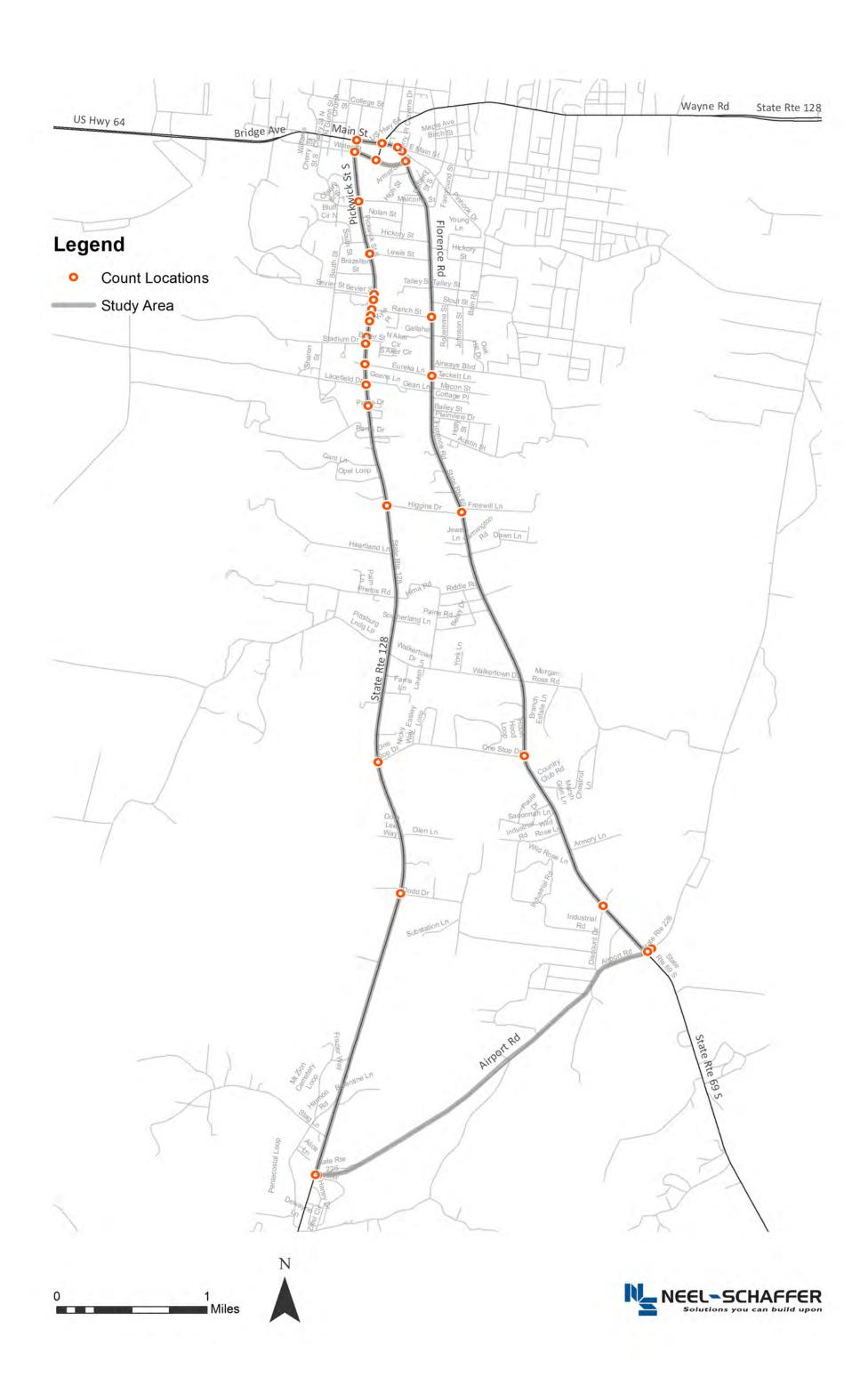
Fund	Description	Match
National Highway Performance Program	Combines former funding programs for Interstate Maintenance (IM), National Highway System (NHS) and the portion of the Bridge Replacement & Rehabilitation (BRR). Provides funding for construction, reconstruction, resurfacing, restoration, rehabilitation, preservation, or operational improvement of segments of the National Highway System. This includes Interstate highways and bridges on the NHS. Projects must support progress toward national goals for the condition and performance of the system.	80% Federal 20% Non Federal 90 to 95% Federal match available for certain freight projects.
Surface Transportation Program (STP or S STP)	Provides funding for roads functionally classified as rural major collector and above. Funds may be utilized on projects in Rural Areas, Urbanized Areas, Small Urban Areas, Enhancement, Safety and Rail Highway Crossings. Also funds bridge replacement & rehabilitation on non federal aid routes (activities previously under the BRR local program).	80% Federal 20% Non Federal
Transportation Alternatives (set aside of STP)	Combines former funding programs for Enhancements, Safe Routes to Schools, Scenic Byways, and Recreational Trails. Eligible activities include bicycle and pedestrian facilities, sidewalks near elementary and middle schools, main street and boulevard projects, and environmental mitigation to address impacts of the transportation system.	80% Federal 20% Non Federal
Highway Safety Improvement Program (HSIP)	Provides funds to make improvements to high hazard locations on eligible roadways, including highway rail grade crossings. Projects are selected based on crash rate and crash frequency.	90% Federal 10% Non Federal
TDOT Spot Safety Improvement Project	Provides funds for projects on state routes or intersections with state routes. May includes funds to install a traffic signal on a state route, fix a sight-distance problem on or near a state route, add a turning lane or lanes with or without signals on a state route, install school flashing signals on a state route, or install a flashing beacon on a state route.	90-100% Federal
TDOT Industrial Access Program	Provides funds to construct a road for a new or newly expanding industry.	50% State, 50% Local

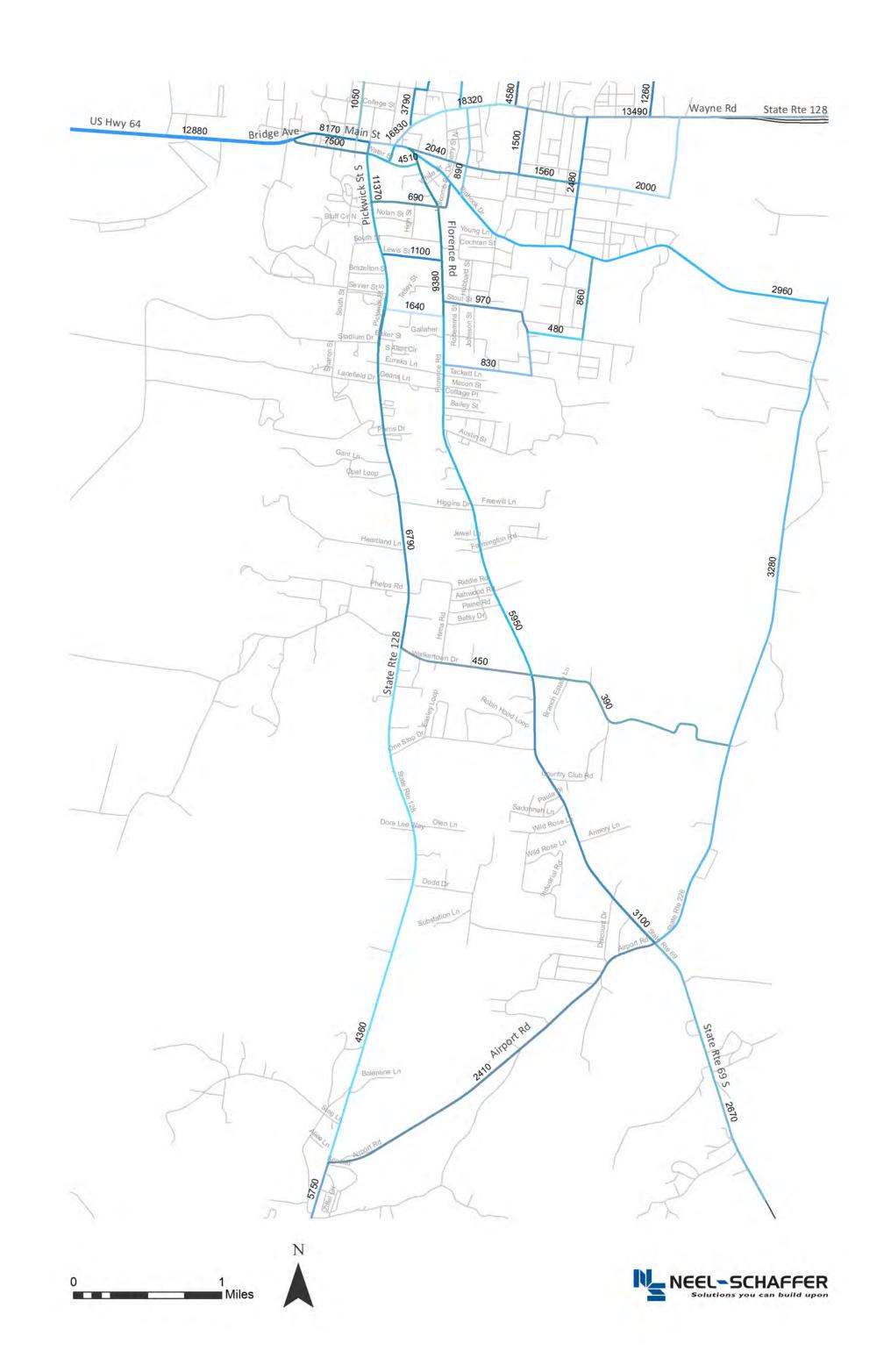
^{*}Sources: TDOT Local Programs Funding Options website, Jackson Area MPO 2040 Long Range Transportation Plan

