# Congestion Management Process

# CMP Report

# June 2019

North Florida TPO
Transportation Planning Organization
PLAN · FUND · MOBILIZE

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# Executive Summary

The North Florida Transportation Planning Organization (TPO) is required to prepare a congestion management process to address recurring congestion within the region. The social and economic costs of recurring congestion within the North Florida region have staggering economic and social costs. More than $329 million are lost each year by travelers due to the lost time and excess fuel consumption associated with delays.

Since 2014, the total demand on the network has increased by 13.6 percent. More people are moving today than were in 2014 and this results in increased total travel delay. The daily delay has increased by 18 percent in 2017. Travel time reliability is also decreasing on key corridors. Compared to 2014, the regional costs of congestion increased by $198 million. This congestion during this analysis period is more concentrated on key facilities such as I-10, I-95, I-295, Banding Boulevard, Southside Boulevard, Atlantic Boulevard, San Jose Boulevard, J.T. Butler Boulevard and SR A1A.

Transit ridership numbers are nearly the same as they were in 2014, however ridership has reduced by 4.9 percent from 2016 to 2017. This may be due to a strong economy where users can afford the use of other transportation modes such as personal vehicles or ride-hailing services. The population with access to transit has increased at the same rate as the population growth. In 2017, 4 percent of all residential households in the North Florida region have a transit stop within the quarter-mile radius. Sixty-four percent of all residential households within North Florida region are located within a 5-mile radius of a park-n-ride lot.

As part of this plan, a series of congestion management corridors were established, and then potential strategies to reduce congestion and improve mobility were identified. The goals and objectives of these strategies included:

- Leverage technology such as express lanes and digital traffic control to enhance the operations of corridors, so we can get the most out of our existing system.
- Limit the number of lanes to six on non-freeway facilities to provide pedestrian, bicycle and transit friendly environments consistent with the corridor.
- A continuing process to enhance the mobility within the area.
- Update the process once every 5 years concurrent with the update to the long-range transportation plan.
- Engage new data sources as they come available to enhance the process for understanding congestion and defining solutions to best fit the needs for improving the corridors.
- Evaluate performance measures annually for the region, and monitor real-time data sources for intermediate evaluations of problem corridors.

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## List of Acronyms and Abbreviations

| | |
|---|---|
| ACS | American Community Survey |
| API | Application Programming Interface |
| BEBR | Bureau of Economic and Business Research |
| BRT | Bus Rapid Transit |
| CAP | Computer Assistance Service Program |
| CMP | Congestion Management Process |
| CO | Carbon Monoxide |
| $CO_2$ | Carbon Dioxide |
| DMS | Dynamic Message Sign |
| FARS | Fatal Analysis Reporting System |
| FDOT | Florida Department of Transportation |
| FHWA | Federal Highway Administration |
| FIRES | Florida's Integrated Report Exchange System |
| FTCR | Florida Traffic Crash Report |
| GDP | Gross Domestic Product |
| GTFS | General Transit Feed Specification |
| HAR | Highway Advisory Radio |
| HOV | High Occupancy Vehicle |
| ICM | Integrated Corridor Management |
| IDE | Integrated Data Exchange |
| ITS | Intelligent Transportation System |
| JAXPORT | Jacksonville Port Authority |
| JIA | Jacksonville International Airport |
| JTA | Jacksonville Transportation Authority |
| LEHD | Longitudinal Employer-Household Dynamics |
| LOS | Level of Service |
| LOTTR | Level of Travel Time Reliability |
| LRT | Light Rail Transit |
| LRTP | Long Range Transportation Plan |
| MOE | Measure of Effectiveness |
| MPA | Metropolitan Planning Agency |
| MPM | Mobility Performance Measures |
| MPO | Metropolitan Planning Organization |
| NEPA | National Environmental Policy Act |
| NERPM | Northeast Regional Planning Model |
| NHS | National Highway System |
| Non-SOV | Non-Single Occupancy Vehicle |
| $NO_x$ | Nitrogen Oxides |
| PD&E | Project Development and Environment |
| PMTD | Person Miles Traveled Daily |
| RCI | Roadway Characteristics Inventory |
| RTMC | Regional Transportation Management Center |
| SAFETEA-LU | Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users |
| SGJ | Northeast Florida Regional Airport |
| SHS | State Highway System |
| SOV | Single Occupancy Vehicle |

| | |
|---|---|
| TEU | Twenty-foot Equivalent Unit |
| TIP | Transportation Improvement Program |
| TMA | Transportation Management Area |
| TPO | Transportation Planning Organization |
| TSM&O | Transportation System Maintenance and Operations |
| TTTR | Truck Travel Time Reliability |
| VMT | Vehicle Miles Traveled |
| VMTD | Vehicle Miles Traveled Daily |
| VMTPH | Vehicle Miles Traveled Peak Hour |
| VOC | Volatile Organic Compounds |

# 1. Introduction

A Congestion Management Process, or CMP, involves routinely monitoring all modes of travel and activity on the transportation network and identifying effective solutions that mitigate the adverse impacts of congestion. The purpose of the CMP is to improve traffic operations and safety by aligning strategies, objectives, and investments to ensure resources are dedicated to reducing congestion within the North Florida Transportation Planning Organization (TPO) planning boundary.

According to the Congestion Management Process: A Guidebook (FHWA, 2011), the Federal Highway Administration (FHWA) defines a CMP as "a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meet state and local needs." This guidebook includes eight actions of a successful congestion management process. At a basic level, these actions must be implemented to comply with federal regulations. The federal eight-action congestion management process outlined in the FHWA CMP Guidebook is displayed in Figure 1 – Congestion Management Process below.

*Figure 1 – Congestion Management Process*

Maintenance of a CMP is a requirement for all Metropolitan Planning Organizations (MPO) under Florida law and for MPO's in Transportation Management Areas (TMAs) under Federal law. In accordance with state and Federal law, the North Florida TPO has maintained a CMP since 1997 as part of routine planning efforts. The public benefits from having a functional CMP in place, since it can often improve travel conditions by suggesting low-cost improvements or strategies. These strategies can be implemented in a relatively short timeframe (within 5 to 10 years) compared to more traditional capacity improvements such as adding additional travel lanes which can take over ten years to implement and cost significantly more. Projects identified through the CMP may also be added to future updates of the Long-Range Transportation Plan (LRTP), should they require a longer timeframe to implement.

## 1.1. Causes of Congestion

The process of congestion management begins by understanding the cause of the problem. In a national study presented by FHWA (Paniati, 2003), six major causes of congestion are identified. These occurrences can be reoccurring, such as bottlenecks and poor signal timing, or non-reoccurring, such as traffic incidents, work zones, bad weather, and special events. Figure 2 illustrates the six major causes of congestion.

*Recurring Congestion*

Bottlenecks – points where the roadway narrows or regular traffic demands (typically at traffic signals) cause traffic to back up. Bottlenecks cause 40 percent of traffic congestion, the largest source of congestion and typically cause a roadway to operate below its adopted level of service standards.

Poor Traffic Signal Timing – the faulty operation of traffic signals where the time allocation for a road does not match the volume on that road. Poor signal timings cause 5 percent of traffic congestion, typically on major and minor streets.

*Non-recurring Congestion*

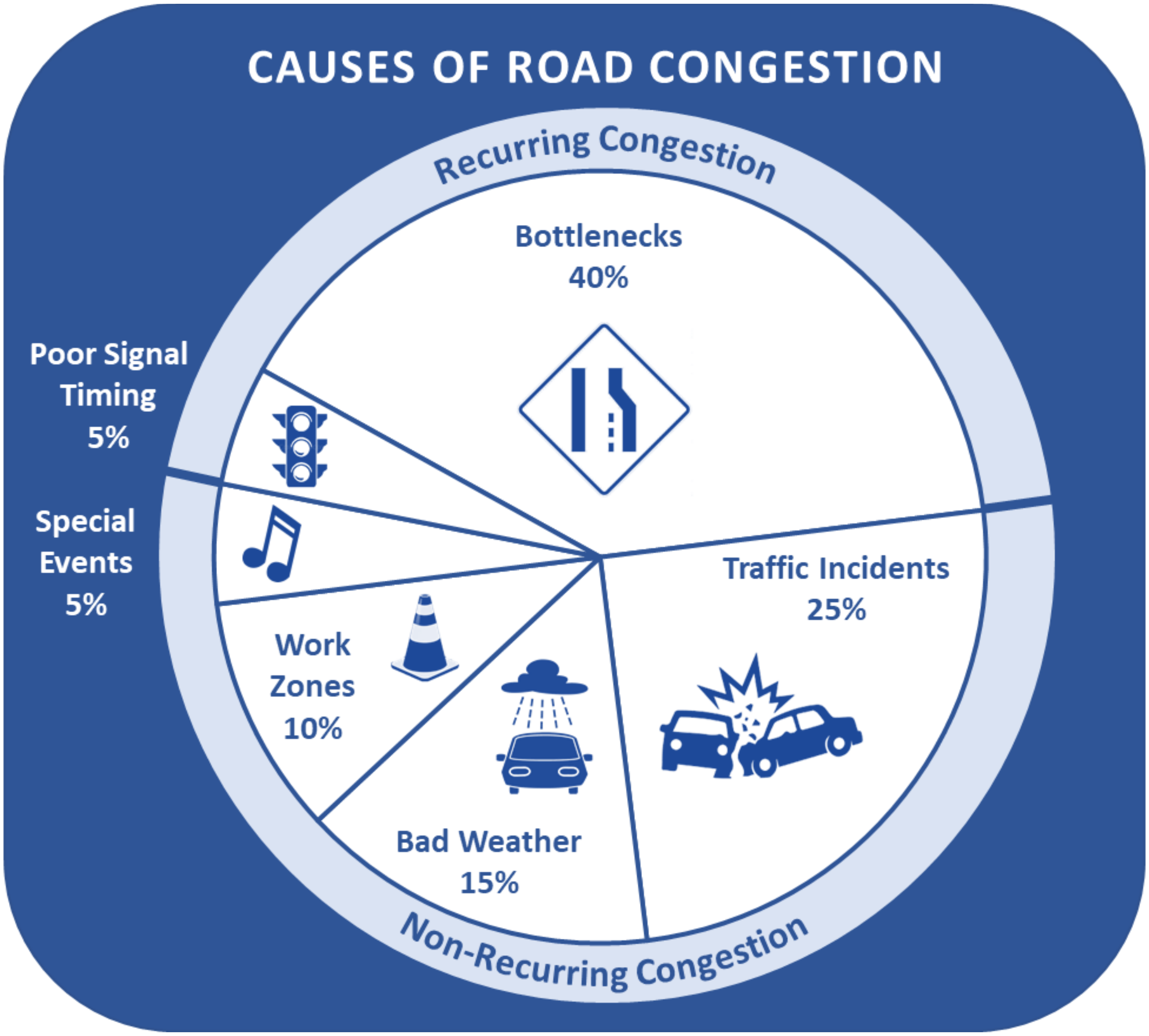
Traffic Incidents – could include crashes, stalled vehicles, and debris on the road. These incidents cause about one quarter of congestion problems.

Bad Weather – weather cannot be controlled but cause about 15 percent of traffic congestion. Travelers can be notified of the potential for increased congestion and signal systems can adapt to improve safety.

Work Zones – could include new road building and maintenance activities, such as filling potholes. These are necessary activities but cause about 10 percent of traffic congestion. The amount of congestion caused by these activities can be reduced through a variety of strategies.

Special Events – could include musical events, sports games, or other public festivals. These events cause spikes in traffic volumes and account for about 5 percent of traffic congestion.

*Figure 2– Causes of Road Congestion*



## 1.2. North Florida TPO's CMP

The North Florida TPO has maintained a CMP since 1997. Updates to the CMP were completed in 2006 and 2013. The congestion management process has evolved to utilize new technology in the transportation industry. In 2006, the Northeast Regional Planning Model (NERPM) was used to determine the ratio of volume to roadway capacity, which was the primary performance measure analyzed to determine congested corridors. In 2013, the CMP used advanced technologies such as BlueToad™ data and probe data to analyze travel time and speed on major roadways. Also, the analysis area was expanded to consider the multi-modal transportation network and the expanded TPO boundary encompassing the entire counties of Clay, Duval, Nassau, and St Johns.

The North Florida TPO continues to utilize the latest technology available. In 2015, a new state-of-the-art Regional Transportation Management Center (RTMC) was opened housing employees from the Florida Highway Patrol, Florida Department of Transportation (FDOT), North Florida TPO, and others whose main objective is to work towards safe and efficient travel in the Northeast Florida area. The Florida Highway Patrol provides dispatch for ten state law enforcement agencies from the Center. Live traffic cameras, real-time BlueToad™ data, and other technologies are utilized to dispatch law enforcement, fire/rescue, towing, and Road Rangers as needed. Road Rangers is a FDOT program partially funded by the North Florida TPO that assists disabled motorists and law enforcement during traffic incidents by securing the scene and directing traffic. The North Florida RTMC staff monitor and deploy other intelligent transportation systems such as dynamic message signs, vehicle detection sensors, traffic signal controllers, wind sensors, and 511 – the free phone and web service providing real-time information on traffic conditions and incidents at any time of day or night.

As part of the 2019 CMP update, the North Florida TPO have an associated web-based dashboard (SmartNorthFloridaData.com). The dashboard will be accessible to the public and will display the data for each performance measure in the CMP. The dashboard is a visualization of the underlying database comprised from multiple sources. This database is the first step towards an Integrated Data Exchange (IDE). The IDE is the web-based solution being developed to meet both the open and controlled access data needs of the North Florida Smart Region program as envisioned by the North Florida TPO, FDOT and partners. The IDE platform is at the heart of the North Florida Smart Region data environment that integrates data and data services from multiple sources and tenants, including the planned smart region technologies, traditional transportation data, and data from other community partners. The IDE embodies open-data, best of breed technologies, including opensource and commercial off the shelf concepts to enable better decision-making and problem solving for all users.

The North Florida TPO complies with federal regulations outlined in the FHWA Moving Ahead for Progress in the 21st Century Act (MAP-21) and accompanying Fast Act. MAP-21 establishes a performance measures to help achieve goals in the areas of safety, infrastructure condition, congestion reliability, system reliability, freight movement, environmental sustainability, and reduced project delays. As part of the MAP-21 Act the North Florida TPO reports all performance measures outlined by FHWA and adopted by the FDOT. Figure 3 outlines the performance measures reported by the North Florida TPO, the FDOT Sourcebook, and the federal requirements.

*Figure 3 - Performance measures by Agency*

| MODE | | QUANTITY | FDOT | North Florida TPO | FHWA | QUALITY | FDOT | North Florida TPO | FHWA | ACCESSIBILITY | FDOT | North Florida TPO | FHWA | UTILIZATION | FDOT | North Florida TPO | FHWA | SAFETY | FDOT | North Florida TPO | FHWA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PEOPLE | Auto/Truck | Vehicle Miles Traveled | ● | ● | | % Travel Meeting LOS Criteria | ● | | | Job Accesibility: Auto | ● | ● | | % Travel Heavily Congested | ● | ● | | Number of Fatalities | ● | ● | ● |
| | | Person Miles Traveled | ● | ● | | % Miles Meeting LOS Criteria | ● | ● | | | | | | % Miles Heavily Congested | ● | ● | | Number of Serious Injuries | ● | ● | ● |
| | | Percent SOV | | ● | | Travel Time Reliability: On-Time Arrival Planning Time Index | ● | ● | ● | | | | | Hours Heavily Congested | ● | ● | | Rate of Fatalities | ● | ● | ● |
| | | Percent Non-SOV | | ● | | Vehicle Hours of Delay | ● | ● | | | | | | Vehicles per Lane Mile | ● | ● | | Serious Injury Rate | ● | ● | ● |
| | | Vehicle Occupancy | | ● | | Person Hours of Delay | ● | | | | | | | | | | | Total Number of Crashes | ● | ● | |
| | | | | | | Average Travel Speed | ● | ● | | | | | | | | | | Non-motorized serious injuries | ● | ● | ● |
| | | | | | | Bridge Condition | ● | ● | ● | | | | | | | | | | | | |
| | | | | | | Pavement Condition | ● | ● | ● | | | | | | | | | | | | |
| | Transit | Passenger Trips | ● | ● | | Revenue Miles Between Failures | ● | | | Weekday Span of Service | ● | | | Passenger Trips per Revenue Mile | ● | ● | | | | | |
| | | Revenue Miles | ● | | | Average Age of Transit Fleet | ● | ● | ● | Resident Access to Transit | ● | ● | | Passenger Trips Per Revenue Hour | | ● | | | | | |
| | | | | | | | | | | Job Accesibility: Transit | ● | | | Average Load On Transit Vehicle | | ● | | | | | |
| | | | | | | | | | | Population within 5 miles of Park n Ride Lots | | ● | | | | | | | | | |
| | Pedestrian & Bicyclist | | | | | Pedestrian Level of Service | ● | | | % Pedestrian Facility Coverage | ● | ● | | | | | | Pedestrian Crashes | ● | ● | |
| | | | | | | Bicycle Level of Service | ● | | | % Bicycle Facility Coverage | ● | ● | | | | | | Bicycle Crashes | ● | ● | |
| | | | | | | | | | | Miles of Pedestrian Facilities | ● | ● | | | | | | | | | |
| | | | | | | | | | | Miles of Bicycle Facilities | ● | | | | | | | | | | |
| | | | | | | | | | | % Populatoin within 1 mile of Bike Lane and Shared Use Paths | ● | | | | | | | | | | |
| | Aviation | Passenger Boardings | ● | ● | | Departure Reliability | ● | | | | | | | | | | | | | | |
| | Rail | Passengers | ● | | | On-time Arrival | ● | | | | | | | | | | | | | | |
| | Seaport | Seaport Passenger Movement | ● | | | | | | | | | | | | | | | | | | |
| Freight | Truck | Truck Miles Traveled | ● | | | Combination Truck Travel Time Reliability On Time Arrival Planning Time Index | ● | ● | ● | | | | | Truck Empty Backhaul Tonnage | ● | | | | | | |
| | | Combination Truck Miles Traveled | ● | ● | | Combination Truck Hours of Delay | ● | | | | | | | % Miles Heavily Congested | ● | | | | | | |
| | | Combination Truck Ton Miles Traveled | ● | | | Combination Truck Average Travel Speed | ● | | | | | | | Vehicles per Lane Mile | ● | | | | | | |
| | | Combination Truck Tonnage | ● | | | Combination Truck Cost of Delay | ● | | | | | | | | | | | | | | |
| | | Combination Truck Value of Freight | ● | | | | | | | | | | | | | | | | | | |
| | Aviation | Tonnage | ● | ● | | | | | | | | | | | | | | | | | |
| | | Value of Freight | | | | | | | | | | | | | | | | | | | |
| | Rail | Tonnage | ● | | | | | | | | | | | | | | | | | | |
| | Seaport | Tonnage | ● | ● | | | | | | % of Seaports with Active Rail Access | ● | | | | | | | | | | |
| | | Containers (TEU's) | ● | ● | | | | | | | | | | | | | | | | | |
| | | Automobiles | ● | ● | | | | | | | | | | | | | | | | | |
| | | Value of Freight | ● | | | | | | | | | | | | | | | | | | |

FDOT ● (blue)
North Florida TPO ● (red)
FHWA ● (yellow)

### 1.3. Review of Other CMP Documents

A review of the CMP from other Florida MPOs and other states in North America was performed to identify different approaches to the congestion management process. A total of 30 CMPs were reviewed, 23 within the state of Florida and seven outside of Florida.

A summary of the key findings in the literature review are presented below. A detailed summary of the seven most recently published CMPs is included in Appendix A.

- Many of the CMPs reviewed used volume to capacity ratio as the primary evaluation of congestion.
- Many of the CMPs reviewed used transportation models with Existing + Committed scenarios to evaluate congestion.
- Almost all the CMPs reviewed cited FHWA guidance including the federal regulations, national goals, causes of congestion, the eight-step congestion management process, and the toolbox of congestion management strategies.
- Many of the CMPs reviewed used data provided by the FDOT.
- Most of the CMPs reviewed connect goals with objectives and performance measures, but many do not connect the implementation strategies with the goal, objectives, and performance measures.
- Most of the CMPs reviewed contain a long list of strategies without specifying which ones will be implemented.
- Most of the CMPs reviewed are complimented with an annual update showing the results of selected performance measures.
- Many of the CMPs reviewed separate the 8-step congestion management process by addressing the first three steps in a procedure handbook and the last 5 steps in an annual report.
- Very few of the MPOs reviewed have a dashboard component for the CMP.

## 2. Goals and Objectives

A series of CMP goals and objectives were developed to guide the process of monitoring congestion and improving mobility in North Florida. These were compiled based on the previously adopted CMP goals and objectives and the 2040 Long Range Transportation Plan. The 2045 Long Range Transportation Plan will be adopted on November 14th, 2019. A comparison of the CMP goals and objectives with the 2013 CMP goals and objectives is included in Appendix B. These goals and objectives are consistent with those adopted for the 2045 LRTP.

There are five goals with associated objectives are summarized in Table 1.

*Table 1 - Summary of Goals and Objectives*

| Goal 1: Enhance Economic Competitiveness | |
|---|---|
| Objective 1.1 | Improve truck travel time reliability |
| Objective 1.2 | Enhance access to jobs |
| Objective 1.3 | Enhance freight activities |

| | |
|---|---|
| Objective 1.4 | Improve local economy |

| Goal 2: Livability and Sustainability | |
|---|---|
| Objective 2.1 | Enhance transit accessibility |
| Objective 2.2 | Enhance transit ridership |
| Objective 2.3 | Enhance bicycle and pedestrian quality of service |
| Objective 2.4 | Reduce the cost of congestion |
| Objective 2.5 | Reduce emissions from automobiles |

| Goal 3: Enhance Safety | |
|---|---|
| Objective 3.1 | Reduce crashes |
| Objective 3.2 | Reduce fatal crashes |

| Goal 4: Enhance Mobility | |
|---|---|
| Objective 4.1 | Optimize the quantity of travel |
| Objective 4.2 | Optimize the quality of travel |
| Objective 4.3 | Reduce congestion from incidents |
| Objective 4.4 | Improve accessibility to mode choices |
| Objective 4.5 | Optimize the utilization of the system |

| Goal 5: System Preservation | |
|---|---|
| Objective 5.1 | Maintain roadways |
| Objective 5.2 | Maintain bridges |
| Objective 5.3 | Maintain transit system |

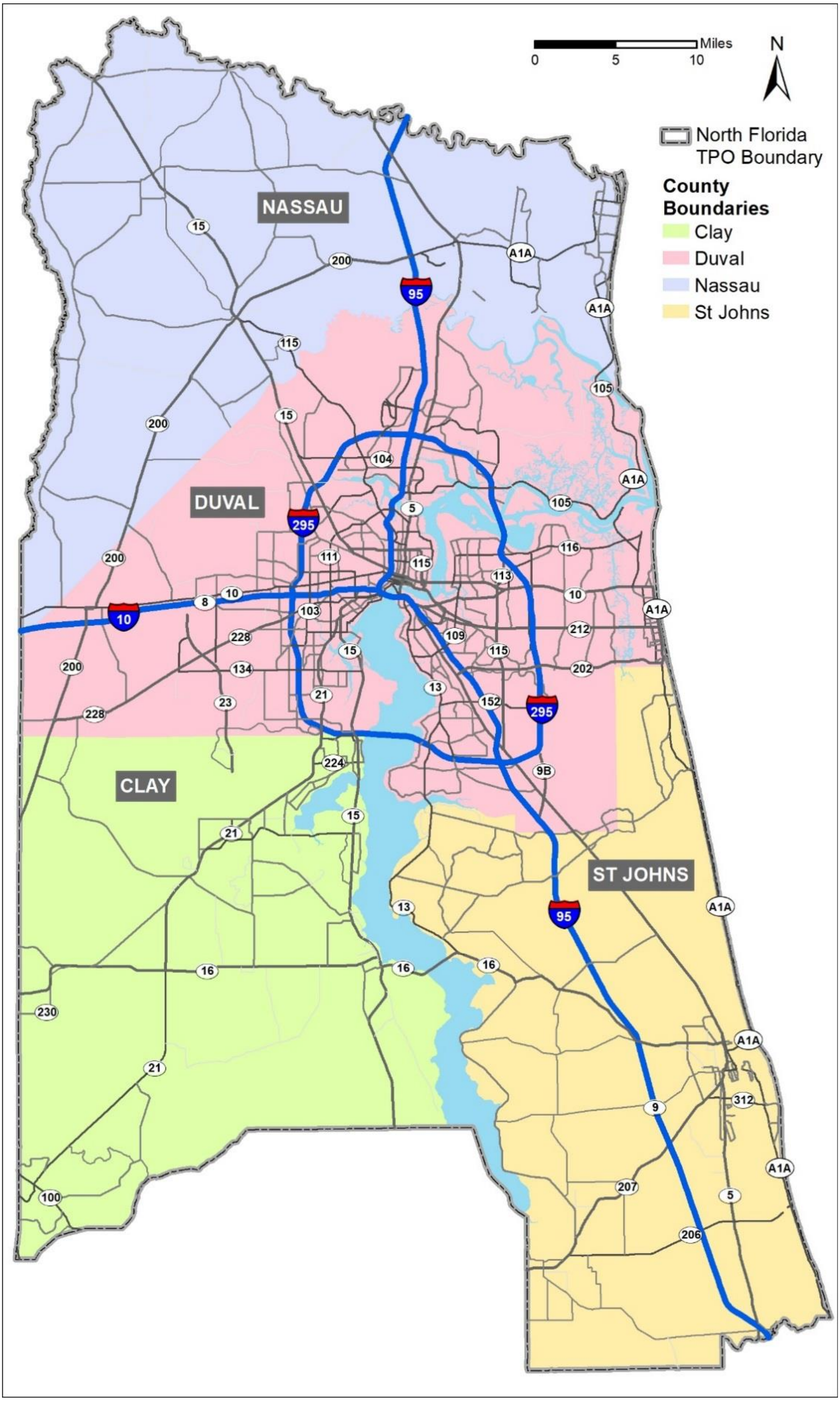
# 3. CMP Network

The North Florida TPO planning boundaries consist of Clay, Duval, Nassau, and St. Johns counties in their entirety. The multi-modal transportation network consists of roads, bridges, airports, a seaport, transit, bicycle and pedestrian facilities. The North Florida CMP network boundary is shown on Figure 4. The roadway network for the CMP is classified by the FDOT functional classification system and includes the following categories: Principal Arterials (Interstate, Expressway, and other), Minor Arterials, and Major Collectors. For the purposes of the CMP, Minor Collectors and local roads are not included.

There are four transit systems within the North Florida TPO boundary. Nassau Transit primarily operates in Nassau County with service to Hilliard, Callahan, Yulee, Fernandina Beach, and Jacksonville. The Jacksonville Transportation Authority (JTA) primarily operates in Duval County with some service in Clay, Nassau, and St Johns counties. Clay Transit operates in Clay County with one route that extends to Naval Air Station Jacksonville. The Sunshine Bus Company is the transit provider for St. Johns County.

There are several airports that provide passenger and freight transport. The Jacksonville Port Authority (JAXPORT) also provides for freight transportation, and passengers utilize JAXPORT to travel on the cruise line.

*Figure 4 – North Florida CMP Network Boundary*



# 4. Multi-modal Performance Measures

Table 2 summarizes the performance measure by goal and objective.

*Table 2 - Summary of Performance Measures by Goal and Objective*

| Goal 1: Enhance Economic Competitiveness | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 1.1 | Improve truck travel time reliability | Truck travel time reliability (TTTR) | Maintain or improve the reliability |
| 1.2 | Enhance access to jobs | Number of jobs near a state highway | Maintain or improve access to jobs |
| 1.3 | Enhance freight activities | Air cargo | Maintain or increase |
| | | Tons moved | Maintain or increase |
| | | Containers moved | Maintain or increase |
| | | Automobiles moved | Maintain or increase |
| 1.4 | Improve local economy | Gross domestic product | (1) |

| Goal 2: Livability and Sustainability | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 2.1 | Enhance transit accessibility | Percent of Population within a quarter mile walk of a transit stop | 95% of all stops<br>(2) |
| | | Population within 5 miles of park-n-ride lots | 95% of all stops |
| 2.2 | Enhance transit ridership | Passengers per vehicle revenue mile | (3) |
| | | Passengers per vehicle revenue hour | (3) |
| 2.3 | Enhance bicycle and pedestrian quality of service | Lane miles with bicycle and pedestrian facilities | 85% of lane miles |
| 2.4 | Reduce the cost of congestion | Cost of congestion | (4) |
| | | Congestion cost per capita | (4) |
| 2.5 | Reduce emissions from automobiles | Cost of emissions | Maintain attainment status. (4) |

| Goal 3: Enhance Safety | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 3.1 | Reduce crashes | Number of vehicle crashes | Reduce by 0.25% each year |
| | | Crash rate per million vehicle miles | Reduce or maintain |
| | | Number of serious injuries | Reduce by 0.25% each year |
| | | Rate of serious injuries per million vehicle miles | Reduce or maintain |
| | | Non-motorized serious injuries | Reduce by 0.25% each year |
| | | Total bicycle crashes | Reduce by 0.25% each year |
| | | Total pedestrian crashes | Reduce by 0.25% each year |
| 3.2 | Reduce fatal crashes | Number of fatalities | Reduce by 0.25% each year |
| | | Fatality rate per million vehicle miles | Reduce or maintain |
| | | Total bicycle fatalities | Reduce by 0.25% each year |
| | | Total pedestrian fatalities | Reduce by 0.25% each year |

| Goal 4: Enhance Mobility | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 4.1 | Optimize the quantity of travel | Vehicle miles traveled | (5) |
| | | Person miles traveled | (5) |
| | | Truck miles traveled | (5) |
| | | Vehicle occupancy | (5) |
| | | Transit ridership | Increase transit ridership |
| | | Enplanements | Maintain or increase |
| 4.2 | Optimize the quality of travel | Average travel speed | Maintain or improve the average travel speed |
| | | Average vehicle delay | Maintain or reduce the average vehicle delay |
| | | Average commute time | Maintain or reduce the average trip time |

| Goal 4: Enhance Mobility | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 4.2 | Optimize the quality of travel | Level of travel time reliability (LOTTR) | Maintain or improve the reliability Achieve 95% reliability (on time arrival) on Strategic Intermodal System facilities. |
| | | On-time reliability ("FL Method") | Maintain or improve the reliability Achieve 95% reliability (on time arrival) on Strategic Intermodal System facilities. |
| | | Percent miles meeting LOS criteria rural facilities | Maintain the level of service standard (FDOT standard for Strategic Intermodal System facilities and local government standards for other facilities) |
| 4.3 | Reduce congestion from incidents | Number of incidents | Maintain or reduce |
| | | Incident verification time | Maintain or reduce |
| | | Incident clearance time | Improve clearance times by 15 minutes. |
| | | Response duration | Maintain or reduce |
| | | Open roads duration | Maintain or reduce |
| | | Departure duration | Maintain or reduce |
| | | Roadway clearance duration | Improve clearance times by 15 minutes. |
| 4.4 | Improve accessibility to mode choices | Miles of pedestrian facilities | (6) |
| | | Miles of bicycle facilities | (6) |
| | | Percent population with access to transit | Increase the % of population served with ¼ mile |
| 4.5 | Optimize the utilization of the system | Percent miles severely congested | Maintain or reduce the % of system heavily congested |
| | | Percent travel severely congested | Maintain or reduce the % of travel heavily congested |
| | | Vehicles per lane mile | Optimize the vehicles per lane mile for a desired LOS |
| | | Hours severely congested | Maintain or reduce the % of travel heavily congested |

| Goal 4: Enhance Mobility | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 4.5 | Optimize the utilization of the system | Average load on transit vehicle | Optimize the transit load factor for a desired quality of service |

| Goal 5: System Preservation | | | |
|---|---|---|---|
| **Objective** | | **Performance Measures** | **Benchmark** |
| 5.1 | Maintain roadways | Percent of Interstate Pavement in Good Condition | 95% of SIS roadways in good or better condition |
| | | Percent of Interstate Pavement in Poor Condition | 95% of SIS roadways in good or better condition |
| | | Percent of Non-Interstate Pavement in Good Condition | 85% of non-SIS roadways in good or better condition |
| | | Percent of Non-Interstate Pavement in Poor Condition | 85% of non-SIS roadways in good or better condition |
| 5.2 | Maintain bridges | Percent of National Highway System Bridges in Good Condition | Strengthen bridges that are either (1) structurally deficient or (2) posted for weight restriction within 6 years on FDOT facilities. Replace bridges that require structural repair that more cost effective to replace within 9 years on FDOT facilities. Satisfy FDOT's off system bridge replacement goals. |
| | | Percent of National Highway System Bridges in Poor Condition | |
| 5.3 | Maintain transit system | Average age of transit vehicles | Age of vehicles |

(1) GDP is an exogenous factor that referenced for correlation of demand only.
(2) This performance measure will not change significantly from year to year unless major route changes or new transit operations are deployed.
(3) Coordination with Jacksonville Transportation Authority is needed to develop the benchmark data needed.
(4) Many exogenous factors influence this performance measure including the price of fuels that are beyond the scope of a CMP. However, this performance measure will be considered within the CMP based on policy decisions made during the scenario development.
(5) Generally, increases in the quantity traveled (throughout) are preferred. However, consistent with livability and sustainability goals, one objective is to reduce the amount of travel needed. Therefore, no benchmarks are proposed, but monitoring is recommended.
(6) These performance measures will not change significantly from year to year but will be evaluated in each major update to the CMP to establish benchmark and monitor performance.

# 5. Data Collection

For this CMP update, the data sources were determined for use in the dashboard with the integrated data exchange in mind. The integrated data exchange works best with streaming data from the internet through an application program interface (API). The following section documents the data source and calculations for each of the performance measures.

## 5.1. Truck Travel Time Reliability (TTTR)

The data for truck travel time reliability is collected through BlueToad™ devices. The North Florida TPO in partnership with the FDOT District 2 ITS office has deployed BlueToad™ devices along major roadways within the North Florida region to obtain real-time data. TrafficCast's BlueToad™ devices use Bluetooth technology to collect information from mobile devices within vehicles traveling on the roadways. The Bluetooth technology transmits the geolocation and timestamp of the mobile device. By examining this data for a pair of BlueToad™ devices, the speed and travel time of the vehicle is determined. There are ten corridors equipped with BlueToad™ devices in North Florida: I-10, I-95, SR 10, SR 21, SR 200, US 17, US 90, SR 13, I-295, and US 1.

According to the Federal Highway Administration, freight movement will be assessed by a Truck Travel Time Reliability (TTTR) Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the TTTR Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of roadway. Table 3 shows the data source and calculation methodology. For this CMP, the truck travel time reliability is reported for the months of April and May.

*Table 3 - Truck Travel Time Reliability*

| *Truck Travel Time Reliability (TTTR)* | |
|---|---|
| Data Sources | Calculation |
| Truck travel time reliability: BlueToad™ data for pairs along I-10, I-95, SR 10, SR 21, SR 200, US 17, US 90, SR 13, I-295, and US 1. | Ratio of 95th percentile travel time to 50th percentile travel time for time periods:<br>For WKDAY, only Tues - Thurs<br>1) AM WKDAY - 6AM - 10AM<br>2) Mid-Day WKDAY - 10AM - 4PM<br>3) PM WKDAY - 4PM - 8PM<br>4) WKEND - 6AM - 8PM<br>5) Overnight All Days - 8PM - 6AM<br>Corridor index is the weighted average of highest index for each segment weighted by segment length. |

## 5.2. Number of Jobs Near State Highways

The employment data is an annual number that represents the average number of jobs throughout the year. The number of jobs is obtained from the US Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program through the "On-The Map" tool. The data is exported from the tool for each county within the TPO boundary. The employment data is a point file that represents the total number of jobs at a specific locations or addresses. To obtain the number of jobs near a State highway, the State highway line file from the FDOT is used. The number of jobs is summed for each point within ½ mile of a State highway. This data is available for each year through 2015. Table 4 summarizes the calculation.

*Table 4 - Number of Jobs Near State Highways*

| *Number of Jobs Near State Highways* | |
|---|---|
| Data Sources | Calculation |
| Number of jobs: https://onthemap.ces.census.gov/<br>State highways: http://www.fdot.gov/statistics/gis/ | Sum of total jobs for each point within ½ mile of a State highway |

## 5.3. Air Cargo

The Jacksonville International Airport (JIA) reports the air cargo and airmail transported annually on their website. The air cargo is reported in pounds and converted to short tons. This data is available through 2016. Table 5 summarizes the calculation.

*Table 5 - Air Cargo*

| *Air Cargo* | |
|---|---|
| Data Sources | Calculation |
| Air cargo: http://www.flyjacksonville.com/content2015.aspx?id=18 | Pounds * 0.0005 = short tons |

## 5.4. Tons Moved, Containers Moved, Automobiles Moved

JAXPORT reports cargo statistics annually on their website. Total tonnage is reported in number of tons. Containers are reported in twenty-foot equivalent units (TEUs). Automobiles are a major cargo item at JAXPORT and the total number of automobiles moved is reported annually. This data is available by fiscal year through 2017. Table 6 shows the data source.

*Table 6 - Freight Moved*

| *Tons Moved, Containers Moved, Automobiles Moved* | |
|---|---|
| Data Sources | Calculation |
| Tons moved, Containers moved, Automobiles moved: https://www.jaxport.com/media/publications/ | None |

## 5.5. Gross Domestic Product

The Gross Domestic Product (GDP) for the Jacksonville Metropolitan Area is reported annually by the Bureau of Economic Analysis (BEA). This area includes all four counties in the North Florida TPO boundary. This data is reported in millions of dollars and is available through 2017. Table 7 shows the data source.

*Table 7 - Gross Domestic Product*

| *Gross Domestic Product (GDP)* | |
|---|---|
| Data Sources | Calculation |
| GDP: https://www.bea.gov/data/gdp/gdp-metropolitan-area | None |

## 5.6. Population with Access to Transit

Population with access to transit is defined as the number of people that live within one-quarter mile of a transit stop. The population used for this performance metric is the 2010 US Census population by block group factored to 2017 population using the 2017 population estimates by county from the Bureau of Economic and Business Research (BEBR). The transit stop locations are from the three transit agencies within the North Florida TPO region, including Nassau Transit, JTA, and the Sunshine Bus Company. JTA provides service for Duval and Clay counties. The JTA and the Sunshine Bus Company publish files in the general transit feed specification (GTFS) format that contains a stops file in which the bus stops are listed with latitude and longitude coordinates. The bus stops for Nassau Transit and Clay transit are obtained from their websites.

The bus stop locations for the four transit agencies is used to create a polygon file that is a 1/4 mile circle around each bus stop. This polygon file is overlaid on the census block group file that contains the 2017 estimated population. The population within the area of the bus stop 1/4 mile polygon file is estimated from the census block group file based on the percentage of the census block that is geographically covered by the bus stop 1/4 mile polygon file. Table 8 shows the data sources and calculation methodology.

*Table 8 - Population with Access to Transit*

| *Percent population with access to transit* | |
|---|---|
| Data Sources | Calculation |
| 2010 census population by block group: https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml<br><br>2017 population estimate by county: https://www.bebr.ufl.edu/population/data<br><br>JTA bus stops: https://schedules.jtafla.com/SchedulesGtfs/Download<br><br>Sunshine Bus Company bus stops: http://transitfeeds.com/p/sunshine-bus-company<br><br>https://www.google.com/maps/d/u/0/viewer?mid=1KuFHOQ8pDbi1ZhUmWXFQLAjytnY&ll=29.99108689176467%2C-81.85888750000004&z=11<br><br>Nassau Transit bus stop:<br><br>https://www.nassautransit.org/accessibility/ | Sum for each block group polygon:<br><br>2017 population within the block group multiplied by the area of block group polygon that overlaps the 1/4 mile polygon surrounding the bus stops divided by the total area of the block group polygon |

## 5.7. Population within 5 miles of park-n-ride lots

There are ten park-n-ride lots in North Florida where the public can park-n-ride a transit vehicle from one of the three transit providers. The park-n-ride lots are mapped manually using the JTA System Map and Google Maps as a guide. The ten park-n-ride lots include: Jacksonville Beach, Wonderwood, Monument, Armsdale, Baldwin, Avenues Walk, JTB, Clay County/Black Creek, Marbon, and Kings Avenue Garage.

The population used for this performance metric is the 2010 US Census population by block group factored to 2017 population using the 2017 population estimates by county from the Bureau of Economic and Business Research.

The park-n-ride locations are used to create a polygon file that is a 5-mile circle around each park-n-ride lot. This polygon file is overlaid on the census block group file that contains the 2017 estimated population. The population within the area of the park-n-ride 5-mile polygon file is estimated from the census block group file based on the percentage of the census block that is geographically covered by the park-n-ride 5-mile polygon file. Table 9 shows the data sources and calculation methodology.

*Table 9 - Population with Access to Park-and-Ride Lots*

| *Percent Population With Access To Park-and-Ride Lots* | |
|---|---|
| Data Sources | Calculation |
| 2010 census population by block group: https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml<br><br>2017 population estimate by county: https://www.bebr.ufl.edu/population/data<br><br>Park-n-ride Lots:<br><br>JTA System Map: https://www.jtafla.com/schedules/<br><br>Google Maps: https://www.google.com/maps | Sum for each block group polygon:<br><br>2017 population within the block group multiplied by the area of block group polygon that overlaps the 5-mile polygon surrounding the park-n-ride lots divided by the total area of the block group polygon |

## 5.8. Passengers Per Revenue Hour, Passengers Per Revenue Mile

The National Transit Database (NTD) provides guidance for calculating passengers per revenue hour and passengers per revenue mile for all three transit agencies within North Florida. Passengers per revenue hour is calculated by dividing the number of passengers, also known as unlinked passenger trips, by the actual vehicle revenue hours. Passengers per revenue mile is calculated by dividing the unlinked passenger trips by the actual vehicle revenue miles. Table 10 shows the data sources and calculation methodology.

*Table 10 - Passengers per Revenue Hour*

| *Passengers per revenue hour* | |
|---|---|
| Data Sources | Calculation |
| Passengers per revenue hour: National Transit Database, Service table<br>https://www.transit.dot.gov/ntd/ntd-data | Unlinked passenger trips divided by actual vehicle revenue hours |
| Passengers per revenue mile: National Transit Database, Service table<br>https://www.transit.dot.gov/ntd/ntd-data | Unlinked passenger trips divided by actual vehicle revenue miles |

## 5.9. Miles of Pedestrian Facilities

FDOT District 2 completed a Bike Ped Gap Study in March 2018. This study uses the 2017 FDOT Roadway Characteristics Inventory (RCI) database of state roads and defines a pedestrian facility as a sidewalk on at least one side of the street. The study includes total miles of sidewalk and percent of roadway miles with sidewalks by county. To calculate the percentage, the total roadway miles do not include limited access roadway miles. Table 11 shows the data sources and calculation methodology.

*Table 11 - Miles of Pedestrian Facilities*

| *Miles of Pedestrian Facilities* | |
|---|---|
| Data Sources | Calculation |
| Miles of pedestrian facilities: FDOT D2 Bike Ped Gap Study | None |

## 5.10. Miles of Bicycle Facilities

The FDOT District 2 Bike Ped Gap Study contains a summary of bicycle facilities in terms of total miles and percent of miles. The study uses the 2017 RCI database and contains values for bike lanes, paved shoulders, and shared use paths. Table 12 shows the data source.

*Table 12 - Miles of Bicycle Facilities*

| *Miles of Bicycle Facilities* | |
|---|---|
| Data Sources | Calculation |
| Miles of bicycle facilities: FDOT D2 Bike Ped Gap Study | None |

## 5.11. Cost of Congestion, Cost of Congestion Per Capita

The cost of congestion is the sum of the cost of fuel consumption and the cost of time loss due to congestion. Both factors are based on the delay due to congestion as reported in the FDOT Mobility Performance Measures (MPM) data. To calculate the cost of fuel consumption, the delay is multiplied by an assumed value of fuel wasted during delay. The amount of fuel is then converted to dollars based on the average cost of gasoline. To calculate the cost of time loss due to congestion, the delay is multiplied by an assumed average cost of time.

The cost of congestion per capita is the cost of congestion divided by the population. The population used for this performance metric is the 2017 population estimates by county from the BEBR. Table 13 shows the data sources and calculation methodology. Table 13 shows the data sources and calculation methodology.

*Table 13 - Cost of Congestion*

| *Cost of congestion* | |
|---|---|
| Data Sources | Calculation |
| Cost of fuel consumption due to congestion:<br>Daily delay – FDOT MPM data<br>Assumed fuel wasted during delay: 575 ml/hour<br>Average cost of gasoline: $2.485/gallon – https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_sfl_a.htm<br>Conversion factor: 0.00026 gal/ml<br>Days per year factor: 300 days per year (weekdays) | Daily Delay (hrs) * Assumed fuel wasted during delay (ml/hr) * Conversion factor (gal/ml) * Average cost of gasoline ($/gal) * Days per year factor |
| Cost of time loss due to congestion:<br>Daily delay – FDOT MPM data<br>Assumed average cost of time: $17.67 – 2015 TTI Urban Mobility Report<br>https://mobility.tamu.edu/ums/<br>Days per year factor: 300 days per year (weekdays) | Daily delay (hrs) * avg cost of time * Days per year factor |
| Cost of congestion | Cost of fuel consumption due to congestion + cost of time loss due to congestion |
| Cost of congestion per capita: 2017 population estimate by county<br>https://www.bebr.ufl.edu/population/data | Cost of congestion / population |

## 5.12. Cost of Emissions

The cost of emissions is defined as the cost of carbon dioxide, volatile organic compounds, and nitrogen oxides due to congestion. The cost of these emissions is based on delay due to congestion. The delay is reported in the FDOT MPM data and is reported in vehicle-hours per day. The delay is multiplied by emission factors to estimate the amount of emissions due to the delay. The amount of emissions is then multiplied by a monetized value to estimate the cost of the emissions due to the delay. Table 14 shows the data sources and calculation methodology.

*Table 14 - Cost of Emissions*

| *Cost of emissions* | |
|---|---|
| Data Sources | Calculation |
| Cost of carbon dioxide ($CO_2$):<br><br>Daily delay – FDOT MPM data<br><br>$CO_2$ emissions factor: 1,389 g/hr<br><br>$CO_2$ monetized value: $47/metric ton – TIGER Benefit-Cost Analysis Resource Guide<br><br>Conversion factor: 1,000,000 g/metric ton<br><br>Days per year factor: 300 days per year (weekdays) | Daily Delay (hrs) * Emission Factor(g/hr) / Conversion factor (g/metric ton) * Monetized value ($/metric ton) * Days per year factor |
| Cost of volatile organic compounds (VOC):<br><br>Daily delay – FDOT MPM data<br><br>VOC emissions factor: 10.7 g/hr<br><br>VOC monetized value: $1,905/short ton – Benefit-Cost Analysis Guidance for Discretionary Grant<br><br>https://www.transportation.gov/office-policy/transportation-policy/benefit-cost-analysis-guidance<br><br>Conversion factor: 907,184.74 g/short ton<br><br>Days per year factor: 300 days per year (weekdays) | Daily Delay (hrs) * Emission Factor(g/hr) / Conversion factor (g/short ton) * Monetized value ($/short ton) * Days per year factor |
| Cost of nitrogen oxides ($NO_x$):<br><br>Daily delay – FDOT MPM data<br><br>$NO_x$ emissions factor: 4.2 g/hr<br><br>$NO_x$ monetized value: $7,508/short ton – Benefit-Cost Analysis Guidance for Discretionary Grant<br><br>https://www.transportation.gov/office-policy/transportation-policy/benefit-cost-analysis-guidance<br><br>Conversion factor: 907,184.74 g/short ton<br><br>Days per year factor: 300 days per year (weekdays) | Daily Delay (hrs) * Emission Factor(g/hr) / Conversion factor (g/short ton) * Monetized value ($/short ton) * Days per year factor |
| Cost of emissions | Cost of $CO_2$ + Cost of VOC + Cost of $NO_X$ |

## 5.13. Crash Data

Crash data for North Florida is available from several sources, described below:

Fatal Analysis Reporting System (FARS) – dataset produced by the National Highway Traffic Safety Administration (NHTSA) that contains data only for fatal crashes. The user interface on the website allows for queries and summary files. Raw data can also be downloaded as a series of csv files.
https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars

Florida's Integrated Report Exchange System (FIRES) – dataset maintained on behalf of the Florida Department of Highway Safety and Motor Vehicles. The website contains a restricted access section and a section that is available to the public. The public does not have access to export raw data. The data available to the public is typically in summary format by County. The data can be queried and exported; however, only some details are available. For example, the crash location, injury, and fatality information are available with the export, but the bicycle/pedestrian information is not. Also, the details are only available for a limited number of records to be exported.
https://firesportal.com/Pages/Public/Home.aspx?ReturnUrl=%2f

FDOT State Safety Office – dataset maintained by the FDOT and made available to the public through the web application called SSOGis. The application allows the user to perform queries and export the crash information, including all the details, such as crash location, injuries, fatalities, bicycle, and pedestrian.
https://fdotewp1.dot.state.fl.us/SSOGis/Home.aspx

There are other sources that offer crash data that are access restricted. As this CMP will be used to create a web dashboard and Integrated Data Exchange that is available to the public, access restricted sources are not considered for this CMP.

FDOT safety data provided to the TPO – the FDOT summarizes crashes resulting in fatalities and serious injuries for each MPO/TPO annually. This data is sent to the TPO in spreadsheet format. The fatality and serious injury counts come from the FDOT State Safety Office's Crash Analysis Reporting (CAR) database and the traffic volumes (used for crash rate calculations) are published by the FDOT office of Transportation Data and Analytics at https://www.fdot.gov/statistics/mileage-rpts/. The information contained in this spreadsheet includes fatalities, serious injuries, fatality rates, serious injury rates, and pedestrian and bicycle combined fatalities and serious injuries. This data is provided it totals and rolling 5-year averages. The data is provided in summary format for the entire TPO area, the State Highway System within the TPO area, and the local roads within the TPO area. The pedestrian and bicycle combined fatalities and serious injuries are also provided for parking lots and private property.

### 5.13.1. Total Crashes by Mode

The FIRES dataset is used to report total crashes, pedestrian crashes, and bicycle crashes. The FIRES website shows this crash data by year for each county. Table 15 shows the data source.

*Table 15 - Total Crashes by Mode*

| *Total crashes, pedestrian crashes, bicycle crashes* | |
|---|---|
| Data Sources | Calculation |
| Total crashes, pedestrian crashes, bicycle crashes: Florida's Integrated Report Exchange System<br>https://firesportal.com/Pages/Public/Home.aspx?ReturnUrl=%2f | None |

### 5.13.2. Fatal Crashes

Crash fatality data is available from the FARS, FIRES, and the FDOT safety data provided to the TPO. The total fatalities for the year 2016 match for the three data sources. There are only slight differences between FARS and FIRES for pedestrian and bicycle fatalities. The FDOT safety data provided to the TPO combines pedestrian and bicycle fatalities with serious injuries, so it cannot be compared to the FARS and FIRES data for pedestrian and bicycle fatalities. The fatality data reported for these performance measures for the region and by county is from the FIRES dataset, which will maintain consistency with the total crash information reported. The total fatalities for the State Highway System and the local roads is from the FDOT crash data provided to the TPO. Table 16 shows the data source.

*Table 16 - Fatal Crashes*

| *Total fatalities* | |
|---|---|
| Data Sources | Calculation |
| Total fatalities, pedestrian fatalities, bicycle fatalities for the region and by county: Florida's Integrated Report Exchange System<br>https://firesportal.com/Pages/Public/Home.aspx?ReturnUrl=%2f | None |
| Total fatalities for the State Highway System and local roads: FDOT safety data provided to the TPO | None |

### 5.13.3. Serious Injury Crashes

The FDOT safety data provided to the TPO contains data for serious injuries. In this dataset, serious injuries are defined by the Florida Traffic Crash Report (FTCR) injury code “4” – incapacitating. The number of serious injuries is provided for the entire TPO region, the State Highway System within the TPO region, and the local roads within the TPO region. The data is not provided by individual county. Non-motorized serious injuries are provided as combined number including pedestrian and bicycle fatalities with serious injuries, which is reported for the entire TPO region, the State Highway System within the TPO region, the local roads within the TPO region, and the parking lots and private property within the TPO region. Table 17 shows the data sources.

*Table 17 - Serious Injury Crashes*

| *Number of serious injuries* | |
|---|---|
| Data Sources | Calculation |
| Number of serious injuries for the region, State Highway System, and local roads: FDOT safety data provided to the TPO | None |
| Non-motorized serious injuries – combined pedestrian and bicycle fatalities and serious injuries for the region, State Highway System, local roads, and parking lots and private property: FDOT Crash Data provided to the TPO | None |

### 5.13.4. Crash Rate, Fatality Rate, Serious Injury Rate

The crash rate, fatality rate, and serious injury rate are defined as the number of crashes, fatalities, and serious injuries per million vehicle-miles. The FDOT publishes vehicle miles traveled by county and roadway type in the mileage reports at https://www.fdot.gov/statistics/mileage-rpts/. The total number of crashes, fatalities, and serious injuries are described below. Table 18 shows the data sources and calculation methodology.

*Table 18 - Crash Rates*

| *Crash rate* | |
|---|---|
| Data Sources | Calculation |
| Crash rate: Total crashes - Florida's Integrated Report Exchange System (FIRES)<br>https://firesportal.com/Pages/Public/Home.aspx?ReturnUrl=%2f<br>vehicle miles traveled – FDOT mileage reports<br>https://www.fdot.gov/statistics/mileage-rpts/ | Total crashes / (total daily vehicle miles traveled / 1,000,000 * 365) |
| Fatality rate for the region and by county: Total fatalities - Florida's Integrated Report Exchange System (FIRES)<br>https://firesportal.com/Pages/Public/Home.aspx?ReturnUrl=%2f<br>Vehicle miles traveled – FDOT mileage reports<br>https://www.fdot.gov/statistics/mileage-rpts/ | Total fatalities / (total daily vehicle miles traveled / 1,000,000 * 365) |
| Fatality rate for the State Highway System and local roads: FDOT safety data provided to the TPO | None |
| Serious injury rate for the region, the State Highway System and local roads: FDOT safety data provided to the TPO | None |

## 5.14. Vehicle Miles Traveled

The FDOT Central Office prepares performance management data for each MPO in the state of Florida annually. This data is based on probe data and is delivered to the North Florida TPO in spreadsheet and shapefile format by roadway segment for the state highway system. This data is also known as the FDOT Mobility Performance Management (MPM) data. The data is reported as an annual daily average and can be summarized for the region, by county, and by functional classification of the roadways. Table 19 shows the data sources and calculation methodology.

*Table 19 - Vehicle-miles Traveled*

| *Vehicle miles traveled* | |
|---|---|
| Data Sources | Calculation |
| Daily vehicle miles traveled: FDOT MPM Data | Sum vehicle miles traveled daily (field VMTD) for all state highways within the region, county, and functional classification. |

## 5.15. Person Miles Traveled

The FDOT MPM data provides person miles traveled by roadway segment for the state highway system. This data can be summarized for the region, by county, and by functional classification of the roadways. Person miles traveled is derived from vehicle miles traveled multiplied by persons per vehicle. Table 20 shows the data sources and calculation methodology.

*Table 20 – Person-miles Traveled*

| *Person miles traveled* | |
|---|---|
| Data Sources | Calculation |
| Person miles traveled: FDOT MPM Data | Sum person miles traveled (field PMTD) for all state highways within the region, county, and functional classification. |

## 5.16. Truck Miles Traveled

The FDOT MPM data provides person miles traveled by roadway segment for the state highway system. This data can be summarized for the region, by county, and by functional classification of the roadways. Truck miles traveled is derived from vehicle miles traveled multiplied by percent of vehicles that are trucks. Table 21 shows the data sources and calculation methodology.

*Table 21 - Truck-miles Traveled*

| *Truck miles traveled* | |
|---|---|
| Data Sources | Calculation |
| Truck miles traveled: FDOT MPM Data | Sum truck miles traveled (field TMTD) for all state highways within the region, county, and functional classification. |

## 5.17. Vehicle Occupancy

Vehicle occupancy is reported in the CMP in terms of the percent of vehicles with a single occupant, also known as single occupancy vehicles (SOV), the percent of vehicles with more than one occupant, also known as non-single occupancy vehicles (Non-SOV), and persons per vehicle. The US Census Bureau reports vehicle occupancy data collected through the American Community Survey (ACS) in table S0802: Means of Transportation to Work by Selected Characteristics. This CMP will use the 1-year estimate for this data, which is available through 2017. The percentage of SOV is calculated by dividing the number of workers that used a vehicle and drove alone (field HC02_EST_VC01) divided by the total number of workers (field HC01_EST_VC01). The percentage of Non-SOV is calculated by dividing the number of workers that used a vehicle and carpooled (field HC03_EST_VC01) divided by the total number of workers (field HC01_EST_VC01). This data can be summarized by the region and by county as shown in Table 22.

Persons per vehicle is also reported in the CMP, which is sourced from the FDOT MPM data. Although the documentation for the FDOT MPM data references the ACS for persons per vehicle, for consistency, the CMP uses the FDOT MPM data directly. This data is calculated by dividing the person miles traveled divided by the vehicle miles traveled and is unique for each county.

*Table 22 - Vehicle Occupancy*

| *Vehicle occupancy* | |
|---|---|
| Data Sources | Calculation |
| Percent SOV: ACS table S0802<br><br>https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t | Number of workers that used a vehicle and drove alone (field HC02_EST_VC01) divided by the total number of workers (field HC01_EST_VC01) |
| Percent Non-SOV: ACS table S0802<br><br>https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t | Number of workers that used a vehicle and carpooled (field HC03_EST_VC01) divided by the total number of workers (field HC01_EST_VC01) |
| Persons per vehicle: FDOT MPM Data | Person miles traveled (field PMTD) divided by vehicle miles traveled (field VMTD) |

## 5.18. Transit Ridership

Congress established the NTD to be the Nation's primary source for information and statistics on the transit systems of the United States. The NTD reports transit ridership annually for each of the four transit agencies within the North Florida TPO boundary. The data is reported by mode and is called unlinked passenger trips. Traditional bus transit is mode MB, or motor bus. Demand response is mode DR, which is door-to-door service for the disabled community. Each of the four transit agencies offer both traditional bus transit and demand response service. The Jacksonville Transportation Authority also operates the Skyway, which is mode MG, and the Ferry, which is mode FB. NTD data is available through 2017, however, Nassau Transit and Clay Transit only began reporting to the NTD in 2015. This data can be summarized by transit provider or by mode. Table 23 shows the data source and calculation methodology.

*Table 23 - Transit Ridership*

| *Transit ridership* | |
|---|---|
| Data Sources | Calculation |
| Transit ridership: National Transit Database<br><br>https://www.transit.dot.gov/ntd/ntd-data | Sum unlinked passenger trips by transit provider and/or by mode |

## 5.19. Enplanements

Enplanements refers to passengers traveling by aircraft. Enplanement data for the JIA is reported annually on their website. The annual enplanement data for the Northeast Florida Regional Airport (SGJ) was sent via email from the St. Johns County Airport Authority to the TPO. Table 24 shows the data source.

*Table 24 - Enplanements*

| *Enplanements* | |
|---|---|
| Data Sources | Calculation |
| Enplanements JIA: http://www.flyjacksonville.com/content2015.aspx?id=18 | None |
| Enplanements SGJ: sent via email | |

## 5.20. Average Travel Speed

The FDOT MPM data provides average peak hour travel speed by roadway segment for the state highway system. This data can be summarized for the region, by county, and by functional classification of the roadways. The average speed is reported annually in miles per hour and is calculated by averaging the average peak hour travel speed. Table 25 shows the data source and calculation methodology.

*Table 25 - Average Travel Speed*

| *Travel speed* | |
|---|---|
| Data Sources | Calculation |
| Peak hour travel speed: FDOT MPM Data | Average peak hour travel speed (field ASpeedPH) weighted by VMT (peak hour) for all state highways within the region, county, and functional classification |

## 5.21. Average Vehicle Delay

The FDOT MPM data provides daily delay by roadway segment for the state highway system. This data can be summarized for the region, by county, and by functional classification of the roadways. The daily delay is reported annually in vehicle-hours per day and is calculated by the sum of the daily delay. Table 26 shows the data source and calculation methodology.

*Table 26 - Daily Delay*

| *Delay* | |
|---|---|
| Data Sources | Calculation |
| Daily delay: FDOT MPM Data | Sum daily delay (field DelayD) for all state highways within the region, county, and functional classification. |

## 5.22. Average Commute Time

The US Census Bureau reports average commute time through the ACS in table S0801: Commuting Characteristics by Sex. This CMP will use the 1-year estimate for this data, which is available through 2017. The average commute time for each county is reported in field HC01_EST_VC55: Total; Estimate; Travel Time to Work – Mean travel time to work (minutes). Table 27 shows the data source.

*Table 27 - Average Commute Time*

| *Average commute time* | |
|---|---|
| Data Sources | Calculation |
| Mean travel time to work: ACS table S0801 field HC01_EST_VC55:<br><br>Total; Estimate; Travel Time to Work – Mean travel time to work (minutes)<br><br>https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t | None |

## 5.23. Level of Travel Time Reliability (LOTTR)

The data for travel time reliability is collected through BlueToad™ devices. The North Florida TPO in partnership with the FDOT District 2 ITS office has deployed BlueToad™ devices along major roadways within the North Florida region to obtain real-time data. The BlueToad™ devices are deployed through a company called TrafficCast and use Bluetooth technology to collect information from mobile devices within vehicles traveling on the roadways. The Bluetooth technology transmits the geolocation and timestamp of the mobile device. By examining this data among a pair of BlueToad™ devices, the speed and travel time of the vehicle is determined. There are ten corridors equipped with BlueToad™ devices in North Florida: I-10, I-95, SR 10, SR 21, SR 200, US 17, US 90, SR 13, I-295, and US 1.

According to the Federal Highway Administration, LOTTR is defined as the ratio of the 80th percentile travel time of a reporting segment to a normal travel time (50th percentile). Data is collected in 15-

minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant NHS areas that are reliable.

For this CMP, the level of travel time reliability is reported for the months of April and May. Since person-miles traveled is not available with BlueToad™ data, the LOTTR Index for the corridor will be generated by multiplying each segment's ratio by its length, then dividing the sum of all length-weighted segments by the total length of roadway. Table 28 shows the data sources and calculation methodology.

*Table 28 - Level of Travel Time Reliability*

| *Level of travel time reliability (LOTTR)* | |
|---|---|
| Data Sources | Calculation |
| Level of travel time reliability: BlueToad™ data for pairs along I-10, I-95, SR 10, SR 21, SR 200, US 17, US 90, SR 13, I-295, and US 1. | Ratio of 80th percentile travel time to 50th percentile travel time for WKDAY (Tues – Thurs) for 6AM – 8PM<br><br>Corridor index is the weighted average of all segment indexes weighted by segment length. |

## 5.24. On-time Reliability ("FL Method")

The on-time reliability calculation known as the "FL Method" is the percent of weekday travel with average speed above 45 miles per hour for roadways with speed limit above 45 mph. For roadways with speed limit of 45 mph or below, the calculation is the percent of travel with average speed above 5 miles per hour below the posted speed limit.

The BlueToad™ data can be used for the 10 corridors with BlueToad™ devices. The BlueToad™ data provides the average speed for each roadway segment in 15-minute intervals. The on-time reliability "FL Method" is the count of 15-minute intervals with average speed above 45 mph (or above the posted speed limit minus 5 mph for roadways with speed limit of 45 mph or below) divided by the count of 15-minute intervals with valid speed data. The BlueToad™ data used for this CMP includes Tuesday through Thursday for April and May.

The FDOT MPM data provides average speed for peak hour (daily average speed is not included) and can be used to calculate the on-time reliability "FL Method" for the state roads, summarized by the region, by county, and by functional classification. The calculation using the FDOT MPM data is the sum of vehicle miles traveled for peak hour when average speed is over 45 mph (or above the posted speed limit minus 5 mph for roadways with speed limit of 45 mph or below) divided by the sum of vehicle miles traveled peak hour. Table 29 shows the calculation methodology.

*Table 29 - On-time Reliability*

| *On-time reliability ("FL Method")* | |
|---|---|
| Data Sources | Calculation |
| On-time reliability ("FL Method"): BlueToad™ Data | Weekday only – Tuesday through Thursday<br><br>Roadways with posted speed limit over 45 mph:<br><br>Count of 15-min intervals with average speed over 45 mph divided by count of intervals with valid speed data.<br><br>Roadways with posted speed limit 45 mph and lower:<br><br>Count of 15-min intervals with average speed over 5 mph below the posted speed limit divided by count of 15-min intervals with valid speed data. |
| On-time reliability ("FL Method"): FDOT MPM Data | Roadways with posted speed limit over 45 mph:<br><br>Sum of vehicle miles traveled peak hour (field VMTPH) for segments with average speed (field ASpeedPH) over 45 mph divided by sum of vehicle miles traveled peak hour for all segments.<br><br>Roadways with posted speed limit 45 mph and lower:<br><br>Sum of vehicle miles traveled peak hour (field VMTPH) for segments with average speed (field ASpeedPH) over 5 mph below posted speed limit (field Speed) divided by sum of vehicle miles traveled peak hour for all segments. |

## 5.25. Percent Miles Meeting LOS Criteria Rural Facilities

The FDOT MPM data provides percent travel meeting level of service (LOS) criteria for daily, peak hour, and peak period. The FDOT MPM data also provides percent miles meeting LOS criteria for peak hour and peak period. Daily percent miles meeting LOS criteria is not provided. Therefore, daily percent travel meeting LOS criteria is used for this performance metric. Only state roads with rural classification are used for the calculation, which includes the following classification types: 01 – Interstate Rural, 02 – Principal Arterial Rural, 04 – Principal Arterial Other Rural, 06 – Minor Arterial Rural, and 07 – Major Collector Rural. The data can be summarized for the region, by county, and by functional classification of the roadways. The percent miles meeting LOS criteria is calculated by finding the weighted average of the daily percent travel meeting LOS criteria, weighted by lane miles. Table 30 shows the calculation methodology.

*Table 30 - Percent Miles Meeting LOS Criteria*

| *Percent miles meeting LOS criteria rural facilities* | |
|---|---|
| Data Sources | Calculation |
| Daily percent lane miles meeting LOS criteria rural facilities: FDOT MPM Data | Weighted average of daily percent travel meeting LOS criteria (field PerTLOSD) for rural state roads (function class 01, 02, 04, 06, 07), weighted by lane miles (field LaneMile). |

## 5.26. Incident and Response Information

The FDOT uses SunGuide software to track and report information regarding traffic incidents. These performance measures are included in the annual report produced by the FDOT through the SunGuide software. Table 31 shows the measures pulled from the FDOT SunGuide data set.

*Table 31 - Incident Response Measures*

| *Number of incidents, Incident verification time, Incident clearance time, Response duration, Open roads duration, Departure duration, Roadway clearance duration* | |
|---|---|
| Data Sources | Calculation |
| Number of incidents: FDOT SunGuide | None |
| Incident verification time: FDOT SunGuide | |
| Incident clearance time: FDOT SunGuide | |
| Response duration: FDOT SunGuide | |
| Open roads duration: FDOT SunGuide | |
| Departure duration: FDOT SunGuide | |
| Roadway clearance duration: FDOT SunGuide | |

## 5.27. Percent Miles Severely Congested

The FDOT MPM data provides percent miles severely congested by roadway segment for the peak hour. This data can be summarized for the region, by county, and by functional classification. Percent miles severely congested is calculated by the weighted average of percent miles severely congested, weighted by lane miles. Table 32 shows the calculation methodology.

*Table 32 - Percent Miles Severely Congested*

| *Percent miles severely congested* | |
|---|---|
| Data Sources | Calculation |
| Peak hour percent miles severely congested: FDOT MPM Data | Weighted average of peak hour percent miles severely congested (field PerMSCPH), weighted by lane miles (field LaneMiles) for all state highways within the region, county, and functional classification. |

## 5.28. Percent Travel Severely Congested

The FDOT MPM data provides percent travel severely congested by roadway segment for the peak hour and daily. This data can be summarized for the region, by county, and by functional classification. Percent travel severely congested is calculated by the weighted average of percent travel severely congested, weighted by vehicle miles traveled. Table 33 shows the calculation methodology.

*Table 33 - Percent Travel Severely Congested*

| *Percent travel severely congested* | |
|---|---|
| Data Sources | Calculation |
| Peak hour percent travel severely congested: FDOT MPM Data | Weighted average of peak hour percent travel severely congested (field PerTCSPH), weighted by vehicle miles traveled (field VMTPH). |
| Daily percent travel severely congested: FDOT MPM Data | Weighted average of daily percent travel severely congested (field PerTCSD), weighted by vehicle miles traveled (field VMTD). |

## 5.29. Vehicles Per Lane Mile

The FDOT MPM data provides vehicles per lane mile by roadway segment for the peak hour. This data can be summarized for the region, by county, and by functional classification. The calculation is the weighted average of the vehicles per lane mile, weighted by lane miles. The calculation methodology is shown in Table 34.

*Table 34 - Vehicles per Lane-mile*

| *Vehicles per lane mile* | |
|---|---|
| Data Sources | Calculation |
| Peak hour vehicles per lane mile: FDOT MPM Data | Weighted average of vehicles per lane mile (field VehPLMPH), weighted by lane miles (field LaneMiles) for all state roads within the region, county, or functional classification. |

## 5.30. Hours Severely Congested

The FDOT MPM data provides hours severely congested by roadway segment daily and annually. This data can be summarized for the region, by county, and by functional classification. Hours severely congested is reported in the number of hours and is calculated by the weighted average of hours severely congested, weighted by vehicle miles traveled.

Hours severely congested is also known as duration of congestion and can be calculated using BlueToad™ data for the 10 corridors that are equipped with BlueToad™ devices. The BlueToad™ data provides the average speed for each roadway segment in 15-minute intervals. The duration of congestion is the sum of the 15-minute time periods in which the average speed is below 45 miles per hour, for roadways with speed limit above 45 mph, or below 5 mph below the posted speed limit for roadways with speed limit of 45 mph or below. Table 35 shows the calculation methodology.

*Table 35 - Hours Severely Congested*

| *Hours severely congested* | |
|---|---|
| Data Sources | Calculation |
| Daily hours severely congested: FDOT MPM Data | Weighted average of daily hours severely congested (field HrsSCD), weighted by vehicle miles traveled (field VMTD) |
| Per year hours severely congested: FDOT MPM Data | Weighted average of yearly hours severely congested (field HrsSCYly), weighted by vehicle miles traveled (field VMTD) |
| Daily duration of congestion: BlueToad™ Data | Weekday only – Tuesday through Thursday. Average the average speed for each 15-minute time period for all of the days within the study period (Tues – Thurs for April – May)<br><br>Roadways with posted speed limit over 45 mph:<br><br>Count of 15-min intervals with average speed below 45 mph<br><br>Roadways with posted speed limit 45 mph and lower:<br><br>Count of 15-min intervals with average speed below 5 mph below the posted speed limit<br><br>Count of 15-minute time periods divided by 4 = hours of congestion |

## 5.31. Average Load on Transit Vehicles

The average load on transit vehicles is the average number of passengers on a transit vehicle. The average load is calculated by passenger miles divided by revenue miles, which is information reported annually in the NTD. However, only larger transit agencies, known as “Full Reporters” are required to report passenger miles to the NTD. The JTA and Clay Transit are Full Reporters and therefore, average load is available. Nassau Transit is considered a “Rural Reporter” and the Sunshine Bus Company is considered a “Reduced Reporter.” Both agencies are not required to report passenger miles and therefore, average load is not available for Nassau Transit and the Sunshine Bus Company. Table 36 shows the data source and calculation methodology.

*Table 36 - Average Load on Transit Vehicles*

| *Average load on transit vehicles* | |
|---|---|
| Data Sources | Calculation |
| Average load: National Transit Database, Service table<br>https://www.transit.dot.gov/ntd/ntd-data | Passenger miles divided by vehicle revenue miles |

## 5.32. Pavement Condition

The pavement condition is evaluated by the FDOT and sent in summary format to the North Florida TPO. A spreadsheet is sent annually that contains pavement performance measures of Florida's interstate and non-interstate National Highway System. The data is presented in percent of lane miles in good, fair, and poor condition. Sections with bridges, unpaved surfaces, "other" surface types and missing data (any of IRI, Cracking %, Rutting or Faulting) are excluded. A section can have missing, invalid or unresolved data (any of IRI, Cracking %, Rutting or Faulting) due to roadway under construction, data not collected, etc. Table 37 shows the performance measures reported by FDOt.

*Table 37 - Pavement Condition*

| *Pavement in good condition, Pavement in fair condition, Pavement in poor condition* | |
|---|---|
| Data Sources | Calculation |
| Interstate pavement in good, fair, poor condition –<br>FDOT Pavement Performance Measures sent to the TPO | None |
| Non-Interstate pavement in good, fair, poor condition –<br>FDOT Pavement Performance Measures sent to the TPO | None |

## 5.33. Bridge Condition

Bridge condition is evaluated by the FDOT and sent in summary PDF format annually to the North Florida TPO. The data is presented in number of bridges, percent of bridges, deck area of bridges, and percent of deck area of bridges in good, fair, and poor condition. The performance measures are summarized in Table 38.

*Table 38 - Bridge Condition*

| *Bridges in good condition, Bridges in fair condition, Bridges in poor condition* | |
|---|---|
| Data Sources | Calculation |
| Percent of National Highway System Bridges in Good Condition –<br><br>FDOT Bridge Condition sent to the TPO | None |
| Percent of National Highway System Bridges in Fair Condition –<br><br>FDOT Bridge Condition sent to the TPO | None |
| Percent of National Highway System Bridges in Poor Condition –<br><br>FDOT Bridge Condition sent to the TPO | None |

## 5.34. Average Age of Vehicles

Transit agencies are required to report vehicle age to the NTD. This data can be accessed from the NTD website, https://www.transit.dot.gov/ntd/ntd-data in the Vehicles table. The table shows the number of vehicles by vehicle age and type. The performance measure is summarized in Table 39.

*Table 39 - Average Age of Vehicles*

| *Average age of vehicles* | |
|---|---|
| Data Sources | Calculation |
| Vehicle Age: National Transit Database, Vehicles table<br><br>https://www.transit.dot.gov/ntd/ntd-data | Average of vehicle age, weighted by the number of vehicles. |

# 6. Summary and Analysis of Performance Measures

The identified performance measures were evaluated from the data sets listed for the years 2014 to 2017. The integrated data exchange was used to generate the majority of the figures and perform a comparative analysis. Detailed information for the region, counties, and roadway classification are available historically and real-time on the IDE web exchange. A detailed summary of these performance measures are available in the 2019 Annual Mobility Report. This section summarizes the quantity, quality and reliability of travel in Clay, Duval, Nassau and St. Johns counties.

The total population of the North Florida TPO regional boundary, including Clay, Duval, Nassau and St. Johns counties, is approximately 1.5 million[1]. The Bureau of Economic and Business Research identified Duval County among the seven largest counties in Florida. The FDOT's Mobility Performance Measures database shows the centerline miles and lane-miles for the four counties within the North Florida TPO boundary. A summary of the total miles and lane-miles of roadways with performance measures from the FDOT's Mobility Performance Measures database within North Florida is presented below.

The following summarizes the changes that occurred in the highway network between 2014 and 2017.

- **Total Miles:**
  - The total miles of urban Interstate evaluated remained constant from 2014 to 2017 at 114 miles.
  - The total miles of rural Interstates evaluated remained constant at 54 miles between the years 2014 and 2017.
  - The total miles of urban freeways and expressways evaluated increased from 50 miles in the year 2014 to 52 miles in the year 2017.
  - The urban principal arterials evaluated increased from 196 miles in the year 2014 to 228 miles in the year 2017.
  - The rural principal arterials evaluated remained unchanged at 228 miles.
  - The urban minor arterials evaluated increased from 242 in 2014 to 242 in 2017.
  - The rural minor arterials evaluated remained constant at 61 miles.
- **Lane-Miles:**
  - The total lane-miles for urban Interstates increased by 28.4 lane-miles between 2014 and 2017.
  - The total lane-miles for rural Interstates has remained constant from 2014 to 2017.
  - The total lane-miles for urban freeways and expressways showed increased by 5 lane miles from 2014 to 2017.
  - The total lane-miles for urban principal arterials increased by 4 lane miles between 2014 and 2017.
  - The total lane-miles for rural principal arterials increased by 36.1 lane-miles between 2014 and 2017.
  - The total lane-miles for urban minor arterials increased by 7 lane miles from 2014 to 2017.

Table 40 summarizes the 2017 results for mobility performance measures and benchmarks adopted in the Path Forward 2040 Long Range Transportation Plan. The following summarizes the key results and findings:

[1] https://www.bebr.ufl.edu/population/data

- Mobility demand is expected to grow at the same rate as the local economy. Automobile traffic increased by 3.2 percent in 2016. The number of aviation passengers and amount of freight moving through the port increased from 2014 to 2017.
- Traffic delays increased and average speed across the network fell by 0.2 mph during the peak hour from 2014 to 2017. Traffic delays cost our region $329 million in 2017.
- The system's capacity is being consumed by more travelers. The vehicles-per-lane-mile on the roadway system increased 1.9 percent from 2016 to 2017. Continued investment in constructing new capacity and new connectors is needed to meet these needs.
- The estimated system reliability for Strategic Intermodal System (SIS) facilities is declining, however is still greater than the 75 percent system reliability goal. The reliability declined on the seven most congested corridors in the region indicating the peak has spread beyond the 5-6 p.m. peak hour.
- Increases in demand and congestion make it harder to resume traffic flowing after major back-ups. As recurring congestion increases, additional investments are needed in Transportation Systems Management and Operations (TSM&O) strategies to ensure we get the most from our system.
- About 80 percent of travel is single-occupancy vehicle trips, which remained unchanged from prior years.
- In 2017, vehicle crashes cost our region $5.1 billion in economic losses and 232 people died in crashes.
- Vehicles are a major contributor to air pollution, producing significant amounts of carbon dioxide($CO_2$), nitrogen oxides ($NO_X$), carbon monoxide (CO), and other pollutions. The total cost of emissions for the 2017 year was $2.2 million.
- The total fuel consumption cost due to delay in 2017 was $6.8 million.

*Table 40- Mobility Report Card*

| ***Performance Measure*** | **Aspirational Goal** | **Progress (2016-2017)** |
|---|---|---|
| ***Quantity of Travel*** | | |
| **Vehicles** | | |
| *Vehicle-Miles Traveled (Daily)* | (1) | 3.1% increase |
| *Vehicle Occupancy (Persons/Vehicle)* | Maintain or increase | No significant change since 2014 |
| *Person-Miles Traveled (Daily)* | (1) | 3.2% increase |
| *Truck-Miles Traveled (Daily)* | (1) | 6.3% increase |
| *Transit Ridership* | Increase | 5.1% decrease |
| **Aviation** | | |
| *Enplanements* | Maintain or increase | 0.5% decrease from JIA |
| *Air Cargo (Tons)* | Maintain or increase | 9.2% increase from 2014 to 2016 |
| **Ports** | | |
| *Tons Moved* | Maintain or increase | 7.0% increase |
| *Containers Moved* | Maintain or increase | 6.7% increase |
| *Automobiles Moved* | Maintain or increase | 9.0% increase |

| | | |
|---|---|---|
| ***Quality of Travel*** | | |
| *Average Travel Speed (Peak Hour)* | Maintain or improve | 1.3% Increase |
| *Delay (Daily)* | Maintain or reduce | 18.2% increase |
| *Percent of person-miles traveled on the Interstate that are reliable*[2] | 75%[3] | 76.9% in 2016 (8.9% decrease from 2014 to 2016) |
| *Percent of person-miles traveled on the non-Interstate NHS that are reliable*[2] | 50%[4] | 65.5% in 2016 (2.5% decrease from 2014 to 2016) |
| *Truck travel time reliability ratio (TTR) on the Interstate*[2] | 1.75[3] | 1.79 in 2016 (0.14 increase from 2014 to 2016) |
| *Number of Jobs Near a State Highway* | Maintain or improve | 629,619 jobs for 2015 |
| *Percent miles meeting LOS criteria rural facilities* | Maintain or improve | No significant change |
| ***System Utilization*** | | |
| *Percent Miles Severely Congested (Peak Hour)* | Maintain or reduce | 6.5% decrease |
| *Percent Travel Severely Congested (Daily)* | Maintain or reduce | 3.2% increase |
| *Percent Travel Severely Congested (Peak Hour)* | Maintain or reduce | 11.3% decrease |
| *Hours Severely Congested (Daily)* | Maintain or reduce | 7.0% increase |
| *Hours Severely Congested (Yearly)* | Maintain or reduce | Increased by an average of 10.36 hours per road segment |
| *Vehicles Per Lane Mile (Peak Hour)* | Indicator of utilization for information only | 1.9% increase |
| ***Safety*** | | |
| *Total Crash Rate (crashes/million vehicle-miles)* | Reduce | No significant change |
| *Number of Fatalities*[2] | Zero | No significant change |
| *Number of Serious Injuries*[2] | Zero | No significant change |
| *Fatal Crash Rate (crashes/million vehicle-miles)*[2] | Zero | No significant change |
| *Serious Injury Rate (crashes/million vehicle-miles)*[2] | Zero | No significant change |
| *Total Number of Non-Motorized Fatalities and Serious Injuries*[2] | Zero | No significant change |
| ***Operations*** | | |
| *Identification and Verification (minutes)* | Maintain or reduce | 11.9% increase |
| *Clearance Times (minutes)* | Maintain or reduce | 6.7% increase |
| ***Livability and Sustainability*** | | |
| *Cost of Congestion ($)* | (5) | $50,700,605 increase |
| *Cost of Emissions ($)* | Maintain or reduce | $344,285 increase |
| *Percent of Population within a quarter mile walk of a transit stop* | 95% | 3.3% in 2017 |
| *Population within 5 miles of park-n-ride lots* | 95% | 64% in 2017 |
| *Passengers per vehicle revenue mile* | (6) | 6.5% decrease |
| *Passengers per vehicle revenue hour* | (6) | 5.7% decrease |
| *Lane miles with bicycle and pedestrian facilities* | 85% of lane miles | 82.6% in 2017 |
| ***System Preservation*** | | |
| *Percent of Interstate Pavement in Good Condition*[2] | >60%[4] | 64.0% in 2017 |
| *Percent of Interstate Pavements in Poor Condition*[2] | ≤ 5%[4] | 0% in 2017 |
| *Percent of Non-Interstate NHS Pavement in Good Condition*[2] | ≥40%[3] | 36.2% in 2017 |
| *Percent of Non-Interstate NHS Pavement in Poor Condition*[2] | ≤ 5%[3] | 0.6% in 2017 |
| *Percent of National Highway System Bridges in Good Condition*[2] | 50%[3] (7) | 71.2% in 2017 |

| | | |
|---|---|---|
| *Percent of National Highway System Bridges in Poor Condition*[2] | <10%[3] | 1.28% in 2017 |
| *Average Age of Transit Vehicles (years)*[2] | - | 0.78-year increase from 2016 to 2017 |

1. Vehicle-miles traveled, etc., were not assigned a benchmark since they are not only an indicator of demand and system throughput. There were strategies in the Path Forward 2040 Long Range Transportation Plan designed to reduce vehicle-miles traveled, such as transit service expansion.
2. Denotes a FHWA MAP-21 Performance Measure.
3. 2-year target
4. 4-year target
5. Many exogenous factors influence this performance measure including the price of fuels that are beyond the scope of a CMP. However, this performance measure will be considered within the CMP based on policy decisions made during the scenario development.
6. Coordination with Jacksonville Transportation Authority is needed to develop the baseline and benchmark data needed.
7. Strengthen bridges that are either (1) structurally deficient or (2) posted for weight restriction within 6 years on FDOT facilities. Replace bridges that require structural repair that more cost effective to replace within 9 years on FDOT facilities. Satisfy FDOT's off system bridge replacement goals

Our residents are driving and consuming more goods. This growth in demand corresponds to the growth in the region's economy, but the growth is not without tradeoffs. Congestion and the reliability of travel in our region is getting worse and the economic impacts are evident. Additionally, transit riders appear to be shifting to different modes of travel.

# 7. Congested and Constrained Facilities

The recent regional trends have suggested an increase in the congestion levels within the North Florida region. The following summarizes the analysis performed to identify the congested and constrained facilities within the North Florida TPO governing boundary:

The corridors experiencing at least 1 hour of LOS E/F during an average weekday from the FDOT's Mobility Performance Measures database were identified as congested and shown in Table 41. Congested facilities within the North Florida region were identified utilizing the FDOT LOS base map roadway extents[2]. Figure 5 shows the congested facilities and Figure 6 shows the congested and constrained facilities. Constrained facilities are defined as having 6 or more lanes on the roadway. Note that the southern portion of I-295 East of the Buckman bridge has been widened following the reporting of this 2017 data.

The key measures of effectiveness (MOEs) for these facilities were estimated from the FDOT Mobility Performance Measures database. A table was compiled which contains the Roadway ID, Roadway Name and MOEs along with the existing year LOS for these roadways. Preliminary ranking was assigned to these facilities based on the existing LOS and peak hour delay. The facilities were sorted from the most severely congested to moderately congested facilities based on the ranking criteria.

Table 41 provides a list of these congested facilities within the North Florida region along with their preliminary ranking. Compared to the 2013 CMP, 74 additional road segments were identified as congested in the 2019 CMP. This includes the following roadways:

- Park Ave (Clay)
- Ponce De Leon(St. Johns)
- South Castillo St (St. Johns)
- Riverside Ave (Duval)

[2] https://www.fdot.gov/planning/systems/programs/sm/los/districts/district2/default.shtm

- SR16 (St. Johns)
- SR21 (Clay)
- Branan Field Rd (Clay)
- May St (St. Johns)
- Vilano Rd (St. Johns)

Table 41- Ranking of Congested Facilities in the North Florida TPO Boundary

| Rank | County | Area | Facility | ROADWAY | Begin Post | End Post | Roadway Length (mi) | Roadway Length (Ft) | Area Type | Facility Type | Daily VMT | Daily PMT | Daily TMT | Peak Hour VMT | Peak Hour PMT | Peak Speed | Peak Hour Delay | Daily Delay | Tot Lanes | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DUVAL | Jacksonville | I-95 | 72020000 | 0.388 | 2.034 | 1.646 | 8691 | Urbanized | Freeway | 262537 | 422304 | 19690 | 22011 | 35405 | 33.58 | 357.67 | 1359.47 | 6 | F |
| 2 | DUVAL | Jacksonville | I-95 | 72280000 | 13.5 | 15.313 | 1.813 | 9573 | Urbanized | Freeway | 238152 | 383079 | 19767 | 19966 | 32117 | 33.36 | 296.07 | 599.20 | 6 | F |
| 3 | DUVAL | Jacksonville | I-95 | 72280000 | 15.313 | 16.3 | 0.987 | 5211 | Urbanized | Freeway | 125349 | 201630 | 16170 | 10509 | 16904 | 27.60 | 232.24 | 462.87 | 6 | F |
| 4 | CLAY | Jacksonville | BLANDING BLVD | 71070000 | 12.624 | 14.092 | 1.468 | 7751 | Urbanized | Arterial | 95420 | 121386 | 4294 | 7933 | 10091 | 18.50 | 176.56 | 808.35 | 6 | F |
| 5 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 20.743 | 22.103 | 1.36 | 7181 | Urbanized | Freeway | 122400 | 196886 | 16402 | 10262 | 16507 | 41.81 | 133.08 | 188.74 | 5 | F |
| 6 | DUVAL | Jacksonville | SOUTHSIDE BLVD | 72040000 | 4.852 | 6.248 | 1.396 | 7371 | Urbanized | Arterial | 71196 | 114522 | 1210 | 5919 | 9521 | 20.56 | 132.81 | 163.88 | 4 | F |
| 7 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 6.384 | 7.954 | 1.57 | 8290 | Urbanized | Arterial | 85565 | 137636 | 1711 | 7113 | 11442 | 20.46 | 132.36 | 637.99 | 6 | F |
| 8 | DUVAL | Jacksonville | I-95 | 72280000 | 11.674 | 13.124 | 1.45 | 7656 | Urbanized | Freeway | 211700 | 340530 | 17783 | 17749 | 28549 | 46.73 | 118.33 | 359.53 | 6 | F |
| 9 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 1.61 | 3.07 | 1.46 | 7709 | Urbanized | Freeway | 181770 | 292386 | 19995 | 15239 | 24513 | 48.59 | 112.25 | 301.52 | 6 | F |
| 10 | DUVAL | Jacksonville | I-95 | 72280000 | 16.5238 | 16.793 | 0.2692 | 1421 | Urbanized | Freeway | 34188 | 54994 | 4410 | 2866 | 4611 | 23.84 | 88.37 | 227.57 | 5 | F |
| 11 | DUVAL | Jacksonville | I-95 | 72020000 | 0.019 | 0.326 | 0.307 | 1621 | Urbanized | Freeway | 48967 | 78765 | 3672 | 4105 | 6604 | 32.23 | 81.09 | 292.90 | 6 | F |
| 12 | CLAY | Jacksonville | BLANDING BLVD | 71070000 | 14.092 | 14.498 | 0.406 | 2144 | Urbanized | Arterial | 33292 | 42351 | 999 | 2768 | 3521 | 18.23 | 72.22 | 338.82 | 6 | F |
| 13 | DUVAL | Jacksonville | BAYMEADOWS RD | 72028000 | 3.001 | 3.504 | 0.503 | 2656 | Urbanized | Arterial | 24899 | 40050 | 373 | 2070 | 3330 | 15.83 | 65.74 | 365.45 | 4 | F |
| 14 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 0.783 | 1.61 | 0.827 | 4367 | Urbanized | Freeway | 102962 | 165619 | 11326 | 8632 | 13885 | 48.14 | 64.87 | 131.74 | 7 | F |
| 15 | CLAY | Jacksonville | BLANDING BLVD | 71070000 | 11.927 | 12.624 | 0.697 | 3680 | Urbanized | Arterial | 50533 | 64283 | 2274 | 4201 | 5344 | 21.44 | 61.42 | 288.77 | 6 | F |
| 16 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0.508 | 0.802 | 0.294 | 1552 | Urbanized | Arterial | 32928 | 52966 | 1449 | 2751 | 4425 | 30.55 | 61.27 | 283.86 | 5 | F |
| 17 | DUVAL | Jacksonville | I-95 | 72280000 | 16.3 | 16.5238 | 0.2238 | 1182 | Urbanized | Freeway | 28423 | 45719 | 3667 | 2383 | 3833 | 26.27 | 59.32 | 119.83 | 6 | F |
| 18 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 20.39 | 20.743 | 0.353 | 1864 | Urbanized | Freeway | 31770 | 51104 | 4257 | 2664 | 4284 | 27.68 | 56.64 | 119.25 | 4 | F |
| 19 | DUVAL | Jacksonville | BEACH BLVD | 72190000 | 3.908 | 4.799 | 0.891 | 4704 | Urbanized | Arterial | 57470 | 92443 | 862 | 4778 | 7685 | 23.07 | 53.96 | 151.24 | 6 | F |
| 20 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 3.07 | 4.876 | 1.806 | 9536 | Urbanized | Freeway | 228459 | 367488 | 25130 | 19154 | 30810 | 56.91 | 50.18 | 229.44 | 6 | F |
| 21 | DUVAL | Jacksonville | SOUTHSIDE BLVD | 72040000 | 6.248 | 6.653 | 0.405 | 2138 | Urbanized | Arterial | 20655 | 33225 | 351 | 1717 | 2762 | 19.62 | 47.20 | 70.90 | 4 | F |
| 22 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 21.057 | 22.165 | 1.108 | 5850 | Urbanized | Freeway | 92518 | 148820 | 11010 | 7757 | 12477 | 50.33 | 46.11 | 125.65 | 4 | F |
| 23 | CLAY | Jacksonville | PARK AVE | 71020000 | 12.65 | 13.997 | 1.347 | 7112 | Urbanized | Arterial | 86208 | 109667 | 4483 | 7167 | 9117 | 26.01 | 45.25 | 232.26 | 6 | F |
| 24 | DUVAL | Jacksonville | UNIVERSITY BLVD | 72014000 | 1.34 | 1.736 | 0.396 | 2091 | Urbanized | Arterial | 19800 | 31849 | 475 | 1646 | 2648 | 15.53 | 42.39 | 266.81 | 4 | F |
| 25 | CLAY | Jacksonville | BLANDING BLVD | 71070000 | 10.003 | 11.927 | 1.924 | 10159 | Urbanized | Arterial | 121212 | 154196 | 5455 | 10077 | 12819 | 27.44 | 42.36 | 236.62 | 6 | F |
| 26 | ST.JOHNS | Jacksonville | SR A1A | 78001000 | 5.369 | 6.824 | 1.455 | 7682 | Urbanized | Arterial | 73478 | 135206 | 1176 | 6108 | 11240 | 28.74 | 41.69 | 46.52 | 4 | F |
| 27 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 13.936 | 15.4388 | 1.5028 | 7935 | Urbanized | Freeway | 129241 | 207890 | 17318 | 10835 | 17429 | 54.76 | 38.33 | 125.66 | 4 | F |
| 28 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 22.103 | 23.658 | 1.555 | 8210 | Urbanized | Freeway | 139950 | 225117 | 18753 | 11733 | 18873 | 55.39 | 35.36 | 137.82 | 4 | F |
| 29 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0 | 0.42 | 0.42 | 2218 | Urbanized | Arterial | 16590 | 26686 | 730 | 1379 | 2218 | 18.87 | 33.24 | 212.42 | 4 | F |
| 30 | DUVAL | Jacksonville | I-95 | 72280000 | 13.124 | 13.5 | 0.376 | 1985 | Urbanized | Freeway | 47000 | 75602 | 3525 | 3940 | 6338 | 42.55 | 32.80 | 82.91 | 6 | F |
| 31 | DUVAL | Jacksonville | BAYMEADOWS RD | 72028000 | 2.691 | 2.917 | 0.226 | 1193 | Urbanized | Arterial | 11187 | 17995 | 168 | 930 | 1496 | 14.94 | 32.27 | 175.64 | 6 | F |
| 32 | DUVAL | Jacksonville | BLANDING BLVD | 72170000 | 0 | 0.182 | 0.182 | 961 | Urbanized | Arterial | 14924 | 24006 | 448 | 1241 | 1996 | 17.70 | 31.52 | 182.96 | 7 | F |
| 33 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 23.658 | 24.233 | 0.575 | 3036 | Urbanized | Freeway | 51750 | 83242 | 6935 | 4339 | 6979 | 51.79 | 22.42 | 86.76 | 5 | F |
| 34 | DUVAL | Jacksonville | BLANDING BLVD | 72170000 | 0.182 | 0.435 | 0.253 | 1336 | Urbanized | Arterial | 20746 | 33371 | 622 | 1725 | 2774 | 22.58 | 20.79 | 150.62 | 9 | F |
| 35 | DUVAL | Jacksonville | I-95 | 72020000 | 0.326 | 0.388 | 0.062 | 327 | Urbanized | Freeway | 9889 | 15907 | 742 | 829 | 1334 | 31.45 | 18.08 | 61.80 | 5 | F |
| 36 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 13.394 | 13.935 | 0.541 | 2856 | Urbanized | Freeway | 46526 | 74839 | 6234 | 3901 | 6274 | 54.76 | 13.80 | 45.24 | 4 | F |
| 37 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0.802 | 0.893 | 0.091 | 480 | Urbanized | Arterial | 10192 | 16394 | 448 | 851 | 1370 | 37.41 | 13.02 | 14.44 | 4 | F |
| 38 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0.956 | 1.076 | 0.12 | 634 | Urbanized | Arterial | 13440 | 21619 | 591 | 1123 | 1806 | 37.48 | 12.71 | 14.71 | 5 | F |