APPENDIX A: ENLARGED FIGURES

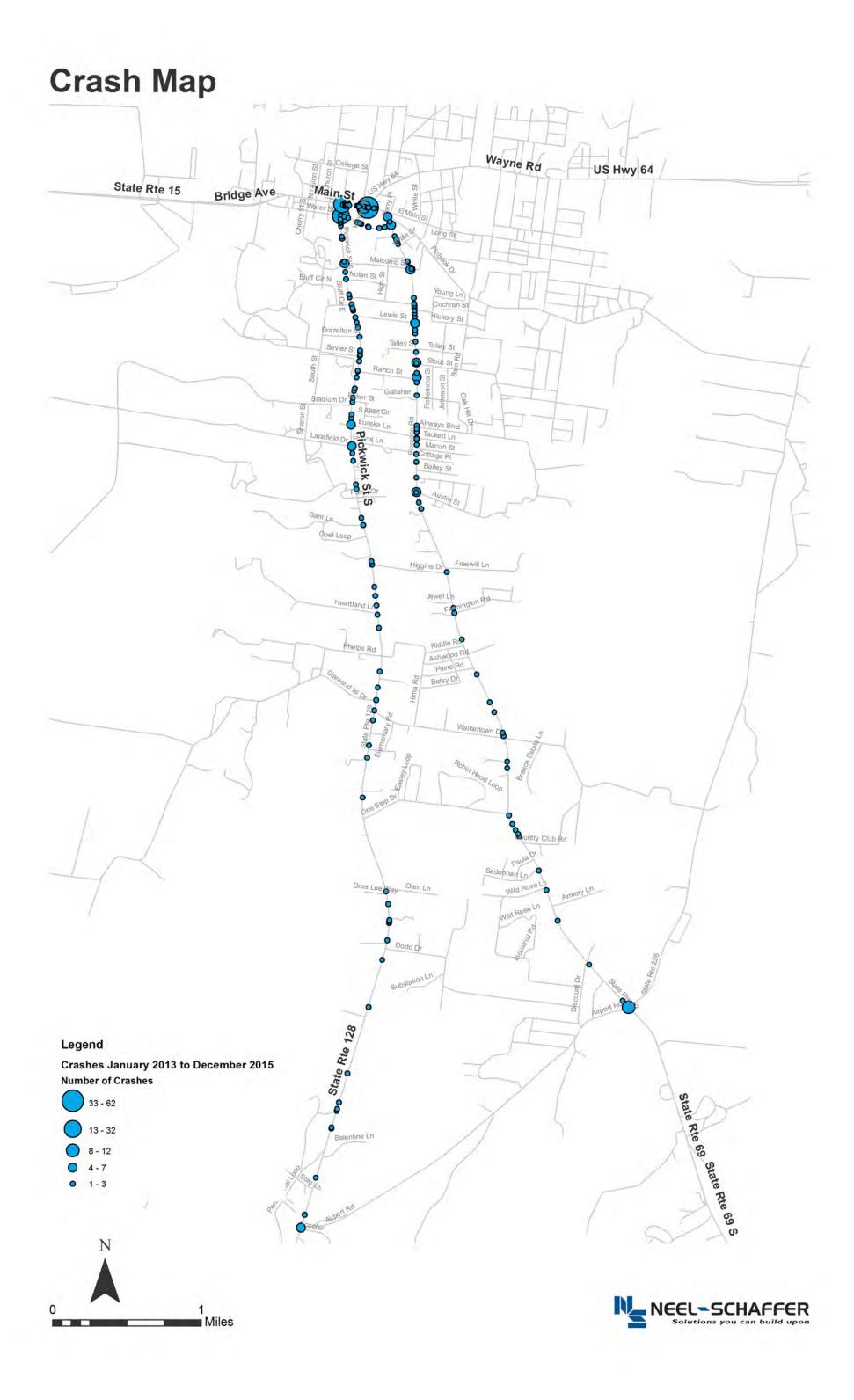




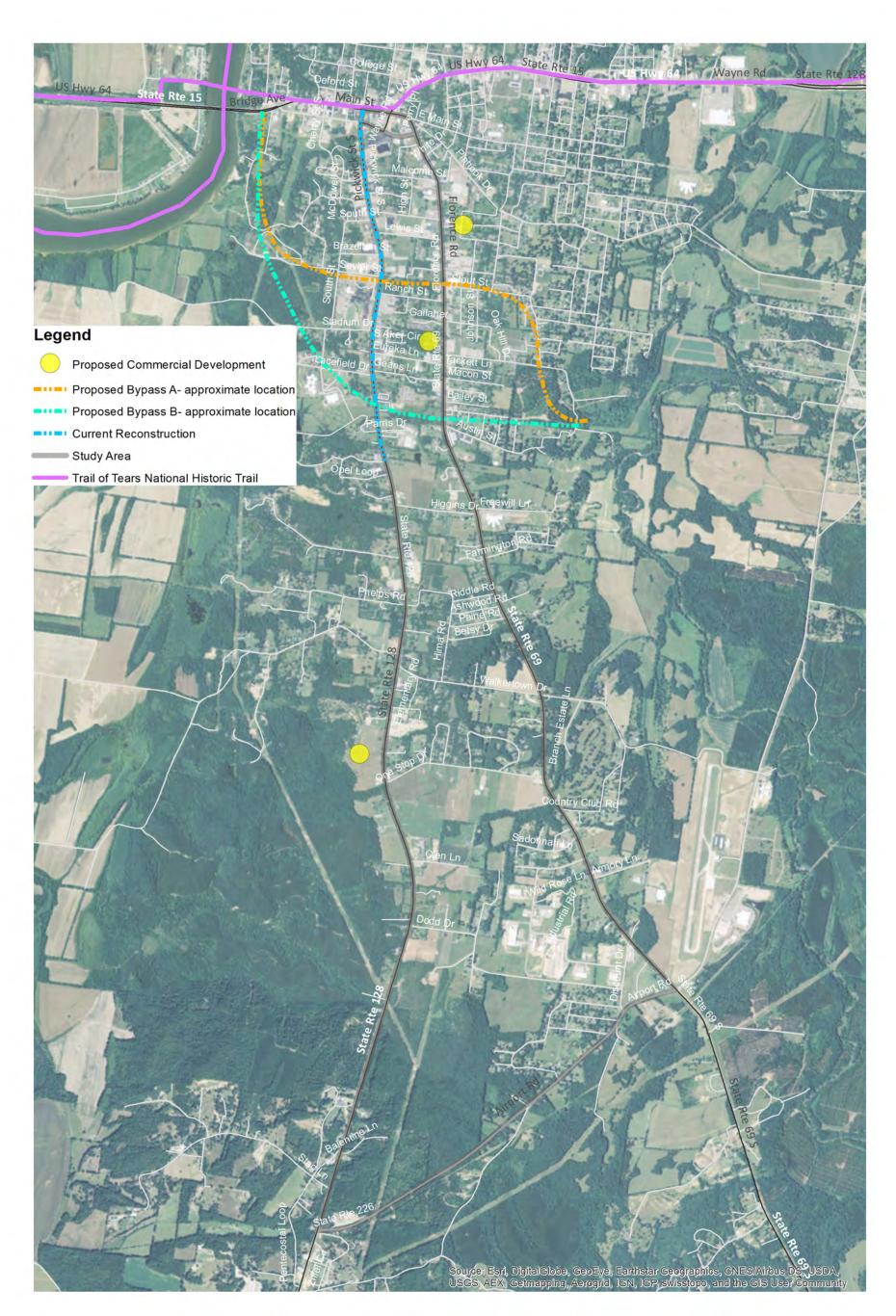






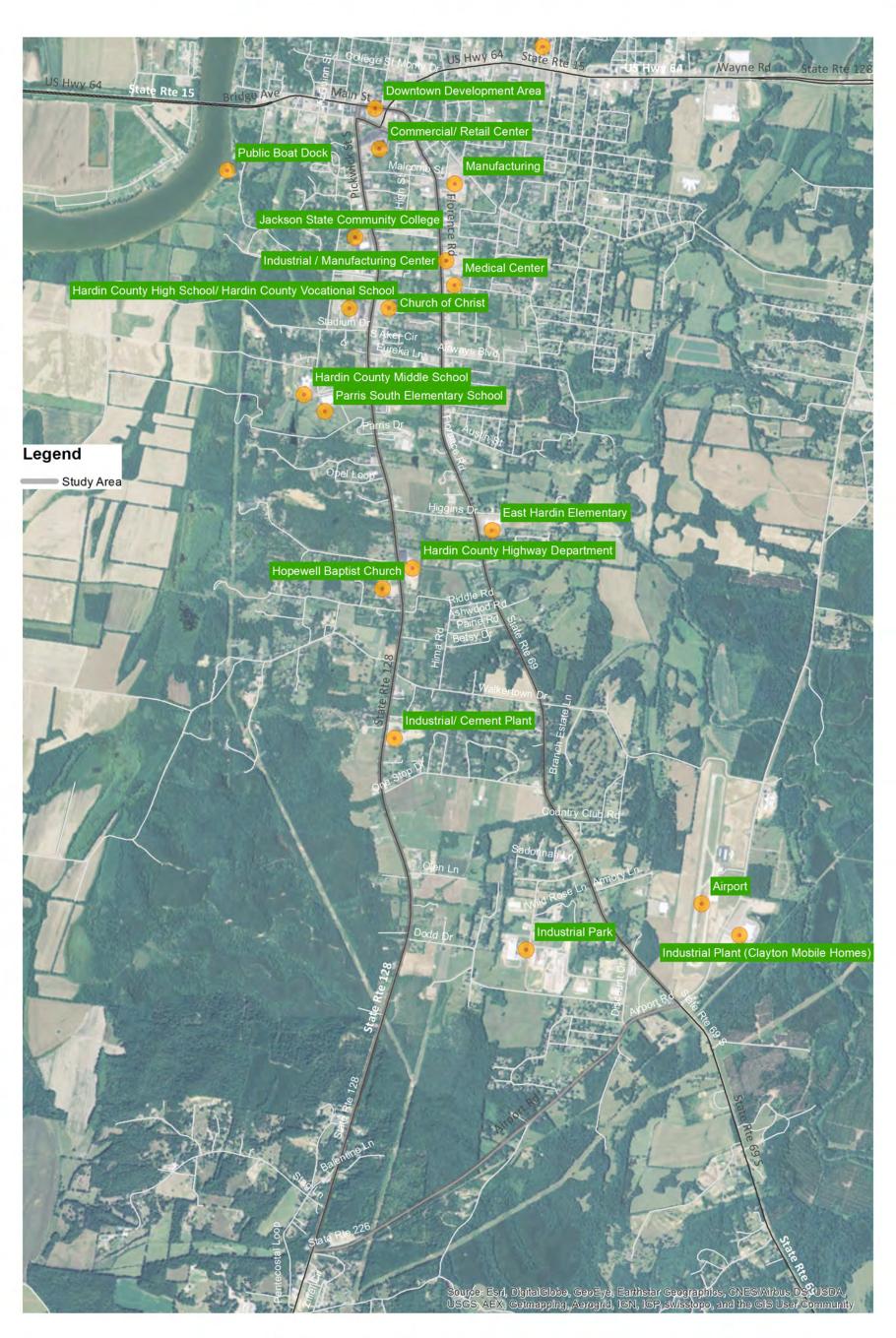






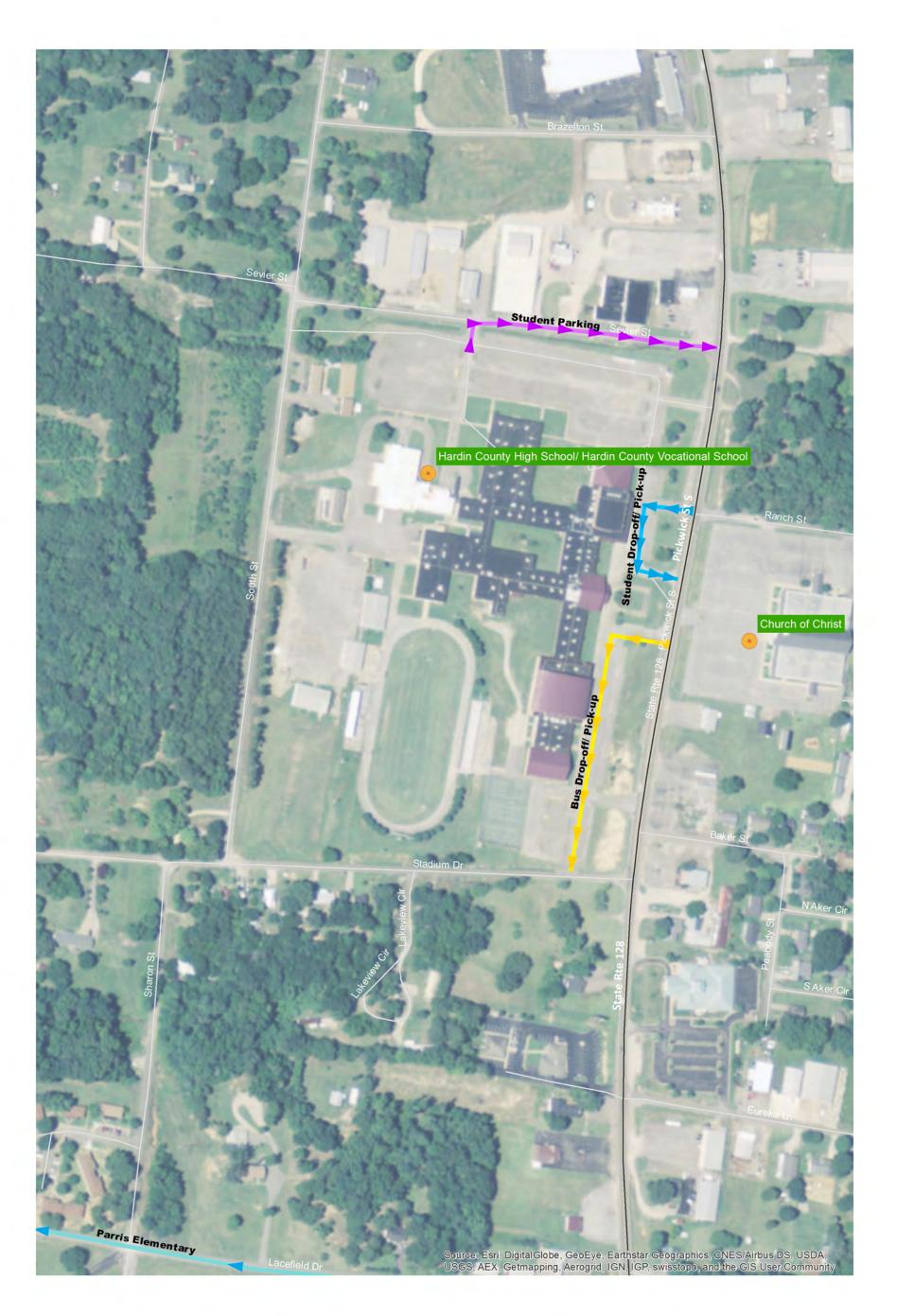






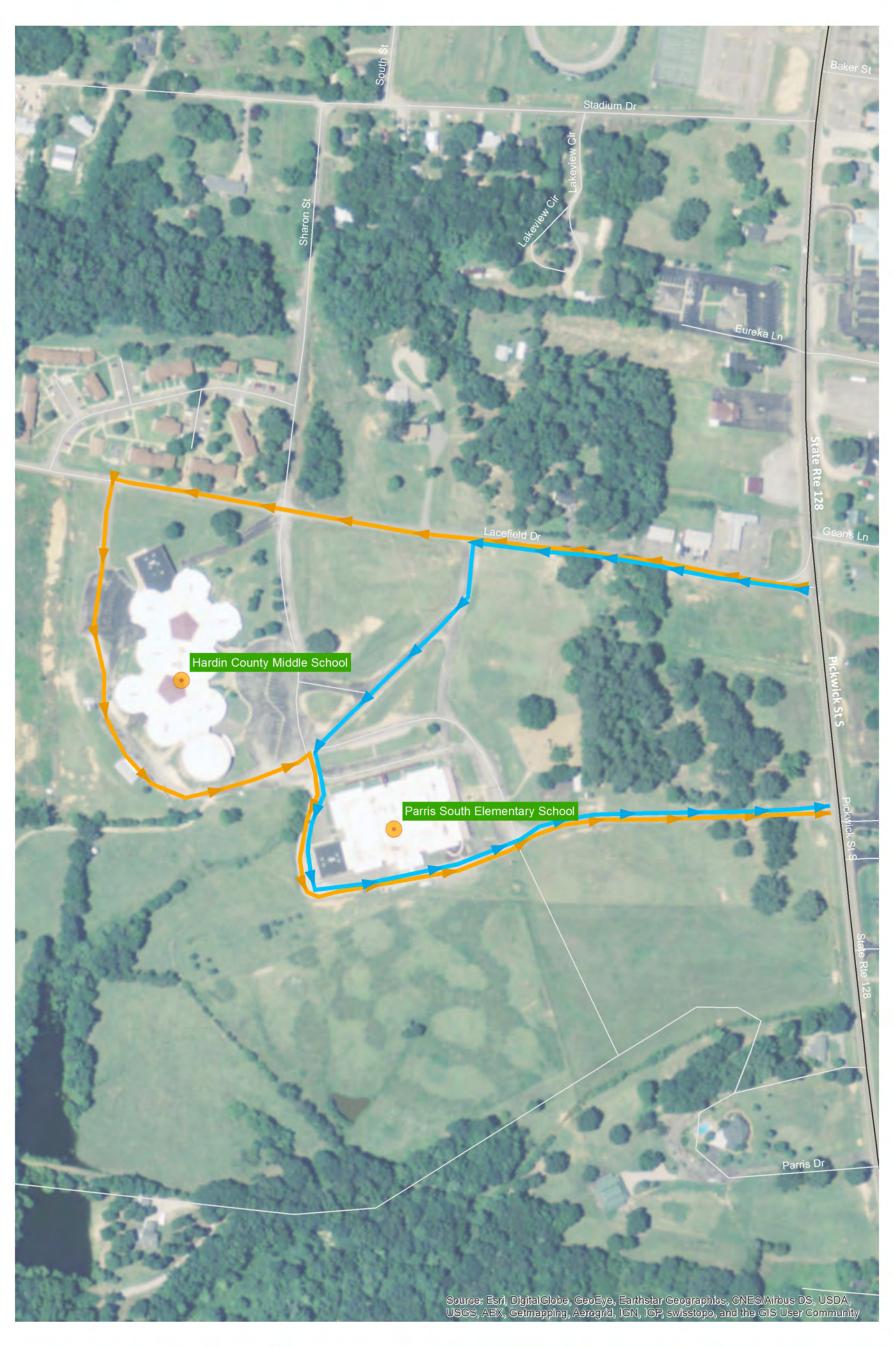






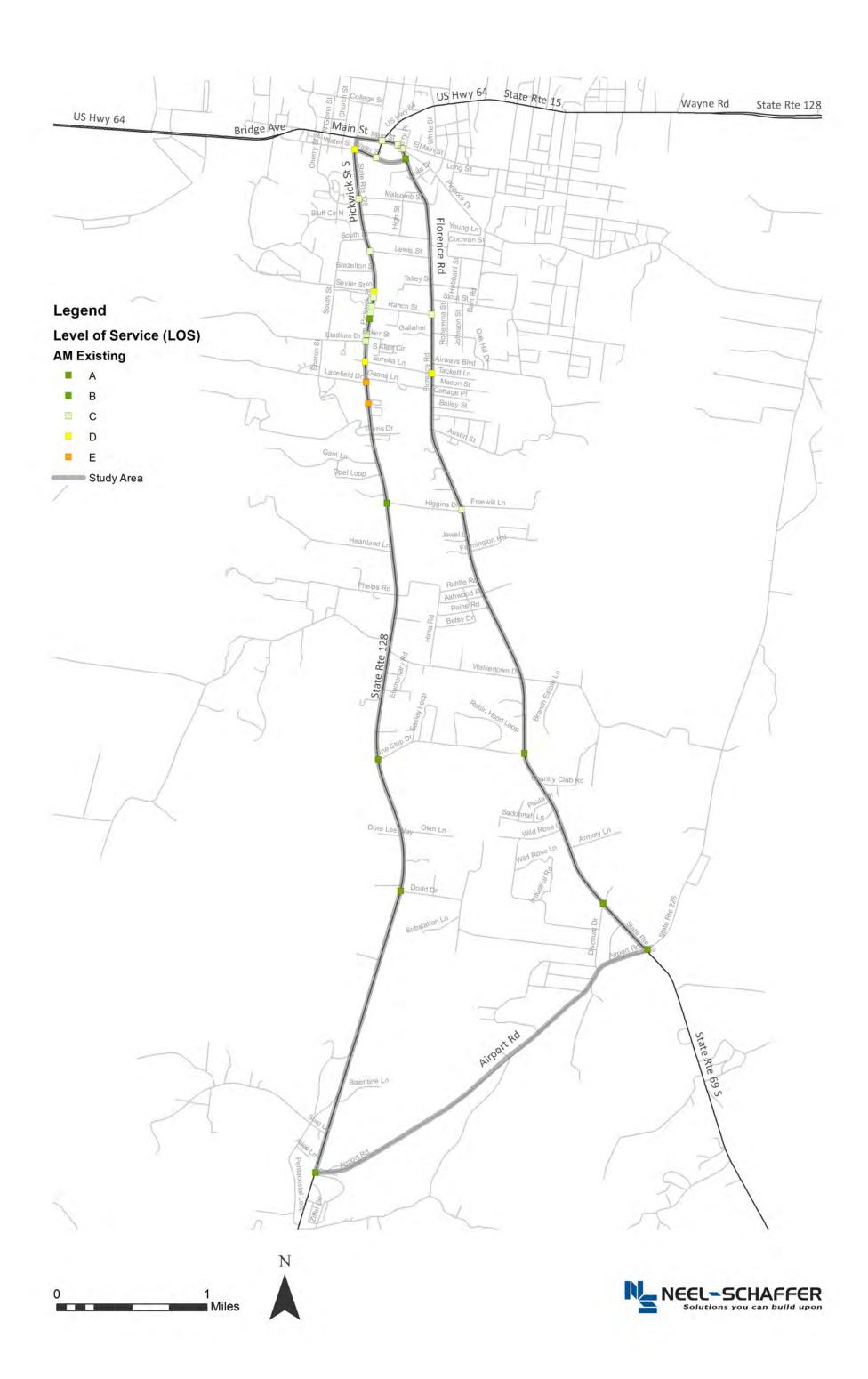


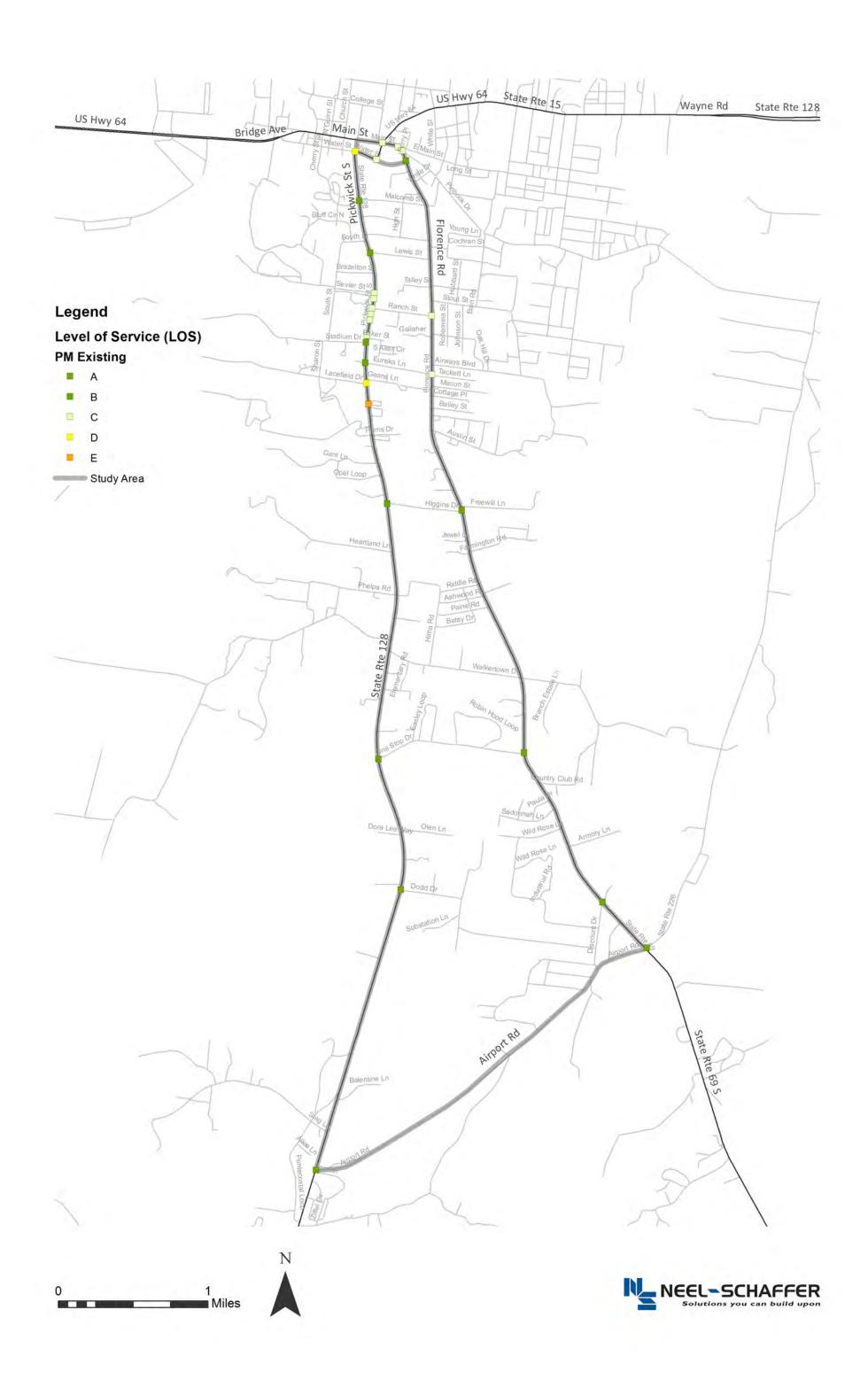


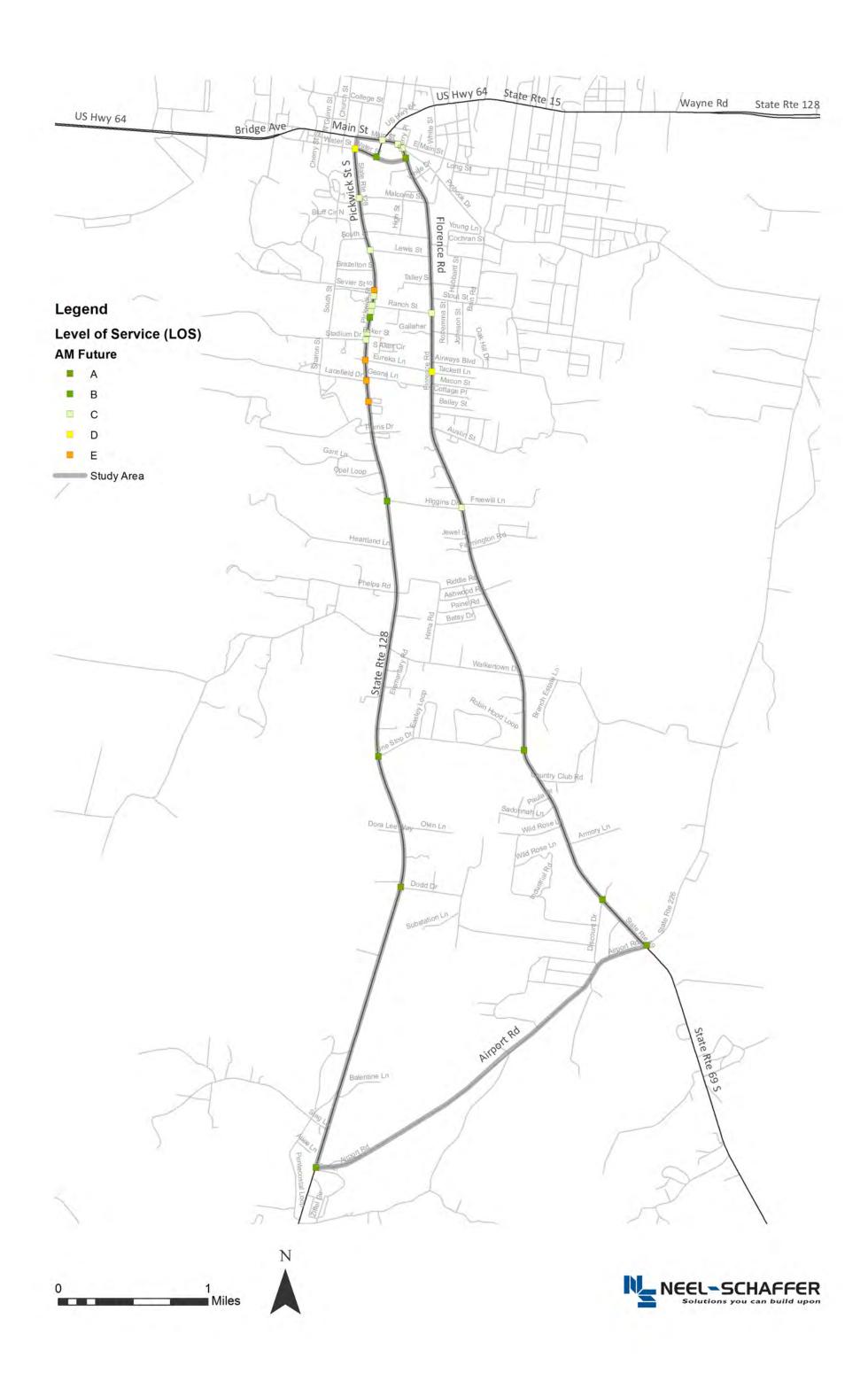


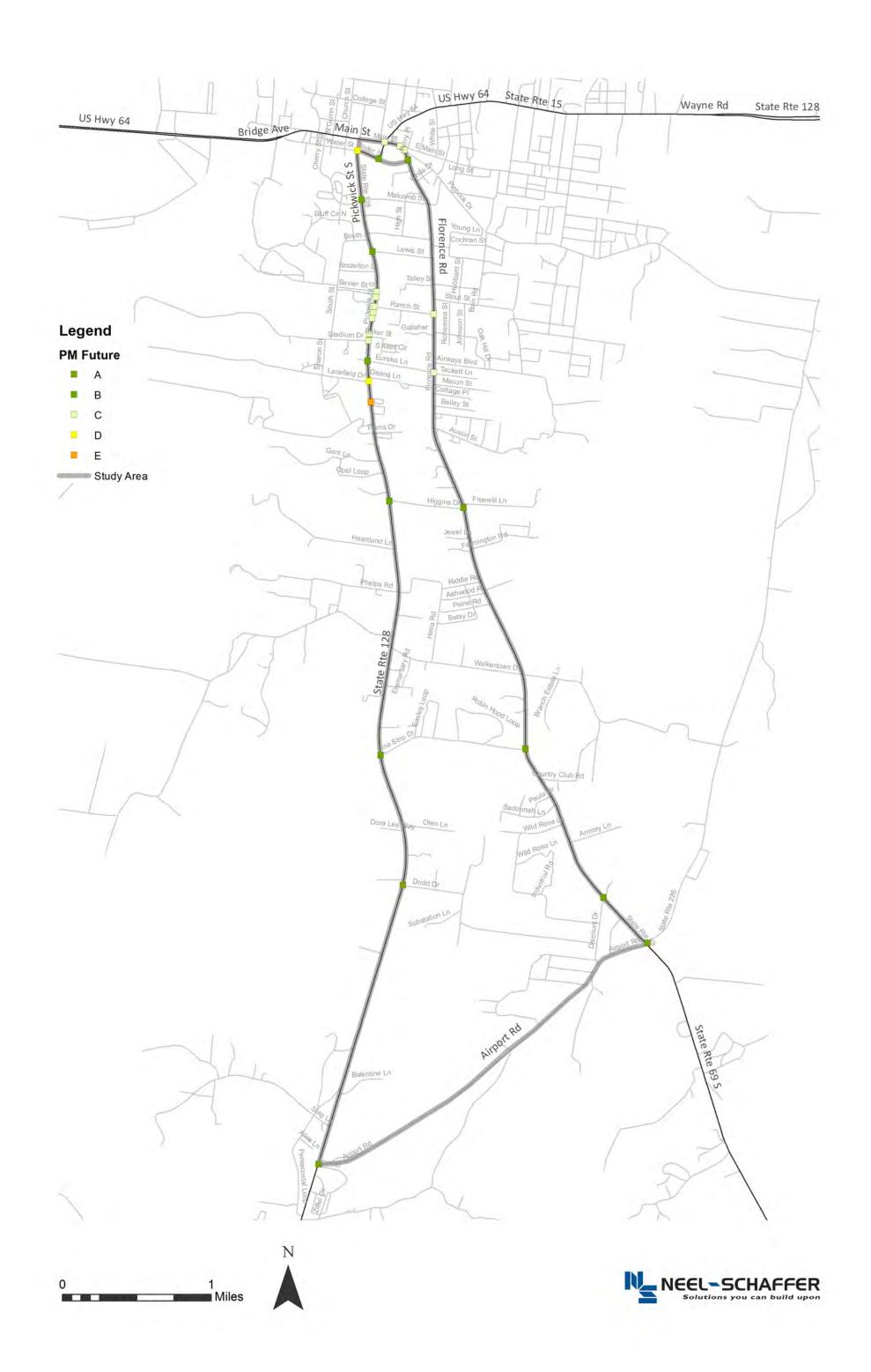




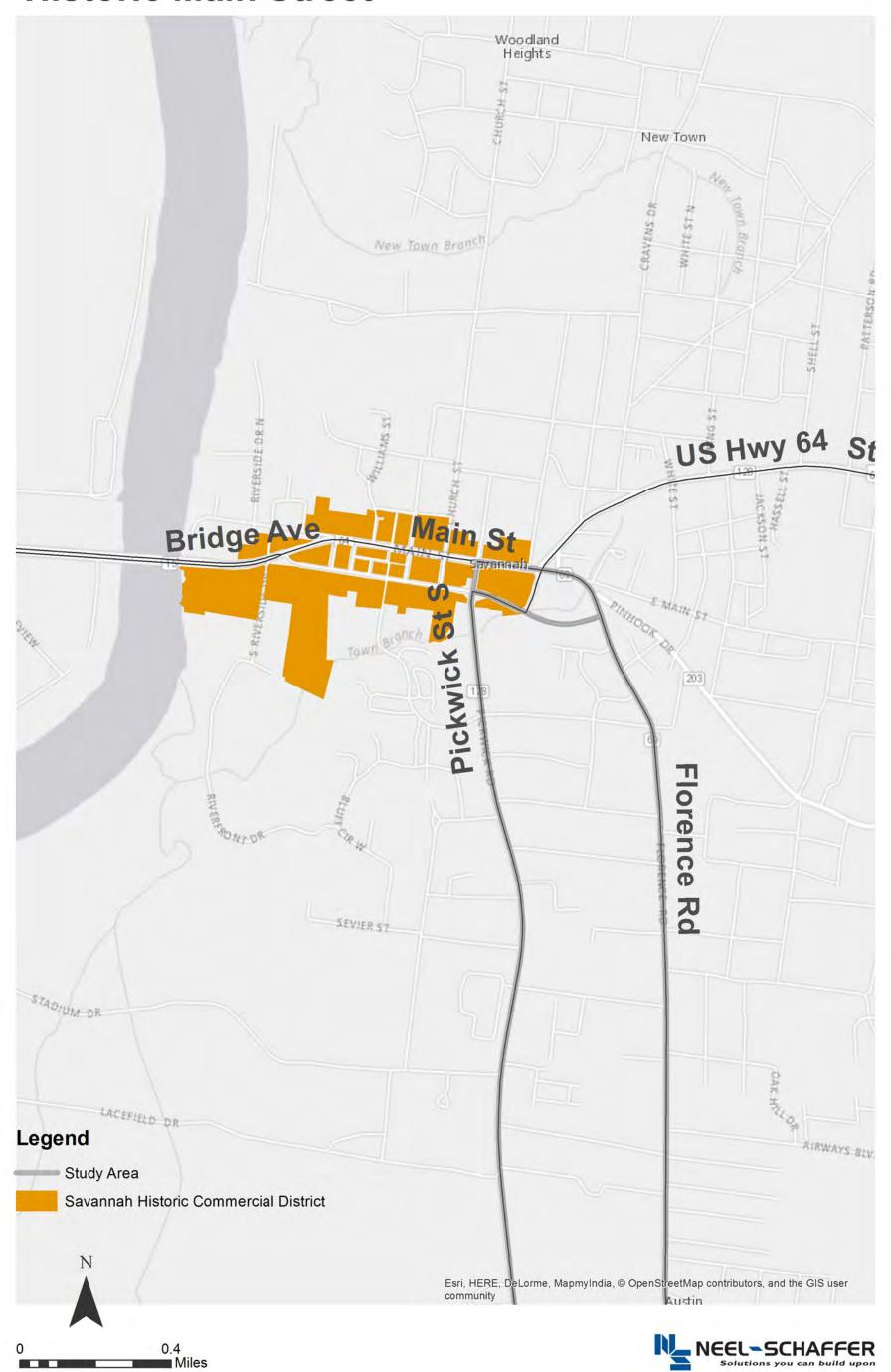


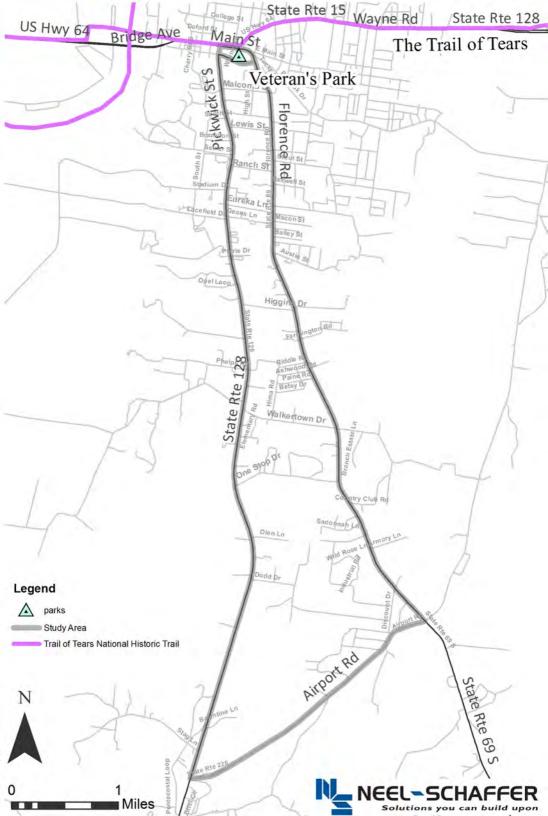




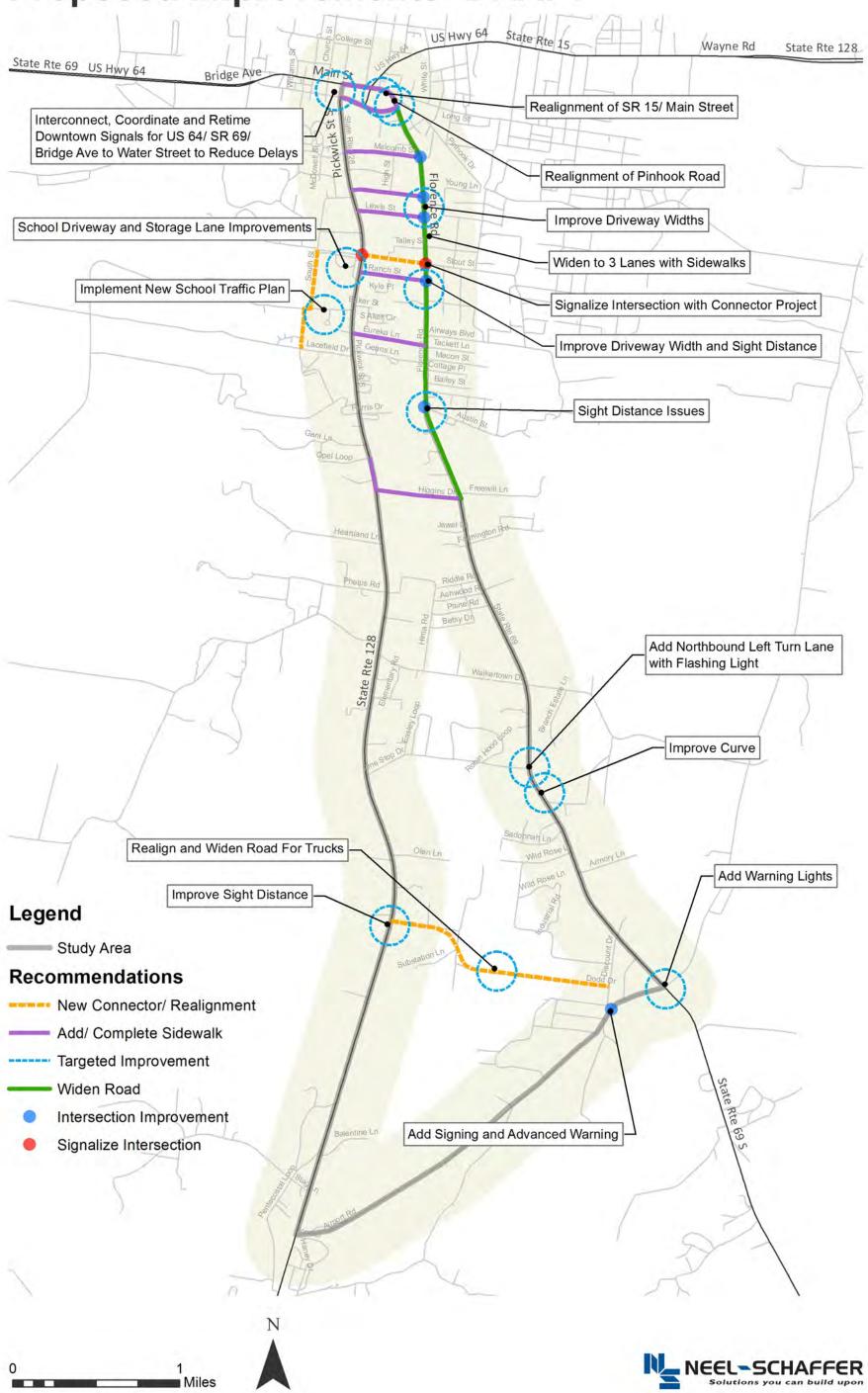


Historic Main Street

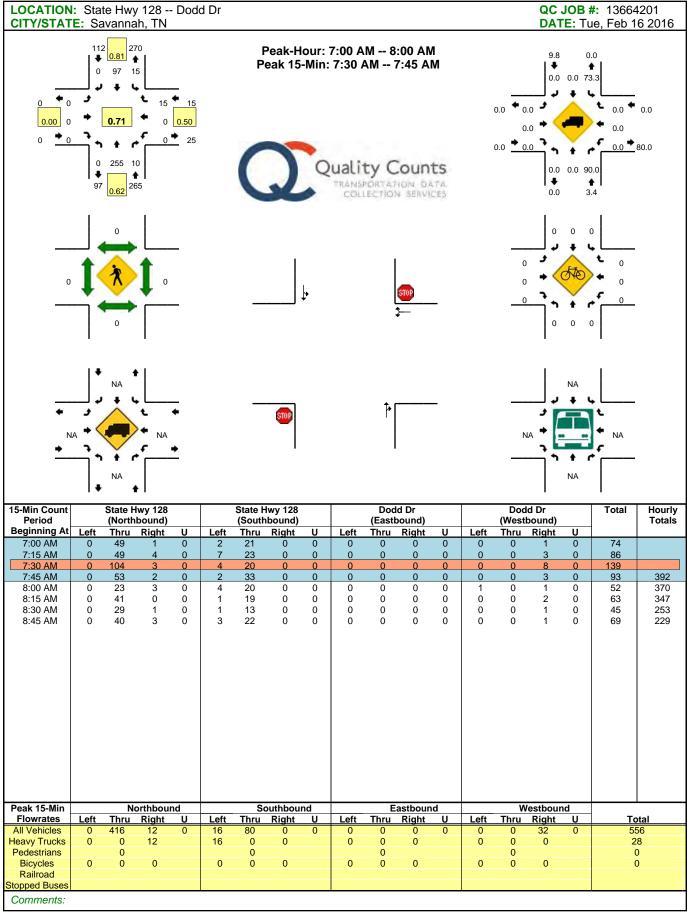


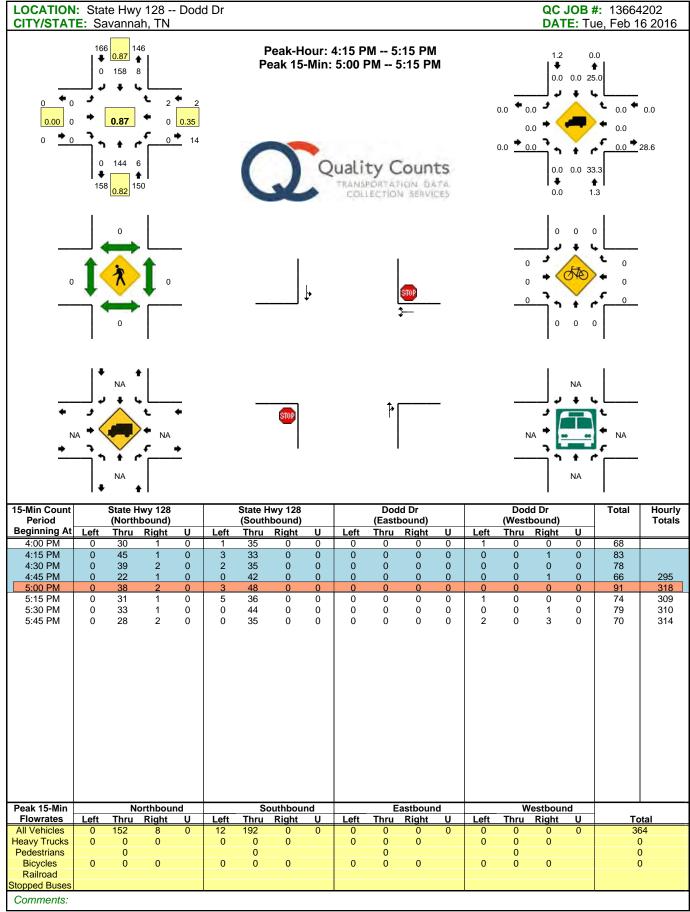


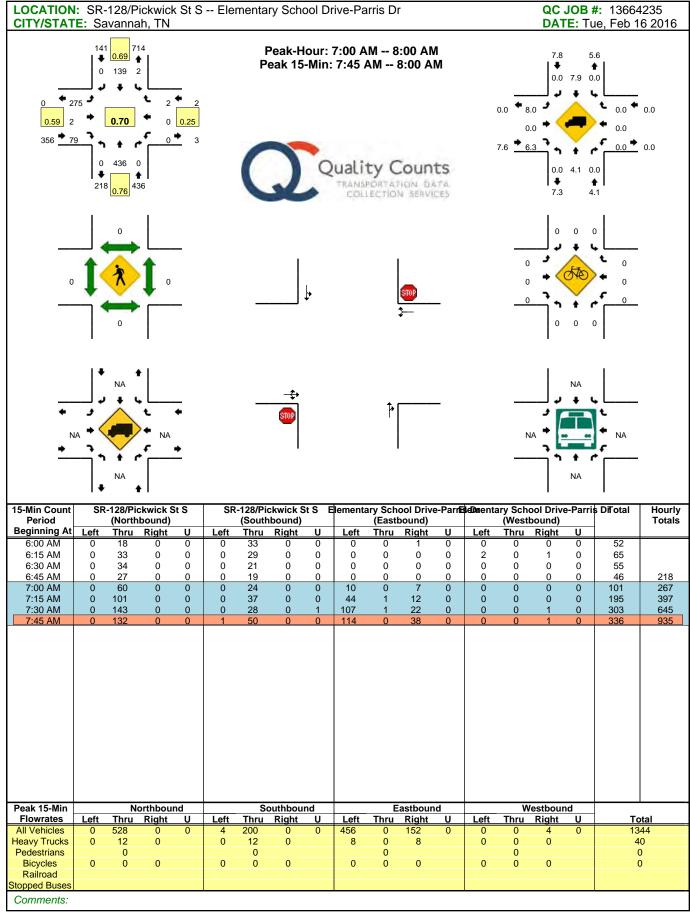
Proposed Improvements- DRAFT

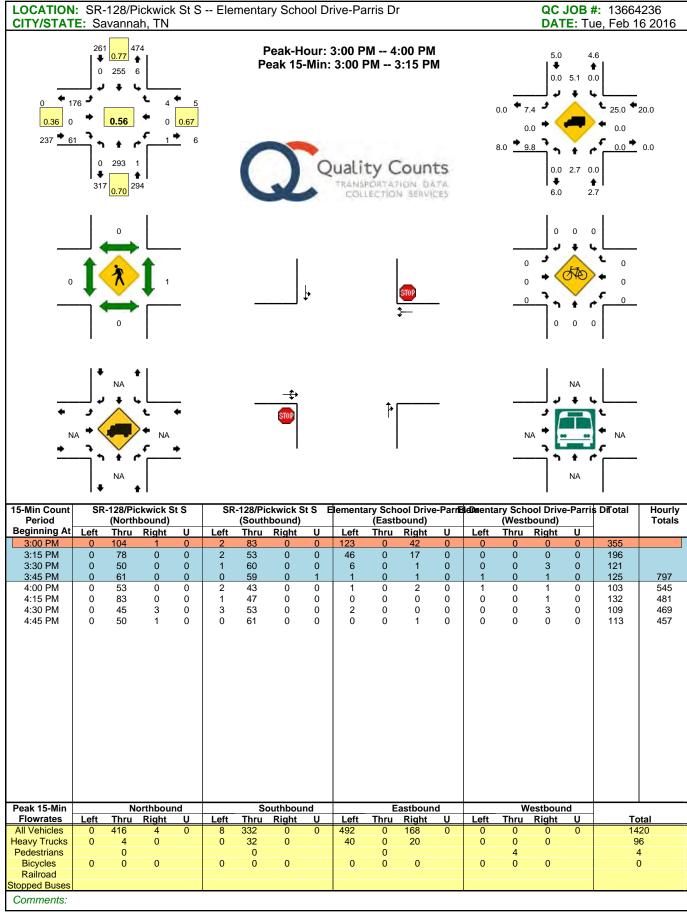


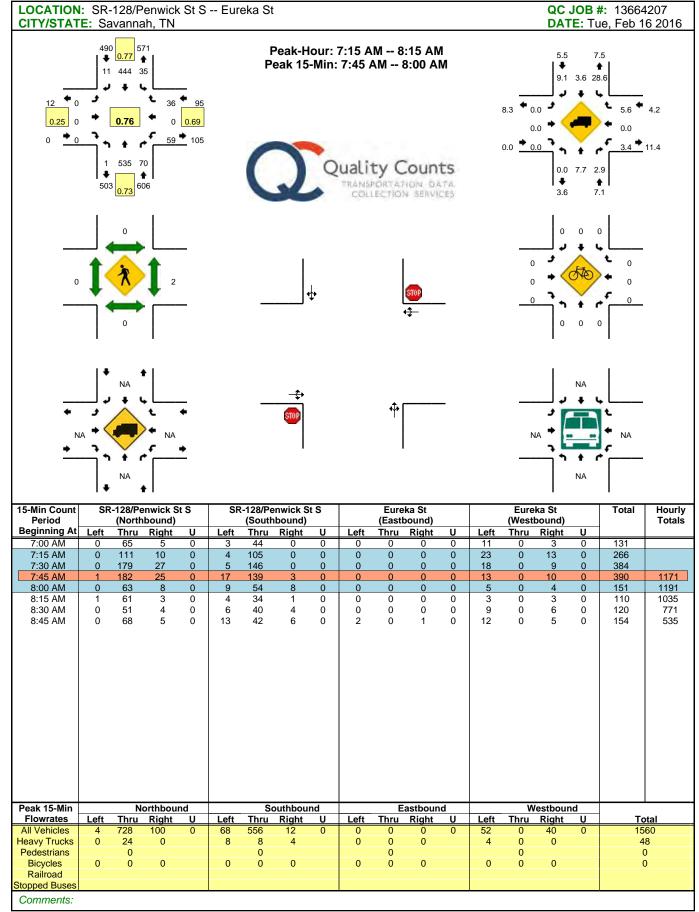
APPENDIX B: TRAFFIC DATA

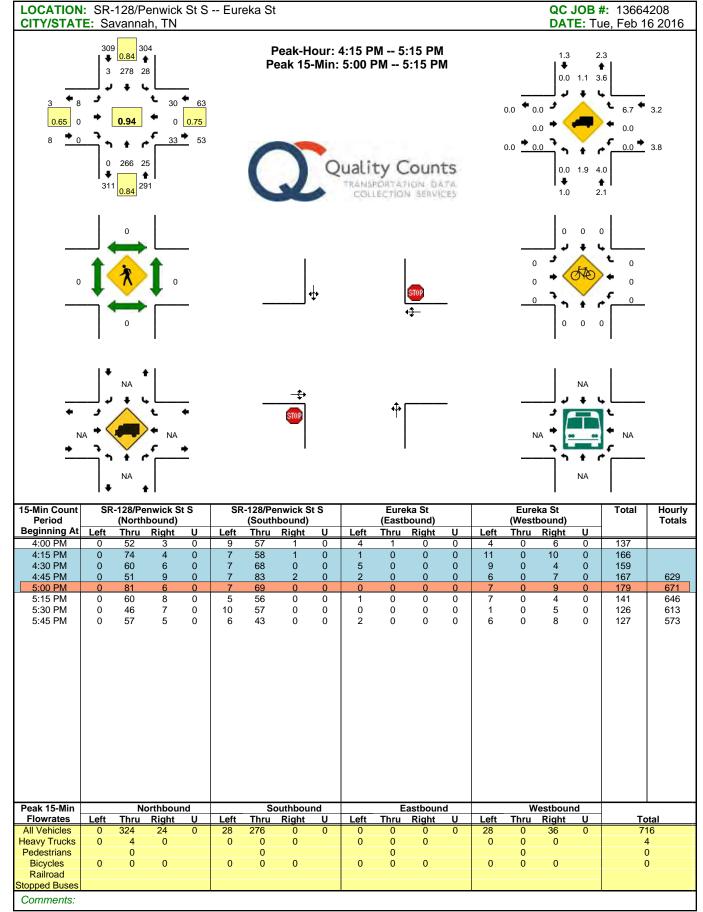


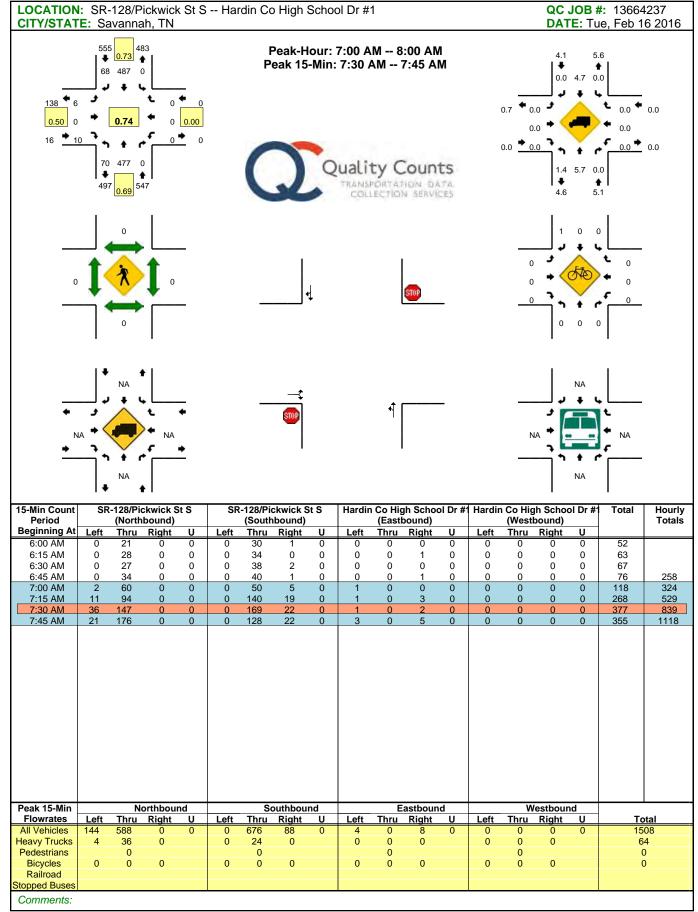


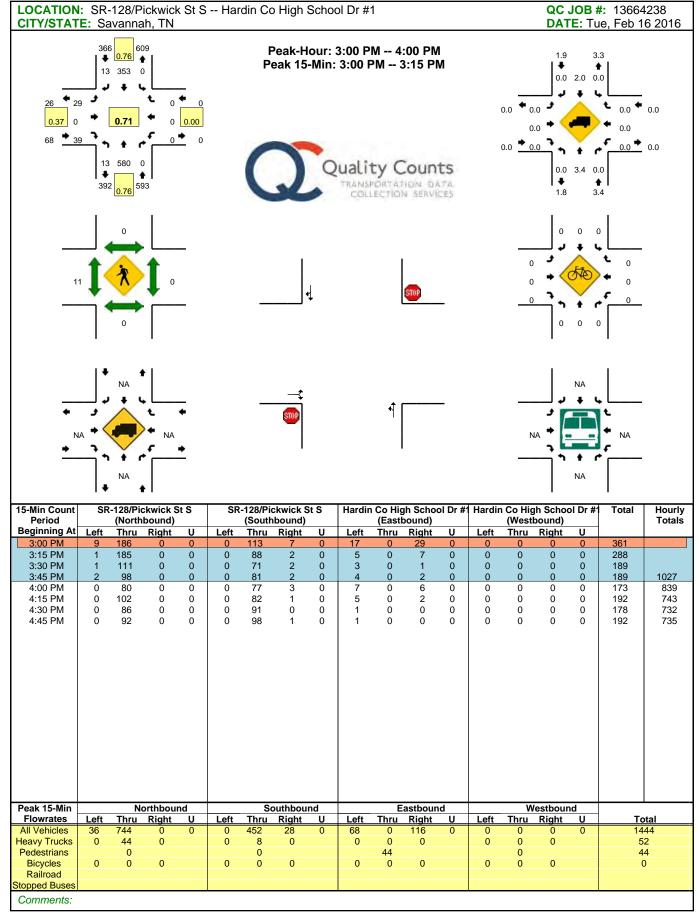


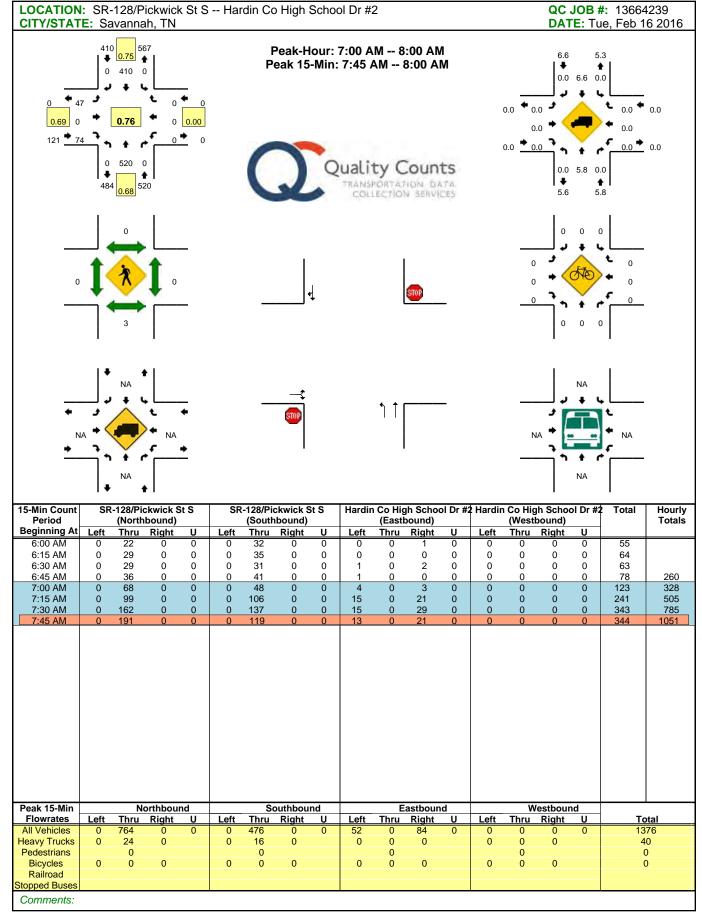


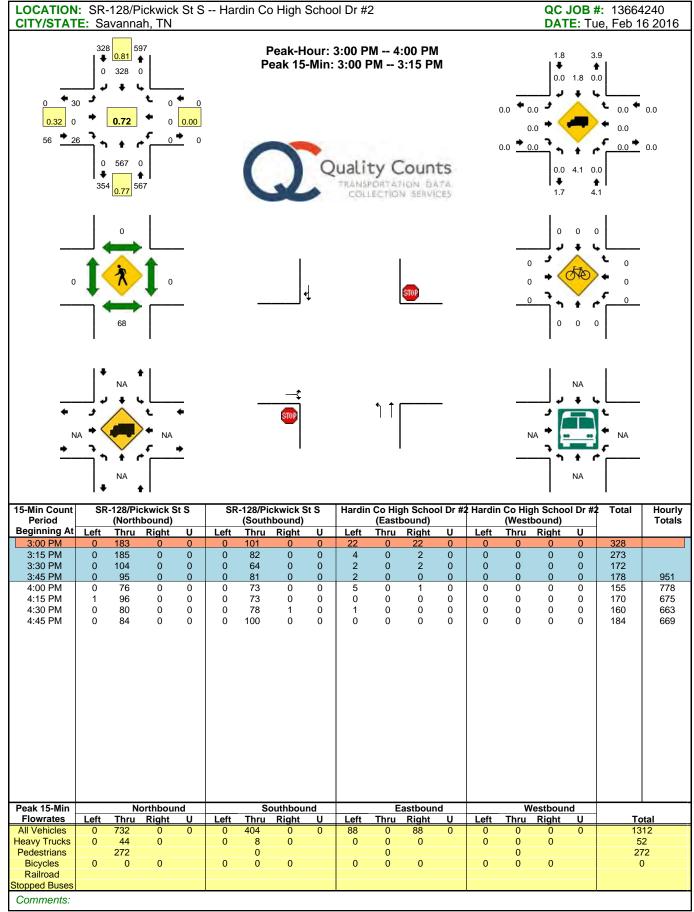


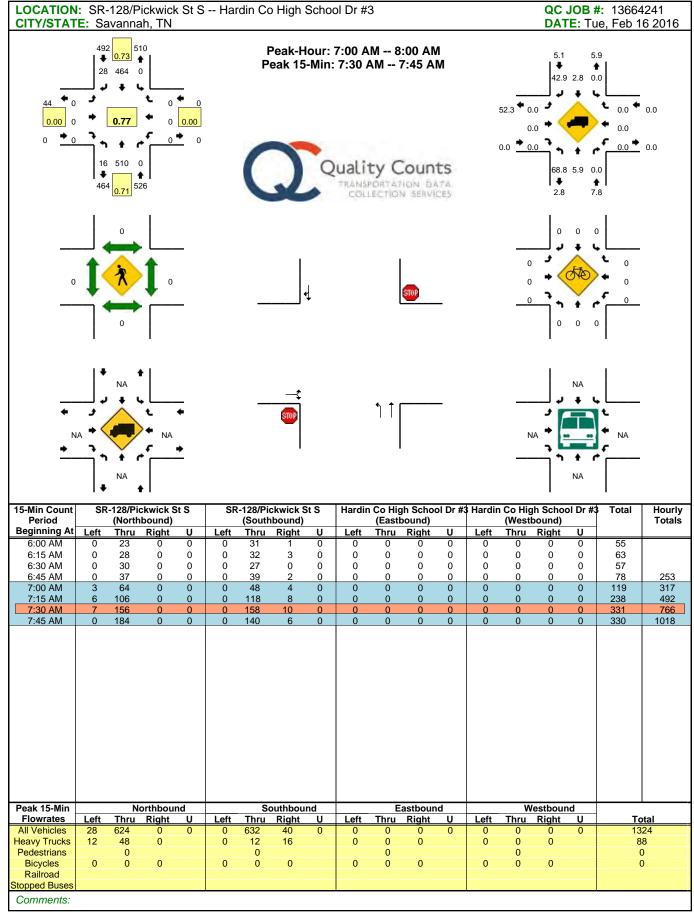


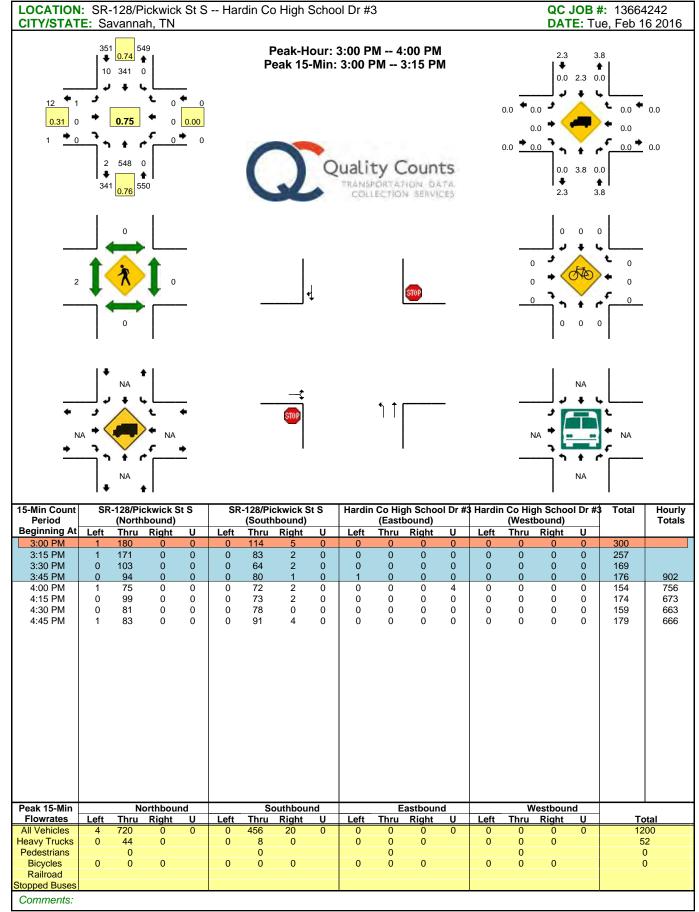


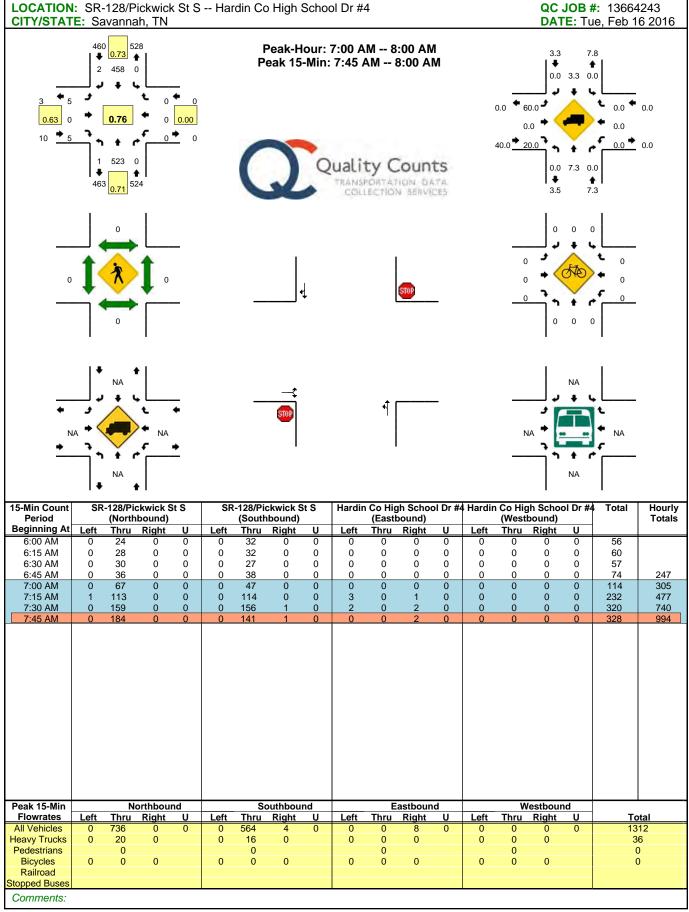


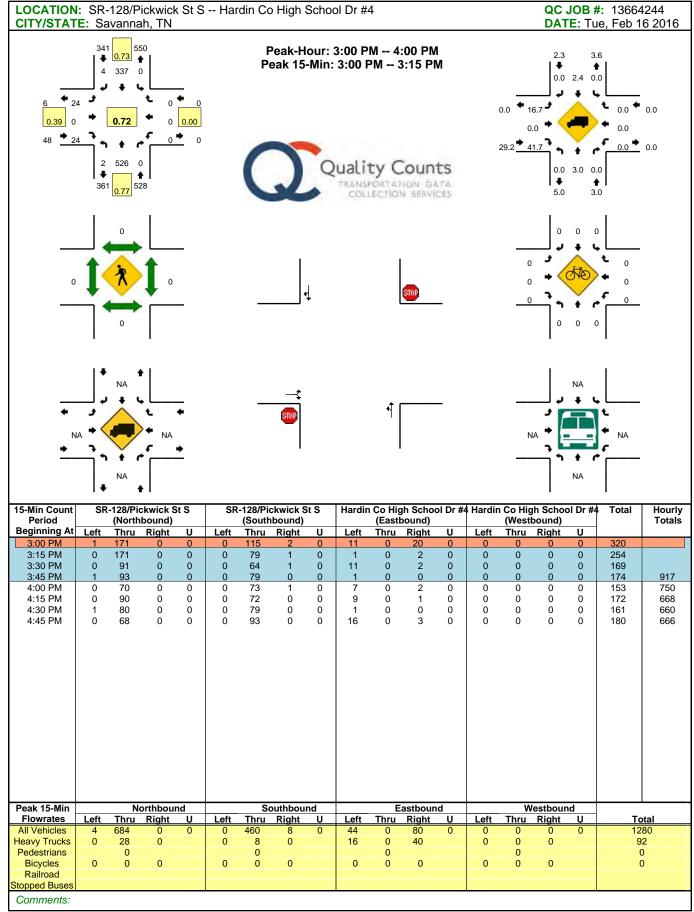


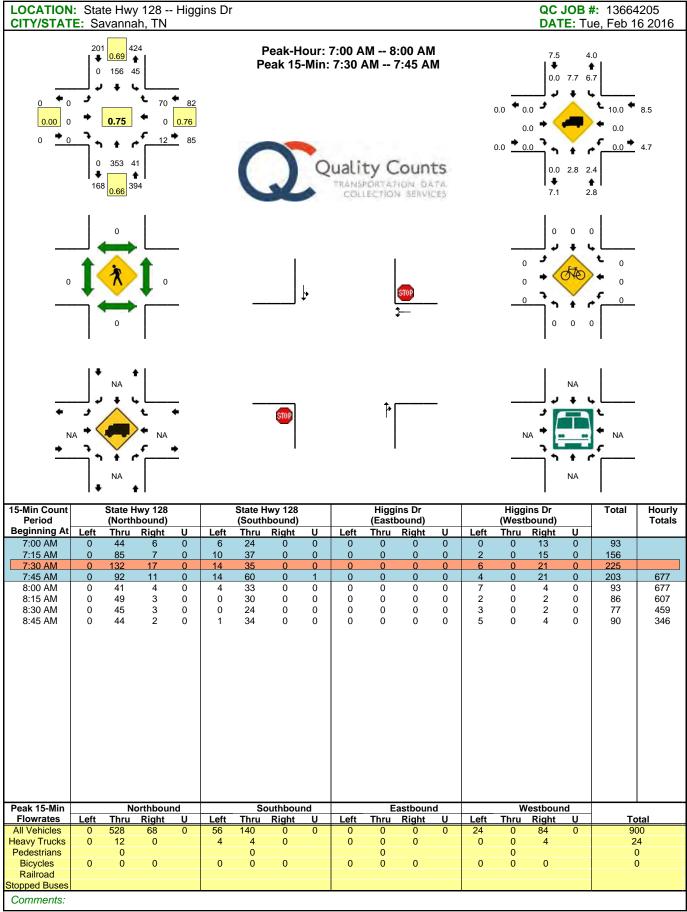


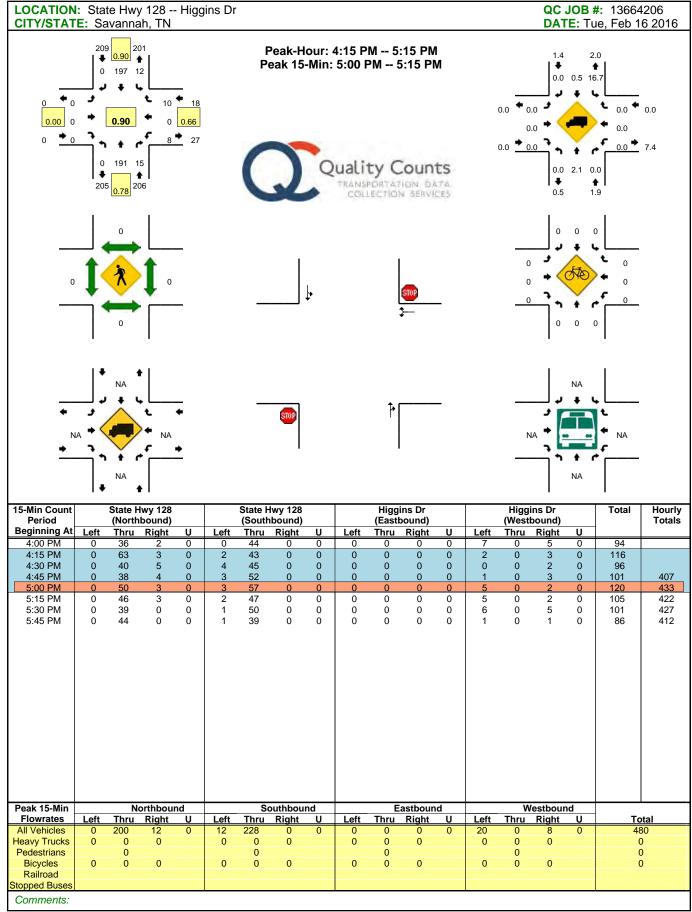


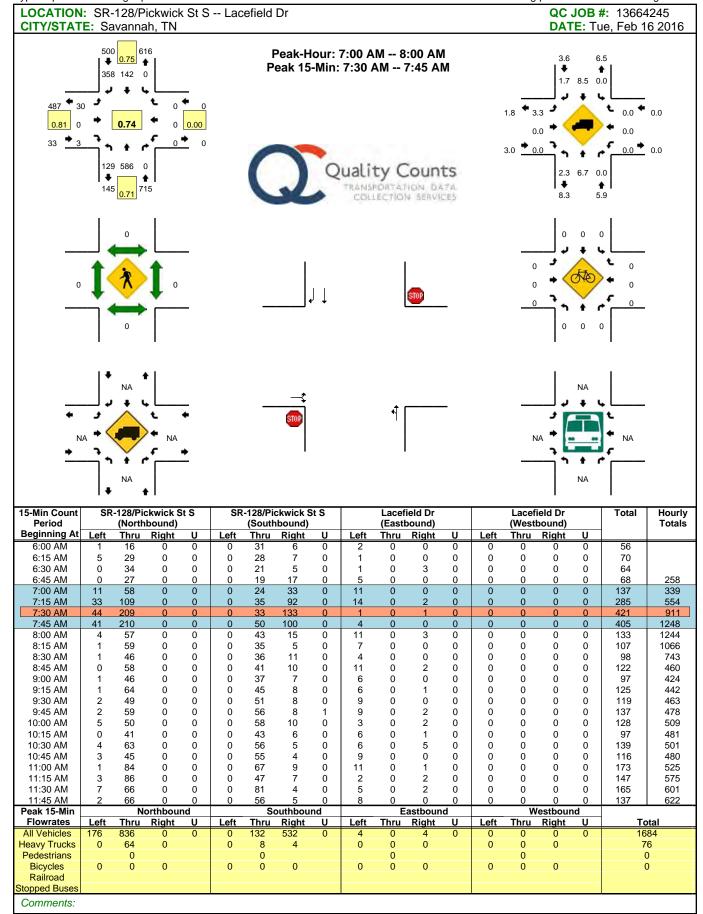


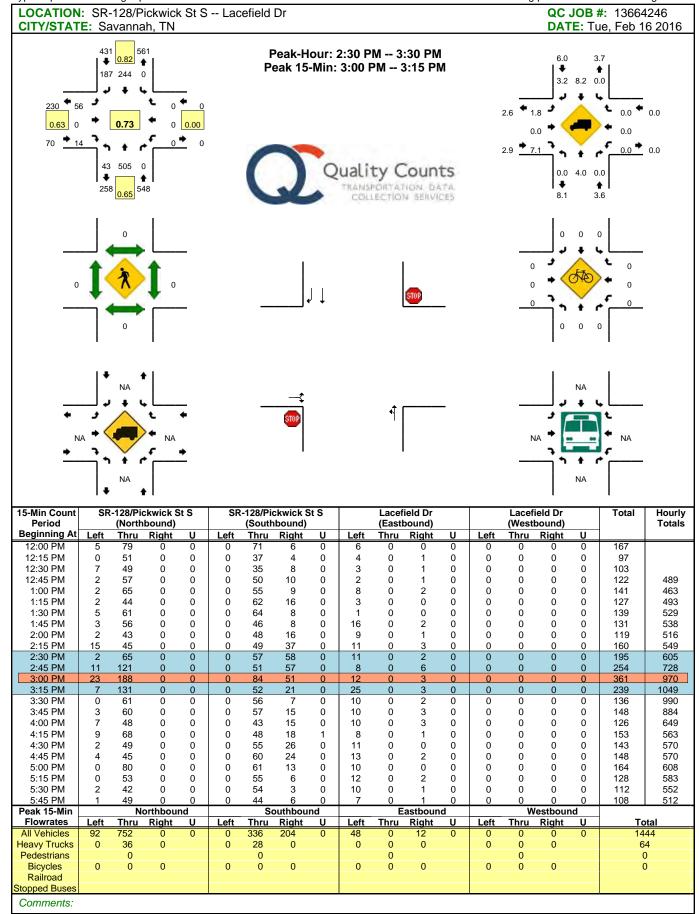


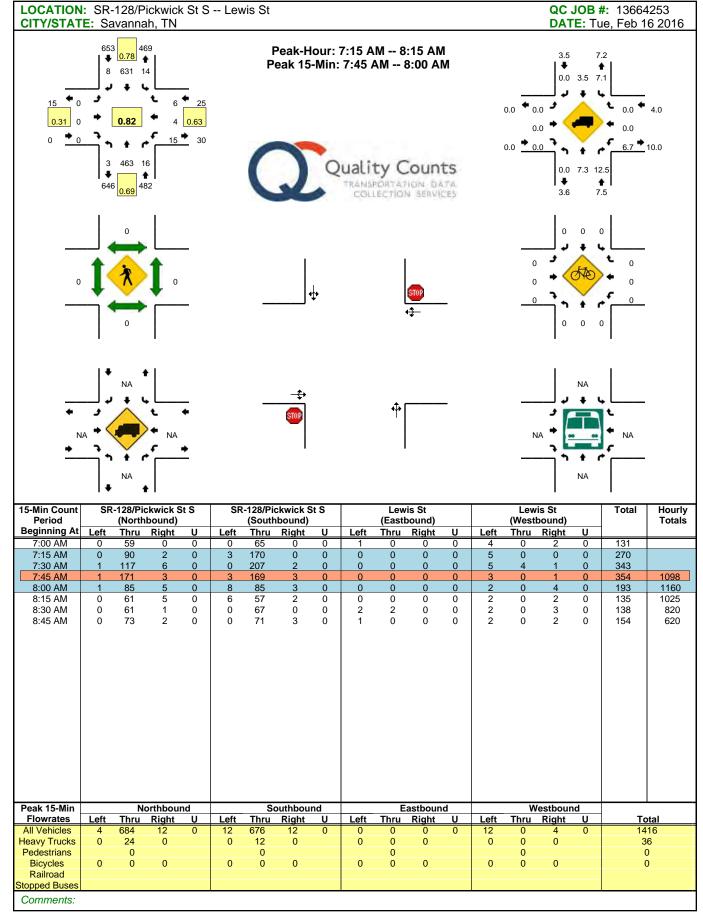


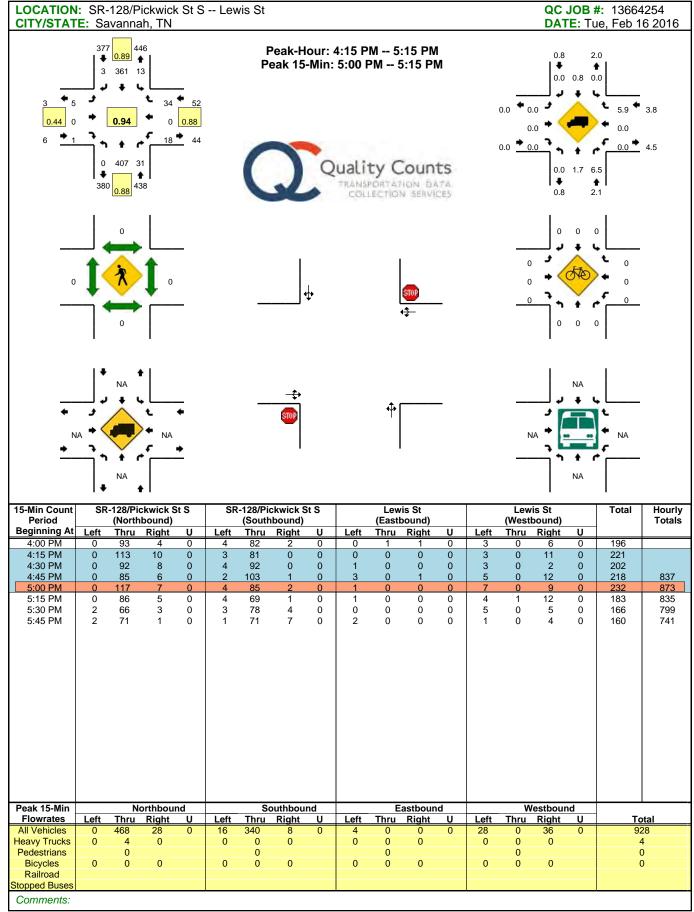


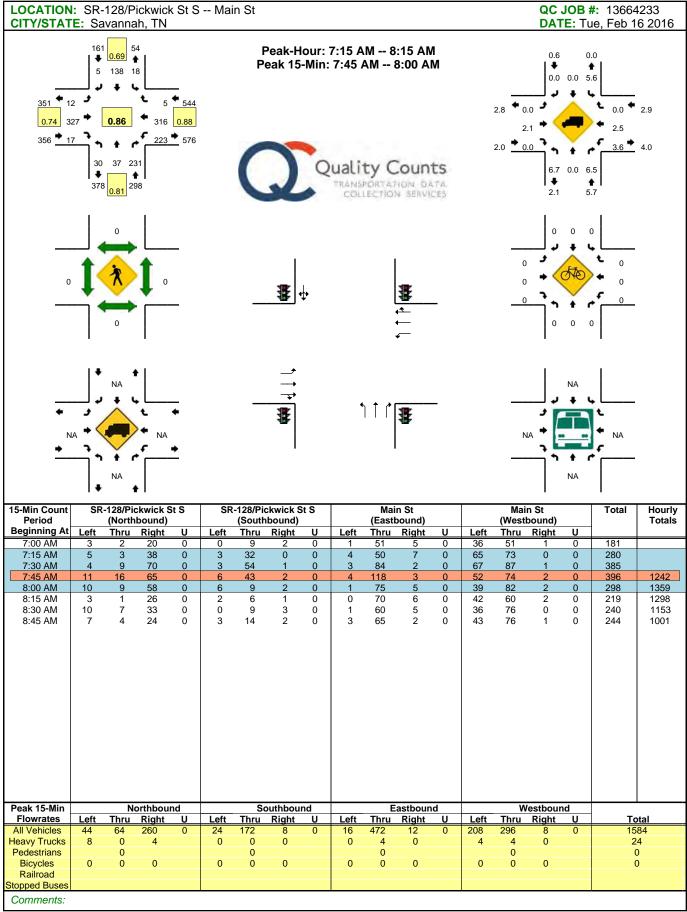


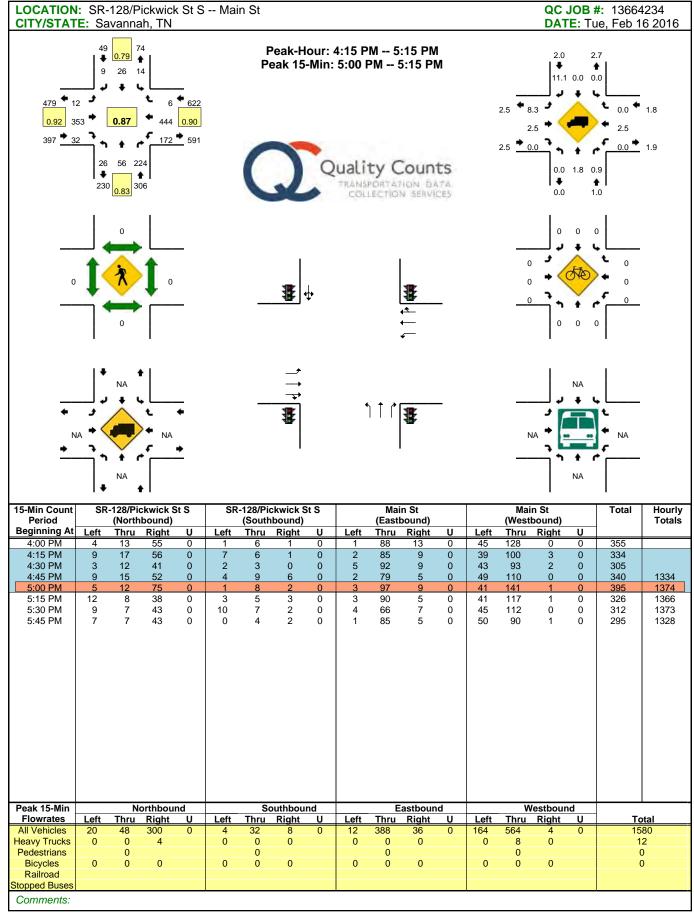


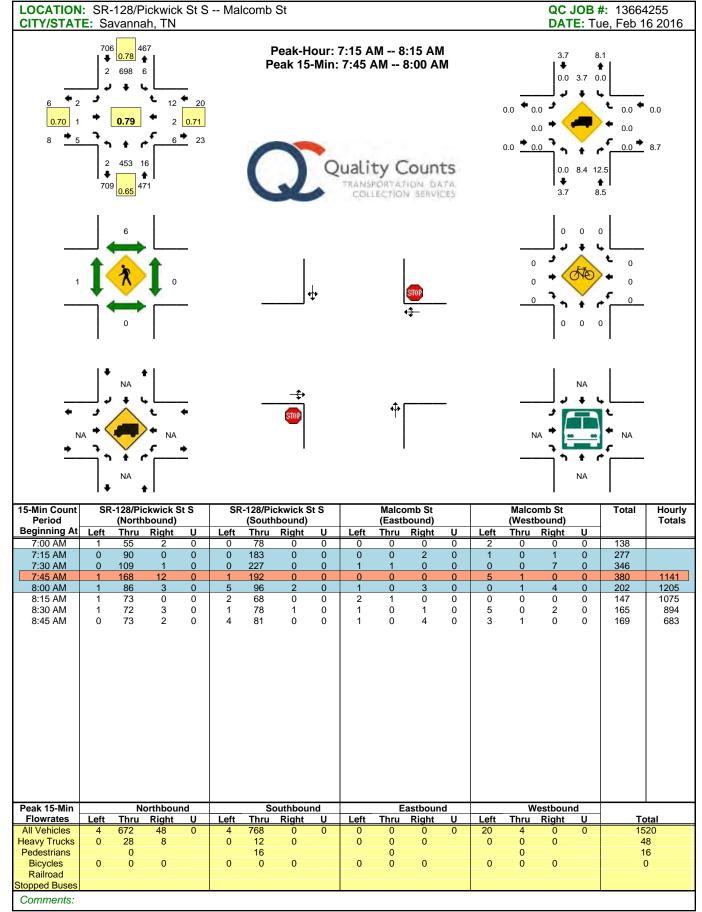


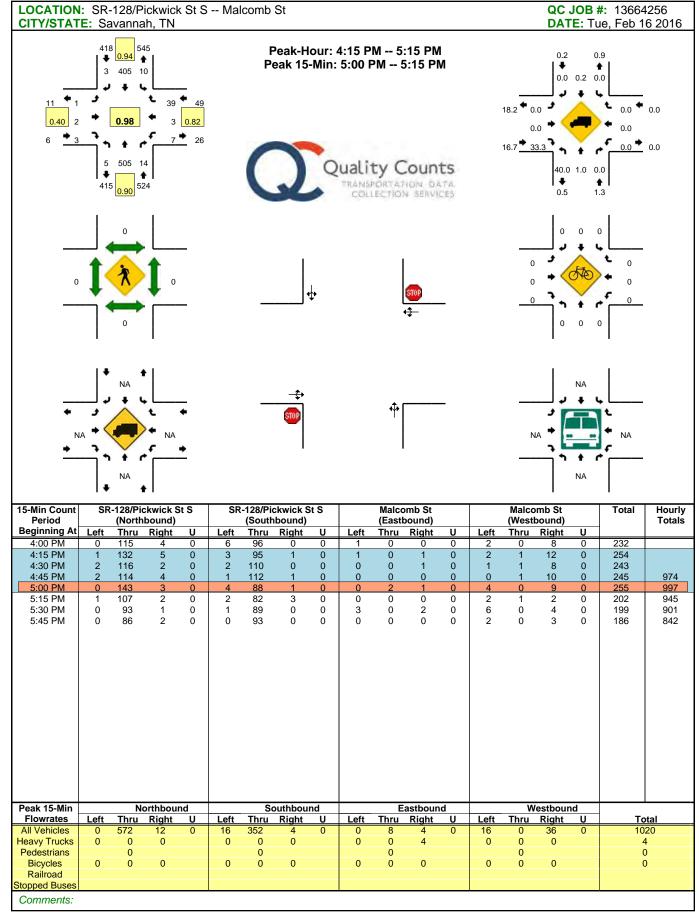


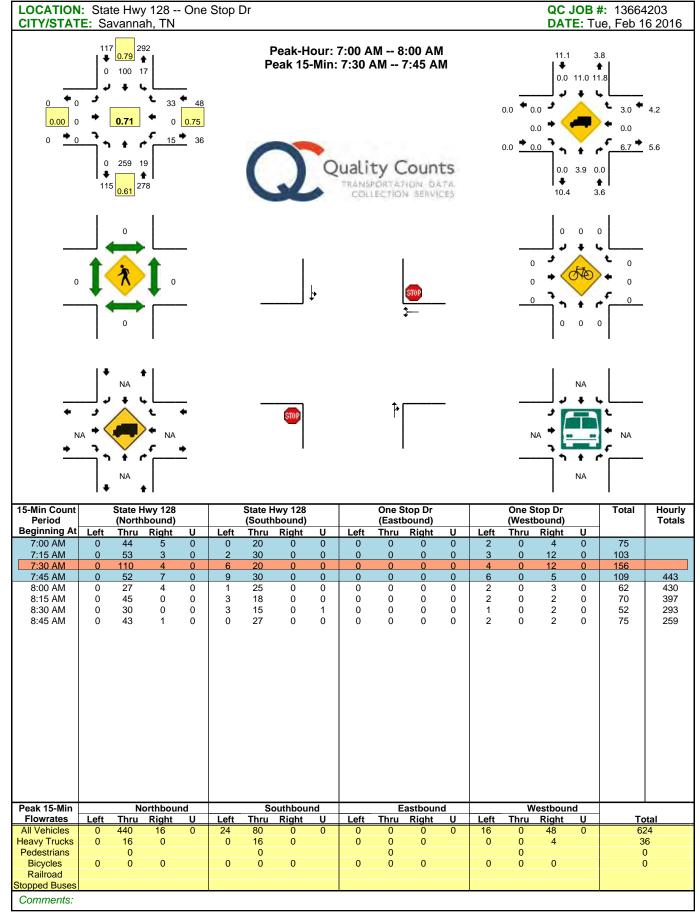


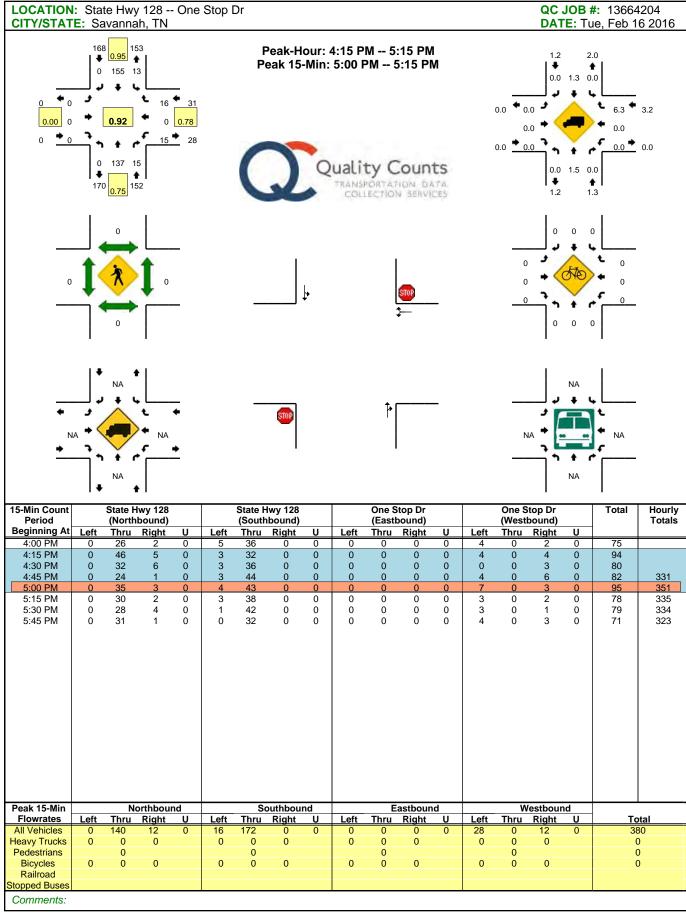


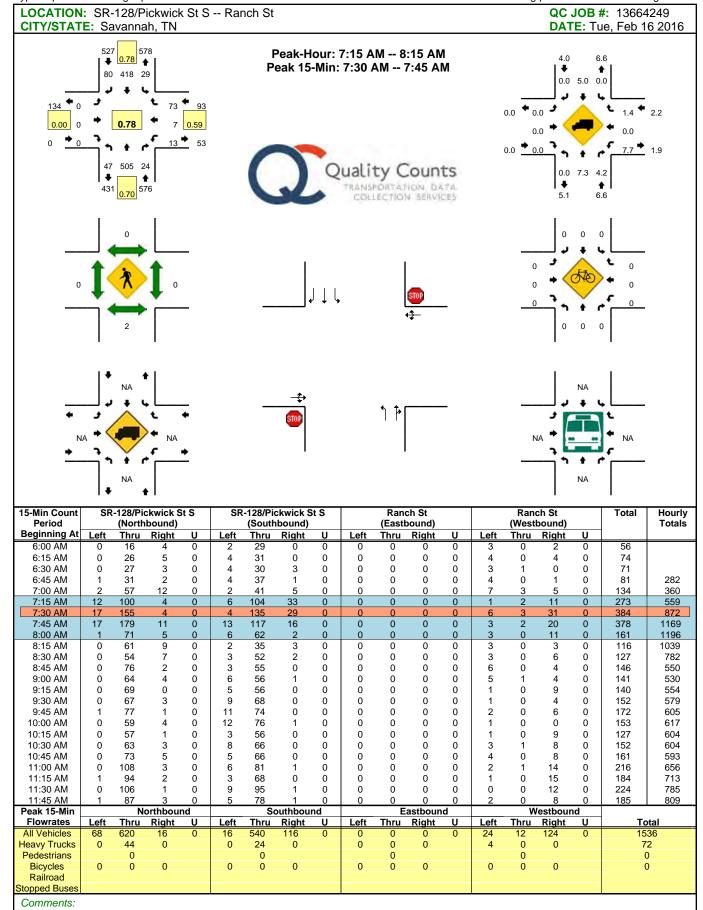


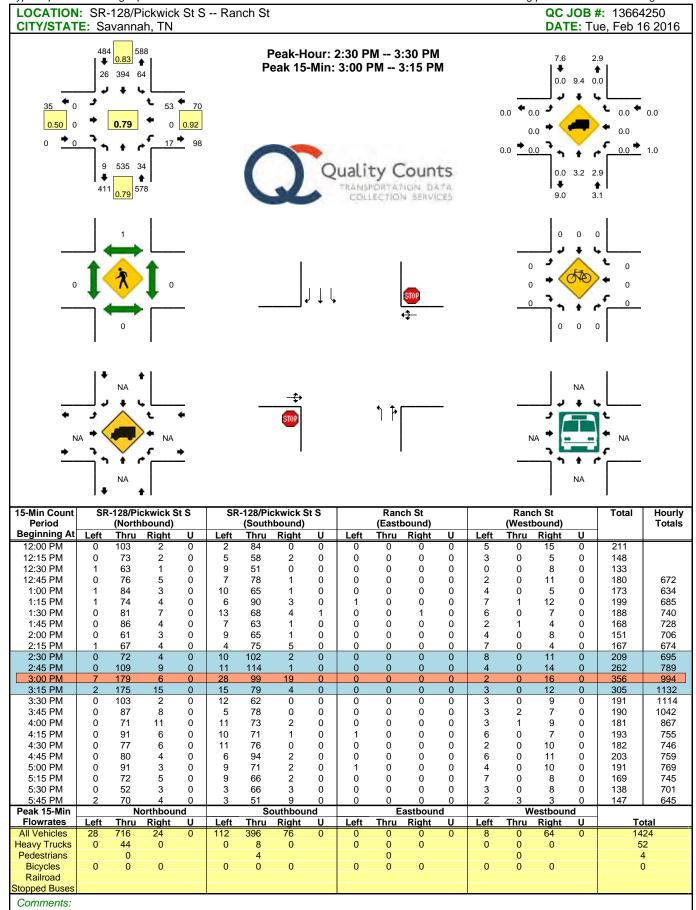


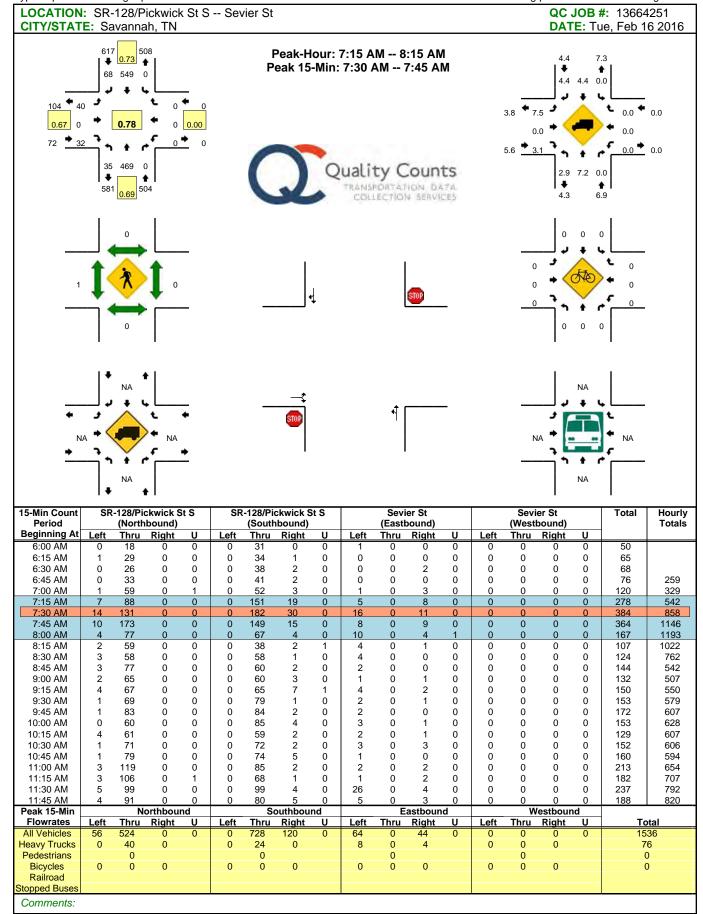


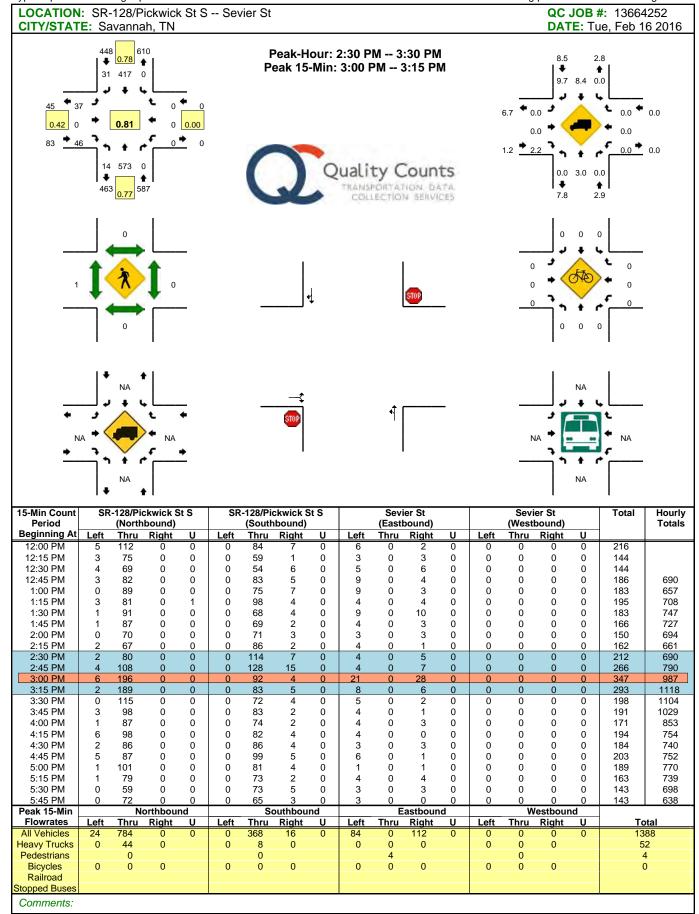


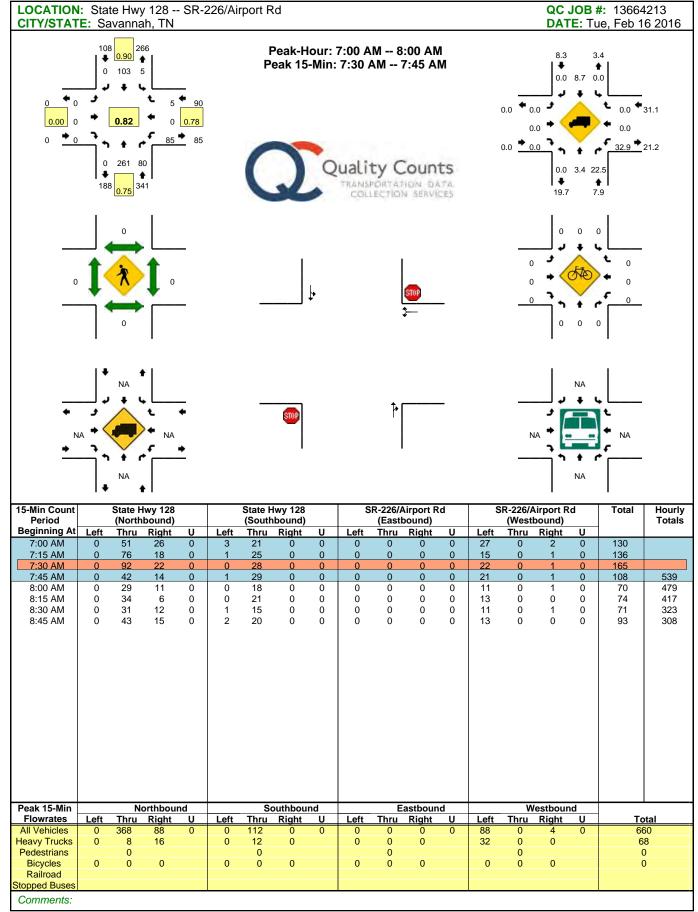


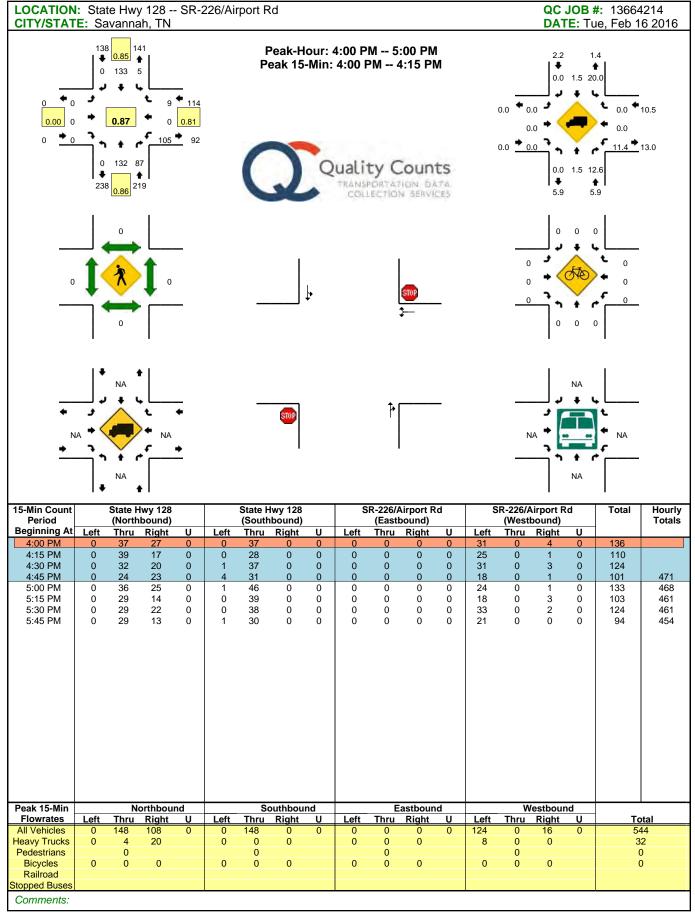


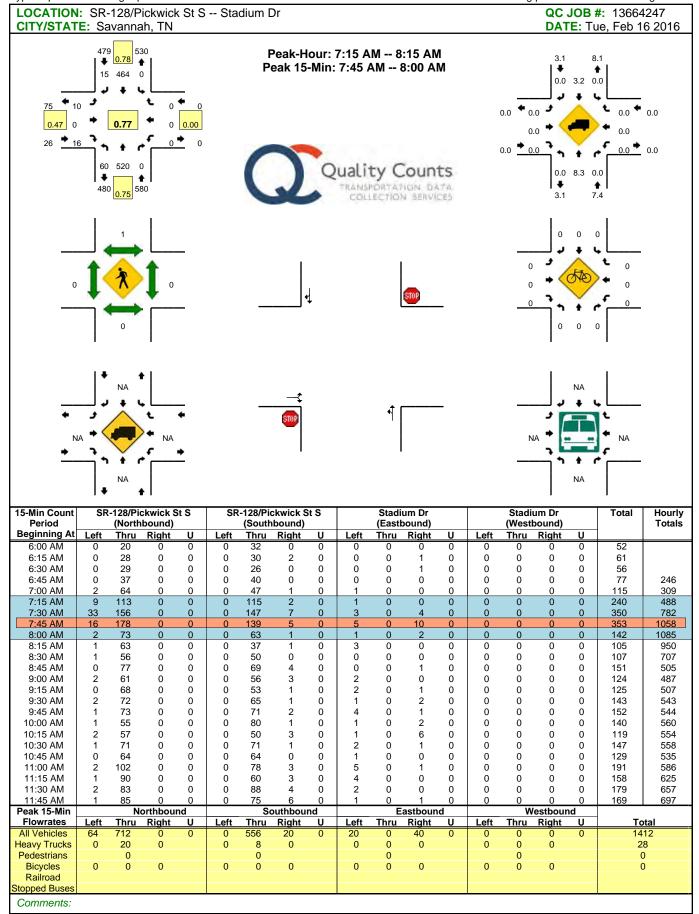


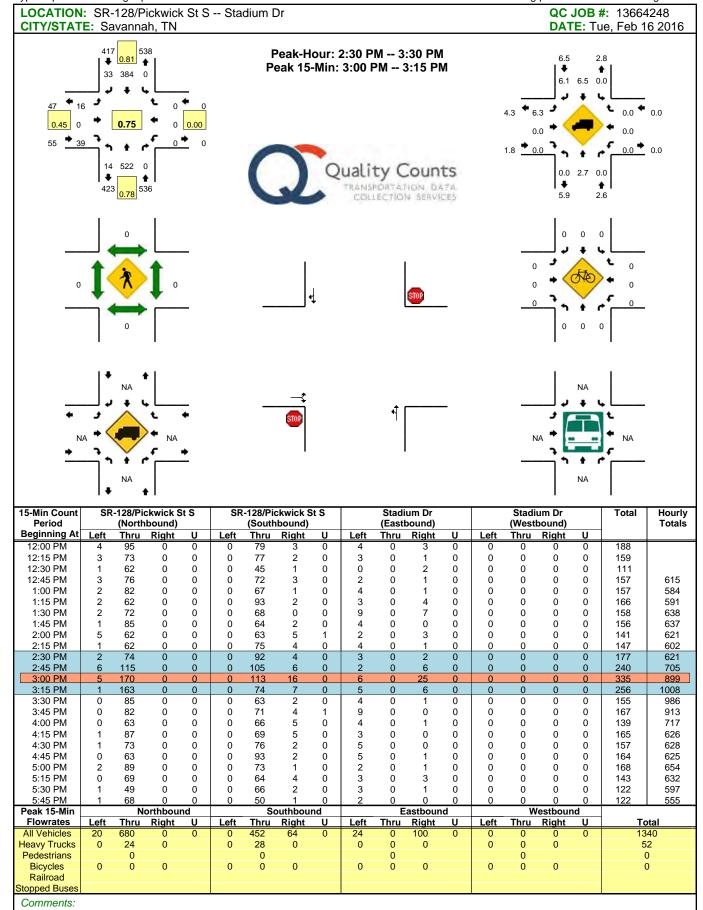


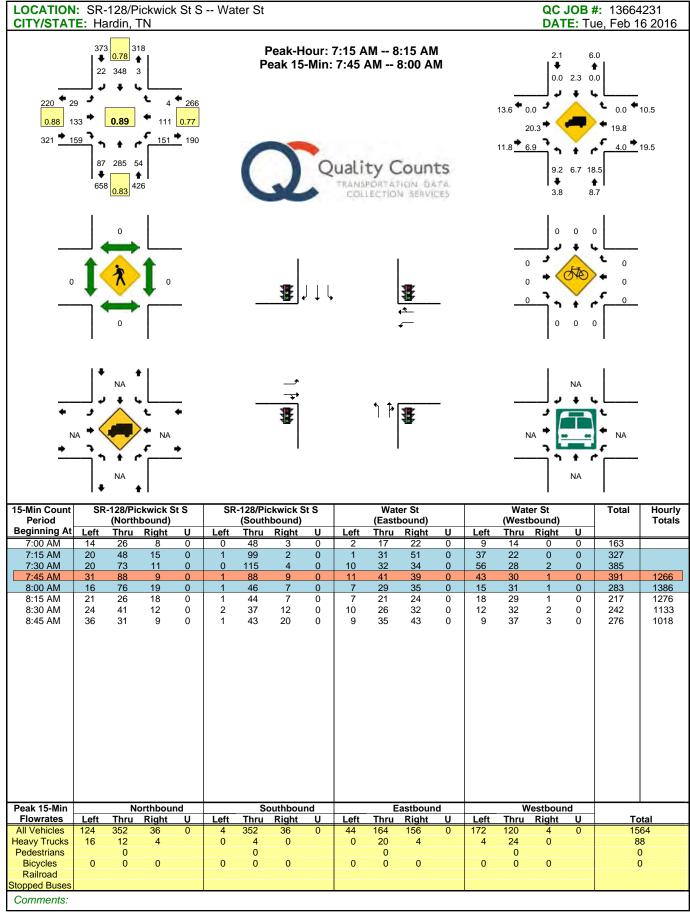


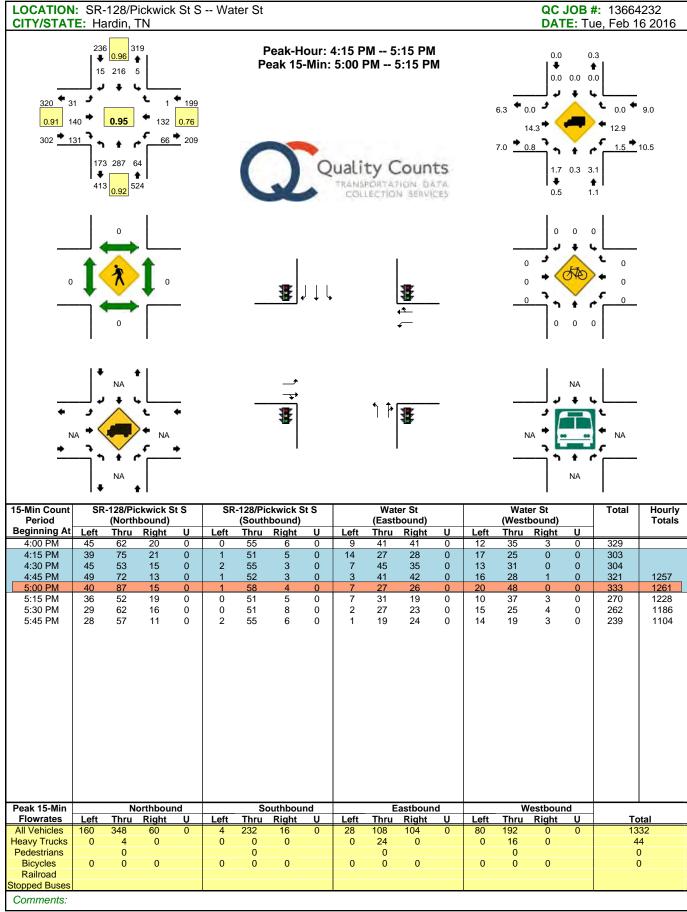


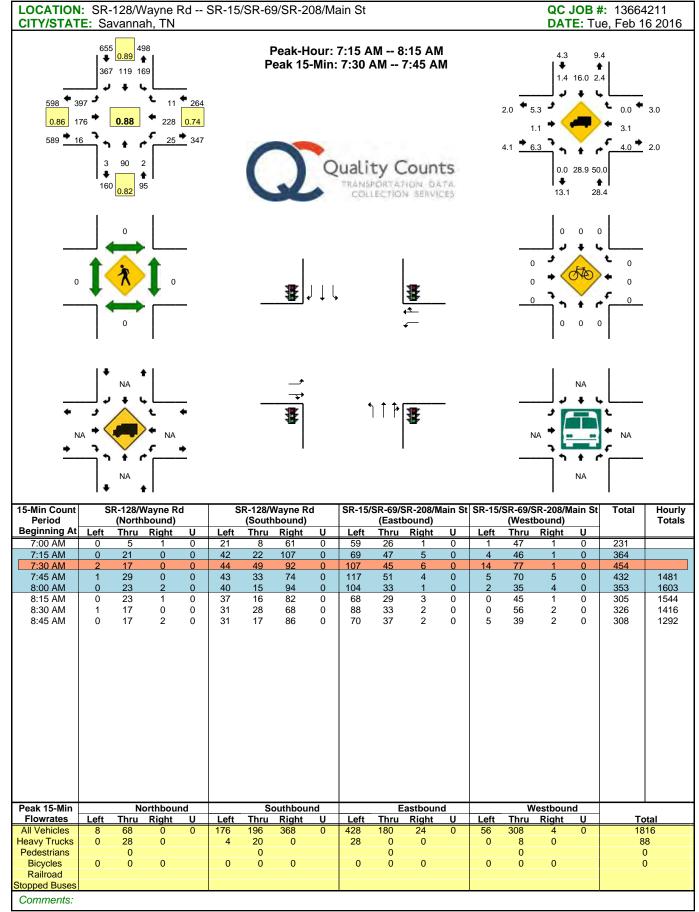


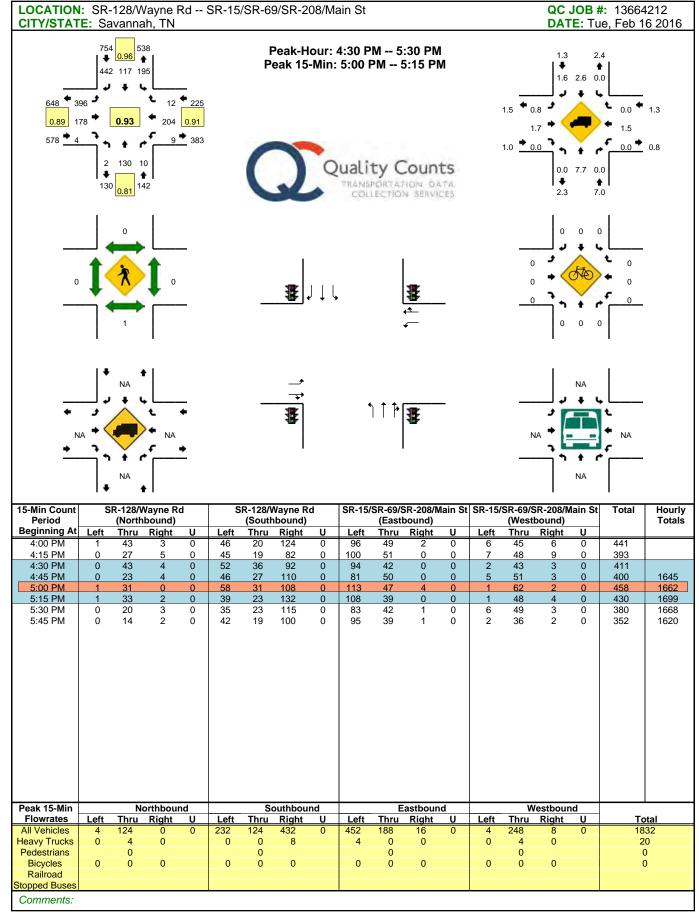


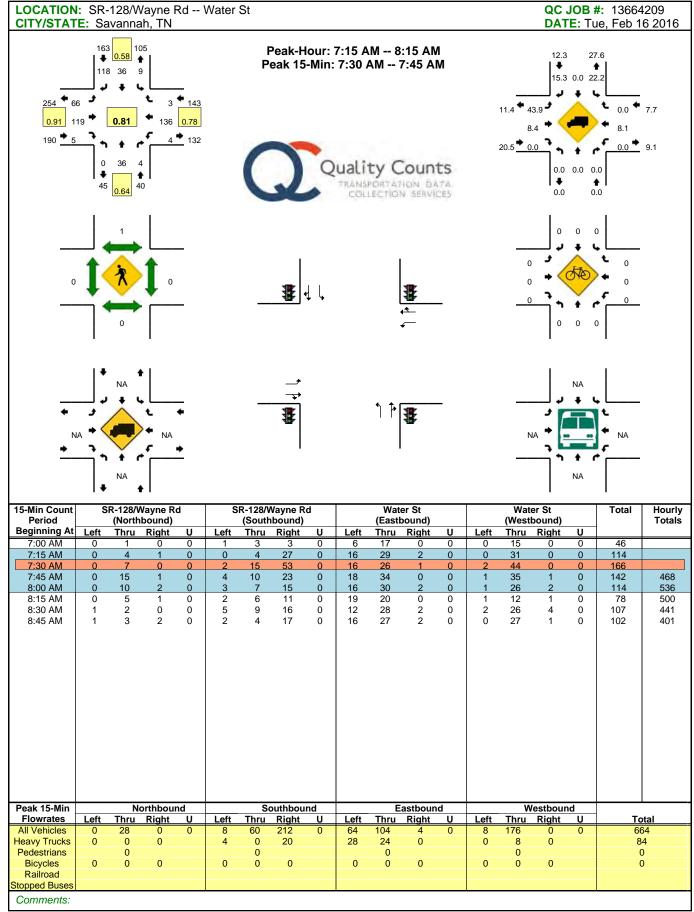


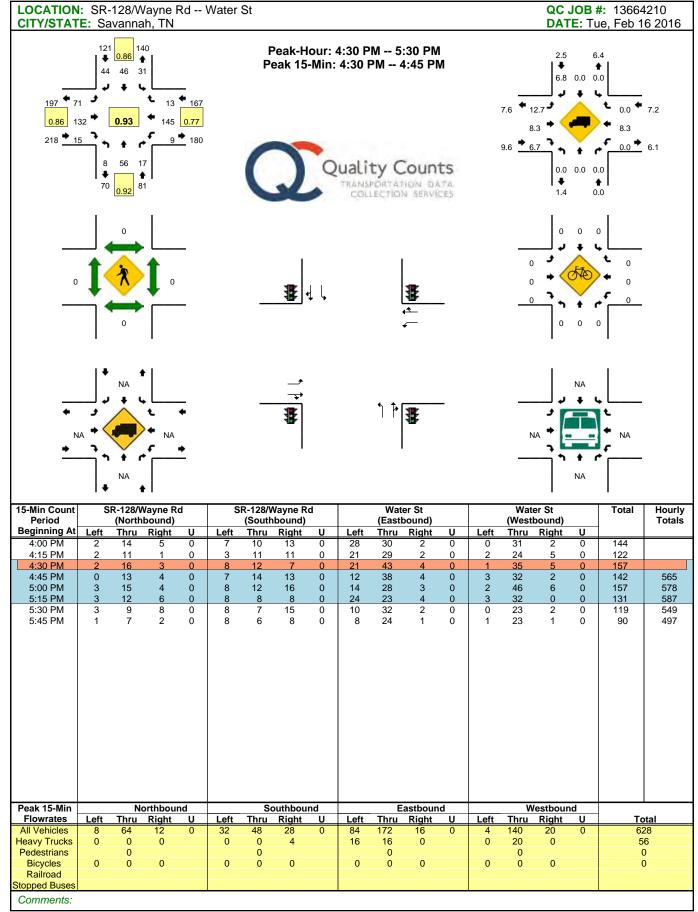


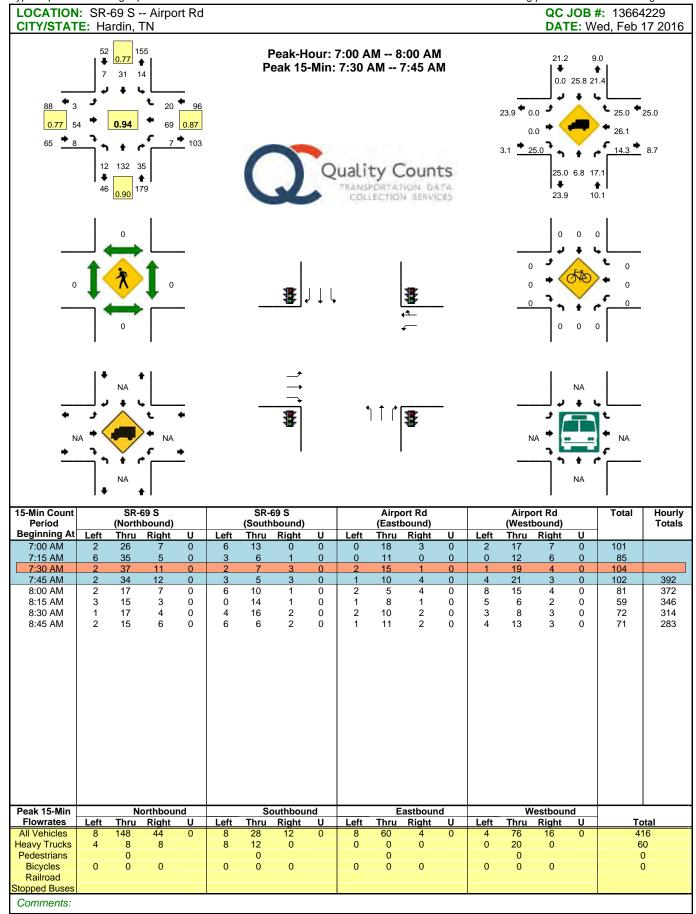


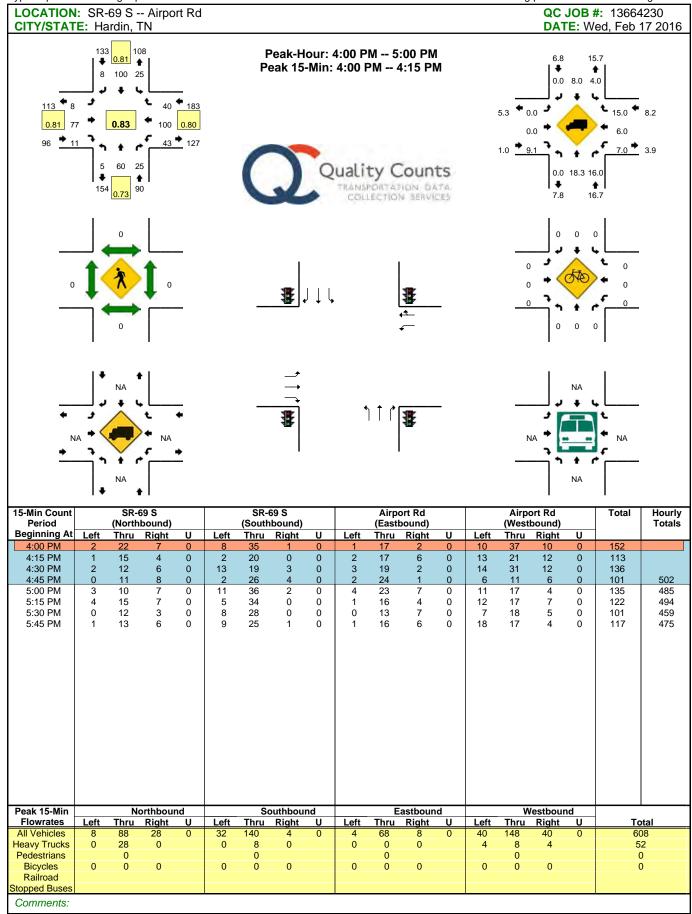


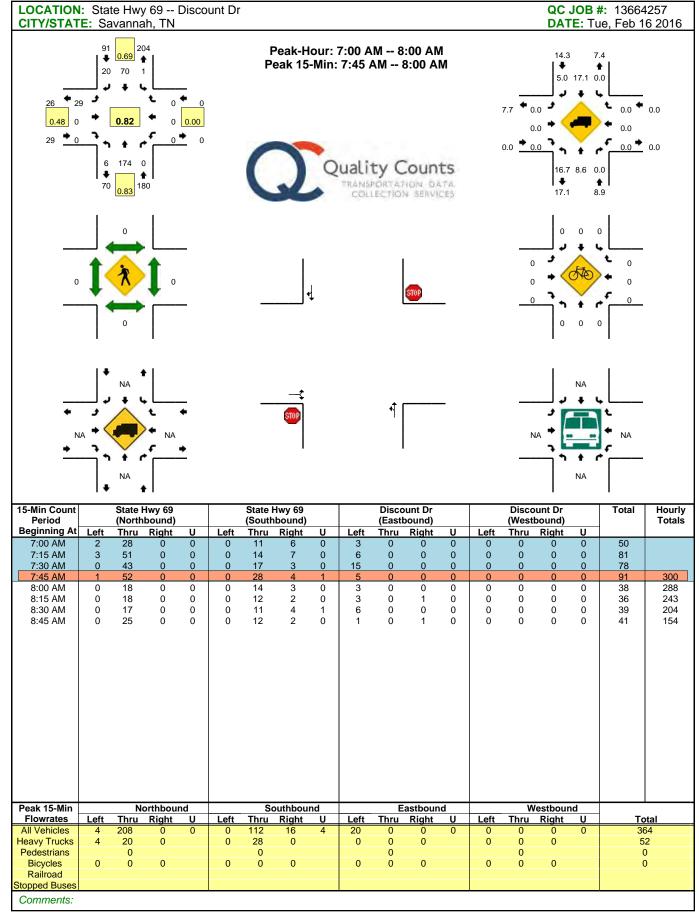


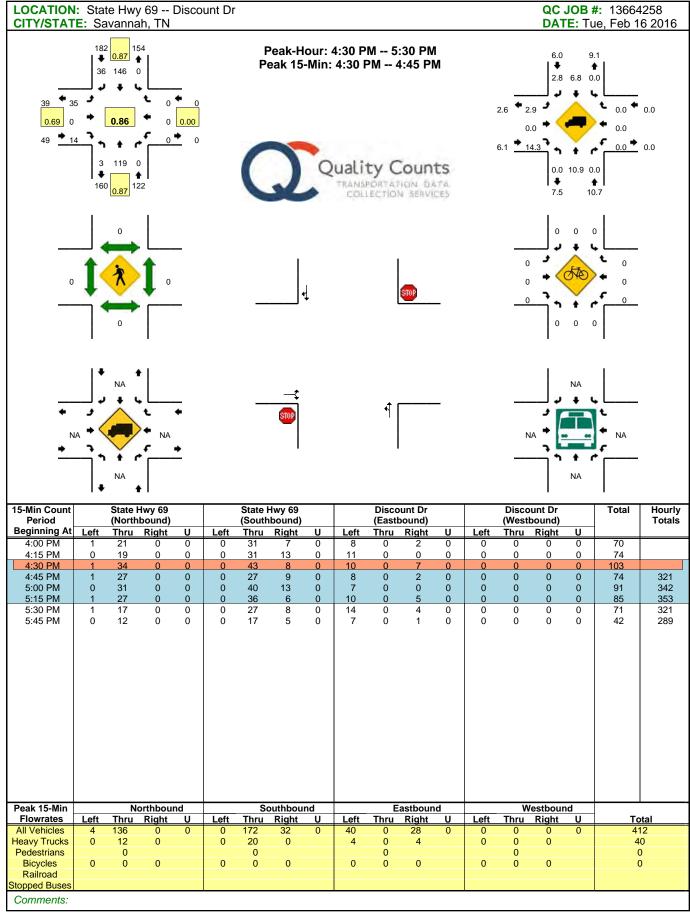


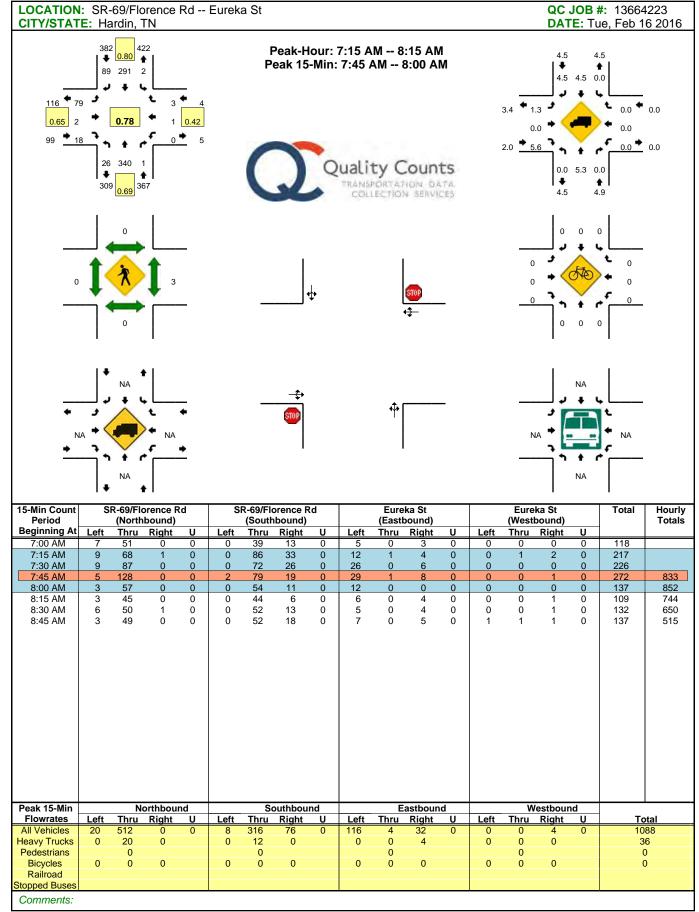


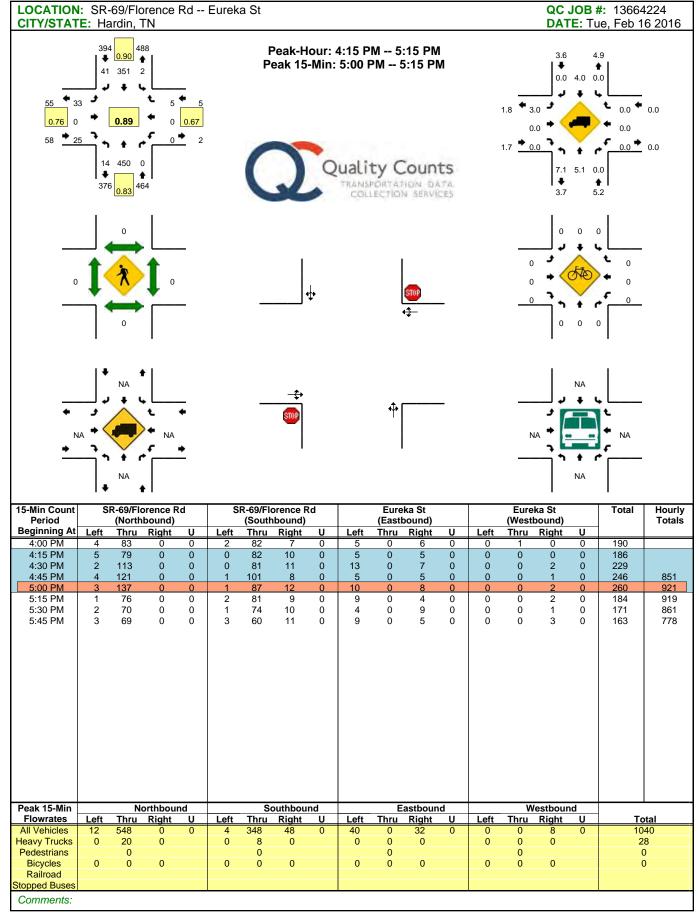


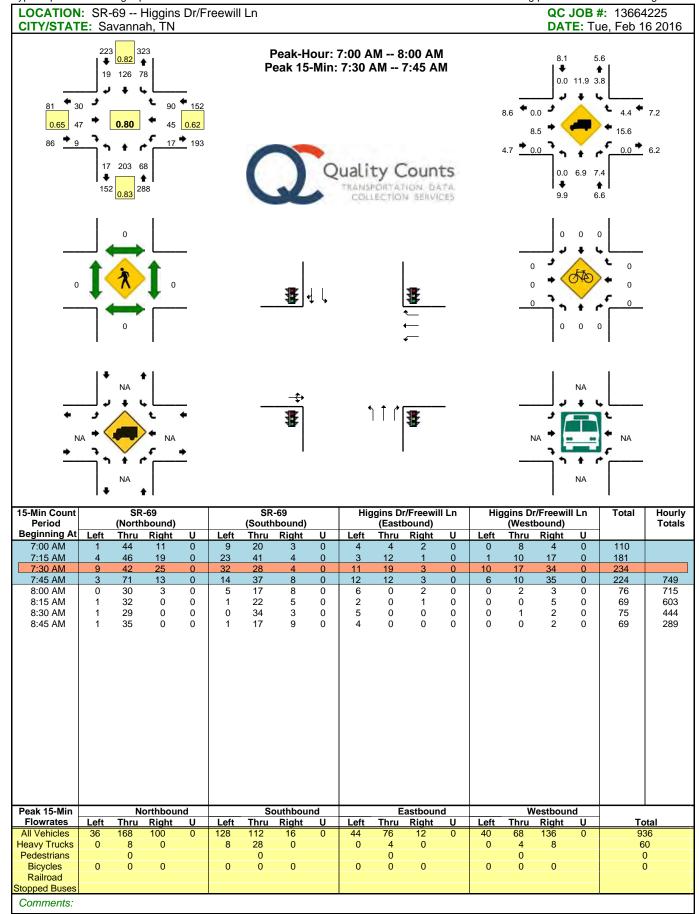


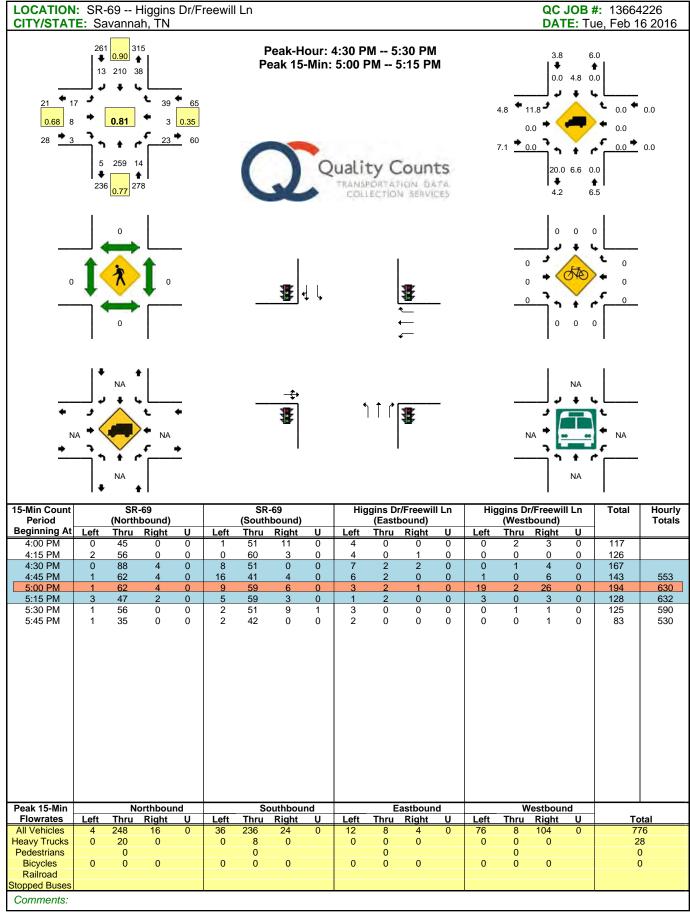


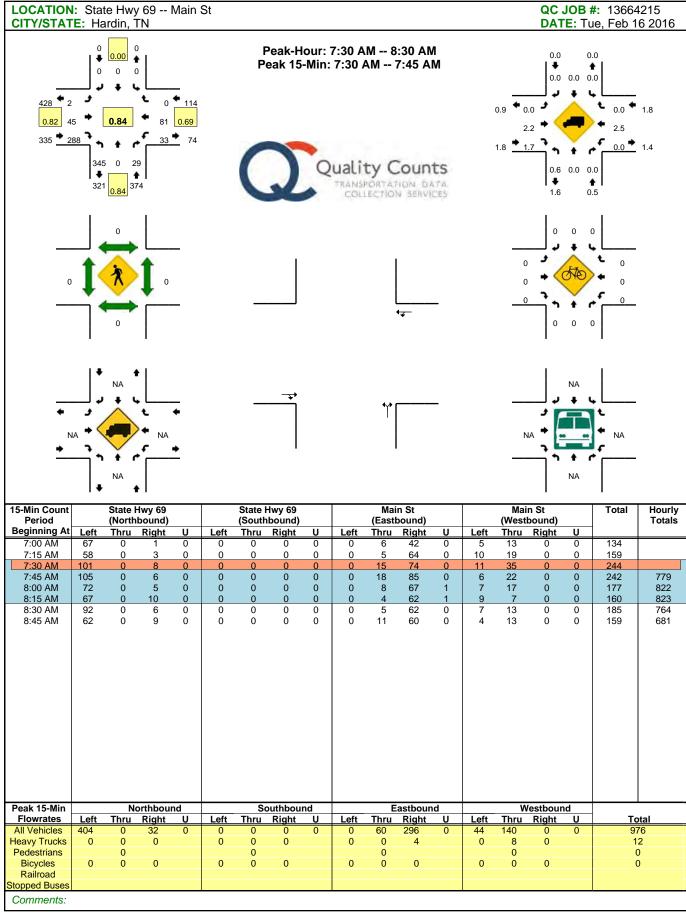


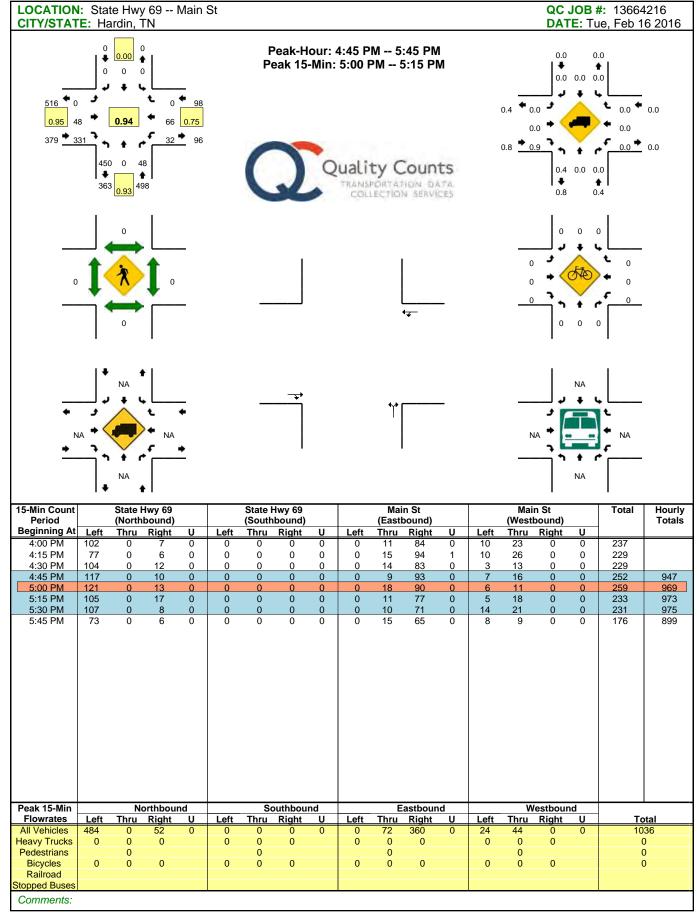


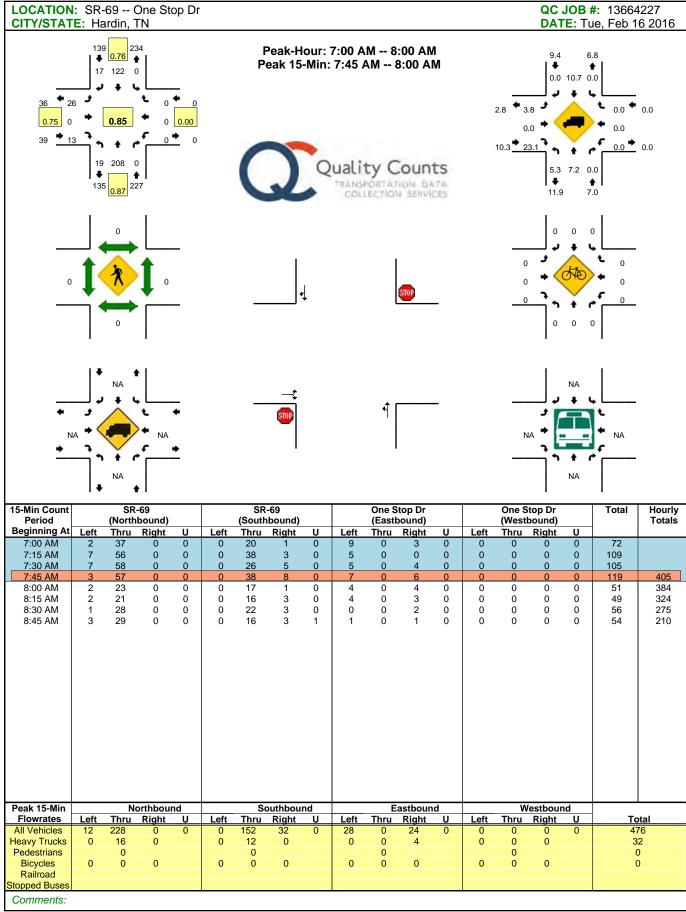


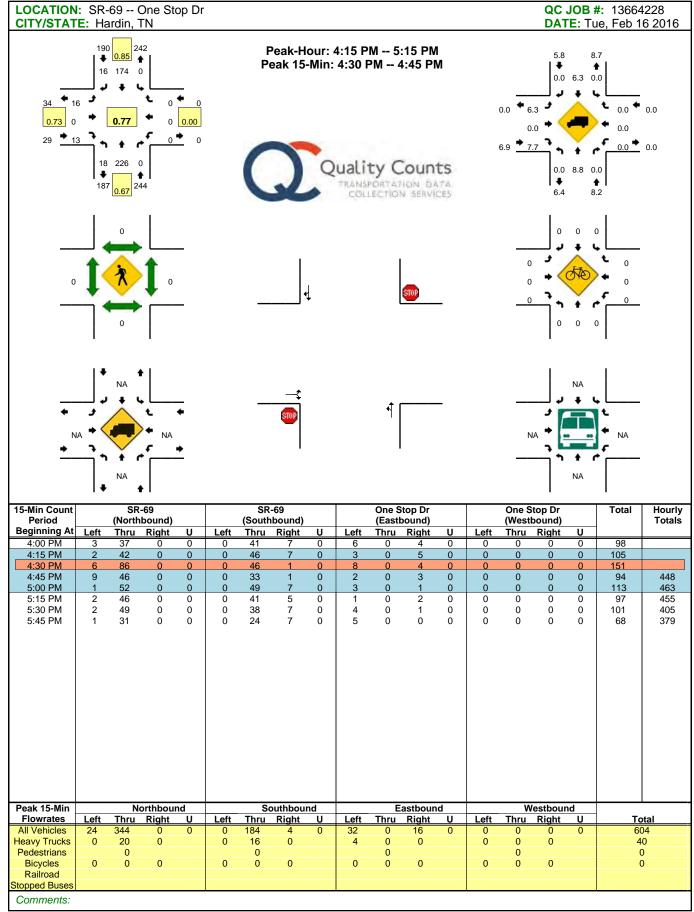


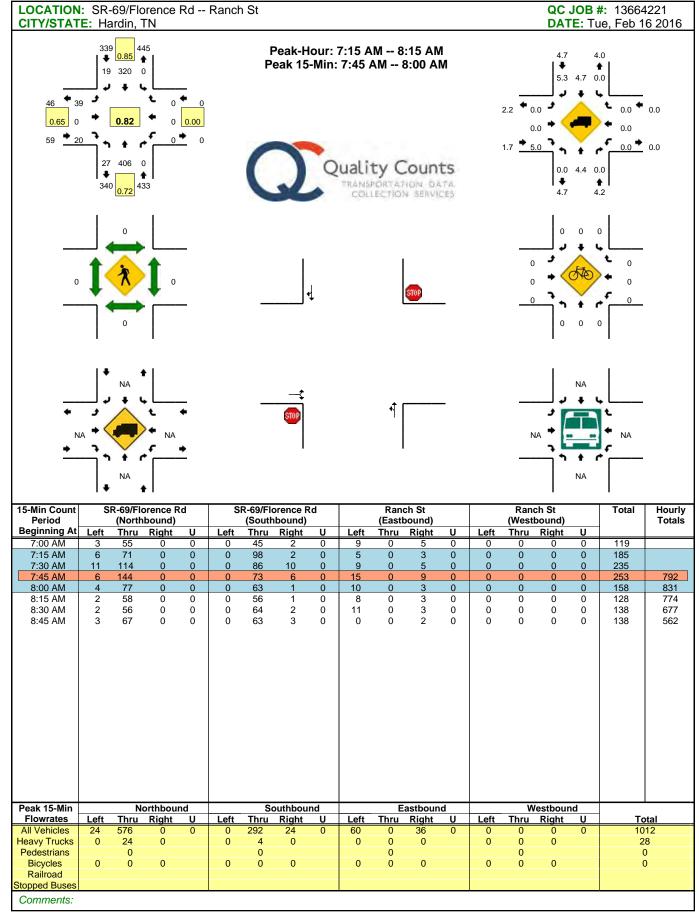


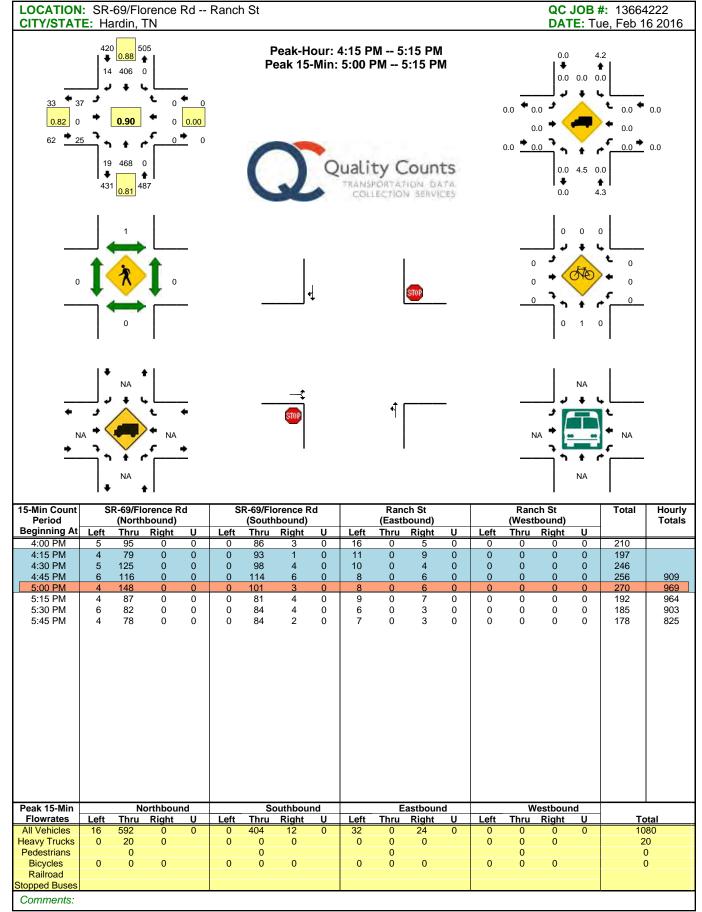


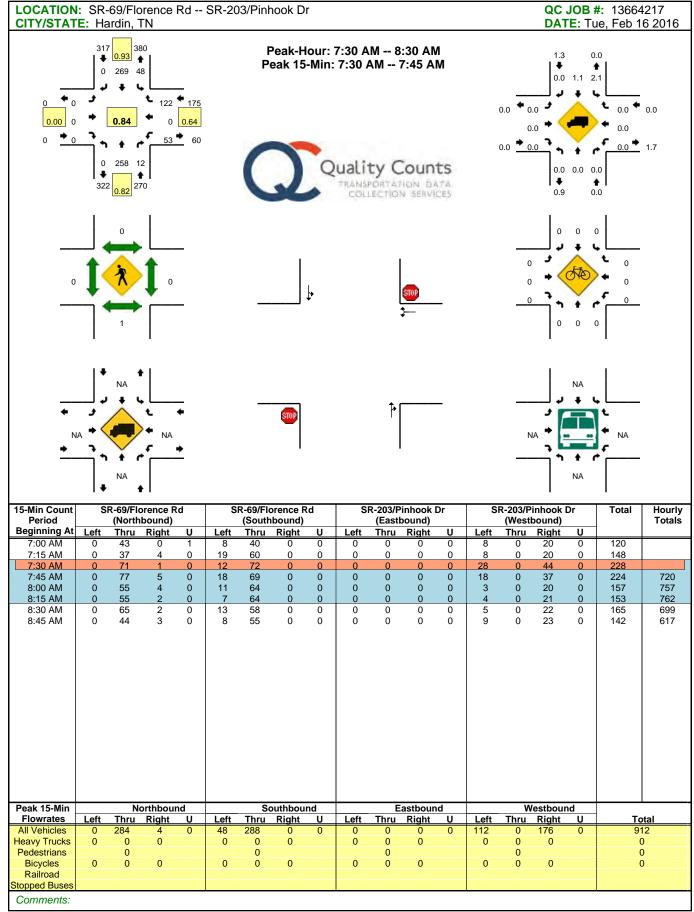


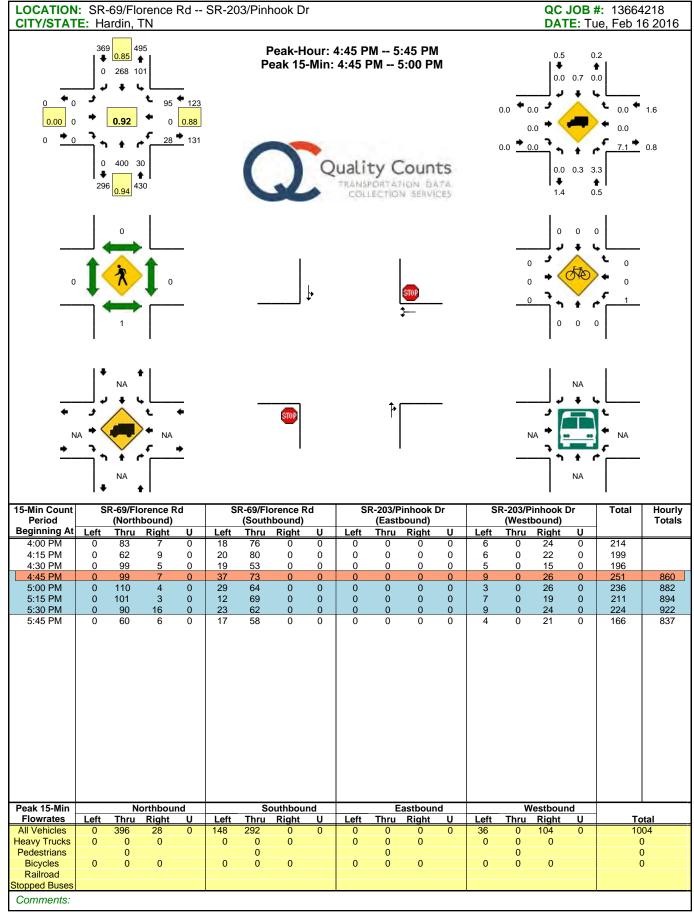


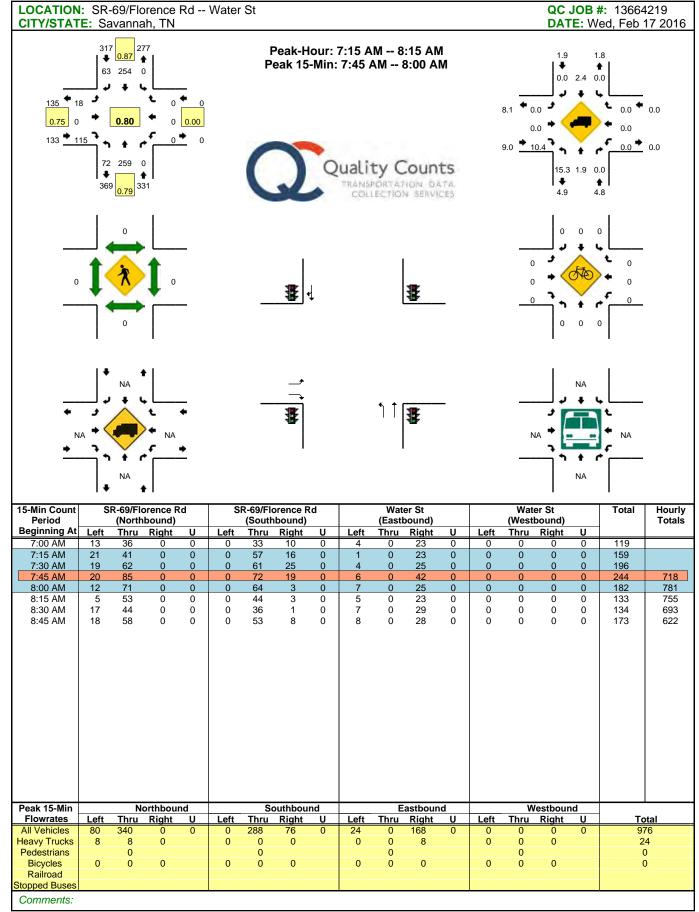


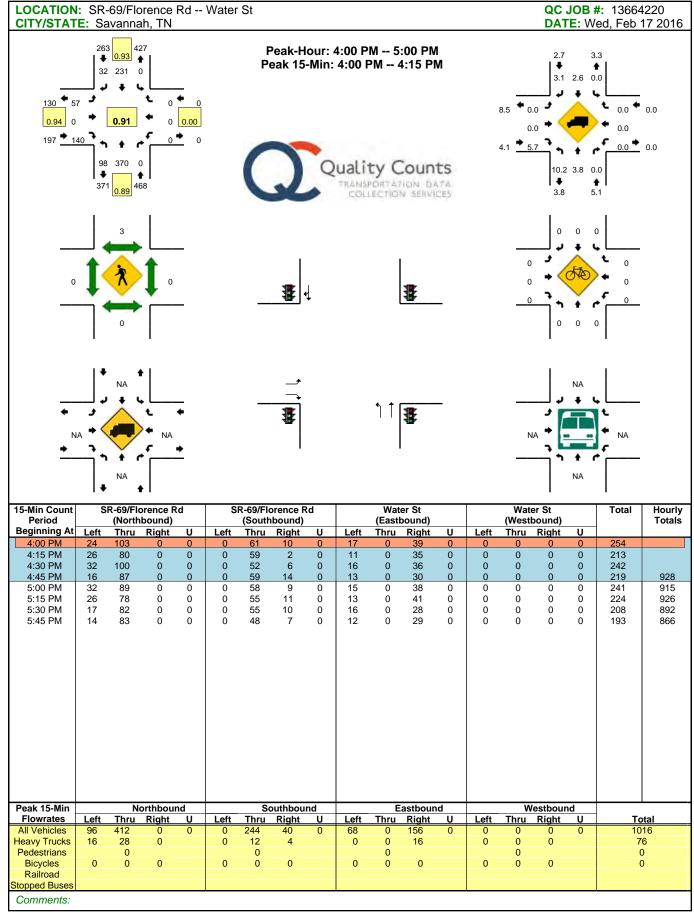




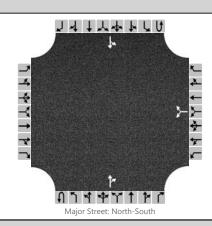








	eport							
General Information		Site Information						
Analyst	PWahl	Intersection	SR 128/SR 226 Airport Rd.					
Agency/Co.	Neel-Schaffer	Jurisdiction						
Date Performed	9/6/2016	East/West Street	SR 226 Airport Road					
Analysis Year	2016	North/South Street	SR 128					
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.82					
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25						
Project Description	Savannah CTPG							



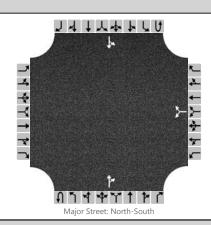
Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastbound				Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						85		5			261	80		5	103	
Percent Heavy Vehicles						33		0						0		
Proportion Time Blocked																
Right Turn Channelized		No				Ν	lo		No				No			
Median Type					Undiv				livided							

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				110				6		
Capacity				481				1154		
v/c Ratio				0.23				0.01		
95% Queue Length				0.9				0.0		
Control Delay (s/veh)				14.7				8.1		
Level of Service (LOS)				В				А		
Approach Delay (s/veh)			14	1.7				0	.4	
Approach LOS			E	В						

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 128/SR 226 Airport Rd.								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	SR 226 Airport Road								
Analysis Year	2040	North/South Street	SR 128								
Time Analyzed	AM Peak	Peak Hour Factor	0.82								
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25									
Project Description	Savannah CTPG										



Ve	hic	le '	Vol	lumes	and	Ad	justments
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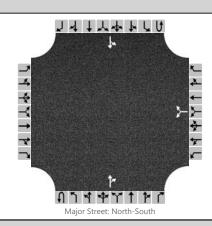
Approach		Eastbound				Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						85		5			261	80		5	103	
Percent Heavy Vehicles						33		0						0		
Proportion Time Blocked																
Right Turn Channelized		No				No				N	lo			N	lo	
Median Type								Undi	ivided							

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					110				6		
Capacity					481				1154		
v/c Ratio					0.23				0.01		
95% Queue Length					0.9				0.0		
Control Delay (s/veh)					14.7				8.1		
Level of Service (LOS)					В				А		
Approach Delay (s/veh)				14	1.7				0.	.4	
Approach LOS				В							

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport					
General Information		Site Information						
Analyst	PWahl	Intersection	SR 128/SR 226 Airport Rd.					
Agency/Co.	Neel-Schaffer	Jurisdiction						
Date Performed	9/6/2016	East/West Street	SR 226 Airport Road					
Analysis Year	2016	North/South Street	SR 128					
Time Analyzed	PM Peak (4:00-5:00)	Peak Hour Factor	0.87					
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25						
Project Description	Savannah CTPG							



Vehicle Volumes	and	Adjustments
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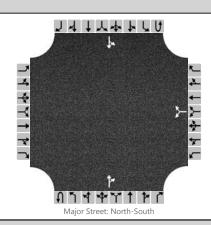
Approach		Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						105		9			132	87		5	133		
Percent Heavy Vehicles						11		0						20			
Proportion Time Blocked																	
Right Turn Channelized		No				No				Ν	lo		No				
Modian Type						Undivid				ividad							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					131				6		
Capacity					625				1215		
v/c Ratio					0.21				0.00		
95% Queue Length					0.8				0.0		
Control Delay (s/veh)					12.3				8.0		
Level of Service (LOS)					В				А		
Approach Delay (s/veh)				12	2.3				0.	.3	
Approach LOS				В							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/SR 226 Airport Rd.									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	SR 226 Airport Road									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.87									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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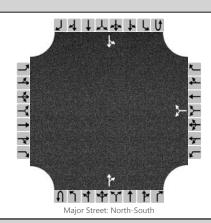
Approach		Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration							LR					TR		LT				
Volume (veh/h)						105		9			132	87		5	133			
Percent Heavy Vehicles						11		0						20				
Proportion Time Blocked																		
Right Turn Channelized		No			No					N	lo			N	lo			
Median Type							Undi	ivided										

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				131				6		
Capacity				625				1215		
v/c Ratio				0.21				0.00		
95% Queue Length				0.8				0.0		
Control Delay (s/veh)				12.3				8.0		
Level of Service (LOS)				В				А		
Approach Delay (s/veh)			12	2.3				0.	.3	
Approach LOS			[В						

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Dodd Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Dodd Drive									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.71									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



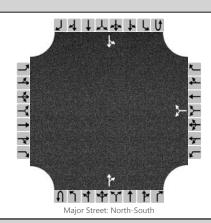
Approach		Eastb	ound		Westbound					North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						0		15			255	10		15	97		
Percent Heavy Vehicles						0		0						73			
Proportion Time Blocked																	
Right Turn Channelized		No			No					Ν	lo			Ν	lo		
Madia Tara								111	1.1.1								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				21				21		
Capacity				684				882		
v/c Ratio				0.03				0.02		
95% Queue Length				0.1				0.1		
Control Delay (s/veh)				10.4				9.2		
Level of Service (LOS)				В				А		
Approach Delay (s/veh)			10).4				1.	.4	
Approach LOS				B						

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Dodd Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Dodd Drive									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.71									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastb	ound		Westbound					North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						0		15			255	10		15	97		
Percent Heavy Vehicles						0		0						73			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			Ν	lo			N	lo			Ν	lo		
Madhartan		·				11.32.3											

Median Type Undivided

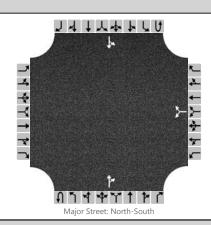
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)				21				21		
Capacity				684				882		
v/c Ratio				0.03				0.02		
95% Queue Length				0.1				0.1		
Control Delay (s/veh)				10.4				9.2		
Level of Service (LOS)				В				А		
Approach Delay (s/veh)			10).4				1.	.4	
Approach LOS			·	3						

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	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 128/Dodd Drive
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Dodd Drive
Analysis Year	2016	North/South Street	SR 128
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.87
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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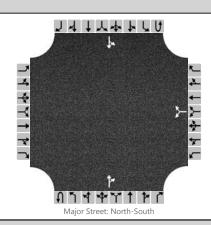
Approach		Eastb	ound			Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						0		2			144	6		8	158		
Percent Heavy Vehicles						0		0						25			
Proportion Time Blocked																	
Right Turn Channelized		No				No				No				No			
Median Tyne						Undivid					divided						

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)							2						9		
Capacity							879						1274		
v/c Ratio							0.00						0.01		
95% Queue Length							0.0						0.0		
Control Delay (s/veh)							9.1						7.8		
Level of Service (LOS)							А						А		
Approach Delay (s/veh)						9	.1						0	.4	
Approach LOS				Α											

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 128/Dodd Drive
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Dodd Drive
Analysis Year	2040	North/South Street	SR 128
Time Analyzed	PM Peak	Peak Hour Factor	0.87
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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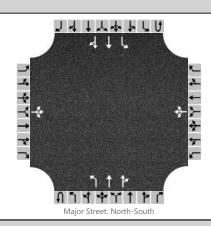
Approach		Eastb	ound			Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						0		2			144	6		8	158	
Percent Heavy Vehicles						0		0						25		
Proportion Time Blocked																
Right Turn Channelized		No			No			No				No				
Madian Tuna						Undividad					- livided					

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)							2							9		
Capacity							879							1274		
v/c Ratio							0.00							0.01		
95% Queue Length							0.0							0.0		
Control Delay (s/veh)							9.1							7.8		
Level of Service (LOS)							А							А		
Approach Delay (s/veh)						9.1							0.4			
Approach LOS					A											

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport					
General Information		Site Information						
Analyst	PWahl	Intersection	SR 128/Eureka St					
Agency/Co.	Neel-Schaffer	Jurisdiction						
Date Performed	9/6/2016	East/West Street	Eureka Street					
Analysis Year	2016	North/South Street	SR 128					
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.76					
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25						
Project Description	Savannah CTPG							



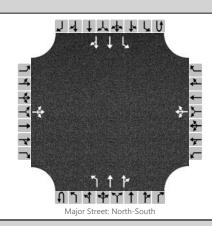
Vehicl	e Vo	lumes	and	Adj	justments
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Approach		Eastbound T R				Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		0	0	0		59	0	36		1	535	70		35	444	11
Percent Heavy Vehicles		0	0	0		3	0	6		0				29		
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	lo			N	lo			N	lo	
Median Type					Undivided											

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			0			125		1			46		
Capacity			0			243		989			666		
v/c Ratio						0.51		0.00			0.07		
95% Queue Length						2.7		0.0			0.2		
Control Delay (s/veh)			5.0			34.4		8.6			10.8		
Level of Service (LOS)			А			D		А			В		
Approach Delay (s/veh)		5.	.0		34	1.4		0	.0		0.	.8	
Approach LOS	А		D										

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Eureka St									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Eureka Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.76									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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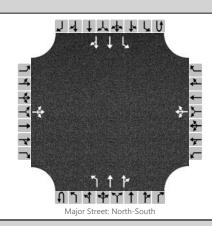
Approach		Eastbound				Westbound				North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		0	0	0		60	0	37		1	546	71		36	453	11
Percent Heavy Vehicles		0	0	0		3	0	6		0				29		
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo	
Modian Typo								LIndi	lividad							

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			0			128		1			47		
Capacity			0			237		979			656		
v/c Ratio						0.54		0.00			0.07		
95% Queue Length						2.9		0.0			0.2		
Control Delay (s/veh)			5.0			36.7		8.7			10.9		
Level of Service (LOS)			А			Е		А			В		
Approach Delay (s/veh)	5.0			36	5.7		0	.0	0.8				
Approach LOS		A	Α		ı	E							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Eureka St									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Eureka Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.94									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



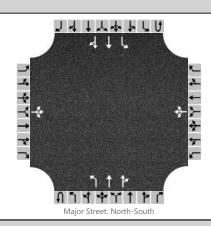
Vehicle Volumes and Adju	ustments
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Approach		Eastb	ound		Westbound					North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		8	0	0		33	0	30		0	266	25		28	278	3
Percent Heavy Vehicles		0	0	0		0	0	7		0				4		
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	lo			N	lo			N	lo	
Median Type						Undivided										