| Rank | County | Area | Facility | ROADWAY | Begin Post | End Post | Roadway Length (mi) | Roadway Length (Ft) | Area Type | Facility Type | Daily VMT | Daily PMT | Daily TMT | Peak Hour VMT | Peak Hour PMT | Peak Speed | Peak Hour Delay | Daily Delay | Tot Lanes | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | DUVAL | Jacksonville | BEACH BLVD | 72190000 | 3.515 | 3.73 | 0.215 | 1135 | Urbanized | Arterial | 13868 | 22307 | 208 | 1153 | 1854 | 23.43 | 12.19 | 35.62 | 8 | F |
| 40 | ST.JOHNS | St. Augustine | PONCE DE LEON BLVD | 78010000 | 16.064 | 16.58 | 0.516 | 2724 | Urbanized | Arterial | 24510 | 45101 | 735 | 2038 | 3749 | 26.50 | 11.66 | 89.78 | 4 | F |
| 41 | ST.JOHNS | St. Augustine | SAN MARCO AVE | 78010027 | 1.504 | 2.047 | 0.543 | 2867 | Urbanized | Arterial | 7874 | 14488 | 252 | 655 | 1204 | 15.95 | 11.31 | 120.49 | 2 | F |
| 42 | DUVAL | Jacksonville | BEACH BLVD | 72190000 | 3.73 | 3.908 | 0.178 | 940 | Urbanized | Arterial | 11481 | 18468 | 172 | 954 | 1535 | 22.76 | 11.29 | 30.67 | 8 | F |
| 43 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 20.631 | 21.057 | 0.426 | 2249 | Urbanized | Freeway | 35571 | 57218 | 4233 | 2982 | 4797 | 54.52 | 11.01 | 30.32 | 5 | F |
| 44 | DUVAL | Jacksonville | BAYMEADOWS RD | 72028000 | 2.917 | 3.001 | 0.084 | 444 | Urbanized | Arterial | 4158 | 6688 | 62 | 346 | 556 | 15.83 | 10.75 | 60.54 | 5 | F |
| 45 | DUVAL | Jacksonville | UNIVERSITY BLVD | 72014000 | 1.124 | 1.34 | 0.216 | 1140 | Urbanized | Arterial | 5940 | 9555 | 143 | 494 | 794 | 15.45 | 10.12 | 76.27 | 4 | F |
| 46 | ST.JOHNS | Jacksonville | SR A1A | 78001000 | 6.824 | 7.151 | 0.327 | 1727 | Urbanized | Arterial | 16514 | 30387 | 264 | 1373 | 2526 | 28.74 | 9.49 | 10.58 | 4 | F |
| 47 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0.893 | 0.956 | 0.063 | 333 | Urbanized | Arterial | 7056 | 11350 | 310 | 589 | 948 | 37.48 | 8.99 | 9.90 | 4 | F |
| 48 | DUVAL | Jacksonville | BEACH BLVD | 72190000 | 3.304 | 3.515 | 0.211 | 1114 | Urbanized | Arterial | 13610 | 21892 | 204 | 1131 | 1820 | 26.67 | 8.66 | 35.04 | 4 | F |
| 49 | ST.JOHNS | St. Augustine | SOUTH CASTILLO ST | 78010027 | 1.144 | 1.408 | 0.264 | 1394 | Urbanized | Arterial | 4594 | 8453 | 147 | 382 | 703 | 14.83 | 8.41 | 96.24 | 4 | F |
| 50 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 4.877 | 5.124 | 0.247 | 1304 | Urbanized | Freeway | 33839 | 54432 | 3722 | 2837 | 4563 | 56.94 | 7.41 | 34.06 | 6 | F |
| 51 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 14.097 | 14.7 | 0.603 | 3184 | Urbanized | Arterial | 22010 | 35403 | 352 | 1830 | 2943 | 27.85 | 6.90 | 54.81 | 4 | F |
| 52 | DUVAL | Jacksonville | SOUTHSIDE BLVD | 72040000 | 6.653 | 7.375 | 0.722 | 3812 | Urbanized | Arterial | 32490 | 52262 | 552 | 2701 | 4345 | 30.97 | 6.57 | 38.19 | 4 | F |
| 53 | ST.JOHNS | Jacksonville | SR A1A | 78001000 | 4.216 | 5.369 | 1.153 | 6088 | Urbanized | Arterial | 49003 | 90170 | 784 | 4074 | 7496 | 29.63 | 6.25 | 20.74 | 4 | F |
| 54 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 1.076 | 1.113 | 0.037 | 195 | Urbanized | Freeway | 4144 | 6666 | 182 | 347 | 559 | 37.48 | 5.23 | 13.33 | 5 | F |
| 55 | ST.JOHNS | Jacksonville | SR A1A | 78001000 | 3.073 | 4.216 | 1.143 | 6035 | Urbanized | Arterial | 45720 | 84129 | 732 | 3801 | 6994 | 29.97 | 4.33 | 14.46 | 4 | F |
| 56 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100100 | 0 | 0.379 | 0.379 | 2001 | Urbanized | Arterial | 4927 | 7925 | 99 | 410 | 659 | 23.54 | 4.19 | 5.68 | 2 | F |
| 57 | DUVAL | Jacksonville | J T BUTLER BLVD | 72292000 | 0.42 | 0.508 | 0.088 | 465 | Urbanized | Arterial | 3476 | 5591 | 153 | 289 | 465 | 24.40 | 4.05 | 14.18 | 5 | F |
| 58 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 6.567 | 6.721 | 0.154 | 813 | Urbanized | Arterial | 4081 | 6564 | 86 | 339 | 546 | 18.87 | 3.52 | 49.69 | 2 | F |
| 59 | ST.JOHNS | St. Augustine | PONCE DE LEON BLVD | 78010000 | 16.771 | 17.2895 | 0.5185 | 2738 | Urbanized | Arterial | 17629 | 32439 | 529 | 1466 | 2697 | 23.08 | 2.67 | 3.09 | 4 | F |
| 60 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 6.721 | 6.787 | 0.066 | 348 | Urbanized | Arterial | 1749 | 2813 | 37 | 145 | 234 | 16.50 | 2.25 | 17.45 | 4 | F |
| 61 | DUVAL | Jacksonville | BLANDING BLVD | 72170000 | 0.435 | 0.462 | 0.027 | 143 | Urbanized | Arterial | 2214 | 3561 | 66 | 184 | 296 | 22.53 | 2.24 | 13.82 | 8 | F |
| 62 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 10.034 | 12.383 | 2.349 | 12403 | Urbanized | Arterial | 132719 | 213484 | 2654 | 11033 | 17748 | 30.85 | 1.77 | 2.87 | 6 | F |
| 63 | ST.JOHNS | St. Augustine | SAN MARCO AVE | 78010027 | 1.42 | 1.504 | 0.084 | 444 | Urbanized | Arterial | 1218 | 2241 | 39 | 101 | 186 | 15.95 | 1.75 | 18.64 | 3 | F |
| 64 | ST.JOHNS | St. Augustine | PONCE DE LEON BLVD | 78010000 | 16.58 | 16.771 | 0.191 | 1008 | Urbanized | Arterial | 8882 | 16343 | 266 | 738 | 1359 | 23.05 | 1.60 | 1.79 | 4 | F |
| 65 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 5.911 | 6.148 | 0.237 | 1251 | Urbanized | Arterial | 3318 | 5337 | 70 | 276 | 444 | 20.07 | 1.21 | 15.16 | 2 | F |
| 66 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 24.233 | 24.42 | 0.187 | 987 | Urbanized | Freeway | 16830 | 27072 | 2255 | 1411 | 2270 | 62.41 | 1.20 | 3.60 | 6 | F |
| 67 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 6.365 | 6.567 | 0.202 | 1067 | Urbanized | Arterial | 3030 | 4874 | 64 | 252 | 405 | 20.05 | 1.12 | 14.12 | 2 | F |
| 68 | ST.JOHNS | St. Augustine | SAN MARCO AVE | 78010027 | 2.047 | 2.091 | 0.044 | 232 | Urbanized | Arterial | 594 | 1093 | 19 | 49 | 91 | 15.95 | 0.85 | 9.09 | 2 | F |
| 69 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 13.965 | 14.097 | 0.132 | 697 | Urbanized | Arterial | 6732 | 10829 | 135 | 560 | 900 | 36.73 | 0.84 | 6.43 | 4 | F |
| 70 | ST.JOHNS | St. Augustine | SOUTH CASTILLO ST | 78010027 | 1.408 | 1.42 | 0.012 | 63 | Urbanized | Arterial | 209 | 384 | 7 | 17 | 32 | 15.14 | 0.36 | 3.98 | 3 | F |
| 71 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 6.32 | 6.365 | 0.045 | 238 | Urbanized | Arterial | 630 | 1013 | 13 | 52 | 84 | 20.05 | 0.23 | 2.94 | 2 | F |
| 72 | DUVAL | Jacksonville | ROOSEVELT BLVD | 72030000 | 8.74 | 9.064 | 0.324 | 1711 | Urbanized | Arterial | 17658 | 28404 | 318 | 1468 | 2361 | 39.99 | 0.00 | 5.79 | 4 | F |
| 73 | DUVAL | Jacksonville | I-10 ROOSEVELT CONN | 72030000 | 9.712 | 10.276 | 0.564 | 2978 | Urbanized | Arterial | 29610 | 47629 | 474 | 2462 | 3960 | 40.41 | 0.00 | 4.67 | 4 | F |
| 74 | DUVAL | Jacksonville | ROOSEVELT BLVD | 72030000 | 9.064 | 9.148 | 0.084 | 444 | Urbanized | Arterial | 4578 | 7364 | 82 | 381 | 612 | 39.69 | 0.00 | 2.13 | 5 | F |
| 75 | DUVAL | Jacksonville | I-10 ROOSEVELT CONN | 72030000 | 9.25 | 9.4343 | 0.1843 | 973 | Urbanized | Arterial | 9584 | 15416 | 173 | 797 | 1282 | 36.79 | 0.00 | 0.51 | 6 | F |
| 76 | ST.JOHNS | Jacksonville | SR 13 | 78070000 | 16.303 | 17.294 | 0.991 | 5232 | Urbanized | Arterial | 47073 | 86618 | 424 | 3913 | 7201 | 33.07 | 0.00 | 0.27 | 4 | F |
| 77 | DUVAL | Jacksonville | ROOSEVELT BLVD | 72030000 | 9.148 | 9.2121 | 0.0641 | 338 | Urbanized | Arterial | 3493 | 5619 | 63 | 290 | 467 | 39.15 | 0.00 | 0.19 | 5 | F |
| 78 | DUVAL | Jacksonville | I-10 ROOSEVELT CONN | 72030000 | 9.2121 | 9.25 | 0.0379 | 200 | Urbanized | Arterial | 2066 | 3323 | 37 | 172 | 276 | 37.75 | 0.00 | 0.17 | 6 | F |

| Rank | County | Area | Facility | ROADWAY | Begin Post | End Post | Roadway Length (mi) | Roadway Length (Ft) | Area Type | Facility Type | Daily VMT | Daily PMT | Daily TMT | Peak Hour VMT | Peak Hour PMT | Peak Speed | Peak Hour Delay | Daily Delay | Tot Lanes | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 79 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 7.954 | 8.415 | 0.461 | 2434 | Urbanized | Arterial | 29965 | 48200 | 599 | 2491 | 4007 | 34.11 | 0.00 | 0.00 | 6 | F |
| 80 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 8.415 | 9.994 | 1.579 | 8337 | Urbanized | Arterial | 102635 | 165094 | 2053 | 8532 | 13725 | 35.15 | 0.00 | 0.00 | 6 | F |
| 81 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 9.994 | 10.034 | 0.04 | 211 | Urbanized | Arterial | 2600 | 4182 | 52 | 216 | 348 | 37.85 | 0.00 | 0.00 | 6 | F |
| 82 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 24.42 | 25.532 | 1.112 | 5871 | Urbanized | Freeway | 51708 | 83175 | 6929 | 4335 | 6973 | 57.20 | 0.00 | 0.00 | 6 | F |
| 83 | DUVAL | Jacksonville | 3RD ST S | 72004000 | 0.126 | 0.156 | 0.03 | 158 | Urbanized | Arterial | 1170 | 1882 | 23 | 97 | 156 | 25.22 | 0.00 | 0.00 | 5 | F |
| 84 | DUVAL | Jacksonville | ATLANTIC BLVD | 72100000 | 13.698 | 13.965 | 0.267 | 1410 | Urbanized | Arterial | 13617 | 21904 | 272 | 1132 | 1821 | 45.16 | 0.00 | 0.00 | 5 | F |
| 85 | DUVAL | Jacksonville | 3RD ST S | 72004000 | 0 | 0.126 | 0.126 | 665 | Urbanized | Arterial | 5103 | 8208 | 102 | 424 | 682 | 28.97 | 0.00 | 0.00 | 5 | F |
| 86 | ST.JOHNS | | SR 16 | 78060000 | 15.828 | 16.178 | 0.35 | 1848 | | Arterial | 12600 | 23185 | 302 | 1047 | 1927 | 39.40 | 0.00 | 0.00 | 4 | F |
| 87 | DUVAL | Jacksonville | 3RD ST S | 72100000 | 19.109 | 19.84 | 0.731 | 3860 | Urbanized | Arterial | 29606 | 47622 | 444 | 2461 | 3959 | 24.03 | 0.00 | 0.00 | 4 | F |
| 88 | CLAY | Jacksonville | SR 21 | 71070000 | 4.256 | 7.124 | 2.868 | 15143 | Urbanized | Arterial | 119022 | 151410 | 5356 | 9895 | 12587 | 37.27 | 0.00 | 0.00 | 4 | F |
| 89 | ST.JOHNS | | SR 16 | 78060000 | 15.3 | 15.772 | 0.472 | 2492 | | Arterial | 16992 | 31267 | 408 | 1413 | 2599 | 39.43 | 0.00 | 0.00 | 4 | F |
| 90 | CLAY | Jacksonville | SR 21 | 71070000 | 2.75 | 3.9449 | 1.1949 | 6309 | Urbanized | Arterial | 46601 | 59282 | 2097 | 3874 | 4928 | 37.46 | 0.00 | 0.00 | 4 | F |
| 91 | ST.JOHNS | | SR 16 | 78060000 | 16.178 | 17.7623 | 1.5843 | 8365 | | Arterial | 57035 | 104950 | 1369 | 4742 | 8725 | 39.42 | 0.00 | 0.00 | 4 | F |
| 92 | DUVAL | Jacksonville | 3RD ST S | 72004000 | 0.156 | 0.217 | 0.061 | 322 | Urbanized | Arterial | 2379 | 3827 | 48 | 198 | 318 | 24.02 | 0.00 | 0.00 | 4 | F |
| 93 | ST.JOHNS | St. Augustine | SR 16 | 78060000 | 17.7623 | 17.787 | 0.0247 | 130 | Urbanized | Arterial | 889 | 1636 | 21 | 74 | 136 | 39.42 | 0.00 | 0.00 | 4 | F |
| 94 | ST.JOHNS | St. Augustine | PONCE DE LEON BLVD | 78010000 | 17.2895 | 17.521 | 0.2315 | 1222 | Urbanized | Arterial | 9260 | 17039 | 278 | 770 | 1417 | 24.64 | 0.00 | 0.00 | 4 | F |
| 95 | DUVAL | Jacksonville | I-10 ROOSEVELT CONN | 72030000 | 9.4343 | 9.712 | 0.2777 | 1466 | Urbanized | Arterial | 14579 | 23451 | 233 | 1212 | 1950 | 36.13 | 0.00 | 0.00 | 4 | F |
| 96 | ST.JOHNS | | SR 16 | 78060000 | 15.772 | 15.828 | 0.056 | 296 | | Arterial | 2016 | 3710 | 48 | 168 | 308 | 39.42 | 0.00 | 0.00 | 4 | F |
| 97 | DUVAL | Jacksonville | 3RD ST S | 72100000 | 18.065 | 19.109 | 1.044 | 5512 | Urbanized | Arterial | 39672 | 63814 | 793 | 3298 | 5305 | 23.98 | 0.00 | 0.00 | 4 | F |
| 98 | CLAY | Jacksonville | SR 21 | 71070000 | 3.9449 | 4.256 | 0.3111 | 1643 | Urbanized | Arterial | 12911 | 16424 | 581 | 1073 | 1365 | 42.51 | 0.00 | 0.00 | 4 | F |
| 99 | ST.JOHNS | St. Augustine | SR 16 | 78060000 | 17.787 | 17.797 | 0.01 | 53 | Urbanized | Arterial | 250 | 460 | 6 | 21 | 38 | 39.29 | 0.00 | 0.00 | 4 | F |
| 100 | DUVAL | Jacksonville | 3RD ST S | 72004000 | 0.217 | 0.692 | 0.475 | 2508 | Urbanized | Arterial | 18525 | 29798 | 371 | 1540 | 2477 | 24.02 | 0.00 | 0.00 | 4 | F |
| 101 | CLAY | Jacksonville | SR 21 | 71070000 | 1.855 | 2.75 | 0.895 | 4726 | Urbanized | Arterial | 34905 | 44403 | 1571 | 2902 | 3691 | 26.65 | 0.00 | 0.00 | 4 | F |
| 102 | DUVAL | Jacksonville | 3RD ST N | 72100000 | 17.813 | 18.065 | 0.252 | 1331 | Urbanized | Arterial | 8568 | 13782 | 171 | 712 | 1146 | 24.02 | 0.00 | 0.00 | 4 | F |
| 103 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 5.547 | 5.911 | 0.364 | 1922 | Urbanized | Arterial | 5096 | 8197 | 107 | 424 | 681 | 0.00 | 0.00 | 0.00 | 2 | F |
| 104 | ST.JOHNS | St. Augustine | SR A1A | 78040000 | 16.652 | 17.041 | 0.389 | 2054 | Urbanized | Arterial | 7586 | 13958 | 167 | 631 | 1160 | 0.00 | 0.00 | 0.00 | 2 | F |
| 105 | CLAY | Jacksonville | BRANAN FIELD RD | 71393000 | 0.767 | 2.275 | 1.508 | 7962 | Urbanized | Arterial | 27898 | 35490 | 1004 | 2319 | 2950 | 39.66 | 0.00 | 0.00 | 2 | F |
| 106 | ST.JOHNS | St. Augustine | SAN MARCO AVE | 78010027 | 2.091 | 2.173 | 0.082 | 433 | Urbanized | Arterial | 1107 | 2037 | 35 | 92 | 169 | 0.00 | 0.00 | 0.00 | 2 | F |
| 107 | CLAY | Jacksonville | BRANAN FIELD RD | 71393000 | 0 | 0.3108 | 0.3108 | 1641 | Urbanized | Arterial | 5750 | 7314 | 207 | 478 | 608 | 35.63 | 0.00 | 0.00 | 2 | F |
| 108 | DUVAL | Jacksonville | RIVERSIDE AVE | 72050000 | 6.148 | 6.32 | 0.172 | 908 | Urbanized | Arterial | 2408 | 3873 | 51 | 200 | 322 | 0.00 | 0.00 | 0.00 | 2 | F |
| 109 | CLAY | Jacksonville | BRANAN FIELD RD | 71393000 | 0.3108 | 0.767 | 0.4562 | 2409 | Urbanized | Arterial | 8440 | 10736 | 304 | 702 | 893 | 39.54 | 0.00 | 0.00 | 2 | F |
| 110 | DUVAL | Jacksonville | I-95 | 72280000 | 9.334 | 11.674 | 2.34 | 12355 | Urbanized | Freeway | 287820 | 462973 | 37129 | 24130 | 38815 | 50.39 | 135.19 | 447.51 | 6 | E |
| 111 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 17.426 | 19.25 | 1.824 | 9631 | Urbanized | Freeway | 211584 | 340343 | 23274 | 17739 | 28534 | 60.30 | 27.43 | 57.39 | 6 | E |
| 112 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 11.395 | 12.85 | 1.455 | 7682 | Urbanized | Freeway | 110580 | 177873 | 14818 | 9271 | 14913 | 60.08 | 14.98 | 96.83 | 4 | E |
| 113 | DUVAL | Jacksonville | I-295/SR9A | 72001000 | 15.907 | 17.426 | 1.519 | 8020 | Urbanized | Freeway | 175445 | 282211 | 12983 | 14709 | 23660 | 62.56 | 12.35 | 26.88 | 6 | E |
| 114 | DUVAL | Jacksonville | I-295/SR9A | 72002000 | 12.85 | 13.394 | 0.544 | 2872 | Urbanized | Freeway | 41888 | 67379 | 5613 | 3512 | 5649 | 59.59 | 6.20 | 41.47 | 4 | E |
| 115 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0.66 | 0.803 | 0.143 | 755 | Urbanized | Arterial | 2159 | 3973 | 50 | 180 | 330 | 29.33 | 1.11 | 9.03 | 2 | E |
| 116 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0.614 | 0.66 | 0.046 | 243 | Urbanized | Arterial | 695 | 1278 | 16 | 58 | 106 | 29.26 | 0.36 | 2.91 | 2 | E |
| 117 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0 | 0.03 | 0.03 | 158 | Urbanized | Arterial | 453 | 834 | 10 | 38 | 69 | 29.47 | 0.23 | 1.89 | 2 | E |
| 118 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0.03 | 0.069 | 0.039 | 206 | Urbanized | Arterial | 589 | 1084 | 14 | 49 | 90 | 29.17 | 0.00 | 0.29 | 2 | E |

| Rank | County | Area | Facility | ROADWAY | Begin Post | End Post | Roadway Length (mi) | Roadway Length (Ft) | Area Type | Facility Type | Daily VMT | Daily PMT | Daily TMT | Peak Hour VMT | Peak Hour PMT | Peak Speed | Peak Hour Delay | Daily Delay | Tot Lanes | LOS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 119 | ST.JOHNS | St. Augustine | VILANO RD | 78030001 | 0.138 | 1.032 | 0.894 | 4720 | Urbanized | Arterial | 13321 | 24511 | 306 | 1107 | 2038 | 36.34 | 0.00 | 0.00 | 2 | E |
| 120 | ST.JOHNS | St. Augustine | KING ST | 78010027 | 0 | 0.235 | 0.235 | 1241 | Urbanized | Arterial | 4348 | 8000 | 139 | 361 | 665 | 0.00 | 0.00 | 0.00 | 2 | E |
| 121 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0.301 | 0.614 | 0.313 | 1653 | Urbanized | Arterial | 4726 | 8697 | 109 | 393 | 723 | 36.41 | 0.00 | 0.00 | 2 | E |
| 122 | ST.JOHNS | St. Augustine | KING ST | 78010027 | 0.235 | 0.383 | 0.148 | 781 | Urbanized | Arterial | 2664 | 4902 | 85 | 221 | 408 | 0.00 | 0.00 | 0.00 | 2 | E |
| 123 | ST.JOHNS | St. Augustine | VILANO RD | 78030001 | 0 | 0.138 | 0.138 | 729 | Urbanized | Arterial | 2056 | 3784 | 47 | 171 | 315 | 40.52 | 0.00 | 0.00 | 2 | E |
| 124 | ST.JOHNS | St. Augustine | SAN MARCO AVE | 78010027 | 0.383 | 0.6531 | 0.2701 | 1426 | Urbanized | Arterial | 3376 | 6213 | 108 | 281 | 516 | 0.00 | 0.00 | 0.00 | 2 | E |
| 125 | ST.JOHNS | St. Augustine | MAY ST | 78030000 | 0.069 | 0.301 | 0.232 | 1225 | Urbanized | Arterial | 3503 | 6446 | 81 | 291 | 536 | 36.33 | 0.00 | 0.00 | 2 | E |

*Figure 5 – North Florida LOS Map for Congested Facilities*

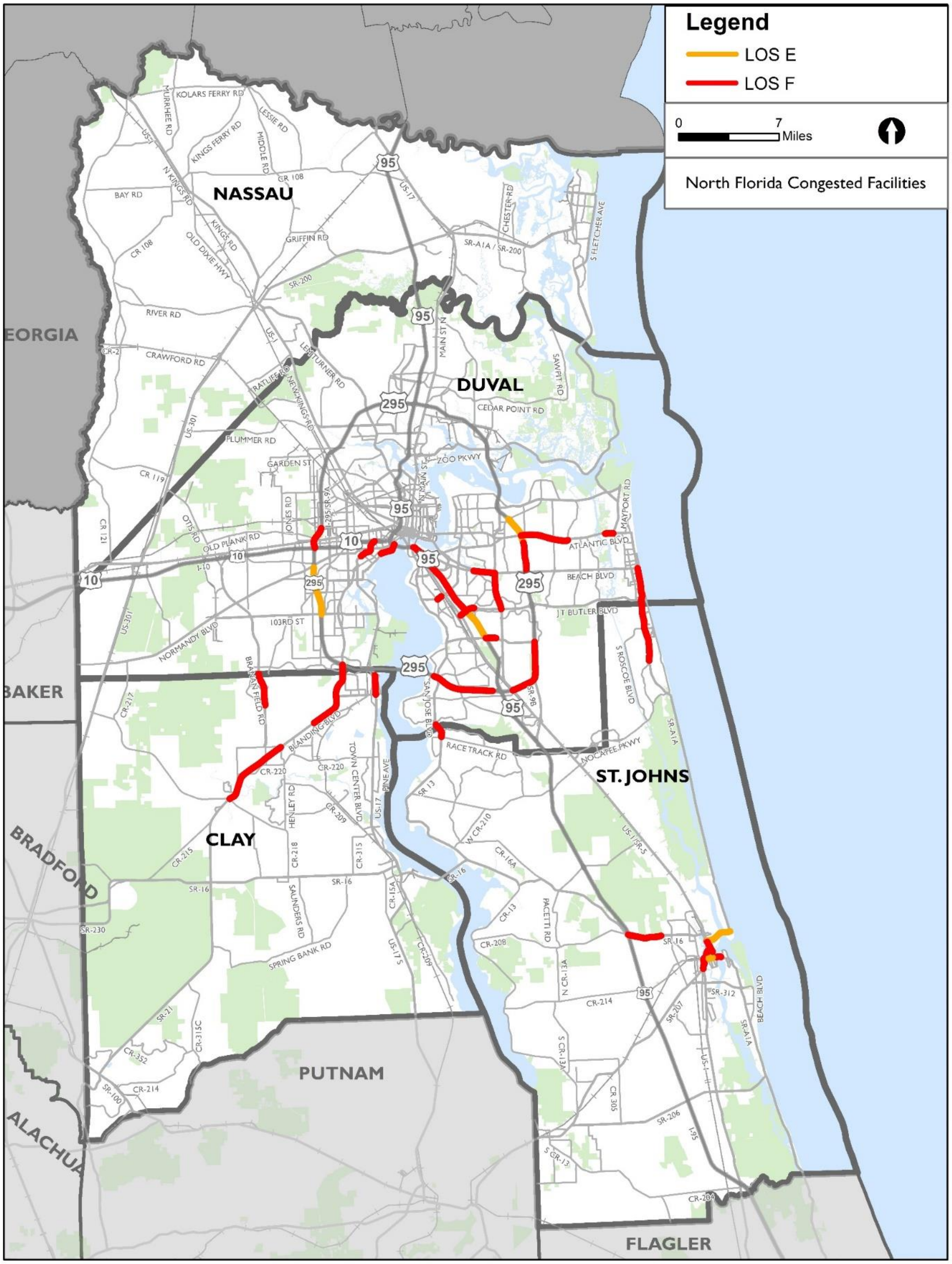
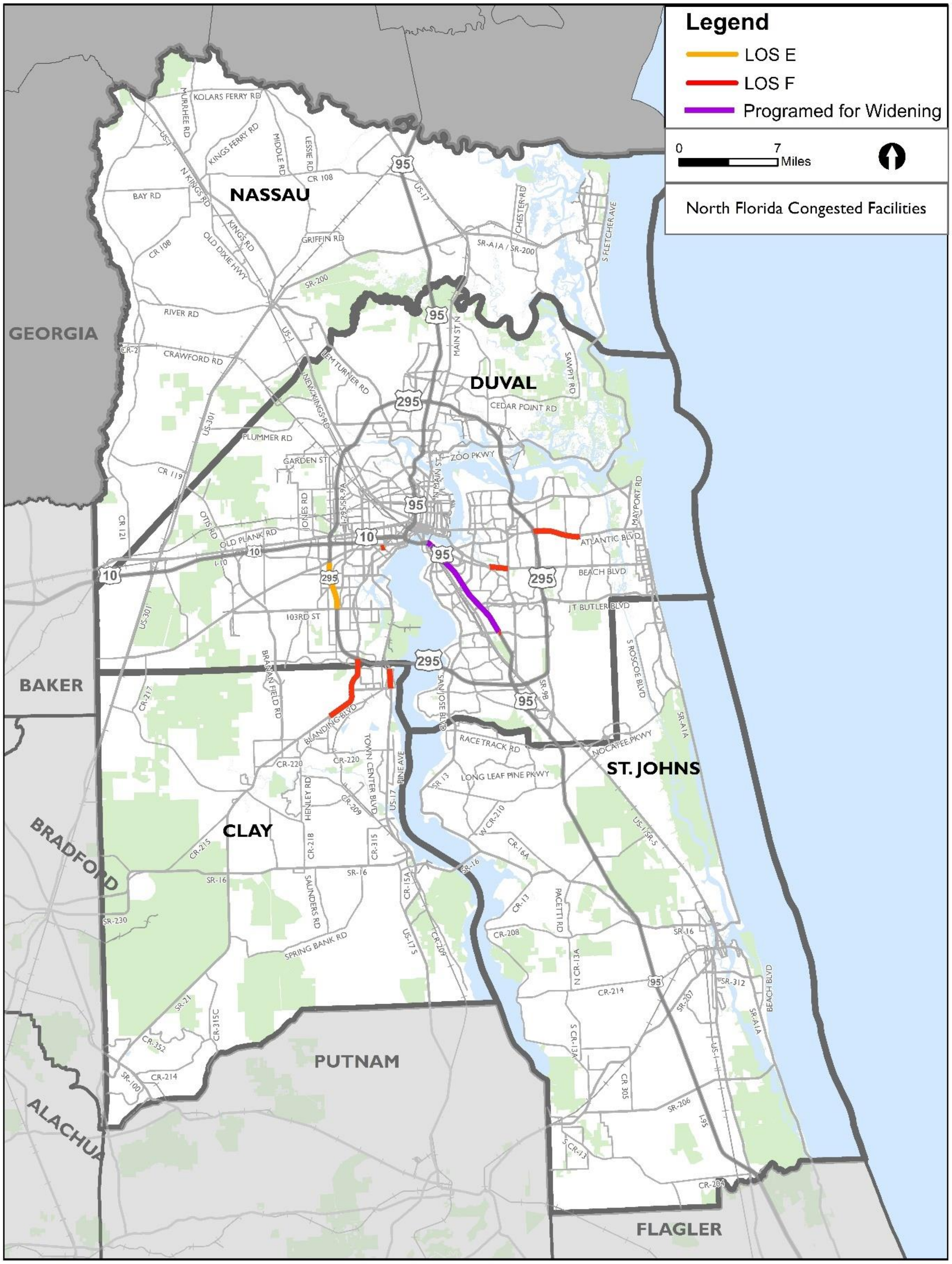


*Figure 6- North Florida LOS Map for Congested and Constrained Facilities*



# 8. Congestion Mitigation Strategies

This section is intended to illustrate and describe mitigation strategies that can relieve congestion. For MPOs with more than 200,000 people within their planning areas, SAFETEA-LU requires that the MPO:

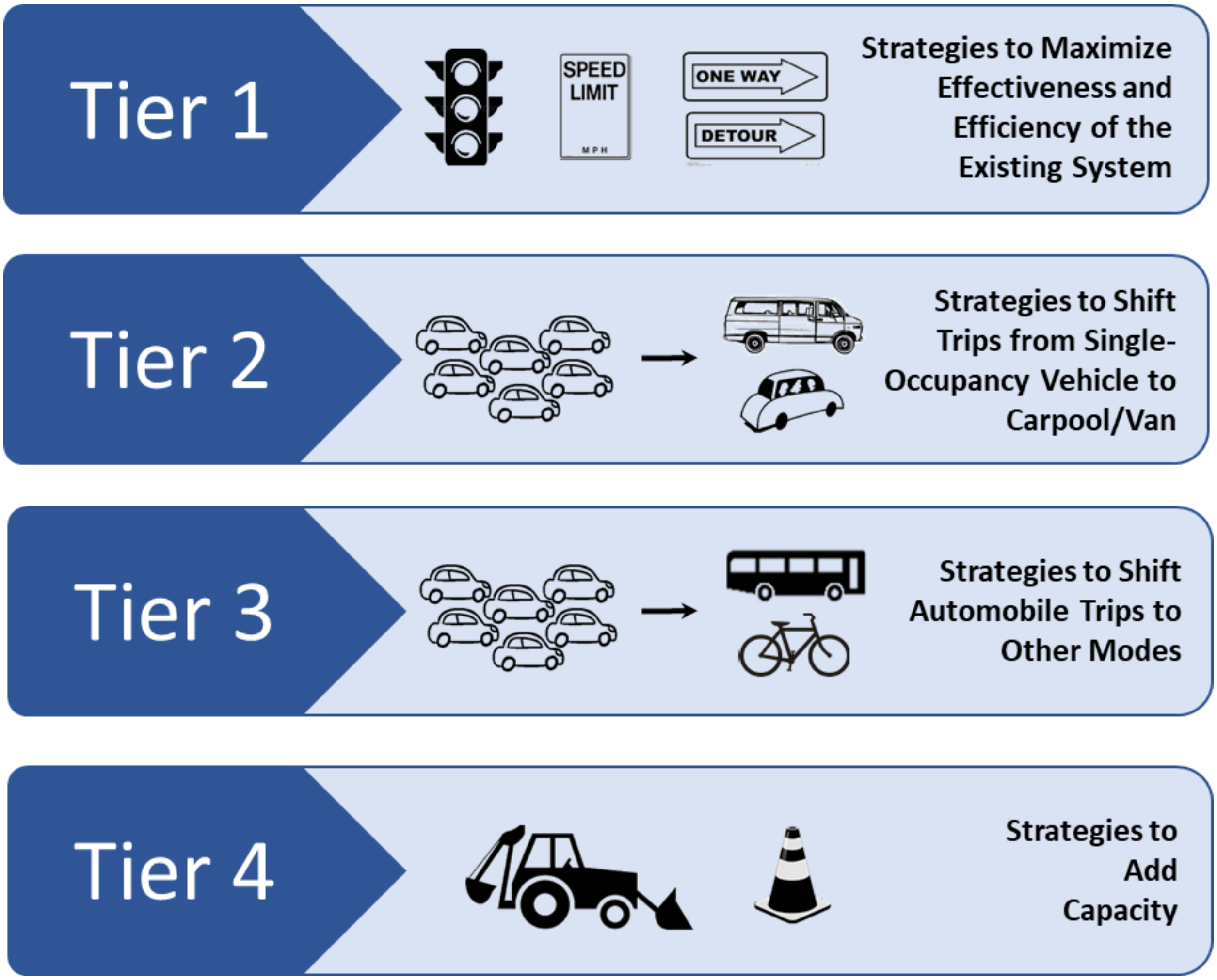
> *"shall address congestion management … through the use of travel demand reduction and operational management strategies."*

In addition, the Final Rule on Statewide and Metropolitan Transportation Planning, states:

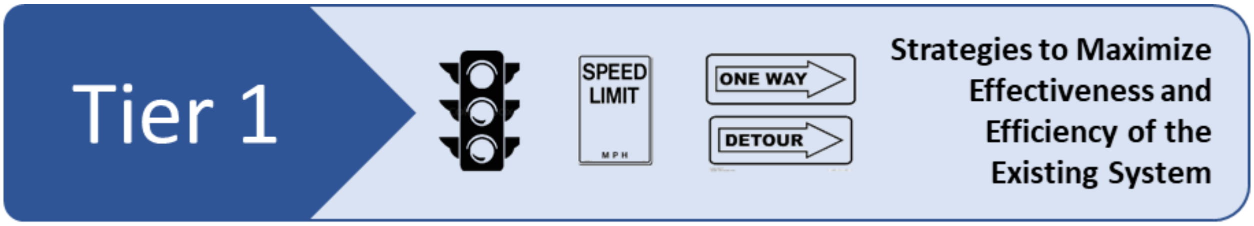
> *"development of a congestion management process should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the Transportation Improvement Program (TIP)."*

A full range of mitigation strategies has been identified for the North Florida TPO. This is not intended to be a complete list of all the strategies that may be employed for congestion mitigation. Other congestion mitigation strategies may also be selected and implemented in addition to the strategies described in this section. The CMP uses a strategy toolbox with tiers of strategies to support the congestion strategies for corridors. Following an approach used by other MPOs and promoted by FHWA, the toolbox is arranged so measures at the top take precedence over those at the bottom. The toolbox is presented in Figure 7 below.

*Figure 7 – Congestion Management Toolbox of Strategies*




The "top-down" approach promotes the growing sentiment in transportation planning and the FHWA's direction to consider all solutions before recommending additional roadway capacity. The congestion management toolbox of strategies is presented in detail in the remainder of this section.




## 8.1. Tier 1: Strategies to Maximize Effectiveness and Efficiency of the Existing System

The existing transportation system can be utilized most effectively and efficiently through TSM&O strategies. TSM&O is an integrated program developed to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of the transportation system. Several TSM&O strategies are described in detail below.

### 8.1.1. Surveillance and Incident Management Systems

A freeway incident detection and management system consists of one or some combination of: roving tow or service vehicles, citizen cellular devices, incident teams, traffic detectors, changeable message signs, closed circuit television surveillance, a communication system, and central computer control. A system of detectors connected to the central computer allows monitoring of conditions throughout the freeway system. Pertinent driver information is provided through the dynamic message sign system and radio traffic reports to alert drivers to congested conditions and allows diversion to alternate routes if necessary. The North Florida TPO has successfully implemented various Incident Management Systems in partnership with the FDOT through various Traffic Incident Management programs and studies with the North Florida region including video surveillance and road ranger service on all interstates in the region.

### 8.1.2. Access Management

An access management program can improve average travel speeds, safety, performance, and capacity of arterials. Access management elements often include: physical restriction of left turns, restricting curb cuts and driveways, separating obvious conflict areas, eliminating parking, adequate intersection spacing, and frontage roads. Access management improves safety and serves as a congestion reduction technique because it controls and limits the locations where vehicles can exit or enter the road.

### 8.1.3. Congestion Pricing

Congestion pricing, sometimes called value pricing, is a way to harness the existing roadway capacity to reduce traffic congestion. Congestion pricing works by shifting rush hour highway travel to other transportation modes or to off-peak periods. By removing a fraction of the vehicles from a congested roadway, pricing enables the system to flow much more efficiently, allowing more cars to move through the same physical space. Congestion pricing programs raise the price during rush hours and lower the price during off-peak periods to better use the road space. The tolls can be adjusted according to a set toll schedule or dynamically, based on demand. Adjusting the toll can persuade drivers to choose: an alternate route, a different departure time, a different mode, telecommute, or eliminate low-priority trips.

### 8.1.4. Integrated Corridor Management

Integrated Corridor Management (ICM) systems combine individual transportation assets along a corridor into one operating system. By partnering local, state, and private agencies responsible for freeway, arterial, and transit operations within the corridor, ICM offers an opportunity to optimize transportation throughout the entire network by combining technologies and sharing information between network partners. This allows for the leveraging of underutilized infrastructure and improved dissemination of information to the traveling public.

### 8.1.5. Arterial Management Systems

Arterial management systems regulate or direct traffic along arterial roads, employing traffic detectors, traffic signals, and various means of communicating information to travelers. These systems use information collected by traffic surveillance devices to smooth the flow of traffic along travel corridors. They also disseminate important information about travel conditions to travelers via technology such as dynamic message signs (DMS) or highway advisory radio (HAR). Arterial management may include the following strategies: incident detection with service patrols, roving tow vehicles, motorist information systems, and incident teams; intersection surveillance and monitoring using loop detectors, interconnected signal systems, and video monitoring of intersections; parking control and management; integration of freeway and arterial management programs; and traffic surveillance and metering.

### 8.1.6. Hard Shoulder Running

Drivable shoulder use, also known as hard shoulder running, is a strategy designed to permit a roadway shoulder to serve as additional roadway capacity on a temporary basis. By allowing vehicles (either all vehicles or only eligible vehicles, such as transit, HOVs, etc.) on the shoulder with reduced speed limits, it is possible to serve a higher number of vehicles and minimize congestion during peak periods. The drivable shoulders could also be used temporarily for incident or construction management. The decision to implement should use on a segment is typically made by an operator in the traffic management center based on traffic conditions, after a check for obstacles and in accordance with operations policies.

### 8.1.7. Reversible Lanes

Reversible or changeable traffic lanes add capacity to a road and decrease congestion by utilizing capacity from the other (off-peak) direction. Reversing lanes reduces congestion during morning and evening commutes, when there is an incident blocking a lane of traffic, or when construction or maintenance is being done on the road. Both freeway and arterial roads can be adjusted to become a one-way street or have the middle lane(s) operate in the peak direction of travel. These adjustments, indicated by changeable message signs and/or arrows, occur at specified times of the day or when volume exceeds limits.

### 8.1.8. One-way Streets

Although most streets and highways are designed for use as two-way traffic, high volumes of traffic and vehicle conflicts often lead to consideration of one-way traffic regulations. In major activity centers, such as the central business districts of cities with large traffic volumes and closely spaced intersections, one-way traffic regulations are frequently used because of traffic signal timing considerations and to improve street capacity. In the development of new activity centers such as shopping centers, sports arenas, industrial parks, and so on, one-way regulations are frequently incorporated into original streets and traffic plans. One-way streets are generally operated in one of the following three ways: a street on which traffic moves in one direction at all times; a street that is normally one-way but at certain times may not be operated in the reverse direction to provide additional capacity in the predominant direction of flow; or a street that normally carries two-way traffic but which during peak traffic hours may be operated as a one-way street, usually in the heavier direction of flow.

### 8.1.9. Ramp Metering

Ramp metering, also known as ramp flow control, uses specialized traffic signals that release vehicles onto a freeway in a smooth and even manner. The goal is to keep entering vehicles from crowding out freeway traffic and creating stop-and-go traffic that ripples upstream and slows the entire freeway. By releasing one or two vehicles at a time, ramp meter signals keep the freeway moving efficiently for a longer period of time. Less stop-and-go traffic means fewer crashes that cause additional congestion. In turn, vehicles will wait on the ramp. Queue by-pass lanes can be added to ramps to give priority to high-occupancy vehicles (HOV), including carpools and buses.

### 8.1.10. Transit Signal Priority

Transit signal priority and transit signal preemption are standard traffic controller features that transfer normal signal operations to a special control mode to facilitate the passage of buses and emergency vehicles by prohibiting conflicting traffic flow. The primary objective is to improve intersection safety. For emergency vehicle services, an equally important objective is faster response times. Transit signal priority can be best implemented on traffic signals near railway crossings or on corridors with heavy transit use or designated express bus or bus rapid transit routes.

### 8.1.11. Variable Speed Limits

Variable speed limits, also referred to as speed harmonization, use speed limit signs that can be changed to alert drivers when traffic congestion is imminent. Sensors along the roadway detect when congestion weather conditions exceed specified thresholds and automatically reduce the speed limit in 5 miles per hour increments to slow traffic uniformly and delay the onset of congestion. Depending upon the objectives set for the system, speed limits can be regulatory or advisory. Dynamic message signs can also be deployed in conjunction with this system to give drivers travel-time information or explanations.

### 8.1.12. Dynamic Detours

Dynamic detours is the concept of detouring traffic in real time based on real time traffic information. A major part of the dynamic detour system is the ITS component that collects real-time traffic information from the road network and disseminates information to travelers to help them make informed decisions on selecting an alternate route or continue on the original route. Detour routes are a common feature of the highway system. Many detours are planned in conjunction with work zones or special events, but the roadway used for the detour may not be able to accommodate the additional traffic without prior improvements. Improvements to detour routes are intended to improve the capacity of corridors.

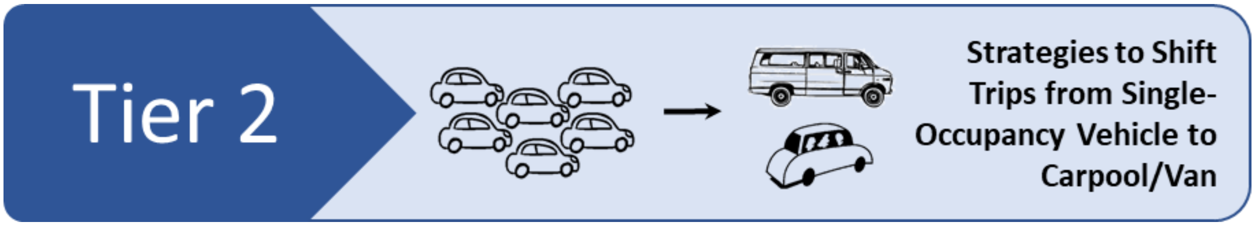
### 8.1.13. Queue Warning Systems

Queue warning system's basic principle is to inform travelers of the presence of downstream stop-and-go traffic (based on real-time traffic detection) using warning signs and flashing lights. Drivers can anticipate an upcoming situation of emergency breaking and slow down, avoid erratic behavior, and reduce queuing-related collisions. Dynamic message signs show a symbol or word when stop-and-go traffic is near. Speed harmonization and lane control signals that provide incident management capabilities can be combined with queue warning. The system can be automated or controlled by a traffic management center operator. Work zones also benefit from queue warning with portable dynamic message sign units placed upstream of expected queue points.

### 8.1.14. Traveler Information Systems

Traveler information systems inform drivers on current roadway conditions – including delays, incidents, weather-related messages, travel times, emergency alerts, and alternative routes. Providing this information to drivers before and during trips allows them to make more effective travel decisions about changing routes, modes, departure times, or even destinations. More informed drivers result in more efficiently utilized roadway capacity. This means less gridlock and better traffic flow.

Travel information is generated by sensors reporting to a traffic management center or through private entities using data from in-vehicle location devices, or from smart phones communicating location and speed. This information is then disseminated via traditional broadband media, internet, mobile devices, or roadside messaging. Personalized travel messages and alerts enable individuals to get trip-specific information on demand, or have it pushed to them via email or text message subscription services.




## 8.2. Tier 2: Strategies to Shift Trips from Single-Occupancy Vehicle to Carpool/Van

These strategies are recommended to encourage HOV use. Examples include HOV lanes, park-and-ride lots, multimodal transportation corridors and centers, and commuter assistance service programs. These strategies are described in detail below.

### 8.2.1. High-Occupancy Vehicle (HOV) Lanes

A HOV lane, also known as a carpool or diamond lane is a restricted traffic lane reserved at peak travel times or longer for exclusive use of vehicles with a driver and one or more passengers, including carpools, vanpools, and transit buses. The normal occupancy level is two or three occupants. HOV lanes are normally created to increase higher average vehicle occupancy and person throughput with the goal of reducing traffic congestion and air pollution.

### 8.2.2. Park-and-Ride Lots

Park-and-ride lots are typically located on the suburban fringe of urbanized areas. Usually, park-and-ride lots are strategically placed outside of the “ring of congestion” on major commuter corridors. Services offered at park-and-ride lots may include local fixed route bus, express bus, bus rapid transit, and rail. The lots are designed for commuters transferring from low-occupancy mode of travel (usually private automobiles) to high-occupancy modes (rail, bus, van, and/or car-pools). Services from park-and-ride lots are designed to concentrate transit demand, offering transit services that could not otherwise be cost-effectively provided. Typical park-and-ride amenities include covered or enclosed waiting areas, benches, and sometimes vending machines and restrooms. Lots may vary in size from 200 to over 1,000 spaces and can be used exclusively for transit or offer shared uses, such as vanpool staging. Transit fares from park-and-ride lots are typically higher than basic local fares, and parking may be free or for a small fee.

### 8.2.3. Multimodal Transportation Corridors and Centers

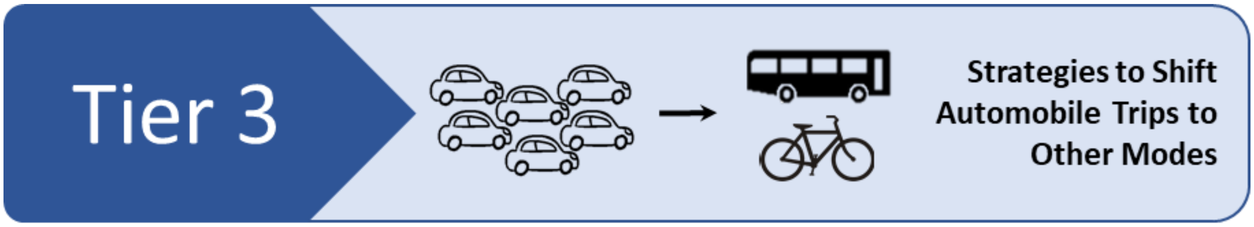
Multimodal transportation corridors provide the best solution for all person or freight movement in a congested corridor. This requires designers to incorporate strategies such as managed lanes, toll facilities, rail transit, and commute options into a corridor, allowing capacity for moving people and freight to be more easily expanded in the future.

Similarly, multimodal transportation centers take the corridor concept and condense it into a single facility that combines multiple modes including bus, rail, bicycle, rental cars, taxis, and other transportation services. These facilities provide high connectivity and convenience for all users. Planning and designing multimodal corridors and centers relies on knowing the specific needs and resources of the surrounding community.

### 8.2.4. Commuter Assistance Service Programs

A commuter assistance service program (CAP) is a program or series of programs with the goal of reducing single-occupant vehicle commuter congestion and travel on our nation's roads. These CAPs advocate alternative transportation strategies such as carpooling, vanpooling, car sharing, telework, flex time, congestion pricing, walking, biking, and many other methods. Employers can implement four major types of initiatives to reduce congestion:

- Encourage ridesharing, carpools, and vanpools
- Take advantage of legislation that allows tax write-offs for employee transit subsidies
- Institute flex-time programs that allow employees to spread their arrival and departure time throughout the peak periods of the day
- Participate in Transportation Management Associations.




## 8.3. Tier 3: Strategies to Shift Automobile Trips to Other Modes

There are two types of strategies to shift automobile trips to other modes: public transit strategies and non-motorized transportation strategies. Public transit strategies include improvements in local bus service, express bus service, bus rapid transit, light rail, and commuter rail. Non-motorized transportation strategies include new sidewalk connections, designated bicycle facilities, improved safety of existing bicycle and pedestrian facilities, exclusive non-motorized right of way, and complete streets. These strategies are described in detail below.

### 8.3.1. Local Bus Service Improvements

Providing more routes, increased frequency, and longer hours is one of the most cost-effective transportation solutions for urban areas, especially compared to major light rail projects or freeway capacity upgrades. This strategy provides better accessibility to transit to a greater share of the population. Increasing frequency makes transit more attractive to use.

### 8.3.2. Express Bus Service Improvements

Express bus service is a variation of fixed route service where a portion of the route is operated without stops or with a very limited number of stops to pick up or discharge passengers. This service strategy is particularly attractive to commuters in outlying suburban areas who desire fast service to downtown areas.

### 8.3.3. Bus Rapid Transit Improvements

Bus Rapid Transit (BRT) refers to a new generation of bus service that includes dedicated running ways/lanes, facilities, technology, and equipment. BRT offers more frequent and predictable service and traffic priority systems to help get passengers to their destinations faster than traditional local bus service. BRT provide for a faster, more affordable way to build transit use without the large capital investments on rail technologies. BRT can also operate on an existing roadway.

### 8.3.4. Light Rail Transit Improvements

Light Rail Transit (LRT) is a medium capacity rail transit technology utilized for public transportation using a steel-tracked fixed guideway that provides passenger capacities ranging from 2,000 to 20,000 travelers an hour. Light rail can operate on either grade-separated, reserved right-of-way and can operate in mixed traffic on city streets. The latter operation is commonly known as streetcar service. Passenger loading platforms are usually low level and operation is manual. LRT cars can operate singly or in trains and can easily be coupled or uncoupled to adapt to changing traffic conditions.

### 8.3.5. Automated People Mover Improvements

The automated people mover is a type of small scale automated guideway transit system. The term is generally used only to describe systems serving relatively small areas such as airports, downtown districts or theme parks. The JTA currently operates automated monorail trains on fixed guideway, called the Skyway. It includes 2.5 miles of track serving eight stations in downtown Jacksonville and crosses the St. Johns River on the Acosta Bridge. The Skyway operates free of charge to customers.

### 8.3.6. Commuter Rail Improvements

Commuter rail transit is a service which generally operates between major downtown and suburban areas of a metropolitan region. Commuter rail operates on mainline rail lines, using high speed locomotives or self-propelled cars in multi-car trains. This service is usually characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, and usually one or two stations in the central business district. Commuter rail primarily carries daily commuters (work trips) bus is used in many areas as a viable alternative to the personal automobile on evenings and weekends as well.

### 8.3.7. New Sidewalk Connections

Sidewalk connectivity encourages pedestrian traffic. Maximum block lengths, building setback restrictions, and streetscape enhancements are examples of design guidelines that can be codified in zoning ordinances to encourage pedestrian activity.

### 8.3.8. Designated Bicycle Facilities

Designated bicycle lanes refer to on-road bikeways in urban areas with bicycle logo/arrow pavement markings (person on bike symbol) and signs indicating that it is a bicycle lane. Creating designated bicycle facilities enhances the visibility of bicyclists and increases safety. Bike lanes have a powerful influence on people's willingness to try bicycling in traffic. In many cases, bicycle lanes can be added to roadways through re-striping.

### 8.3.9. Improved Safety on Existing Bicycle and Pedestrian Facilities

Improved safety on existing bicycle and pedestrian facilities could include: lighting, signs, striping, traffic control devices, pavement quality, curb cuts and extensions, median refuges, raised crosswalks, and protected bicycle lanes.

### 8.3.10. Complete Streets

Complete streets are context sensitive streets or roadways that are designed and operated for safe access and travel by users of all ages and abilities, including, but not limited to motorists, bicyclists, pedestrians, transit users, technology and other mobility providers, freight haulers. Complete streets allow the public to safely cross the street, walk or bicycle to shops and/or work. They support safe and convenient access to transit services. Designing and operating the entire right-of-way as a complete street can enable safe access for pedestrians, bicyclists, motorists, and transit users. Elements that may be found on a complete street include sidewalks, bike facilities, special bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, support for changing mobility technologies, and more.

### 8.3.11. Mixed Use Development

Mixed use development is characterized as pedestrian-friendly development that blends two or more residential, commercial, cultural, institutional, and/or industrial uses. Mixed use is one of the ten principles of Smart Growth, a planning strategy that seeks to foster community design and development that serves the economy, community, public health, and the environment. This strategy allows many trips to be made without automobiles because people can walk to restaurants and services rather than use their vehicles.


## 8.4. Tier 4: Strategies to Add Capacity

Strategies to add capacity are the costliest and least desirable strategies and should be considered a last resort method for reducing congestion. A capacity improvement strategy could include more traffic lanes, new roadways, or other options, such as managed lanes, auxiliary lanes, or intersection improvements. These strategies can either address long-term needs via corridor-wide or alternative route expansion or can contribute to moving more traffic through a short bottleneck location in less time. These improvements are costly and will require high construction dollars to accomplish the needed goals. Strategies to add capacity are described in detail below.

### 8.4.1. New Lanes

Adding new lanes or adding general capacity can be added to any facility by building more lanes. Additional general-purpose lanes can be directly adjacent, or at-grade, to the existing mainline. While this strategy is a traditional solution to the capacity needs, it can be costly to construct additional lanes due to right-of-way restrictions or structure costs. With today's funding challenges, growing right-of-way constraints in developed areas, and increased environmental regulations, it becomes more and more challenging for cities and states to "build" their way out of congestion.

### 8.4.2. New Managed Lanes

Managed lanes refer to any lane or corridor that controls usage by vehicle eligibility, price, or access control. Managed lanes provide travel alternatives, giving flexibility to users by allowing them to choose the best method of travel for the trip. This choice reduces congestion by maximizing existing capacity while encouraging transit and carpool/vanpool usage. Public acceptance is crucial to successfully integrate managed lanes into a transportation network.

### 8.4.3. Intersection Improvements

Geometric and signal timing improvements can improve the traffic flow through an intersection. These types of upgrades include additional turning lanes, protected turns, turn restrictions, lane widening, signal timing optimization, and other methods of improving the intersection's capacity. Roundabouts are becoming more popular and allow for increased capacity and simplification of some intersections. Signal coordination amongst consecutive intersections allows platoons of vehicles to travel along a corridor, further improving a system's efficiency. Intersection improvements are typically applied along arterial roadway corridors.

### 8.4.4. Interchange Improvements

Interchange improvements are typically performed on freeway corridors. When the traffic demand overwhelms available capacity along an interchange or a corridor, some form of improvements should be performed to eliminate these bottlenecks. These recurring localized bottlenecks are encountered in everyday commutes and are characterized as being relatively predictable in cause, location, time of day, and approximate duration. Common locations of bottlenecks include places where the number of lanes decreases, at ramp junctions and interchanges, and where there are roadway alignment changes. Bottlenecks removal can be achieved through a myriad of solutions, ranging from relatively simple, low-cost strategies to more moderate enhancements.

### 8.4.5. Auxiliary Lanes

Auxiliary lanes are continuous lanes provided between closely spaced interchange entrance and exit ramps to balance the traffic load and maintain a more uniform level of service on the highway. Auxiliary lanes facilitate the positioning of drivers at exits and the merging of drivers at entrances. A collector-distributor (C-D) lane system is similar to auxiliary lanes, except that the entering and exiting traffic weaving maneuvers take place adjacent to the mainline, often separated by a striped or physical buffer. Collector-distributor (C-D) lanes handle entering and exiting freeway traffic separately from the mainline traffic. C-D lanes may be cost prohibitive due to the need for retaining walls if existing right-of-way is limited.

# 9. Mitigation Strategies Effect on Performance Measures

The final component of the CMP cycle calls for the monitoring of the strategies effectiveness in alleviating congestion on roadways that were identified to be congested. After appropriate strategies have been implemented on the congested corridors, performance measures will be studied to identify the effectiveness of implemented strategies on alleviating congestion on the roadway. A more detailed evaluation of the actual cause of congestion and alternative strategies will be studied in a detailed corridor study for each of the congested corridors identified within the CMP when funds are available.

Table 42 provides a matrix of different mitigation strategies and the performance measures with which each strategy may have an impact on. This table may be used to easily identify potential strategies to implement when underperforming trends are identified. The effectiveness of the congestion management strategies shall be monitored and tracked along with the updates to the CMP every year. As more data is collected over time, it will become easier to identify trends, and compare congestion data across different geographic regions within the region. Monitoring the various performance measures identified within the CMP over time will allow a “before-and-after” analysis to determine the effectiveness of an adopted strategy.

*Table 42 – Congestion Mitigation Strategies*

| Goal | Objective | Performance Measure | Tier 1: TSM&O Strategies | | | | | | | | | | | | | | Tier 2: Travel Demand Management Strategies | | | | Tier 3: Transit Improvements | | | | | Tier 4: Capacity Improvements | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Surveillance and Incident Management Systems | Access Management | Congestion Pricing | Integrated Corridor Management | Arterial Management Systems | Hard Shoulder Running | Reversible Lanes | One-way Streets | Ramp Metering | Transit Signal Priority | Variable Speed Limits | Dynamic Detours | Queue Warning Systems | Traveler Information Systems | High-Occupancy Vehicle (HOV) Incentives | Park-and-Ride Lots | Multimodal Transportation Centers | Commuter Assistance Service Programs | Local Bus Service Improvements | Express Bus Service Improvements | Bus Rapid Transit Improvements | Light Rail Transit Improvements | Commuter Rail Improvements | Add New Lanes | Add New Managed Lanes | Intersection Improvements | Interchange Improvements | Add Auxiliary Lanes |
| Enhance Economic Competitiveness | Improve Truck Travel Time Reliability | Truck Travel Time Reliability | ✓ | ✓ | | | | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | | | | ✓ | ✓ | | ✓ | ✓ |
| | Enhance Access to Jobs | Number of Jobs near State Highway | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Enhance Freight Activities | Enplanements | | | | | | | | | | | | | | ✓ | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | |
| | | Air Cargo | ✓ | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| | | Tons Moved | ✓ | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| | | Containers Moved | ✓ | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| | | Automobiles Moved | ✓ | | ✓ | ✓ | ✓ | | | | | | | ✓ | ✓ | | | | | | | | | | | | | | | |
| | Improve Local Economy | GDP | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Enhance Mobility | Optimize the Quantity of Travel | Vehicle Miles Traveled | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Vehicle Occupancy | | | | | | | | | | | | | | | ✓ | ✓ | | | | | | | | | | | | |
| | | Person Miles Traveled | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Truck Miles Traveled | ✓ | ✓ | | | | | | | ✓ | | | ✓ | ✓ | ✓ | | | | | | | | | | ✓ | ✓ | | ✓ | ✓ |
| | | Transit Ridership | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| | Optimize the Quality of Travel | Travel Time Reliability | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Travel Speed | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Delay | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Percent Miles Meeting LOS Criteria Rural Facilities | | | | ✓ | ✓ | | | | | | ✓ | | | ✓ | | ✓ | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Hours Severely Congested | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | On-time Reliability ("FL Method" - speed over 45 mph) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Reduce Congestion from Incidents | Events | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | | ✓ | ✓ | |
| | | Incident Verification Time | ✓ | | | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | | Incident Clearance Time | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | | Response Duration | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | | Open Roads Duration | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | | Departure Duration | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | | Roadway Clearance Duration | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | | | | | | | | | | | | | | |
| | Improve Accessibility to Mode Choices | Miles of Pedestrian Facilities | | | | | | | | | | | | | | | | | ✓ | | | | | | | | | | | |
| | | Miles of Bicycle Facilities | | | | | | | | | | | | | | | | | ✓ | | | | | | | | | | | |
| | | Percent of Population with Access to Transit | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| | Optimize the Utilization of the System | Percent Miles Severely Congested | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Percent Travel Severely Congested | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Vehicles per Lane Mile | | | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Duration of Congestion | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Average Load | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| | | Passengers per Revenue Hour | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| | | Passengers per Revenue Mile | | | | | | | | | | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

| Goal | Objective | Performance Measure | Tier 1: TSM&O Strategies | | | | | | | | | | | | | | Tier 2: Travel Demand Management Strategies | | | | Tier 3: Transit Improvements | | | | | Tier 4: Capacity Improvements | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Surveillance and Incident Management Systems | Access Management | Congestion Pricing | Integrated Corridor Management | Arterial Management Systems | Hard Shoulder Running | Reversible Lanes | One-way Streets | Ramp Metering | Transit Signal Priority | Variable Speed Limits | Dynamic Detours | Queue Warning Systems | Traveler Information Systems | High-Occupancy Vehicle (HOV) Incentives | Park-and-Ride Lots | Multimodal Transportation Centers | Commuter Assistance Service Programs | Local Bus Service Improvements | Express Bus Service Improvements | Bus Rapid Transit Improvements | Light Rail Transit Improvements | Commuter Rail Improvements | Add New Lanes | Add New Managed Lanes | Intersection Improvements | Interchange Improvements | Add Auxiliary Lanes |
| Enhance Safety | Reduce Crashes | Total Crash Rate | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Crashes | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Pedestrian Crashes | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Bicycle Crashes | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | Reduce Fatal Crashes | Fatal Crash Rate | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Fatalities | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Pedestrian Fatalities | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Total Bicycle Fatalities | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | Reduce Serious Injuries | Number of Serious Injuries | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Rate of Serious Injuries | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| | | Non-motorized Serious Injuries | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | ✓ | ✓ |
| Livability and Sustainability | Reduce the Cost of Congestion | Cost of Emissions | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Cost of Congestion | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | Fuel Consumption | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| System Preservation | Maintain Bridges | Bridge Condition | ✓ | | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| | Maintain Roadways | Roadway Condition | ✓ | | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | | | |
| | Maintain Transit System | Average Active Fleet Age | | | | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |

# 10. Conclusions and Recommendations

This CMP Update was conducted for the North Florida TPO planning area and identified corridors with recurring congestion problems. Priority rankings were assigned to this list of congested and constrained corridors for funding, and management strategies were developed for alleviating congestion. The CMP policies, goals, and objectives for the North Florida TPO planning area were compiled and are summarized in this report. A brief review of the updated CMP policies is present below:

- A corridor analysis shall be performed before any capacity expansion project is proposed and shall be presented for approval to the North Florida TPO. If congestion mitigation strategies are not included as part of such a project, then justification for their exclusion must be provided to the North Florida TPO. The Corridor Analysis should be completed, whether or not the facility has been identified as a priority project of this CMP. A basic Corridor Analysis must include an evaluation of potential improvements that would provide for more efficient traffic operations or the future deployment of ITS projects along that corridor.
- The corridor analysis conducted on the CMP corridors shall include an evaluation of the potential for adding value lanes, such as managed lanes or express toll lanes on limited access highway facilities.
- A maximum width of six general purpose lanes is recommended, exclusive of special lanes and turning lanes at major intersections. It is not the intent of this policy to discourage or preclude the reservation or acquisition of rights-of-way now for use in adding additional capacity beyond the specified six lanes.
- Funding sources for project implementation of the CMP identified priority project shall be identified. These funding sources should represent various levels of government, including city, county, regional, and state. The North Florida TPO shall work with FDOT and other governing agencies to locate a source of funds that can be used to implement congestion mitigation strategies and/or projects on the congested corridors identified in the CMP.
- Local governments shall be encouraged to develop policies that support access management controls, and driveway sharing.

Table 19 provided the list of the congested facilities within the North Florida region with a preliminary ranking of the facilities based on the severity of congestion. Table 20 shows the congestion mitigation strategy evaluation matrix for these congested roadway corridors. It is recommended that the North Florida TPO study one or two of these CMP corridors in greater detail each year. It is expected that detailed corridor studies be conducted on all of the congested corridors identified in this CMP before the next update of the North Florida TPO's CMP, which is currently scheduled to occur every 5 years. Detailed corridors studies will evaluate the feasibility and benefits of the congestion mitigation strategies identified in the report for congested corridors. Specific design recommendations in the form of operational or capacity projects will result from such corridor studies. A corridor study initiated should be scheduled for completion within a year of its inception. The scope of services for the detailed corridor study should consist of the following tasks:

- Analyze the existing operating conditions on the corridors being studied.
- Identify the causes of congestion on these roadways.
- Evaluate the congestion mitigation strategies and identify the feasibility and benefits of each strategy studied.

- Develop implementation strategy that can relieve congestion on the roadway.
- Identify operation or capacity improvements that would enhance operations and decrease congestion on the roadway.

The performance of a CMP can be evaluated by the successful implementation of the operational and capital projects formulated from the corridor studies conducted on the priority congested corridors identified within the CMP. The corridor studies can be scheduled and funded based on the preliminary ranking assigned to the congested corridors identified in this report. It is expected that the North Florida TPO Board will select one or two CMP projects to be added to the TIP on an annual basis. The actual number of projects may vary, depending upon the results of the detailed corridor studies, CMP policies, goals and objectives, and the availability of funds for these projects.

## 10.1. Procedure for Periodic Assessment and Updates

It is essential to devise a mechanism for collecting data needed to quantify the performance measures listed in the CMP and to track congestion over time. A data collection monitoring plan that identifies specific elements such as type, frequency of data collection, data collection sites, responsibilities, analysis techniques, and performance reporting is essential for a CMP. The key to effective transportation decision is accurate and reliable transportation data. Data collection for the listed performance measures is being conducted by the FDOT annually through the Mobility Performance Measures Program. FDOT also conducts yearly traffic count to determine the volumes and types of vehicles using the roadway network. This data set can be made accessible by the FDOT during the update for every 5-year period. The BlueToad™ data collection technology is anticipated to be enhanced over time and more data is anticipated to be available for further analysis. The North Florida TPO will update the BlueToad™ data analysis outlined in this report annually to obtain the reliability information on the roadway network with Bluetooth devices with the availability of realistic and accurate BlueToad™ data.

## 10.2. Integration with other North Florida TPO Plans

The CMP will be an integral part of the North Florida TPO's planning process, including the LRTP, Transportation Improvement Program (TIP), the Unified Work Program (UPWP), and other related plans and programs funded by the North Florida TPO. A brief description of how the CMP is related to these other plans is provided below:

### 10.2.1. Integration with the LRTP

The CMP, in accordance with Federal guidance, guides the Long Range Transportation Plan (LRTP) planning process in the following ways:

- Identifies TSM&O projects that can be included in the North Florida TPO's TIP and LRTP.
- Identifies a set of congestion mitigation/alleviation strategies that can be applied to congested and/or strategically important corridors.

The North Florida TPO's LRTP Steering Committee which comprises of state, county, and local agencies should provide inputs into the CMP process. The LRTP Steering Committee identifies projects for potential TSM&O improvements that can be funded in the coming fiscal year. The current CMP will be included into the on-going update of the 2040 LRTP as an application designed to facilitate stakeholder participation and for information dissemination.

### 10.2.2. Integration with the TIP

The identified congested corridors and/or hot spots will be considered for the TIP. All capital improvement projects, including roadway capacity enhancement projects, will be considered candidates for congestion management. The TIP Development Committee will identify projects from the CMP to be included into the TIP based on the following criteria:

- Identify high priority projects based on the ranking provided for the congested corridors within the CMP.
- Obtain stakeholder input on the projects identified and refine the order based on their input. The projects listed into the TIP should have a funding source identified to implement the proposed improvements on the selected congested corridors.

### 10.2.3. Integration with the Public Involvement Plans

The North Florida TPO engages citizens regarding transportation issues in their community, such as safety. The next update to the LRTP can target the public's participation into the CMP process to provide their input on the congested corridor section. Such programs can aid in the identification of multi-modal strategies that are of interest to the commuting public and when implemented can bring greater benefits to the community.

### 10.2.4. Integration with the NEPA Process

All highway, transit, and non-motorized projects that utilize federal funds are required to undergo applicable National Environmental Policy Act (NEPA) process. The FDOT's Project Development and Environment (PD&E) study process reflects the NEPA requirements. A typical PD&E study for roadway improvements considers several congestion management strategies as part of the study. Strategies included in this study proposed alternatives are always evaluated for their effectiveness in addressing the congestion needs for the project as identified in the CMP.

References

FHWA. (2011). *FHWA Operations.* Retrieved from FHWA: https://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/cmpguidebk.pdf

Paniati, J. F. (2003). *FHWA Operations.* Retrieved from FHWA: https://ops.fhwa.dot.gov/congsymp/sld001.htm

# Appendices

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# Appendix A

## Review of Recently Published CMP's

A review of the Congestion Management Process (CMP) from other Florida Metropolitan Planning Organizations (MPO) and other states in North America was performed to identify different approaches to the congestion management process. A total of 30 CMPs were reviewed, 23 within the state of Florida and 7 outside of Florida. The reviewed MPO's are listed in the table below.

| | |
|---|---|
| Charlotte County - Punta Gorda MPO | Florida - Alabama TPO |
| Collier County MPO | Okaloosa - Walton TPO |
| Lee County MPO | Indian River County MPO |
| Polk TPO | Martin County MPO |
| Sarasota - Manatee MPO | Palm Beach MPO |
| Gainesville MTPO | St Lucie TPO |
| Bay County TPO | Lake - Sumter MPO |
| Capital Region Transportation Planning Agency | METROPLAN Orlando |
| Space Coast TPO | Volusia TPO |
| Miami - Dade MPO | Hernando County MPO |
| Hillsborough County MPO | Pasco County MPO |
| Pinellas County MPO | Wilmington Area Planning Council (WILMAPCO) |
| Atlanta Regional Commission (ARC) | Capital District Transportaton Committee (CDTC) |
| Southwestern Pennsylvania Commission (SPC) | Delaware Valley Regional Planning Commission (DVRPC) |
| Puget Sound Regional Council (PSRC) | Kentuckiana Regional Planning and Development Agency |

Seven of the MPO CMP's that were published within the last three years are described in more detail below.

**Collier Metropolitan Planning Organization**

Collier County is located in southwest Florida and is the geographic area of the Collier MPO. Collier MPO published an updated Congested Management Process in 2017. The document is organized by first citing federal and state requirements and a summary of document revisions for this update. The document next describes the committed transportation improvement projects listed in their Long Range Transportation Plan (LRTP). The goals listed for the CMP are consistent with the goals in the LRTP. In summary, the goals listed include:

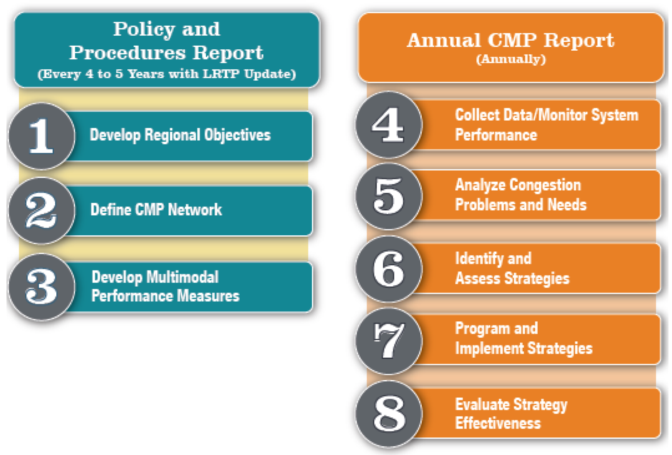
1. Increase safety
2. Increase accessibility and mobility
3. Enhance integration and connectivity
4. Promote efficient system management and operations
5. Support economic vitality

One objective is given for the CMP: Reduce the aggregate lane miles with v/c >1 based on the 2040 traffic assignment to the E+C network. The performance measures are listed by category and not specifically correlated to the goals or the objective. The CMP contains an Implementation chapter that specifies three studies that will be conducted to provide further detail on projects to alleviate congestion. Funding sources and implementation costs are also described in this chapter. The Evaluation and Monitoring chapters specifies that the MPO will document before and after conditions for each project based on the performance measures. Public comments are accepted via the website or by mail. A map of the Existing + Committed Network is provided at the end of the document.

**Hernando Citrus Metropolitan Planning Organization**

The Hernando Citrus MPO covers the counties of Hernando and Citrus in west-central Florida. Their Congestion Management Process is sub-titled "Policy and Procedures Handbook" and was published in May 2017. The document is organized by: Introduction, CMP Overview, Goals and Objectives, Network Identification, Performance Measures, System Performance Monitoring Plan, Congested Corridor Selection and CMP Strategies, and Monitoring and Strategy Effectiveness. The introduction cites the FHWA causes of congestion, federal regulations, national goals, the eight-step congestion management process, and typical strategies. A portion of the CMP Overview chapter is dedicated to complete streets, describing the FDOT complete streets policies and the Hernando/Citrus MPO complete streets vision and action plan. The Public Involvement section states that various public involvement activities will take place. It also describes the advisory group for the CMP, which consists of representatives from local governments, school districts, and transit providers. An annual State of the System Report will track effectiveness of the implementation strategies and a timeline for the development of this report is given. The figure to the right shows which steps of the eight-step congestion management process will be done with each report.

Figure 2-1: Hernando/Citrus MPO's Approach to the Federal Eight Step Process




Goals and associated objectives are listed. Performance measure are related to the goals and objectives through the matrix below. The performance measures are described in detail along with the data source and availability of the data.

The Network Identification is described in terms of the Area of Application, the Transportation Network, and the Roadway Network. The Area of Application is Hernando and Citrus Counties. The Transportation Network includes roads, transit, bicycle, pedestrian, trail, and freight movement networks. The Roadway Network includes all functionally classified roadways included in the adopted LRTP and/or the existing plus committed (E+C) 5 year road network (typically, the existing condition plus 5 years).

The CMP describes a monitoring plan in which a few of the performance measured are specified with the activity, responsible agency, and frequency of evaluation.

The implementation process is divided into 3 phases. Phase 1 is the Congested Corridor Network Identification. Corridors are identified as being "not congested," "approaching congestion or minimally congested," or "extremely congested," based on volume to capacity ratio and crash analysis. Phase 2 is the CMP and Safety Strategy Screening. The CMP Strategy Matrix is used to address recurring congestion, and the Safety Mitigation Strategy Matrix is used to address nonrecurring congestion. Phase 3 is Project Identification and Implementation.

The Congestion Mitigation Toolbox of Strategies contains a long list of strategies organized by the FHWA CMP Toolbox of 5 tiers of strategies.

| | Performance Measures | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Safety Performance Measures (5 Year Rolling Average) | | | | | Roadway Capacity Performance Measures | | | Travel Time Realiabity Performance Measures | |
| **Goals and Objectives** | Number of Fatalities | Fatality Rate | Serious Injuries | Serious Injury Rate | Non-Motorized Safety (Fatalities + Serious Injuries) | Percent of VMT and Roadway Miles below adopted Level of Service Standard | V/C Ratio | V/MSI Ratio | Percent of Person-Miles Traveled on the Interstate that Are Reliable | Percent of Person-Miles Traveled on the Non- Interstate NHS that Are Reliable |
| **GOAL #1: Improve and increase transit as a viable transportation alternative.** | | | | | | | | | | |
| Objective 1.1 Improve transit service in congested corridors by increasing service in congested corridors with existing service and implementing service in congested corridors currently not served by transit. | | | | | | | | | | |
| Objective 1.2 Develop multimodal strategies that reduce dependency on the single occupant vehicle (SOV). | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 1.3 Increase efficiency of transit system through the use of appropriate new and advanced technologies that are feasible. | | | | | | | | | | |
| **GOAL #2: Identify and implement strategies to mitigate congestion and improve the safety and mobility of people and goods and maintain the region's air quality.** | | | | | | | | | | |
| Objective 2.1 Identify and implement congestion management strategies to enhance the existing transportation system and relieve congestion, improve travel time reliability, improve safety, and improve mobility of persons and goods, where large capital improvements may not be necessary. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 2.2 Encourage using demand management and/or operations management strategies to solve congestion problems before adding capacity through general purpose lanes or new roadways where these strategies may eliminate the need to construct additional lanes. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 2.3 Increase the efficiency of the transportation system through the use of low-cost TDM alternatives such as carpooling, vanpooling, telecommuting, and flexible work hours. | | | | | | ✓ | ✓ | ✓ | | |
| Objective 2.4 Improve the mobility of people and goods by using strategies in advanced technologies such as Intelligent Transportation Systems (ITS). | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **GOAL #3: Develop, maintain, and expand bicycle, pedestrian, and multi-use trail facilities for efficient and safe movement of people.** | | | | | | | | | | |
| Objective 3.1 Coordinate transit services with bicycle, pedestrian, and multi-use trail improvement projects. | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| Objective 3.2 Provide for pedestrian, multi-use trail, transit, and bicycle facilities to encourage employees to use these facilities to get to work. | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| **GOAL #4: Integrate CMP and its improvements into the LRTP and TIP and help guide land use policies and land development regulations.** | | | | | | | | | | |
| Objective 4.1 Incorporate projects identified through the CMP in the Five-Year TIP. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 4.2 Develop land use policies and land development regulations that support public transit, ridesharing, walking, and bicycling, especially for travel to work. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| | Performance Measures | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Goods Movement Performance Measures | | | | Public Transit Performance Measures | | | | | Bicycle/ Pedestrian/ Trail Facility Performance Measures | | TDM Performance Measures | System Preservation (Optional – Non CMP) | |
| **Goals and Objectives** | Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes | Truck Travel Time Reliability (TTTR) Index | Percent of the Interstate System Mileage Uncongested | Number of Crashes Involving Heavy Vehicles | Percent of Congested Roadway Centerline Miles with Transit Service | Passenger Trips per Revenue Hour | Average Peak Service Frequency | On-Time Performance | Annual Ridership | Percent of Congested Roadway Centerline Miles with Bicycle and/or Sidewalk Facilities | Miles of Multi-Use Trails | Number of Registered Carpools or Vanpools | Percent of Interstate & Non-Interstate NHS Pavement in Good/Poor Condition | Percent of NHS Bridges in Good/Poor Condition |
| **GOAL #1: Improve and increase transit as a viable transportation alternative.** | | | | | | | | | | | | | | |
| Objective 1.1 Improve transit service in congested corridors by increasing service in congested corridors with existing service and implementing service in congested corridors currently not served by transit. | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Objective 1.2 Develop multimodal strategies that reduce dependency on the single occupant vehicle (SOV). | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Objective 1.3 Increase efficiency of transit system through the use of appropriate new and advanced technologies that are feasible. | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **GOAL #2: Identify and implement strategies to mitigate congestion and improve the safety and mobility of people and goods and maintain the region's air quality.** | | | | | | | | | | | | | | |
| Objective 2.1 Identify and implement congestion management strategies to enhance the existing transportation system and relieve congestion, improve travel time reliability, improve safety, and improve mobility of persons and goods, where large capital improvements may not be necessary. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 2.2 Encourage using demand management and/or operations management strategies to solve congestion problems before adding capacity through general purpose lanes or new roadways where these strategies may eliminate the need to construct additional lanes. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Objective 2.3 Increase the efficiency of the transportation system through the use of low-cost TDM alternatives such as carpooling, vanpooling, telecommuting, and flexible work hours. | | | | | | | | | | | | ✓ | | |
| Objective 2.4 Improve the mobility of people and goods by using strategies in advanced technologies such as Intelligent Transportation Systems (ITS). | | | | | | | | ✓ | | | | | | |
| **GOAL #3: Develop, maintain, and expand bicycle, pedestrian, and multi-use trail facilities for efficient and safe movement of people.** | | | | | | | | | | | | | | |
| Objective 3.1 Coordinate transit services with bicycle, pedestrian, and multi-use trail improvement projects. | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Objective 3.2 Provide for pedestrian, multi-use trail, transit, and bicycle facilities to encourage employees to use these facilities to get to work. | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| **GOAL #4: Integrate CMP and its improvements into the LRTP and TIP and help guide land use policies and land development regulations.** | | | | | | | | | | | | | | |
| Objective 4.1 Incorporate projects identified through the CMP in the Five-Year TIP. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Objective 4.2 Develop land use policies and land development regulations that support public transit, ridesharing, walking, and bicycling, especially for travel to work. | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |

**MetroPlan Orlando**

The Congested Management Process for MetroPlan Orlando is a technical report within their 2040 Long Range Transportation Plan and was adopted in January 2016. The document is organized in 4 chapters: Introduction, Congestion Management Process Requirements, MetroPlan Orlando's Eight-Step Congestion Management Process, and Conclusions and Recommendations. The introduction lists the FHWA causes of congestion, federal regulations, national goals, and the eight-step congestion management process. Relative state and local initiatives are described in relation to Transportation Systems Management and Operations. There are no goals listed in this CMP, but there are 15 objectives including: Freight and Goods Movement, Balanced System, Bicycle System, Pedestrian System, Safety, Safety Enhancements, System Preservation, Cost-effectiveness, Mobility Enhancements, Intelligent Transportation System, System Function and Performance, Investment Coordination, Intergovernmental Coordination, Air Quality, and Funding.

The Network Identification is described in terms of the Area of Application, the Transportation Network, and the Roadway Network. The Area of Application is Hernando and Citrus Counties. The Transportation Network includes roads, transit, bicycle, pedestrian, trail, and freight movement networks. The Roadway Network includes all functionally classified roadways included in the adopted LRTP and/or the existing plus committed (E+C) 5-year road network (typically, the existing condition plus 5 years). A map of the Study Roadways is provided.

The performance measures are listed below along with the relation to the objectives.

The implementation process is divided into 3 phases. Phase 1 is the Congested Corridor Network Identification. Corridors are identified as being "not congested," "approaching congestion or minimally congested," or "extremely congested," based on volume to capacity ratio and crash analysis. Phase 2 is the CMP and Safety Strategy Screening. The CMP Strategy Matrix is used to address recurring congestion, and the Safety Mitigation Strategy Matrix is used to address nonrecurring congestion. Phase 3 is Project Identification and Implementation.

The Congestion Mitigation Toolbox of Strategies contains a long list of strategies organized by the FHWA CMP Toolbox of 5 tiers of strategies.

The MetroPlan Orlando CMP will make use of an Annual Congestion Management System Report to document the performance of the transportation system.

| Performance Measure | Objectives | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Freight & Goods Movement | Balanced System | Bicycle System | Pedestrian System | Safety | Safety Enhancements | System Preservation | Cost-effective | Mobility Enhancements | Intelligent Transportation System | System Function and Performance | Investment Coordination | Intergovernmental Coordination | Air Quality |
| Annual Average Serious Injuries and Fatalities (By Safety Emphasis Area) | | | | | + | + | | | | | + | + | + | |
| Vehicle Miles Traveled | | car | | | | | | | car | | | car | car | car |
| Percent of Travel in Generally Acceptable Operating Conditions (Peak Hour) | | car | | | | | | | car | car | car | car | car | car |
| Delay | | | | | | | | | | car | car | car | car | car |
| Travel Time Reliability | | car | | | | | | | car | car | car | car | car | |
| Percent Miles Severely Congested (Based on V/C Ratio) | | | | | | | | | | car | car | car | car | car |
| Combination Truck Miles | truck | | | | | | | | | | | truck | truck | truck |
| Combination Truck Travel Time Reliability | truck | | | | | | | | | truck | truck | truck | truck | truck |
| Combination Truck Delay | truck | | | | | | | | | truck | truck | truck | truck | truck |
| Combination Truck Percent Miles Severely Congested | truck | | | | | | | | | truck | truck | truck | truck | truck |
| Fixed Route Major Transit Incidents | | bus | | | bus | bus | | | bus | | bus | bus | bus | |
| Percent of Congested Roadway Centerline Miles with Transit Service | | bus | | | | | | | bus | bus | bus | bus | bus | |
| Passenger Trips per Revenue Hour | | bus | | | | | | | bus | | | bus | bus | |
| Average Peak Service Frequency | | bus | | | | | | | bus | | | bus | bus | |
| On-Time Performance | | bus | | | | | | | bus | bus | bus | bus | bus | bus |
| Annual Ridership | | bus | | | | | | | bus | | | bus | bus | bus |
| Percent of Congested Roadway Centerline Miles with Pedestrian Facilities | | pedestrian | pedestrian | | pedestrian | pedestrian | | | pedestrian | | | pedestrian | pedestrian | pedestrian |
| Percent of Congested Roadway Centerline Miles with Bicycle Facilities | | bicycle | bicycle | bicycle | bicycle | bicycle | | | bicycle | | | bicycle | bicycle | bicycle |
| Number of Registered Carpools or Vanpools | | van | | | | | | | van | | | van | van | van |
| Number of Crashes Involving Heavy Vehicles | truck | | | | truck | truck | | | | | truck | truck | truck | |
| Signal retiming cost/benefit | clock | | | | | | clock | clock | | clock | clock | clock | clock | clock |
| Peak-hour travel speed - indicated as a percent of the posted speed limit. | car | | | | | | | | | | car | car | car | car |
| Incident duration | clock | | | | | | | | | clock | clock | clock | clock | clock |

**Okaloosa-Walton Transportation Planning Organization**

The Okaloosa-Walton Transportation Planning Organization (TPO) is bounded within the urbanized areas of Okaloosa and Walton Counties in the Northwest panhandle. The Congestion Management Process is a stand-alone document and was updated in 2016. It is organized in 9 chapters: Introduction, CMP Goals and Objectives, Transportation Networks, Performance Measures, Performance Measure Assessment, Corridor Management Planning and Planning for Constrained Facilities, Data Collection Needs and Sources, CMP Coordination and Integration, and Conclusion.

| 2040 LRTP Goals | |
|---|---|
| Goal A | A transportation system that is safe and secure. |
| Goal B | A transportation system that is user-friendly and maximizes mobility. |
| Goal C | A transportation system that provides for the effective movement of goods and people. |
| Goal D | A transportation system that supports a high quality of life respectful of the environment, public health and vulnerable users. |
| Goal E | A transportation system that is multimodal, integrated and connected. |
| Goal F | A transportation system that is maintained and operated efficiently. |
| Goal G | A transportation system that includes consistent, continuing, cooperative and comprehensive planning processes. |

| Objectives | Congestion Mitigation Strategies |
|---|---|
| 1. Reduce travel demand | - Decrease vehicle miles traveled (VMT)<br>- Implement Transportation Demand Management Strategies<br>- Encourage carpooling and use of the Commuter Assistance Program<br>- Encourage other modes of transportation |
| 2. Promote alternate modes of transportation | - Improve access to transit by supporting transit expansion<br>- Increase bicycle and pedestrian connectivity by expanding bicycle and pedestrian facilities |
| 3. Improve functionality and reliability of the transportation system | - Improve traffic flow<br>- Implement Transportation System Management and Operation Strategies |
| 4. Enhance the safety for motorized and non-motorized users | - Reduce the rate of accidents<br>- Seek out high-crash "hot spots"<br>- Separate travel modes to reduce conflict points |
| 5. Preserve the existing transportation system | - Monitor traffic conditions in real time<br>- Prioritize capacity improvements for roadways with a deficient LOS / volume to capacity ratio<br>- Prioritize low-cost, operational improvements that will reduce congestion |

The introduction shows the 8 steps of the congestion management process and describes the study area. The goals of the CMP align with the goals of the 2040 LRTP and are shown to the left.

There are 5 objectives listed in the CMP. The objectives are not correlated with the goals but are correlated with mitigation strategies.

The transportation network is described to be multimodal, including roadway, transit, travel demand, bicycle, pedestrian, and freight. The roadway network for the CMP includes roadways classified by FHWA as freeways and tolls, arterials, and collectors. Local roads are not analyzed in the CMP.

The table below shows the performance measures presented in the CMP. Level of service analysis, crash analysis, means of transportation to work, and travel time to work are described in more detail.

The corridor management section explains various corridors that have been studied in further detail.

The public involvement steps outlined in the CMP include group selection, role education, and create opportunities.

The minor update of the CMP involves on LOS analysis. Implementation occurs with the LRTP process. Several agencies, local governments, and committees of decision makers are described.

| # | Objectives | Congestion Mitigation Strategies | Performance Measures |
|---|---|---|---|
| 1A | Reduce Number of Automobile Trips | Decrease vehicle miles traveled (VMT) | Track VMT and public transportation miles of travel |
| | | | Monitor travel times to work |
| | | Implement Transportation Demand Management Strategies | Continue to promote public awareness of CAP |
| | | | Promote transit services |
| 1B | Reduce Length of Automobile Trips | Encourage carpooling and the use of Commuter Assistance Program | Produce electronic bicycle and pedestrian route maps for the public by 12/2016 and 1,000 printed maps by 12/2017 |
| | | Encourage other modes of transportation | Encourage telecommuting and flexible work hours programs |
| | | | Reduce travel time to work |
| 2 | Promote Alternative Modes of Transportation | Improve access to transit by supporting transit expansion | Monitor Transit Usage |
| | | Increase bicycle and pedestrian connectivity by expanding bicycle and pedestrian facilities | Monitor means of transportation to work |
| | | | Prioritize bike lane and sidewalk projects that create connectivity between existing multi-modal facilities |
| | | Increase participation in rideOn and similar programs | Track ride-On participation |
| | | | Construct 1 Park-and-Ride lot annually |
| 3 | Improve Functionality and Reliability of Transportation System | Improve traffic flow | Increase ITS capabilities to provide greater access to system information |
| | | Implement Transportation System Management and Operation Strategies | Re-time 60 traffic signals annually |
| | | | Monitor congestion measures annually to discover congestion problems |
| 4 | Enhance Safety for Motorized and Non-Motorized Users | Reduce the rate of accidents | Track and bring awareness to the number of traffic and pedestrian fatalities |
| | | Seek out high-crash "hot spots: | Implement access management strategies to reduce conflict points |
| | | Separate travel modes to reduce conflict points | Map and review crash locations for high-crash hot spots annually as a part of the CMP |
| | | | Provide $350,000 of funding annual for separated bicycle and pedestrian facilities |
| 5 | Preserve the Existing Transportation System | Monitor traffic conditions in real time | Seek capital and operating funding for traffic monitoring, management, and control facilities and programs |
| | | Prioritize capacity improvements for roadways with a deficient LOS/volume to capacity ratio | Invest $150,000 in operational roadway improvements (including intersection improvements, removal of bottlenecks, and addition of turn lanes) each fiscal year |
| | | Prioritize low-cost, operational improvements that will reduce congestion | Update LOS tables annually and prioritize projects that have a failing LOS |

**Palm Beach Metropolitan Planning Organization**

The Palm Beach MPO encompasses Palm Beach County in south-east Florida. The Executive Summary of the CMP contains a well-organized annual report that is visually appealing and conveys the performance clearly. Subsequent tables clearly describe the goals, objectives, historical, existing, and target performance, and mitigation strategies.

The document is organized in 8 chapters: Introduction, Define the CMP Network, Develop Regional Goals, Objectives and Performance Measures, Data Collection, Analysis, and Recommendations, Evaluation of Alternative Solutions, Implementation, Feedback, and Conclusions.

Palm Beach County's transportation network includes a dense array of freeways, arterials, collector non-motorized facilities, airports, a deep-water seaport, and extensive rail facilities serving passenger and freight purposes. Maps of the transportation networks are included.

The Palm Beach MPO preceded goals and objectives by establishing 10 values that were used to develop the LRTP.