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			9			67		0			30		
Capacity			434			577		1274			1233		
v/c Ratio			0.02			0.12		0.00			0.02		
95% Queue Length			0.1			0.4		0.0			0.1		
Control Delay (s/veh)			13.5			12.1		7.8			8.0		
Level of Service (LOS)			В			В		А			А		
Approach Delay (s/veh)	13.5			12	2.1		0	.0	0.7				
Approach LOS		E	3		E	В							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Eureka St									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Eureka Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.94									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



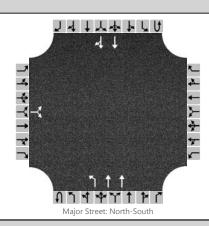
Vehicle Volumes and Adju	ustments
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Approach		Eastb	ound			Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		8	0	0		34	0	31		0	272	26		29	284	3
Percent Heavy Vehicles		0	0	0		0	0	7		0				4		
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	lo			N	lo			N	lo	
Median Type						Undivided										

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			9			69			0				31		
Capacity			425			569			1267				1226		
v/c Ratio			0.02			0.12			0.00				0.03		
95% Queue Length			0.1			0.4			0.0				0.1		
Control Delay (s/veh)			13.7			12.2			7.8				8.0		
Level of Service (LOS)			В			В			А				А		
Approach Delay (s/veh)	13.7			12	2.2		0.0				0.7				
Approach LOS	В		В												

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #1						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #1						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.74						
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25							
Project Description Savannah CTPG									



Vehicle	Volumes	and	Adjustments
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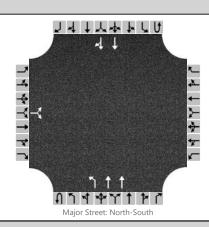
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		6		10						70	477				487	68
Percent Heavy Vehicles		0		0						1						
Proportion Time Blocked																
Right Turn Channelized	No				No			No				No				
NA 11: T		11 2 11														

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		22				95				
Capacity		259				862				
v/c Ratio		0.09				0.11				
95% Queue Length		0.3				0.4				
Control Delay (s/veh)		20.2				9.7				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	20).2				1	.2			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #1						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #1						
Analysis Year	2040	North/South Street	SR 128						
Time Analyzed	AM Peak	Peak Hour Factor	0.74						
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25							
Project Description Savannah CTPG									



Vehicle Volumes and Adjustments

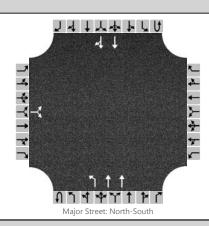
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		6		10						71	487				497	69
Percent Heavy Vehicles		0		0						1						
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			Ν	lo			Ν	lo	
Modian Type		Undivided														

Median Type Undivid

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		22				96				
Capacity		250				851				
v/c Ratio		0.09				0.11				
95% Queue Length		0.3				0.4				
Control Delay (s/veh)		20.8				9.8				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	20).8				1	.2			
Approach LOS	(C								

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #1						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #1						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	PM Peak (3:00-4:00)	Peak Hour Factor	0.71						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description Savannah CTPG									



Vehicle	Volumes	and	Adjustments
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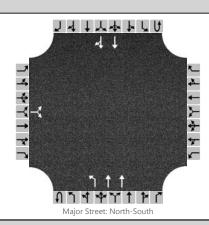
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		29		39						13	580				353	13
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo	
Median Type	Undivided															

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		96				18				
Capacity		363				1061				
v/c Ratio		0.26				0.02				
95% Queue Length		1.0				0.1				
Control Delay (s/veh)		18.4				8.5				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	18	3.4				0	.2			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #1						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #1						
Analysis Year	2040	North/South Street	SR 128						
Time Analyzed	PM Peak	Peak Hour Factor	0.71						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description Savannah CTPG									



Vehicle Volumes	and	Adjustments
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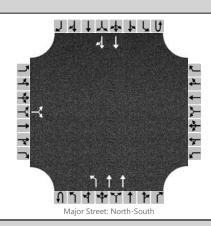
Approach		Eastb	ound		Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		30		40						13	592				360	13
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		No No					No				No					
Modian Type	Lindivided															

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		98				18				
Capacity		354				1052				
v/c Ratio		0.28				0.02				
95% Queue Length		1.1				0.1				
Control Delay (s/veh)		19.0				8.5				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	19	0.0				0	.2			
Approach LOS	(

HCS 2010 Two-Way Stop Control Summary Report									
General Information									
Analyst	PWahl	Intersection	SR 128/HCHS Drive #2						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #2						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.76						
Intersection Orientation North-South Analysis Time Period (hrs) 0.25									
Project Description Savannah CTPG									



V	ehic	le \	/ol	lumes	and	Ad	ljustments
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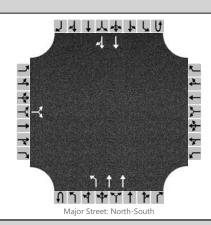
Approach		Eastb	ound		Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		47		74						0	520				410	0
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized	No				No			No				No				

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		159				0				
Capacity		411				1040				
v/c Ratio		0.39				0.00				
95% Queue Length		1.8				0.0				
Control Delay (s/veh)		19.2				8.5				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	19	.2				0	.0			
Approach LOS	(

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #2						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #2						
Analysis Year	2040	North/South Street	SR 128						
Time Analyzed	AM Peak	Peak Hour Factor	0.76						
Intersection Orientation North-South Analysis Time Period (hrs) 0.25									
Project Description Savannah CTPG									



Vehicle Volume	s and I	Adjustments
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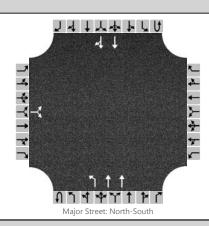
Approach		Eastb	ound		Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		48		76						0	531				419	0
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		N	lo		No			No				No				
Madia Tara	0.2.4.4															

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		163				0				
Capacity		403				1029				
v/c Ratio		0.40				0.00				
95% Queue Length		1.9				0.0				
Control Delay (s/veh)		19.9				8.5				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	19).9				0	.0			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #2						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #2						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	PM Peak (3:00-4:00)	Peak Hour Factor	0.72						
Intersection Orientation North-South Analysis Time Period (hrs) 0.25									
Project Description Savannah CTPG									

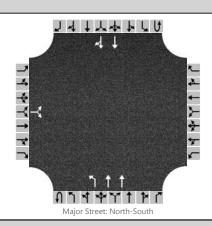


Vehicle Volumes	and	Adjustments
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Approach		Eastb	ound		Westbound					North	bound			South	bound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R			
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6			
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0			
Configuration			LR							L	Т				Т	TR			
Volume (veh/h)		30		26						0	567				328	0			
Percent Heavy Vehicles		0		0						0									
Proportion Time Blocked																			
Right Turn Channelized		N	lo			N	lo			Ν	lo			Ν	No				
Median Type								Undi	vided										

Median Storage														
Delay, Queue Length, and	l Level	of Se	rvice											
Flow Rate (veh/h)			78							0				
Capacity			358							1116				
v/c Ratio			0.22							0.00				
95% Queue Length			0.8							0.0				
Control Delay (s/veh)			17.8							8.2				
Level of Service (LOS)			С							А				
Approach Delay (s/veh)		17	7.8							0	.0			
Approach LOS	С													

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/HCHS Drive #2									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	HCHS Drive #2									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.72									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle Volume	s and I	Adjustments
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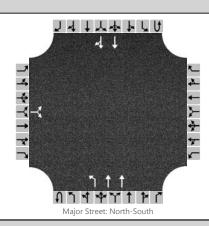
Approach		Eastb	ound			Westl	oound			North	bound			South	bound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R			
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6			
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0			
Configuration			LR							L	Т				Т	TR			
Volume (veh/h)		31		27						0	579				335	0			
Percent Heavy Vehicles		0		0						0									
Proportion Time Blocked																			
Right Turn Channelized		No					No				lo			Ν	No	0			
Madia Tara						11.32.24.3													

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			81				0				
Capacity			353				1107				
v/c Ratio			0.23				0.00				
95% Queue Length			0.9				0.0				
Control Delay (s/veh)			18.2				8.3				
Level of Service (LOS)			С				А				
Approach Delay (s/veh)	18.2					0	.0				
Approach LOS	С										

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/HCHS Drive #3									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	HCHS Drive #3									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.77									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



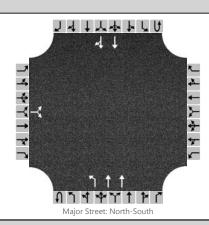
Vehicle Volumes and Adjustments

Approach		Eastb	ound			Westl	oound			North	bound		Southbound							
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R				
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6				
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0				
Configuration			LR							L	Т				Т	TR				
Volume (veh/h)		0		0						16	510				464	28				
Percent Heavy Vehicles		0		0						69										
Proportion Time Blocked																				
Right Turn Channelized		N	lo			N	lo			N	lo			Ν	lo					
Median Type	Undivided																			

Delay, Queue Length, and Level of Service

-														
	Flow Rate (veh/h)			0						21				
	Capacity			0						602				
	v/c Ratio									0.03				
	95% Queue Length									0.1				
	Control Delay (s/veh)			5.0						11.2				
	Level of Service (LOS)			А						В				
	Approach Delay (s/veh)	5.0							0	.3				
	Approach LOS	А												

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #3						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #3						
Analysis Year	2040	North/South Street	SR 128						
Time Analyzed	AM Peak	Peak Hour Factor	0.77						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description	Project Description Savannah CTPG								



Vehicle Volumes and Adjustments

Approach		Eastb	ound			Westbound				North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		0		0						16	521				474	29	
Percent Heavy Vehicles		0		0						69							
Proportion Time Blocked																	
Right Turn Channelized	No				No			No				No					
Madia Tara								1111	1.1.1								

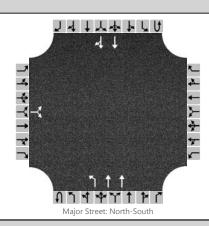
Median Type Undivided

Median Storage

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		0				21				
Capacity		0				592				
v/c Ratio						0.04				
95% Queue Length						0.1				
Control Delay (s/veh)		5.0				11.3				
Level of Service (LOS)		А				В				
Approach Delay (s/veh)	5	.0				0	.3			
Approach LOS	,	Ą								

HCS 2010 Two-Way Stop Control Summary Report										
General Information		Site Information								
Analyst	PWahl	Intersection	SR 128/HCHS Drive #3							
Agency/Co.	Neel-Schaffer	Jurisdiction								
Date Performed	9/6/2016	East/West Street	HCHS Drive #3							
Analysis Year	2016	North/South Street	SR 128							
Time Analyzed	PM Peak (3:00-4:00)	Peak Hour Factor	0.75							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Project Description Savannah CTPG									



Vehicle Volumes and Adju	ustments
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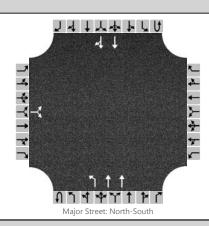
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		1		0						2	548				341	10
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		No				No				No				No		
Median Type								Undi	vided							

Wedan Type

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		1				3				
Capacity		263				1100				
v/c Ratio		0.00				0.00				
95% Queue Length		0.0				0.0				
Control Delay (s/veh)		18.8				8.3				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	18	3.8				0	.0			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report										
General Information		Site Information								
Analyst	PWahl	Intersection	SR 128/HCHS Drive #3							
Agency/Co.	Neel-Schaffer	Jurisdiction								
Date Performed	9/6/2016	East/West Street	HCHS Drive #3							
Analysis Year	2040	North/South Street	SR 128							
Time Analyzed	PM Peak	Peak Hour Factor	0.75							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Project Description Savannah CTPG									



Vehicle Volumes	and	Adjustments
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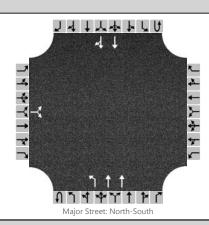
Approach	1	Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		1		0						2	560				343	10
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		No No						Ν	lo			Ν	lo			
Median Type								Undi	vided							

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		1				3				
Capacity		258				1098				
v/c Ratio		0.00				0.00				
95% Queue Length		0.0				0.0				
Control Delay (s/veh)		19.0				8.3				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	19	0.0				0	.0			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report									
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/HCHS Drive #4						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	HCHS Drive #4						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.76						