TABLE 03 **PALM BEACH MPO DIRECTIONS 2040 LONG RANGE TRANSPORTATION PLAN VALUES**

| | |
|---|---|
| 1 | Improve the safety and security of the transportation system for all users. |
| 2 | Fund maintenance and rehabilitation of existing infrastructure before expanding. |
| 3 | Implement Transportation Systems Management and Operations (TSM&O) and Transportation Demand Management (TDM) strategies to maximize efficiency of existing system before expanding. |
| 4 | Maximize benefits of existing transportation revenues. |
| 5 | Provide multimodal access to areas with low income and/or traditionally under served populations. |
| 6 | Support context-sensitive implementation of complete street principles in or near identified redevelopment areas or urban centers. |
| 7 | Support economic growth and development through projects consistent with local comprehensive plans and with minimal environmental impacts. |
| 8 | Promote regionally significant facilities and coordination of projects crossing jurisdictional boundaries to facilitate effective movement of people and goods. |
| 9 | Prioritize non-motorized facilities at all transit hubs, interchanges, bridges, and railroad crossings. |
| 10 | Invest in efficient, convenient and attractive mass transit system. |

The goals, objectives, and values are consistent with the LRTP. This document considers objectives as another word for performance measures.

In the data collection, analysis, and recommendations chapter, specific data points are described in further detail. 400 intersections were analyzed in detail. Specific improvements are listed that would be needed to accomplish the goals.

Potential projects are scored based on weighting criteria that are related to the 10 values. Projects are scored, listed in priority order, and separated into categories: Major Highway, Transit and Freight Projects, the Local Initiatives Program (for non-regionally significant projects), and the Transportation Alternatives Program for smaller non-motorized projects.
The feedback chapter refers to making sure the projects selected through the process are in alignment with the achieving the goals.
Maps and other details are shown in the appendix.

| | OBJECTIVE | DESCRIPTION | 2014 VALUE | 2016 VALUE | 2025 VALUE | 2040 VALUE |
|---|---|---|---|---|---|---|
| **Goal 1: Provide an efficient and reliable vehicular transportation system** | | | | | | |
| 1 | 1.1 | Reduce the number of thoroughfare intersections with critical sum > 1400 | 40 | 36 | 30 | 25 |
| | 1.2 | Increase the percentage of traffic signals connected to the central control system by fiber optic network | 78% | 81% | 85% | 90% |
| | 1.3 | Increase the percentage of principal arterials covered by closed circuit TV cameras | 55% | 55% | 65% | 75% |
| | 1.4 | Increase the percentage of traffic signals with operable vehicle detection | 75% | 87% | 85% | 95% |
| | 1.5 | Increase the percentage of facilities that accommodate two feet sea level rise<br>For the SIS network<br>For the non-SIS thoroughfare network | <br>99%<br>99% | <br>99%+<br>99% | <br>90%<br>75% | <br>90%<br>75% |
| **Goal 2: Prioritize an efficient and interconnected mass transit system** | | | | | | |
| 2 | 2.1 | Increase the percentage of transit commuter mode choice | 1.6% | 1.9% | 3% | 5% |
| | 2.2 | Increase passenger trips per revenue mile<br>For Tri-Rail service<br>For Palm Tran fixed route service | <br>1.36<br>1.61 | <br>1.29<br>1.56 | <br>1.5<br>2.0 | <br>2.0<br>2.5 |
| | 2.3 | Increase the number of park-n-ride spaces | 2,196 | 2,014 | 3,000 | 4,000 |
| | 2.4 | Reduce the average ratio of transit travel time to auto travel time for Palm Tran fixed route system | 2.87 | 2.52 | 2.5 | 2.00 |
| **Goal 3: Prioritize a safe and convenient non-motorized transportation network** | | | | | | |
| 3 | 3.1 | Increase the percentage of<br>Pedestrian commuter mode choice<br>Bicycling commuter mode choice | <br>1.7%<br>0.5% | <br>1.6%<br>0.5% | <br>3.5%<br>1.5% | <br>5%<br>3% |
| | 3.2 | Increase centerline mileage of<br>Buffered bike lanes<br>10-ft or wider shared use pathways<br>Designated bike lanes<br>Priority bike network operating at LOS C or better | <br>8<br>25<br>125<br>140 | <br>8<br>50<br>160<br>158 | <br>50<br>75<br>250<br>350 | <br>100<br>125<br>500<br>500 |
| | 3.3 | Increase percentage of thoroughfare mileage near transit hubs<br>That provides dedicated bicycle facilities (within 3 miles)<br>That provides dedicated pedestrian facilities (within 1 mile) | <br>10%<br>85% | <br>7%<br>85% | <br>20%<br>100% | <br>40%<br>100% |
| **Goal 4: Maximize the efficient movement of freight through the region** | | | | | | |
| 4 | 4.1 | Decrease the percentage of SIS facilities, SIS connectors, and non-SIS designated truck routes that exceed capacity (v/c > 1.1) | 3.3% | 8.4% | 2.5% | 1.5% |
| | 4.2 | Increase the annual tonnage of freight through<br>The Port of Palm Beach<br>Palm Beach International Airport | <br>2.14M<br>22K | <br>1.96M<br>24K | <br>2.5M<br>25K | <br>3.0M<br>35K |
| **Goal 5: Preserve and Enhance Social and Environmental Resources** | | | | | | |
| 5 | 5.1 | Decrease per capita daily fuel use (gallons/person) | 1.54 | 1.24 | 1.25 | 1.00 |
| | 5.2 | Decrease per capita daily NOx emissions (grams/person) | 50 | 20 | 35 | 25 |
| | 5.3 | Decrease per capita daily Hydrocarbon emissions (grams/person) | 30 | 25 | 20 | 10 |
| | 5.4 | Decrease per capita daily Carbon Monoxide emissions (grams/person) | 400 | 160 | 300 | 250 |
| | 5.5 | Decrease per capita daily Vehicles Miles Travelled (VMT/person) | 25 | 20.7 | 21 | 20 |

**Pasco County Metropolitan Planning Organization**

Pasco County is in south-central Florida. Their CMP is organized by 8 chapters: Introduction, Congestion Management Process Overview, CMP Goals and Objectives, Network Identification, Development of Performance Measures, System Performance and Monitoring Plan, Congested Corridor Selection and CMP Strategies, and Monitor Strategy Effectiveness.

**Roadway Performance Measures**

- Percent of Roadway Miles by LOS Type
- Percent of Vehicle Miles Traveled by LOS Type

**Public Transit Performance Measures**

- Number of Transit Routes by Peak Service Frequency
- Passenger Trips (Annual Ridership)
- Passenger Trips per Revenue Hour

**Bicycle/Pedestrian/Multiuse Path Facility Performance Measures**

- Percent of Congested Roadway Centerline Miles with Bicycle Facilities
- Percent of Congested Roadway Centerline Miles with Sidewalk Facilities
- Miles of existing Multiuse Paths

**Goods Movement Performance Measures**

- Vehicle Miles Traveled (VMT) Below LOS Standard on Designated Truck Routes
- Number of Crashes Involving Heavy Vehicles

**Safety Performance Measures**

- Total Crashes
- Number of Crashes by Safety Emphasis Areas
- Number of Crashes Involving Heavy Vehicles

**Transportation Demand Management**

- Available information on registered vanpools/carpools and riders.

The introduction chapter lists the FHWA causes of congestion and the FHWA regulations. The 8 step congestion management process is described and separated into two reports – the first 3 steps are addressed in the CMP Procedures Handbook and the last 5 steps are addressed in the CMP State of the System Report. Integration of the process with other transportation plans and programs is described. The public involvement process is described as meetings with various agency and citizen advisory groups. The steps to complete the CMP are described in the section titled CMP Actions/Recommendation. The goals and objectives are described. The transportation network is described, which includes the existing plus committed network. The performance measures are described in detail with comments regarding data collection and availability. The relationship of performance measures to the goals and objectives are shown in a table.

The system monitoring will be done in the State of the System Report, which will be updated every 2 – 3 years between LRTP adoptions. Implementation and management of CMP strategies is done in several phases: 1) Identify congested corridors and locations for review, 2) CMP and Safety Strategy Screening, and 3) Evaluate Project or Program for Implementation. The toolbox of strategies with the 5 tiers is used in this CMP. A ranking system is used to prioritize projects by project category: Intersection/ITS, Sidewalk/Multiuse Path, Transit, Transportation Demand Management, and Highway.

The State of the System Report is described again in the Monitor Strategy Effectiveness chapter.

Specific projects, data, and performance are not described in the CMP. It is a policy document that explains what, how, and when the performance will be evaluated. The actual performance data analysis is done in the State of the System Report.

# Relationship of Goals and Objectives to Performance Measures

| Goals & Objectives | Performance Measures | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Roadway | | | Public Transportation | | | Bike/Ped Path | | | Safety | TDM | Goods Movement | |
| | Percent of VMT and Roadway Miles Below the Adopted Level of Service Standard | Volume to Capacity (V/C Ratio) | Volume to Maximum Service Ratio (V/MSV) | Passenger Trips per Revenue Hour | Passenger Trips (Annual Ridership) | Average Service Frequency and Number of Routes | Percent of Congested CMP Roadway Centerline Miles with Bicycle Facilities | Percent of Congested CMP Roadway Centerline Miles with Sidewalk Facilities | Miles of Multiuse Paths | Number of Crashes by Safety Emphasis Area (at intersection, vulnerable users, lane departure and aggressive driving | Number of Registered Carpools or Vanpools | Truck Vehicle Miles (VMT) Traveled Below LOS Standard | ***Number of Crashes Involving Heavy Vehicles (Reported with Safety in State of System Report) |
| **Goal 1: Integrate the Congestion Management Process and its proposed improvements into the Long Range Transportation Plan and the Transportation Improvement Program and help guide Land-use Policies and Land Development Regulations** | | | | | | | | | | | | | |
| **Objective 1.1** - Incorporate projects identified through the CMP in the Five-Year Transportation Improvement Program (TIP). | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | P | ● | ● |
| **Objective 1.2** - Develop land-use policies and land development regulations that support public transit, ridesharing, walking, and bicycling, especially for travel to work. | ● | ● | ● | ● | ● | ● | ● | ● | ● | | P | | |
| **Goal 2: Develop, maintain, and expand bicycle, pedestrian, and multiuse path facilities for efficient and safe movement of people.** | | | | | | | | | | | | | |
| **Objective 2.1** - Coordinate transit services with bicycle, pedestrian, and multiuse path improvement projects. | | | | ● | ● | ● | ● | ● | ● | ● | | | |
| **Objective 2.2** - Provide for pedestrian, multiuse path, transit, and bicycle facilities to encourage employees to use these facilities to get to work. | | | | ● | ● | ● | ● | ● | ● | ● | | | |
| **Goal 3: Improve and increase transit as a viable transportation alternative.** | | | | | | | | | | | | | |
| **Objective 3.1** - Improve transit service in congested corridors by increasing service in congested corridors with existing service and implementing service in congested corridors currently not served by transit. | | | | ● | ● | ● | | | | | | | |
| **Objective 3.2** - Develop multimodal strategies that reduce dependency on the single occupant vehicle (SOV). | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| **Objective 3.3** - Establish park-and-ride facilities and provide transit connections to park-and-ride facilities and carpool lots. | | | | ● | ● | ● | | | | | P | | |
| **Objective 3.4** - Increase efficiency of transit system through the use of appropriate new and advanced technologies that are feasible. | | | | ● | ● | ● | | | | | | | |
| **Goal 4: Identify and implement strategies to mitigate congestion and improve the safety and mobility of people and goods and maintain the region's air quality** | | | | | | | | | | | | | |
| **Objective 4.1** - Identify and implement congestion management strategies to enhance the existing transportation system and relieve congestion, improve safety, and improve mobility of persons and goods, where large capital improvements may not be necessary. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | P | ● | ● |
| **Objective 4.2** - Encourage using demand management and/or operations management strategies to solve congestion problems before adding capacity through general purpose lanes or new roadways where these strategies may eliminate the need to construct additional lanes. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | P | ● | ● |
| **Objective 4.3** - Increase the efficiency of the transportation system through the use of low-cost Transportation Demand Management (TDM) alternatives such as carpooling, vanpooling, telecommuting, and flexible work hours. | ● | ● | ● | | | | | | | | P | | |
| **Objective 4.4** - Improve the mobility of people and goods by using strategies in advanced technologies such as Intelligent Transportation Systems (ITS). | ● | ● | ● | ● | ● | ● | | | | ● | | ● | ● |

**River to Sea Transportation Planning Organization**

The River to Sea TPO's Metropolitan Planning Area (MPA) is comprised of Volusia County and the urbanized eastern portion of Flagler County (including Flagler Beach, Beverly Beach and portions of the cities of Palm Coast and Bunnell, as well as some portions of unincorporated Flagler County). The Congestion Management/Performance Measures Report was published in 2018. The report is organized by mode and topics, and includes the following sections: Introduction, CMP Network, Performance Measures, Scorecard, Motor Vehicle Travel, Transit, Sunrail, and Safety. The CMP is updated in concert with the LRTP and these documents share the same goals and objectives.

The CMP network consists of the National Highway System (NHS), Interstate System, Strategic Intermodal System (SIS), State Highway System (SHS), and Off-System Arterial and Collector roadways. For the evaluation of fatalities and injuries, the network is comprised of all public. The CMP also evaluates bicycle/pedestrian facilities and transit services.

Table 1 Transportation System Performance Scorecard

| PERFORMANCE (All Public Roads) | | | | | | |
|---|---|---|---|---|---|---|
| Measure | 2012 | 2013 | 2014 | 2015 | 2016 | Trend |
| **Flagler County** | | | | | | |
| **Auto Demand** | | | | | | |
| Daily vehicle miles traveled[1,2] | 2,887,406 | 2,882,235 | 3,554,788 | 3,679,679 | 3,766,531 | |
| Total centerline miles[1] | 984 | 986 | 986 | 986 | 986 | |
| **Auto Safety** | | | | | | |
| Total Fatalities | 15 | 16 | 24 | 12 | 25 | |
| Total Injuries | 765 | 849 | 817 | 1,023 | 828 | |
| Total Property damage only | 335 | 466 | 619 | 709 | 594 | |
| **Bicycle Safety** | | | | | | |
| Fatalities | 0 | 2 | 1 | 0 | 1 | |
| Injuries | 23 | 31 | 29 | 34 | 23 | |
| **Pedestrian Safety** | | | | | | |
| Fatalities | 2 | 0 | 0 | 2 | 5 | |
| Injuries | 26 | 26 | 18 | 25 | 19 | |
| **Intersection Related Crashes** | | | | | | |
| Total Crashes | 342 | 415 | 507 | 601 | 621 | |
| **Volusia County** | | | | | | |
| **Auto Demand** | | | | | | |
| Daily Vehicle Miles Traveled[1] | 14,723,818 | 14,872,278 | 15,194,907 | 15,688,513 | 16,280,142 | |
| Total centerline miles[1] | 3,361 | 3,357 | 3,362 | 3,400 | 3,357 | |
| **Auto Safety** | | | | | | |
| Total Fatalities | 97 | 90 | 86 | 87 | 122 | |
| Total Injuries | 4,702 | 5,210 | 5,251 | 5,750 | 5,872 | |
| Total Property Damage Only | 3,178 | 4,339 | 4,607 | 4,840 | 4,824 | |
| **Transit Demand** | | | | | | |
| Votran Ridership (fixed routes) | 3,570,329 | 3,734,117 | 3,729,307 | 3,357,743 | 3,248,466 | |
| Votran Revenue Miles | 1,283,544 | 1,299,359 | 1,285,442 | 1,459,211 | 1,525,423 | |
| Votran Revenue Hours | 80,003 | 82,555 | 81,522 | 94,468 | 101,968 | |
| Passenger Trips per Revenue Mile | 1.37 | 1.46 | 1.41 | 1.29 | 1.23 | |
| Passenger Trips per Revenue Hour | 22.86 | 23.62 | 22.46 | 20.28 | 18.92 | |
| SunRail Ridership | NA | NA | 29,147 | 44,715 | 40,969 | |
| **Transit Safety** | | | | | | |
| Votran Collision | 2 | 3 | 5 | 10 | 11 | |
| Votran Total Fatalities | 0 | 0 | 0 | 0 | 0 | |
| Votran Total Injuries | 8 | 16 | 19 | 23 | 24 | |
| SunRail Crashes | NA | NA | 14 | 11 | 12 | |
| **Bicycle Safety** | | | | | | |
| Fatalities | 1 | 5 | 4 | 4 | 5 | |
| Injuries | 180 | 201 | 175 | 192 | 171 | |
| **Pedestrian Safety** | | | | | | |
| Fatalities | 16 | 19 | 25 | 17 | 16 | |
| Injuries | 179 | 224 | 213 | 199 | 221 | |
| **Intersection Related Crashes** | | | | | | |
| Total Crashes | 2,104 | 2,944 | 3,060 | 3,274 | 3,457 | |

Favorable
Neutral
Unfavorable

# Appendix B

## Comparison of the 2013 and 2019 CMP Performance Measures

This appendix provides a direct comparison of performance measures included in the previous release of the CMP in 2013 versus the updated 2019 version.

| Goal 1: Enhance Economic Competitiveness | | | |
|---|---|---|---|
| **Objective** | **Performance measure** | **2013 CMP** | **2019 CMP** |
| **Improve truck travel time reliability** | Truck travel time reliability (TTTR) | ☑ | ☑ |
| **Enhance access to jobs** | Number of jobs near a state highway | ☑ | ☑ |
| **Maximize the Return on Investment** | Benefit/Cost Ratio | ☑ | (1) |
| | Return on Investment | ☑ | (2) |
| **Enhance freight activities** | Air cargo | | ☑ |
| | Tons moved | | ☑ |
| | Containers moved | | ☑ |
| | Automobiles moved | | ☑ |
| **Improve local economy** | Gross domestic product | | ☑ |

| Goal 2: Livability and Sustainability | | | |
|---|---|---|---|
| **Objective** | **Performance Measure** | **2013 CMP** | **2019 CMP** |
| **Enhance transit accessibility** | Percent of Population within a quarter mile walk of a transit stop | ☑ | ☑ |
| | Population within 5 miles of park and ride lots | ☑ | ☑ |
| **Enhance transit ridership** | Passengers per vehicle revenue mile | ☑ | ☑ |
| | Passengers per vehicle revenue hour | ☑ | ☑ |
| | Annual Average Trip Length | ☑ | |
| **Enhance bicycle and pedestrian quality of service** | Miles of bicycle facilities | ☑ | ☑ |
| | Miles of pedestrian facilities | ☑ | ☑ |
| **Reduce the cost of congestion** | *Cost of fuel consumption due to congestion | ☑ | ☑ |
| | *Cost of time loss due to congestion | ☑ | ☑ |
| | Cost of congestion | ☑ | ☑ |
| | Cost of congestion per capita | ☑ | ☑ |
| **Reduce emissions from automobiles** | *Cost of carbon dioxide | ☑ | ☑ |
| | *Cost of volatile organic compounds | ☑ | ☑ |
| | *Cost of nitrogen oxides | ☑ | ☑ |
| | Cost of emissions | ☑ | ☑ |

| Goal 3: Enhance Safety | | | |
|---|---|---|---|
| **Objective** | **Performance Measure** | **2013 CMP** | **2019 CMP** |
| **Reduce crashes** | Number of vehicle crashes | ☑ | ☑ |
| | Crash rate per million vehicle miles | ☑ | ☑ |
| | Number of serious injuries | | ☑ |
| | Rate of serious injuries per million vehicle miles | | ☑ |
| | Non-motorized serious injuries | | ☑ |
| | Total bicycle crashes | | ☑ |
| | Total pedestrian crashes | | ☑ |
| **Reduce fatal crashes** | Number of fatalities | ☑ | ☑ |
| | Fatality rate per million vehicle miles | ☑ | ☑ |
| | Total bicycle fatalities | | ☑ |
| | Total pedestrian fatalities | | ☑ |
| **Invest in Safety Projects** | Advance safety funding projects | ☑ | (3) |

| Goal 4: Enhance Mobility | | | |
|---|---|---|---|
| **Objective** | **Performance Measure** | **2013 CMP** | **2019 CMP** |
| **Optimize the quantity of travel** | Vehicle miles traveled | ☑ | ☑ |
| | Person miles traveled | ☑ | ☑ |
| | Truck miles traveled | ☑ | ☑ |
| | *Percent SOV | ☑ | ☑ |
| | *Percent Non-SOV | ☑ | ☑ |
| | Vehicle occupancy | ☑ | ☑ |
| | Transit ridership | ☑ | ☑ |
| | Enplanements | | ☑ |
| **Optimize the quality of travel** | Average travel speed | ☑ | ☑ |
| | Average vehicle delay | ☑ | ☑ |
| | Average commute time | ☑ | ☑ |
| | Level of travel time reliability (LOTTR) | ☑ | ☑ |
| | On-time reliability (“FL Method”) | | ☑ |
| | Percent miles meeting LOS criteria rural facilities | ☑ | ☑ |
| **Reduce congestion from incidents** | Number of incidents | | ☑ |
| | Incident verification time | | ☑ |
| | Incident clearance time | | ☑ |
| | Response duration | | ☑ |

| | | | |
|---|---|---|---|
| | Open roads duration | | ☑ |
| | Departure duration | | ☑ |
| | Roadway clearance duration | | ☑ |
| **Improve accessibility to mode choices** | Miles of pedestrian facilities | ☑ | ☑ |
| | Miles of bicycle facilities | ☑ | ☑ |
| | Percent population with access to transit | ☑ | ☑ |
| **Optimize the utilization of the system** | Percent miles severely congested | ☑ | ☑ |
| | **Percent travel severely congested** | | |
| | Daily percent travel severely congested | ☑ | ☑ |
| | Peak hour percent travel severely congested | ☑ | ☑ |
| | Vehicles per lane mile | ☑ | ☑ |
| | **Hours severely congested** | | |
| | Daily hours severely congested | | ☑ |
| | Per year hours severely congested | | ☑ |
| | Daily duration of congestion | ☑ | ☑ |
| | Average load on transit vehicle | | ☑ |

| Goal 5: System Preservation | | | |
|---|---|---|---|
| **Objective** | **Performance Measure** | **2013 CMP** | **2019 CMP** |
| **Maintain roadways** | Percent of Interstate Pavement in Good Condition | | ☑ |
| | Percent of Interstate Pavement in Poor Condition | | ☑ |
| | Percent of Non-Interstate Pavement in Good Condition | | ☑ |
| | Percent of Non-Interstate Pavement in Poor Condition | | ☑ |
| **Maintain bridges** | Percent of National Highway System Bridges in Good Condition | | ☑ |
| | Percent of National Highway System Bridges in Poor Condition | | ☑ |
| | Percent of State Highway Bridges in Good Condition | | ☑ |
| | Percent of State Highway Bridges in Poor Condition | | ☑ |
| | Percent of Non-State Highway Bridges in Good Condition | | ☑ |
| | Percent of Non-State Highway Bridges in Poor Condition | | ☑ |
| **Maintain transit system** | Average age of transit vehicles | ☑ | ☑ |

(1) Cost/Benefit Ratio is assessed on an individual project basis as identified in the 2040 LRTP and cannot be reported through the CMP process

(2) Return on investment is assessed on an individual project basis as identified in the 2040 LRTP and cannot be reported through the CMP process

(3) This is not a performance measure that can easily be evaluated on a yearly basis through the annual mobility report.

# Appendix C

## Reliability Analysis Summary And Speed Data

# I-10 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-295 | Stockton St | 4.55 | 261 | 331.7 | 1.27 | 79% | 492.80 | 1181.19 | 2.40 | 42% | 6am - 10am Weekday |
| Stockton St | I-95 & Acosta Expy | 1.99 | Insufficient Data | | | | | | | | |
| **I-10 Eastbound Corridor** | | | | | **1.27** | **79%** | | | **2.40** | **42%** | |
| **I-10 Eastbound Critical Segment** | **(I-295 to Stockton St)** | | | | **1.27** | **79%** | | | **2.40** | **42%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-295 | Stockton St | 4.55 | Insufficient Data | | | | | | | | |
| Stockton St | I-95 & Acosta Expy | 1.99 | 153.45 | 186.8 | 1.22 | 82% | 169.80 | 510.60 | 3.01 | 33% | 6am - 10am Weekday |
| **I-10 Eastbound Corridor** | | | | | **1.22** | **82%** | | | **3.01** | **33%** | |
| **I-10 Eastbound Critical Segment** | **(Stockton St to I-95 & Acosta Expy)** | | | | **1.22** | **82%** | | | **3.01** | **33%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-295 | Stockton St | 4.55 | 262 | 287.98 | 1.10 | 91% | 362.70 | 982.50 | 2.71 | 37% | 6am - 10am Weekday |
| Stockton St | I-95 & Acosta Expy | 1.99 | Insufficient Data | | | | | | | | |
| **I-10 Eastbound Corridor** | | | | | **1.10** | **91%** | | | **2.71** | **37%** | |
| **I-10 Eastbound Critical Segment** | **(I-295 to Stockton St)** | | | | **1.10** | **91%** | | | **2.71** | **37%** | |

| Year 2018 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 & Acosta Expy | Stockton St | 1.99 | 266 | 285.3 | 1.07 | 93% | 295.15 | 502.72 | 1.70 | 59% | 4pm - 8pm Weekday |
| Stockton St | I-295 | 4.55 | Insufficient Data | | | | | | | | |
| **I-10 Westbound Corridor** | | | | | **1.07** | **93%** | | | **1.70** | **59%** | |
| **I-10 Westbound Critical Segment** | **(I-95 & Acosta Expy to Stockton St)** | | | | **1.07** | **93%** | | | **1.70** | **59%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 & Acosta Expy | Stockton St | 1.99 | Insufficient Data | | | | | | | | |
| Stockton St | I-295 | 4.55 | 128.1 | 205.7 | 1.61 | 62% | 255.65 | 382.73 | 1.50 | 67% | 4pm - 8pm Weekday |
| **I-10 Westbound Corridor** | | | | | **1.61** | **62%** | | | **1.50** | **67%** | |
| **I-10 Westbound Critical Segment** | **(Stockton St to I-295)** | | | | **1.61** | **62%** | | | **1.50** | **67%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-10** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 & Acosta Expy | Stockton St | 1.99 | 272 | 288.82 | 1.06 | 94% | 298.65 | 417.48 | 1.40 | 72% | 4pm - 8pm Weekday |
| Stockton St | I-295 | 4.55 | Insufficient Data | | | | | | | | |
| **I-10 Westbound Corridor** | | | | | **1.06** | **94%** | | | **1.40** | **72%** | |
| **I-10 Westbound Critical Segment** | **(I-95 & Acosta Expy to Stockton St)** | | | | **1.06** | **94%** | | | **1.40** | **72%** | |

# I-95 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I-95 | | | Level of Travel Time Reliability LOTTR | | | | Truck Travel Time Reliability TTTR | | | | |
| Northbound | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| South of Race Track Rd | North of SR 9B | 2.31 | 122.9 | 125.6 | 1.02 | 98% | 119.70 | 128.19 | 1.07 | 93% | 6am - 8pm Weekend |
| North of SR 9B | North of Old St Augustine Rd | 2.38 | 114 | 117.7 | 1.03 | 97% | 116.00 | 128.64 | 1.11 | 90% | 4pm - 8pm Weekday |
| North of Old St Augustine Rd | I-295 | 1.47 | 71.7 | 74.3 | 1.04 | 97% | 73.30 | 105.78 | 1.44 | 69% | 4pm - 8pm Weekday |
| I-295 | SR-152 (Baymeadows Rd) | 4.84 | 256.2 | 263.3 | 1.03 | 97% | 285.45 | 764.49 | 2.68 | 37% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | SR-109 (University Blvd) | 4.27 | 219 | 294.18 | 1.34 | 74% | 250.30 | 673.14 | 2.69 | 37% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | Acosta Expy | 3.40 | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-114 (8th St) | 3.62 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | SR-115 (Lem Turner Rd) | 1.78 | Insufficient Data | | | | | | | | |
| SR-115 (Lem Turner Rd) | SR-111 (Edgewood Ave) | 1.39 | 74.7 | 77.3 | 1.03 | 97% | 76.70 | 86.14 | 1.12 | 89% | 4pm - 8pm Weekday |
| SR-111 (Edgewood Ave) | SR-105 (Hecksher Dr) | 1.30 | 70 | 72 | 1.03 | 97% | 70.70 | 77.32 | 1.09 | 91% | 4pm - 8pm Weekday |
| SR-105 (Hecksher Dr) | Pecan Park Rd | 8.59 | 451 | 462.8 | 1.03 | 97% | 462.40 | 519.21 | 1.12 | 89% | 10am - 4pm Weekday |
| Pecan Park Rd | SR-A1A (SR-200) | 6.43 | Insufficient Data | | | | | | | | |
| **I-95 Northbound Corridor** | | | | | **1.08** | **93%** | | | **1.67** | **60%** | |
| **I-95 Northbound Critical Segment** | **(SR-152 (Baymeadows Rd) to SR-109 (University Blvd))** | | | | **1.34** | **74%** | | | **2.69** | **37%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I-95 | | | Level of Travel Time Reliability | | | | Truck Travel Time Reliability | | | | |
| Northbound | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| South of Race Track Rd | North of SR 9B | 2.31 | Insufficient Data | | | | | | | | |
| North of SR 9B | North of Old St Augustine Rd | 2.38 | 114 | 117.3 | 1.03 | 97% | 118.00 | 126.70 | 1.07 | 93% | 8pm - 6am All Days |
| North of Old St Augustine Rd | I-295 | 1.47 | 70.7 | 73.3 | 1.04 | 96% | 71.30 | 98.85 | 1.39 | 72% | 6am - 10am Weekday |
| I-295 | SR-152 (Baymeadows Rd) | 4.84 | 253.7 | 260.1 | 1.03 | 98% | 290.65 | 727.83 | 2.50 | 40% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | SR-109 (University Blvd) | 4.27 | 215.3 | 229.3 | 1.07 | 94% | 222.85 | 647.80 | 2.91 | 34% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | Acosta Expy | 3.40 | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-114 (8th St) | 3.62 | 217.7 | 233.3 | 1.07 | 93% | 273.00 | 354.38 | 1.30 | 77% | 4pm - 8pm Weekday |
| SR-114 (8th St) | SR-115 (Lem Turner Rd) | 1.78 | 97.3 | 100.7 | 1.03 | 97% | 99.00 | 126.69 | 1.28 | 78% | 4pm - 8pm Weekday |
| SR-115 (Lem Turner Rd) | SR-111 (Edgewood Ave) | 1.39 | 74 | 76.3 | 1.03 | 97% | 75.30 | 80.70 | 1.07 | 93% | 8pm - 6am All Days |
| SR-111 (Edgewood Ave) | SR-105 (Hecksher Dr) | 1.30 | 70 | 71.7 | 1.02 | 98% | 71.70 | 76.00 | 1.06 | 94% | 8pm - 6am All Days |
| SR-105 (Hecksher Dr) | Pecan Park Rd | 8.59 | 439.7 | 448.2 | 1.02 | 98% | 430.85 | 450.50 | 1.05 | 96% | 6am - 8pm Weekend |
| Pecan Park Rd | SR-A1A (SR-200) | 6.43 | Insufficient Data | | | | | | | | |
| **I-95 Northbound Corridor** | | | | | **1.04** | **96%** | | | **1.62** | **62%** | |
| **I-95 Northbound Critical Segment** | **(Acosta Expy to SR-114 (8th St))** | | | | **1.07** | **93%** | | | **2.91** | **34%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-95** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| South of Race Track Rd | North of SR 9B | 2.31 | Insufficient Data | | | | | | | | |
| North of SR 9B | North of Old St Augustine Rd | 2.38 | Insufficient Data | | | | | | | | |
| North of Old St Augustine Rd | I-295 | 1.47 | Insufficient Data | | | | | | | | |
| I-295 | SR-152 (Baymeadows Rd) | 4.84 | 254 | 260.66 | 1.03 | 97% | 268.90 | 601.48 | 2.24 | 45% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | SR-109 (University Blvd) | 4.27 | 216.3 | 228.3 | 1.06 | 95% | 262.15 | 546.55 | 2.08 | 48% | 6am - 10am Weekday |
| SR-109 (University Blvd) | Acosta Expy | 3.40 | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-114 (8th St) | 3.62 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | SR-115 (Lem Turner Rd) | 1.78 | Insufficient Data | | | | | | | | |
| SR-115 (Lem Turner Rd) | SR-111 (Edgewood Ave) | 1.39 | Insufficient Data | | | | | | | | |
| SR-111 (Edgewood Ave) | SR-105 (Hecksher Dr) | 1.30 | Insufficient Data | | | | | | | | |
| SR-105 (Hecksher Dr) | Pecan Park Rd | 8.59 | 446.2 | 456.8 | 1.02 | 98% | 437.50 | 463.49 | 1.06 | 94% | 6am - 8pm Weekend |
| Pecan Park Rd | SR-A1A (SR-200) | 6.43 | Insufficient Data | | | | | | | | |
| **I-95 Northbound Corridor** | | | | | **1.03** | **97%** | | | **1.63** | **61%** | |
| **I-95 Northbound Critical Segment** | **(SR-152 (Baymeadows Rd) to SR-109 (University Blvd))** | | | | **1.06** | **95%** | | | **2.24** | **45%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-95** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| SR-A1A (SR-200) | Pecan Park Rd | 6.50 | Insufficient Data | | | | | | | | |
| Pecan Park Rd | SR-105 (Heckscher Dr) | 8.59 | 450.8 | 458.3 | 1.02 | 98% | 447.05 | 466.56 | 1.04 | 96% | 6am - 10am Weekday |
| SR-105 (Heckscher Dr) | SR-111 (Edgewood Ave) | 1.30 | 71 | 73 | 1.03 | 97% | 70.70 | 116.57 | 1.65 | 61% | 6am - 10am Weekday |
| SR-111 (Edgewood Ave) | SR-115 (Lem Turner Rd) | 1.39 | 76 | 78.7 | 1.04 | 97% | 76.70 | 218.30 | 2.85 | 35% | 6am - 10am Weekday |
| SR-115 (Lem Turner Rd) | SR-114 (8th St) | 1.79 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | Acosta Expy | 3.62 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | SR-109 (University Blvd) | | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-152 (Baymeadows Rd) | 4.30 | 227.15 | 244 | 1.07 | 93% | 262.50 | 716.42 | 2.73 | 37% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | I-295 | 4.87 | 258.2 | 264.3 | 1.02 | 98% | 264.70 | 454.18 | 1.72 | 58% | 4pm - 8pm Weekday |
| I-295 | North of Old St Augustine Rd | 1.49 | 75.3 | 77.7 | 1.03 | 97% | 76.00 | 147.83 | 1.95 | 51% | 4pm - 8pm Weekday |
| North of Old St Augustine Rd | North of Race Track Rd | 2.38 | 115.7 | 118.7 | 1.03 | 97% | 116.50 | 133.02 | 1.14 | 88% | 4pm - 8pm Weekday |
| North of Race Track Rd | South of Race Track Rd | 2.33 | 124.5 | 126.6 | 1.02 | 98% | 125.00 | 218.88 | 1.75 | 57% | 4pm - 8pm Weekday |
| **I-95 Southbound Corridor** | | | | | **1.03** | **97%** | | | **1.68** | **59%** | |
| **I-95 Southbound Critical Segment** | **(Acosta Expy to SR-152 (Baymeadows Rd))** | | | | **1.07** | **93%** | | | **2.85** | **35%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-95** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| SR-A1A (SR-200) | Pecan Park Rd | 6.50 | Insufficient Data | | | | | | | | |
| Pecan Park Rd | SR-105 (Heckscher Dr) | 8.59 | 445.1 | 452.36 | 1.02 | 98% | 435.40 | 454.57 | 1.04 | 96% | 6am - 8pm Weekend |
| SR-105 (Heckscher Dr) | SR-111 (Edgewood Ave) | 1.30 | 70.7 | 72.7 | 1.03 | 97% | 70.00 | 92.48 | 1.32 | 76% | 6am - 10am Weekday |
| SR-111 (Edgewood Ave) | SR-115 (Lem Turner Rd) | 1.39 | 75 | 77.3 | 1.03 | 97% | 75.00 | 184.03 | 2.45 | 41% | 6am - 10am Weekday |
| SR-115 (Lem Turner Rd) | SR-114 (8th St) | 1.79 | 98.3 | 103.3 | 1.05 | 95% | 98.00 | 292.58 | 2.99 | 33% | 4pm - 8pm Weekday |
| SR-114 (8th St) | Acosta Expy | 3.62 | 229 | 278.3 | 1.22 | 82% | 235.15 | 575.25 | 2.45 | 41% | 4pm - 8pm Weekday |
| SR-114 (8th St) | SR-109 (University Blvd) | | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-152 (Baymeadows Rd) | 4.30 | 229.7 | 293.82 | 1.28 | 78% | 292.85 | 631.70 | 2.16 | 46% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | I-295 | 4.87 | 258.2 | 263.8 | 1.02 | 98% | 261.75 | 387.63 | 1.48 | 68% | 4pm - 8pm Weekday |
| I-295 | North of Old St Augustine Rd | 1.49 | 75.3 | 77.3 | 1.03 | 97% | 75.70 | 102.53 | 1.35 | 74% | 4pm - 8pm Weekday |
| North of Old St Augustine Rd | North of Race Track Rd | 2.38 | 115 | 118.3 | 1.03 | 97% | 114.70 | 224.70 | 1.96 | 51% | 4pm - 8pm Weekday |
| North of Race Track Rd | South of Race Track Rd | 2.33 | Insufficient Data | | | | | | | | |
| **I-95 Southbound Corridor** | | | | | **1.08** | **92%** | | | **1.73** | **58%** | |
| **I-95 Southbound Critical Segment** | **(Acosta Expy to SR-152 (Baymeadows Rd))** | | | | **1.28** | **78%** | | | **2.99** | **33%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-95** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| SR-A1A (SR-200) | Pecan Park Rd | 6.50 | Insufficient Data | | | | | | | | |
| Pecan Park Rd | SR-105 (Heckscher Dr) | 8.59 | 445.9 | 453.2 | 1.02 | 98% | 452.80 | 472.30 | 1.04 | 96% | 8pm - 6am All Days |
| SR-105 (Heckscher Dr) | SR-111 (Edgewood Ave) | 1.30 | Insufficient Data | | | | | | | | |
| SR-111 (Edgewood Ave) | SR-115 (Lem Turner Rd) | 1.39 | Insufficient Data | | | | | | | | |
| SR-115 (Lem Turner Rd) | SR-114 (8th St) | 1.79 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | Acosta Expy | 3.62 | Insufficient Data | | | | | | | | |
| SR-114 (8th St) | SR-109 (University Blvd) | | Insufficient Data | | | | | | | | |
| Acosta Expy | SR-152 (Baymeadows Rd) | 4.30 | 234 | 255.3 | 1.09 | 92% | 246.85 | 489.07 | 1.98 | 50% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | I-295 | 4.87 | 258.3 | 265.04 | 1.03 | 97% | 265.10 | 624.50 | 2.36 | 42% | 4pm - 8pm Weekday |
| I-295 | North of Old St Augustine Rd | 1.49 | Insufficient Data | | | | | | | | |
| North of Old St Augustine Rd | North of Race Track Rd | 2.38 | Insufficient Data | | | | | | | | |
| North of Race Track Rd | South of Race Track Rd | 2.33 | Insufficient Data | | | | | | | | |
| **I-95 Southbound Corridor** | | | | | **1.04** | **96%** | | | **1.63** | **61%** | |
| **I-95 Southbound Critical Segment** | **(Acosta Expy to SR-152 (Baymeadows Rd))** | | | | **1.09** | **92%** | | | **2.36** | **42%** | |

# I-295 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Old St Augustine Rd | 2.82 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | SR-13 (San Jose Blvd) | 1.80 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | South of Buckman | 0.84 | Insufficient Data | | | | | | | | |
| South of Buckman | North of Buckman | 3.10 | Insufficient Data | | | | | | | | |
| North of Buckman | SR-15 (Park Ave) | 0.84 | 46.1 | 48.5 | 1.05 | 95% | 48.60 | 64.89 | 1.34 | 75% | 4pm - 8pm Weekday |
| SR-15 (Park Ave) | SR-21 (Blanding Blvd) | 2.14 | 112.6 | 114.9 | 1.02 | 98% | 112.80 | 122.13 | 1.08 | 92% | 4pm - 8pm Weekday |
| SR-21 (Blanding Blvd) | Collins Rd | 1.13 | 60 | 61.2 | 1.02 | 98% | 61.60 | 140.70 | 2.28 | 44% | 8pm - 6am All Days |
| Collins Rd | SR-134 (103rd St) | 3.11 | 165.1 | 167.9 | 1.02 | 98% | 164.80 | 174.77 | 1.06 | 94% | 4pm - 8pm Weekday |
| SR-134 (103rd St) | Wilson Blvd | 1.52 | 81.6 | 83.2 | 1.02 | 98% | 81.90 | 95.45 | 1.17 | 86% | 6am - 10am Weekday |
| Wilson Blvd | SR-228 (Normandy Blvd) | 1.96 | 103.8 | 106.2 | 1.02 | 98% | 104.15 | 137.38 | 1.32 | 76% | 6am - 10am Weekday |
| SR-228 (Normandy Blvd) | I-10 | 0.40 | 22.3 | 23 | 1.03 | 97% | 21.50 | 23.40 | 1.09 | 92% | 6am - 8pm Weekend |
| I-10 | Commonwealth Ave | 2.38 | 128.5 | 131.6 | 1.02 | 98% | 129.10 | 186.34 | 1.44 | 69% | 6am - 10am Weekday |
| Commonwealth Ave | Pritchard Rd | 2.51 | 143.3 | 147.8 | 1.03 | 97% | 145.00 | 204.83 | 1.41 | 71% | 6am - 10am Weekday |
| Pritchard Rd | US-1 (Kings Rd) | 2.55 | 139.4 | 142.18 | 1.02 | 98% | 138.20 | 181.38 | 1.31 | 76% | 4pm - 8pm Weekday |
| US-1 (Kings Rd) | Dunn Ave | 2.72 | Insufficient Data | | | | | | | | |
| Dunn Ave | Lem Turner Rd | 1.65 | Insufficient Data | | | | | | | | |
| Lem Turner Rd | Duval/Airport Rd | 1.67 | 89 | 91.3 | 1.03 | 97% | 90.00 | 132.20 | 1.47 | 68% | 6am - 10am Weekday |
| Duval/Airport Rd | I-95 | 1.66 | 92.5 | 95.1 | 1.03 | 97% | 91.70 | 102.66 | 1.12 | 89% | 4pm - 8pm Weekday |
| **I-295 West Beltway Northbound Corridor** | | | | | **1.02** | **98%** | | | **1.31** | **76%** | |
| **I-295 West Beltway Northbound Cri** | **(North of Buckman to SR-15 (Park Ave))** | | | | **1.05** | **95%** | | | **2.28** | **44%** | |

| Year 2017 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Old St Augustine Rd | 2.82 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | SR-13 (San Jose Blvd) | 1.80 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | South of Buckman | 0.84 | Insufficient Data | | | | | | | | |
| South of Buckman | North of Buckman | 3.10 | 170.7 | 178.2 | 1.04 | 96% | 179.05 | 415.68 | 2.32 | 43% | 4pm - 8pm Weekday |
| North of Buckman | SR-15 (Park Ave) | 0.84 | 47 | 49.2 | 1.05 | 96% | 48.50 | 70.32 | 1.45 | 69% | 4pm - 8pm Weekday |
| SR-15 (Park Ave) | SR-21 (Blanding Blvd) | 2.14 | 111.9 | 114.3 | 1.02 | 98% | 111.40 | 118.40 | 1.06 | 94% | 4pm - 8pm Weekday |
| SR-21 (Blanding Blvd) | Collins Rd | 1.13 | 60.4 | 61.7 | 1.02 | 98% | 60.00 | 62.80 | 1.05 | 96% | 6am - 10am Weekday |
| Collins Rd | SR-134 (103rd St) | 3.11 | 163.4 | 165.9 | 1.02 | 98% | 162.55 | 171.80 | 1.06 | 95% | 6am - 10am Weekday |
| SR-134 (103rd St) | Wilson Blvd | 1.52 | 81.4 | 83 | 1.02 | 98% | 81.60 | 87.28 | 1.07 | 93% | 6am - 10am Weekday |
| Wilson Blvd | SR-228 (Normandy Blvd) | 1.96 | 105.7 | 107.6 | 1.02 | 98% | 106.00 | 114.30 | 1.08 | 93% | 6am - 10am Weekday |
| SR-228 (Normandy Blvd) | I-10 | 0.40 | 21.6 | 22.2 | 1.03 | 97% | 21.20 | 22.70 | 1.07 | 93% | 8pm - 6am All Days |
| I-10 | Commonwealth Ave | 2.38 | 127.45 | 129.8 | 1.02 | 98% | 128.20 | 145.29 | 1.13 | 88% | 6am - 10am Weekday |
| Commonwealth Ave | Pritchard Rd | 2.51 | 141.8 | 145.9 | 1.03 | 97% | 143.80 | 156.25 | 1.09 | 92% | 6am - 10am Weekday |
| Pritchard Rd | US-1 (Kings Rd) | 2.55 | 137.4 | 139.8 | 1.02 | 98% | 136.00 | 142.25 | 1.05 | 96% | 4pm - 8pm Weekday |
| US-1 (Kings Rd) | Dunn Ave | 2.72 | Insufficient Data | | | | | | | | |
| Dunn Ave | Lem Turner Rd | 1.65 | Insufficient Data | | | | | | | | |
| Lem Turner Rd | Duval/Airport Rd | 1.67 | 88.7 | 90.7 | 1.02 | 98% | 89.85 | 96.08 | 1.07 | 94% | 6am - 10am Weekday |
| Duval/Airport Rd | I-95 | 1.66 | 93.8 | 97.06 | 1.03 | 97% | 90.70 | 106.60 | 1.18 | 85% | 8pm - 6am All Days |
| **I-295 West Beltway Northbound Corridor** | | | | | **1.03** | **98%** | | | **1.25** | **80%** | |
| **I-295 West Beltway Northbound Cri** | **(North of Buckman to SR-15 (Park Ave))** | | | | **1.05** | **96%** | | | **2.32** | **43%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Old St Augustine Rd | 2.82 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | SR-13 (San Jose Blvd) | 1.80 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | South of Buckman | 0.84 | Insufficient Data | | | | | | | | |
| South of Buckman | North of Buckman | 3.10 | 169.3 | 175.9 | 1.04 | 96% | 184.10 | 373.90 | 2.03 | 49% | 4pm - 8pm Weekday |
| North of Buckman | SR-15 (Park Ave) | 0.84 | Insufficient Data | | | | | | | | |
| SR-15 (Park Ave) | SR-21 (Blanding Blvd) | 2.14 | Insufficient Data | | | | | | | | |
| SR-21 (Blanding Blvd) | Collins Rd | 1.13 | Insufficient Data | | | | | | | | |
| Collins Rd | SR-134 (103rd St) | 3.11 | 165 | 168.9 | 1.02 | 98% | 165.50 | 176.61 | 1.07 | 94% | 4pm - 8pm Weekday |
| SR-134 (103rd St) | Wilson Blvd | 1.52 | 82.1 | 83.92 | 1.02 | 98% | 82.60 | 89.81 | 1.09 | 92% | 6am - 10am Weekday |
| Wilson Blvd | SR-228 (Normandy Blvd) | 1.96 | 105.3 | 107.5 | 1.02 | 98% | 105.00 | 171.81 | 1.64 | 61% | 6am - 10am Weekday |
| SR-228 (Normandy Blvd) | I-10 | 0.40 | Insufficient Data | | | | | | | | |
| I-10 | Commonwealth Ave | 2.38 | Insufficient Data | | | | | | | | |
| Commonwealth Ave | Pritchard Rd | 2.51 | Insufficient Data | | | | | | | | |
| Pritchard Rd | US-1 (Kings Rd) | 2.55 | 136.8 | 139.4 | 1.02 | 98% | 136.40 | 144.50 | 1.06 | 94% | 4pm - 8pm Weekday |
| US-1 (Kings Rd) | Dunn Ave | 2.72 | Insufficient Data | | | | | | | | |
| Dunn Ave | Lem Turner Rd | 1.65 | Insufficient Data | | | | | | | | |
| Lem Turner Rd | Duval/Airport Rd | 1.67 | 88 | 90.3 | 1.03 | 97% | 87.30 | 93.00 | 1.07 | 94% | 4pm - 8pm Weekday |
| Duval/Airport Rd | I-95 | 1.66 | 88.6 | 90.2 | 1.02 | 98% | 88.20 | 92.28 | 1.05 | 96% | 4pm - 8pm Weekday |
| **I-295 West Beltway Northbound Corridor** | | | | | **1.03** | **98%** | | | **1.33** | **75%** | |
| **I-295 West Beltway Northbound Cri** | **(South of Buckman to North of Buckman)** | | | | **1.04** | **96%** | | | **2.03** | **49%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Duval/Airport Rd | 1.66 | 96.2 | 98.7 | 1.03 | 97% | 96.80 | 128.99 | 1.33 | 75% | 4pm - 8pm Weekday |
| Duval/Airport Rd | Lem Turner Rd | 1.67 | 89 | 91 | 1.02 | 98% | 89.00 | 106.70 | 1.20 | 83% | 4pm - 8pm Weekday |
| Lem Turner Rd | Dunn Ave | 1.65 | Insufficient Data | | | | | | | | |
| Dunn Ave | US-1 (Kings Rd) | 2.72 | Insufficient Data | | | | | | | | |
| US-1 (Kings Rd) | Pritchard Rd | 2.55 | 140.5 | 143.4 | 1.02 | 98% | 141.30 | 251.06 | 1.78 | 56% | 4pm - 8pm Weekday |
| Pritchard Rd | Commonwealth Ave | 2.51 | 140.5 | 145 | 1.03 | 97% | 143.60 | 229.29 | 1.60 | 63% | 4pm - 8pm Weekday |
| Commonwealth Ave | I-10 | 2.38 | 129.8 | 133.2 | 1.03 | 97% | 130.10 | 257.42 | 1.98 | 51% | 4pm - 8pm Weekday |
| I-10 | SR-228 (Normandy Blvd) | 0.40 | 20.7 | 21.4 | 1.03 | 97% | 21.00 | 60.37 | 2.87 | 35% | 4pm - 8pm Weekday |
| SR-228 (Normandy Blvd) | Wilson Blvd | 1.96 | 105.7 | 108.4 | 1.03 | 98% | 107.30 | 169.93 | 1.58 | 63% | 4pm - 8pm Weekday |
| Wilson Blvd | SR-134 (103rd St) | 1.52 | 81.9 | 83.8 | 1.02 | 98% | 82.50 | 94.88 | 1.15 | 87% | 4pm - 8pm Weekday |
| SR-134 (103rd St) | Collins Rd | 3.11 | 164.8 | 167.6 | 1.02 | 98% | 164.50 | 181.11 | 1.10 | 91% | 4pm - 8pm Weekday |
| Collins Rd | SR-21 (Blanding Blvd) | 1.13 | 59.1 | 60.2 | 1.02 | 98% | 59.40 | 61.80 | 1.04 | 96% | 10am - 4pm Weekday |
| SR-21 (Blanding Blvd) | SR-15 (Park Ave) | 2.14 | 114.2 | 117.4 | 1.03 | 97% | 116.95 | 354.59 | 3.03 | 33% | 6am - 10am Weekday |
| SR-15 (Park Ave) | North of Buckman | 0.84 | 43.4 | 45.1 | 1.04 | 96% | 45.90 | 133.26 | 2.90 | 34% | 6am - 10am Weekday |
| North of Buckman | South of Buckman | 3.10 | Insufficient Data | | | | | | | | |
| South of Buckman | SR-13 (San Jose Blvd) | 0.84 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | Old St Augustine Rd | 1.80 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | I-95 | 2.82 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.02** | **98%** | | | **1.69** | **59%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(SR-15 (Park Ave) to North of Buckman)** | | | | **1.04** | **96%** | | | **3.03** | **33%** | |

| Year 2017 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Duval/Airport Rd | 1.66 | 94.2 | 96.6 | 1.03 | 98% | 94.40 | 104.38 | 1.11 | 90% | 4pm - 8pm Weekday |
| Duval/Airport Rd | Lem Turner Rd | 1.67 | 88 | 90.3 | 1.03 | 97% | 88.00 | 94.40 | 1.07 | 93% | 4pm - 8pm Weekday |
| Lem Turner Rd | Dunn Ave | 1.65 | Insufficient Data | | | | | | | | |
| Dunn Ave | US-1 (Kings Rd) | 2.72 | Insufficient Data | | | | | | | | |
| US-1 (Kings Rd) | Pritchard Rd | 2.55 | 140.2 | 142.7 | 1.02 | 98% | 139.90 | 200.45 | 1.43 | 70% | 4pm - 8pm Weekday |
| Pritchard Rd | Commonwealth Ave | 2.51 | 138.3 | 142.02 | 1.03 | 97% | 139.10 | 255.41 | 1.84 | 54% | 4pm - 8pm Weekday |
| Commonwealth Ave | I-10 | 2.38 | 128.9 | 132.5 | 1.03 | 97% | 128.60 | 219.55 | 1.71 | 59% | 4pm - 8pm Weekday |
| I-10 | SR-228 (Normandy Blvd) | 0.40 | 20.5 | 21.2 | 1.03 | 97% | 20.70 | 53.63 | 2.59 | 39% | 4pm - 8pm Weekday |
| SR-228 (Normandy Blvd) | Wilson Blvd | 1.96 | 105.6 | 107.8 | 1.02 | 98% | 106.80 | 159.33 | 1.49 | 67% | 4pm - 8pm Weekday |
| Wilson Blvd | SR-134 (103rd St) | 1.52 | 82.4 | 84.1 | 1.02 | 98% | 82.40 | 93.33 | 1.13 | 88% | 4pm - 8pm Weekday |
| SR-134 (103rd St) | Collins Rd | 3.11 | 164.6 | 167.2 | 1.02 | 98% | 164.50 | 171.33 | 1.04 | 96% | 6am - 10am Weekday |
| Collins Rd | SR-21 (Blanding Blvd) | 1.13 | 59.3 | 60.5 | 1.02 | 98% | 58.90 | 62.28 | 1.06 | 95% | 4pm - 8pm Weekday |
| SR-21 (Blanding Blvd) | SR-15 (Park Ave) | 2.14 | 114.2 | 117.9 | 1.03 | 97% | 115.90 | 328.53 | 2.83 | 35% | 6am - 10am Weekday |
| SR-15 (Park Ave) | North of Buckman | 0.84 | 43.3 | 45.3 | 1.05 | 96% | 45.70 | 156.40 | 3.42 | 29% | 6am - 10am Weekday |
| North of Buckman | South of Buckman | 3.10 | 174.2 | 188.7 | 1.08 | 92% | 213.95 | 524.43 | 2.45 | 41% | 6am - 10am Weekday |
| South of Buckman | SR-13 (San Jose Blvd) | 0.84 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | Old St Augustine Rd | 1.80 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | I-95 | 2.82 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.03** | **97%** | | | **1.71** | **59%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(North of Buckman to South of Buckman)** | | | | **1.08** | **92%** | | | **3.42** | **29%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Duval/Airport Rd | 1.66 | 89.3 | 91.4 | 1.02 | 98% | 88.40 | 97.12 | 1.10 | 91% | 4pm - 8pm Weekday |
| Duval/Airport Rd | Lem Turner Rd | 1.67 | 87.7 | 90 | 1.03 | 97% | 87.30 | 93.02 | 1.07 | 94% | 4pm - 8pm Weekday |
| Lem Turner Rd | Dunn Ave | 1.65 | Insufficient Data | | | | | | | | |
| Dunn Ave | US-1 (Kings Rd) | 2.72 | Insufficient Data | | | | | | | | |
| US-1 (Kings Rd) | Pritchard Rd | 2.55 | 139.8 | 142.7 | 1.02 | 98% | 139.50 | 215.73 | 1.55 | 65% | 4pm - 8pm Weekday |
| Pritchard Rd | Commonwealth Ave | 2.51 | Insufficient Data | | | | | | | | |
| Commonwealth Ave | I-10 | 2.38 | Insufficient Data | | | | | | | | |
| I-10 | SR-228 (Normandy Blvd) | 0.40 | Insufficient Data | | | | | | | | |
| SR-228 (Normandy Blvd) | Wilson Blvd | 1.96 | 105.9 | 108.4 | 1.02 | 98% | 106.85 | 149.84 | 1.40 | 71% | 4pm - 8pm Weekday |
| Wilson Blvd | SR-134 (103rd St) | 1.52 | 84 | 86 | 1.02 | 98% | 84.30 | 90.71 | 1.08 | 93% | 4pm - 8pm Weekday |
| SR-134 (103rd St) | Collins Rd | 3.11 | 164.2 | 166.9 | 1.02 | 98% | 163.30 | 173.62 | 1.06 | 94% | 4pm - 8pm Weekday |
| Collins Rd | SR-21 (Blanding Blvd) | 1.13 | Insufficient Data | | | | | | | | |
| SR-21 (Blanding Blvd) | SR-15 (Park Ave) | 2.14 | Insufficient Data | | | | | | | | |
| SR-15 (Park Ave) | North of Buckman | 0.84 | Insufficient Data | | | | | | | | |
| North of Buckman | South of Buckman | 3.10 | 171.6 | 177.8 | 1.04 | 97% | 186.15 | 609.51 | 3.27 | 31% | 6am - 10am Weekday |
| South of Buckman | SR-13 (San Jose Blvd) | 0.84 | Insufficient Data | | | | | | | | |
| SR-13 (San Jose Blvd) | Old St Augustine Rd | 1.80 | Insufficient Data | | | | | | | | |
| Old St Augustine Rd | I-95 | 2.82 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.02** | **98%** | | | **1.63** | **61%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(North of Buckman to South of Buckman)** | | | | **1.04** | **97%** | | | **3.27** | **31%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 East Beltway** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | SR-152 (Baymeadows Rd) | 5.26 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | SR-212 (Beach Blvd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-212 (Beach Blvd) | SR-10 (Atlantic Blvd) | 2.57 | 149.1 | 160.68 | 1.08 | 93% | 175.95 | 256.09 | 1.46 | 69% | 4pm - 8pm Weekday |
| SR-10 (Atlantic Blvd) | Monument Rd | 1.48 | 80.4 | 82.7 | 1.03 | 97% | 82.00 | 120.14 | 1.47 | 68% | 4pm - 8pm Weekday |
| Monument Rd | Merrill Rd | 1.10 | 55.6 | 57.1 | 1.03 | 97% | 56.60 | 68.56 | 1.21 | 83% | 4pm - 8pm Weekday |
| Merrill Rd | Hecksher Dr | 4.28 | 236.1 | 242.9 | 1.03 | 97% | 236.75 | 361.44 | 1.53 | 66% | 4pm - 8pm Weekday |
| Hecksher Dr | Alta Dr | 1.75 | 95 | 98.6 | 1.04 | 96% | 96.80 | 271.84 | 2.81 | 36% | 4pm - 8pm Weekday |
| Alta Dr | Pulaski Rd | 2.28 | 129.3 | 133.7 | 1.03 | 97% | 131.10 | 245.52 | 1.87 | 53% | 4pm - 8pm Weekday |
| Pulaski Rd | US-17 (Main St) | 1.54 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | I-95 | 0.97 | 53.7 | 55.8 | 1.04 | 96% | 54.45 | 67.05 | 1.23 | 81% | 4pm - 8pm Weekday |
| **I-295 East Beltway Northbound Corridor** | | | | | **1.04** | **96%** | | | **1.67** | **60%** | |
| **I-295 East Beltway Northbound Critical Segment** | **(SR-212 (Beach Blvd) to SR-10 (Atlantic Blvd))** | | | | **1.08** | **93%** | | | **2.81** | **36%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 East Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | SR-152 (Baymeadows Rd) | 5.26 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | SR-212 (Beach Blvd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-212 (Beach Blvd) | SR-10 (Atlantic Blvd) | 2.57 | Insufficient Data | | | | | | | | |
| SR-10 (Atlantic Blvd) | Monument Rd | 1.48 | 80 | 82 | 1.03 | 98% | 81.30 | 167.10 | 2.06 | 49% | 4pm - 8pm Weekday |
| Monument Rd | Merrill Rd | 1.10 | 55.6 | 57 | 1.03 | 98% | 56.40 | 178.18 | 3.16 | 32% | 4pm - 8pm Weekday |
| Merrill Rd | Hecksher Dr | 4.28 | Insufficient Data | | | | | | | | |
| Hecksher Dr | Alta Dr | 1.75 | Insufficient Data | | | | | | | | |
| Alta Dr | Pulaski Rd | 2.28 | 128 | 130.9 | 1.02 | 98% | 128.60 | 159.20 | 1.24 | 81% | 4pm - 8pm Weekday |
| Pulaski Rd | US-17 (Main St) | 1.54 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | I-95 | 0.97 | 51.2 | 52.9 | 1.03 | 97% | 51.10 | 58.43 | 1.14 | 87% | 8pm - 6am All Days |
| **I-295 East Beltway Northbound Corridor** | | | | | **1.03** | **98%** | | | **1.79** | **56%** | |
| **I-295 East Beltway Northbound Critical Segment** | **(US-17 (Main St) to I-95)** | | | | **1.03** | **97%** | | | **3.16** | **32%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 East Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | SR-152 (Baymeadows Rd) | 5.26 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | SR-212 (Beach Blvd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-212 (Beach Blvd) | SR-10 (Atlantic Blvd) | 2.57 | Insufficient Data | | | | | | | | |
| SR-10 (Atlantic Blvd) | Monument Rd | 1.48 | 79.9 | 82.02 | 1.03 | 97% | 81.60 | 94.46 | 1.16 | 86% | 4pm - 8pm Weekday |
| Monument Rd | Merrill Rd | 1.10 | 55.4 | 56.9 | 1.03 | 97% | 56.20 | 66.21 | 1.18 | 85% | 4pm - 8pm Weekday |
| Merrill Rd | Hecksher Dr | 4.28 | Insufficient Data | | | | | | | | |
| Hecksher Dr | Alta Dr | 1.75 | Insufficient Data | | | | | | | | |
| Alta Dr | Pulaski Rd | 2.28 | 126.7 | 129.6 | 1.02 | 98% | 126.20 | 141.92 | 1.12 | 89% | 4pm - 8pm Weekday |
| Pulaski Rd | US-17 (Main St) | 1.54 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | I-95 | 0.97 | 49.6 | 50.9 | 1.03 | 97% | 49.40 | 53.31 | 1.08 | 93% | 4pm - 8pm Weekday |
| **I-295 East Beltway Northbound Corridor** | | | | | **1.03** | **98%** | | | **1.14** | **88%** | |
| **I-295 East Beltway Northbound Critical Segment** | **(Monument Rd to Merrill Rd)** | | | | **1.03** | **97%** | | | **1.18** | **85%** | |

| Year 2018 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | US-17 (Main St) | 0.97 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | Pulaski Rd | 1.54 | Insufficient Data | | | | | | | | |
| Pulaski Rd | Alta Dr | 2.28 | 127.9 | 131 | 1.02 | 98% | 125.90 | 145.23 | 1.15 | 87% | 4pm - 8pm Weekday |
| Alta Dr | Hecksher Dr | 1.75 | 94.7 | 97.6 | 1.03 | 97% | 93.50 | 139.97 | 1.50 | 67% | 4pm - 8pm Weekday |
| Hecksher Dr | Merrill Rd | 4.28 | 237.4 | 244.18 | 1.03 | 97% | 237.35 | 314.65 | 1.33 | 75% | 4pm - 8pm Weekday |
| Merrill Rd | Monument Rd | 1.10 | 55.4 | 58.4 | 1.05 | 95% | 56.70 | 201.38 | 3.55 | 28% | 6am - 10am Weekday |
| Monument Rd | SR-10 (Atlantic Blvd) | 1.48 | 80.55 | 111.9 | 1.39 | 72% | 94.10 | 301.28 | 3.20 | 31% | 6am - 10am Weekday |
| SR-10 (Atlantic Blvd) | SR-212 (Beach Blvd) | 2.57 | 165.5 | 216.18 | 1.31 | 77% | 211.60 | 365.63 | 1.73 | 58% | 6am - 10am Weekday |
| SR-212 (Beach Blvd) | SR-152 (Baymeadows Rd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | I-95 | 5.26 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.12** | **89%** | | | **1.78** | **56%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(Monument Rd to SR-10 (Atlantic Blvd))** | | | | **1.39** | **72%** | | | **3.55** | **28%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | US-17 (Main St) | 0.97 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | Pulaski Rd | 1.54 | Insufficient Data | | | | | | | | |
| Pulaski Rd | Alta Dr | 2.28 | 126.7 | 129.2 | 1.02 | 98% | 124.95 | 131.73 | 1.05 | 95% | 4pm - 8pm Weekday |
| Alta Dr | Hecksher Dr | 1.75 | Insufficient Data | | | | | | | | |
| Hecksher Dr | Merrill Rd | 4.28 | Insufficient Data | | | | | | | | |
| Merrill Rd | Monument Rd | 1.10 | 55 | 57.1 | 1.04 | 96% | 57.10 | 175.58 | 3.07 | 33% | 6am - 10am Weekday |
| Monument Rd | SR-10 (Atlantic Blvd) | 1.48 | 80.2 | 86.1 | 1.07 | 93% | 102.95 | 267.13 | 2.59 | 39% | 6am - 10am Weekday |
| SR-10 (Atlantic Blvd) | SR-212 (Beach Blvd) | 2.57 | 168.5 | 191.2 | 1.13 | 88% | 211.70 | 344.33 | 1.63 | 61% | 6am - 10am Weekday |
| SR-212 (Beach Blvd) | SR-152 (Baymeadows Rd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | I-95 | 5.26 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.07** | **93%** | | | **1.86** | **54%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(SR-10 (Atlantic Blvd) to SR-212 (Beach Blvd))** | | | | **1.13** | **88%** | | | **3.07** | **33%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **I-295 West Beltway** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | US-17 (Main St) | 0.97 | Insufficient Data | | | | | | | | |
| US-17 (Main St) | Pulaski Rd | 1.54 | Insufficient Data | | | | | | | | |
| Pulaski Rd | Alta Dr | 2.28 | 126 | 128.9 | 1.02 | 98% | 125.90 | 133.03 | 1.06 | 95% | 6am - 10am Weekday |
| Alta Dr | Hecksher Dr | 1.75 | Insufficient Data | | | | | | | | |
| Hecksher Dr | Merrill Rd | 4.28 | Insufficient Data | | | | | | | | |
| Merrill Rd | Monument Rd | 1.10 | 55.3 | 57.4 | 1.04 | 96% | 56.90 | 219.95 | 3.87 | 26% | 6am - 10am Weekday |
| Monument Rd | SR-10 (Atlantic Blvd) | 1.48 | 81.2 | 86.7 | 1.07 | 94% | 90.90 | 288.98 | 3.18 | 31% | 6am - 10am Weekday |
| SR-10 (Atlantic Blvd) | SR-212 (Beach Blvd) | 2.57 | 171.8 | 184.06 | 1.07 | 93% | 189.25 | 269.45 | 1.42 | 70% | 6am - 10am Weekday |
| SR-212 (Beach Blvd) | SR-152 (Baymeadows Rd) | 4.93 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | I-95 | 5.26 | Insufficient Data | | | | | | | | |
| **I-295 West Beltway Southbound Corridor** | | | | | **1.05** | **95%** | | | **2.02** | **49%** | |
| **I-295 West Beltway Southbound Critical Segment** | **(SR-10 (Atlantic Blvd) to SR-212 (Beach Blvd))** | | | | **1.07** | **93%** | | | **3.87** | **26%** | |

# SR-10 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Eastbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kingman Ave | SR-109 (University Blvd) | 2.64 | 321.2 | 352.46 | 1.10 | 91% | 362.05 | 888.06 | 2.45 | 41% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | St Johns Bluff Rd | 4.73 | 691.2 | 1546.64 | 2.24 | 45% | 716.30 | 3611.20 | 5.04 | 20% | 6am - 10am Weekday |
| St Johns Bluff Rd | Hodges Blvd | 3.86 | 388.4 | 410.86 | 1.06 | 95% | 405.20 | 529.46 | 1.31 | 77% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 0.51 | 49.7 | 57.3 | 1.15 | 87% | 50.20 | 75.40 | 1.50 | 67% | 6am - 8pm Weekend |
| **SR-10 (Atlantic Blvd) Eastbound Corridor** | | | | | **1.55** | **65%** | | | **3.08** | **32%** | |
| **SR-10 (Atlantic Blvd) Eastbound Critical Segment** | **(SR-109 (University Blvd) to St Johns Bluff Rd)** | | | | **2.24** | **45%** | | | **5.04** | **20%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | |
| **Eastbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kingman Ave | SR-109 (University Blvd) | 2.64 | 302.9 | 337.3 | 1.11 | 90% | 339.45 | 515.77 | 1.52 | 66% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | St Johns Bluff Rd | 4.73 | 579.5 | 653.22 | 1.13 | 89% | 606.30 | 828.43 | 1.37 | 73% | 8pm - 6am All Days |
| St Johns Bluff Rd | Hodges Blvd | 3.86 | 379.85 | 403.82 | 1.06 | 94% | 399.95 | 500.58 | 1.25 | 80% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 0.51 | 49.7 | 56.5 | 1.14 | 88% | 45.00 | 71.10 | 1.58 | 63% | 8pm - 6am All Days |
| **SR-10 (Atlantic Blvd) Eastbound Corridor** | | | | | **1.10** | **91%** | | | **1.37** | **73%** | |
| **SR-10 (Atlantic Blvd) Eastbound Critical Segment** | **(Hodges Blvd to San Pablo Rd)** | | | | **1.14** | **88%** | | | **1.58** | **63%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | |
| **Eastbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kingman Ave | SR-109 (University Blvd) | 2.64 | Insufficient Data | | | | | | | | |
| SR-109 (University Blvd) | St Johns Bluff Rd | 4.73 | Insufficient Data | | | | | | | | |
| St Johns Bluff Rd | Hodges Blvd | 3.86 | 381.15 | 418.06 | 1.10 | 91% | 403.90 | 524.95 | 1.30 | 77% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 0.51 | 50.5 | 55.8 | 1.10 | 91% | 47.20 | 67.59 | 1.43 | 70% | 8pm - 6am All Days |
| **SR-10 (Atlantic Blvd) Eastbound Corridor** | | | | | **1.10** | **91%** | | | **1.32** | **76%** | |
| **SR-10 (Atlantic Blvd) Eastbound Critical Segment** | **(Hodges Blvd to San Pablo Rd)** | | | | **1.10** | **91%** | | | **1.43** | **70%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Pablo Rd | Hodges Blvd | 0.51 | 54.9 | 69.4 | 1.26 | 79% | 56.40 | 137.27 | 2.43 | 41% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 3.86 | 425.2 | 451.9 | 1.06 | 94% | 360.40 | 430.50 | 1.19 | 84% | 6am - 10am Weekday |
| St Johns Bluff Rd | Hodges Blvd | 4.73 | 716.6 | 963.1 | 1.34 | 74% | 611.30 | 2559.02 | 4.19 | 24% | 6am - 10am Weekday |
| SR-109 (University Blvd) | Kingman Ave | 2.64 | 259.2 | 285.38 | 1.10 | 91% | 265.40 | 379.60 | 1.43 | 70% | 6am - 10am Weekday |
| **SR-10 (Atlantic Blvd) Westbound Corridor** | | | | | **1.19** | **84%** | | | **2.51** | **40%** | |
| **SR-10 (Atlantic Blvd) Westbound Critical Segment** | **(St Johns Bluff Rd to Hodges Blvd)** | | | | **1.34** | **74%** | | | **4.19** | **24%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Pablo Rd | Hodges Blvd | 0.51 | 53.3 | 64.7 | 1.21 | 82% | 56.35 | 83.25 | 1.48 | 68% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 3.86 | 425.4 | 449.42 | 1.06 | 95% | 381.25 | 483.05 | 1.27 | 79% | 6am - 10am Weekday |
| St Johns Bluff Rd | Hodges Blvd | 4.73 | Insufficient Data | | | | | | | | |
| SR-109 (University Blvd) | Kingman Ave | 2.64 | Insufficient Data | | | | | | | | |
| **SR-10 (Atlantic Blvd) Westbound Corridor** | | | | | **1.07** | **93%** | | | **1.29** | **77%** | |
| **SR-10 (Atlantic Blvd) Westbound Critical Segment** | **(San Pablo Rd to Hodges Blvd)** | | | | **1.21** | **82%** | | | **1.48** | **68%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-10 (Atlantic Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Pablo Rd | Hodges Blvd | 0.51 | 56.5 | 69.78 | 1.24 | 81% | 58.55 | 98.93 | 1.69 | 59% | 4pm - 8pm Weekday |
| Hodges Blvd | San Pablo Rd | 3.86 | 420.8 | 445.1 | 1.06 | 95% | 361.80 | 434.80 | 1.20 | 83% | 6am - 10am Weekday |
| St Johns Bluff Rd | Hodges Blvd | 4.73 | 614.45 | 673.18 | 1.10 | 91% | 671.00 | 938.00 | 1.40 | 72% | 8pm - 6am All Days |
| SR-109 (University Blvd) | Kingman Ave | 2.64 | 260.7 | 283.7 | 1.09 | 92% | 260.05 | 476.90 | 1.83 | 55% | 6am - 10am Weekday |
| **SR-10 (Atlantic Blvd) Westbound Corridor** | | | | | **1.09** | **92%** | | | **1.44** | **69%** | |
| **SR-10 (Atlantic Blvd) Westbound Critical Segment** | **(San Pablo Rd to Hodges Blvd)** | | | | **1.24** | **81%** | | | **1.83** | **55%** | |

# SR-13 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Julington Creek Rd | Orange Picker Rd | 0.92 | 95.9 | 106.5 | 1.11 | 90% | 81.20 | 109.66 | 1.35 | 74% | 6am - 8pm Weekend |
| Orange Picker Rd | Loretto Rd | 0.77 | 92.4 | 108.76 | 1.18 | 85% | 85.95 | 122.75 | 1.43 | 70% | 6am - 8pm Weekend |
| Loretto Rd | I-295 | 1.75 | Insufficient Data | | | | | | | | |
| I-295 | Crowne Point Rd | 1.00 | 142.8 | 155.7 | 1.09 | 92% | 99.75 | 169.14 | 1.70 | 59% | 6am - 10am Weekday |
| Crowne Point Rd | Beauclerc Rd | 1.19 | 153.65 | 194.8 | 1.27 | 79% | 127.55 | 471.05 | 3.69 | 27% | 6am - 10am Weekday |
| Beauclerc Rd | SR-152 (Baymeadows Rd) | 0.43 | 42.5 | 49.18 | 1.16 | 86% | 45.35 | 95.45 | 2.10 | 48% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | San Clerc Rd | 0.52 | 46.9 | 49.9 | 1.06 | 94% | 48.10 | 96.45 | 2.01 | 50% | 6am - 10am Weekday |
| San Clerc Rd | St Augustine Rd | 1.36 | 106.2 | 112.02 | 1.05 | 95% | 106.50 | 207.12 | 1.94 | 51% | 6am - 10am Weekday |
| St Augustine Rd | SR-109 (University Blvd) | 1.78 | 160.1 | 169.22 | 1.06 | 95% | 157.65 | 190.91 | 1.21 | 83% | 6am - 10am Weekday |
| SR-109 (University Blvd) | SR-126 (Emerson St) | 1.69 | 167.2 | 178.9 | 1.07 | 93% | 172.00 | 355.40 | 2.07 | 48% | 6am - 10am Weekday |
| SR-126 (Emerson St) | San Marco Blvd | 1.37 | 147.8 | 162.66 | 1.10 | 91% | 153.10 | 229.76 | 1.50 | 67% | 6am - 10am Weekday |
| **SR-13 (San Jose Blvd) Northbound Corridor** | | | | | **1.11** | **90%** | | | **1.88** | **53%** | |
| **SR-13 (San Jose Blvd) Northbound Critical Segment (Crowne Point Rd to Beauclerc Rd)** | | | | | **1.27** | **79%** | | | **3.69** | **27%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Julington Creek Rd | Orange Picker Rd | 0.92 | 88.45 | 103.5 | 1.17 | 85% | 77.70 | 112.24 | 1.44 | 69% | 6am - 8pm Weekend |
| Orange Picker Rd | Loretto Rd | 0.77 | 93.1 | 107 | 1.15 | 87% | 85.10 | 134.92 | 1.59 | 63% | 6am - 8pm Weekend |
| Loretto Rd | I-295 | 1.75 | Insufficient Data | | | | | | | | |
| I-295 | Crowne Point Rd | 1.00 | Insufficient Data | | | | | | | | |
| Crowne Point Rd | Beauclerc Rd | 1.19 | 161.1 | 201.2 | 1.25 | 80% | 132.00 | 447.35 | 3.39 | 30% | 6am - 10am Weekday |
| Beauclerc Rd | SR-152 (Baymeadows Rd) | 0.43 | 41.6 | 47.18 | 1.13 | 88% | 41.95 | 91.73 | 2.19 | 46% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | San Clerc Rd | 0.52 | 46.5 | 49.5 | 1.06 | 94% | 48.90 | 101.79 | 2.08 | 48% | 6am - 10am Weekday |
| San Clerc Rd | St Augustine Rd | 1.36 | 105.3 | 110.92 | 1.05 | 95% | 105.40 | 215.50 | 2.04 | 49% | 6am - 10am Weekday |
| St Augustine Rd | SR-109 (University Blvd) | 1.78 | 164.4 | 173.92 | 1.06 | 95% | 164.60 | 214.05 | 1.30 | 77% | 6am - 10am Weekday |
| SR-109 (University Blvd) | SR-126 (Emerson St) | 1.69 | 157.4 | 170.14 | 1.08 | 93% | 163.65 | 233.11 | 1.42 | 70% | 6am - 10am Weekday |
| SR-126 (Emerson St) | San Marco Blvd | 1.37 | 139.6 | 156.02 | 1.12 | 89% | 148.10 | 249.94 | 1.69 | 59% | 6am - 10am Weekday |
| **SR-13 (San Jose Blvd) Northbound Corridor** | | | | | **1.11** | **90%** | | | **1.84** | **54%** | |
| **SR-13 (San Jose Blvd) Northbound Critical Segment (Crowne Point Rd to Beauclerc Rd)** | | | | | **1.25** | **80%** | | | **3.39** | **30%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Julington Creek Rd | Orange Picker Rd | 0.92 | 88 | 99.2 | 1.13 | 89% | 77.70 | 97.01 | 1.25 | 80% | 6am - 8pm Weekend |
| Orange Picker Rd | Loretto Rd | 0.77 | Insufficient Data | | | | | | | | |
| Loretto Rd | I-295 | 1.75 | Insufficient Data | | | | | | | | |
| I-295 | Crowne Point Rd | 1.00 | Insufficient Data | | | | | | | | |
| Crowne Point Rd | Beauclerc Rd | 1.19 | Insufficient Data | | | | | | | | |
| Beauclerc Rd | SR-152 (Baymeadows Rd) | 0.43 | Insufficient Data | | | | | | | | |
| SR-152 (Baymeadows Rd) | San Clerc Rd | 0.52 | 44.4 | 47.3 | 1.07 | 94% | 46.10 | 97.94 | 2.12 | 47% | 6am - 10am Weekday |
| San Clerc Rd | St Augustine Rd | 1.36 | 105.6 | 112 | 1.06 | 94% | 105.70 | 257.67 | 2.44 | 41% | 6am - 10am Weekday |
| St Augustine Rd | SR-109 (University Blvd) | 1.78 | 164.7 | 173.16 | 1.05 | 95% | 167.15 | 206.94 | 1.24 | 81% | 6am - 10am Weekday |
| SR-109 (University Blvd) | SR-126 (Emerson St) | 1.69 | 158.2 | 166.6 | 1.05 | 95% | 162.40 | 193.78 | 1.19 | 84% | 6am - 10am Weekday |
| SR-126 (Emerson St) | San Marco Blvd | 1.37 | 144.3 | 164.42 | 1.14 | 88% | 158.30 | 253.43 | 1.60 | 62% | 6am - 10am Weekday |
| **SR-13 (San Jose Blvd) Northbound Corridor** | | | | | **1.08** | **93%** | | | **1.57** | **64%** | |
| **SR-13 (San Jose Blvd) Northbound Critical Segment (SR-126 (Emerson St) to San Marco Blvd)** | | | | | **1.14** | **88%** | | | **2.44** | **41%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Marco Blvd | SR-126 (Emerson St) | 1.37 | 150.8 | 163.3 | 1.08 | 92% | 159.10 | 201.34 | 1.27 | 79% | 4pm - 8pm Weekday |
| SR-126 (Emerson St) | SR-109 (University Blvd) | 1.69 | 155.2 | 162.54 | 1.05 | 95% | 144.40 | 157.80 | 1.09 | 92% | 6am - 10am Weekday |
| SR-109 (University Blvd) | St Augustine Rd | 1.78 | 155.5 | 166.7 | 1.07 | 93% | 165.75 | 227.19 | 1.37 | 73% | 4pm - 8pm Weekday |
| St Augustine Rd | San Clerc Rd | 1.36 | 110 | 116.8 | 1.06 | 94% | 117.20 | 353.45 | 3.02 | 33% | 4pm - 8pm Weekday |
| San Clerc Rd | SR-152 (Baymeadows Rd) | 0.52 | 53.6 | 64.5 | 1.20 | 83% | 67.70 | 124.35 | 1.84 | 54% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Beauclerc Rd | 0.43 | 46 | 53.88 | 1.17 | 85% | 52.30 | 81.75 | 1.56 | 64% | 4pm - 8pm Weekday |
| Beauclerc Rd | Crowne Point Rd | 1.19 | 156.85 | 172 | 1.10 | 91% | 152.55 | 446.93 | 2.93 | 34% | 4pm - 8pm Weekday |
| Crowne Point Rd | I-295 | 1.00 | Insufficient Data | | | | | | | | |
| I-295 | Loretto Rd | 1.75 | Insufficient Data | | | | | | | | |
| Loretto Rd | Orange Picker Rd | 0.77 | 74.4 | 83.4 | 1.12 | 89% | 71.10 | 85.30 | 1.20 | 83% | 6am - 8pm Weekend |
| Orange Picker Rd | Julington Creek Rd | 0.92 | 85.7 | 93.3 | 1.09 | 92% | 88.35 | 125.84 | 1.42 | 70% | 4pm - 8pm Weekday |
| **SR-13 (San Jose Blvd) Southbound Corridor** | | | | | **1.09** | **92%** | | | **1.74** | **57%** | |
| **SR-13 (San Jose Blvd) Southbound Critical Segment (San Clerc Rd to SR-152 (Baymeadows Rd))** | | | | | **1.20** | **83%** | | | **3.02** | **33%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Marco Blvd | SR-126 (Emerson St) | 1.37 | 138.2 | 148.6 | 1.08 | 93% | 128.90 | 160.55 | 1.25 | 80% | 6am - 10am Weekday |
| SR-126 (Emerson St) | SR-109 (University Blvd) | 1.69 | 157 | 168.3 | 1.07 | 93% | 162.90 | 226.45 | 1.39 | 72% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | St Augustine Rd | 1.78 | 154.5 | 166.7 | 1.08 | 93% | 167.80 | 198.48 | 1.18 | 85% | 4pm - 8pm Weekday |
| St Augustine Rd | San Clerc Rd | 1.36 | 110.8 | 115.6 | 1.04 | 96% | 116.60 | 236.25 | 2.03 | 49% | 4pm - 8pm Weekday |
| San Clerc Rd | SR-152 (Baymeadows Rd) | 0.52 | 50.3 | 59.78 | 1.19 | 84% | 66.20 | 124.79 | 1.89 | 53% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Beauclerc Rd | 0.43 | 46.4 | 54.88 | 1.18 | 85% | 55.05 | 106.20 | 1.93 | 52% | 4pm - 8pm Weekday |
| Beauclerc Rd | Crowne Point Rd | 1.19 | 151.1 | 167.66 | 1.11 | 90% | 147.55 | 453.10 | 3.07 | 33% | 4pm - 8pm Weekday |
| Crowne Point Rd | I-295 | 1.00 | Insufficient Data | | | | | | | | |
| I-295 | Loretto Rd | 1.75 | Insufficient Data | | | | | | | | |
| Loretto Rd | Orange Picker Rd | 0.77 | 73.4 | 81.7 | 1.11 | 90% | 69.45 | 84.88 | 1.22 | 82% | 6am - 8pm Weekend |
| Orange Picker Rd | Julington Creek Rd | 0.92 | 85.4 | 92.6 | 1.08 | 92% | 86.80 | 107.74 | 1.24 | 81% | 4pm - 8pm Weekday |
| **SR-13 (San Jose Blvd) Southbound Corridor** | | | | | **1.09** | **92%** | | | **1.64** | **61%** | |
| **SR-13 (San Jose Blvd) Southbound Critical Segment (San Clerc Rd to SR-152 (Baymeadows Rd))** | | | | | **1.19** | **84%** | | | **3.07** | **33%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-13 (San Jose Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Marco Blvd | SR-126 (Emerson St) | 1.37 | 140 | 152.96 | 1.09 | 92% | 139.05 | 175.93 | 1.27 | 79% | 10am - 4pm Weekday |
| SR-126 (Emerson St) | SR-109 (University Blvd) | 1.69 | 155.1 | 164.9 | 1.06 | 94% | 165.55 | 187.30 | 1.13 | 88% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | St Augustine Rd | 1.78 | 160.3 | 169.6 | 1.06 | 95% | 151.45 | 172.81 | 1.14 | 88% | 6am - 10am Weekday |
| St Augustine Rd | San Clerc Rd | 1.36 | 110.85 | 115.86 | 1.05 | 96% | 115.55 | 147.95 | 1.28 | 78% | 4pm - 8pm Weekday |
| San Clerc Rd | SR-152 (Baymeadows Rd) | 0.52 | 50.2 | 57.02 | 1.14 | 88% | 61.25 | 112.09 | 1.83 | 55% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Beauclerc Rd | 0.43 | Insufficient Data | | | | | | | | |
| Beauclerc Rd | Crowne Point Rd | 1.19 | Insufficient Data | | | | | | | | |
| Crowne Point Rd | I-295 | 1.00 | Insufficient Data | | | | | | | | |
| I-295 | Loretto Rd | 1.75 | Insufficient Data | | | | | | | | |
| Loretto Rd | Orange Picker Rd | 0.77 | Insufficient Data | | | | | | | | |
| Orange Picker Rd | Julington Creek Rd | 0.92 | 88.5 | 94.3 | 1.07 | 94% | 91.40 | 153.10 | 1.68 | 60% | 4pm - 8pm Weekday |
| **SR-13 (San Jose Blvd) Southbound Corridor** | | | | | **1.07** | **94%** | | | **1.30** | **77%** | |
| **SR-13 (San Jose Blvd) Southbound Critical Segment (San Clerc Rd to SR-152 (Baymeadows Rd))** | | | | | **1.14** | **88%** | | | **1.83** | **55%** | |

# SR-21 RELIABILITY ANALYSIS SUMMARY

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | |
| **Northbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kinghtbox Rd | Kingsley Ave | 4.34 | 500 | 575.22 | 1.15 | 87% | 458.45 | 584.55 | 1.28 | 78% | 6am - 10am Weekday |
| Kingsley Ave | Collins Rd | 2.76 | 421.9 | 536.7 | 1.27 | 79% | 336.70 | 623.46 | 1.85 | 54% | 6am - 8pm Weekend |
| **SR-21 (Blanding Blvd) Northbound Corridor** | | | | | **1.20** | **83%** | | | **1.50** | **67%** | |
| **SR-21 (Blanding Blvd) Northbound Critical Segment** | **(Kingsley Ave to Collins Rd)** | | | | **1.27** | **79%** | | | **1.85** | **54%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | |
| **Northbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kinghtbox Rd | Kingsley Ave | 4.34 | 520 | 572.82 | 1.10 | 91% | 483.80 | 599.22 | 1.24 | 81% | 6am - 10am Weekday |
| Kingsley Ave | Collins Rd | 2.76 | Insufficient Data | | | | | | | | |
| **SR-21 (Blanding Blvd) Northbound Corridor** | | | | | **1.10** | **91%** | | | **1.24** | **81%** | |
| **SR-21 (Blanding Blvd) Northbound Critical Segment** | **(Kinghtbox Rd to Kingsley Ave)** | | | | **1.10** | **91%** | | | **1.24** | **81%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | |
| **Northbound** | | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Kinghtbox Rd | Kingsley Ave | 4.34 | 528 | 572.52 | 1.08 | 92% | 517.15 | 696.83 | 1.35 | 74% | 6am - 10am Weekday |
| Kingsley Ave | Collins Rd | 2.76 | Insufficient Data | | | | | | | | |
| **SR-21 (Blanding Blvd) Northbound Corridor** | | | | | **1.08** | **92%** | | | **1.35** | **74%** | |
| **SR-21 (Blanding Blvd) Northbound Critical Segment** | **(Kinghtbox Rd to Kingsley Ave)** | | | | **1.08** | **92%** | | | **1.35** | **74%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Collins Rd | Kingsley Ave | 2.76 | 426.1 | 492.32 | 1.16 | 87% | 369.85 | 522.80 | 1.41 | 71% | 6am - 8pm Weekend |
| Kingsley Ave | Kinghtbox Rd | 4.34 | 471.45 | 504.1 | 1.07 | 94% | 489.30 | 631.03 | 1.29 | 78% | 4pm - 8pm Weekday |
| **SR-21 (Blanding Blvd) Southbound Corridor** | | | | | **1.10** | **91%** | | | **1.34** | **75%** | |
| **SR-21 (Blanding Blvd) Southbound Critical Segment (Collins Rd to Kingsley Ave)** | | | | | **1.16** | **87%** | | | **1.41** | **71%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Collins Rd | Kingsley Ave | 2.76 | Insufficient Data | | | | | | | | |
| Kingsley Ave | Kinghtbox Rd | 4.34 | 474.6 | 505.8 | 1.07 | 94% | 492.30 | 584.30 | 1.19 | 84% | 4pm - 8pm Weekday |
| **SR-21 (Blanding Blvd) Southbound Corridor** | | | | | **1.07** | **94%** | | | **1.19** | **84%** | |
| **SR-21 (Blanding Blvd) Southbound Critical Segment (Kingsley Ave to Kinghtbox Rd)** | | | | | **1.07** | **94%** | | | **1.19** | **84%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-21 (Blanding Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Collins Rd | Kingsley Ave | 2.76 | Insufficient Data | | | | | | | | |
| Kingsley Ave | Kinghtbox Rd | 4.34 | 489.6 | 520.6 | 1.06 | 94% | 399.80 | 473.64 | 1.18 | 84% | 8pm - 6am All Days |
| **SR-21 (Blanding Blvd) Southbound Corridor** | | | | | **1.06** | **94%** | | | **1.18** | **84%** | |
| **SR-21 (Blanding Blvd) Southbound Critical Segment (Kingsley Ave to Kinghtbox Rd)** | | | | | **1.06** | **94%** | | | **1.18** | **84%** | |

# SR-200 RELIABILITY ANALYSIS SUMMARY

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Chester River Rd | 6.27 | Insufficient Data | | | | | | | | |
| Chester River Rd | Amelia Island Pkwy | 4.92 | 510.8 | 627.8 | 1.23 | 81% | 491.05 | 821.92 | 1.67 | 60% | 6am - 10am Weekday |
| Amelia Island Pkwy | Sadler Rd | 1.02 | 106.1 | 115.6 | 1.09 | 92% | 94.90 | 120.74 | 1.27 | 79% | 6am - 8pm Weekend |
| **SR-200 (A1A) Eastbound Corridor** | | | | | **1.21** | **83%** | | | **1.60** | **62%** | |
| **SR-200 (A1A) Eastbound Critical Segment** | **(Chester River Rd to Amelia Island Pkwy)** | | | | **1.23** | **81%** | | | **1.67** | **60%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Chester River Rd | 6.27 | Insufficient Data | | | | | | | | |
| Chester River Rd | Amelia Island Pkwy | 4.92 | Insufficient Data | | | | | | | | |
| Amelia Island Pkwy | Sadler Rd | 1.02 | Insufficient Data | | | | | | | | |
| **SR-200 (A1A) Eastbound Corridor** | | | | | | | | | | | |
| **SR-200 (A1A) Eastbound Critical Segment** | | | | | | | | | | | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| I-95 | Chester River Rd | 6.27 | Insufficient Data | | | | | | | | |
| Chester River Rd | Amelia Island Pkwy | 4.92 | Insufficient Data | | | | | | | | |
| Amelia Island Pkwy | Sadler Rd | 1.02 | Insufficient Data | | | | | | | | |
| **SR-200 (A1A) Eastbound Corridor** | | | | | | | | | | | |
| **SR-200 (A1A) Eastbound Critical Segment** | | | | | | | | | | | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Sadler Rd | Amelia Island Pkway | 1.02 | 90.3 | 95.5 | 1.06 | 95% | 94.30 | 106.51 | 1.13 | 89% | 4pm - 8pm Weekday |
| Amelia Island Pkway | Chester River Rd | 4.92 | 520.3 | 700.84 | 1.35 | 74% | 451.15 | 702.99 | 1.56 | 64% | 6am - 8pm Weekend |
| Chester River Rd | I-95 | 6.27 | Insufficient Data | | | | | | | | |
| **SR-200 (A1A) Westbound Corridor** | | | | | **1.30** | **77%** | | | **1.48** | **67%** | |
| **SR-200 (A1A) Westbound Critical Segment** | **(Amelia Island Pkway to Chester River Rd)** | | | | **1.35** | **74%** | | | **1.56** | **64%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Sadler Rd | Amelia Island Pkway | 1.02 | Insufficient Data | | | | | | | | |
| Amelia Island Pkway | Chester River Rd | 4.92 | Insufficient Data | | | | | | | | |
| Chester River Rd | I-95 | 6.27 | Insufficient Data | | | | | | | | |
| **SR-200 (A1A) Westbound Corridor** | | | | | | | | | | | |
| **SR-200 (A1A) Westbound Critical Segment** | | | | | | | | | | | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SR-200 (A1A)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Sadler Rd | Amelia Island Pkway | 1.02 | Insufficient Data | | | | | | | | |
| Amelia Island Pkway | Chester River Rd | 4.92 | Insufficient Data | | | | | | | | |
| Chester River Rd | I-95 | 6.27 | Insufficient Data | | | | | | | | |
| **SR-200 (A1A) Westbound Corridor** | | | | | | | | | | | |
| **SR-200 (A1A) Westbound Critical Segment** | | | | | | | | | | | |