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25						
Project Description Savannah CTPG									



Vehicle	Volumes	and	Adjustments
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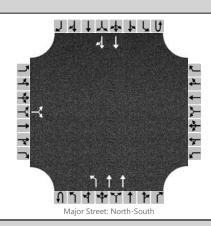
Approach		Eastbound			Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		5		5						1	523				458	2
Percent Heavy Vehicles		60		20						0						
Proportion Time Blocked																
Right Turn Channelized	No				No			No				No				

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		14				1				
Capacity		236				982				
v/c Ratio		0.06				0.00				
95% Queue Length		0.2				0.0				
Control Delay (s/veh)		21.2				8.7				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	21	2				0	.0			
Approach LOS	(

HCS 2010 Two-Way Stop Control Summary Report													
General Information		Site Information											
Analyst	PWahl	Intersection	SR 128/HCHS Drive #4										
Agency/Co.	Neel-Schaffer	Jurisdiction											
Date Performed	9/6/2016	East/West Street	HCHS Drive #4										
Analysis Year	2040	North/South Street	SR 128										
Time Analyzed	AM Peak	Peak Hour Factor	0.76										
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25											
Project Description Savannah CTPG													

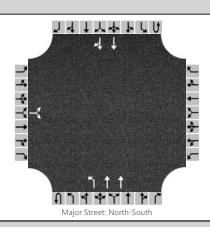


Vehicle	Volumes	and	Adjustments
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Approach		Eastbound			Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		5		5						1	534				468	2
Percent Heavy Vehicles		60		20						0						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			N	lo			N	lo		No			
Median Type	Undivided															

Median Storage																
Delay, Queue Length, and	Delay, Queue Length, and Level of Service															
Flow Rate (veh/h)			14							1						
Capacity			228							971						
v/c Ratio			0.06							0.00						
95% Queue Length			0.2							0.0						
Control Delay (s/veh)			21.8							8.7						
Level of Service (LOS)			С							Α						
Approach Delay (s/veh)	21.8 0.0															
Approach LOS	C															

HCS 2010 Two-Way Stop Control Summary Report													
General Information		Site Information											
Analyst	PWahl	Intersection	SR 128/HCHS Drive #4										
Agency/Co.	Neel-Schaffer	Jurisdiction											
Date Performed	9/6/2016	East/West Street	HCHS Drive #4										
Analysis Year	2016	North/South Street	SR 128										
Time Analyzed	PM Peak (3:00-4:00)	Peak Hour Factor	0.72										
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25											
Project Description Savannah CTPG													



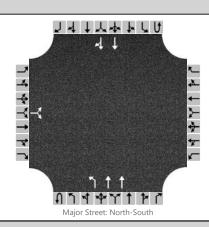
Vehicle Volumes and Adjustments

Approach		Eastbound			Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		24		24						2	526				337	4
Percent Heavy Vehicles		17		42						0						
Proportion Time Blocked																
Right Turn Channelized		N	О			N	lo			N	lo		No			
Median Type	Undivided															

Delay, Queue Length, and Level of Service

j ,										
Flow Rate (veh/h)		66				3				
Capacity		344				1099				
v/c Ratio		0.19				0.00				
95% Queue Length		0.7				0.0				
Control Delay (s/veh)		17.9				8.3				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	17	7.9				0	.0			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report													
General Information		Site Information											
Analyst	PWahl	Intersection	SR 128/HCHS Drive #4										
Agency/Co.	Neel-Schaffer	Jurisdiction											
Date Performed	9/6/2016	East/West Street	HCHS Drive #4										
Analysis Year	2040	North/South Street	SR 128										
Time Analyzed	PM Peak	Peak Hour Factor	0.72										
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25											
Project Description	roject Description Savannah CTPG												



Vehicle Volumes and Adjustments

Approach		Eastbound			Westbound			Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		25		25						2	537				344	4
Percent Heavy Vehicles		17		42						0						
Proportion Time Blocked																
Right Turn Channelized		No			No			No				No				
Madia Tara	0.000.00															

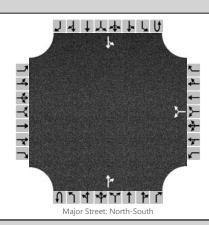
Median Type Undivided

Median Storage

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		70				3				
Capacity		335				1089				
v/c Ratio		0.21				0.00				
95% Queue Length		0.8				0.0				
Control Delay (s/veh)		18.5				8.3				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	18	3.5				0	.0			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Higgins Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Higgins Drive									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.75									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vel	hic	le	۷	0	lumes	and	Α	d	justments
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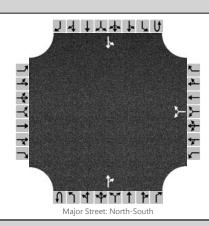
Approach	Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						12		70			353	41		45	156	
Percent Heavy Vehicles						0		10						7		
Proportion Time Blocked																
Right Turn Channelized	No			No				No				No				
Madianta					11.32.2				an na ca							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				109				60		
Capacity				504				1017		
v/c Ratio				0.22				0.06		
95% Queue Length				0.8				0.2		
Control Delay (s/veh)				14.1				8.8		
Level of Service (LOS)				В				А		
Approach Delay (s/veh)			14	1.1				2.	.4	
Approach LOS			-	В						

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport				
General Information		Site Information					
Analyst	PWahl	Intersection	SR 128/Higgins Drive				
Agency/Co.	Neel-Schaffer	Jurisdiction					
Date Performed	9/6/2016	East/West Street	Higgins Drive				
Analysis Year	2040	North/South Street	SR 128				
Time Analyzed	AM Peak	Peak Hour Factor	0.75				
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25					
Project Description	Savannah CTPG						



Vehicle Volumes and Adju	ustments
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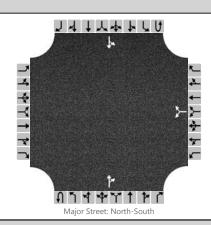
Approach	Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						12		71			360	42		46	159	
Percent Heavy Vehicles						0		10						7		
Proportion Time Blocked																
Right Turn Channelized	No			No				No				No				
Modian Typo					Undivid				dividad				-			

Median Type Undivided

Delay, Queue Length, and Level of Service

Flo	ow Rate (veh/h)				111				61		
Ca	apacity				497				1008		
v/	c Ratio				0.22				0.06		
95	5% Queue Length				0.8				0.2		
Co	ontrol Delay (s/veh)				14.3				8.8		
Le	evel of Service (LOS)				В				А		
Ap	pproach Delay (s/veh)			14	1.3				2	.4	
Ar	pproach LOS			[В						

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport			
General Information		Site Information				
Analyst	PWahl	Intersection	SR 128/Higgins Drive			
Agency/Co.	Neel-Schaffer	Jurisdiction				
Date Performed	9/6/2016	East/West Street	Higgins Drive			
Analysis Year	2016	North/South Street	SR 128			
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.90			
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25			
Project Description	Savannah CTPG					



Ve	hic	le '	Vol	lumes	and	Ad	justments
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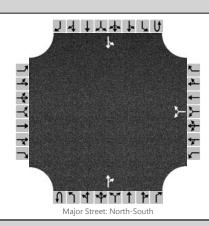
Approach	Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						8		10			191	15		12	197	
Percent Heavy Vehicles						0		0						17		
Proportion Time Blocked																
Right Turn Channelized	No			No				No				No				
Madian Tuna					Undivis				divide d				•			

Median Type Undivided

Delay, Queue Length, and Level of Service

ш													
	Flow Rate (veh/h)						20				13		
	Capacity						675				1257		
	v/c Ratio						0.03				0.01		
	95% Queue Length						0.1				0.0		
ĺ	Control Delay (s/veh)						10.5				7.9		
ĺ	Level of Service (LOS)						В				А		
	Approach Delay (s/veh)					10).5				0.	.5	
ľ	Approach LOS			В									

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport				
General Information		Site Information					
Analyst	PWahl	Intersection	SR 128/Higgins Drive				
Agency/Co.	Neel-Schaffer	Jurisdiction					
Date Performed	9/6/2016	East/West Street	Higgins Drive				
Analysis Year	2040	North/South Street	SR 128				
Time Analyzed	PM Peak	Peak Hour Factor	0.90				
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25					
Project Description	Savannah CTPG						



Vel	hic	le	۷	0	lumes	and	Α	d	justments
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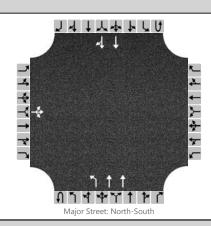
Approach		Eastb	ound		Westbound				Northbound					South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						8		10			195	15		12	201	
Percent Heavy Vehicles						0		0						17		
Proportion Time Blocked																
Right Turn Channelized		No			No					N	No				lo	
Madian Tuna								Lladi	بنطمط							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					20				13		
Capacity					669				1252		
v/c Ratio					0.03				0.01		
95% Queue Length					0.1				0.0		
Control Delay (s/veh)					10.5				7.9		
Level of Service (LOS)					В				А		
Approach Delay (s/veh)				10).5				0.	.5	
Approach LOS				[В						

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport						
General Information		Site Information							
Analyst	PWahl	Intersection	SR 128/LacefieldDr						
Agency/Co.	Neel-Schaffer	Jurisdiction							
Date Performed	9/6/2016	East/West Street	Lacefield Drive						
Analysis Year	2016	North/South Street	SR 128						
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.74						
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25							
Project Description	Savannah CTPG								

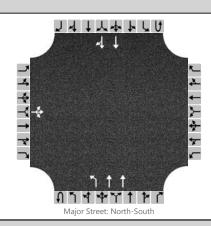


Vehicle	Volumes	and	Adjustments
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Approach	Eastbound Westbound Northbound									Southbound						
Movement	U	L	T	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LTR							L	T				Т	TR
Volume (veh/h)		30	0	3						129	586				142	358
Percent Heavy Vehicles		3	0	0						2						
Proportion Time Blocked																
Right Turn Channelized		No				Ν	lo		No					N	lo	
Median Type								Undi	Individed							

Median Storage															
Delay, Queue Length, and	Level	of Servic	е												
Flow Rate (veh/h)		45							174						
Capacity		133							912						
v/c Ratio		0.34							0.19						
95% Queue Length		1.4							0.7						
Control Delay (s/veh)		45.2	!						9.9						
Level of Service (LOS)		Е							Α						
Approach Delay (s/veh)		45.2								1.8					
Approach LOS		E													

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport				
General Information		Site Information					
Analyst	PWahl	Intersection	SR 128/LacefieldDr				
Agency/Co.	Neel-Schaffer	Jurisdiction					
Date Performed	9/6/2016	East/West Street	Lacefield Drive				
Analysis Year	2040	North/South Street	SR 128				
Time Analyzed	AM Peak	Peak Hour Factor	0.74				
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25					
Project Description	Savannah CTPG						



V	eh	ic	le	V	o	lume	s ar	ıd	Ad	١j١	us	tn	1e	nt	S	
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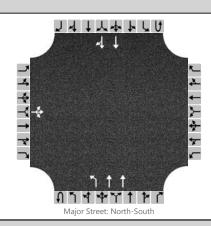
Approach		Eastbound				Westbound				Northbound				South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LTR							L	Т				Т	TR
Volume (veh/h)		31	0	3						132	598				145	366
Percent Heavy Vehicles		3	0	0						2						
Proportion Time Blocked																
Right Turn Channelized		No			No			No					Ν	lo		
Madian Type								Lladi	uidad							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				178				
Capacity		127				900				
v/c Ratio		0.36				0.20				
95% Queue Length		1.5				0.7				
Control Delay (s/veh)		48.8				10.0				
Level of Service (LOS)		E				А				
Approach Delay (s/veh)	48	3.8				1	.8			
Approach LOS	l l	<u> </u>								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/LacefieldDr									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Lacefield Drive									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (2:30-3:30)	Peak Hour Factor	0.73									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



V	ehic	le \	/ol	lumes	and	Ad	ljustments
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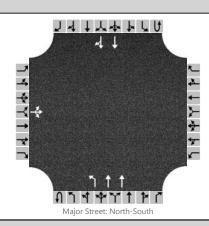
Approach		Eastbound				Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LTR							L	Т				Т	TR	
Volume (veh/h)		56	0	14						43	505				244	187	
Percent Heavy Vehicles		2	0	7						0							
Proportion Time Blocked																	
Right Turn Channelized		No				No				No				No			
–																	

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		96				59				
Capacity		247				996				
v/c Ratio		0.39				0.06				
95% Queue Length		1.7				0.2				
Control Delay (s/veh)		28.5				8.8				
Level of Service (LOS)		D				А				
Approach Delay (s/veh)	28	3.5				0	.7			
Approach LOS	[)								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/LacefieldDr									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Lacefield Drive									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.73									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volume	s and I	Adjustments
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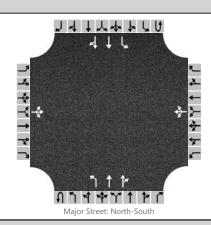
Approach		Eastbound				Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LTR							L	Т				Т	TR	
Volume (veh/h)		57	0	14						44	516				249	191	
Percent Heavy Vehicles		2	0	7						0							
Proportion Time Blocked																	
Right Turn Channelized		No			No				No				No				
Madian Type								Lladi	ividad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		97				60				
Capacity		239				985				
v/c Ratio		0.41				0.06				
95% Queue Length		1.9				0.2				
Control Delay (s/veh)		30.0				8.9				
Level of Service (LOS)		D				А				
Approach Delay (s/veh)	30	0.0				0	.7			
Approach LOS)								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Lewis Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Lewis Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.82									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes	and	Adjustments
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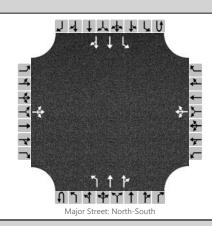
Approach		Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		0	0	0		15	4	6		3	463	16		14	631	8	
Percent Heavy Vehicles		0	0	0		7	0	0		0				7			
Proportion Time Blocked																	
Right Turn Channelized		No			No				No				No				
Modian Type								Lindi	ivided								