# US-1 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability LOTTR** | | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Greenland Rd | SR-115 (Southside Blvd) | 1.24 | 111.7 | 121.5 | 1.09 | 92% | 108.35 | 150.98 | 1.39 | 72% | 4pm - 8pm Weekday |
| SR-115 (Southside Blvd) | I-95 | 0.43 | 48.35 | 59.1 | 1.22 | 82% | 59.90 | 108.67 | 1.81 | 55% | 4pm - 8pm Weekday |
| I-95 | Shad Rd | 1.16 | 113.7 | 122.68 | 1.08 | 93% | 109.60 | 162.70 | 1.48 | 67% | 4pm - 8pm Weekday |
| Shad Rd | Sunbeam Rd | 0.82 | 75.95 | 82.2 | 1.08 | 92% | 76.35 | 125.89 | 1.65 | 61% | 6am - 10am Weekday |
| Sunbeam Rd | SR-152 (Baymeadows Rd) | 1.13 | 127.15 | 140.6 | 1.11 | 90% | 130.70 | 289.46 | 2.21 | 45% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | JT Butler Blvd | 1.83 | 197.4 | 228.46 | 1.16 | 86% | 193.90 | 316.37 | 1.63 | 61% | 6am - 10am Weekday |
| JT Butler Blvd | University Blvd | 1.83 | 219.45 | 252.6 | 1.15 | 87% | 248.10 | 630.10 | 2.54 | 39% | 4pm - 8pm Weekday |
| University Blvd | Emerson St | 1.74 | 188.8 | 201.9 | 1.07 | 94% | 191.05 | 222.56 | 1.16 | 86% | 4pm - 8pm Weekday |
| **US-1 (Philips Hwy) Northbound Corridor** | | | | | **1.11** | **90%** | | | **1.74** | **57%** | |
| **US-1 (Philips Hwy) Northbound Critical Segment** | **(SR-115 (Southside Blvd) to I-95)** | | | | **1.22** | **82%** | | | **2.54** | **39%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Greenland Rd | SR-115 (Southside Blvd) | 1.24 | 108.5 | 115.72 | 1.07 | 94% | 111.20 | 135.46 | 1.22 | 82% | 6am - 10am Weekday |
| SR-115 (Southside Blvd) | I-95 | 0.43 | 52.65 | 60.2 | 1.14 | 87% | 38.40 | 57.09 | 1.49 | 67% | 8pm - 6am All Days |
| I-95 | Shad Rd | 1.16 | 114.8 | 123.8 | 1.08 | 93% | 107.80 | 133.21 | 1.24 | 81% | 4pm - 8pm Weekday |
| Shad Rd | Sunbeam Rd | 0.82 | 75.5 | 82.5 | 1.09 | 92% | 78.95 | 126.61 | 1.60 | 62% | 6am - 10am Weekday |
| Sunbeam Rd | SR-152 (Baymeadows Rd) | 1.13 | 128.3 | 141.7 | 1.10 | 91% | 133.00 | 266.06 | 2.00 | 50% | 6am - 10am Weekday |
| SR-152 (Baymeadows Rd) | JT Butler Blvd | 1.83 | 197 | 223.68 | 1.14 | 88% | 193.15 | 313.48 | 1.62 | 62% | 6am - 10am Weekday |
| JT Butler Blvd | University Blvd | 1.83 | 218.4 | 249.44 | 1.14 | 88% | 245.50 | 544.48 | 2.22 | 45% | 4pm - 8pm Weekday |
| University Blvd | Emerson St | 1.74 | Insufficient Data | | | | | | | | |
| **US-1 (Philips Hwy) Northbound Corridor** | | | | | **1.11** | **90%** | | | **1.68** | **59%** | |
| **US-1 (Philips Hwy) Northbound Critical Segment** | **(SR-115 (Southside Blvd) to I-95)** | | | | **1.14** | **87%** | | | **2.22** | **45%** | |

| Year 2016 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable | | |
| Greenland Rd | SR-115 (Southside Blvd) | 1.24 | 124.1 | 132.28 | 1.07 | 94% | 111.70 | 130.86 | 1.17 | 85% | 6am - 10am Weekday | | |
| SR-115 (Southside Blvd) | I-95 | 0.43 | 45 | 50.8 | 1.13 | 89% | 47.60 | 69.90 | 1.47 | 68% | 6am - 8pm Weekend | | |
| I-95 | Shad Rd | 1.16 | Insufficient Data | | | | | | | | | | |
| Shad Rd | Sunbeam Rd | 0.82 | Insufficient Data | | | | | | | | | | |
| Sunbeam Rd | SR-152 (Baymeadows Rd) | 1.13 | Insufficient Data | | | | | | | | | | |
| SR-152 (Baymeadows Rd) | JT Butler Blvd | 1.83 | 205.1 | 248.74 | 1.21 | 82% | 196.35 | 349.69 | 1.78 | 56% | 6am - 10am Weekday | | |
| JT Butler Blvd | University Blvd | 1.83 | Insufficient Data | | | | | | | | | | |
| University Blvd | Emerson St | 1.74 | Insufficient Data | | | | | | | | | | |
| **US-1 (Philips Hwy) Northbound Corridor** | | | | | **1.15** | **87%** | | | **1.53** | **66%** | | | |
| **US-1 (Philips Hwy) Northbound Critical Segment** | **(SR-152 (Baymeadows Rd) to JT Butler Blvd)** | | | | **1.21** | **82%** | | | **1.78** | **56%** | | | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Emerson St | University Blvd | 1.74 | 224.8 | 246.9 | 1.10 | 91% | 239.70 | 519.84 | 2.17 | 46% | 4pm - 8pm Weekday |
| University Blvd | JT Butler Blvd | 1.83 | 169.2 | 179.4 | 1.06 | 94% | 170.90 | 206.30 | 1.21 | 83% | 4pm - 8pm Weekday |
| JT Butler Blvd | SR-152 (Baymeadows Rd) | 1.83 | 201.9 | 229.7 | 1.14 | 88% | 249.45 | 592.96 | 2.38 | 42% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Sunbeam Rd | 1.13 | 102.8 | 110.9 | 1.08 | 93% | 110.65 | 141.10 | 1.28 | 78% | 4pm - 8pm Weekday |
| Sunbeam Rd | Shad Rd | 0.82 | 84.3 | 93.5 | 1.11 | 90% | 83.15 | 181.08 | 2.18 | 46% | 4pm - 8pm Weekday |
| Shad Rd | I-95 | 1.16 | 105 | 111.2 | 1.06 | 94% | 99.70 | 112.53 | 1.13 | 89% | 6am - 8pm Weekend |
| I-95 | SR-115 (Southside Blvd) | 0.43 | 70.5 | 77.7 | 1.10 | 91% | 56.00 | 72.14 | 1.29 | 78% | 8pm - 6am All Days |
| SR-115 (Southside Blvd) | Greenland Rd | 1.24 | 110.9 | 124.1 | 1.12 | 89% | 119.10 | 140.40 | 1.18 | 85% | 4pm - 8pm Weekday |
| **US-1 (Philips Hwy) Southbound Corridor** | | | | | **1.10** | **91%** | | | **1.66** | **60%** | |
| **US-1 (Philips Hwy) Southbound Critical Segment** | **(JT Butler Blvd to SR-152 (Baymeadows Rd))** | | | | **1.14** | **88%** | | | **2.38** | **42%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Emerson St | University Blvd | 1.74 | Insufficient Data | | | | | | | | |
| University Blvd | JT Butler Blvd | 1.83 | 167.2 | 175.9 | 1.05 | 95% | 167.75 | 195.65 | 1.17 | 86% | 4pm - 8pm Weekday |
| JT Butler Blvd | SR-152 (Baymeadows Rd) | 1.83 | 202.8 | 227.1 | 1.12 | 89% | 239.00 | 500.13 | 2.09 | 48% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Sunbeam Rd | 1.13 | 102.95 | 109.9 | 1.07 | 94% | 107.40 | 147.49 | 1.37 | 73% | 4pm - 8pm Weekday |
| Sunbeam Rd | Shad Rd | 0.82 | 85 | 94.56 | 1.11 | 90% | 81.80 | 175.67 | 2.15 | 47% | 4pm - 8pm Weekday |
| Shad Rd | I-95 | 1.16 | 104.6 | 110.9 | 1.06 | 94% | 98.10 | 112.14 | 1.14 | 87% | 4pm - 8pm Weekday |
| I-95 | SR-115 (Southside Blvd) | 0.43 | 65.75 | 72.8 | 1.11 | 90% | 49.30 | 65.80 | 1.33 | 75% | 8pm - 6am All Days |
| SR-115 (Southside Blvd) | Greenland Rd | 1.24 | 114.4 | 125.3 | 1.10 | 91% | 121.65 | 144.40 | 1.19 | 84% | 6am - 10am Weekday |
| **US-1 (Philips Hwy) Southbound Corridor** | | | | | **1.08** | **92%** | | | **1.50** | **67%** | |
| **US-1 (Philips Hwy) Southbound Critical Segment** | **(JT Butler Blvd to SR-152 (Baymeadows Rd))** | | | | **1.12** | **89%** | | | **2.15** | **47%** | |

| Year 2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-1 (Philips Hwy)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Emerson St | University Blvd | 1.74 | Insufficient Data | | | | | | | | |
| University Blvd | JT Butler Blvd | 1.83 | Insufficient Data | | | | | | | | |
| JT Butler Blvd | SR-152 (Baymeadows Rd) | 1.83 | 215.5 | 242.14 | 1.12 | 89% | 254.60 | 399.87 | 1.57 | 64% | 4pm - 8pm Weekday |
| SR-152 (Baymeadows Rd) | Sunbeam Rd | 1.13 | Insufficient Data | | | | | | | | |
| Sunbeam Rd | Shad Rd | 0.82 | Insufficient Data | | | | | | | | |
| Shad Rd | I-95 | 1.16 | Insufficient Data | | | | | | | | |
| I-95 | SR-115 (Southside Blvd) | 0.43 | 51.5 | 59.12 | 1.15 | 87% | 44.10 | 57.32 | 1.30 | 77% | 6am - 10am Weekday |
| SR-115 (Southside Blvd) | Greenland Rd | 1.24 | 126.65 | 135.8 | 1.07 | 93% | 131.60 | 155.92 | 1.18 | 84% | 6am - 10am Weekday |
| **US-1 (Philips Hwy) Southbound Corridor** | | | | | **1.11** | **90%** | | | **1.40** | **71%** | |
| **US-1 (Philips Hwy) Southbound Critical Segment** | **(I-95 to SR-115 (Southside Blvd))** | | | | **1.15** | **87%** | | | **1.57** | **64%** | |

# US-17 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| CR-220 | SR-224 (Kingsley Ave) | 4.40 | 383.8 | 399.1 | 1.04 | 96% | 356.70 | 398.15 | 1.12 | 90% | 6am - 8pm Weekend |
| SR-224 (Kingsley Ave) | Wells Rd | 1.34 | 147.3 | 170.4 | 1.16 | 86% | 141.20 | 207.86 | 1.47 | 68% | 6am - 10am Weekday |
| Wells Rd | Collins Rd | 0.82 | 78.2 | 87.3 | 1.12 | 90% | 77.15 | 95.33 | 1.24 | 81% | 6am - 10am Weekday |
| Collins Rd | SR-134 (Timiquana Rd) | 3.52 | 326.4 | 356.8 | 1.09 | 91% | 318.10 | 368.55 | 1.16 | 86% | 10am - 4pm Weekday |
| SR-134 (Timiquana Rd) | McDuff Ave | 5.30 | 470.7 | 531.36 | 1.13 | 89% | 534.80 | 794.20 | 1.49 | 67% | 6am - 10am Weekday |
| **US-17 Northbound Corridor** | | | | | **1.10** | **91%** | | | **1.29** | **77%** | |
| **US-17 Northbound Critical Segment** | **(SR-224 (Kingsley Ave) to Wells Rd)** | | | | **1.16** | **86%** | | | **1.49** | **67%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| CR-220 | SR-224 (Kingsley Ave) | 4.40 | 387.85 | 400.48 | 1.03 | 97% | 360.10 | 402.00 | 1.12 | 90% | 6am - 8pm Weekend |
| SR-224 (Kingsley Ave) | Wells Rd | 1.34 | 140.9 | 163.92 | 1.16 | 86% | 135.10 | 233.24 | 1.73 | 58% | 6am - 10am Weekday |
| Wells Rd | Collins Rd | 0.82 | Insufficient Data | | | | | | | | |
| Collins Rd | SR-134 (Timiquana Rd) | 3.52 | Insufficient Data | | | | | | | | |
| SR-134 (Timiquana Rd) | McDuff Ave | 5.30 | 543.75 | 593.6 | 1.09 | 92% | 508.10 | 656.21 | 1.29 | 77% | 6am - 10am Weekday |
| **US-17 Northbound Corridor** | | | | | **1.08** | **93%** | | | **1.27** | **78%** | |
| **US-17 Northbound Critical Segment** | **(SR-224 (Kingsley Ave) to Wells Rd)** | | | | **1.16** | **86%** | | | **1.73** | **58%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Northbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| CR-220 | SR-224 (Kingsley Ave) | 4.40 | 385.7 | 403.1 | 1.05 | 96% | 358.30 | 420.61 | 1.17 | 85% | 6am - 10am Weekday |
| SR-224 (Kingsley Ave) | Wells Rd | 1.34 | 156 | 177.7 | 1.14 | 88% | 142.00 | 238.10 | 1.68 | 60% | 6am - 10am Weekday |
| Wells Rd | Collins Rd | 0.82 | Insufficient Data | | | | | | | | |
| Collins Rd | SR-134 (Timiquana Rd) | 3.52 | Insufficient Data | | | | | | | | |
| SR-134 (Timiquana Rd) | McDuff Ave | 5.30 | Insufficient Data | | | | | | | | |
| **US-17 Northbound Corridor** | | | | | **1.07** | **94%** | | | **1.29** | **77%** | |
| **US-17 Northbound Critical Segment** | **(SR-224 (Kingsley Ave) to Wells Rd)** | | | | **1.14** | **88%** | | | **1.68** | **60%** | |

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| McDuff Ave | SR-134 (Timiquana Rd) | 5.30 | 473.75 | 497 | 1.05 | 95% | 486.90 | 544.12 | 1.12 | 89% | 4pm - 8pm Weekday |
| SR-134 (Timiquana Rd) | Collins Rd | 3.52 | 276.7 | 338.2 | 1.22 | 82% | 380.40 | 674.00 | 1.77 | 56% | 4pm - 8pm Weekday |
| Collins Rd | Wells Rd | 0.82 | 108 | 148.62 | 1.38 | 73% | 161.20 | 301.01 | 1.87 | 54% | 4pm - 8pm Weekday |
| Wells Rd | SR-224 (Kingsley Ave) | 1.34 | 144.7 | 179.82 | 1.24 | 80% | 166.20 | 302.32 | 1.82 | 55% | 4pm - 8pm Weekday |
| SR-224 (Kingsley Ave) | CR-220 | 4.40 | 384 | 408.36 | 1.06 | 94% | 404.90 | 484.59 | 1.20 | 84% | 4pm - 8pm Weekday |
| **US-17 Southbound Corridor** | | | | | **1.13** | **89%** | | | **1.39** | **72%** | |
| **US-17 Southbound Critical Segment** | **(Collins Rd to Wells Rd)** | | | | **1.38** | **73%** | | | **1.87** | **54%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| McDuff Ave | SR-134 (Timiquana Rd) | 5.30 | 466 | 476.2 | 1.02 | 98% | 424.30 | 503.55 | 1.19 | 84% | 6am - 8pm Weekend |
| SR-134 (Timiquana Rd) | Collins Rd | 3.52 | Insufficient Data | | | | | | | | |
| Collins Rd | Wells Rd | 0.82 | Insufficient Data | | | | | | | | |
| Wells Rd | SR-224 (Kingsley Ave) | 1.34 | 147.1 | 198.32 | 1.35 | 74% | 143.30 | 265.30 | 1.85 | 54% | 10am - 4pm Weekday |
| SR-224 (Kingsley Ave) | CR-220 | 4.40 | 384 | 405 | 1.05 | 95% | 323.70 | 362.30 | 1.12 | 89% | 8pm - 6am All Days |
| **US-17 Southbound Corridor** | | | | | **1.07** | **93%** | | | **1.24** | **81%** | |
| **US-17 Southbound Critical Segment** | **(Wells Rd to SR-224 (Kingsley Ave))** | | | | **1.35** | **74%** | | | **1.85** | **54%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-17** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Southbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| McDuff Ave | SR-134 (Timiquana Rd) | 5.30 | Insufficient Data | | | | | | | | |
| SR-134 (Timiquana Rd) | Collins Rd | 3.52 | Insufficient Data | | | | | | | | |
| Collins Rd | Wells Rd | 0.82 | Insufficient Data | | | | | | | | |
| Wells Rd | SR-224 (Kingsley Ave) | 1.34 | 151.8 | 171.9 | 1.13 | 88% | 133.90 | 195.85 | 1.46 | 68% | 8pm - 6am All Days |
| SR-224 (Kingsley Ave) | CR-220 | 4.40 | 391.4 | 406.64 | 1.04 | 96% | 403.20 | 460.10 | 1.14 | 88% | 4pm - 8pm Weekday |
| **US-17 Southbound Corridor** | | | | | **1.06** | **94%** | | | **1.22** | **82%** | |
| **US-17 Southbound Critical Segment** | **(Wells Rd to SR-224 (Kingsley Ave))** | | | | **1.13** | **88%** | | | **1.46** | **68%** | |

# US-90 Reliability Analysis Summary

| Year 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | **Truck Travel Time Reliability TTTR** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Mateo Ave | SR-109 (University Blvd) | 2.11 | 252.35 | 283 | 1.12 | 89% | 289.70 | 533.66 | 1.84 | 54% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | I-295 | 4.83 | 593.95 | 678.9 | 1.14 | 87% | 534.65 | 949.38 | 1.78 | 56% | 8pm - 6am All Days |
| I-295 | Hodges Blvd | 3.74 | 396.8 | 440.84 | 1.11 | 90% | 432.90 | 749.09 | 1.73 | 58% | 4pm - 8pm Weekday |
| Hodges Blvd | Penman Rd | 3.22 | 356.15 | 374.82 | 1.05 | 95% | 334.40 | 393.80 | 1.18 | 85% | 6am - 8pm Weekend |
| **US-90 (Beach Blvd) Eastbound Corridor** | | | | | **1.11** | **90%** | | | **1.64** | **61%** | |
| **US-90 (Beach Blvd) Eastbound Critical Segment** | **(SR-109 (University Blvd) to I-295)** | | | | **1.14** | **87%** | | | **1.84** | **54%** | |

| Year 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Mateo Ave | SR-109 (University Blvd) | 2.11 | 272.1 | 291.88 | 1.07 | 93% | 295.00 | 402.73 | 1.37 | 73% | 4pm - 8pm Weekday |
| SR-109 (University Blvd) | I-295 | 4.83 | 593.65 | 659.9 | 1.11 | 90% | 499.70 | 778.15 | 1.56 | 64% | 8pm - 6am All Days |
| I-295 | Hodges Blvd | 3.74 | 401 | 440.02 | 1.10 | 91% | 324.20 | 389.18 | 1.20 | 83% | 8pm - 6am All Days |
| Hodges Blvd | Penman Rd | 3.22 | 360.5 | 382.24 | 1.06 | 94% | 332.25 | 404.58 | 1.22 | 82% | 6am - 8pm Weekend |
| **US-90 (Beach Blvd) Eastbound Corridor** | | | | | **1.09** | **92%** | | | **1.35** | **74%** | |
| **US-90 (Beach Blvd) Eastbound Critical Segment** | **(SR-109 (University Blvd) to I-295)** | | | | **1.11** | **90%** | | | **1.56** | **64%** | |

| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Eastbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| San Mateo Ave | SR-109 (University Blvd) | 2.11 | 263.8 | 276.62 | 1.05 | 95% | 229.60 | 272.72 | 1.19 | 84% | 6am - 10am Weekday |
| SR-109 (University Blvd) | I-295 | 4.83 | 579.5 | 668.42 | 1.15 | 87% | 499.10 | 705.84 | 1.41 | 71% | 8pm - 6am All Days |
| I-295 | Hodges Blvd | 3.74 | Insufficient Data | | | | | | | | |
| Hodges Blvd | Penman Rd | 3.22 | Insufficient Data | | | | | | | | |
| **US-90 (Beach Blvd) Eastbound Corridor** | | | | | **1.12** | **89%** | | | **1.35** | **74%** | |
| **US-90 (Beach Blvd) Eastbound Critical Segment** | **(SR-109 (University Blvd) to I-295)** | | | | **1.15** | **87%** | | | **1.41** | **71%** | |

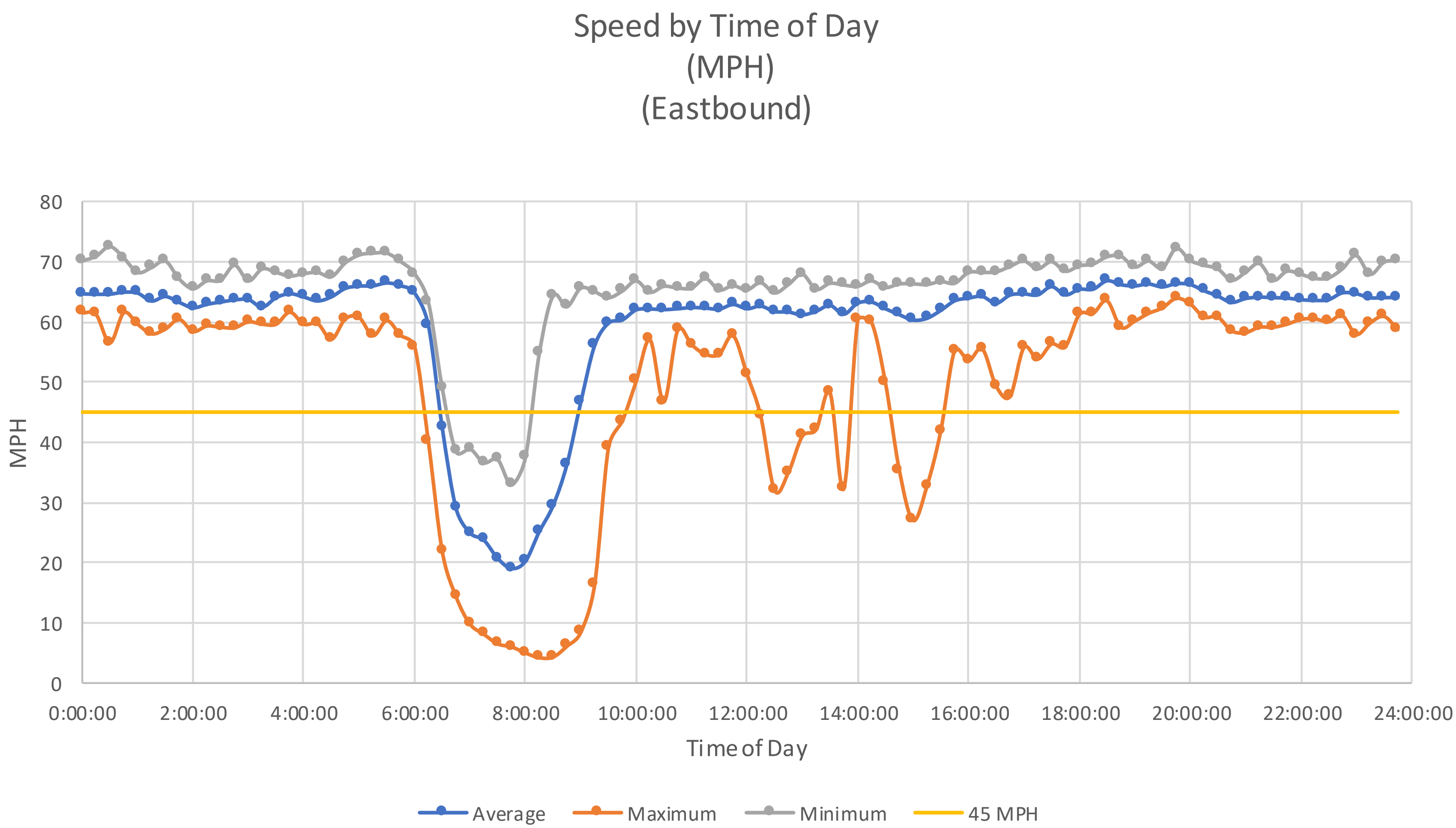
| Year 2018 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability LOTTR** | | | | | **Truck Travel Time Reliability TTTR** | | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable | |
| Penman Rd | Hodges Blvd | 3.22 | 352.35 | 406.64 | 1.15 | 87% | | 417.80 | 513.75 | 1.23 | 81% | 4pm - 8pm Weekday | |
| Hodges Blvd | I-295 | 3.74 | 400.85 | 447.46 | 1.12 | 90% | | 377.30 | 466.36 | 1.24 | 81% | 6am - 10am Weekday | |
| I-295 | SR-109 (University Blvd) | 4.83 | 554.6 | 659.24 | 1.19 | 84% | | 528.20 | 729.85 | 1.38 | 72% | 8pm - 6am All Days | |
| SR-109 (University Blvd) | San Mateo Ave | 2.11 | 207.2 | 216.68 | 1.05 | 96% | | 206.20 | 226.05 | 1.10 | 91% | 10am - 4pm Weekday | |
| **US-90 (Beach Blvd) Westbound Corridor** | | | | | **1.14** | **88%** | | | | **1.26** | **79%** | | |
| **US-90 (Beach Blvd) Westbound Critical Segment** | **(I-295 to SR-109 (University Blvd))** | | | | **1.19** | **84%** | | | | **1.38** | **72%** | | |

| Year 2017 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable | |
| Penman Rd | Hodges Blvd | 3.22 | 359.7 | 413.02 | 1.15 | 87% | 286.60 | 358.44 | 1.25 | 80% | 6am - 10am Weekday | |
| Hodges Blvd | I-295 | 3.74 | 420.1 | 457.2 | 1.09 | 92% | 323.00 | 430.51 | 1.33 | 75% | 6am - 8pm Weekend | |
| I-295 | SR-109 (University Blvd) | 4.83 | 580.2 | 669.64 | 1.15 | 87% | 513.40 | 742.64 | 1.45 | 69% | 8pm - 6am All Days | |
| SR-109 (University Blvd) | San Mateo Ave | 2.11 | 204.3 | 212.7 | 1.04 | 96% | 196.20 | 219.45 | 1.12 | 89% | 8pm - 6am All Days | |
| **US-90 (Beach Blvd) Westbound Corridor** | | | | | **1.12** | **89%** | | | **1.32** | **76%** | | |
| **US-90 (Beach Blvd) Westbound Critical Segment** | **(I-295 to SR-109 (University Blvd))** | | | | **1.15** | **87%** | | | **1.45** | **69%** | | |

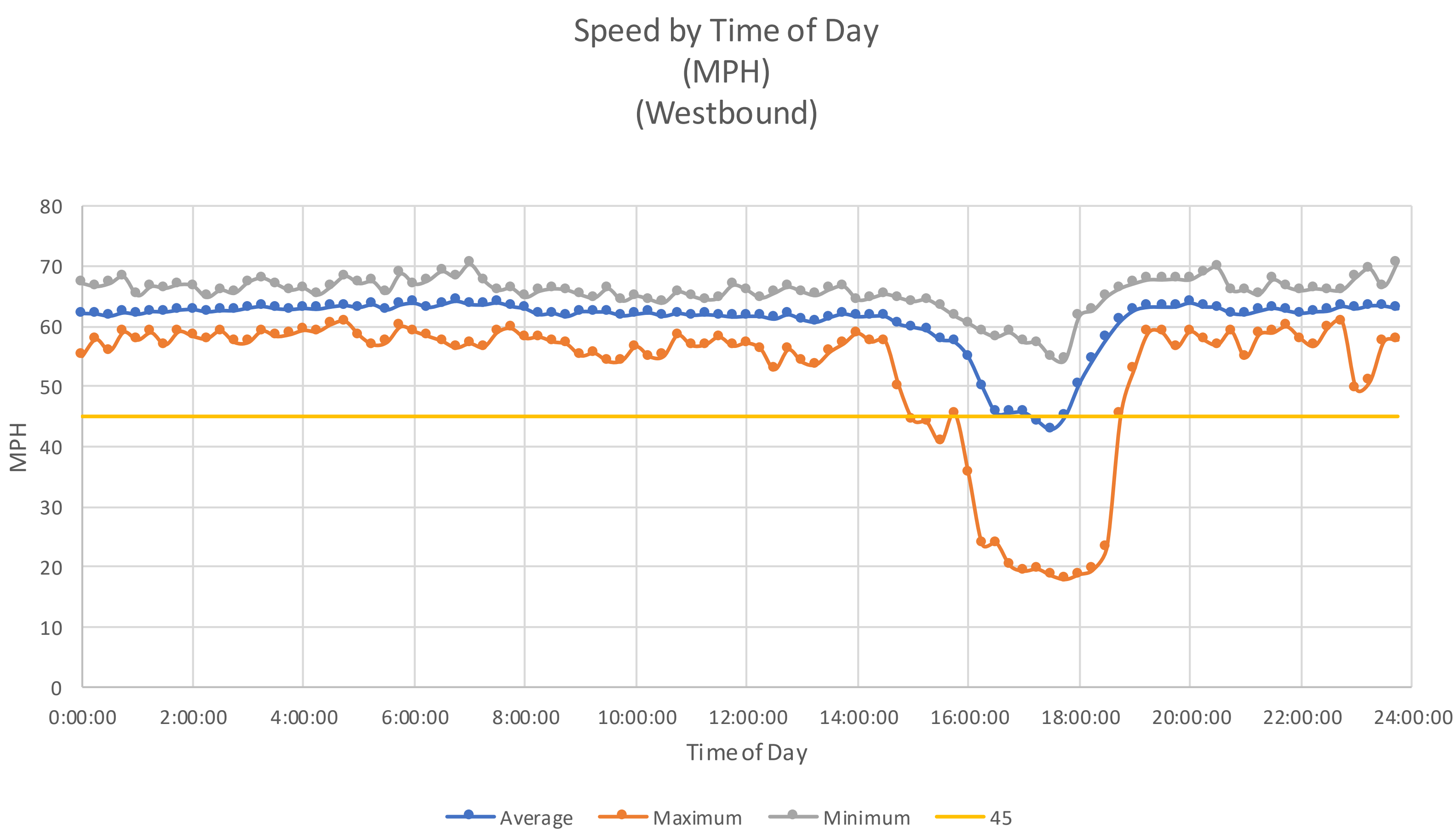
| Year 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **US-90 (Beach Blvd)** | | | **Level of Travel Time Reliability** | | | | **Truck Travel Time Reliability** | | | | |
| **Westbound** | | | 6am - 8pm Weekdays | | | | Time Period Most Unreliable | | | | |
| From | To | Length (miles) | Median Travel Time | 80th Percentile Travel Time | Level of Travel Time Reliability Ratio | Level of Travel Time Reliability % | Median Travel Time | 95th Percentile Travel Time | Truck Travel Time Reliability Ratio | Truck Travel Time Reliability % | Time Period Most Unreliable |
| Penman Rd | Hodges Blvd | 3.22 | Insufficient Data | | | | | | | | |
| Hodges Blvd | I-295 | 3.74 | Insufficient Data | | | | | | | | |
| I-295 | SR-109 (University Blvd) | 4.83 | 591.65 | 625.22 | 1.06 | 95% | 508.30 | 724.74 | 1.43 | 70% | 8pm - 6am All Days |
| SR-109 (University Blvd) | San Mateo Ave | 2.11 | 210.7 | 222.18 | 1.05 | 95% | 195.10 | 225.40 | 1.16 | 87% | 6am - 8pm Weekend |
| **US-90 (Beach Blvd) Westbound Corridor** | | | | | **1.06** | **95%** | | | **1.34** | **74%** | |
| **US-90 (Beach Blvd) Westbound Critical Segment** | **(I-295 to SR-109 (University Blvd))** | | | | **1.06** | **95%** | | | **1.43** | **70%** | |

# Speed Data

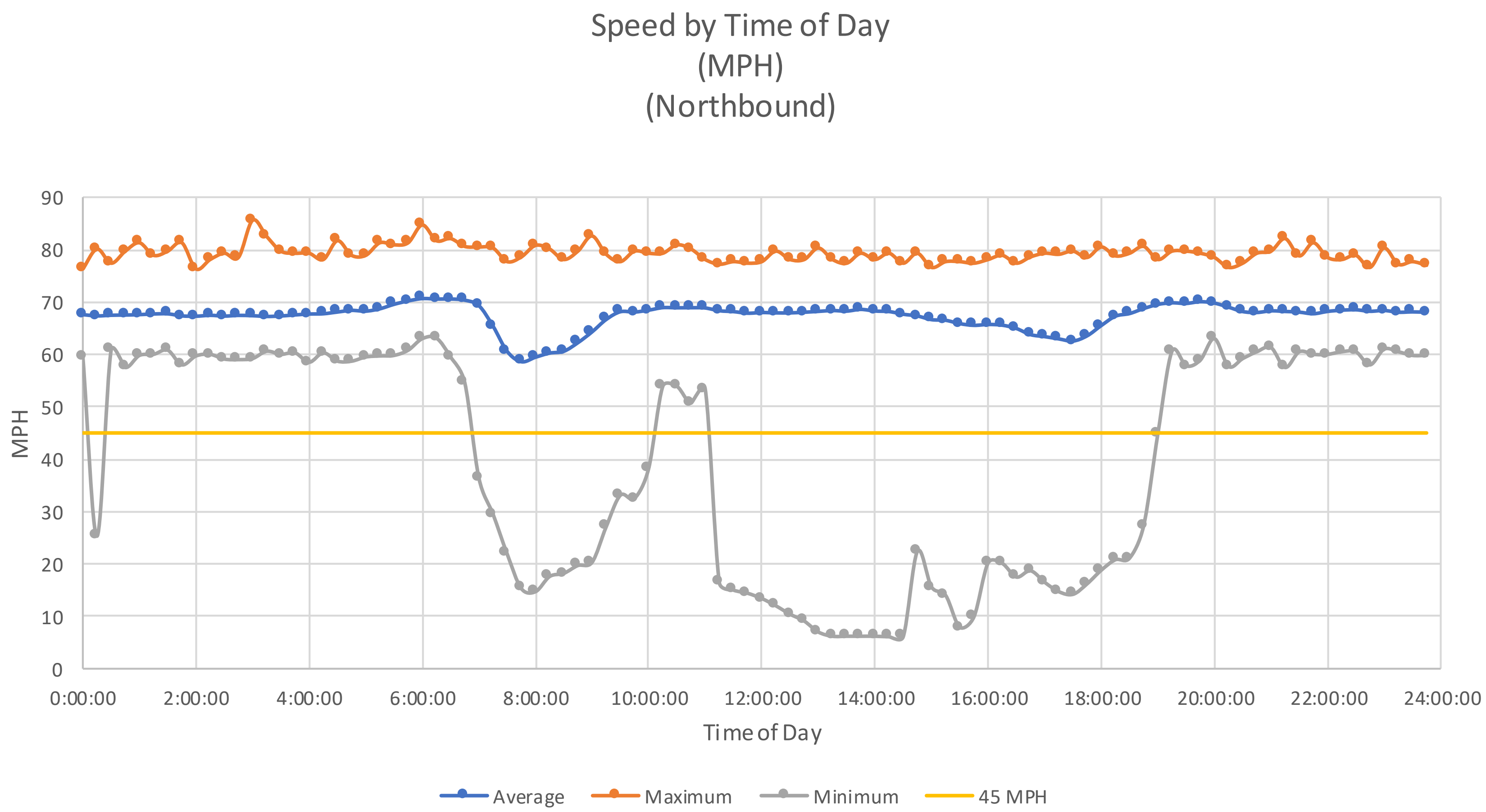
# I-10 Speed Graph

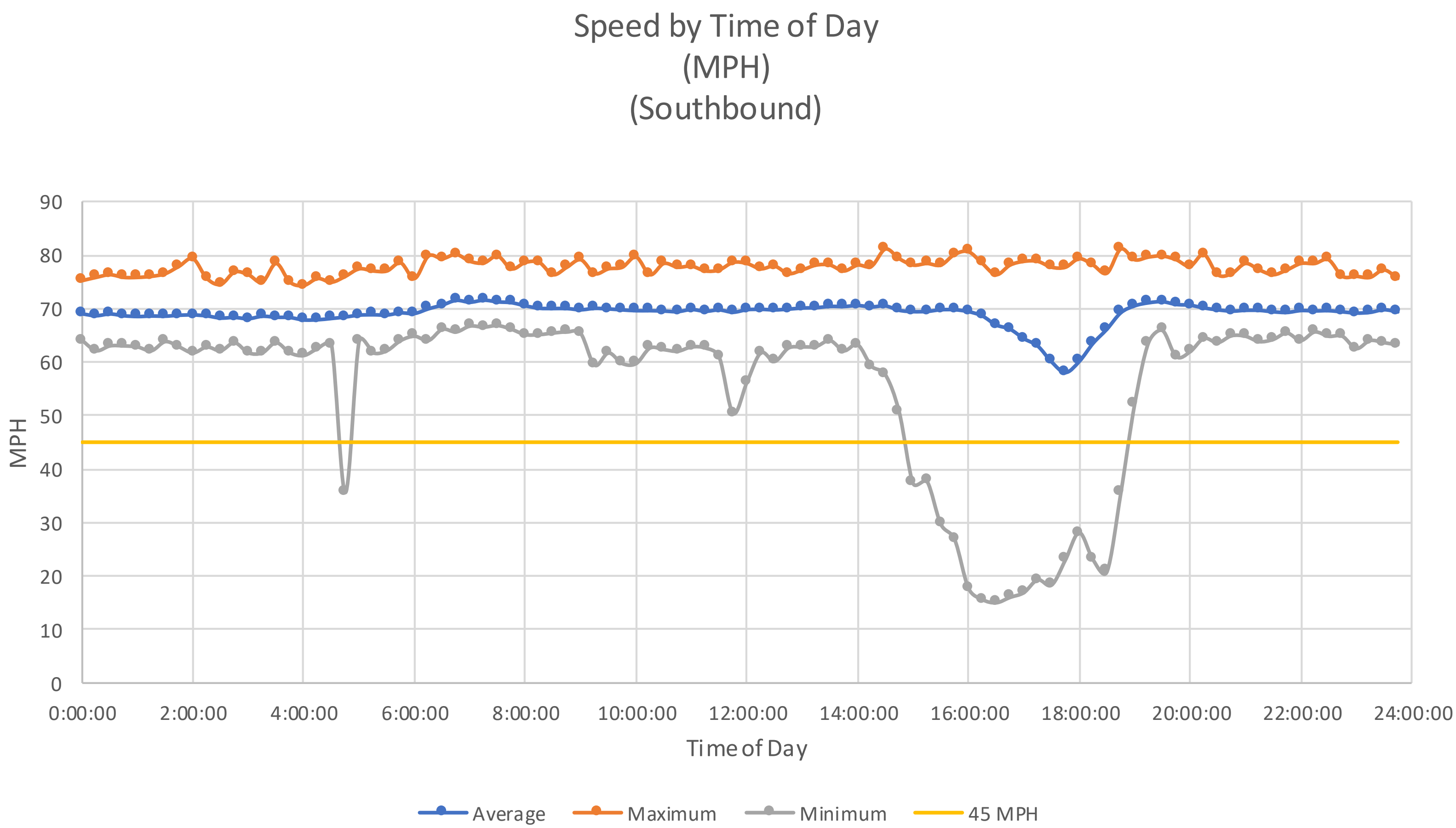


Speed by Time of Day
(MPH)
(Eastbound)
80
70
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

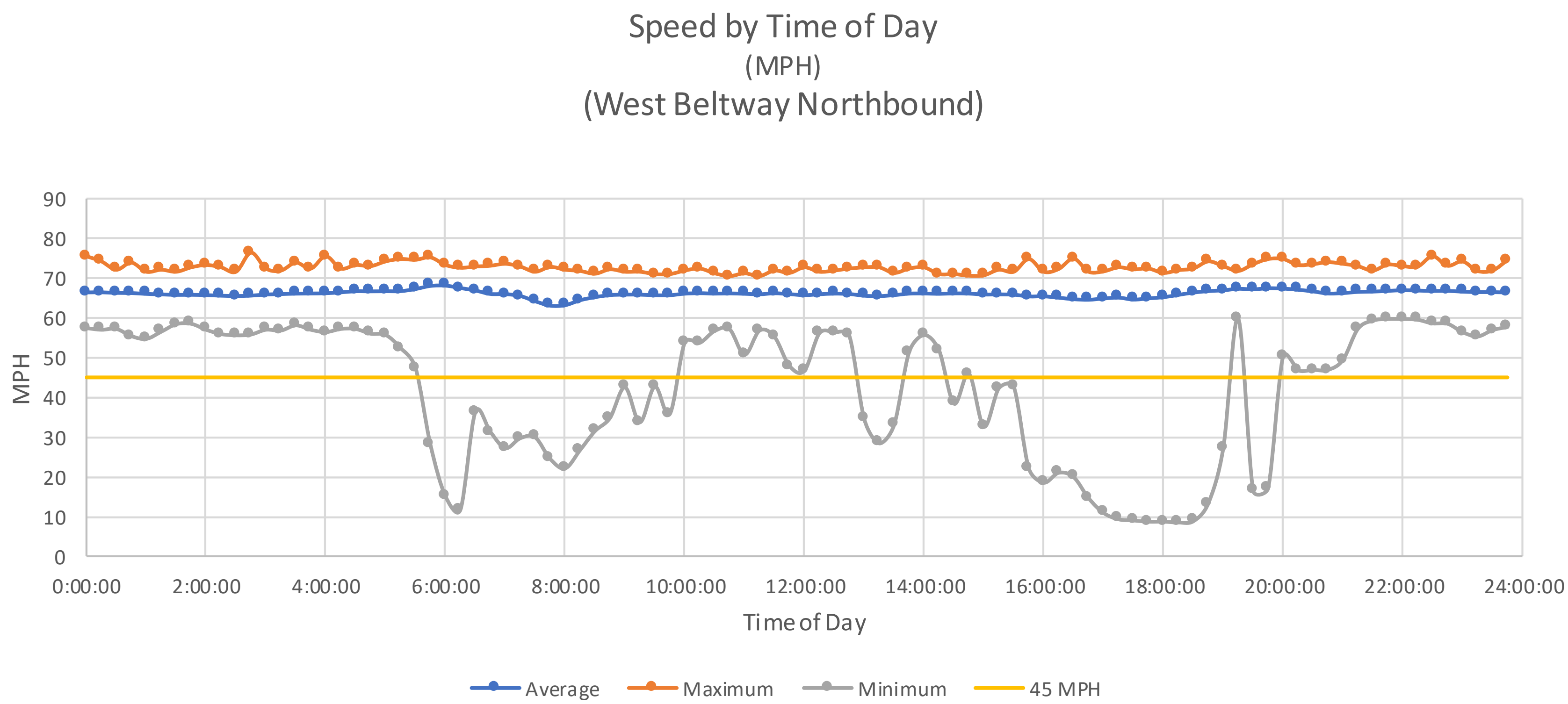

Speed by Time of Day
(MPH)
(Westbound)
MPH
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45

# I-95 Speed Graph

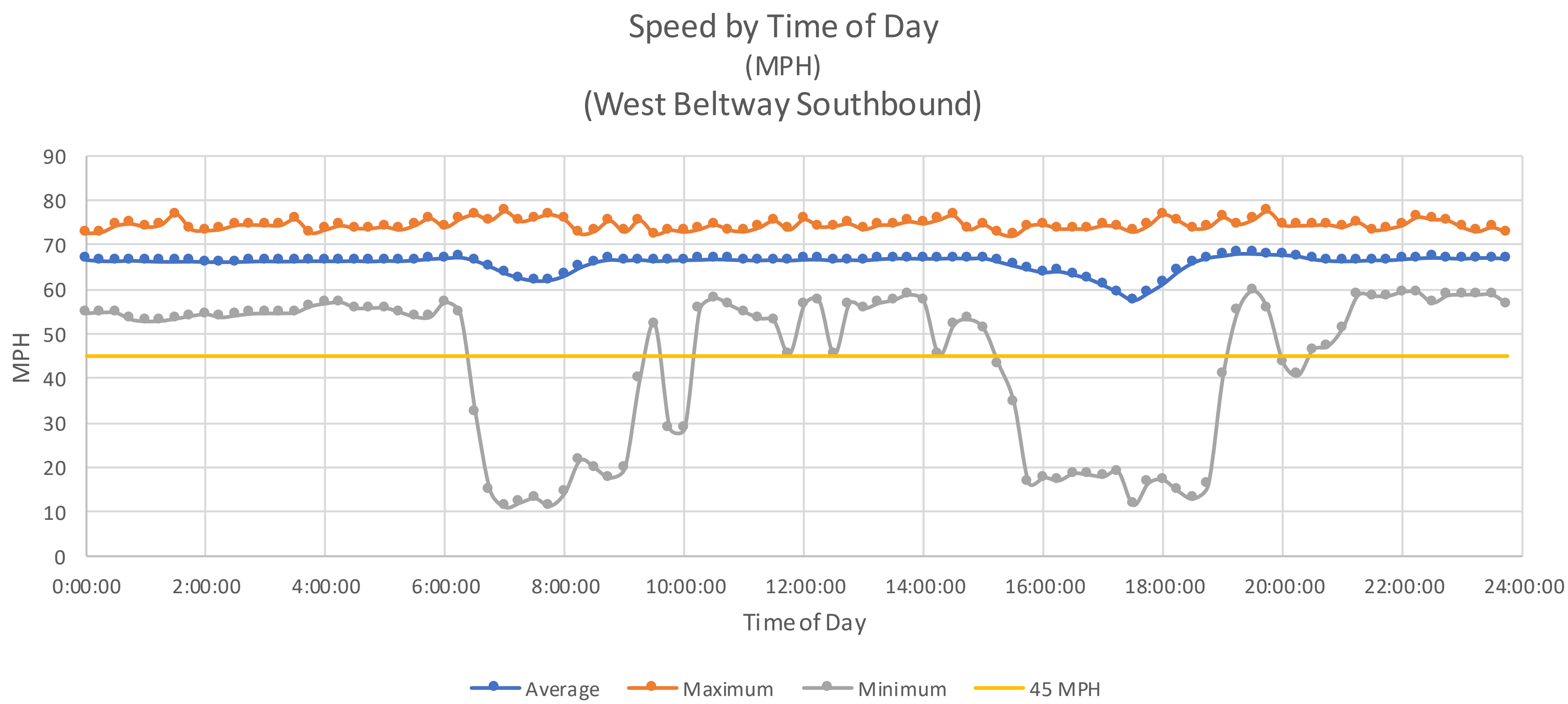

Speed by Time of Day
(MPH)
(Northbound)
MPH
90
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