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		0			30		4			17		
Capacity		0			239		846			952		
v/c Ratio					0.13		0.00			0.02		
95% Queue Length					0.4		0.0			0.1		
Control Delay (s/veh)		5.0			22.2		9.3			8.8		
Level of Service (LOS)		А			С		А			А		
Approach Delay (s/veh)	5	.0		22	2.2		0	.1		0	.2	
Approach LOS	A	4		(2							

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 128/Lewis Street								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	Lewis Street								
Analysis Year	2040	North/South Street	SR 128								
Time Analyzed	AM Peak	Peak Hour Factor	0.82								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										

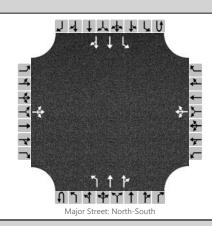


Vehicle	Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		0	0	0		15	4	6		3	473	16		14	644	8
Percent Heavy Vehicles		0	0	0		7	0	0		0				7		
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			N	lo			Ν	lo	
Median Type					Undivi				ivided							

Delay, Queue Length, and	Level	of Se	rvice													
Flow Rate (veh/h)			0				30			4				17		
Capacity			0				232			836				942		
v/c Ratio							0.13			0.00				0.02		
95% Queue Length							0.4			0.0				0.1		
Control Delay (s/veh)			5.0				22.8			9.3				8.9		
Level of Service (LOS)			А				С			А				А		
Approach Delay (s/veh)		5.0			22.8			0.1				0.2				
Approach LOS		A	Α			(C									

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Lewis Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Lewis Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.94									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		5	0	1		18	0	34		0	407	31		13	361	3
Percent Heavy Vehicles		0	0	0		0	0	6		0				0		
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			Ν	lo			Ν	lo	
Modian Type					Undiv				- wided							

Median Type Undivided

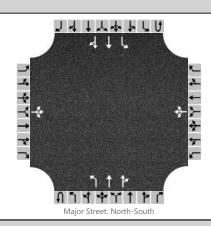
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)		6			55		0			14		
Capacity		386			534		1183			1106		
v/c Ratio		0.02			0.10		0.00			0.01		
95% Queue Length		0.0			0.3		0.0			0.0		
Control Delay (s/veh)		14.5			12.5		8.0			8.3		
Level of Service (LOS)		В			В		А			А		
Approach Delay (s/veh)	14	l.5		12	2.5		0	.0		0	.3	
Approach LOS	E	3		l l	В							

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HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 128/Lewis Street								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	Lewis Street								
Analysis Year	2040	North/South Street	SR 128								
Time Analyzed	PM Peak	Peak Hour Factor	0.94								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



V	ehic	le \	/ol	lumes	and	Ad	ljustments
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Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		5	0	1		18	0	35		0	416	32		13	369	3
Percent Heavy Vehicles		0	0	0		0	0	6		0				0		
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			N	lo			Ν	lo	

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		6			56		0			14		
Capacity		377			529		1174			1096		
v/c Ratio		0.02			0.11		0.00			0.01		
95% Queue Length		0.0			0.4		0.0			0.0		
Control Delay (s/veh)		14.7			12.6		8.1			8.3		
Level of Service (LOS)		В			В		А			А		
Approach Delay (s/veh)	14	1.7		12	2.6		0	.0		0.	.3	
Approach LOS	E	3		E	3							

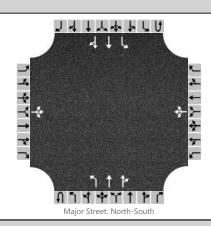
HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF Jurisdiction Time Period AM Peak 0.86 (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** SR 128 & Water Street File Name SR128 & MainSt 2016 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 12 327 17 223 316 5 30 37 231 18 138 5 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 2 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 NB SB **Movement Group Results** EΒ WB Approach Movement L Т R L Т R L Т R L Т R 7 5 2 12 **Assigned Movement** 4 14 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), 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 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.86 Jurisdiction Time Period AM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1>7:15 SR 128 & Water Street File Name SR128 & MainSt 2040 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R Demand (v), veh/h 12 334 17 228 323 5 31 38 236 18 141 5 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S 0.0 On Red 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 7 2 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 Approach Delay, s/veh / LOS 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF Jurisdiction Time Period PM Peak 0.87 (4:15-5:15) **Urban Street** SR 128 Analysis Year 1> 4:15 2016 **Analysis Period** SR 128 & Water Street File Name SR128 & MainSt 2016 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 12 353 32 172 444 6 26 56 224 14 26 9 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 2 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 NB SB **Movement Group Results** EΒ WB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 5 2 12 4 14 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), 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 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.87 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1>4:15 SR 128 & Water Street File Name SR128 & MainSt 2040 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R R 33 453 Demand (v), veh/h 12 360 176 6 27 57 229 4 27 9 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S 0.0 On Red 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 7 2 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 Approach Delay, s/veh / LOS 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Malcomb Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Malcomb Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.79									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volume	s and I	Adjustments
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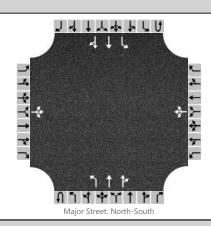
Approach	Eastbound				Westbound					Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0		
Configuration			LTR				LTR			L	Т	TR		L	Т	TR		
Volume (veh/h)		2	1	5		6	2	12		2	453	16		6	698	2		
Percent Heavy Vehicles		0	0	0		0	0	0		0				0				
Proportion Time Blocked																		
Right Turn Channelized	No				No					N	lo			No				

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		10			26		3			8		
Capacity		243			287		771			993		
v/c Ratio		0.04			0.09		0.00			0.01		
95% Queue Length		0.1			0.3		0.0			0.0		
Control Delay (s/veh)		20.4			18.8		9.7			8.7		
Level of Service (LOS)		С			С		А			А		
Approach Delay (s/veh)	20).4		18	3.8		0	.0		0.	.1	
Approach LOS	(2		(2							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Malcomb Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Malcomb Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.79									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle	Volumes	and	Adjustments
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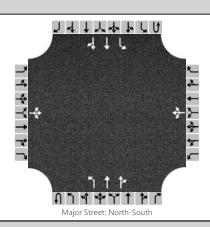
Approach		Eastb	ound		Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		2	1	5		6	2	12		2	463	16		6	713	2	
Percent Heavy Vehicles		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No					No			

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		10			26		3			8		
Capacity		234			278		758			982		
v/c Ratio		0.04			0.09		0.00			0.01		
95% Queue Length		0.1			0.3		0.0			0.0		
Control Delay (s/veh)		21.0			19.3		9.8			8.7		
Level of Service (LOS)		С			С		А			А		
Approach Delay (s/veh)	21	0		19	9.3		0	.0		0	.1	
Approach LOS	(2		(2							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Malcomb Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Malcomb Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.98									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle Volumes and Adjustments

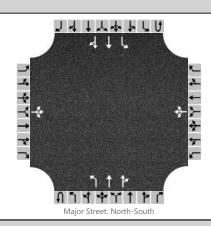
Approach		Eastbound				Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0		
Configuration			LTR				LTR			L	Т	TR		L	Т	TR		
Volume (veh/h)		1	2	3		7	3	39		5	505	14		10	405	3		
Percent Heavy Vehicles		0	0	33		0	0	0		40				0				
Proportion Time Blocked																		
Right Turn Channelized	No				No				No				No					

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		6			50		5			10		
Capacity		387			556		910			1049		
v/c Ratio		0.02			0.09		0.01			0.01		
95% Queue Length		0.0			0.3		0.0			0.0		
Control Delay (s/veh)		14.5			12.1		9.0			8.5		
Level of Service (LOS)		В			В		А			А		
Approach Delay (s/veh)	14	1.5		12	2.1		0	.1		0	.2	
Approach LOS	E	3		l l	В							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Malcomb Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Malcomb Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.98									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle	Volumes	and	Adjustments
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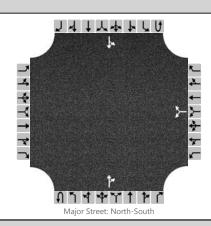
Approach		Eastb	ound			Westl	bound			North	bound			Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0		
Configuration			LTR				LTR			L	Т	TR		L	Т	TR		
Volume (veh/h)		1	2	3		7	3	40		5	516	14		10	414	3		
Percent Heavy Vehicles		0	0	33		0	0	0		40				0				
Proportion Time Blocked																		
Right Turn Channelized	No				No					N	lo		No					
NA 11: T																		

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		6			51		5			10		
Capacity		379			550		902			1038		
v/c Ratio		0.02			0.09		0.01			0.01		
95% Queue Length		0.0			0.3		0.0			0.0		
Control Delay (s/veh)		14.7			12.2		9.0			8.5		
Level of Service (LOS)		В			В		А			А		
Approach Delay (s/veh)	14	1.7		12	2.2		0	.1		0	.2	
Approach LOS	ı	3		I	В							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/One Stop Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	One Stop Drive									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.71									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



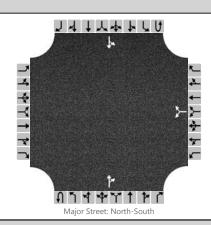
Approach	Eastbound				Westbound					North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						15		33			259	19		17	100	
Percent Heavy Vehicles						7		3						12		
Proportion Time Blocked																
Right Turn Channelized	No				No			No				No				
Madianta								1111	1.11							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					67				24		
Capacity					587				1113		
v/c Ratio					0.11				0.02		
95% Queue Length					0.4				0.1		
Control Delay (s/veh)					11.9				8.3		
Level of Service (LOS)					В				А		
Approach Delay (s/veh)				11	1.9				1.	.4	
Approach LOS				В							

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/One Stop Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	One Stop Drive									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.71									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach	Eastbound					Westl	oound			North	bound		Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						15		33			259	19		17	100	
Percent Heavy Vehicles						7		3						12		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Modian Typo								Lindi	ividad							

Median Type Undivide

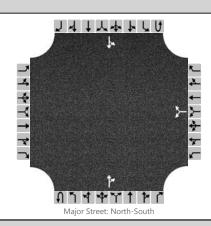
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)					67				24		
Capacity					587				1113		
v/c Ratio					0.11				0.02		
95% Queue Length					0.4				0.1		
Control Delay (s/veh)					11.9				8.3		
Level of Service (LOS)					В				А		
Approach Delay (s/veh)				11	1.9				1.	.4	
Approach LOS				В							

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	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 128/One Stop Drive
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	One Stop Drive
Analysis Year	2016	North/South Street	SR 128
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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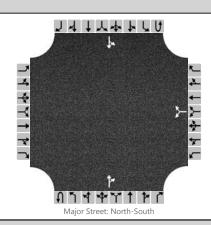
Approach		Eastb	ound			Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						15		16			137	15		13	155	
Percent Heavy Vehicles						0		6						0		
Proportion Time Blocked																
Right Turn Channelized		No				No				N	lo		No			
Madian Tuna						Undivi				i. dalad						

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						33					14		
Capacity						746					1426		
v/c Ratio						0.04					0.01		
95% Queue Length						0.1					0.0		
Control Delay (s/veh)						10.0					7.6		
Level of Service (LOS)						В					А		
Approach Delay (s/veh)					10	0.0					0.	.7	
Approach LOS				В									

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport					
General Information		Site Information						
Analyst	PWahl	Intersection	SR 128/One Stop Drive					
Agency/Co.	Neel-Schaffer	Jurisdiction						
Date Performed	9/6/2016	East/West Street	One Stop Drive					
Analysis Year	2040	North/South Street	SR 128					
Time Analyzed	PM Peak	Peak Hour Factor	0.92					
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25						
Project Description	Savannah CTPG							



Ve	hic	le '	Vol	lumes	and	Ad	justments
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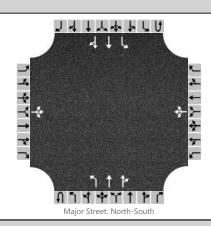
Approach		Eastb	ound			Westl	oound		Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						15		16			137	15		13	155	
Percent Heavy Vehicles						0		6						0		
Proportion Time Blocked																
Right Turn Channelized		No				No				N	lo		No			
Median Type					LIndivi					ivided						

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						33					14		
Capacity						746					1426		
v/c Ratio						0.04					0.01		
95% Queue Length						0.1					0.0		
Control Delay (s/veh)						10.0					7.6		
Level of Service (LOS)						В					А		
Approach Delay (s/veh)					10	0.0					0.	.7	
Approach LOS				В									

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport					
General Information		Site Information						
Analyst	PWahl	Intersection	SR 128/ElementarySchoolDr					
Agency/Co.	Neel-Schaffer	Jurisdiction						
Date Performed	9/6/2016	East/West Street	Elementary School Drive					
Analysis Year	2016	North/South Street	SR 128					
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.70					
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25						
Project Description	Savannah CTPG							



Vehicle Volumes	and	Adjustments
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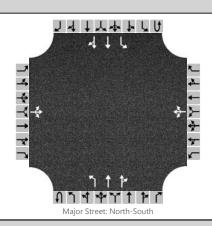
Approach		Eastb	ound		Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		275	2	79		0	0	2		0	436	0		2	139	0	
Percent Heavy Vehicles		8	0	6		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			١	lo			Ν	lo			Ν	lo		
Madianta						11122					P. 1 1						

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		509			3		0			3		
Capacity		483			690		1386			968		
v/c Ratio		1.05			0.00		0.00			0.00		
95% Queue Length		15.6			0.0		0.0			0.0		
Control Delay (s/veh)		85.5			10.2		7.6			8.7		
Level of Service (LOS)		F			В		А			А		
Approach Delay (s/veh)	85	i.5		10).2		0	.0		0	.1	
Approach LOS	F	=		i i	3							

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport				
General Information		Site Information					
Analyst	PWahl	Intersection	SR 128/ElementarySchoolDr				
Agency/Co.	Neel-Schaffer	Jurisdiction					
Date Performed	9/6/2016	East/West Street	Elementary School Drive				
Analysis Year	2040	North/South Street	SR 128				
Time Analyzed	AM Peak	Peak Hour Factor	0.70				
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25					
Project Description	Savannah CTPG						



Ver	nicle	Vol	umes	and	Ad	jusi	tment	ts
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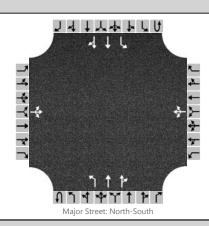
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		281	2	81		0	0	2		0	445	0		2	142	0
Percent Heavy Vehicles		8	0	6		0	0	0		0				0		
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			١	lo			Ν	lo			Ν	lo	
NA 11: T																

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		520			3		0			3		
Capacity		475			684		1381			957		
v/c Ratio		1.09			0.00		0.00			0.00		
95% Queue Length		17.1			0.0		0.0			0.0		
Control Delay (s/veh)		98.6			10.3		7.6			8.8		
Level of Service (LOS)		F			В		А			А		
Approach Delay (s/veh)	98	3.6		10).3		0	.0		0	.1	
Approach LOS	F	=			В							

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 128/ElementarySchoolDr
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Elementary School Drive
Analysis Year	2016	North/South Street	SR 128
Time Analyzed	PM Peak (3:00-4:00)	Peak Hour Factor	0.56
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



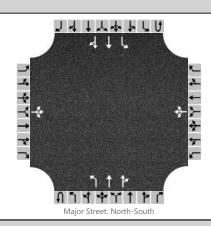
Vehicle Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		176	0	61		1	0	4		0	293	1		6	255	0
Percent Heavy Vehicles		7	0	10		0	0	25		0				0		
Proportion Time Blocked																
Right Turn Channelized		N	lo			N	lo			N	lo			Ν	lo	
Median Type								Undi	livided							

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		423			9		0			11		
Capacity		346			485		1117			1050		
v/c Ratio		1.22			0.02		0.00			0.01		
95% Queue Length		18.3			0.1		0.0			0.0		
Control Delay (s/veh)	:	156.0			12.6		8.2			8.5		
Level of Service (LOS)		F			В		А			А		
Approach Delay (s/veh)	156.0	0		12	2.6		0	.0		0.	.2	
Approach LOS	F			- I	3							

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 128/ElementarySchoolDr
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Elementary School Drive
Analysis Year	2040	North/South Street	SR 128
Time Analyzed	PM Peak	Peak Hour Factor	0.56
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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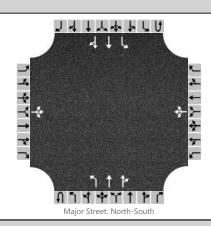
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0
Configuration			LTR				LTR			L	Т	TR		L	Т	TR
Volume (veh/h)		180	0	62		1	0	4		0	299	1		6	260	0
Percent Heavy Vehicles		7	0	10		0	0	25		0				0		
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			Ν	lo			Ν	lo	
Modian Typo							vidad									

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		432			9		0			11		
Capacity		338			476		1108			1040		
v/c Ratio		1.28			0.02		0.00			0.01		
95% Queue Length		19.9			0.1		0.0			0.0		
Control Delay (s/veh)		178.4			12.7		8.2			8.5		
Level of Service (LOS)		F			В		А			А		
Approach Delay (s/veh)	178.	.4		12	2.7		0	.0		0.	.2	
Approach LOS	F			E	3							

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 128/Ranch Street								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	Ranch Street								
Analysis Year	2016	North/South Street	SR 128								
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.78								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



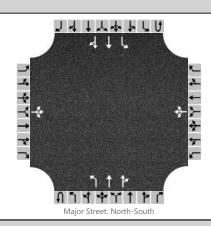
Vel	hic	le	۷	0	lumes	and	Α	d	justments
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Approach	Eastbound				Westbound					North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		0	0	0		13	7	73		47	505	24		29	418	80	
Percent Heavy Vehicles		0	0	0		8	0	1		0				0			
Proportion Time Blocked																	
Right Turn Channelized	No					Ν	lo		No				No				
Median Type	Undivided																

Delay, Queue Length, and Level of Service

zeidy, Quede zeingun, an	 													
Flow Rate (veh/h)		0			120			60				37		
Capacity		0			379			955				924		
v/c Ratio					0.32			0.06				0.04		
95% Queue Length					1.3			0.2				0.1		
Control Delay (s/veh)		5.0			18.8			9.0				9.1		
Level of Service (LOS)		А			С			А				А		
Approach Delay (s/veh)	5.0			18.8			0.7				0.5			
Approach LOS	A			С										

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Ranch Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Ranch Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.78									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volume	s and I	Adjustments
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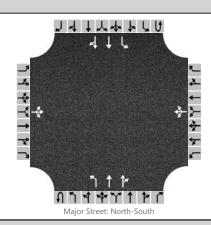
Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		0	0	0		13	7	75		48	516	25		30	427	82	
Percent Heavy Vehicles		0	0	0		8	0	1		0				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo		No				No				No				
Madia Tara	11								de tale a								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			0			122			62			38		
Capacity			0			370			944			911		
v/c Ratio						0.33			0.07			0.04		
95% Queue Length						1.4			0.2			0.1		
Control Delay (s/veh)			5.0			19.5			9.1			9.1		
Level of Service (LOS)			А			С			А			А		
Approach Delay (s/veh)	5.0				19	9.5			0	.7	0.5			
Approach LOS	А			С										

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Ranch Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Ranch Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (2:30-3:30)	Peak Hour Factor	0.79									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes and Adju	ustments
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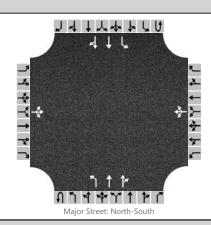
Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		0	0	0		17	0	53		9	535	34		64	394	26	
Percent Heavy Vehicles		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized		Ν	lo			Ν	lo		No				No				
Median Type						Undivided											

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			0			89			11				81		
Capacity			0			395			1046				891		
v/c Ratio						0.23			0.01				0.09		
95% Queue Length						0.9			0.0				0.3		
Control Delay (s/veh)			5.0			16.8			8.5				9.4		
Level of Service (LOS)			А			С			А				А		
Approach Delay (s/veh)	5.0			16	5.8		0.1				1.2				
Approach LOS	А			С											

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Ranch Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Ranch Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.79									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



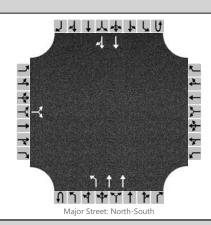
Vehicle Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	0	
Configuration			LTR				LTR			L	Т	TR		L	Т	TR	
Volume (veh/h)		0	0	0		17	0	54		9	546	35		65	402	27	
Percent Heavy Vehicles		0	0	0		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			N	lo		No					No			
Median Type						Undivided											

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			0			90			11				82		
Capacity			0			387			1036				880		
v/c Ratio						0.23			0.01				0.09		
95% Queue Length						0.9			0.0				0.3		
Control Delay (s/veh)			5.0			17.1			8.5				9.5		
Level of Service (LOS)			А			С			А				А		
Approach Delay (s/veh)	5.0				17	7.1		0.1				1.2			
Approach LOS	А			С											

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Sevier Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Sevier Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.78									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes	and	Adjustments
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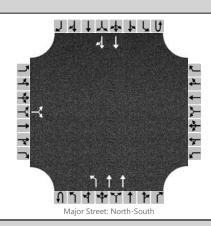
Approach		Eastb	ound			Westl	oound			North	bound			Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		40		32						35	469				549	68	
Percent Heavy Vehicles		8		3						4							
Proportion Time Blocked																	
Right Turn Channelized		N	lo			Ν	lo			Ν	lo			Ν	lo		
Modian Type								Lladi	idad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		92				45				
Capacity		216				811				
v/c Ratio		0.43				0.06				
95% Queue Length		2.0				0.2				
Control Delay (s/veh)		33.6				9.7				
Level of Service (LOS)		D				А				
Approach Delay (s/veh)	33	3.6				0	.7			
Approach LOS	Γ)								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Sevier Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Sevier Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.78									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes	and	Adjustments
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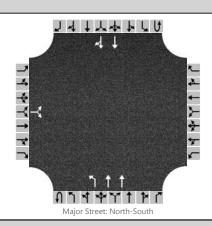
Approach	Eastbound					Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		41		33						36	479				560	69	
Percent Heavy Vehicles		8		3						4							
Proportion Time Blocked																	
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo		
Modian Typo								LIndi	idad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		95				46				
Capacity		207				800				
v/c Ratio		0.46				0.06				
95% Queue Length		2.2				0.2				
Control Delay (s/veh)		36.3				9.8				
Level of Service (LOS)		E				А				
Approach Delay (s/veh)	36	5.3				0	.7			
Approach LOS	ı	E								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Sevier Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Sevier Street									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (2:30-3:30)	Peak Hour Factor	0.81									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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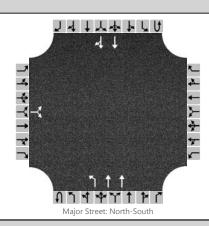
Approach	Eastbound					Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		37		46						14	573				417	31	
Percent Heavy Vehicles		0		2						0							
Proportion Time Blocked																	
Right Turn Channelized		Ν	lo			Ν	lo			N	lo			Ν	lo		
Madian Type								Lladi	uidad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		103				17				
Capacity		363				1026				
v/c Ratio		0.28				0.02				
95% Queue Length		1.1				0.1				
Control Delay (s/veh)		18.8				8.6				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	18	3.8				0	.2			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Sevier Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Sevier Street									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.81									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle Volun	nes and A	Adjustments
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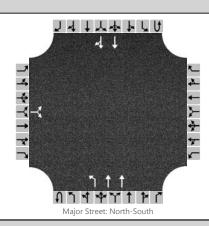
Approach		Eastbound				Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0		
Configuration			LR							L	Т				Т	TR		
Volume (veh/h)		38		47						14	585				426	32		
Percent Heavy Vehicles		0		2						0								
Proportion Time Blocked																		
Right Turn Channelized		N	lo			N	lo			N	lo			١	lo			
Median Type								Undi	vided									

The diality type

Delay, Queue Length, and Level of Service

	Flow Rate (veh/h)		105				17				
	Capacity		353				1014				
	v/c Ratio		0.30				0.02				
	95% Queue Length		1.2				0.1				
Γ	Control Delay (s/veh)		19.5				8.6				
	Level of Service (LOS)		С				А				
Γ	Approach Delay (s/veh)	19	9.5				0	.2			
	Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Stadium Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street Stadium Drive										
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.77									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



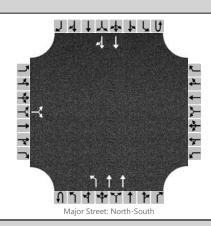
Vehicle	Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0
Configuration			LR							L	Т				Т	TR
Volume (veh/h)		10		16						60	520				464	15
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			Ν	lo			Ν	lo	
Median Type								Undi	vided							

Delay, Queue Length, and Level of Service

•	, ,										
Flow I	Rate (veh/h)		34				78				
Capac	city		301				969				
v/c Ra	atio		0.11				0.08				
95% (Queue Length		0.4				0.3				
Contr	ol Delay (s/veh)		18.5				9.0				
Level	of Service (LOS)		С				А				
Appro	oach Delay (s/veh)	18	3.5				0	.9			
Appro	oach LOS	(C								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Stadium Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Stadium Drive									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	AM Peak	Peak Hour Factor	0.77									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



V	ehic	le \	/ol	lumes	and	Ad	ljustments
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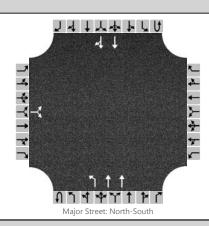
Approach		Eastbound			Westbound					North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		10		16						61	531				474	15	
Percent Heavy Vehicles		0		0						0							
Proportion Time Blocked																	
Right Turn Channelized		N	lo			Ν	lo			N	lo			Ν	lo		

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		34				79				
Capacity		292				958				
v/c Ratio		0.12				0.08				
95% Queue Length		0.4				0.3				
Control Delay (s/veh)		19.0				9.1				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	19	9.0				0	.9			
Approach LOS	(2								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Stadium Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Stadium Drive									
Analysis Year	2016	North/South Street	SR 128									
Time Analyzed	PM Peak (2:30-3:30)	Peak Hour Factor	0.75									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Vehicle Volumes and Adju	ustments
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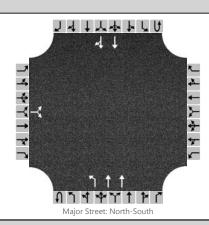
Approach		Eastbound				Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		16		39						14	522				384	33	
Percent Heavy Vehicles		6		0						0							
Proportion Time Blocked																	
Right Turn Channelized	No					No			No				No				
Modian Type					LIndivi				ividad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			73				19				
Capacity			433				1025				
v/c Ratio			0.17				0.02				
95% Queue Length			0.6				0.1				
Control Delay (s/veh)			15.0				8.6				
Level of Service (LOS)			В				А				
Approach Delay (s/veh)	15.0						0	.2			
Approach LOS		E	3								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 128/Stadium Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Stadium Drive									
Analysis Year	2040	North/South Street	SR 128									
Time Analyzed	PM Peak	Peak Hour Factor	0.75									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle	Vo	lumes	and	Ad	justments
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Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	U L T			U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	1	2	0	0	0	2	0	
Configuration			LR							L	Т				Т	TR	
Volume (veh/h)		16		40						14	533				392	34	
Percent Heavy Vehicles		6		0						0							
Proportion Time Blocked																	
Right Turn Channelized		Ν	lo		No				No				No				
Median Type					Undiv					livided							

Median Storage

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			74				19				
Capacity			426				1014				
v/c Ratio			0.17				0.02				
95% Queue Length			0.6				0.1				
Control Delay (s/veh)			15.2				8.6				
Level of Service (LOS)			С				А				
Approach Delay (s/veh)	15.2						0	.2			
Approach LOS		(2								

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information** Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.89 Jurisdiction Time Period AM Peak (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** SR 128 & Water Street File Name SR128 & WaterSt 2016 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 29 133 159 151 111 4 87 285 54 3 348 22 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated No Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB SB **Movement Group Results** EΒ NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 5 2 12 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 | 0.000 | 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0.0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date | Sep 18, 2016 Area Type Other PHF 0.89 Jurisdiction Time Period AM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1>7:15 SR 128 & Water Street File Name SR128 & WaterSt 2040 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R 55 355 Demand (v), veh/h 30 136 162 154 113 4 89 291 3 22 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated No Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information** Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF Jurisdiction Time Period PM Peak 0.96 (4:15-5:15) **Urban Street** SR 128 Analysis Year 1> 4:15 2016 **Analysis Period** SR 128 & Water Street File Name SR128 & WaterSt 2016 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 31 140 131 66 132 173 287 64 5 216 15 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated No Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB SB **Movement Group Results** EΒ NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 5 2 12 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 | 0.000 | 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0.0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information** Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.96 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1>4:15 SR 128 & Water Street File Name SR128 & WaterSt 2040 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R Demand (v), veh/h 32 143 134 67 135 1 177 293 65 5 221 15 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated No Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.81 Jurisdiction Time Period AM Peak (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** SR 128/Wayne & Water... File Name SR128-Wayne & WaterSt 2016 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 66 119 5 4 136 3 0 36 4 9 36 118 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R 7 14 5 2 12 **Assigned Movement** 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.81 Jurisdiction Time Period AM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1> 7:15 SR 128/Wayne & Water... File Name SR128-Wayne & WaterSt 2040 AM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** EB NB SB Approach Movement L R L R L R R 140 Demand (v), veh/h 68 123 5 4 3 0 37 4 9 37 122 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.93 Jurisdiction Time Period PM Peak (4:30-5:30)**Urban Street** SR 128 Analysis Year 2016 1> 4:30 **Analysis Period** SR 128/Wayne & Water... File Name SR128-Wayne & WaterSt 2016 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** ΕB WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 71 132 15 9 145 13 8 56 17 31 46 44 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 5 2 12 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.93 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1> 4:30 SR 128/Wayne & Water... File Name SR128-Wayne & WaterSt 2040 PM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 18 Demand (v), veh/h 73 136 15 9 150 13 8 58 32 48 45 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

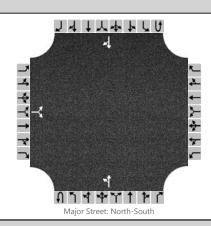
HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF Jurisdiction Time Period AM Peak 0.88 (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** SR 128/Wayne & SR 15... File Name SR128-Wayne & SR15-SR69-MainSt 2016 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EΒ WB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 397 176 16 25 228 11 3 90 2 169 119 367 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB SB **Movement Group Results** EΒ NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 5 2 12 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 | 0.000 | 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), 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 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.88 Jurisdiction Time Period AM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1> 7:15 SR 128/Wayne & SR 15... File Name SR128-Wayne & SR15-SR69-MainSt 2040 AM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R Demand (v), veh/h 410 182 16 26 235 11 3 93 2 175 123 379 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.93 Jurisdiction Time Period PM Peak (4:30-5:30)**Urban Street** SR 128 Analysis Year 1> 4:30 2016 **Analysis Period** SR 128/Wayne & SR 15... File Name SR128-Wayne & SR15-SR69-MainSt 2016 PM.xus Intersection **Project Description** Savannah CTPG EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R Demand (v), veh/h 396 178 4 9 204 12 2 130 10 195 117 442 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 7 4 3 8 6 5 2 1 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 WB SB **Movement Group Results** EΒ NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 5 2 12 4 3 8 18 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 | 0.000 | 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), 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 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.93 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1> 4:30 SR 128/Wayne & SR 15... File Name SR128-Wayne & SR15-SR69-MainSt 2040 PM.xus Intersection **Project Description** Savannah CTPG **Demand Information** EB **WB** NB SB Approach Movement L R L R L R L R 409 12 Demand (v), veh/h 184 4 9 211 2 134 10 201 119 456 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 3 8 6 2 7 1 5 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 4 14 3 18 6 16 5 2 12 8 1 Adjusted Flow Rate (v), veh/h 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/Discount Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Discount Drive									
Analysis Year	2016	North/South Street	SR 69									
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.82									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle Volumes and Adju	ustments
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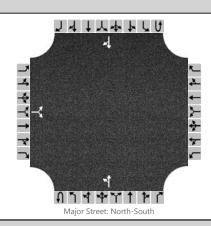
Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		29		0						6	174				70	20	
Percent Heavy Vehicles		0		0						17							
Proportion Time Blocked																	
Right Turn Channelized	No					No			No				No				
Madian Type					Lladi				uidad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			35				7				
Capacity			631				1395				
v/c Ratio			0.06				0.01				
95% Queue Length			0.2				0.0				
Control Delay (s/veh)			11.0				7.6				
Level of Service (LOS)			В				А				
Approach Delay (s/veh)	11.0						0	.3			
Approach LOS		E	3								

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport							
General Information		Site Information								
Analyst	PWahl	Intersection	SR 69/Discount Drive							
Agency/Co.	Neel-Schaffer	Jurisdiction								
Date Performed	9/6/2016	East/West Street	Discount Drive							
Analysis Year	2040	North/South Street	SR 69							
Time Analyzed	AM Peak	Peak Hour Factor	0.82							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Savannah CTPG									



Vel	hic	le	۷	0	lumes	and	Α	d	justments
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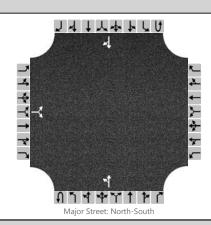
Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		30		0						6	183				73	21
Percent Heavy Vehicles		0		0						17						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo	
Median Type		Undivided														

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		37				7				
Capacity		616				1388				
v/c Ratio		0.06				0.01				
95% Queue Length		0.2				0.0				
Control Delay (s/veh)		11.2				7.6				
Level of Service (LOS)		В				А				
Approach Delay (s/veh)	11.2					0	.3			
Approach LOS	В									

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 69/Discount Drive
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Discount Drive
Analysis Year	2016	North/South Street	SR 69
Time Analyzed	PM Peak (4:30-5:30)	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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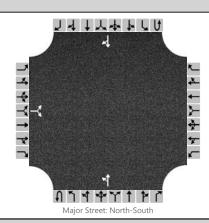
Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U				U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		35		14						3	119				36	146
Percent Heavy Vehicles		3		14						0						
Proportion Time Blocked																
Right Turn Channelized		N	10			Ν	lo			Ν	lo			Ν	lo	
Median Type		Undivided														

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				57				3				
Capacity				727				1371				
v/c Ratio				0.08				0.00				
95% Queue Length				0.3				0.0				
Control Delay (s/veh	n)			10.4				7.6				
Level of Service (LOS	5)			В				А				
Approach Delay (s/v	reh)	10.4					0	.2				
Approach LOS		В										

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 69/Discount Drive
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Discount Drive
Analysis Year	2040	North/South Street	SR 69
Time Analyzed	PM Peak	Peak Hour Factor	0.86
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



V	eh	ic	le	V	o	lume	s ar	ıd	Ad	١j١	us	tn	1e	nt	S	
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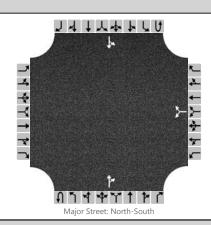
Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U	-			U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		37		15						3	125				38	153
Percent Heavy Vehicles		3		14						0						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo	
Median Type		Undivided														

Median Storage

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			60				3				
Capacity			715				1359				
v/c Ratio			0.08				0.00				
95% Queue Length			0.3				0.0				
Control Delay (s/veh)			10.5				7.7				
Level of Service (LOS)			В				А				
Approach Delay (s/veh)	10.5					0	.2				
Approach LOS	В										

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/E. Main Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	E. Main Street									
Analysis Year	2016	North/South Street	SR 69									
Time Analyzed	AM Peak (7:30-8:30)	Peak Hour Factor	0.84									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Vehicle Volumes	and	Adjustments
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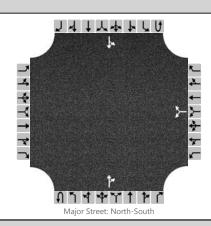
Approach	Eastbound				Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						33		81			345	29		47	288		
Percent Heavy Vehicles						0		3						2			
Proportion Time Blocked																	
Right Turn Channelized	No				No				No				No				
Modian Typo					Undivi				ividad								

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						135				56		
Capacity						441				1114		
v/c Ratio						0.31				0.05		
95% Queue Length						1.3				0.2		
Control Delay (s/veh)						16.7				8.4		
Level of Service (LOS)						С				А		
Approach Delay (s/veh)					16	5.7				1.	.6	
Approach LOS				С								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/E. Main Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	E. Main Street									
Analysis Year	2040	North/South Street	SR 69									
Time Analyzed	AM Peak	Peak Hour Factor	0.84									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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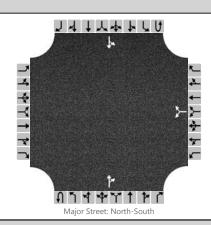
Approach	Eastbound				Westbound					Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						34		84			356	30		48	297		
Percent Heavy Vehicles						0		3						2			
Proportion Time Blocked																	
Right Turn Channelized	No				No					N	lo		No				
Modian Typo	i				Undivi				lividad								

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						140					57		
Capacity						429					1100		
v/c Ratio						0.33					0.05		
95% Queue Length						1.4					0.2		
Control Delay (s/veh)						17.4					8.5		
Level of Service (LOS)						С					А		
Approach Delay (s/veh)					17	7.4					1.	.6	
Approach LOS				С									

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/E. Main Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	E. Main Street									
Analysis Year	2016	North/South Street	SR 69									
Time Analyzed	PM Peak (4:45-5:45)	Peak Hour Factor	0.94									
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25										
Project Description	Savannah CTPG											



Ve	hic	le '	Vol	lumes	and	Ad	justments
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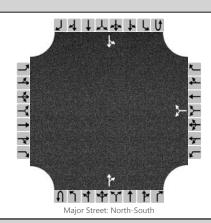
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						32		66			450	48		48	331	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No					N	lo			N	lo	
Madian Tuna					Hadisis				: :: d = d							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				104				51		
Capacity				383				1048		
v/c Ratio				0.27				0.05		
95% Queue Length				1.1				0.2		
Control Delay (s/veh)				17.9				8.6		
Level of Service (LOS)				С				А		
Approach Delay (s/veh)			17	7.9				1	.5	
Approach LOS			(C						

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 69/E. Main Street								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	E. Main Street								
Analysis Year	2040	North/South Street	SR 69								
Time Analyzed	PM Peak	Peak Hour Factor	0.94								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



Ve	hic	le '	Vol	lumes	and	Ad	justments
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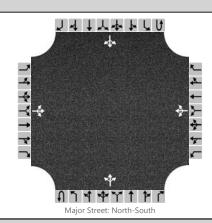
Approach		Eastbound				Westbound				North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						33		68			465	50		48	331		
Percent Heavy Vehicles						0		0						0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo		No				No				No				
Median Type								Undi	vided								

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						107					51		
Capacity						373					1032		
v/c Ratio						0.29					0.05		
95% Queue Length						1.2					0.2		
Control Delay (s/veh)						18.5					8.7		
Level of Service (LOS)						С					А		
Approach Delay (s/veh)					18.5					1.6			
Approach LOS				С									

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/Eureka Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Eureka Street									
Analysis Year	2016	North/South Street	SR 69									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.78									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



Approach		Eastb	ound		Westbound					North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		79	2	18		0	1	3		26	340	1		2	291	89	
Percent Heavy Vehicles		1	0	6		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			N	lo			N	lo			Ν	lo		
Median Type						Undivided											

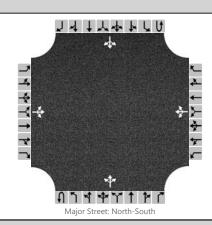
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)			127				5		33			3		
Capacity			264				466		1086			1128		
v/c Ratio			0.48				0.01		0.03			0.00		
95% Queue Length			2.4				0.0		0.1			0.0		
Control Delay (s/veh)			30.7				12.8		8.4			8.2		
Level of Service (LOS)			D				В		А			А		
Approach Delay (s/veh)	30.7				12.8			0	.9	0.1				
Approach LOS	D			В										

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HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 69/Eureka Street								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	Eureka Street								
Analysis Year	2040	North/South Street	SR 69								
Time Analyzed	AM Peak	Peak Hour Factor	0.78								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



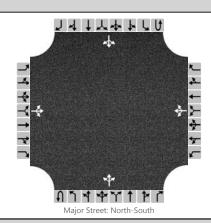
Vehicle Volumes	and	Adjustments
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Approach		Eastb	ound			Westl	oound			North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		82	2	19		0	1	3		27	351	1		2	300	92	
Percent Heavy Vehicles		1	0	6		0	0	0		0				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			Ν	lo			N	lo			Ν	lo		
Median Type						Undivided											

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			132			5		35			3		
Capacity			251			452		1071			1114		
v/c Ratio			0.53			0.01		0.03			0.00		
95% Queue Length			2.8			0.0		0.1			0.0		
Control Delay (s/veh)			34.2			13.1		8.5			8.2		
Level of Service (LOS)			D			В		А			А		
Approach Delay (s/veh)	34.2			13.1			1	.0	0.1				
Approach LOS)			В							

HCS 2010 Two-Way Stop Control Summary Report													
General Information		Site Information											
Analyst	PWahl	Intersection	SR 69/Eureka Street										
Agency/Co.	Neel-Schaffer	Jurisdiction											
Date Performed	9/6/2016	East/West Street	Eureka Street										
Analysis Year	2016	North/South Street	SR 69										
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.89										
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25										
Project Description	Savannah CTPG												



V	ehicl	e V	olumes	and	Ad	just	tments
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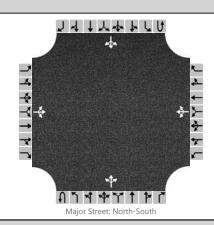
Approach		Eastb	ound			Westl	oound			Northbound				Southbound			
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		33	0	25		0	0	5		14	450	0		2	351	41	
Percent Heavy Vehicles		3	0	0		0	0	0		7				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			Ν	lo			N	lo		No				
Median Type	Undivided																

Median Type

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			65			6		16			2		
Capacity			315			570		1095			1069		
v/c Ratio			0.21			0.01		0.01			0.00		
95% Queue Length			0.8			0.0		0.0			0.0		
Control Delay (s/veh)			19.4			11.4		8.3			8.4		
Level of Service (LOS)			С			В		А			А		
Approach Delay (s/veh)		19.4			11.4			0	.4	0.1			
Approach LOS	С				В								

HCS 2010 Two-Way Stop Control Summary Report													
General Information		Site Information											
Analyst	PWahl	Intersection	SR 69/Eureka Street										
Agency/Co.	Neel-Schaffer	Jurisdiction											
Date Performed	9/6/2016	East/West Street	Eureka Street										
Analysis Year	2040	North/South Street	SR 69										
Time Analyzed	PM Peak	Peak Hour Factor	0.89										
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25										
Project Description	Savannah CTPG												



Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastb	ound			Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		34	0	26		0	0	5		14	465	0		2	362	42	
Percent Heavy Vehicles		3	0	0		0	0	0		7				0			
Proportion Time Blocked																	
Right Turn Channelized		N	lo			N	lo			N	lo		No				
Median Type	Undivided																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			67			6		16			2		
Capacity			303			559		1082			1055		
v/c Ratio			0.22			0.01		0.01			0.00		
95% Queue Length			8.0			0.0		0.0			0.0		
Control Delay (s/veh)			20.2			11.5		8.4			8.4		
Level of Service (LOS)			С			В		А			А		
Approach Delay (s/veh)		20.2			11.5			0	.4	0.1			
Approach LOS	С			В									

HCS 2010 Signalized Intersection Input Data General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak (7:00-8:00)**Urban Street** SR 69 Analysis Year 2016 1> 7:00 **Analysis Period** SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2016 AM.xus Intersection **Project Description** 2016 AM Peak EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R 47 Demand (v), veh/h 30 9 17 45 90 17 203 68 78 126 19 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Traffic Information** ΕB WB NB SB Approach Movement R Т L Т L R L Т R L Т R Demand (v), veh/h 30 47 9 17 45 90 17 203 68 78 126 19 Initial Queue (Qb), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 Base Saturation Flow Rate (so), veh/h 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Parking (Nm), man/h None None None None Heavy Vehicles (PHV), % 8 0 16 4 0 7 4 12 7 Ped / Bike / RTOR, /h 0 0 0 0 0 0 0 0 0 0 0 0 Buses (Nb), buses/h 0 0 0 0 0 0 0 0 0 0 0 0 Arrival Type (AT) 3 3 3 3 3 3 3 3 3 3 3 3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Upstream Filtering (1) 1.00 Lane Width (W), ft 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Turn Bay Length, ft 0 0 0 0 0 0 0 0 n Grade (Pg), % 0 0 0 0 40 40 40 Speed Limit, mi/h 40 40 40 40 40 40 40 40 40 **Phase Information** EBL **EBT** WBL **WBT NBL NBT** SBL **SBT** 30.0 Maximum Green (Gmax) or Phase Split, s 30.0 60.0 30.0 30.0 60.0 Yellow Change Interval (Y), s 4.0 4.0 4.0 4.0 4.0 4.0 Red Clearance Interval (Rc), s 1.0 1.0 1.0 1.0 1.0 1.0 Minimum Green (Gmin), s 4 10 4 10 10 10 10 10 Start-Up Lost Time (It), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of Effective Green (e), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Passage (PT), s 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode Off Off Off Off Off Min Off Min **Dual Entry** No No No No No No No No Walk (Walk), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Pedestrian Clearance Time (PC), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **Multimodal Information** FB WB NB SB 85th % Speed / Rest in Walk / Corner Radius 0 No 25 0 No 25 0 No 25 0 No 25 Walkway / Crosswalk Width / Length, ft 9.0 9.0 9.0 12 0 9.0 12 12 0 12 0 0 Street Width / Island / Curb 0 0 No 0 0 No 0 0 No 0 0 No 12 12 12 12 Width Outside / Bike Lane / Shoulder, ft 5.0 2.0 5.0 2.0 5.0 2.0 5.0 2.0

Pedestrian Signal / Occupied Parking

0.50

No

No

0.50

No

0.50

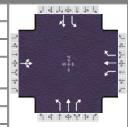
0.50

Nο

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak (7:00-8:00)**Urban Street** SR 69 Analysis Year 2016 1> 7:00 **Analysis Period** SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2016 AM.xus Intersection **Project Description** 2016 AM Peak EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R 47 Demand (v), veh/h 30 9 17 45 90 17 203 68 78 126 19 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode 0.0 Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 8 4 5 2 1 6 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 SB **Movement Group Results** EΒ WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 3 5 6 8 18 7 4 14 2 12 1 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	Neel-Schaffer			Duration, h	0.25		
Analyst	PWahl	Analysis Date	9/12/2016	Area Type	Other		
Jurisdiction		Time Period	AM Peak (7:00-8:00)	PHF	0.80		
Urban Street	SR 69	Analysis Year	2016	Analysis Period	1> 7:00		
Intersection	SR 69 & Higgins Dr/Fre	File Name	SR69 & Higgins-Fr	eewell 2016 AM.xu	ıs		
Project Description	2016 AM Peak						



Demand Information		EB			WB		NB			SB		
Approach Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), veh/h		47	9	17	45	90	17	203	68	78	126	19
Signal Information												
Outle a Defended Discourse	1									(Tx		

Signal Informa	ation		
Cycle, s	0.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Red	0.0	0.0	0.0	0.0	0.0	0.0



		EB			WB			NB			SB	
Saturation Flow / Delay	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Lane Width Adjustment Factor (fw)												
Heavy Vehicle Adjustment Factor (fhv)												
Approach Grade Adjustment Factor (fg)												
Parking Activity Adjustment Factor (fp)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (fbb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Area Type Adjustment Factor (fa)												
Lane Utilization Adjustment Factor (fLU)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Left-Turn Adjustment Factor (f⊥τ)		0.000			0.000		0.000	0.000		0.000	0.000	
Right-Turn Adjustment Factor (frt)		0.000			0.000			0.000			0.000	
Left-Turn Pedestrian Adjustment Factor (fLpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Right-Turn Ped-Bike Adjustment Factor (fRpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Movement Saturation Flow Rate (s), veh/h		0			0		0	0		0	0	
Proportion of Vehicles Arriving on Green (P)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Incremental Delay Factor (k)		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t _L)		0.0		0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C)		0.00		0.00	0.00	0.00	0.00	0.00
Permitted Saturation Flow Rate (sp), veh/h/ln		0		0	0	0	0	0
Shared Saturation Flow Rate (ssh), veh/h/ln		0		0	0	0	0	0
Permitted Effective Green Time (g_p) , s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Service Time (gu), s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Queue Service Time (gps), s		0.0		0.0	0.0	0.0	0.0	0.0
Time to First Blockage (gi), s		0.0		0.0	0.0	0.0	0.0	0.0
Queue Service Time Before Blockage (gfs), s		0.0		0.0	0.0	0.0	0.0	0.0
Protected Right Saturation Flow (s _R), veh/h/ln		0		0	0	0	0	0
Protected Right Effective Green Time (gR), s		0.0		0.0	0.0	0.0	0.0	0.0
Multimodal	E	В	V	VB	N	IB	S	В
Pedestrian F _w / F _v	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Pedestrian F _s / F _{delay}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pedestrian Mcomer / Mcw		0.00		0.00		0.00		0.00
Bicycle c _b / d _b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00

Bicycle Fw / Fv

0.00

0.00

0.00

0.00

0.00

	Messages	
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No errors or warnings exist.

--- Comments ---

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HCS 2010[™] Streets Version 6.80

Generated: 11/14/2016 10:32:26 AM

HCS 2010 Signalized Intersection Input Data General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analysis Date 9/12/2016 Analyst Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak **Urban Street** SR 69 Analysis Year 2040 **Analysis Period** 1> 7:00 SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2040 AM.xus Intersection **Project Description** 2040 AM Peak WB **Demand Information** EB NB SB Approach Movement L R L R L R R 46 93 Demand (v), veh/h 31 49 9 18 18 210 70 81 130 20 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off 0.0 Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0 0 0.0 0.0 0.0 0.0 0.0 **Traffic Information** EΒ WB NB SB Approach Movement R L Т L Т R L Т R L Τ R Demand (v), veh/h 31 49 9 18 46 93 18 210 70 130 20 Initial Queue (Qb), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 Base Saturation Flow Rate (so), veh/h 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Parking (Nm), man/h None None None None Heavy Vehicles (PHV), % 8 0 16 4 0 7 7 4 12 Ped / Bike / RTOR, /h 0 0 0 0 0 0 0 0 0 0 0 0 Buses (Nb), buses/h 0 0 0 0 0 0 0 0 0 0 0 0 3 3 3 3 3 3 3 3 3 3 3 Arrival Type (AT) 3 1.00 Upstream Filtering (1) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Lane Width (W), ft 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Turn Bay Length, ft 0 0 0 0 0 0 0 0 0 Grade (Pg), % 0 0 0 0 Speed Limit, mi/h 40 40 40 40 40 40 40 40 40 40 40 40 **Phase Information** EBL WBL WBT SBL SBT **EBT NBL NBT** Maximum Green (Gmax) or Phase Split, s 30.0 30.0 30.0 60.0 30.0 60.0 Yellow Change Interval (Y), s 4.0 4.0 4.0 4.0 4.0 4.0 Red Clearance Interval (Rc), s 1.0 1.0 1.0 1.0 1.0 1.0 Minimum Green (Gmin), s 4 10 4 10 10 10 10 10 Start-Up Lost Time (It), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of Effective Green (e), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Passage (PT), s 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode Off Off Off Off Off Min Off Min **Dual Entry** No No No No No No Nο No Walk (Walk), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Pedestrian Clearance Time (PC), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **Multimodal Information** EΒ WB NB SB 85th % Speed / Rest in Walk / Corner Radius 0 0 0 No 25 0 No 25 No 25 Nο 25 9.0 9.0 9.0 12 0 9.0 0 Walkway / Crosswalk Width / Length, ft 12 0 12 0 12 Street Width / Island / Curb 0 0 0 0 0 0 0 0 No No No No Width Outside / Bike Lane / Shoulder, ft 12 5.0 2.0 12 5.0 2.0 12 5.0 2.0 12 5.0 2.0

Pedestrian Signal / Occupied Parking

No

0.50

No

0.50

No

0.50

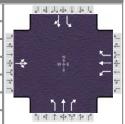
0.50

No

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information Intersection Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak **Urban Street** SR 69 Analysis Year 2040 **Analysis Period** 1> 7:00 SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2040 AM.xus Intersection **Project Description** 2040 AM Peak WB **Demand Information** EB NB SB Approach Movement L R L R L R R 46 93 Demand (v), veh/h 31 49 9 18 18 210 70 81 130 20 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 8 4 2 5 1 6 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 3 8 18 7 4 14 5 2 12 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 Approach Delay, s/veh / LOS 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Intermediate Values

General Information			Intersection Information					
Agency	Neel-Schaffer			Duration, h	0.25			
Analyst	PWahl	Analysis Date	9/12/2016	Area Type	Other			
Jurisdiction		Time Period	AM Peak	PHF	0.80			
Urban Street	SR 69	Analysis Year	2040	Analysis Period	1> 7:00			
Intersection	SR 69 & Higgins Dr/Fre	File Name SR69 & Higgins-Freewell 2040 AM.xus						
Project Description	2040 AM Peak							



Demand Infor	emand Information				EB			WB			NB			SB	
Approach Mov	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), veh/h		31	49	9	18	46	93	18	210	70	81	130	20		
Signal Inform	ation														
Cycle, s	0.0	Reference Phase	2										Ψ		
Offset s	0	Reference Point	End]								1	2	3	4

Signal informa	llion					
Cycle, s	0.0	Reference Phase	2			
Offset, s	0	Reference Point	End	Green	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	Off	Yellow		0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	0.0

Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

	EB WB NB						SB					
Saturation Flow / Delay	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Lane Width Adjustment Factor (fw)												
Heavy Vehicle Adjustment Factor (fhv)												
Approach Grade Adjustment Factor (fg)												
Parking Activity Adjustment Factor (fp)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (fbb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Area Type Adjustment Factor (fa)												
Lane Utilization Adjustment Factor (fLU)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Left-Turn Adjustment Factor (f _L τ)		0.000			0.000		0.000	0.000		0.000	0.000	
Right-Turn Adjustment Factor (frt)		0.000			0.000			0.000			0.000	
Left-Turn Pedestrian Adjustment Factor (fLpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Right-Turn Ped-Bike Adjustment Factor (f _{Rpb})	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Movement Saturation Flow Rate (s), veh/h		0			0		0	0		0	0	
Proportion of Vehicles Arriving on Green (P)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Incremental Delay Factor (k)		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t _L)		0.0		0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C)		0.00		0.00	0.00	0.00	0.00	0.00
Permitted Saturation Flow Rate (s _ρ), veh/h/ln		0		0	0	0	0	0
Shared Saturation Flow Rate (ssh), veh/h/ln		0		0	0	0	0	0
Permitted Effective Green Time (g_p) , s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Service Time (gu), s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Queue Service Time (gps), s		0.0		0.0	0.0	0.0	0.0	0.0
Time to First Blockage (gi), s		0.0		0.0	0.0	0.0	0.0	0.0
Queue Service Time Before Blockage (gfs), s		0.0		0.0	0.0	0.0	0.0	0.0
Protected Right Saturation Flow (s _R), veh/h/ln		0		0	0	0	0	0
Protected Right Effective Green Time (gR), s		0.0		0.0	0.0	0.0	0.0	0.0
Multimodal	Е	В	V	VB	N	NB		В
Pedestrian Fw / Fv	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Pedestrian Fs / Fdelay	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pedestrian Mcomer / Mcw		0.00		0.00		0.00		0.00
Bicycle c _b / d _b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00

0.00

Bicycle Fw / Fv

0.00

0.00

0.00

0.00

0.00

0.00

	Messages
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No errors or warnings exist.

--- Comments ---

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HCS 2010[™] Streets Version 6.80

Generated: 11/14/2016 10:34:04 AM

HCS 2010 Signalized Intersection Input Data General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF Jurisdiction Time Period PM Peak 0.81 (4:30-5:30)**Urban Street** SR 69 Analysis Year 2016 1> 4:30 **Analysis Period** SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2016 PM.xus Intersection **Project Description** 2016 PM Peak EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R Demand (v), veh/h 17 8 3 23 3 39 5 259 14 38 210 13 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult, Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Traffic Information** ΕB WB NB SB Approach Movement R Τ L Т L R L Т R L Т R Demand (v), veh/h 17 8 3 23 39 5 259 14 38 210 13 Initial Queue (Qb), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 Base Saturation Flow Rate (so), veh/h 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Parking (Nm), man/h None None None None Heavy Vehicles (PHV), % 7 0 0 0 20 0 0 5 7 Ped / Bike / RTOR, /h 0 0 0 0 0 0 0 0 0 0 0 0 Buses (Nb), buses/h 0 0 0 0 0 0 0 0 0 0 0 0 Arrival Type (AT) 3 3 3 3 3 3 3 3 3 3 3 3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Upstream Filtering (1) 1.00 Lane Width (W), ft 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Turn Bay Length, ft 0 0 0 0 0 0 0 0 n Grade (Pg), % 0 0 0 0 40 40 40 Speed Limit, mi/h 40 40 40 40 40 40 40 40 40 **Phase Information** EBL **EBT** WBL **WBT NBL NBT** SBL **SBT** 30.0 Maximum Green (Gmax) or Phase Split, s 30.0 60.0 30.0 30.0 60.0 Yellow Change Interval (Y), s 4.0 4.0 4.0 4.0 4.0 4.0 Red Clearance Interval (Rc), s 1.0 1.0 1.0 1.0 1.0 1.0 Minimum Green (Gmin), s 4 10 4 10 10 10 10 10 Start-Up Lost Time (It), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of Effective Green (e), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Passage (PT), s 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode Off Off Off Off Off Min Off Min **Dual Entry** No No No No No No No No Walk (Walk), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Pedestrian Clearance Time (PC), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **Multimodal Information** EΒ WB NB SB 85th % Speed / Rest in Walk / Corner Radius 0 No 25 0 No 25 0 No 25 0 No 25 Walkway / Crosswalk Width / Length, ft 9.0 9.0 9.0 12 0 9.0 12 12 0 12 0 0 Street Width / Island / Curb 0 0 No 0 0 No 0 0 No 0 0 No 12 12 12 12 Width Outside / Bike Lane / Shoulder, ft 5.0 2.0 5.0 2.0 5.0 2.0 5.0 2.0

Pedestrian Signal / Occupied Parking

0.50

No

No

0.50

No

0.50

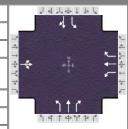
0.50

No

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF Jurisdiction Time Period PM Peak 0.81 (4:30-5:30)**Urban Street** SR 69 1> 4:30 Analysis Year 2016 **Analysis Period** File Name SR69 & Higgins-Freewell 2016 PM.xus Intersection SR 69 & Higgins Dr/Fre... **Project Description** 2016 PM Peak EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R 14 Demand (v), veh/h 17 8 3 23 3 39 5 259 38 210 13 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode 0.0 Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 8 4 5 2 1 6 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 0.00 0.00 SB **Movement Group Results** EΒ WB NB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 3 5 6 8 18 7 4 14 2 12 1 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	Neel-Schaffer			Duration, h	0.25		
Analyst	PWahl	Analysis Date	9/12/2016	Area Type	Other		
Jurisdiction		Time Period	PM Peak (4:30-5:30)	PHF	0.81		
Urban Street	SR 69	Analysis Year	2016	Analysis Period	1> 4:30		
Intersection	SR 69 & Higgins Dr/Fre	File Name	SR69 & Higgins-Fr	eewell 2016 PM.xı	us		
Project Description	2016 PM Peak						



Demand Information		EB			WB			NB			SB	
Approach Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), veh/h	17	8	3	23	3	39	5	259	14	38	210	13

Signal Informa	tion		
Cycle, s	0.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	0.0	0.0	0.0	0.0	0.0
Red	0.0	0.0	0.0	0.0	0.0	0.0



		EB			WB			NB				
Saturation Flow / Delay	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Lane Width Adjustment Factor (fw)												
Heavy Vehicle Adjustment Factor (fhv)												
Approach Grade Adjustment Factor (fg)												
Parking Activity Adjustment Factor (fp)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (fbb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Area Type Adjustment Factor (fa)												
Lane Utilization Adjustment Factor (fLU)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Left-Turn Adjustment Factor (f _L τ)		0.000			0.000		0.000	0.000		0.000	0.000	
Right-Turn Adjustment Factor (frt)		0.000			0.000			0.000			0.000	
Left-Turn Pedestrian Adjustment Factor (fLpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Right-Turn Ped-Bike Adjustment Factor (f _{Rpb})	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Movement Saturation Flow Rate (s), veh/h		0			0		0	0		0	0	
Proportion of Vehicles Arriving on Green (P)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Incremental Delay Factor (k)		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (tL)		0.0		0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C)		0.00		0.00	0.00	0.00	0.00	0.00
Permitted Saturation Flow Rate (sp), veh/h/ln		0		0	0	0	0	0
Shared Saturation Flow Rate (ssh), veh/h/ln		0		0	0	0	0	0
Permitted Effective Green Time (g_p) , s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Service Time (gu), s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Queue Service Time (gps), s		0.0		0.0	0.0	0.0	0.0	0.0
Time to First Blockage (gi), s		0.0		0.0	0.0	0.0	0.0	0.0
Queue Service Time Before Blockage (gfs), s		0.0		0.0	0.0	0.0	0.0	0.0
Protected Right Saturation Flow (s _R), veh/h/ln		0		0	0	0	0	0
Protected Right Effective Green Time (gR), s		0.0		0.0	0.0	0.0	0.0	0.0
Multimodal	E	В	V	VB	N	IB	S	B
Pedestrian F _w / F _v	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Pedestrian F _s / F _{delay}	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pedestrian Mcomer / Mcw		0.00		0.00		0.00		0.00
Bicycle c _b / d _b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00

Bicycle Fw / Fv

0.00

0.00

0.00

0.00

0.00

	Messages	
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No errors or warnings exist.

--- Comments ---

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HCS 2010[™] Streets Version 6.80

Generated: 11/14/2016 10:33:33 AM

HCS 2010 Signalized Intersection Input Data General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Analysis Date 9/12/2016 Analyst Area Type Other PHF 0.81 Jurisdiction Time Period PM Peak **Urban Street** SR 69 Analysis Year 2040 **Analysis Period** 1> 4:30 File Name SR69 & Higgins-Freewell 2040 PM.xus Intersection SR 69 & Higgins Dr/Fre... **Project Description** 2040 PM Peak WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 8 3 14 Demand (v), veh/h 18 3 24 40 5 267 39 217 13 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off 0.0 Yellow 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0 0 0.0 0.0 0.0 0.0 0.0 **Traffic Information** EΒ WB NB SB Approach Movement R L Т L Т R L Т R L Τ R Demand (v), veh/h 18 8 3 24 3 40 5 267 14 39 217 13 Initial Queue (Qb), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 Base Saturation Flow Rate (so), veh/h 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 Parking (Nm), man/h None None None None Heavy Vehicles (PHV), % 7 0 0 0 20 7 0 0 5 Ped / Bike / RTOR, /h 0 0 0 0 0 0 0 0 0 0 0 0 Buses (Nb), buses/h 0 0 0 0 0 0 0 0 0 0 0 0 3 3 3 3 3 3 3 3 3 3 3 Arrival Type (AT) 3 1.00 1.00 Upstream Filtering (1) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Lane Width (W), ft 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Turn Bay Length, ft 0 0 0 0 0 0 0 0 0 Grade (Pg), % 0 0 0 0 Speed Limit, mi/h 40 40 40 40 40 40 40 40 40 40 40 40 **Phase Information** EBL WBL WBT SBL SBT **EBT NBL NBT** Maximum Green (Gmax) or Phase Split, s 30.0 30.0 30.0 60.0 30.0 60.0 Yellow Change Interval (Y), s 4.0 4.0 4.0 4.0 4.0 4.0 Red Clearance Interval (Rc), s 1.0 1.0 1.0 1.0 1.0 1.0 Minimum Green (Gmin), s 4 10 4 10 10 10 10 10 Start-Up Lost Time (It), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of Effective Green (e), s 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Passage (PT), s 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Recall Mode Off Off Off Off Off Min Off Min **Dual Entry** No No No No No No Nο No Walk (Walk), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Pedestrian Clearance Time (PC), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 **Multimodal Information** EΒ WB NB SB 85th % Speed / Rest in Walk / Corner Radius 0 0 0 No 25 0 No 25 No 25 Nο 25 9.0 9.0 9.0 12 0 9.0 0 Walkway / Crosswalk Width / Length, ft 12 0 12 0 12 Street Width / Island / Curb 0 0 0 0 0 0 0 0 No No No No Width Outside / Bike Lane / Shoulder, ft 12 5.0 2.0 12 5.0 2.0 12 5.0 2.0 12 5.0 2.0

Pedestrian Signal / Occupied Parking

No

0.50

No

0.50

No

0.50

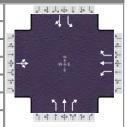
0.50

No

HCS 2010 Signalized Intersection Results Summary 1414141 **General Information** Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/12/2016 Area Type Other PHF 0.81 Jurisdiction Time Period PM Peak **Urban Street** SR 69 Analysis Year 2040 **Analysis Period** 1> 4:30 SR 69 & Higgins Dr/Fre... File Name SR69 & Higgins-Freewell 2040 PM.xus Intersection **Project Description** 2040 PM Peak WB **Demand Information** EB NB SB Approach Movement L R L R L R L R 3 14 Demand (v), veh/h 18 8 3 24 40 5 267 39 217 13 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W Off Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 8 4 2 5 1 6 Case Number 0.0 0.0 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 3 8 18 7 4 14 5 2 12 1 6 16 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 0.0 0.0 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 Approach Delay, s/veh / LOS 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Intermediate Values

General Information				Intersection Information			
Agency	Neel-Schaffer			Duration, h	0.25		
Analyst	PWahl	Analysis Date	9/12/2016	Area Type	Other		
Jurisdiction		Time Period	PM Peak	PHF	0.81		
Urban Street	SR 69	Analysis Year	2040	Analysis Period	1> 4:30		
Intersection	SR 69 & Higgins Dr/Fre	File Name	SR69 & Higgins-F	reewell 2040 PM.xı	us		
Project Description	2040 PM Peak						



Demand Info	rmation				EB			WB		NB			SB		
Approach Mo	/ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Demand (v),	veh/h			18	8	3	24	3	40	5	267	14	39	217	13
				1	1		1	1							
Signal Inform	nation														
Cycle, s	0.0	Reference Phase	2									, j	Ψ		V

Signal Informa	ition		
Cycle, s	0.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow	0.0	0.0	0.0	0.0	0.0	0.0	
Red	0.0	0.0	0.0	0.0	0.0	0.0	

Ţ	1	4	2	3	
``	5		6	7	T

		EB	EB		WB			NB		SB		
Saturation Flow / Delay	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Lane Width Adjustment Factor (fw)												
Heavy Vehicle Adjustment Factor (fhv)												
Approach Grade Adjustment Factor (fg)												
Parking Activity Adjustment Factor (fp)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (fbb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Area Type Adjustment Factor (fa)												
Lane Utilization Adjustment Factor (fLU)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Left-Turn Adjustment Factor (fLT)		0.000			0.000		0.000	0.000		0.000	0.000	
Right-Turn Adjustment Factor (frt)		0.000			0.000			0.000			0.000	
Left-Turn Pedestrian Adjustment Factor (fLpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Right-Turn Ped-Bike Adjustment Factor (fRpb)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Movement Saturation Flow Rate (s), veh/h		0			0		0	0		0	0	
Proportion of Vehicles Arriving on Green (P)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Incremental Delay Factor (k)		0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (tL)		0.0		0.0	0.0	0.0	0.0	0.0
Green Ratio (g/C)		0.00		0.00	0.00	0.00	0.00	0.00
Permitted Saturation Flow Rate (s _ρ), veh/h/ln		0		0	0	0	0	0
Shared Saturation Flow Rate (ssh), veh/h/ln		0		0	0	0	0	0
Permitted Effective Green Time (g_p) , s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Service Time (gu), s		0.0		0.0	0.0	0.0	0.0	0.0
Permitted Queue Service Time (gps), s		0.0		0.0	0.0	0.0	0.0	0.0
Time to First Blockage (gt), s		0.0		0.0	0.0	0.0	0.0	0.0
Queue Service Time Before Blockage (gfs), s		0.0		0.0	0.0	0.0	0.0	0.0
Protected Right Saturation Flow (s _R), veh/h/ln		0		0	0	0	0	0
Protected Right Effective Green Time (gR), s		0.0		0.0	0.0	0.0	0.0	0.0
Multimodal	Е	В	V	VB	N	IB	S	BB
Pedestrian F _w / F _v	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Pedestrian Fs / Fdelay	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pedestrian Mcomer / Mcw		0.00		0.00		0.00		0.00
Bicycle c _b / d _b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00

0.00

Bicycle Fw / Fv

0.00

0.00

0.00

0.00

0.00

0.00

	Messages	
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No errors or warnings exist.

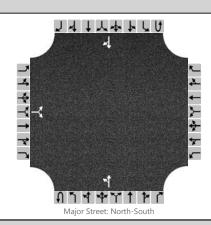
--- Comments ---

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HCS 2010[™] Streets Version 6.80

Generated: 11/14/2016 10:34:31 AM

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 69/One Stop Drive								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	One Stop Drive								
Analysis Year	2016	North/South Street	SR 69								
Time Analyzed	AM Peak (7:00-8:00)	Peak Hour Factor	0.85								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



Ve	hic	le '	Vol	lumes	and	Ad	justments
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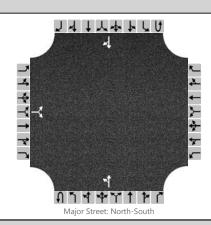
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		26		13						19	208				122	17
Percent Heavy Vehicles		4		23						5						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	10	
Median Tyne								Undi	vided							

Median Type Undivid

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				22				
Capacity		588				1399				
v/c Ratio		0.08				0.02				
95% Queue Length		0.3				0.0				
Control Delay (s/veh)		11.6				7.6				
Level of Service (LOS)		В				А				
Approach Delay (s/veh)	11	L.6				0	.8			
Approach LOS	E	3								

HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 69/One Stop Drive								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	One Stop Drive								
Analysis Year	2040	North/South Street	SR 69								
Time Analyzed	AM Peak	Peak Hour Factor	0.85								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										



Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		27		14						20	218				128	18
Percent Heavy Vehicles		4		23						5						
Proportion Time Blocked																
Right Turn Channelized		Ν	lo			Ν	lo			Ν	lo			Ν	lo	
Median Tyne	Undivided															

Median Type Undivided

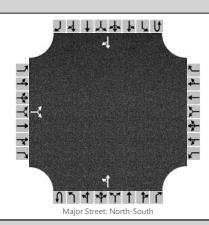
Delay, Queue Length, and Level of Service

Median Storage

Flow Rate (veh/h)		48				24				
Capacity		572				1390				
v/c Ratio		0.08				0.02				
95% Queue Length		0.3				0.1				
Control Delay (s/veh)		11.9				7.6				
Level of Service (LOS)		В				А				
Approach Delay (s/veh)	11	L.9				0	.8			
Approach LOS	E	3								

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HCS 2010 Two-Way Stop Control Summary Report											
General Information		Site Information									
Analyst	PWahl	Intersection	SR 69/One Stop Drive								
Agency/Co.	Neel-Schaffer	Jurisdiction									
Date Performed	9/6/2016	East/West Street	One Stop Drive								
Analysis Year	2016	North/South Street	SR 69								
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.77								
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25								
Project Description	Savannah CTPG										

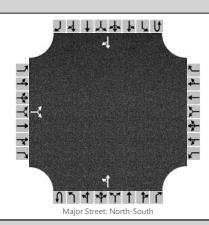


Approach		Eastbound				Westbound				North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		16		13						18	226				174	16	
Percent Heavy Vehicles		6		8						0							
Proportion Time Blocked																	
Right Turn Channelized		No				Ν	lo			Ν	lo		No				
Median Type						Undiv				livided							

Delay, Queue Length, and Level of Service

, , ,										
Flow Rate (veh/h)		38				23				
Capacity		528				1331				
v/c Ratio		0.07				0.02				
95% Queue Length		0.2				0.1				
Control Delay (s/veh)		12.4				7.8				
Level of Service (LOS)		В				А				
Approach Delay (s/veh)	12	2.4				0	.7			
Approach LOS	Е	3								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/One Stop Drive									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	One Stop Drive									
Analysis Year	2040	North/South Street	SR 69									
Time Analyzed	PM Peak	Peak Hour Factor	0.77									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



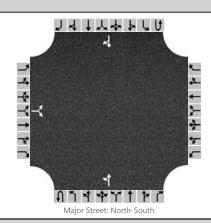
Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastbound				Westbound				North	bound		Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		17		14						19	237				183	17	
Percent Heavy Vehicles		6		8						0							
Proportion Time Blocked																	
Right Turn Channelized		No				Ν	lo			N	lo		No				
Median Type						Undivi				livided							

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		40				25				
Capacity		508				1316				
v/c Ratio		0.08				0.02				
95% Queue Length		0.3				0.1				
Control Delay (s/veh)		12.7				7.8				
Level of Service (LOS)		В				А				
Approach Delay (s/veh)	12	2.7				0	.7			
Approach LOS	E	3								

HCS 2010 Two-Way Stop Control Summary Report												
General Information		Site Information										
Analyst	PWahl	Intersection	SR 69/Ranch Street									
Agency/Co.	Neel-Schaffer	Jurisdiction										
Date Performed	9/6/2016	East/West Street	Ranch Street									
Analysis Year	2016	North/South Street	SR 69									
Time Analyzed	AM Peak (7:15-8:15)	Peak Hour Factor	0.82									
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25									
Project Description	Savannah CTPG											



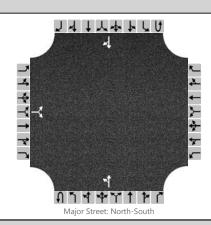
Approach		Eastbound			Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		39		20						27	406				320	19	
Percent Heavy Vehicles		0		1						0							
Proportion Time Blocked																	
Right Turn Channelized		No				No			No				No				
Modian Type				Undivi				lividad									

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		72				33				
Capacity		294				1157				
v/c Ratio		0.25				0.03				
95% Queue Length		0.9				0.1				
Control Delay (s/veh)		21.2				8.2				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	21	2				0	.8			
Approach LOS	(2								

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 69/Ranch Street
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Ranch Street
Analysis Year	2040	North/South Street	SR 69
Time Analyzed	AM Peak	Peak Hour Factor	0.82
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



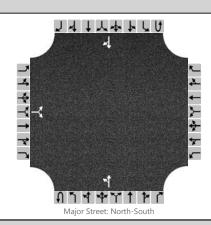
V	ehic	le \	/ol	lumes	and	Ad	ljustments
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Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		40		21						28	419				330	20
Percent Heavy Vehicles		0		1						0						
Proportion Time Blocked																
Right Turn Channelized		No			N	lo		No				No				
Median Type								Undi	ndivided							

Delay, Queue Length, and Level of Service

, , , , , , , , , , , , , , , , , , ,										
Flow Rate (veh/h)		75				34				
Capacity		284				1144				
v/c Ratio		0.26				0.03				
95% Queue Length		1.0				0.1				
Control Delay (s/veh)		22.2				8.2				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	22	2.2				0	.8			
Approach LOS	(

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 69/Ranch Street
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	Ranch Street
Analysis Year	2016	North/South Street	SR 69
Time Analyzed	PM Peak (4:15-5:15)	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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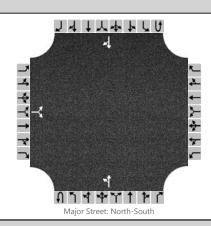
Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		37		25						19	468				406	14
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		No			Ν	lo			Ν	lo			Ν	lo		
Median Tyne								Undi	Individed							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		69				21				
Capacity		288				1104				
v/c Ratio		0.24				0.02				
95% Queue Length		0.9				0.1				
Control Delay (s/veh)		21.4				8.3				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	21	L.4				0	.5			
Approach LOS	(2								

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport			
General Information		Site Information				
Analyst	PWahl	Intersection	SR 69/Ranch Street			
Agency/Co.	Neel-Schaffer	Jurisdiction				
Date Performed	9/6/2016	East/West Street	Ranch Street			
Analysis Year	2040	North/South Street	SR 69			
Time Analyzed	PM Peak	Peak Hour Factor	0.90			
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25				
Project Description	Savannah CTPG					



Vel	hic	le	۷	0	lumes	and	Α	d	justments
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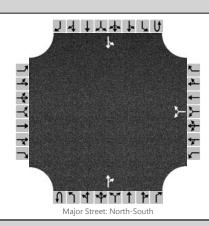
Approach		Eastbound				Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	10	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		38		26						20	483				419	14
Percent Heavy Vehicles		0		0						0						
Proportion Time Blocked																
Right Turn Channelized		No			Ν	lo			Ν	lo			No			
Modian Typo	Ī							Lindi	Individed							

Median Type Undivided

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		71				22				
Capacity		275				1090				
v/c Ratio		0.26				0.02				
95% Queue Length		1.0				0.1				
Control Delay (s/veh)		22.6				8.4				
Level of Service (LOS)		С				А				
Approach Delay (s/veh)	22	2.6				0	.6			
Approach LOS	(C								

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport			
General Information		Site Information				
Analyst	PWahl	Intersection	SR 69/SR 203			
Agency/Co.	Neel-Schaffer	Jurisdiction				
Date Performed	9/6/2016	East/West Street	SR 203-Pinhook Drive			
Analysis Year	2016	North/South Street	SR 69-Florence Road			
Time Analyzed	AM Peak (7:30-8:30)	Peak Hour Factor	0.84			
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25				
Project Description	Savannah CTPG					



Vel	hic	le	۷	0	lumes	and	Α	d	justments
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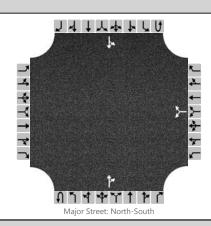
Approach		Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R		
Priority		10		12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0		
Configuration							LR					TR		LT				
Volume (veh/h)						53		122			258	12		48	269			
Percent Heavy Vehicles						0		0						2				
Proportion Time Blocked																		
Right Turn Channelized		No			No No							No						
Median Type					Undivid					ndivided								

Median Storage

Delay, Queue Length, and Level of Service

	Flow Rate (veh/h)					208				57		
	Capacity					560				1238		
	v/c Ratio					0.37				0.05		
	95% Queue Length					1.7				0.1		
Γ	Control Delay (s/veh)					15.2				8.0		
	Level of Service (LOS)					С				А		
Γ	Approach Delay (s/veh)			15	5.2				1.	.6		
Г	Approach LOS				(2						

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport			
General Information		Site Information				
Analyst	PWahl	Intersection	SR 69/SR 203			
Agency/Co.	Neel-Schaffer	Jurisdiction				
Date Performed	9/6/2016	East/West Street	SR 203-Pinhook Drive			
Analysis Year	2040	North/South Street	SR 69-Florence Road			
Time Analyzed	AM Peak	Peak Hour Factor	0.84			
Intersection Orientation	North-South	Analysis Time Period (hrs) 0.25				
Project Description	Savannah CTPG					



Ve	hic	le '	Vol	lumes	and	Ad	justments
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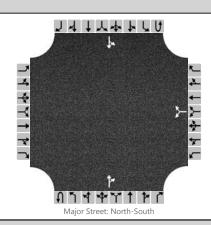
Approach		Eastbound				Westl	oound		Northbound				Southbound				
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						55		126			266	12		50	278		
Percent Heavy Vehicles						0		0						2			
Proportion Time Blocked																	
Right Turn Channelized		No			No			No				No					
Median Type						Undivid				ndivided							

Median Type Undivid

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)					215				60		
Capacity					547				1228		
v/c Ratio					0.39				0.05		
95% Queue Length					1.9				0.2		
Control Delay (s/veh)					15.8				8.1		
Level of Service (LOS)					С				А		
Approach Delay (s/veh)				15	5.8				1.	.7	
Approach LOS				(2						

	HCS 2010 Two-Way Stop C	ontrol Summary R	eport
General Information		Site Information	
Analyst	PWahl	Intersection	SR 69/SR 203
Agency/Co.	Neel-Schaffer	Jurisdiction	
Date Performed	9/6/2016	East/West Street	SR 203-Pinhook Drive
Analysis Year	2016	North/South Street	SR 69-Florence Road
Time Analyzed	PM Peak (4:45-5:45)	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Savannah CTPG		



Ve	hic	le '	Vol	lumes	and	Ad	justments
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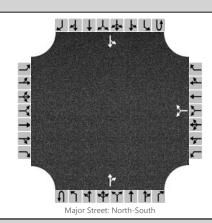
Approach		Eastbound			Westbound		Northbound				Southbound						
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						28		95			400	30		101	268		
Percent Heavy Vehicles						7		0						0			
Proportion Time Blocked																	
Right Turn Channelized		No			No			No				No					
Median Type						Undivid				ndivided				-			

Median Type Undivide

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				133				110		
Capacity				461				1104		
v/c Ratio				0.29				0.10		
95% Queue Length				1.2				0.3		
Control Delay (s/veh)				15.9				8.6		
Level of Service (LOS)				С				А		
Approach Delay (s/veh)			15	5.9				3.	.1	
Approach LOS				2						

HCS 2010 Two-Way Stop Control Summary Report										
General Information		Site Information								
Analyst	PWahl	Intersection	SR 69/SR 203							
Agency/Co.	Neel-Schaffer	Jurisdiction								
Date Performed	9/6/2016	East/West Street	SR 203-Pinhook Drive							
Analysis Year	2040	North/South Street	SR 69-Florence Road							
Time Analyzed	PM Peak	Peak Hour Factor	0.92							
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25							
Project Description	Savannah CTPG									



Ve	hic	le '	Vol	lumes	and	Ad	justments
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Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						29		98			413	31		104	277	
Percent Heavy Vehicles						7		0						0		
Proportion Time Blocked																
Right Turn Channelized		N	lo			Ν	lo			N	lo			N	lo	
Madian Tuna								Lladi	uidad							

Median Type Undivided

Delay, Queue Length, and Level of Service

	Flow Rate (veh/h)				139				113		
	Capacity				445				1090		
	v/c Ratio				0.31				0.10		
	95% Queue Length				1.3				0.3		
Г	Control Delay (s/veh)				16.7				8.7		
	Level of Service (LOS)				С				А		
Г	Approach Delay (s/veh)			16	5.7				3	.2	
	Approach LOS			(2						

Fax:

_____ALL-WAY STOP CONTROL(AWSC) ANALYSIS______

Analyst: PWahl

Agency/Co.: Neel-Schaffer Date Performed: 9/12/2016

Analysis Time Period: AM Peak (7:00-8:00)

Intersection: SR69/SR226

Jurisdiction:

Units: U. S. Customary

Analysis Year: 2016
Project ID: Savannah CTPG
East/West Street: SR 226
North/South Street: SR 69

______Worksheet 2 - Volume Adjustments and Site Characteristics______

Eastbound Westbound Northbound Southbound R L T R L Т R L 3 54 7 69 20 | 12 | 132 | 35 8 14 31 Volume

% Thrus Left Lane

	Eastbound		Westbound		North	oound	Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	L	TR	L	TR
PHF	0.38	0.74	0.44	0.93	0.50	0.87	0.58	0.73
Flow Rate	7	82	15	95	24	191	24	51
% Heavy Veh	0	3	14	26	25	9	0	21
No. Lanes	2	2	:	2	:	2	2	2
Opposing-Lanes	2	2	:	2	:	2	2	2
Conflicting-lanes	2	2	:	2	:	2	2	2
Geometry group	Ţ	5	!	5	!	5	į	5
Duration, T 0.25	hrs.							

______Worksheet 3 - Saturation Headway Adjustment Worksheet______

	Eastbound		Westbound		Northbound		South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
_								
Flow Rates:								
Total in Lane	7	82	15	95	24	191	24	51
Left-Turn	7	0	15	0	24	0	24	0
Right-Turn	0	10	0	21	0	40	0	9
Prop. Left-Turns	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
Prop. Right-Turns	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.2
Prop. Heavy Vehicl	e0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.2
Geometry Group		5		5		5		5
Adjustments Exhibi	t 17-3	3:						
hLT-adj		0.5		0.5		0.5		0.5

hRT-adj hHV-adj	-0 1	.7	-0 1	.7	-0 1	.7	_	.7 .7
hadj, computed	0.5	-0.0	0.7	0.3	0.9	0.0	0.5	0.2
Wor	ksheet	4 - Depa	rture H	eadway a	nd Serv	ice Time		
	Eastb	ound	Westb	ound	Northb	ound	Southb	ound
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	7	82	15	95	24	191	24	51
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.01	0.07	0.01	0.08	0.02	0.17	0.02	0.05
hd, final value	5.88	5.34	6.08	5.63	6.05	5.13	5.76	5.49
x, final value	0.011	0.122	0.025	0.149	0.040	0.272	0.038	0.078
Move-up time, m	2	.3	2	.3	2	.3	2	.3
Service Time	3.6	3.0	3.8	3.3	3.7	2.8	3.5	3.2

Wor	ksheet 5	5 –	Capacity	and	Level	οf	Service	
WOI	17 D I I C C C	,	Capacity	and	$T \subset A \subset T$	O_{\perp}	DCTATCC	

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
_				-				
Flow Rate	7	82	15	95	24	191	24	51
Service Time	3.6	3.0	3.8	3.3	3.7	2.8	3.5	3.2
Utilization, x	0.011	0.122	0.025	0.149	0.040	0.272	0.038	0.078
Dep. headway, hd	5.88	5.34	6.08	5.63	6.05	5.13	5.76	5.49
Capacity	700	683	500	633	600	707	600	638
95% Queue Length	0.0	0.4	0.1	0.5	0.1	1.1	0.1	0.3
Delay	8.6	8.8	8.9	9.3	9.0	9.7	8.7	8.7
LOS	A	A	A	A	A	A	A	A
Approach:								
Delay	8	.8	9	1.3	9	.7	8	.7
LOS	A		P	Δ	A	L	A	
Intersection Delay	9.3		Inte	rsection	LOS A			

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_____ALL-WAY STOP CONTROL(AWSC) ANALYSIS______

Analyst: PWahl

Agency/Co.: Neel-Schaffer
Date Performed: 9/12/2016
Analysis Time Period: AM Peak
Intersection: SR69/SR226

Jurisdiction:

Units: U. S. Customary

Analysis Year: 2040
Project ID: Savannah CTPG
East/West Street: SR 226
North/South Street: SR 69

______Worksheet 2 - Volume Adjustments and Site Characteristics_____

Eastbound Westbound Northbound Southbound R L T R L Т R L 3 57 7 72 21 | 13 | 139 | 37 8 15 33 Volume

% Thrus Left Lane

	Eastbound		Westbound		North	oound	Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	т	mp.	т	mp.	т	mp.	т	mp.
Configuration	L	TR	L	TR	L	TR	L	TR
PHF	0.38	0.74	0.44	0.93	0.50	0.87	0.58	0.73
Flow Rate	7	87	15	99	26	201	25	54
% Heavy Veh	0	3	14	26	25	9	0	21
No. Lanes	2	2	:	2	:	2	2	2
Opposing-Lanes	2	2	:	2	:	2	2	2
Conflicting-lanes	2	2	:	2	:	2	2	2
Geometry group	Ţ	5	!	5	!	5	į	5
Duration, T 0.25	hrs.							

_______Worksheet 3 - Saturation Headway Adjustment Worksheet______

	Eastbound		d Westbound		Northbound		South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	7	87	15	99	26	201	25	54
Left-Turn	7	0	15	0	26	0	25	0
Right-Turn	0	10	0	22	0	42	0	9
Prop. Left-Turns	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
Prop. Right-Turns	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.2
Prop. Heavy Vehicl	e0.0	0.0	0.1	0.3	0.3	0.1	0.0	0.2
Geometry Group		5		5		5		5
Adjustments Exhibi	t 17-3	3:						
hLT-adj		0.5		0.5		0.5		0.5

hRT-adj hHV-adj hadj, computed	1.7		1.7		1.7		1.7	
Wor	ksheet 4 - Departure He		eadway a	and Serv	ice Time	·		
	Eastb	ound	Westbound		Northb	ound	Southb	ound
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	7	87	15	99	26	201	25	54
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.01	0.08	0.01	0.09	0.02	0.18	0.02	0.05
hd, final value	5.93	5.40	6.14	5.69	6.08	5.16	5.80	5.54
x, final value	0.012	0.131	0.026	0.156	0.044	0.288	0.040	0.083
Move-up time, m								
Service Time								
Wor	ksheet	5 - Capa	acity an	d Level	of Serv	ice		
	Eastb	ound	Westb	ound	Northb	ound	Southb	ound
	L1	L2	L1	L2	L1	L2	L1	L2

	Eastb	bound Westbound		Northbound S		Southb	ound			
	L1	L2	L1 L2		L1	L2	L1	L2		
Flow Rate	7	87	15	99	26	201	25	54		
Service Time	3.6	3.1	3.8	3.4	3.8	2.9	3.5	3.2		
Utilization, x	0.012	0.131	0.026	0.156	0.044	0.288	0.040	0.083		
Dep. headway, hd	5.93	5.40	6.14	5.69	6.08	5.16	5.80	5.54		
Capacity	700	669	500	619	650	693	625	675		
95% Queue Length	0.0	0.4	0.1	0.6	0.1	1.2	0.1	0.3		
Delay	8.7	8.9	9.0	9.4	9.1	9.9	8.7	8.7		
LOS	A	A	A	A	A	A	A	A		
Approach:										
Delay	8	. 9	9	. 4	9	.8	8	. 7		
LOS	A		A		A		A			
Intersection Delay	9.4	Intersection			LOS A			675 0.3 8.7 A		

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_____ALL-WAY STOP CONTROL(AWSC) ANALYSIS______

Analyst: PWahl

Agency/Co.: Neel-Schaffer Date Performed: 9/12/2016

Analysis Time Period: PM Peak (4:00-5:00)

Intersection: SR69/SR226

Jurisdiction:

Units: U. S. Customary

Analysis Year: 2016
Project ID: Savannah CTPG
East/West Street: SR 226
North/South Street: SR 69

______Worksheet 2 - Volume Adjustments and Site Characteristics______

Eastbound Westbound Northbound Southbound R L T R L Т R L 8 77 11 | 43 | 100 | 40 | 5 | 60 25 25 100 8 Volume

% Thrus Left Lane

	Eastl	Eastbound		oound	Northbound		Southbound	
	L1 L2		L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	L	TR	L	TR
PHF	0.67	0.88	0.77	0.74	0.63	0.73	0.48	0.75
Flow Rate	11	99	55	189	7	116	52	143
% Heavy Veh	0	1	7	9	0	18	4	7
No. Lanes	2	2	:	2	:	2		2
Opposing-Lanes	2	2	:	2	2		2	2
Conflicting-lanes	2	2	:	2	:	2	2	2
Geometry group	Ţ	5	!	5	!	5	į	5
Duration, T 0.25	J							

______Worksheet 3 - Saturation Headway Adjustment Worksheet______

	East	bound	West	bound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	11	99	55	189	7	116	52	143
Left-Turn	11	0	55	0	7	0	52	0
Right-Turn	0	12	0	54	0	34	0	10
Prop. Left-Turns	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
Prop. Right-Turns	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.1
Prop. Heavy Vehicl	e0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.1
Geometry Group		5		5		5		5
Adjustments Exhibi	t 17-3	3:						
hLT-adj		0.5		0.5		0.5		0.5

hRT-adj	-0.7		_	0.7	_	-0.7 -0.7		
hHV-adj	1.7			1.7		1.7		
hadj, computed	0.5	-0.1	0.6	-0.0	0.5	0.1	0.6	0.1

Worksheet	4	_	Departure	Headway	and	Service	Time

	Eastbound		Westb	ound	Northb	ound	Southb	ound
	L1	L2	L1	L2	L1	L2	L1	L2
Flow rate	11	99	55	189	7	116	52	143
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.01	0.09	0.05	0.17	0.01	0.10	0.05	0.13
hd, final value	6.17	5.61	6.13	5.46	6.19	5.79	6.17	5.67
x, final value	0.019	0.154	0.094	0.287	0.012	0.187	0.089	0.225
Move-up time, m	2.3		2	. 3	2.3		2.3	
Service Time	3.9	3.3	3.8	3.2	3.9	3.5	3.9	3.4

	Eastb	stbound Westbound		ound	Northb	ound	Southb	ound
	L1	L2 L1		L2	L1	L2	L1	L2
Flow Rate	11	99	55	189	7	116	52	143
Service Time	3.9	3.3	3.8	3.2	3.9	3.5	3.9	3.4
Utilization, x	0.019	0.154	0.094	0.287	0.012	0.187	0.089	0.225
Dep. headway, hd	6.17	5.61	6.13	5.46	6.19	5.79	6.17	5.67
Capacity	550	660	611	652	700	611	578	622
95% Queue Length	0.1	0.5	0.3	1.2	0.0	0.7	0.3	0.9
Delay	9.0	9.3	9.5	10.3	9.0	9.8	9.5	10.0+
LOS	A	A	A	В	A	A	A	В
Approach:								
Delay	9	.3	1	0.1	9	.8	9	.9
LOS	A	<u>.</u>	В	3	A	L	A	<u>.</u>
Intersection Delay	9.9		Intersection		n LOS A			

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_____ALL-WAY STOP CONTROL(AWSC) ANALYSIS______

Analyst: PWahl

Agency/Co.: Neel-Schaffer
Date Performed: 9/12/2016
Analysis Time Period: PM Peak
Intersection: SR69/SR226

Jurisdiction:

Units: U. S. Customary

Analysis Year: 2040
Project ID: Savannah CTPG
East/West Street: SR 226
North/South Street: SR 69

______Worksheet 2 - Volume Adjustments and Site Characteristics______

Eastbound Westbound Northbound Southbound R L T R L Т R L 8 81 12 | 45 | 105 | 42 | 5 | 63 26 26 105 8 Volume

% Thrus Left Lane

	Eastl	Eastbound		oound	Northbound		Southbound	
	L1 L2		L1	L2	L1	L2	L1	L2
Q	T	mp.	т.	mp.	T	mp.	T	mp.
Configuration	L	TR	L	TR	L	TR	L	TR
PHF	0.67	0.88	0.77	0.74	0.63	0.73	0.48	0.75
Flow Rate	11	105	58	197	7	121	54	150
% Heavy Veh	0	1	7	9	0	18	4	7
No. Lanes	2	2		2		2		2
Opposing-Lanes	4	2		2	2		2	2
Conflicting-lanes	2	2		2		2	2	2
Geometry group	į	5	!	5	!	5	Ţ	5
Duration, T 0.25	hrs.							

_______Worksheet 3 - Saturation Headway Adjustment Worksheet______

	East	bound	West	Westbound Northbound Sou		South	outhbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rates:								
Total in Lane	11	105	58	197	7	121	54	150
Left-Turn	11	0	58	0	7	0	54	0
Right-Turn	0	13	0	56	0	35	0	10
Prop. Left-Turns	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
Prop. Right-Turns	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.1
Prop. Heavy Vehicl	e0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.1
Geometry Group		5		5		5	5	
Adjustments Exhibi	t 17-3	3:						
hLT-adj		0.5	0.5			0.5		0.5

hRT-adj	_).7	-	-0.7 1.7		0.7		0.7
hHV-adj	لـ	. 7		⊥./		1.7		1.7
hadj, computed	0.5	-0.1	0.6	-0.0	0.5	0.1	0.6	0.1
	Worksheet	4 - Den	arture	Headway	and Ser	vice Tin	ne	

	Eastbound		Westb	ound	Northb	hbound Southbound			
	L1	L2	L1	L2	L1	L2	L1	L2	
Flow rate	11	105	58	197	7	121	54	150	
hd, initial value	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
x, initial	0.01	0.09	0.05	0.18	0.01	0.11	0.05	0.13	
hd, final value	6.24	5.67	6.19	5.52	6.26	5.86	6.23	5.73	
x, final value	0.019	0.165	0.100	0.302	0.012	0.197	0.093	0.239	
Move-up time, m	2	1.3	2	.3	2	.3	2	.3	
Service Time	3.9	3.4	3.9	3.2	4.0	3.6	3.9	3.4	

Worksheet	5	_	Capacity	and	Level	of	Service
-----------	---	---	----------	-----	-------	----	---------

	Eastb	ound	Westb	ound	Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	11	105	58	197	7	121	54	150
Service Time	3.9	3.4	3.9	3.2	4.0	3.6	3.9	3.4
Utilization, x	0.019	0.165	0.100	0.302	0.012	0.197	0.093	0.239
Dep. headway, hd	6.24	5.67	6.19	5.52	6.26	5.86	6.23	5.73
Capacity	550	618	580	657	700	605	600	625
95% Queue Length	0.1	0.6	0.3	1.3	0.0	0.7	0.3	0.9
Delay	9.1	9.5	9.6	10.6	9.0	10.0-	9.6	10.2
LOS	A	A	A	В	A	A	A	В
Approach:								
Delay	9	.5	1	.0.4	9.9		10.1	
LOS	A	L	В	3	A		В	
Intersection Delay	Inte	Intersection LOS B						

HCS 2010 Signalized Intersection Input Data General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** Intersection SR 69 & Water St. File Name SR69 & WaterSt 2016 AM.xus Savannah CTPG **Project Description** WB **Demand Information** ΕB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 18 115 72 259 254 63 **Signal Information** Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 0.0 **Traffic Information** ΕB WB NB SB Approach Movement R Т R Т R L Т L L L Т R Demand (v), veh/h 18 115 72 259 254 63 Initial Queue (Qb), veh/h 0 0 0 0 0 0 Base Saturation Flow Rate (so), veh/h 1900 1900 1900 1900 1900 1900 Parking (Nm), man/h None None None 0 Heavy Vehicles (PHV), % 10 15 2 2 Ped / Bike / RTOR, /h 0 0 0 0 0 Buses (Nb), buses/h 0 0 0 0 0 0 Arrival Type (AT) 3 3 3 3 3 3 1.00 1.00 1.00 1.00 1.00 Upstream Filtering (1) 1.00 12.0 Lane Width (W), ft 12.0 12.0 12.0 12.0 Turn Bay Length, ft 0 0 0 0 0 Grade (Pg), % 0 0 0 0 Speed Limit, mi/h 35 35 35 35 35 35 **Phase Information** EBL EBT WBL WBT **NBL NBT** SBL SBT Maximum Green (Gmax) or Phase Split, s 16.0 12.0 41.0 16.0 41.0 Yellow Change Interval (Y), s 4.0 4.0 4.0 4.0 4.0 Red Clearance Interval (Rc), s 1.0 1.0 1.0 1.0 1.0 Minimum Green (Gmin), s 10 6 10 10 Start-Up Lost Time (It), s 2.0 2.0 2.0 2.0 Extension of Effective Green (e), s 2.0 2.0 2.0 2.0 Passage (PT), s 2.0 1.5 1.5 1.5 Recall Mode Off Off Min Min **Dual Entry** Yes No Yes Yes Walk (Walk), s 0.0 0.0 0.0 0.0 Pedestrian Clearance Time (PC), s 0.0 0.0 0.0 0.0 **Multimodal Information** EΒ WB NB SB 85th % Speed / Rest in Walk / Corner Radius 0 No 25 0 No 25 0 No 25 Walkway / Crosswalk Width / Length, ft 9.0 9.0 12 0 9.0 12 0 12 0 Street Width / Island / Curb 0 0 No 0 0 No 0 0 No 12 12 2.0 12 Width Outside / Bike Lane / Shoulder, ft 5.0 2.0 5.0 5.0 2.0 Pedestrian Signal / Occupied Parking No No 0.50 0.50 No 0.50

HCS 2010 Signalized Intersection Results Summary General Information Intersection Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak (7:15-8:15)**Urban Street** SR 128 Analysis Year 2016 1> 7:15 **Analysis Period** SR 69 & Water St. File Name SR69 & WaterSt 2016 AM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** ΕB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 18 115 72 259 254 63 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode 0.0 Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL WBT NBL NBT** SBL SBT **Assigned Phase** 4 6 2 1 Case Number 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 Max Out Probability 0.00 0.00 0.00 0.00 NB SB **Movement Group Results** EΒ WB Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 2 12 14 1 6 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0 0 0 0 0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 Level of Service (LOS) Approach Delay, s/veh / LOS 0.0 0.0 0.0 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** FB WB NB SB Pedestrian LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Intermediate Values General Information Intersection Information Neel-Schaffer Duration, h 0.25 Agency PWahl Area Type Analyst Analysis Date 9/18/2016 Other PHF Jurisdiction Time Period AM Peak 0.80 (7:15-8:15)**Urban Street** SR 128 1> 7:15 Analysis Year 2016 **Analysis Period** SR 69 & Water St. File Name SR69 & WaterSt 2016 AM.xus Intersection **Project Description** Savannah CTPG EΒ WB NB SB **Demand Information** Approach Movement L R L R L R L R Demand (v), veh/h 18 115 72 259 254 63 Signal Information Cycle, s 0.0 Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S On Red 0.0 0.0 0.0 0.0 0.0 ΕB WB NB SB Saturation Flow / Delay R R R L Т R L L Lane Width Adjustment Factor (fw) Heavy Vehicle Adjustment Factor (fhv) Approach Grade Adjustment Factor (fg) 0.000 0.000 Parking Activity Adjustment Factor (fp) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Bus Blockage Adjustment Factor (fbb) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Area Type Adjustment Factor (fa) Lane Utilization Adjustment Factor (fLU) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Left-Turn Adjustment Factor (fLT) 0.000 0.000 0.000 0.000 Right-Turn Adjustment Factor (fRT) 0.000 0.000 0.000 Left-Turn Pedestrian Adjustment Factor (fLpb) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Right-Turn Ped-Bike Adjustment Factor (fRpb) 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 Movement Saturation Flow Rate (s), veh/h 0 0 0 0 Proportion of Vehicles Arriving on Green (P) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Incremental Delay Factor (k) 0.00 0.00 0.00 **Signal Timing / Movement Groups** FBL EBT/R WBI WBT/R **NBL** NBT/R SBL SBT/R Lost Time (t_L) 0.0 0.0 0.0 0.0 0.00 0.00 0.00 0.00 Green Ratio (g/C) Permitted Saturation Flow Rate (sp), veh/h/ln 0 0 0 0 0 0 0 0 Shared Saturation Flow Rate (ssh), veh/h/ln Permitted Effective Green Time (g_p) , s 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Permitted Service Time (gu), s Permitted Queue Service Time (qps), s 0.0 0.0 0.0 0.0 Time to First Blockage (gt), s 0.0 0.0 0.0 0.0 0.0 0.0 Queue Service Time Before Blockage (gfs), s 0.0 0.0 Protected Right Saturation Flow (sR), veh/h/ln 0 0 0 0 Protected Right Effective Green Time (gR), s 0.0 0.0 0.0 0.0 Multimodal EΒ WB SB NB Pedestrian Fw / Fv 0.000 0.00 0.000 0.00 0.000 0.00 0.000 0.00 0.000 0.000 0.000 0.000 0.000 Pedestrian Fs / Fdelay 0.000 0.000 0.000 Pedestrian Mcomer / Mcw 0.00 0.00 0.00 0.00 Bicycle cb / db 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

0.00

0.00

Bicvcle Fw / Fv

0.00

0.00

0.00

0.00

0.00

0.00

Messages	
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No errors or warnings exist.

--- Comments ---

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HCS 2010[™] Streets Version 6.80

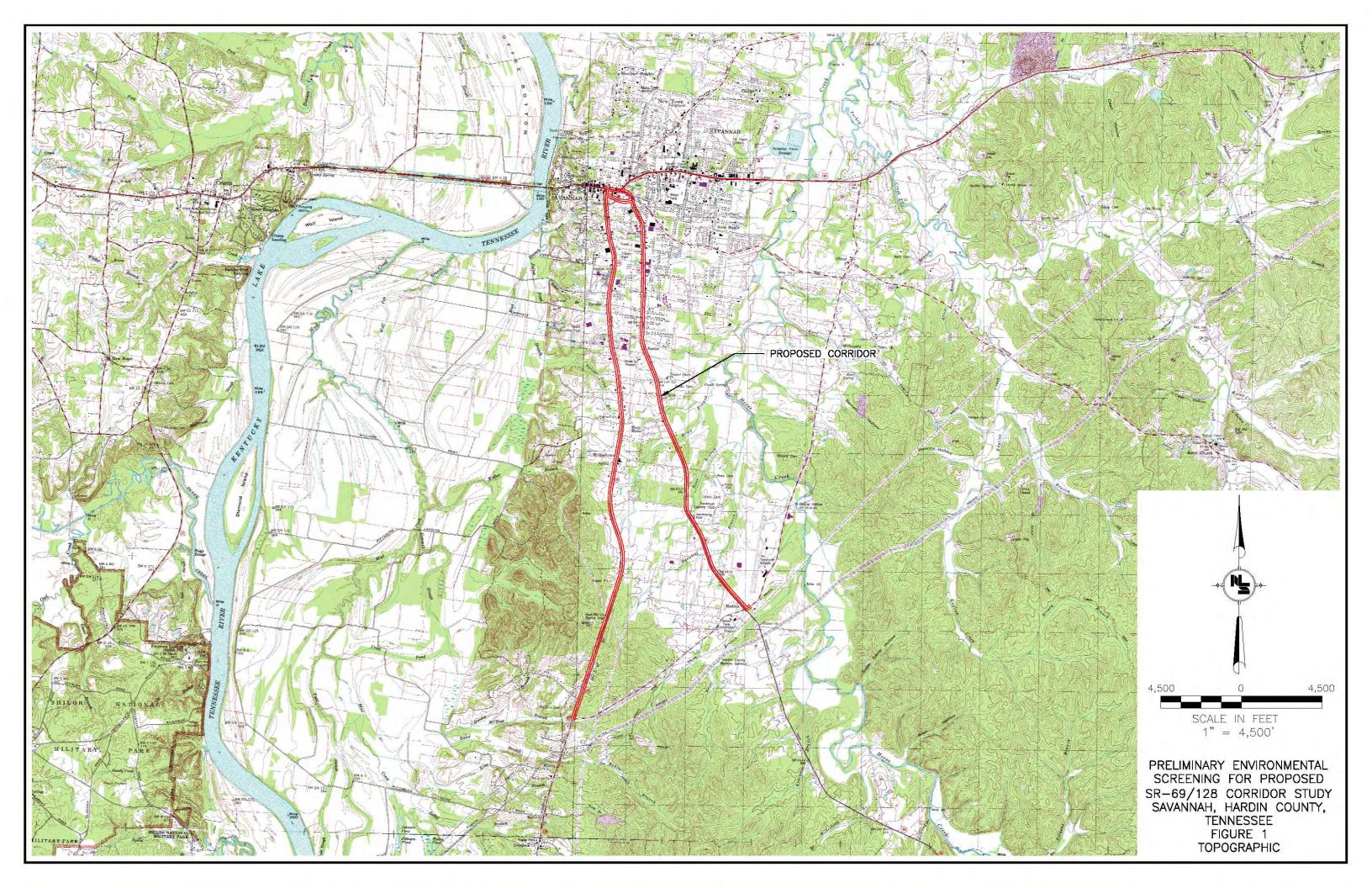
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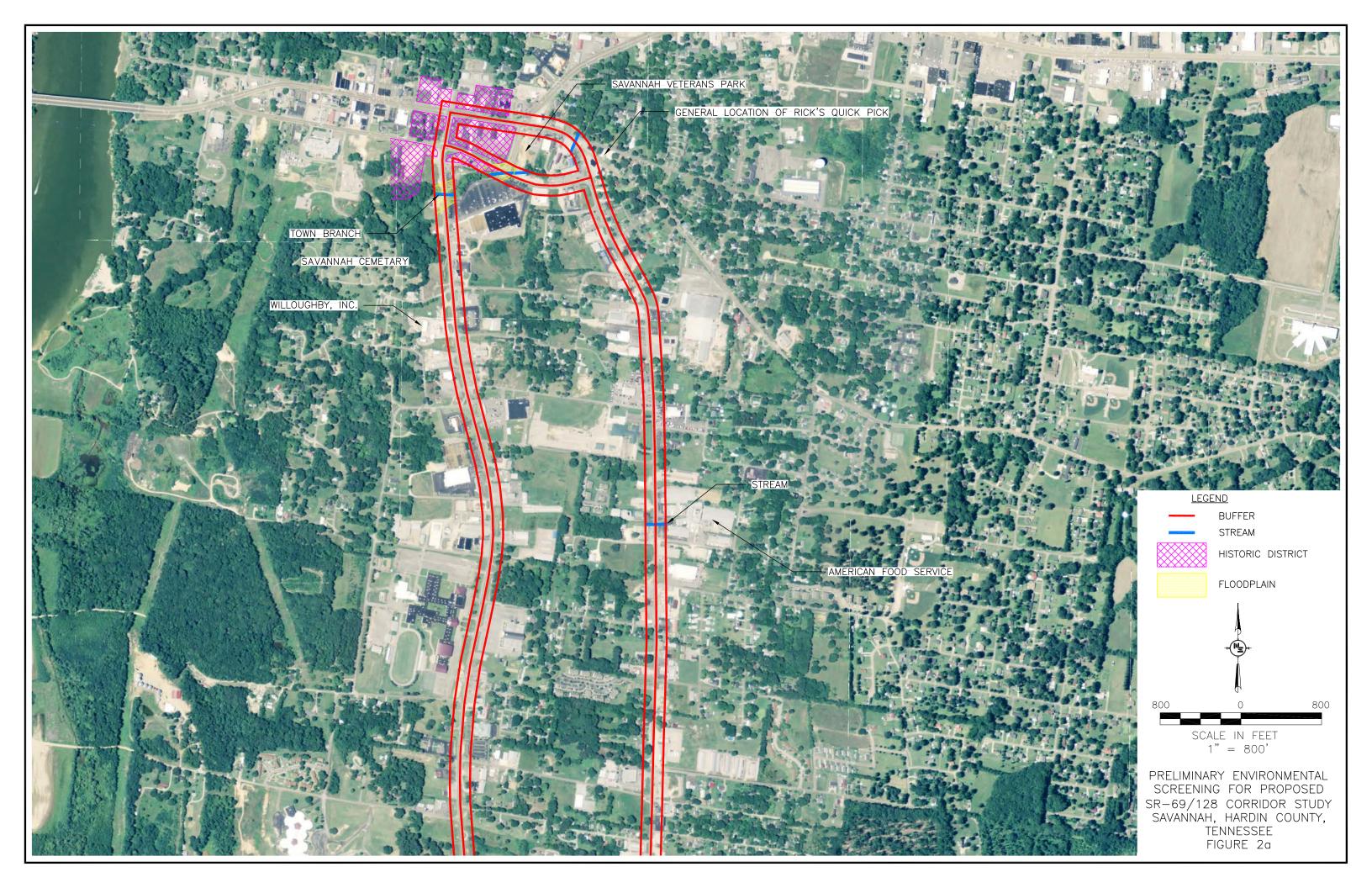
HCS 2010 Signalized Intersection Results Summary Intersection Information General Information Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.80 Jurisdiction Time Period AM Peak **Urban Street** SR 128 Analysis Year 2040 **Analysis Period** 1>7:15 SR 69 & Water St. File Name SR69 & WaterSt 2040 AM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** EB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 19 119 74 267 262 65 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0.0 On 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 6 2 1 Case Number 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 6 2 12 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 0.0 Α 0.0 Α Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary Intersection Information **General Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.91 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2016 **Analysis Period** 1>4:00 SR 69 & Water St. File Name SR69 & WaterSt 2016 PM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** EB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 57 140 98 370 231 32 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0.0 On 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 6 2 1 Case Number 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 6 2 12 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 0.0 Α 0.0 Α Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

HCS 2010 Signalized Intersection Results Summary Intersection Information **General Information** Agency Neel-Schaffer Duration, h 0.25 PWahl Analyst Analysis Date 9/18/2016 Area Type Other PHF 0.91 Jurisdiction Time Period PM Peak **Urban Street** SR 128 Analysis Year 2016 **Analysis Period** 1>4:00 SR 69 & Water St. File Name SR69 & WaterSt 2040 PM.xus Intersection **Project Description** Savannah CTPG WB **Demand Information** EB NB SB Approach Movement L R L R L R L R Demand (v), veh/h 59 145 101 382 239 33 **Signal Information** Cycle, s Reference Phase 2 Offset, s 0 Reference Point End Green 0.0 0.0 0.0 0.0 0.0 0.0 Uncoordinated Yes Simult. Gap E/W On Yellow 0.0 0.0 0.0 0.0 Force Mode Fixed Simult. Gap N/S Red 0.0 On 0.0 0.0 0.0 0.0 0.0 **Timer Results EBL EBT WBL** WBT NBL **NBT** SBL SBT **Assigned Phase** 4 6 2 1 Case Number 0.0 0.0 0.0 0.0 Phase Duration, s 0.0 0.0 0.0 0.0 Change Period, (Y+Rc), s 0.0 0.0 0.0 0.0 Max Allow Headway (MAH), s 0.0 0.0 0.0 0.0 Queue Clearance Time (g_s), s 0.0 0.0 0.0 0.0 Green Extension Time (g_e), s 0.0 0.0 0.0 0.0 Phase Call Probability 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max Out Probability 0.00 WB NB SB **Movement Group Results** EΒ Approach Movement L Т R L Т R L Т R L Т R **Assigned Movement** 7 14 6 2 12 1 Adjusted Flow Rate (v), veh/h 0 0 0 0 0 0 0 0 0 0 Adjusted Saturation Flow Rate (s), veh/h/ln 0.0 Queue Service Time (g_s), s 0.0 0.0 0.0 0.0 Cycle Queue Clearance Time (g_c), s 0.0 0.0 0.0 0.0 0.0 Green Ratio (g/C) Capacity (c), veh/h 0 0 0 0 0 Volume-to-Capacity Ratio (X) 0.000 0.000 0.000 0.000 0.000 Back of Queue (Q), ft/ln (50 th percentile) 0 0 0 0 0 Back of Queue (Q), veh/ln (50 th percentile) 0.0 0.0 0.0 0.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 0.0 0.0 0.0 0.0 0.0 Incremental Delay (d 2), s/veh 0.0 0.0 0.0 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 0.0 0.0 0.0 0.0 0.0 Level of Service (LOS) 0.0 0.0 0.0 Approach Delay, s/veh / LOS 0.0 Intersection Delay, s/veh / LOS 0.0 Α **Multimodal Results** ΕB WB NB Pedestrian LOS Score / LOS 0.0 0.0 Α 0.0 Α Α 0.0 Α Bicycle LOS Score / LOS 0.0 Α 0.0 Α 0.0 Α 0.0 Α

APPENDIX C: ENVIRONMENTAL MAPS











APPENDIX D: PUBLIC MEETING INFORMATION

Notice of Project Informational Meeting

The City of Savannah will conduct a public meeting on May 12, 2016 beginning at 6:00 P.M. at Savannah City Hall 140 Main Street, Savannah, TN 38372 regarding a roadway corridor study along Pickwick Street (SR 69) and Florence Road (SR 128) as shown in the general location map.

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation, will look at vehicle, pedestrian, and bicyclist needs along the corridors and develop strategies to preserve and enhance the functionality of the routes for all users. The intent of the Public Meeting is to solicit input regarding existing traffic issues and specific areas which should be considered in the study.

Persons with a disability, who require aids or services to participate at the meeting, may contact Mr. Thomas Smith at the following address no less than ten (10) days prior to the date of the meeting.

Thomas Smith
City of Savannah
140 Main Street
Savannah, TN 38372
(731) 925-3300
tsmith@cityofsavannah.org







NOTICE OF TRUSTEE'S SALE

WHEREAS, default has occurred in the performance of the covenants, terms, and conditions of a Deed of Trust Note dated November 12, 2004, and the Deed of Trust of even date securing the same, recorded December 3, 2004, in Book No. 361, at Page 254, in Office of the Register of Deeds for Hardin County, Tennessee, executed by Jimmie M. Franks and Donna Jean Franks, conveying certain property therein described to Philip L. Carlton as Trustee for Mortgage Electronic Registration Systems, Inc., as a nominee for America's Wholesale Lender, its successors and assigns; and the undersigned, Wilson & Associates, P.L.L.C., having been appointed Successor Trustee by Ditech Financial LLC.

NOW, THEREFORE, notice is hereby given that the entire indebtedness has been declared due and payable; and that an agent of Wilson & Associates, P.L.L.C., as Successor Trustee, by virtue of the power, duty, and authority created by a fixture filing; a deed of trust; and any matter than an accurate survey of the premises might disclose; and

All right and equity of redemption, statutory or otherwise, homestead, and dower are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above.

This office is attempting to collect a debt. Any information obtained will be used for that purpose.

Brock & Scott, PLLC, Substitute Trustee c/o Tennessee Foreclosure Department 277 Mallory Station Road Suite 115

Franklin, TN 37067

PH: 615-550-7697 FX: 615-550-8484

File No.: 15-25228 FC01

(4213tc)

NOTICE OF PUBLIC MEETING

DATE: Thursday, May 12, 2016

TIME: 6:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN
The City of Savannah will conduct a public meeting in
conjunction with the monthly Planning Commission
meeting for the purpose of soliciting citizen
comments regarding a roadway corridor study along
Pickwick Street (SR-128S) and Florence Road (SR69) from Main Street (SR-15/US-64) to Airport Road
(SR-226).

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation will review vehicle, pedestrian and bicyclist needs along the corridors and develop strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to solicit input regarding existing traffic issues and specific areas which should be considered in the study.

The City of Savannah does not discriminate on the basis of race, color, religion, age, sex, handicap, or national origin. Savannah City Hall is accessible to persons with disabilities.

Any person with a disability needing special accommodations should contact Tom Smith at Savannah City Hall, (731) 925-3300 Ext. 156 prior to the time and date of the meeting indicated above.

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NOTICE TO FURNISHERS

OF LABOR AND MATERIALS TO: Sweeping Corp. of America, Inc. PROJECT NO.: 98048-4183-04 CONTRACT NO.: CNN376 COUNTY: Hardin

The Tennessee Department of Transportation is about to make final settlement with

new title for a
Blue '85 Chevy Pickup
Vin#: ICCEK14H7EF345536
Anyone with proof of claim
should contact
Terry Russell

PUBLIC

NOTICE

To whom it may concern

I am filing for a

office area square feet of fully serviced office space in Savannah, TN. The Government requires 18 parking spaces. Space offered must be within the city limits of Savannah and must meet all state and local building regulations and Architectural Barriers Act Accessibility Standards (ABAAS). New or existing space with renovations will be considered. Space must be available for occupancy by Nov 1, 2017. All services, supplies, utilities, and janitorial (full service lease) are to be provided as part of the rental consideration. The lease term is a 10 years. The lease will have a 120-day termination clause.

The Government is considering alternative space if economically advantageous. In making this determination, the Government will consider, among other things, the availability of alternate space that potentially can satisfy the Government's requirements, as well as costs likely to be incurred through relocating, such as physical move costs, replication of tenant improvements and telecommunication infrastructure, and non-productive agency downtime.

Persons interested in offering space meeting these requirements and wishing to obtain a solicitation should contact on or before May 25, 2016:

Expressions of Interest should include the following:

- Building name and address, or site location and approximate address (if known)
- 2. Location of space within building
- 3. Rentable square feet offered and full-service rental rate per square foot
- 4. List of building services provided
- Total ANSI/BOMA usable square feet office area (ABOA) and the building common area factor
- 6. Amount of onsite paved parking available; parking lot must be able to accommodate pull-thru trailers and oversized vehicles.
- 7. Energy efficiency and renewable energy features existing within the building
- 8. Building ownership information
- 9. Contact information for Owner or Authorized Agent

Send Expressions of Interest referencing Savannah, TN USDA to:

Name/Title: Robert L Moody AmeriVet Real Estate Services Inc.

Address: 5005 W Laurel Street Suite 213 Tampa, FL 33607

Office/Fax: 813-605-5903

Email Address: rlmoody@amerivetres.com

Government Contact

Real Property Leasing Officer: Michelle Bales, USDA RPLO

Transaction Manager: Robert Moody, AmeriVet Real Estate Services Inc.

Field Broker: Robert Moody, AmeriVet Real Estate Services Inc.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.)

NOTICE

The Adamsville Utilities 2015 Water Quality Report will be published in the Savannah Courier on May 5, 2016. This report will not be direct mailed to customers. You may request a copy by calling 731-632-5017.

BID NOTICE

The Hardin County Highway Department is accepting bids for asphalt paving, liquid asphalt and chip/seal at the Hardin County Highway Dept. Office at 9920 Highway 128 S. Bids will be accepted until 10 a.m. on May 10th, 2016. Bids

Effective January 1, 2011, a masonry subcontractor must be licensed with an "LMC" classification in order to bid or to be listed on the outside of bid envelope as a Licensed Masonry Contractor (LMC) when the masonry portion is \$100,000 or more (including materials and labor). The BC-9 or BC will not be acceptable. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work. A Performance Bond, separate Labor and Material Payment Bond, and Insurance in a form acceptable to Owner will be required of the successful Bidder. The successful bidder will be required to furnish and pay for satisfactory performance and payment bond, bonds or insurance surety.

ADDITIONAL BID REQUIREMENTS

In addition to the Bid Form, Bid Bond, and all other required bid documents, the Bidder shall submit with his/her bid a list of at least (4) four commercial roofing projects completed in the last five (5) years that includes:

- 1. The project name and location
- 2. Owner's name, and contact information including address and working telephone number.
- A. The Bidder is also required to submit proof of performed commercial roofing work completed under his/her license number within the last five years, and proof warranty work from manufacturer of any installed roofing system for the past five years.
- B. As per the System's participation in the U.S. Communities Government Purchasing Alliance's Program for Roofing Supplies and Related Products and Services, as priced by and awarded to Garland/DBS, Inc., resulting from the competitively solicited Sealed Bid #09-5409 issued by the Cobb County Board of Commissioners, it is the intent of the System to purchase direct the identified materials on the "Garland Materials List". The authorized Garland Applicators Bid shall include everything except for the materials listed on the Material List. The roofing contractor shall also be responsible for accepting the materials at the job site and staging them where they feel necessary. If materials remain once the job is complete, the System has the option to decide what to do with the materials. One option, if the System decides to return the unused/properly stored materials to Garland, the contractor shall be responsible for the restocking fee.
- C. A mandatory pre-bid meeting for all bidders will be held at the High School Administrative Offices located at 1170 Pickwick Street South, Savannah, TN 38372 on May 5, 2016 at 1:00 p.m.

COMMUNITY TRANSPORTATION PLANNING GRANT PUBLIC INVOLVEMENT

DATE (2016)	<u>ACTION</u>		
April 26	Public Meeting Notice placed on City of Savannah website and City Hall bulletin board		
April 28	Public Meeting Notice advertised in Savannah Courier (local newspaper)		
May 5	Public Meeting Notice advertised in Savannah Courier (local newspaper)		
May 5	Public Meeting Notice announced at Monthly City Commission Meeting and Comment Forms passed out to City Commissioners and Public		
May 12	Meeting with Hardin County School Superintendent. Comment form provided for passing out to school personnel.		
May 12	Public Meeting presentation by Neel-Schaffer in conjunction with Monthly Planning Commission Meeting		
May 17	Press Release, Presentation and Comment Form placed on City website		
May 17	Planning Grant Announcement and pass out Comment forms at Rotary Civic Club Meeting		
May 18	Information on Planning Grant Announcement and Comment forms provided for handout at next River City Kiwanis Civic Club meeting and employees of Hardin County Bank		
June 14	Receive Comment forms from Savannah Courier employees		
June 14	E-mail all Comment forms to Neel-Schaffer		
October 13	Presentation of Corridor Study recommendations by Neel-Schaffer at Monthly Planning Commission Meeting		
November 7	(Proposed) Presentation of Final Corridor Study recommendations by Neel- Schaffer at Monthly City Commission Meeting		

said road and running with the boundary of said Wilkes property, South 77 degrees 33 minutes 24 seconds West, passing an iron pin in the West right-of-way line of said road at 50 feet, continuing 426.80, running in all 476.80 feet to an iron pin in the center of a power line; thence running with said power line, North 05 degrees 51 minutes 52 seconds West, 454.00 feet to an iron pin; thence leaving said power line, North 84 degrees 08 minutes 08 seconds East, passing an iron pin in the West right-of-way line of Embassy Cove at 518.87 feet, continuing 25.02 feet, running in all 543.89 feet to a point in the center of said road; thence running with the center of said road, South 03 degrees 21 minutes 26 seconds East, 47.81 feet; South 04 degrees 09 minutes 44 seconds West, 142.69 feet; and South 05 degrees 43 minutes 35 seconds West, 215.49 feet to the point of beginning, containing 5.000 acres, including 0.258 acres in the right-of-way area of Embassy Cove. Description according to the survey of David B. Cagle, R.L.S. TN No. 497, dated November 24, 1995.

ALSO KNOWN AS: 450 Embassy Cove, Savannah, TN 38372

This sale is subject to all matters shown on any applicable recorded plat; any unpaid taxes; any restrictive covenants, easements, or setback lines that may be applicable; any statutory rights of redemption of any governmental agency, state or federal; any prior liens or encumbrances as well as any priority created by a fixture filing; and to any matter that an accurate survey of the premises might disclose. In addition, the following parties may claim an interest in the above-referenced property:

Jimmie M. Franks Donna Jean Franks

The sale held pursuant to this Notice may be rescinded at the Successor Trustee's option at any time. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above. W&A No. 312983

DATED April 21, 2016
WILSON & ASSOCIATES, P.L.L.C.,
Successor Trustee
FOR SALE INFORMATION,
VISIT WWW.MYFIR.COM
and WWW.REALTYTRAC.COM

(4283tc)

IN THE GENERAL SESSIONS COURT OF HARDIN COUNTY, TENNESSEE WILLIAM FRANKLIN CARTER,

PLAINTIFF,

CIVIL NO. 8741

(4214tc)

KATHERINE JO CARTER, DEFENDANT.

ORDER OF PUBLICATION

It appearing to the Court from the sworn petition or affidavit filed in this cause that the whereabouts of the Defendant, Katherine Jo Carter, is presently unknown and cannot be ascertained upon diligent inquiry, so that ordinary process cannot be served upon her. Therefore, this Order of Publication should be published in the Savannah Courier newspaper located in Savannah, Hardin County, Tennessee as the best possible notice to the Defendant under the circumstances.

Defendant, Katherine Jo Carter, is hereby required to appear and file an answer with this court, or otherwise defend against the Complaint for Divorce and to serve an answer to said petition by May 19, 2016, which is thirty (30) days from the last day of publication of this notice, and send a copy of said answer to Plaintiff's attorney, Joe L. Brown, whose address is 419 Main Street, Savannah, Tennessee 38372, or a default judgment will be entered against the Defendant, Katherine Jo Carter, and this cause set for hearing in the General Sessions Court of Hardin County, Tennessee, sitting in the Hardin County Courthouse in Savannah, Tennessee, ex parte as to Defendant, Katherine Jo Carter.

If there is no answer, a hearing on Plaintiff's motion for default shall be heard on June 20, 2016.

Entered this the 12th day of April, 2016.
/s/ Diane Polk, Clerk
APPROVED FOR ENTRY:
/s/ Joe L. Brown, BPR # 022450
Attorney for the Petitioner
419 Main Street
Savannah, TN 38372
(731) 925-2202

NOTICE OF ROAD CLOSING

CLAYBROOK DRIVE

(North of Parkview Drive Intersection)

Please be advised that the City of Savannah will be closing Claybrook Drive north of the Parkview Drive intersection starting Thursday, May 12th for approximately eight weeks (dependent upon weather conditions) to replace an existing drainage culvert with new concrete box culverts. During this period, no through traffic will be allowed and detour signs will be placed accordingly. Local traffic will be allowed to existing properties only.

For more information, please contact Tom Smith, Project Manager, City of Savannah, 925-3300 or email:

tsmith@cityofsavannah.org.

BID NOTICE

The Hardin County Highway Department is accepting bids for rock at the Hardin County Highway Dept. Office at 9920 Highway 128 S. Bids will be accepted until 10 a.m. on May 17, 2016. Bids should be sealed, delivered or mailed to:

Hardin County Highway Department P.O. Box 116 - Savannah, TN 38372 Please indicate on envelope: BID

It is the policy of the Hardin County Highway Department not to discriminate on the basis of race, color, national origin, age, sex, or disability in its hiring and employment practices or in admission to or operation of its programs, service and activities. The Hardin County Highway Dept. reserves the right to accept or reject any or all bids. For specifications contact the Hardin County Highway Department.

Admission Policy and Hiring Policy

of Harbert Hills Academy Nursing Home May 2016

It is the policy of the Harbert Hills Academy Nursing Home to admit and to treat all patients without regard to race, color, national origin, mental or physical disability. The same requirements for admission are applied to all patients and are assigned or transferred within the nursing home without regard to race, color, national origin, physical or mental disability and abide by the regulations of the Department of Health and Human Services. There is no distinction in eligibility for or in the manner of providing any patient service provided by or through the nursing home. All facilities of the nursing home are available without distinction to all patients and visitors. regardless of race, color, or national origin, mental or physical disability. All persons and/or organizations that recommend the Harbert Hills Academy Nursing Home are advised to do so without regard to the patient's race, color, national origin, physical or mental disability. Harbert Hills Academy Nursing Home is an EOE. Harbert Hills Academy Nursing Home complies with all Title VI. Section 504 & ADA Regulations. If you have any questions concerning the Title VI, or 504 compliance call Randall Dickman, Administrator at 731-925-7221.

Please indicate on envelope: BID

It is the policy of the Hardin County Highway Department not to discriminate on the basis of race, color, national origin, age, sex, or disability in its hiring and employment practices or in admission to or operation of its programs, service and activities. The Hardin County Highway Dept. reserves the right to accept or reject any or all bids.

For specifications contact the Hardin County Highway

Department.

BID NOTICE

The City of Savannah is accepting Sealed Bids for the provision of construction equipment with operator for miscellaneous civil work scope. Bids will be accepted until Tuesday, May 17, 2016 at City Hall, 140 Main Street, Savannah, TN 38372 at 2:00 PM where bids will be publicly opened and read aloud.

The work consists of general civil work scope as may be required within the City of Savannah for the Fiscal Year 2016-2017.

Bid documents and specifications may be obtained from Tom Smith/Project Manager, City of Savannah, 140 Main Street, Savannah, TN 38372, Tel: (731) 925-3300 ext. 156.

The City of Savannah is an equal opportunity affirmative action employer, drug free with policies of nondiscrimination on the basis of race, sex, religion, color, national or ethnic origin, age, disability or military service.

The City of Savannah reserves the right to reject any and all bids and to waive informality in bidding.

NOTICE OF PUBLIC MEETING

DATE: Thursday, May 12, 2016

TIME: 6:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

The City of Savannah will conduct a public meeting in conjunction with the monthly Planning Commission meeting for the purpose of soliciting citizen comments regarding a roadway corridor study along Pickwick Street (SR-128S) and Florence Road (SR-69) from Main Street (SR-15/US-64) to Airport Road (SR-226).

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation will review vehicle, pedestrian and bicyclist needs along the corridors and develop strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to solicit input regarding existing traffic issues and specific areas which should be considered in the study.

The City of Savannah does not discriminate on the basis of race, color, religion, age, sex, handicap, or national origin. Savannah City Hall is accessible to persons with disabilities.

Any person with a disability needing special accommodations, or persons requiring language assistance services, should contact Tom Smith at Savannah City Hall, (731) 925-3300 Ext. 156 prior to the time and date of the meeting indicated above.



April 27, 2016

Main Menu

Home

Pay Your Utility Bill Online Statistics Community Development Fire & Police Recreation

Savannah Main Street

Board Meetings

Taxes/Utilities

FAQs

Contact Us

Links

News Articles
Upcoming Events

Job Openings

City Charter

Board Members

Animal Services Department

Directory

Water Quality Report

Historic District Design

Guidelines

Vendor Registry

Bids and RFPs

Brick Paver Memorial Form

Savannah Theater Calendar

Area Info

Follow Us on Facebook! Chamber of Commerce Tour Hardin County Shiloh National Park



Home

Notice of Public Meeting - TDOT Community Transportation Planning Grant

NOTICE OF PUBLIC MEETING

DATE: Thursday, May 12, 2016

TIME: 6:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

The City of Savannah will conduct a public meeting in conjunction with the monthly Planning Commission meeting for the purpose of soliciting citizen comments regarding a roadway corridor study along Pickwick Street (SR-128S) and Florence Road (SR-69) from Main Street (SR-15/US-64) to Airport Road (SR-226).

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Any person with a disability needing special accommodations should contact Tom Smith at Savannah City Hall, (731) 925-3300 Ext. 156 prior to the time and date of the meeting indicated above.

Public Notices

Notice of Public Meeting - TDOT Community Transportation Planning Grant EEO Statement City Zoning

Information

On the Record week of May 19

Fire Reports week of May 19

Hardin County Fire Dept.

The following items are derived directly from official Hardin County Fire Department reports and spokesmen.

May 6

Crump-Morris Chapel (Dist. 2) responded to the intersection of U.S. 64 and Lemert Road at 2:14 p.m. after receiving a report of a single vehicle collision. On arrival firefighters found a car hit a guardrail, injuring two. They were transported by ambulance to the emergency room, and the call was closed at 2:46 p.m.

May 7

Crump-Morris Chapel (Dist. 2) responded to 430 Coffee Landing Road at 12:03 a.m. after a report of a single vehicle rollover. The car had two occu-

pants, one was airlifted and the other transported by ambulance to the emergency room. The call was closed at 12:35 a.m.

May 12

Walnut Grove (Dist. 11) responded with Bruton Branch (Dist. 14) and HCFD (Station 12) to 2295 Barriertown Drive at 6:10 a.m. after receiving a report of a house fire. On arrival, firefighters found the house fully involved. The owner reported cooking breakfast on the stove, and the grease in the skillet caught fire. The home was a total loss. The call was closed at 8:47 a.m.

Counce (Dist. 3) responded to 3270 Tenn. 57 at 9:50 p.m. after receiving a report of an accident with injury, car versus tree. The single occupant was airlifted, and the call was closed at 11:05 p.m. May 13

of failure to provide proof of vehicle insurance and second offense driving on a revoked license.

Olivet-Walkertown (Dist. 6) responded to 2600 Tenn. 226 at 6:47 a.m. after receiving a report of a two vehicle accident without injury. Occupants of both vehicles refused treatment at the scene, and the call was closed at 6:05 p.m.

Walnut Grove (Dist. 11) responded with Bruton Branch (Dist. 14) and HCFD (Station 12) to 5410 Tenn. 69 at 5 3 a.m. after receiving a report of a fire at the property of Ameripride Fabricators. On arrival, firefighters found the owner had

Driver Ronnie Gibbs, 68, Cravens Drive, was stopped on Church Street at the intersection of Main Street at 2:12 p.m. Don-

already extinguished the fire, and firefighters doused the hot-spots with water. The owner reported welding, and sparks caught the wall on fire. The call was closed at 6:19 a.m.

May 14

Burnt Church (Dist. 8) responded to 245 Campground Road at 9:15 a.m. after receiving a report of a tree that had fallen on power lines and then onto the road, causing smoke and a small fire. The tree was removed and TVEC notified, and the call was

into a metal support on the back porch, causing him to break a front tooth. A witness supported Smith's statement. A warrant was

closed at 10:07 a.m.

Crump-Morris Chapel (Dist. 2) responded to 29630 Tenn. 69 at 9:19 p.m. after a report of a single vehicle accident with no injury. A car hit a bridge abuttment, and the driver refused treatment at the scene. The call was closed at 10:23p.m.

Counce (Dist. 3) responded to 11895 Tenn. 57 at 11:33 a.m. after receiving a report of a possible gas lead. No gas leak was found, and the call was closed at 12:10 p.m.

Auditions upcoming for SPAC's Steel Magnolias

Savannah Performing Arts Company (SPAC) will hold auditions for Steel Magnolias, a comedy-drama play, on Saturday, May 21, at 7 p.m. and Saturday, May 28, at 7 p.m., at the Historic Savan-

nah Theater.

Showtimes will be Aug. 4, 5, 6, at 7 p.m. nightly, and Aug. 7, at 2 p.m.

Steel Magnolias is about a bond among a group of southern women in northwest

Louisiana. The play is written by Robert Harling, based on his experiences with his sister's death. The title suggests the "female characters are as delicate as magnolias but as tough as steel."

PUBLIC NOTICE

Tenth District Community Meeting Saturday, May 21, 2016 at 10:00 A.M. at the Tenth District Community Hall

Corner of Hwy. 69 and Gospel Lane The purpose of this meeting is to elect officers of **Tenth District Community Improvement Club** Property: Map 016, Ctrl. Map 016, Parcel 021.01 **Hurricane School House and Lot**

> For questions contact Joe L. Brown, Attorney 419 Main Street Savannah, TN 38372 731-925-2202

Savannah seeks input on Pickwick and lorence traffic

Julia Ewoldt Staff Writer

Public input is being requested to fulfill a study on Pickwick Street and Florence Road. The goal of the study, led by Neel-Schaffer, Inc. consulting team, is to look at vehicle, pedestrian, bicyclist and freight needs on these two roads and then make suggestions as to which areas need improvement, including how to better use to undeveloped property and how to better access existing developed property.

Comment forms can be accessed at cityofsavannah.org under the "Public Notices" tab in the upper right hand corner, and they will be accepted until June 12. The city plans to complete the study by November 2016.

The study is being paid for

by a grant from the Tennessee Department of Transportation's Office of Community Transportation. Savannah was one of eight cities in the state to receive the \$250,000 for the study and only had to pay ten percent of the cost.

COMMENT FORM

Street City, Zip

Email

Phone





Thank you for your interest in the SR 69 (Florence Road)/SR 128 (Pickwick Street) Corridor Study. We appreciate your comments

1.	What do you primarily use the corridors for? ☐ Live along the corridors ☐ Work along the corridors ☐ Attend school or take children to school ☐ Use of other facilities		Budge Ave Main St. Budge
2.	How often do you travel through the corridors? Multiple times throughout the day Twice daily Couple of times a week Once a week Less than once a week		
 4. 	What challenges, if any, do you encounter while on the corridors? Please rank each of the following factors in order of importance on a se importance).	Legend Study Area 1 Mi	SAVANNAH SR69/128 Sconicce STUDY LO (1 = lower importance, 10 = higher
		Safety ian Safety of Drivewa	ау
5.	Is there anything else that you would like to share with our team or are corridors that our team should be aware of? Please provide your comp may remain in contact with you throughout the study:		
	Name		Thank you for your interest

Thank you for your interest and participation!

FOR MORE INFORMATION
CONTACT STUDY TEAM LEADER
TOM SMITH:

(731) 925-3300 ext. 156 tsmith@cityofsavannah.org

PLACE STAMP HERE

Thomas L. Smith c/o Savannah Corridor Study City of Savannah 140 Main Street Savannah, TN 38372

Fold Here and Tape Close

COMENTARIOS

Ciudad, Zip

Teléfono

Correo electrónico



Gracias por su interés en el estudio del corredor de la SR 69 (Carretera Florencia) /SR 128 (Calle Pickwick). Apreciamos sus comentarios.

1.	¿Para qué principalmente usa estas carreteras? ☐ Vivo a lo largo de las carreteras ☐ Trabajo a lo largo de las carreteras ☐ Asistir a la escuela o llevar a los niños a la escuela ☐ El uso de otras instalaciones	Wayne Rd State Rts 15 US Hwy 64 Bridge Ave Main St Policy State Rts 15 US Hwy 64
2.	¿Con qué frecuencia viaja por estas carreteras? ☐ Varias veces durante el día ☐ Dos veces diarias ☐ Par de veces a la semana ☐ Una vez a la semana ☐ Menos de una vez por semana	
3.	¿Qué desafíos, si alguno, ha encontrado mientras esta a lo largo de estas carreteras? 4. Por favor, a cada uno de los siguientes factores asigne el orden importancia, 10 = mayor importancia).	Legend Shudy Area Miles SAVANNAH SR69/128 Scotlinger STUDY The de importancia en una escala de 1-10 (1 = baja
	Tráfico de Escuela Segur	ridad ciclista ridad de los Peatones ero de entradas
	5. ¿Existe cualquier otra cosa que le gustaría compartir con nuest carreteras que nuestro equipo debe tener en cuenta? Proporci (opcional) para que podamos permanecer en contacto con usta	ione la información completa de contacto
	ombre	¡Gracias por su interés y

¡Gracias por su interés y participación!

PARA MÁS INFORMACIÓN COMUNIQUESTE CON EL LÍDER DEL ESTUDIO TOM SMITH: (731) 925-3300 ext. 156 tsmith@cityofsavannah.org

PLACE STAMP HERE

Thomas L. Smith c/o Savannah Corridor Study City of Savannah 140 Main Street Savannah, TN 38372

Doble aquí y cinta de cierre

PUBLIC MEETING #1



Team Members:











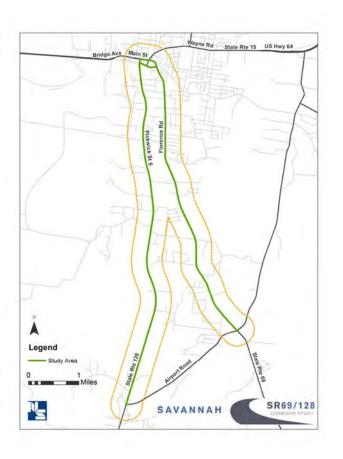
THE PROJECT

A corridor study along the SR 128 / SR 69 corridors beginning at the intersection of SR 128 and SR 226 and ending at the intersection of SR 69 and SR 226.

The purpose of the proposed study is to identify strategies to improve transportation operations within the study area for vehicular traffic, pedestrians, bicyclists and freight movement.

The study will analyze the corridors to identify deficiencies and develop improvement strategies for:

- Safety improvements at intersections and identified high accident locations
- Operational improvements at critical areas
- Accommodation of all travel modes
- Access management on developed properties
- Land use plans for undeveloped properties
- General roadway capacity improvements



STUDY BACKGROUND AND AREA

- Savannah selected for TDOT CTPG funds for an SR 69/SR 128 Study
- TDOT assigned CTPG Projects to Statewide Planning Consultants
- Savannah officials selected Neel-Schaffer from pool of consultants
- Kick Off Meeting held with City, TDOT and consultants.



PURPOSE OF THIS MEETING

In order to create a planning document that is reflective of the needs of the community in Savannah, the Neel-Schaffer team seeks to engage stakeholders in identifying and validating issues within the corridors.

Furthermore, the vision and goals for the project will be the guide in which the study team measures the success of the plan. Community input and acceptance of the vision and goals will result in a plan that addresses the unique needs in Savannah along SR 69 and SR 128.

VISION AND GOALS

Vision: The vision is to develop a comprehensive plan for the corridor that addresses current deficiencies in capacity and safety, provides guidance for improvements to address existing access management issues, and creates a framework to guide future development and public investment through land use policy and access management policy for the subject routes.

Goal 1: Enhance the functionality of the routes for all users through geometric and operational improvements to address access management issues, capacity deficiencies and safety concerns.

Goal 2: Provide for the efficient movement of people and goods from developing industrial and commercial areas south of Savannah into the city.

Goal 3: Ensure compatibility of future development with the transportation network through appropriate land use planning.



GOAL 1

Goal 1: Enhance the functionality of the routes for all users through geometric and operational improvements to address access management issues, capacity deficiencies and safety concerns.

The SR 69 and SR 128 corridors suffer from recurring congestion due to inadequate capacity, lack of turn lanes, and poor access management. Design of street intersections in several locations creates serious operational and safety concerns. The plan will identify deficiencies and develop both near-term and long-term solutions to address those issues.



GOAL 2

Goal 2: Provide for the efficient movement of people and goods from developing industrial and commercial areas south of Savannah into the city.

SR 128 and SR 69 are both important arterials in Savannah/Hardin County, providing links from the city to the Savannah-Hardin County Airport, the Savannah/Hardin County Industrial Park, the Florence/Muscle Shoals, Alabama area to the southeast, and Pickwick Dam and the industrial facilities along Yellow Creek and the Tennessee-Tombigbee Waterway in Mississippi. The plan will address improvements needed to support and enhance the ability of the corridor to accommodate anticipated growth in demand in these areas.



GOAL 3

Goal 3: Ensure compatibility of future development with the transportation network through appropriate land use planning.

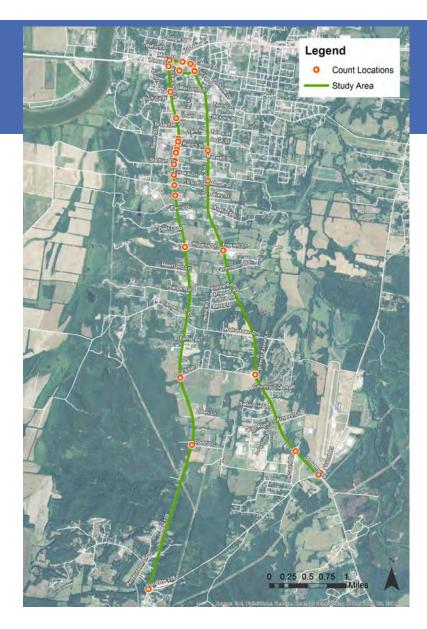
In the southern portion of the study area traffic operations are presently not a problem since much of the abutting property is currently undeveloped. However given the presence of the Savannah/Hardin County Airport, major gas and electric transmission lines, and access to the Tennessee River, there is a high potential for rapid development by commercial, industrial, or residential land uses. The plan will develop land-use policy guidance and access management guidance for these areas to ensure that development occurs in a way that is integrated with the ability of the transportation network to support the increasing demand.





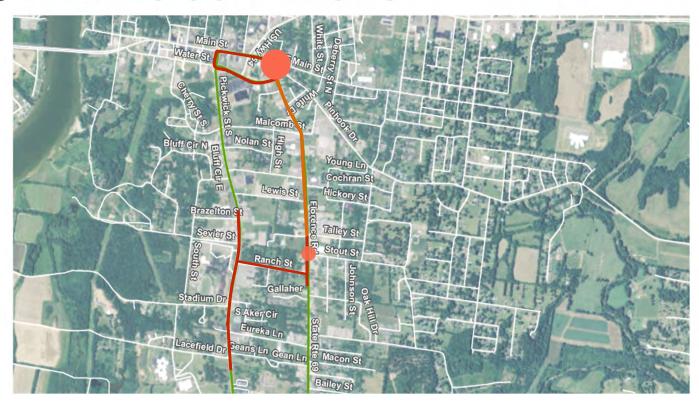
DATA COLLECTION & INVENTORY

- Traffic Counts
- Crash History
- Land Use and Zoning
- Preliminary Environmental
- Planned Development
- School Bus Routing



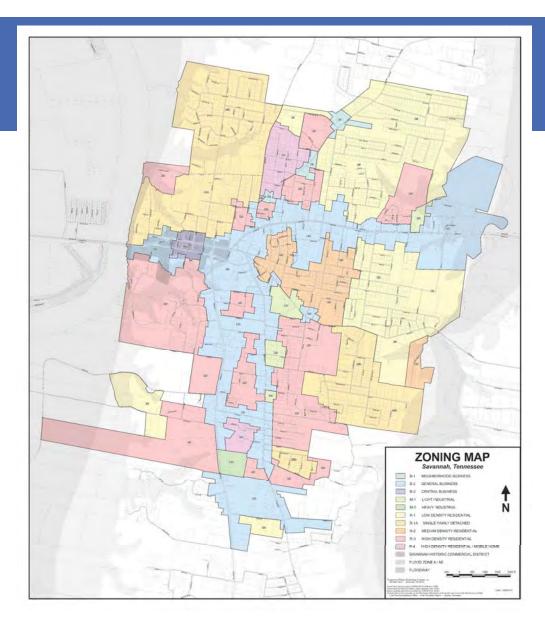


EXISTING TRAFFIC CONDITIONS





EXISTING LAND USE MAP



SAVANNAH

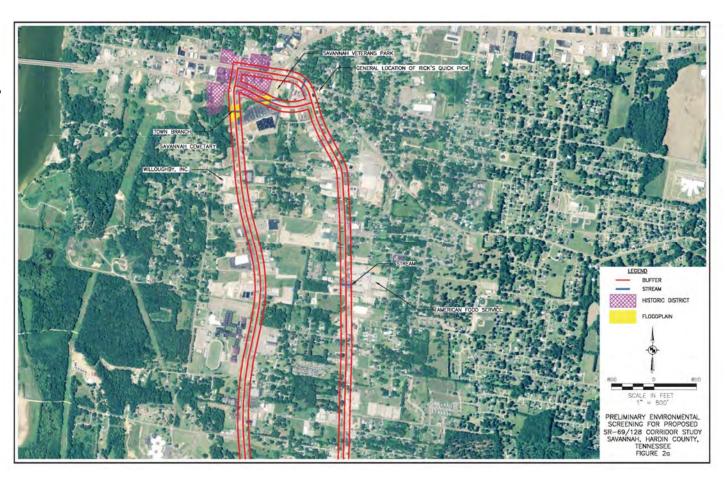
SR69/128 CORRIDOR STUDY



SAVANNAH

SR69/128 CORRIDOR STUDY

ENVIRONMENTAL OVERVIEW



ISSUE - SCHOOL TRAFFIC



How much of an issue is school traffic?

What concerns do you have about school traffic?

What intersections and sections of roadway are most impacted?







ISSUE - BIKE AND PEDESTRIAN TRAFFIC



What challenges do bicyclists and pedestrians face?

Where are they most impacted?

How would improvement benefit the community as a whole?





ISSUE - TRUCK TRAFFIC



Are there any issues with truck traffic?

How do transportation issues impact industrial growth?

How do transportation issues impact economic development?







ISSUE - CONFUSING INTERSECTIONS



Are there intersections that you are concerned about?

What are the issues with these intersections?

What time of day are these issues more prevalent?





ISSUE - CONGESTION AT INTERSECTIONS





Are there intersections where you experience frequent delays?

What are the issues with these intersections?

What time of day are these issues more prevalent?



NEXT STEPS

- 1. FEEDBACK FROM RESIDENTS/BUSINESSES
- 2. EXISTING CONDITIONS SUMMARY
- 3. TRAFFIC MODELING & FORECASTING
- 4. IMPROVEMENT ALTERNATIVES
- 5. ANOTHER PUBLIC MEETING





WE VALUE YOUR FEEDBACK!

CONCLUSION & QUESTIONS

Please contact Tom Smith, Barry Alexander or Karen Mohammadi with your comments;

Tsmith@CityofSavannah.org
Barry.Alexander@Neel-Schaffer.com
Karen.Mohammad@Neel-Schaffer.com

NOTICE OF PUBLIC MEETING

DATE: Monday, November 7, 2016

TIME: 5:00 - 7:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

The City of Savannah will conduct a public meeting regarding a roadway corridor study along Pickwick Street (SR-128S) and Florence Road (SR-69) from Main Street (SR-15/US-64) to Airport Road (SR-226). This meeting will be followed by a presentation at the monthly City Commission Meeting at 7:00 PM.

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation has evaluated vehicle, pedestrian and bicyclist needs, both present and future, along the corridors and the study consultants have developed strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to share those strategies, answer questions and solicit input regarding the study recommendations.

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Any person with a disability needing special accommodations, or persons requiring language assistance services, should contact Tom Smith at Savannah City Hall, (731) 925-3300 Ext. 156 prior to the time and date of the meeting indicated above.

TRUSTEE'S NOTICE OF FORECLOSURE SALE

Default having been made in the terms, conditions and payments provided in a certain Deed of Trust, dated April 7, 2014, executed by William Joseph Delfino II and Erin Bishop to W. Andrew Yarbrough, Trustee, of record in Record Book 597, Page 741 in the Register's Office for Hardin County, Tennessee, to secure the indebtedness described, the entire indebtedness having been declared due and payable as provided in said Deed of Trust, I, W. Andrew Yarbrough, will by virtue of the power and authority vested in me as Trustee, on the 7th day of November, 2016 at 10:00 A.M., at the EAST DOOR OF THE COURTHOUSE, HARDIN COUNTY. TENNESSEE, sell to the highest bidder for cash, free from all legal and equitable rights of redemption, homestead and dower, rights by virtue of marriage, and all other exemptions of every kind, which are expressly waived, and subject to any unpaid taxes, if any, the following described real property:

A certain tract or parcel of land lying and being situated in the 6th Civil District of Hardin County, Tennessee and being more particularly described as follows:

Beginning at an intersection of the center of line of Tennessee Highway No. 142 with the center line of Pisgah-Tula Road; thence running with the center of Pisgah-Tula Road, south 89 degrees 15 minutes East, 460 feet to a point in the center of the same; thence running north 00 degrees 28 minutes east 25 feet to an iron fence post in the north prescriptive right-of-way line of said road found marking the southeast corner and true point of beginning of the property herein described, being a southeast corner of Roy Taylor property described in DB 136-831, ROHC; thence leaving said road and running with the boundary of said Taylor property, north 00 degrees 28 minutes east, 220.76 feet to an iron fence post; thence south 89 degrees 34 minutes 50 seconds east, 400 feet to an iron fence post; and thence south 00 degrees 28 minutes 05 seconds west, 220.05 feet to an iron fence post in the north prescriptive right-of-way line of said Pisgah-Tula Road; thence running with said right-ofway line, north 89 degrees 40 minutes 57 seconds west, 400 feet to the point of beginning containing 2.024 acres. (Description according to prior deed)

This being the real property conveyed to William Joseph Delfino II and Erin Bishop, by deed of Ronald Surratt and Maria Surratt, dated April 4, 2014, of the first publication for posting) as described in (1)(A), of

(2) Twelve (12) months from the decedent's date of death.

This the 13th day of October, 2016. /s/ John Ray Ford, Administrator /s/ Dennis W. Plunk, Attorney for the Estate

/s/ Martha S. Smith, Clerk and Master

(10202tp)

Community news Crump



Sheri Kennedy Community Writer 731-926-6725 sherityk@gmail.com

Hello everyone! How did you like our beautiful weekend?

So nice to see everyone preparing for Halloween and fall.

You don't have to go far to find a school or church having a harvest festival. The flea market was packed this weekend with lots of folks getting out and enjoying the weekend.

This coming weekend will be busy with lots of children in costumes running around. So please be mindful when driving. happy Halloween.

The Tennessee College of Applied Technology at Crump may God watch over you.

Skills/USA chapter will be holding a 5k run/walk at Pickwick Landing State Park on Saturday, Oct. 29. To find out more about the TCAT Trick or Trot 5K including registration and fee information, can send an email to skillsusa@tcatcrump.edu or call the school.

October birthdays: Meagan Kennedy, Kenny Harris and Jeff Gambrell.

Please keep Reda & Lola Jarrett in your prayers.

If you have any Crump "Good News," birthdays, or prayer requests, please email, text, or call and let me know. I will be glad to add it to the Crump community news column in The Courier. This article I hope you all have a safe and is largely based on what you share with me.

Have a wonderful week and

NOTICE OF TRUSTEE'S SALE

WHEREAS, default has occurred in the performance of the covenants, terms, and conditions of a Deed of Trust Note dated February 22, 2005, and the Deed of Trust of even date securing the same, recorded February 22, 2005, in Book No. 367, at Page 789, in Office of the Register of Deeds for Hardin County, Tennessee, executed by Tasha Nichole Shubert and James C. Shubert, conveying certain property therein described to Andrew Valentine, Esq. as Trustee for American Home Mortgage; and the undersigned, Wilson & Associates, P.L.L.C., having been appointed Successor Trustee by JPMorgan Chase Bank, National Association.

NOW, THEREFORE, notice is hereby given that the entire indebtedness has been declared due and payable; and that an agent of Wilson & Associates, P.L.L.C., as Successor Trustee, by virtue of the power, duty, and authority vested in and imposed upon said Successor Trustee, by JPMorgan Chase Bank, National Association, will, on December 1, 2016 on or about 11:00 AM. at the Hardin County Courthouse, Savannah, Tennessee, offer for sale certain property hereinafter described to the highest bidder FOR certified funds paid at the conclusion of the sale, or credit bid from a bank or other lending entity pre-approved by the successor trustee. The sale is free from all exemptions, which are expressly waived in the Deed of Trust, said property being real estate situated in Hardin County, Tennessee, and being more particularly described as follows:

Being Lot No. 36 in The Enchanted Oaks Subdivision, a Plat of said Subdivision being of record in Plat Book 2, Page 86 in the Hardin County Register's Office. Reference is here made to said Plat and to the Book and Page where recorded for a more complete and accurate description of Lot 36 and the same is incorporated herein by this reference as fully and to the same extent as if copied in full herein.

ALSO KNOWN AS: 160 Clement Drive, Savannah, TN 38372

This sale is subject to all matters shown on any applicable recorded plat; any unpaid taxes; any restrictive covenants, easements, or setback lines that may be applicable; any statutory rights of redemption of any governmental agency, state or federal; any prior liens or encumbrances as well as any priority created by a fixture filing; and to any matter that an accurate survey Saturday and took him some I talked with Bettye Crow

NOTICE TO CREDITORS

Notice is hereby given pursuant to T.C.A. §30-2-306 that on the 7th day October, 2016, Letters of Administration, in respect of the ESTATE OF LUCILLE R. MARTIN, deceased, who died on the 26th day of September. 2016, were issued to the undersigned by the Probate Court of Hardin County, Tennessee. All persons, resident and nonresident, having claims, matured or unmatured, against the estate are required to file the same with the clerk of the above named court on or before the earlier of the dates prescribed in (1) or (2) otherwise their claims will be forever barred:

(1) (A) Four (4) months from the date of the first publication (or posting, as the case may be) of this notice if the creditor received an actual copy of this notice to creditors at least sixty (60) days before the date that is four (4) months from the date of the first publication (or posting); or

(B) Sixty (60) days from the date the creditor received an actual copy of the notice to creditors if the creditor received the copy of the notice less than sixty (60) days prior to the date that is four (4) months from the date of the first publication (or posting) as described in (1)(A); or

(2) Twelve (12) months from the decedent's date of death. This the 7th day of October, 2016.

/s/ Anthony Wayne Martin, Administrator Estate of Lucille R. Martin, Deceased MARTHA SMITH, CLERK OF THE PROBATE COURT

/s/ Martha S. Smith, Clerk of the Probate Court

Attorney for the estate: /s/ Dennis W. Plunk

(10202tp)

NOTICE TO CREDITORS ESTATE OF LOUIE ALBERT WINTERS

Notice is hereby given that on the 11th day of October, 2016, Letters Testamentary (or of administration as the case may be) in respect to the estate of Louie Albert Winters who died on August 30, 2016, were issued to the undersigned by the Chancery Court of Hardin County, Tennessee. All persons, resident and nonresident, having claims, matured or unmatured, against the estate are required to file the same with the clerk of the above named Court

NOTICE OF PUBLIC MEETING

DATE: Monday, November 7, 2016

TIME: 5:00 - 7:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

The City of Savannah will conduct a public meeting regarding a roadway corridor study along Pickwick Street(SR-128S) and Florence Road (SR-69) from Main Street (SR-15/ US-64) to Airport Road (SR-226). This meeting will be followed by a presentation at the monthly City Commission Meeting at 7:00 PM.

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation has evaluated vehicle, pedestrian and bicyclist needs, both present and future, along the corridors and the study consultants have developed strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to share those strategies, answer questions and solicit input regarding the study recommendations.

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PUBLIC NOTICES

Page 8A

www.courieranywhere.com

THURSDAY ■ NOVEMBER 3, 2016

Mortgage Association ("Fannie Mae") and WHEREAS, Federal National Mortgage Association ("Fannie Mae"), as the holder of the Note for which debt is owed, ("Note Holder"), appointed the undersigned, Priority Trustee Services of TN, LLC, as Substitute Trustee by instrument filed or to be filed for record in the Register's Office of Hardin County, Tennessee, with all the rights, powers and privileges of the original Trustee named in said Deed of Trust: and NOW. THEREFORE, notice is hereby given that the entire indebtedness has been declared due and payable as provided in said Deed of Trust by the Note Holder, and that the undersigned, Priority Trustee Services of TN, LLC, Substitute Trustee, or its duly appointed attorneys or agents, by virtue of the power and authority vested in it, will on December 1, 2016, commencing at 11:00 AM at the Front Door of the Hardin County Courthouse, 465 Main Street, Savannah, TN 38372, proceed to sell at public outcry to the highest and best bidder for cash or certified check only. The wiring of funds will not be accepted. The conducting of the sale will be handled by Auction.com. More information concerning their policies and procedures on bidding at the foreclosure sale can be found on their website Auction.com. The following described property situated in Hardin County, Tennessee, to wit: BEING LOT NO. 37 IN THE BELLE MEADE SUBDIVISION, A PLAT OR PLAN OF SAID SUBDIVISION BEING OF RECORD IN PLAT CABINET 2, PAGE 31, IN THE REGISTER'S OFFICE OF HARDIN COUNTY, TENNESSEE, AND REFERENCE IS HERE MADE TO SAID PLAT AND TO THE BOOK AND PAGE WHERE RECORDED FOR A MORE COMPLETE AND ACCURATE DESCRIPTION OF SAID LOT NO. 37 AND THE DESCRIPTION, LOCATION AND DESIGNATION AS THERE GIVEN AND SHOWN IS INCORPORATED HEREIN BY THIS REFERENCE THERETO AS FULLY AND TO THE SAME EXTENT AS IF COPIED IN FULL HEREIN. (DESCRIPTION ACCORDING TO PRIOR DEED.) BEING THE SAME PROPERTY CONVEYED TO VIVIAN DILLIHUNT BY DEED DATED OCTOBER 25, 2007 AND OF RECORD IN DEED BOOK 457, PAGE 265, IN THE REGISTER'S OFFICE OF HARDIN COUNTY, TENNESSEE. PROPERTY ADDRESS: 380 WALNUT ST. SAVANNAH, TN 38372 CURRENT OWNER(S): Vivian Dillihunt The sale of the above-described property shall be subject to all matters shown on any recorded plan; any unpaid taxes; any restrictive covenants, easements or set-back lines that may be applicable; any prior liens or encumbrances as well as any priority created by a fixture filing; and any matter that an accurate survey of the premises might disclose. Substitute Trustee will only convey any interest he/she may have in the property at the time of sale. Property is sold "as is, where is." For every lien or claim of lien of the state identified above, please be advised notice required by § 67-1-1433 (b)(1) was timely given and that any sale of the property herein referenced will be subject to the right of the state to redeem the land as provided for in § 67-1-1433(c)(1). All right and equity of redemption, statutory or otherwise, homestead, and dower are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above. PRIORITY TRUSTEE SERVICES OF TN, LLC 2970 Clairmont Road NE, Suite 780 Atlanta, Georgia 30329 770-234-9181 File No.: 7345.29197 Web Site: www.rcolegal.com Courier 10/20/16, 10/27/16, 11/03/16 TS#: 7345.29197 FEI # 2013.04291 10/20/2016, (10203tc) 10/27/2016, 11/03/2016

IN RE:

THE ADOPTION OF MINOR CHILDREN WHOSE NAME FOR THE PURPOSE OF THIS PROCEEDING IS JONATHAN CHRISTOPHER MANARD, DOB: 11/24/1999 **EMILY DAWN MANARD, DOB: 6/13/2004** DANIALLAH HOLLIE MANARD, DOB: 6/14/2005

SUSAN OWENS AND WILLIAM OWENS, JR. PETITIONERS.

NO. AD-372

JUNE ANN OWENS RESPONDENT.

ORDER OF PUBLICATION

It appearing to the Court from the sworn petition or affidavit filed in this cause that the whereabouts of the Respondent, June Ann Owens, is presently unknown and cannot be ascertained upon diligent inquiry, so that ordinary process cannot be served upon her. Therefore, this Order of Publication should be published in the Savannah Courier newspaper located in Savannah, Hardin County, Tennessee as the best possible notice to the Respondents under the circumstances.

Respondent, June Ann Owens, is hereby required to appear and file an answer with Martha Smith, the Clerk and Master of the Hardin County Chancery Court, Hardin County Court House, 465 Main Street, Savannah, Tennessee, 38372 or otherwise defend against the Petition for Adoption by Grandparents and Termination of Parental Rights, and to serve and answer said petition by December 24, 2016, which is thirty (30) days from the last day of publication of this notice, and send a copy of said answer to Joe. L. Brown, Attorney for the Petitioners in this cause, whose address is 419 Main Street, Savannah, Tennessee 38372, or a default judgment will be entered against the Respondent, June Ann Owens, and this cause set for hearing in the Chancery Court of Hardin County, Tennessee, sitting in the Hardin County Courthouse in Savannah, Tennessee, ex parte as to Respondent, June Ann Owens.

If there is no answer, a hearing on Petitioner's Motion for Default shall be heard on January 3, 2017. Failure to answer or appear may result in termination of Respondent's parental rights to the children referenced above.

Entered this the 25th day of October, 2016. /s/ Martha S. Smith, Clerk & Master By: Tammy Hunt, Deputy Clerk and Master Approved for entry: /s/ Joe L. Brown, BPR #022450 Attorney for the Petitioners 419 Main Street Savannah, TN 38372 (10274tc) (731) 925-2202

NOTICE

The Hardin County Board of Education will meet at 5:30 p.m. on Monday, November 14, 2016 at East Hardin Elementary located at 100 Freewill Lane, Savannah, TN 38372. The public is invited.

PUBLIC NOTICE SAVANNAH CITY COMMISSION RESCHEDULED MEETING

The Savannah City Commission regular monthly meeting for November has been rescheduled for the following date: Monday, November 7, 2016 at 7 p.m. at City Hall There will not be a Study Session for November. The public is invited and encouraged to attend.

NOTICE OF PUBLIC MEETING

DATE: Monday, November 7, 2016

TIME: 5:00 - 7:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

The City of Savannah will conduct a public meeting regarding a roadway corridor study along Pickwick Street(SR-128S) and Florence Road (SR-69) from Main Street (SR-15/ US-64) to Airport Road (SR-226). This meeting will be followed by a presentation at the monthly City Commission Meeting at 7:00 PM.

The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation has evaluated vehicle, pedestrian and bicyclist needs. both present and future, along the corridors and the study consultants have developed strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to share those strategies, answer questions and solicit input regarding the study recommendations.

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Savannah City Commission Rescheduled Regular Monthly Meeting Monday November 7, 2016, 7 P.M.

- I. Call to Order
- II. Pledge of Allegiance
- III. Prayer
- IV. Presentation by Neel-Schaffer, Inc. The Savannah SR 69/128 Corridor Study
- V. Minutes:

To Be Approved:

(X) City Commission - October 6, 2016, Regular Meeting,

To Be Accepted for Record:

- (X) Historic Zoning Commission October 11, 2016, Regular Meeting
- (X) Planning Commission October 13, 2016, Regular Meeting 7
- (X) Parks Commission October 20, 2016, Regular Meeting 8
- VI. Ordinances:
 - (X) 1st Reading, of an Ordinance to amend the official zoning map of Savannah, Tennessee, to rezone properties located near 1750, 1800, and 1834 Florence Road (Heather Wilson property) from B-2 (General Business) District to R-3 (High Density Residential) District. ROGER FRANKS 7
- VII. Resolutions:
 - (X) A Resolution adopting the Savannah SR 69/128 Corridor Study prepared for the City of Savannah, Tennessee. TOM SMITH
- VIII. Proclamations/Awards: NONE

PUBLIC PARTICIPATION

- IX. Purchases:
 - A. A motion is requested by the Police Department, "approving the purchase of two 2017 Utility Police Interceptor vehicles from Ford of Murfreesboro at the state contract price of \$35,110.98 each, including equipment." The total purchase price will be \$70,221.96 ATTACHMENT NO. 1, TERRY HOSEA₁₂
 - B. A motion is requested by the Utility Department, "approving a Professional Engineering Services Agreement between the Savannah Utility Department and The Tennergy Corporation for the Industrial Road Regulator Station upgrade." Total cost is \$13,800.00 ATTACHMENT NO. 2, VIRGIL MORRIS

X. New Business: IF ANY

XI. Other Business: IF ANY

CITY MANAGER'S REPORT

XII. Announcements: IF ANY

XIII. Information Items:

- (X) Governmental Type Funds September, 2016, Financial Reports 19
- (X) Utility Dept. September, 2016, Financial Reports
- (X) Police Dept. October, 2016, Activity Report 31
- (X) Codes Dept. October, 2016, Activity Report 33
- (X) Parks Dept. October, 2016, Activity Report 34
- (X) Fire Dept. October, 2016, Activity Report 35

XIV. Adjourn

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Meeting of the SAVANNAH MUNICIPAL/REGIONAL PLANNING COMMISSION October 13, 2016

Dungant	Absent	<u>Others</u>		
Present Blake White Leroy White Benny Austin	Jerry Rogers Joe Cromwell	Terry Hulen Will Radford Garry Welch Seth Sumner Stephen White Patti Clare Karen Mohamma	Tom Smith Barry Webb Heather Wilson Nichole Seymour Calvin Abram Barry Alexander	

Secretary Blake White called the October meeting to order and called for a motion to approve the minutes of the August 11, 2016 regularly scheduled Planning Commission meeting. Commissioner Leroy White made motion to approve minutes as written. Commissioner Benny Austin seconded the motion. The vote was all ayes.

New Business:

A. Rezoning - Florence Road - Heather Wilson

Staff presented the commission with a petition from Heather Wilson requesting property that she owns and located off of Florence Road be rezoned from B-2 (General Business District) to R-3 (High Density Residential District). Staff presented the commission with an overview map outlining where this property was located. After discussion, Commissioner Leroy White made motion to recommend to the City Commission that Tract 1 of Heather Wilson property along with the four parcels adjacent north be rezoned from B-2 to R-3. Commissioner Benny Austin seconded the motion. The vote was all ayes.

B. Community Transportation Planning Grant

Staff introduced Barry Alexander, Patti Clare and Karen Mohammadi from Neel/Schaffer Consultant Firm and turned the meeting over to them. Neel/Schaffer staff gave a general overview of what the TDOT Community Transportation Planning Grant purpose was and the data they have collected. Also present was Calvin Abram/Region 4 Supervisor and Nicole Seymour/ Planner from TDOT. Neel/Schaffer staff gave a presentation outlining the proposal and recommendation of the Transportation Corridor study. After discussion, the commission recommended approval of the study to the city commission.

C. Food Truck

Commissioner Leroy White made motion to postpone discussion of a Food Truck Ordinance until next month's meeting since all the commissioners were not present. Commissioner Benny Austin seconded the motion. The vote was all ayes.

Old Business: None

Other Business: None

There being no further business, a motion to adjourn was made by Commissioner Benny Austin and seconded by Commissioner Leroy White. The vote was all ayes.

Respectfully submitted,

Blake White, Secretary

RESOLUTION

RESOLUTION ADOPTING THE SAVANNAH SR 69/128 CORRIDOR STUDY PREPARED FOR THE CITY OF SAVANNAH, TENNESSEE

WHEREAS, the Board of Mayor and Commissioners of the City of Savannah, Tennessee have committed to supporting and improving the area's transportation system for mobility and accessibility of present and future generations of City of Savannah citizens; and,

WHEREAS, the City of Savannah was awarded a TDOT Community Transportation Planning Grant by the State of Tennessee, Department of Transportation to aid with the creation of planning documents that support improvements in traffic flow, safety and overall efficiency of the transportation system to achieve community visions as related to transportation and land use needs that promote economic growth; and,

WHEREAS, the TDOT Consultant (Neel-Schaffer, Inc.) has completed the Savannah SR69/128 Corridor Study per contract guidelines and deliverables providing recommendations for safety, capacity and connectivity within the study area; and,

WHEREAS, the City of Savannah hereby acknowledges receipt of the Savannah SR69/128 Corridor Study for use in sustaining guidance and compatibility with the planning of future development of the transportation network and land use planning within the study area;

NOW, THEREFORE BE IT RESOLVED by the Board of Mayor and Commissioners of the City of Savannah, meeting this the 7th day of November, 2016, that the City of Savannah does hereby adopt the Savannah SR69/128 Corridor Study as a guiding document to be considered in future planning decisions.

READ, ADOPTED, AND APPROVED IN OPEN PUBLIC MEETING THIS 7th DAY OF NOVEMBER, 2016.

Signed:	Attest:		
Bob Shutt – Mayor			



October 25, 2016

Main Menu

Home

Pay Your Utility Bill Online

Statistics

Community Development

Fire & Police

Recreation

Taxes/Utilities

Savannah Main Street

Board Meetings

FAQs

Contact Us

Links

News Articles

Upcoming Events

Job Openings

City Charter

Board Members

Animal Services Department

Directory

Water Quality Report

Historic District Design Guidelines

Vendor Registry

Bids and RFPs

Brick Paver Memorial Form

Savannah Theater Calendar

Savannah Municipal Code

Area Info

Follow Us on Facebook! Chamber of Commerce Tour Hardin County Shiloh National Park



Home

Public Meeting (Final) SR69/128 Corridor Study

NOTICE OF PUBLIC MEETING

DATE: Monday, November 7, 2016

TIME: 5:00 - 7:00 PM

PLACE: Savannah City Hall, 140 Main Street, Savannah, TN

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The study, funded by a Community Transportation Planning Grant from the Tennessee Department of Transportation has evaluated vehicle, pedestrian and bicyclist needs, both present and future, along the corridors and the study consultants have developed strategies to preserve and enhance the functionality of the routes for all users. The intent of the meeting is to share those strategies, answer questions and solicit input regarding the study recommendations.

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Next >

[Back]

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Project Location Map



SURVEY FORM



Thank you for your interest in the SR 69 (Florence Road)/SR 128 (Pickwick Street) Corridor Study. We appreciate your comments. The build recommendations are included on the back of this form. The priorities used were low, medium and high. "Low" priorities reflect long range projects to be completed 10 or more years in the future. "Medium" priority projects are those that should be completed in the next 5 to 10 years. "High" priority projects are those that should be accomplished in the next five years. Please use the last column to tell us how you think the projects should be prioritized. If you do not feel a project should be included, write "None" in the square.

Improvement Project		stimated oject Costs	Recommended Priority	Your Recommended Priority
Spot Improvements				
SR 128/Dodd Road	\$	70,000	Medium	
SR 128/Sevier Street Signal	\$	220,000	High	
SR 15/Main Street and Water Street Interconnect, Coordinate and Retime Downtown Signals	\$	530,000	High	
SR 69/SR 15 Realignment	\$	550,000	Medium	
SR 69/SR 203 (Pinhook) Realignment	\$	630,000	High	
SR 69/Malcomb Street	\$	70,000	High	
SR 69/Lewis Street	\$	70,000	High	
SR 69/Ranch Street	\$	70,000	High	
SR 69/Austin Street	\$	70,000	High	
SR 69/One Stop Drive	\$	100,000	High	
SR 69 Curve Improvement South of One Stop Drive	\$	550,000	Medium	
SR 69/SR 226 (Airport Drive)	\$	10,000	High	
SR 226 (Airport Drive)/Discount Drive	\$	10,000	HIgh	
Multimodal Improvements				
Main Street	\$	220,000	Medium	
Water Street	\$	180,000	Low	
Malcomb Street	\$	470,000	Low	
Hickory Street	\$	430,000	Low	
Lewis Street	\$	380,000	Low	
Ranch Street	\$	410,000	Low	
Eureka Lane	\$	420,000	Low	
Higgins Drive + North to Opel Loop	\$	500,000	Low	
Connectivity Improvements				
Sevier to Stout Connector	\$	1,540,000	Medium	
Dodd/Discount Drive Connector	\$	2,090,000	Medium	
School Access Improvements				
South Street Improvement	\$	220,000	High	
Driveway/Storage Lane Improvements	\$	70,000	Medium	
Corridor Improvements				
		10,920,000	Medium	

Thank you for your interest and participation!
FOR MORE INFORMATION CONTACT STUDY TEAM LEADER TOM SMITH:

(731) 925-3300 ext. 156 tsmith@cityofsavannah.org

















City Planning Commission Meeting



Team Members:











THE PROJECT



A corridor study along the SR 128 / SR 69 corridors beginning at the intersection of SR 128 and SR 226 and ending at the intersection of SR 69 and SR 226.

The purpose of the proposed study is to identify strategies to improve transportation operations within the study area for vehicular traffic, pedestrians, bicyclists and freight movement.

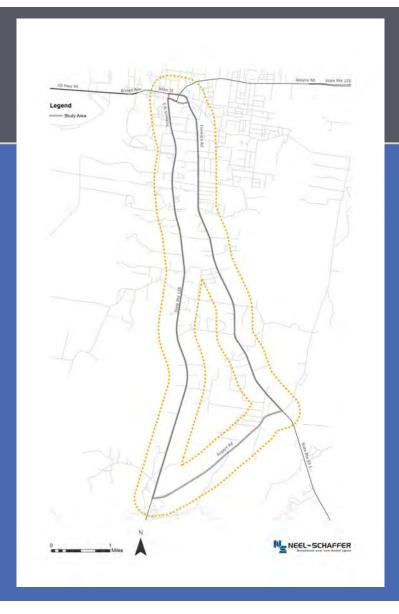
The study will analyze the corridors to identify deficiencies and develop improvement strategies for:

- Safety improvements at intersections and identified high accident locations
- · Operational improvements at critical areas
- Accommodation of all travel modes
- Access management on developed properties
- Land use plans for undeveloped properties
- General roadway capacity improvements



PROJECT ELEMENTS

- ☐ Background Review
- ☐ Data Collection and Inventory
- ☐ Existing Conditions
- ☐ Public Involvement
- □ Recommendations
 - Land Use Planning
 - Spot Improvements
 - Multimodal Improvements
 - Connectivity Improvements
 - School Access Improvements
 - Corridor Improvements
- ☐ Cost Estimates and Project Prioritization



VISION AND GOALS

Vision: The vision is to develop a comprehensive plan for the corridor that addresses current deficiencies in capacity and safety, provides guidance for improvements to address existing access management issues, and creates a framework to guide future development and public investment through land use policy and access management policy for the subject routes.

Goal 1: Enhance the functionality of the routes for all users through geometric and operational improvements to address access management issues, capacity deficiencies and safety concerns.

Goal 2: Provide for the efficient movement of people and goods from developing industrial and commercial areas south of Savannah into the city.

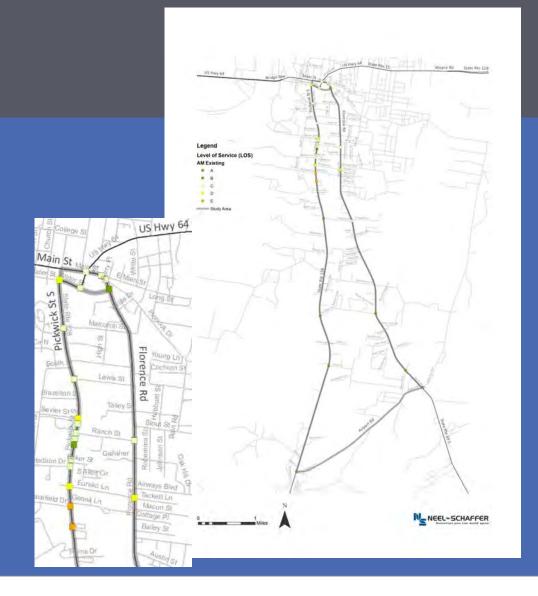
Goal 3: Ensure compatibility of future development with the transportation network through appropriate land use planning.





LEVELS OF SERVICE AM Peak 2015

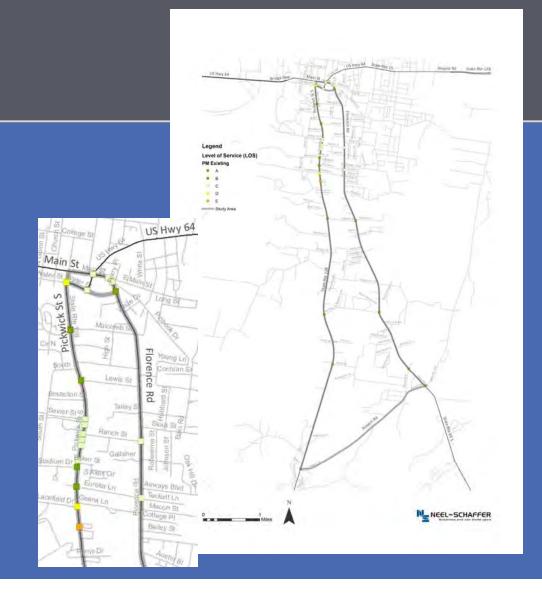
- SR 128/Parris Drive
- SR 128/Eureka Street
- SR 128/Lacefield Drive
- SR 128/Sevier Street
- SR 128/Water Street
- SR 69/Eureka Street





LEVELS OF SERVICE PM Peak 2015

- SR 128/Parris Drive
- SR 128/Lacefield Drive
- SR 128/Water Street





LEVELS OF SERVICE

AM Peak 2040

2016-2040 Growth rates obtained from TDOT:

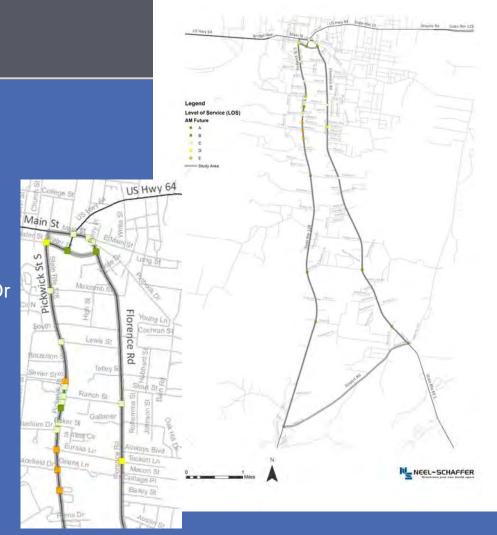
SR 128 2.10% north of Walkertown Rd

SR 128 0% south of Walkertown Rd

SR 69 4.94% between Airport Rd and Walkertown Dr

SR 69 3.25% between Walkertown Dr and Main St

- SR 128/Parris Drive
- SR 128/Lacefield Drive
- SR 128/Eureka Street
- SR 128/Sevier Street
- SR 128/Water Street
- SR 69/Eureka Street





LEVELS OF SERVICE PM Peak 2040

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- SR 128/Lacefield Drive
- SR 128/Water Street

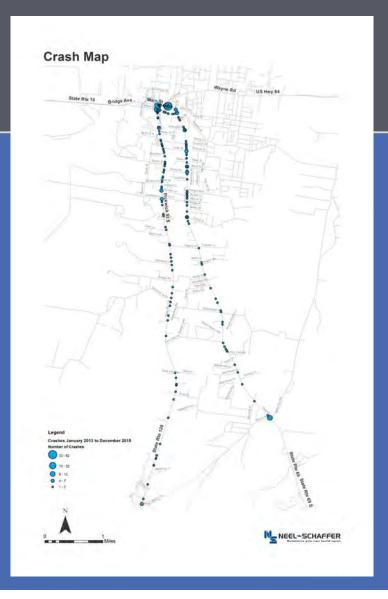




CRASH DATA

		Crash by
	Number	Type for
	Of Crashes in	Hardin
Level of Severity	Study Area	County
Fatal	2	6
Incapacitating Injury	6	
Non-Incapacitating		
Injury	110	517*
Prop Damage	419	1418
TOTAL	537	1941

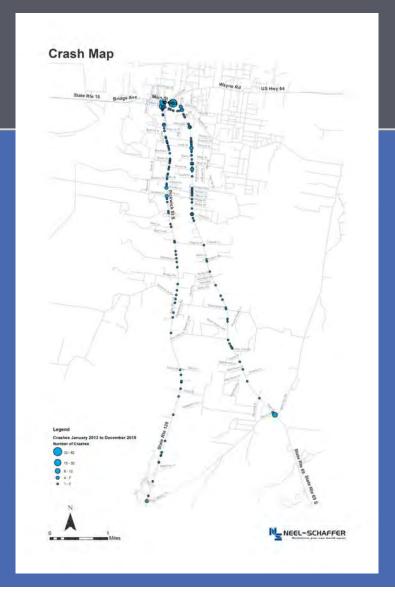
^{*} Includes incapacitating and non-incapacitating injuries





CRASH DATA

Туре	Number of Crashes	Percentage
Angle	124	23.09%
Head-On	10	1.86%
No Collision W/ Vehicle	82	15.27%
Other	12	2.23%
Rear-End	237	44.13%
Rear To Rear	2	0.37%
Rear To Side	2	0.37%
Sideswipe, Opposite		2.98%
Direction	16	
Sideswipe, Same Direction	32	5.96%
Unknown	2	0.37%
Not Specified	18	3.35%
TOTAL	537	



PUBLIC COMMENTS

Issues Average Rankings in Importance

Truck Traffic	School Traffic	Intersection Congestion	Roadway Congestion	Bicyclist Safety	Pedestrian Safety	Number of Driveways
4.8	7.1	7.6	7.9	6.2	7.0	4.8

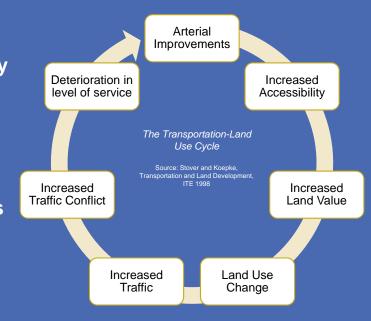
0 = Not important; 10 = Highly Important





RECOMMENDATIONS LAND USE

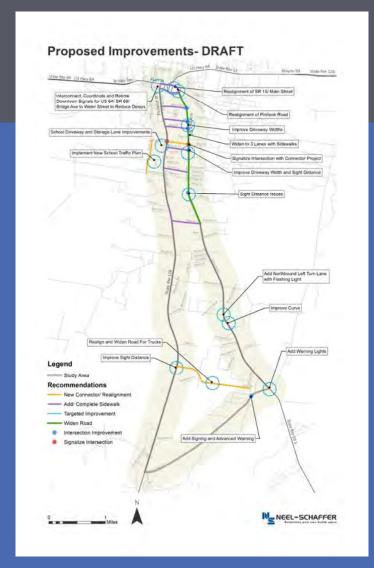
- ☐ Short-Term: Use Access Management as a Land Use Strategy
- ☐ Short-Term: Adopt Traffic Impact Analysis Requirements
- ☐ Mid Term Action: Adopt Subdivision Regulations
- ☐ Mid-Term Action: Adopt goals to guide all land use decisions
- □ Long-Term: Adopt a Comprehensive Plan





RECOMMENDATIONS: SPOT IMPROVEMENTS

- □ South Street/Sharon Street
- ☐ SR 128/Sevier Street
- ☐ SR 15/Main Street and Water Street Area
- ☐ SR 69/Pinhook/Main Street
- ☐ SR 69/Malcomb, Hickory, Lewis, Ranch and Austin Streets
- ☐ SR 69/One Stop Drive





RECOMMENDATIONS: SPOT IMPROVEMENTS

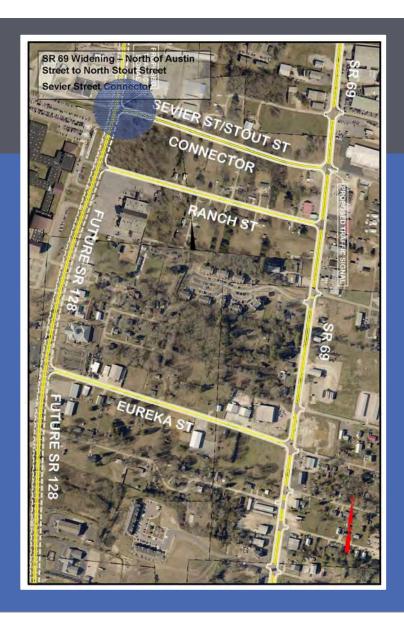
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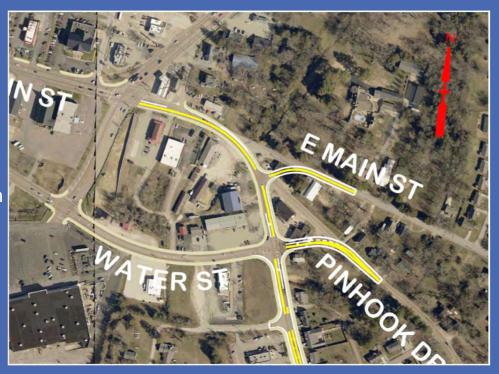
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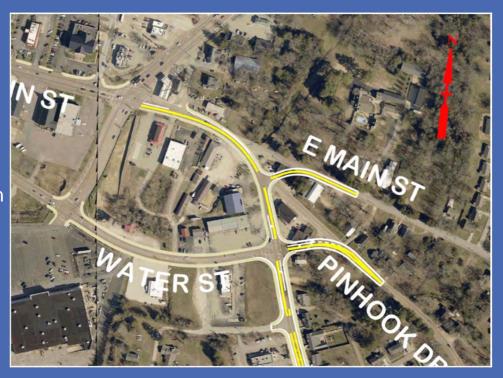


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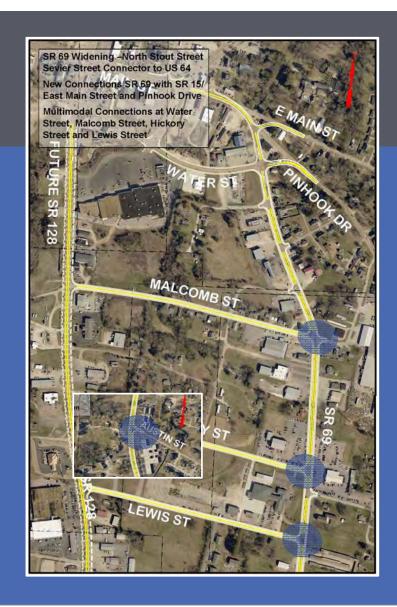


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RECOMMENDATIONS: MULTIMODAL

- Main Street Sidewalks
- Water Street Sidewalks
- Malcomb Street Sidewalk(s)
- ☐ Hickory Street Sidewalk(s)
- ☐ Lewis Street Sidewalk(s)
- ☐ Ranch Street Sidewalk(s)
- ☐ Eureka Street Sidewalk(s)
- ☐ Higgins Street Sidewalk(s)/Trail





RECOMMENDATIONS: CONNECTIVITY

- ☐ Sevier Street
- □ Dodd Road









RECOMMENDATIONS:

CONNECTIVITY

- **□**Sevier Street
- □ Dodd Road





RECOMMENDATIONS: CONNECTIVITY

- ☐ Sevier Street
- □ Dodd Road







RECOMMENDATIONS: SCHOOL ACCESS

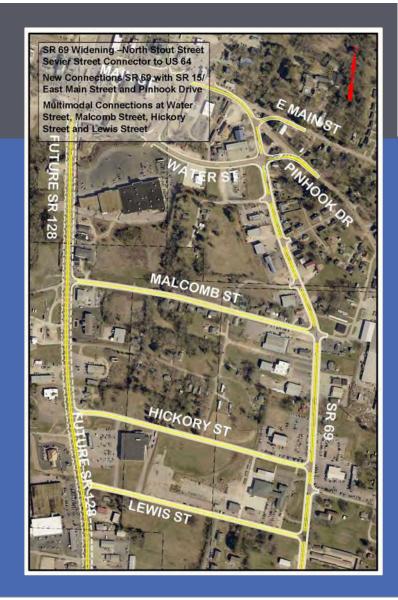
- ☐ Increasing spacing of dismissal times by 15+ minutes
- ☐ Signalize Sevier Street
- ☐ Prohibit left turns from exits
- ☐ Improving the stacking area at High School
- ☐ Improve Sharon Street/South Street Connection





RECOMMENDATIONS CORRIDOR-WIDE

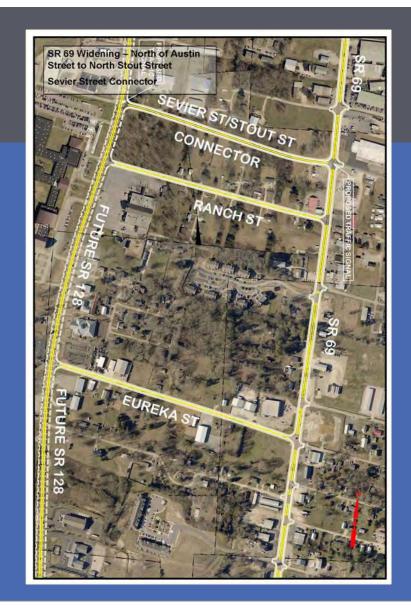
□ SR 69 Widening from Higgins Lane to Water Street





RECOMMENDATIONS: CORRIDOR-WIDE

☐ SR 69 Widening from Higgins Lane to Water Street





RECOMMENDATIONS: CORRIDOR-WIDE

☐ SR 69 Widening from Higgins Lane to Water Street



COST & PRIORITY

Improvement Project	Priority	Estimated Project Costs	
Spot Improvements	THOTILY	110,000 00313	
SR 128/Dodd Road	Medium	\$70,000	
SR 128/Sevier Street Signal	High	\$ 220,000	
SR 15/Main Street and Water Street Interconnect, Coordinate and Retime Downtown Signals	High	\$530,000	
SR 69/SR 15 Realignment	Medium	\$550,000	
SR 69/SR 203 (Pinhook) Realignment	High	\$630,000	
SR 69/Malcomb Street	High	\$70,000	
SR 69/Lewis Street	High	\$70,000	
SR 69/Ranch Street	High	\$70,000	
SR 69/Austin Street	High	\$70,000	
SR 69/One Stop Drive	High	\$100,000	
SR 69 Curve Improvement South of One Stop Drive	High	\$550,000	
SR 69/SR 226 (Airport Drive)	High	\$10,000	
SR 226 (Airport Drive)/Discount Drive	High	\$10,000	
Multimodal Improvements			
Main Street	Medium	\$220,000	
Water Street	Low	\$180,000	
Malcomb Street	Low	\$470,000	
Hickory Street	Low	\$430,000	
Lewis Street	Low	\$380,000	
Ranch Street	Low	\$410,000	
Eureka Lane	Low	\$420,000	
Higgins Drive + North to Opel Loop	Low	\$500,000	
Connectivity Improvements			
Sevier to Stout Connector	High	\$1,540,000	
Dodd/Discount Drive Connector	Medium	\$2,090,000	
School Access Improvements			
South Street Improvement	High	\$220,000	
Driveway/Storage Lane Improvements	Medium	70,000	
Corridor Improvements			
SR 69 Higgins to Main Street	Medium	\$10,920,000	



CONCLUSION & QUESTIONS

WE VALUE YOUR FEEDBACK!

Please contact Tom Smith, Barry Alexander or Karen Mohammadi with your comments;

Tsmith@CityofSavannah.org
Barry.Alexander@Neel-Schaffer.com
Karen.Mohammad@Neel-Schaffer.com

APPENDIX E: ACCESS MANAGEMENT

APPENDIX D: ACCESS MANAGEMENT

Section 11-310 of the City's Zoning Ordinance addresses Access Control and is shown below.

- 1. A point of access, i.e., a drive or opening for vehicles onto a street for one-way traffic shall not exceed twenty (20) feet, for two-way traffic thirtysix (36) feet. Maximum access widths of fifty (50) feet can be allowed on a case by case basis when deemed necessary by the appropriate City Staff or the Planning Commission, and where it is established that daily tractor-trailer traffic will be utilized. (as amended by Ordinance 594-4-2000)
- 2. There shall be no more than two (2) points of access to any one (1) public street on a lot less than 400' but more than 100' in width. Lots less than one hundred (100) feet in width shall have no more than one (1) point of access to any one (1) public street.
- 3. No point of access shall be allowed within ten (10) feet of the right-of-way of any public street intersection.
- 4. Where sidewalks exist, the area existing between the street and an interior parking space or driveway parallel to the street shall have a curb of at least six (6) inches in height and six (6) inches in width separating the parking area from the sidewalk to prevent encroachment of vehicles onto the sidewalk area.
- 5. No curbs on city streets or rights-of-way shall be cut or altered without written approval of the Building Inspector.
- 6. Cases requiring variances relative to this action, and hardships not caused by the property owner, shall be heard and acted upon by the Board of Zoning Appeals, provided, further, that no curb cuts for offstreet automobile storage or parking space shall be permitted where the arrangement would require that vehicles back directly into a public street.
- 7. Access control on property abutting state or federal highways shall be governed by official regulations of the Tennessee Department of Highways or the provisions of this Ordinance whichever is higher.

Tennessee does not have an Access Management Manual. The Access Management recommendations below are taken from the Kentucky Model Access Management Ordinance. The list below includes the sections from the Manual that are applicable to Savannah. The follow paragraphs are excerpts from those sections as recommended for adoption by the City.

Section 1. Intent and Purpose

Section 6 Corner Clearance

Section 7. Joint and Cross Access

Section 9. Access Connection and Driveway Design

Section 13. Nonconforming Access Features

Section 23. Site Plan Review Procedures

Section 24. Variance Standards

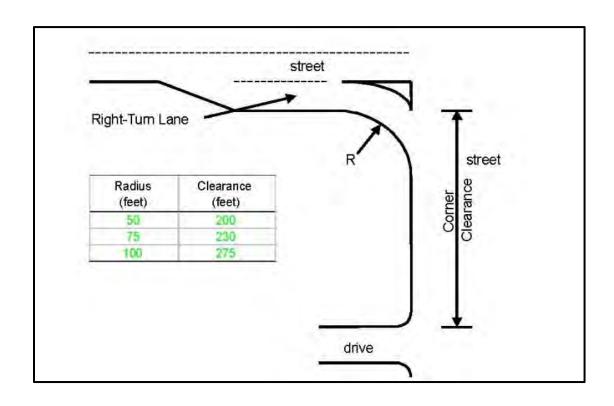
Section 1. Intent and Purpose

The intent of this ordinance is to provide and manage access to land development, while preserving the regional flow of traffic in terms of safety, capacity, and speed. Major thoroughfares, including highways and other arterials, serve as the primary network for moving people and goods. These transportation corridors also provide access to businesses and homes and have served as the focus for commercial and residential development. If access systems are not properly designed, these thoroughfares will be unable to accommodate the access needs of development and retain their primary transportation function. This ordinance balances the right of reasonable access to private property, with the right of the citizens of the city/county) and the Commonwealth of Kentucky to safe and efficient travel.

Section 6. Corner Clearance

- 1) Corner clearance for connections shall meet or exceed the minimum connection spacing requirements for that roadway.
- 2) New connections shall not be permitted within the functional area of an intersection or interchange as defined by the connection spacing standards of this code, unless:
 - a. No other reasonable access to the property is available, and
 - b. The (*permitting department*) determines that the connection does not create a safety or operational problem upon review of a site-specific study of the proposed connection prepared by a registered engineer and submitted by the applicant.
- 3) Where no other alternatives exist, the (*permitting department*) may allow construction of an access connection along the property line farthest from the intersection. In such cases, directional connections (i.e. right in/out, right in only, or right out only) may be required.

4) In addition to the required minimum lot size, all corner lots shall be of adequate size to provide for required frontyard setbacks and corner clearance on street frontage.



Section 7. Joint and Cross Access

1) Adjacent commercial or office properties classified as major traffic generators (i.e. shopping plazas, office parks), shall provide a cross access drive and pedestrian access to allow circulation between sites.

Section 9. Access Connection and Driveway Design

- 1) Driveway grades shall conform to the requirements of FDOT Standard Index, Roadways and Traffic Design Standard Indices, latest edition.
- 2) Driveway approaches must be designed and located to provide an exiting vehicle with an unobstructed view.
- 3) Construction of driveways along acceleration or deceleration lanes and tapers is discouraged due to the potential for vehicular weaving conflicts (see Figure 6).
- Driveways with more than one entry and one exit lane shall incorporate channelization features to separate the entry and exit sides of the driveway. Double yellow lines may be considered instead of medians where truck off-tracking is a problem.
- 5) Driveways across from median openings shall be consolidated wherever feasible to coordinate access at the median opening.
- Driveway width and flair shall be adequate to serve the volume of traffic and provide for rapid movement of vehicles off of the major thoroughfare, but standards shall not be so excessive as to pose safety hazards for pedestrians, bicycles, or other vehicles. (Suggested standards appear in Table 4).

Figure 6: Driveway Location

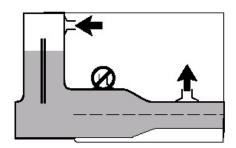


Table 4: Suggested Access Connection Design From

Trips/Day	1-20		21-600		601-4000*	
Trips/Hour	Or 1-5		Or 6-60		Or 61-400	
80	Urban	Rural	Urban	Rural	Urban	Rural
Connection Width (2-way)	12' min	12' min	24' min	24' min	24' min	24' min
	24' max	24' max	36' max	36' max	36' max	36' max
Flare	10' min	N/A	10' min	N/A	N/A	N/A
Returns (Radius)	N/A	15' min	Small	25' min	25' min	25' min
90-000 con 00-000 00-000 00-00	16.6542331507	25' std	radii may	50' std	50' std	50' std
		50' max	Be used	75' max	75' max	75' max
Angle of Drive			60-90	60-90	60-90	60-90
Divisional Island			4-22' wide	4-22' wide	4-22' wide	4-22' wide

^{*}Note: These standards are not intended for major access connections carrying over 4000 vehicles per day.

Section 13. Nonconforming Access Features

- 1) Permitted access connections in place as of (*date of adoption*) that do not conform with the standards herein shall be designated as nonconforming features and shall be brought into compliance with applicable standards under the following conditions:
 - a. When new access connection permits are requested;
 - b. Substantial enlargements or improvements;
 - c. Significant change in trip generation; or
 - d. As roadway improvements allow.

Section 23. Site Plan Review Procedures

- 1) Applicants shall submit a preliminary site plan for review by (*name of department responsible for conducting review*). At a minimum, the site plan shall show:
 - a. Location of access point(s) on both sides of the road where applicable;
 - b. Distances to neighboring constructed access points, median openings, traffic signals, intersections, and other transportation features on both sides of the property;

- c. Number and direction of lanes to be constructed on the driveway plus striping plans;
- d. All planned transportation features (such as auxiliary lanes, signals, etc.);
- e. Trip generation data or appropriate traffic studies;
- f. Parking and internal circulation plans;
- g. Plat map showing property lines, right-of-way, and ownership of abutting properties; and
- h. A detailed description of any requested variance and the reason the variance is requested.
- 2) Subdivision and site plan review shall address the following access considerations:
 - a. Is the road system designed to meet the projected traffic demand and does the road network consist of hierarchy of roads designed according to function?
 - b. Does the road network follow the natural topography and preserve natural features of the site as much as possible? Have alignments been planned so grading requirements are minimized?
 - c. Is access properly placed in relation to sight distance, driveway spacing, and other related considerations, including opportunities for joint and cross access? Are entry roads clearly visible from the major arterials?
 - d. Do units front on residential access streets rather than major roadways?
 - e. Is automobile movement within the site provided without having to use the peripheral road network?
 - f. Does the road system provide adequate access to buildings for residents, visitors, deliveries, emergency vehicles, and garbage collection?
 - g. Have the edges of the roadways been landscaped? If sidewalks are provided alongside the road, have they been set back sufficiently from the road, and has a landscaped planting strip between the road and the sidewalk been provided?
 - h. Does the pedestrian path system link buildings with parking areas, entrances to the development, open space, and recreational and other community facilities?

Commentary: The subdivision and site plan review process provides local governments with the most effective opportunity for addressing access considerations and preventing access problems before they occur. This should be done as early as possible in the process. Developers will be far less amenable to

revising the access plan later in the process or after the site plan or plat has been approved.

3) The *(city/county)* reserves the right to require traffic and safety analysis where safety is an issue or where significant problems already exist.

Section 24. Variance Standards

- 1) The granting of the variation shall be in harmony with the purpose and intent of these regulations and shall not be considered until every feasible option for meeting access standards is explored.
- 2) Applicants for a variance from these standards must provide proof of unique or special conditions that make strict application of the provisions impractical. This shall include proof that:
 - a. indirect or restricted access cannot be obtained;
 - b. no engineering or construction solutions can be applied to mitigate the condition; and
 - c. no alternative access is available from a street with a lower functional classification than the primary roadway.
- 3) Under no circumstances shall a variance be granted, unless not granting the variance would deny all reasonable access, endanger public health, welfare or safety, or cause an exceptional and undue hardship on the applicant. No variance shall be granted where such hardship is self-created.

APPENDIX F: RECOMMENDATIONS