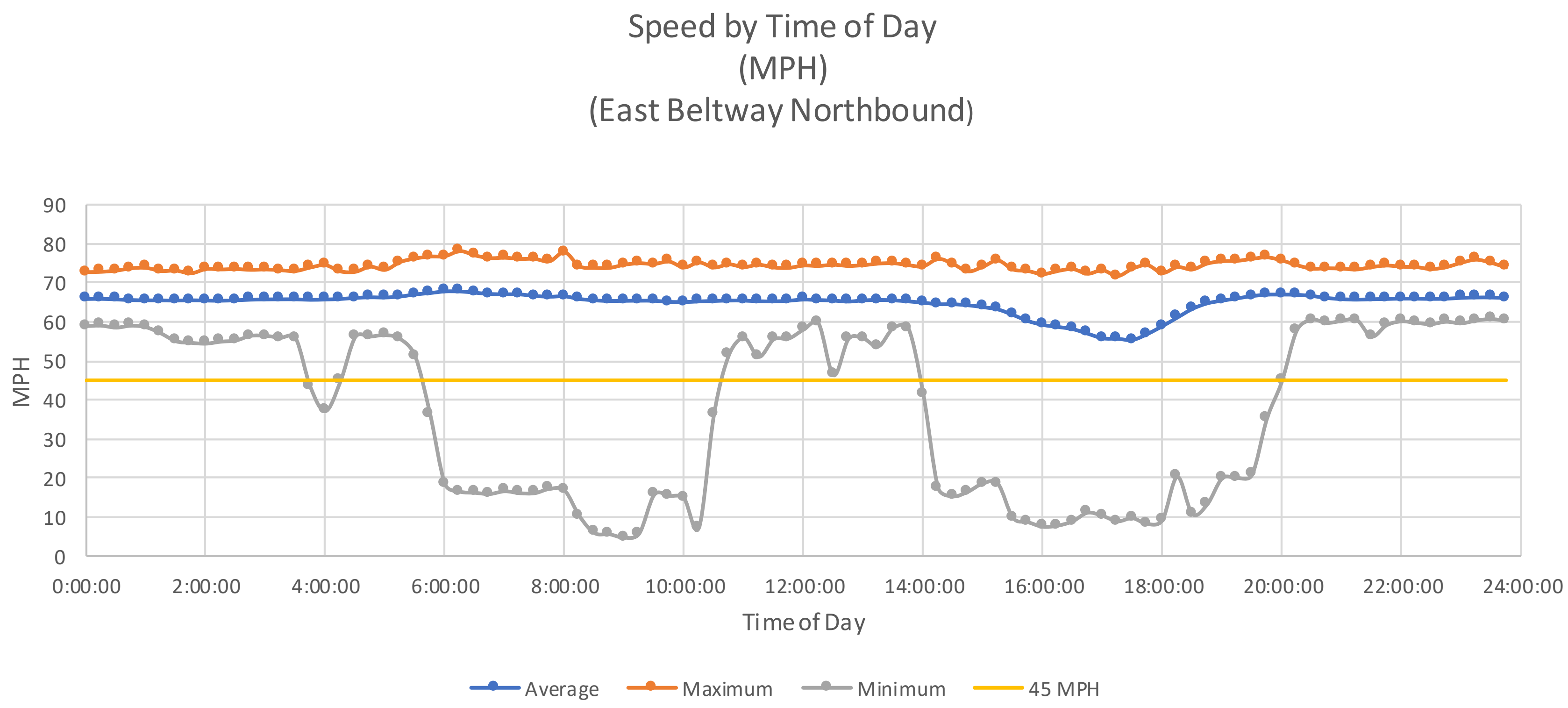

Speed by Time of Day
(MPH)
(Southbound)
MPH
90
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

# I-295 Speed Graph

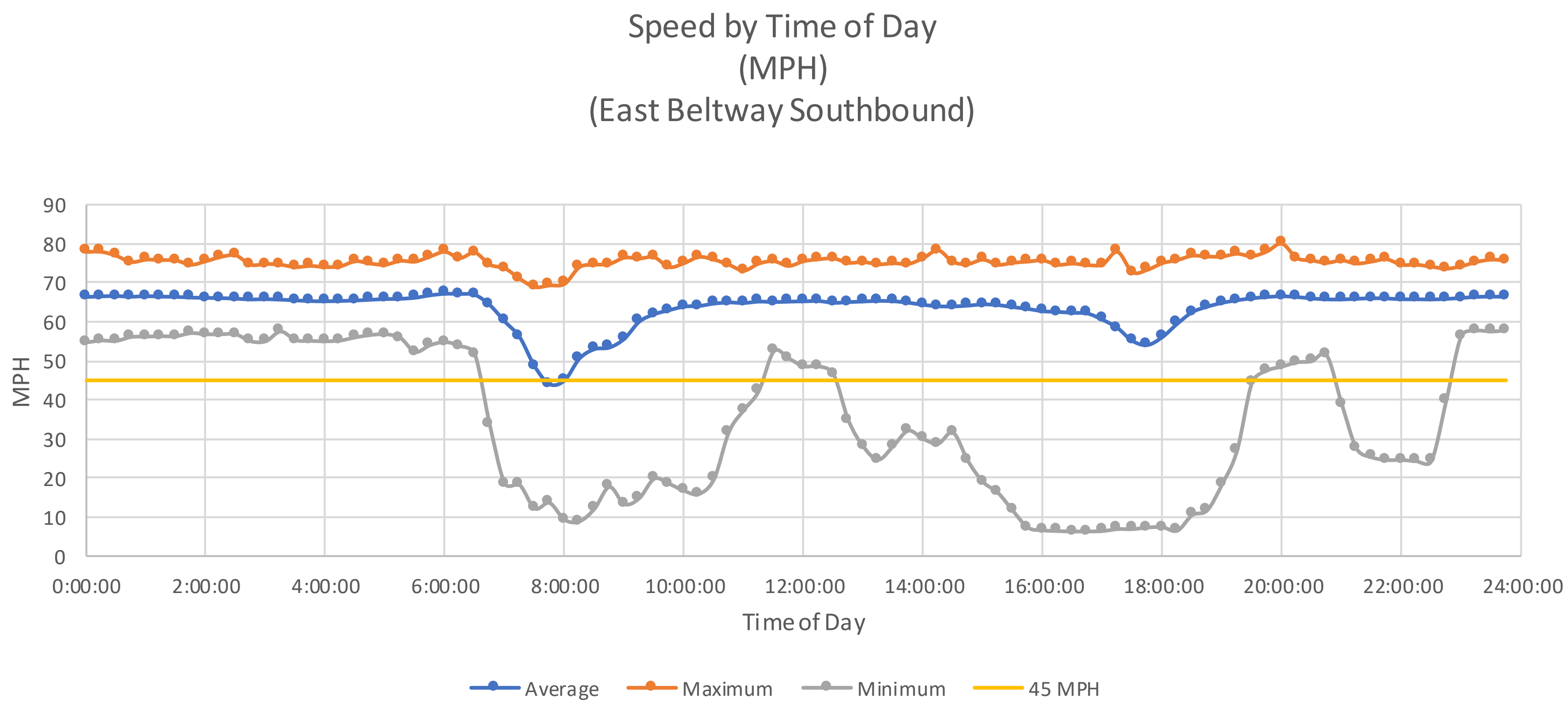


Speed by Time of Day
(MPH)
(West Beltway Northbound)
90
80
70
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH


Speed by Time of Day
(MPH)
(West Beltway Southbound)
MPH
90
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

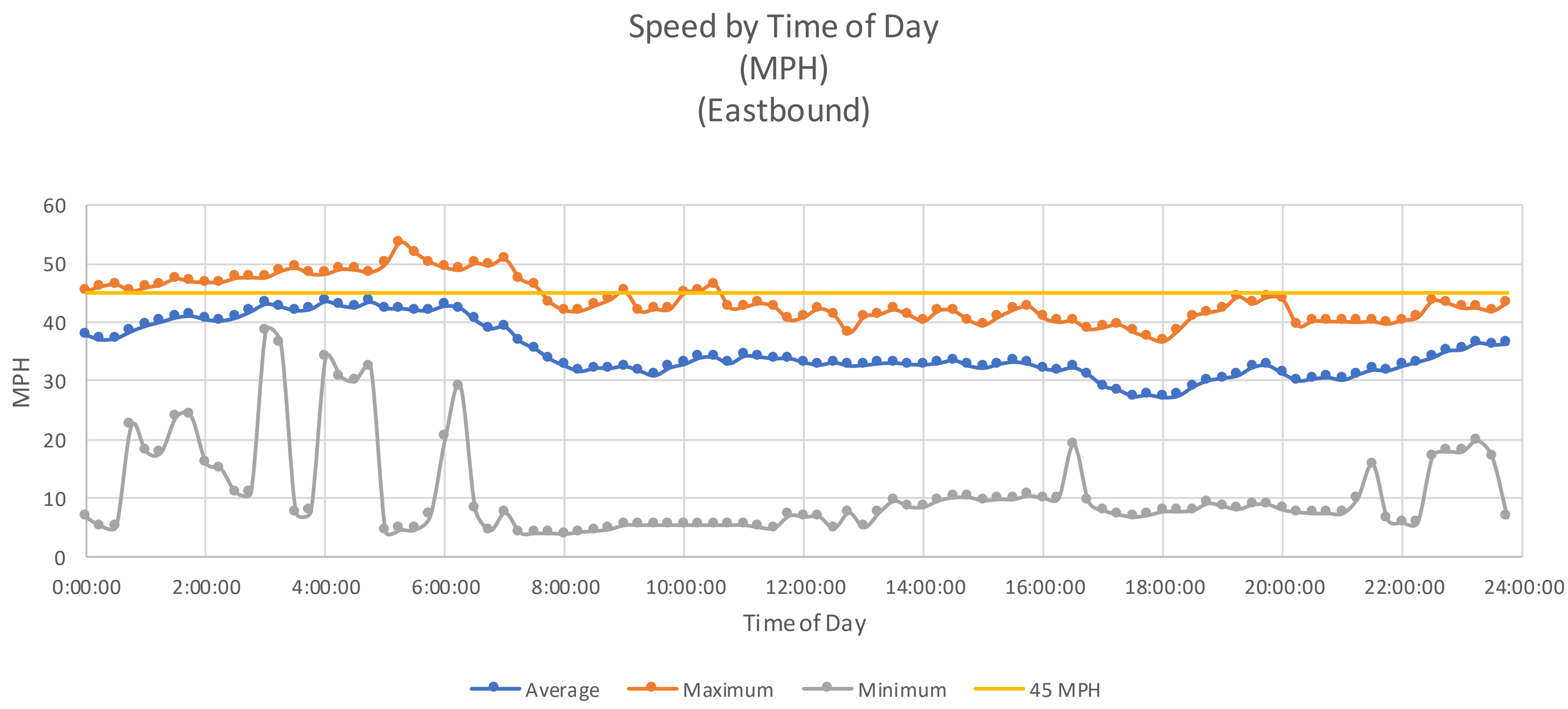


Speed by Time of Day
(MPH)
(East Beltway Northbound)
MPH
90
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

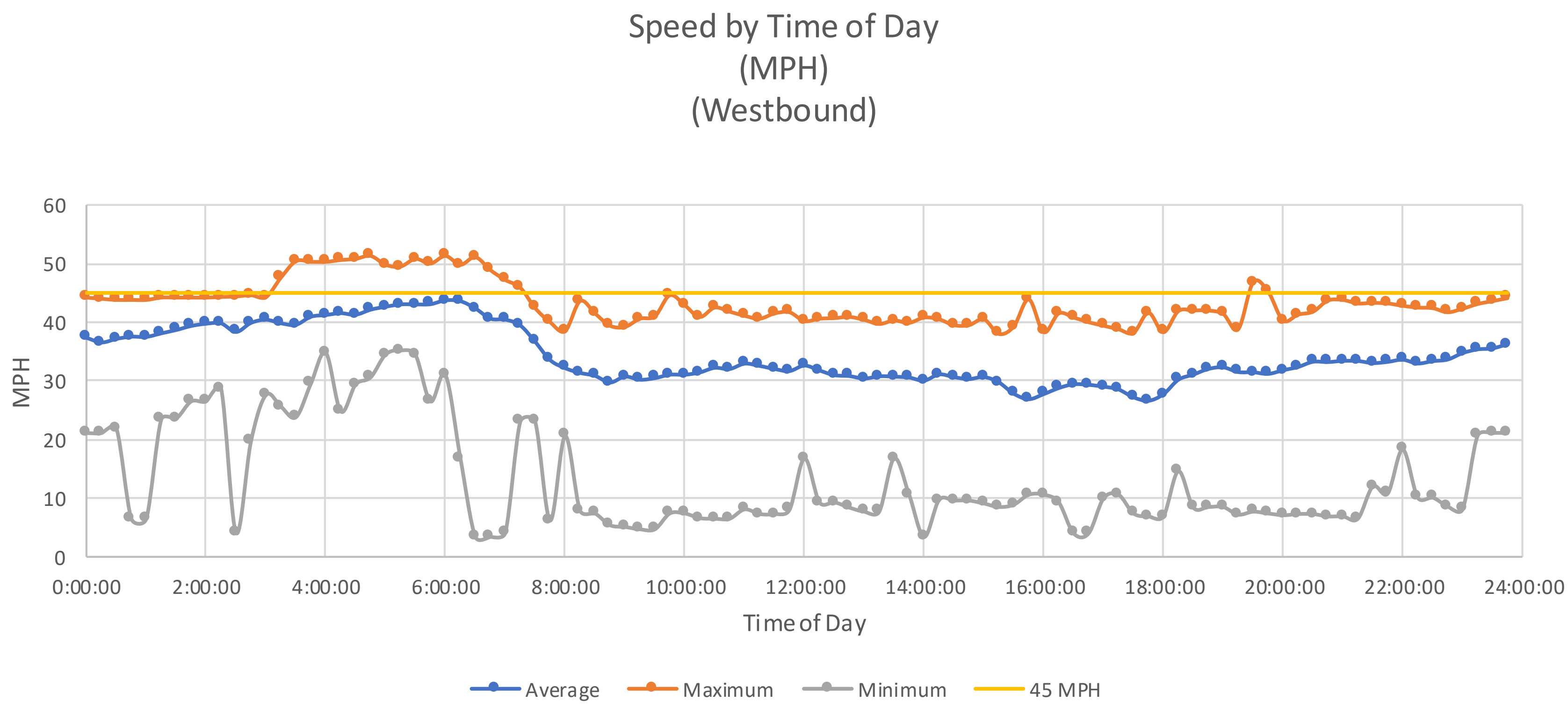


Speed by Time of Day
(MPH)
(East Beltway Southbound)
90
80
70
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

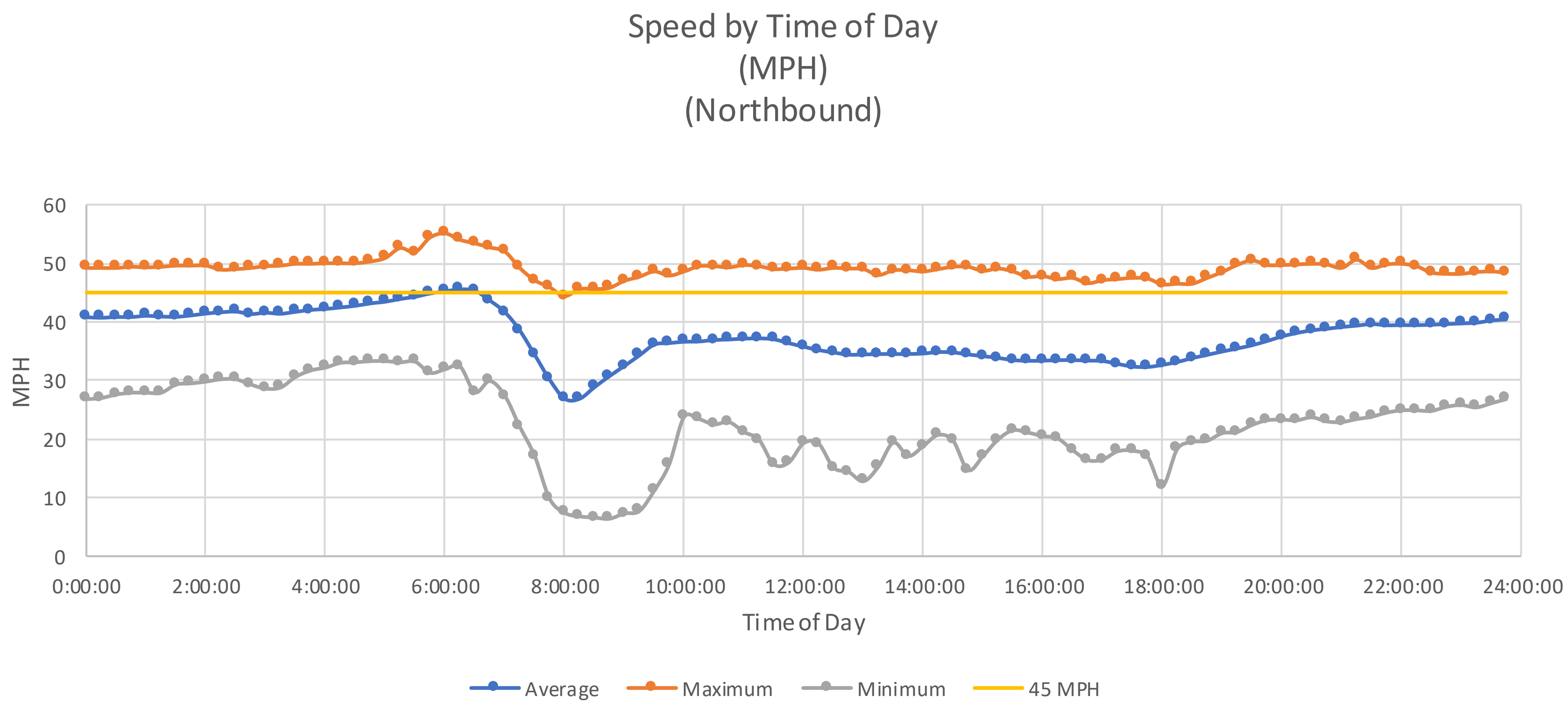
# SR-10 Speed Graph



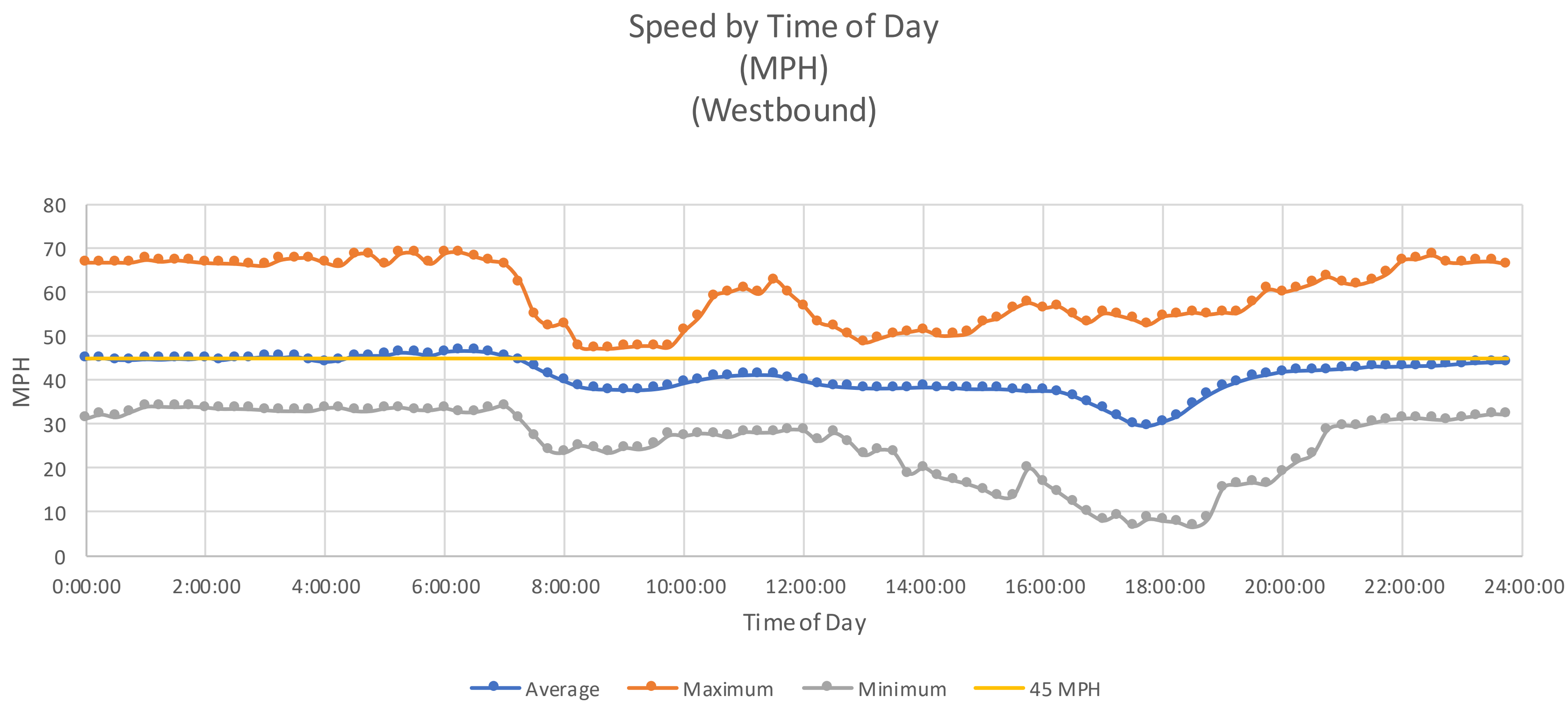
Speed by Time of Day
(MPH)
(Eastbound)
MPH
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH


Speed by Time of Day
(MPH)
(Westbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

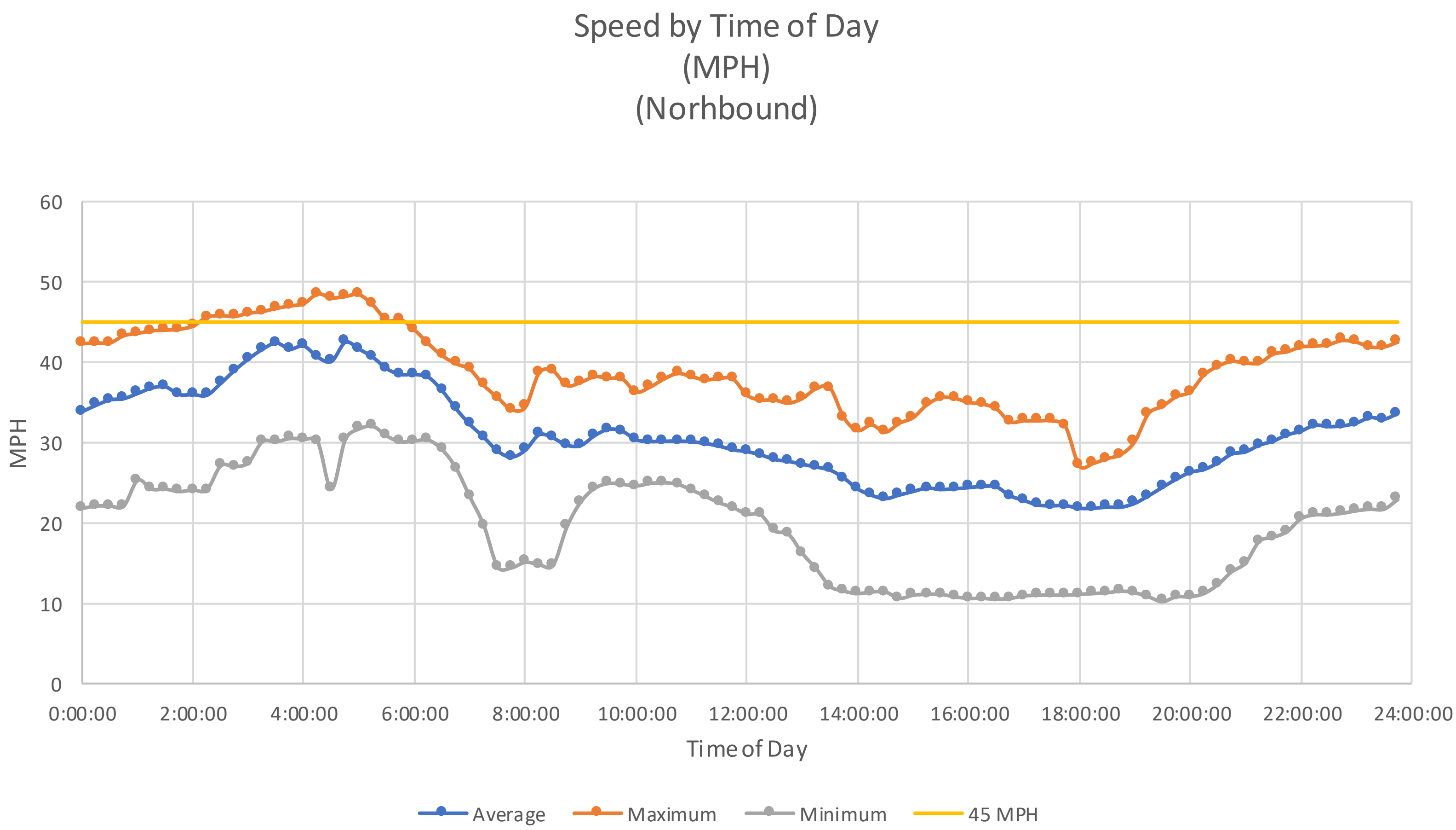
# SR-13 Speed Graph

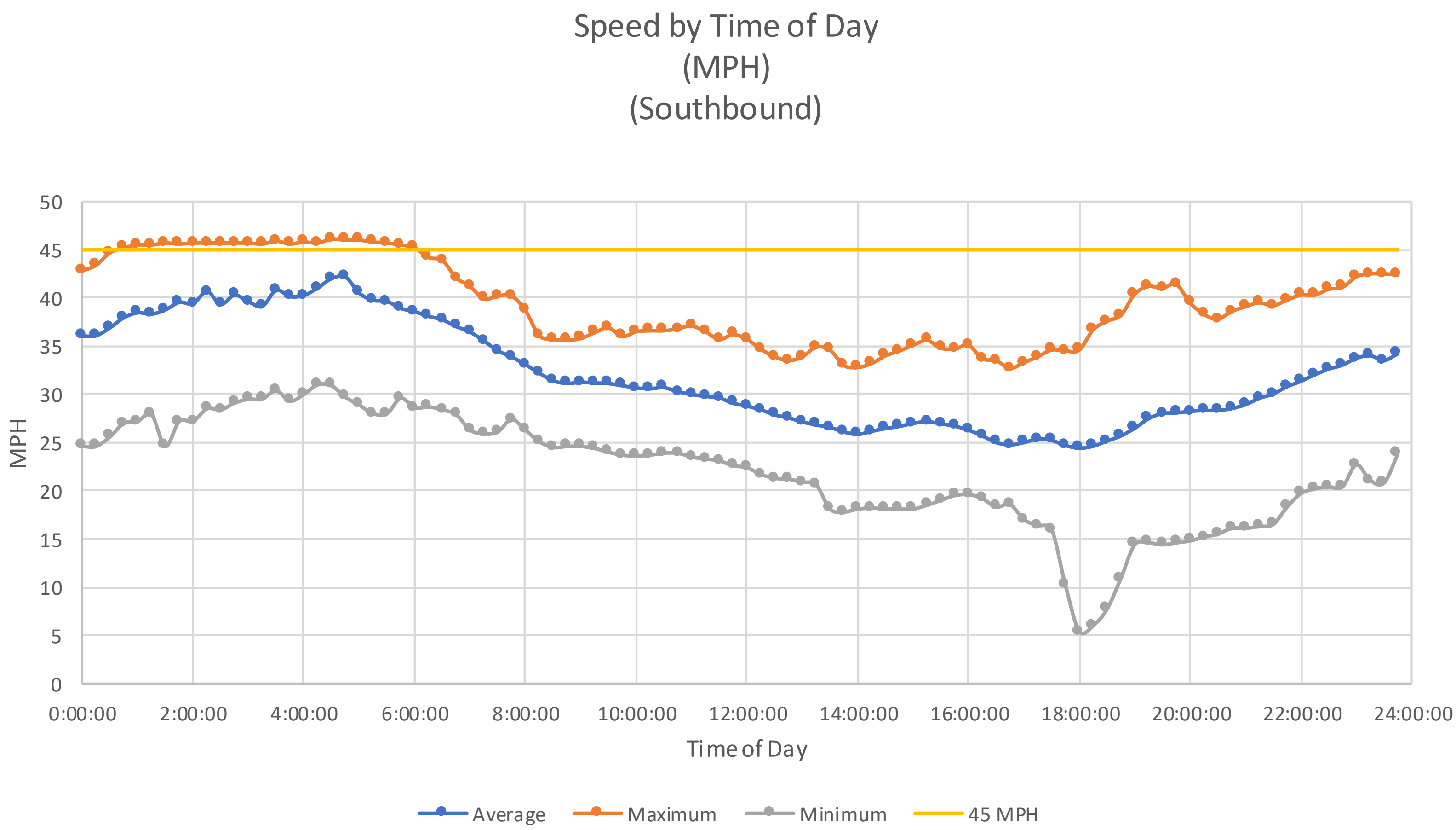


Speed by Time of Day
(MPH)
(Northbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH


Speed by Time of Day
(MPH)
(Westbound)
MPH
80
70
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

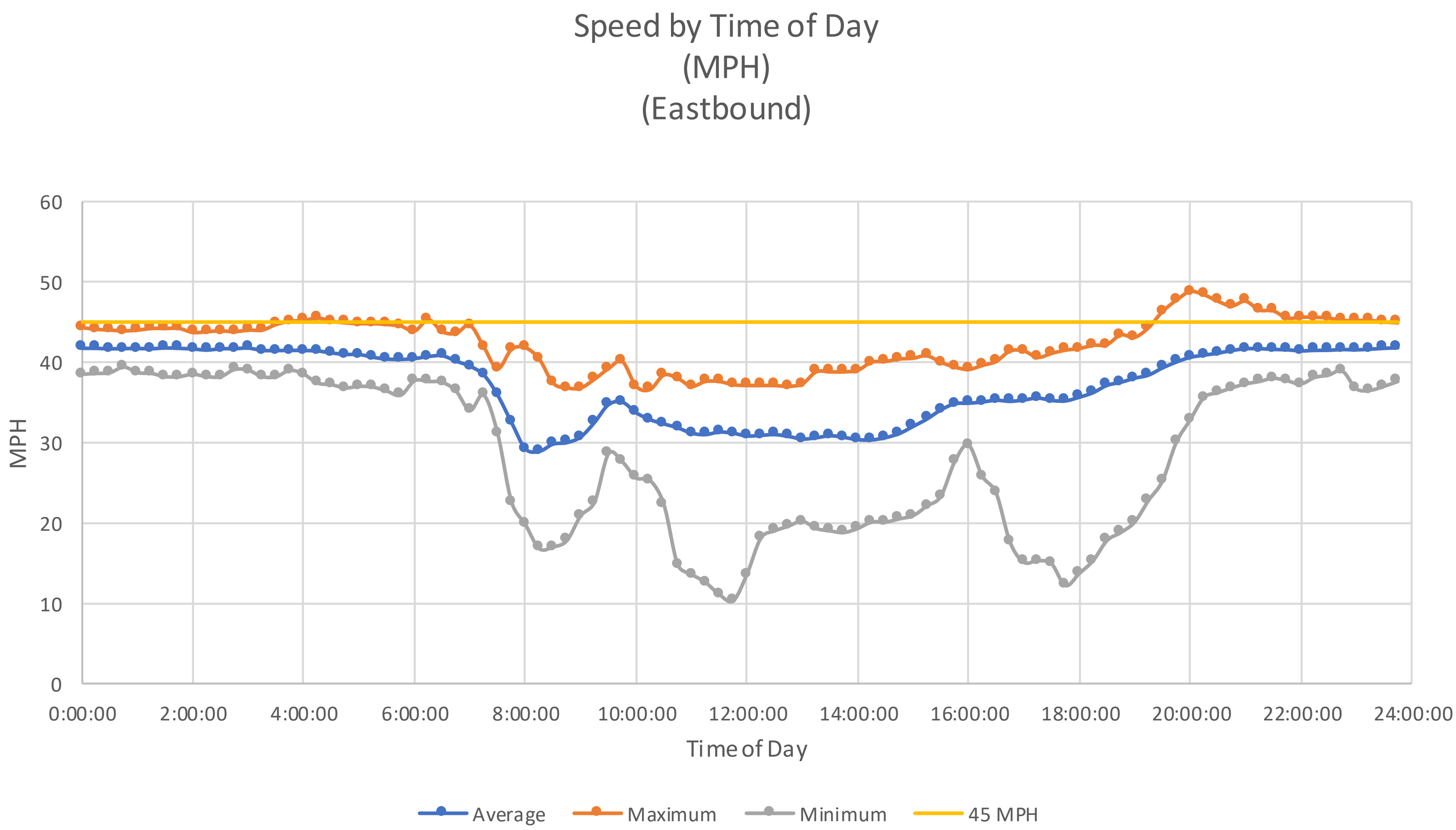
# SR-21 Speed Graph

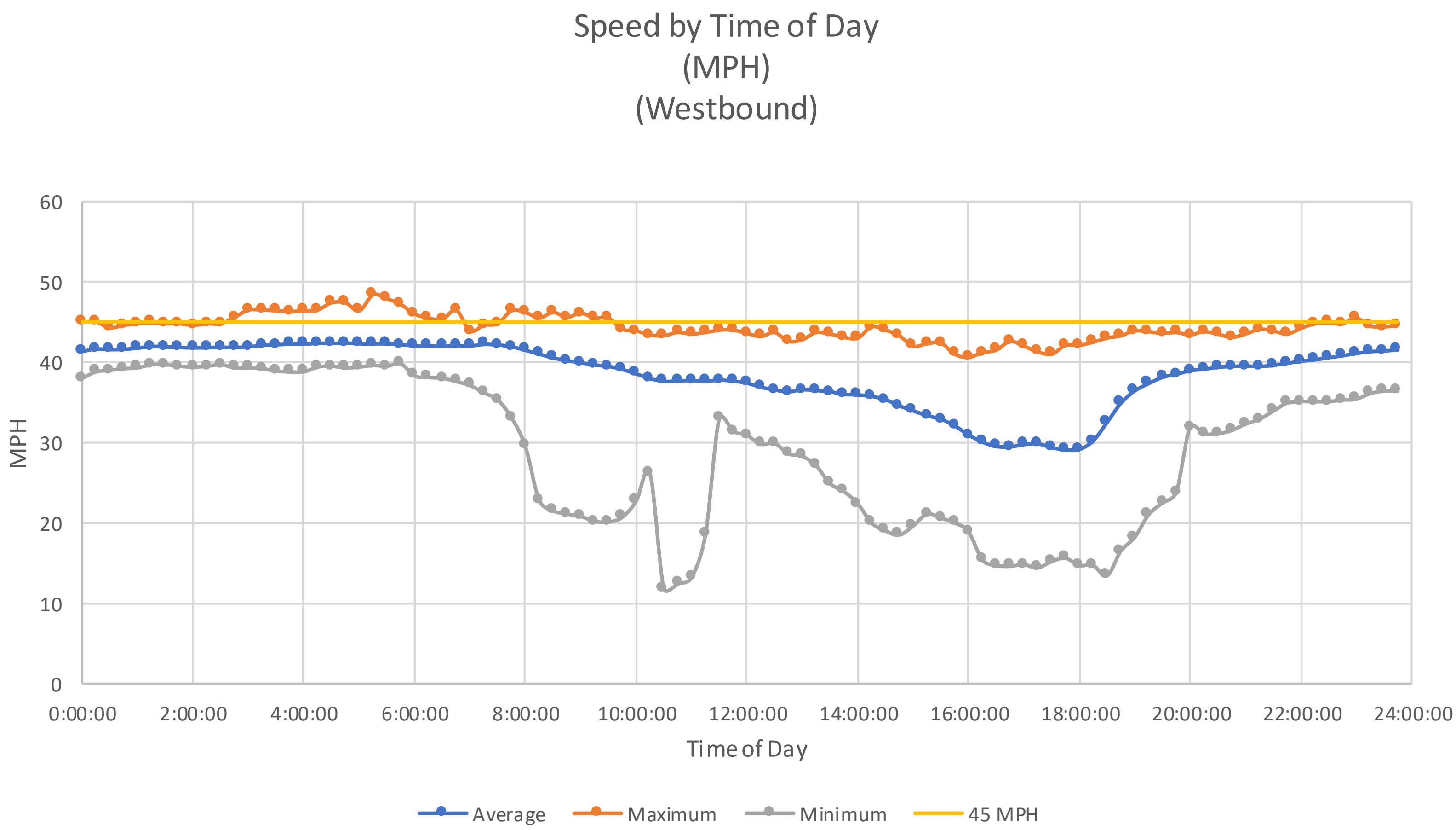

Speed by Time of Day
(MPH)
(Norhbound)
MPH
60
50
40
30
20
10
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH



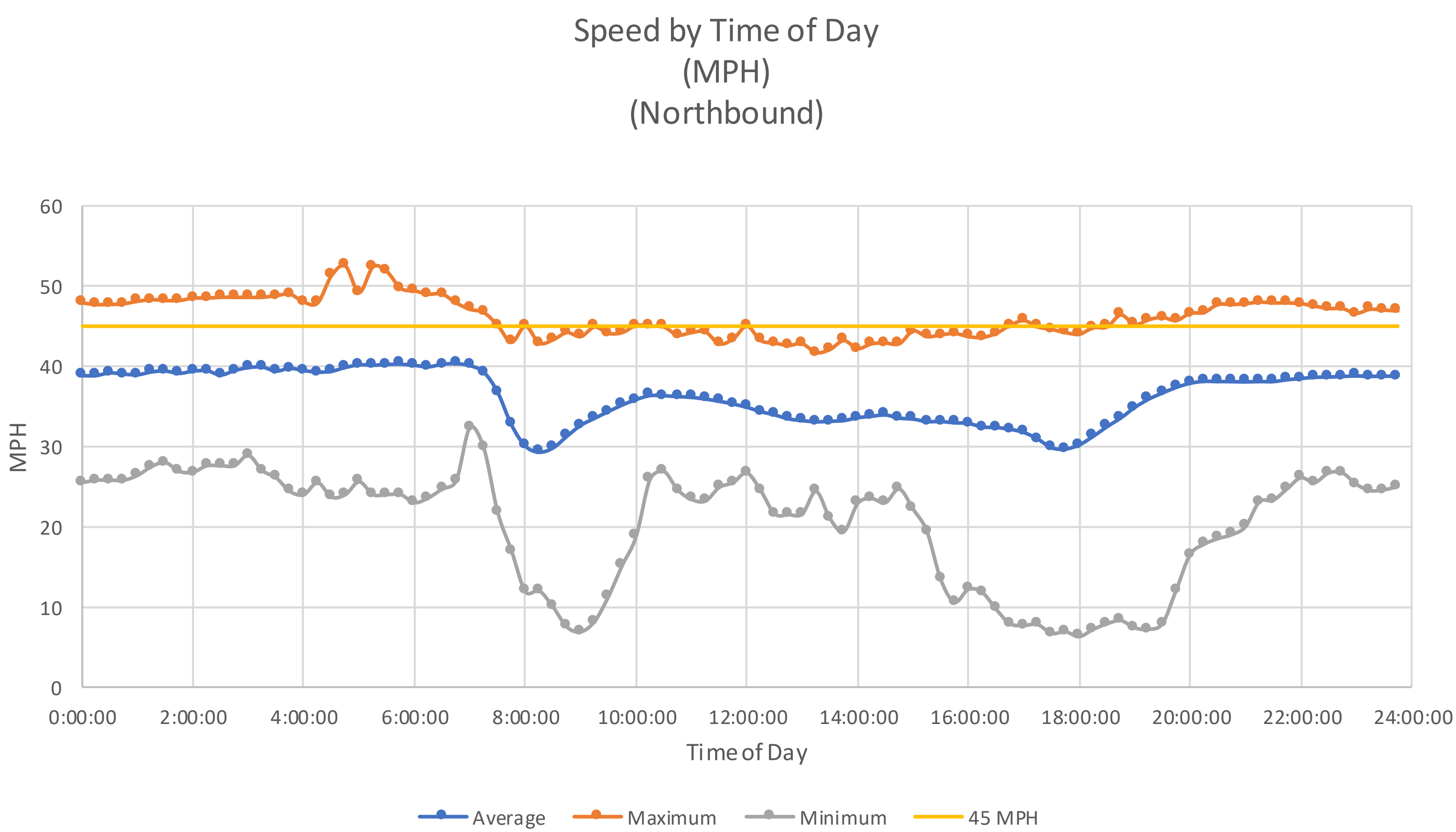
Speed by Time of Day
(MPH)
(Southbound)
50
45
40
35
30
25
20
15
10
5
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

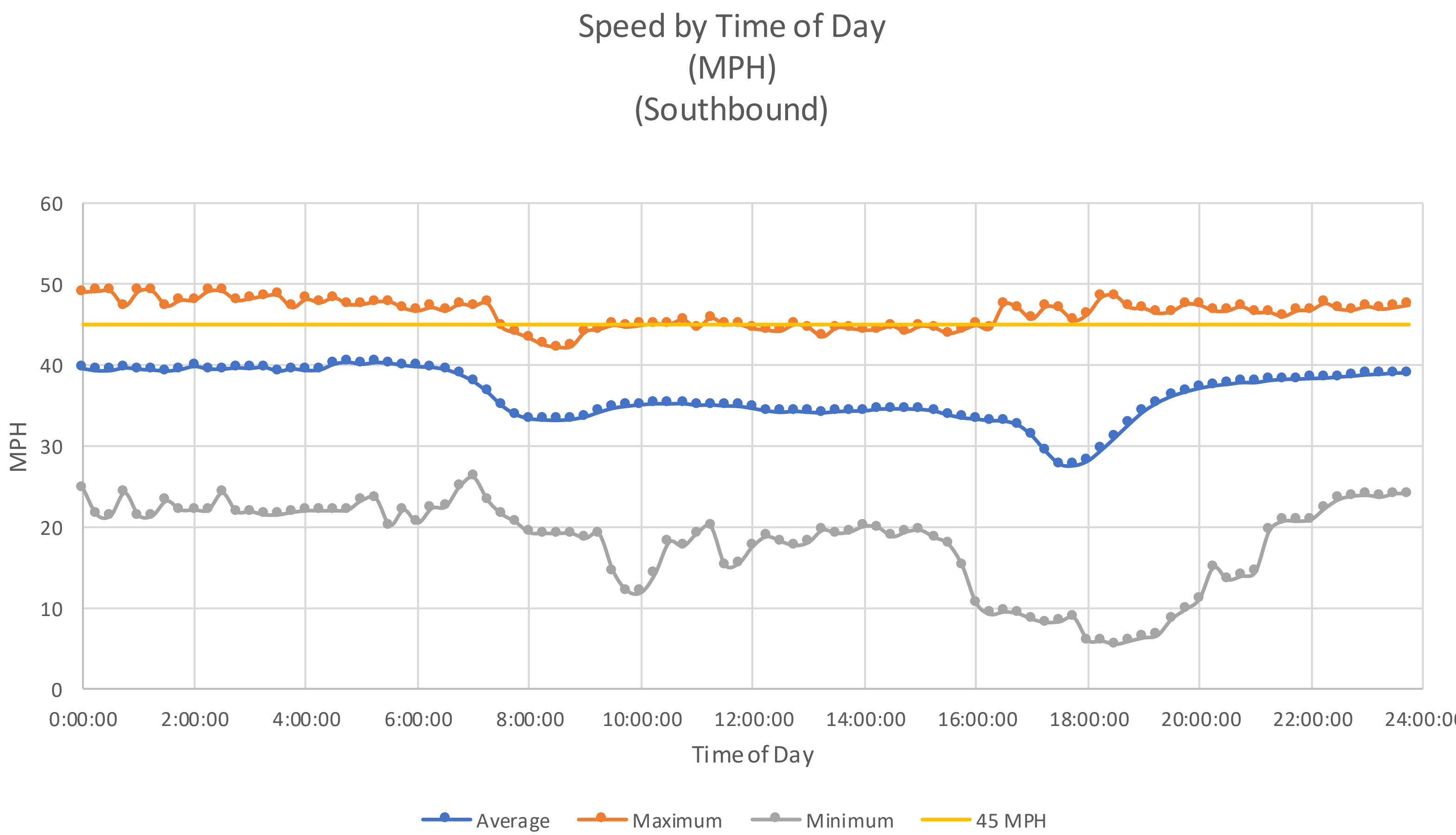
# SR-200 Speed Graph


Speed by Time of Day
(MPH)
(Eastbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH


Speed by Time of Day
(MPH)
(Westbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

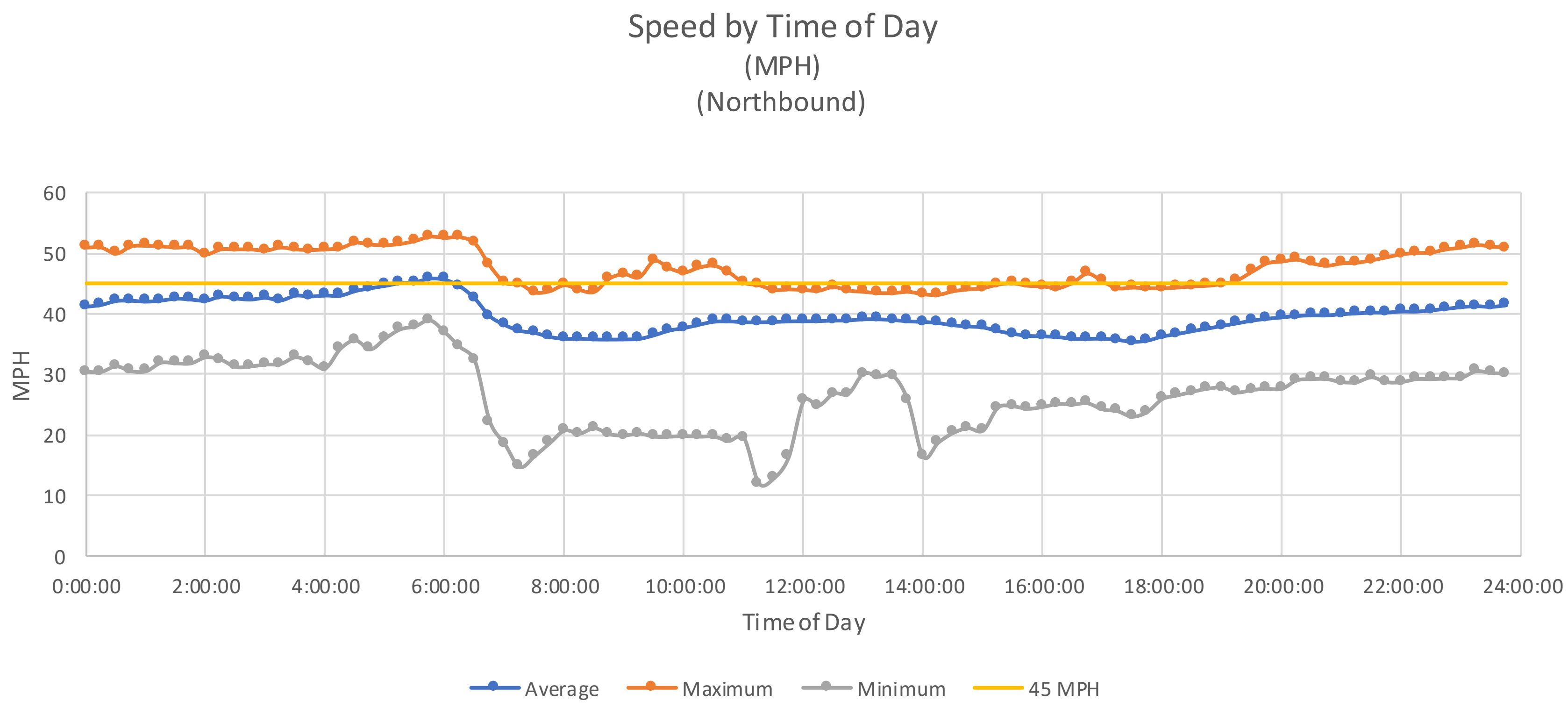
# US-1 Speed Graph

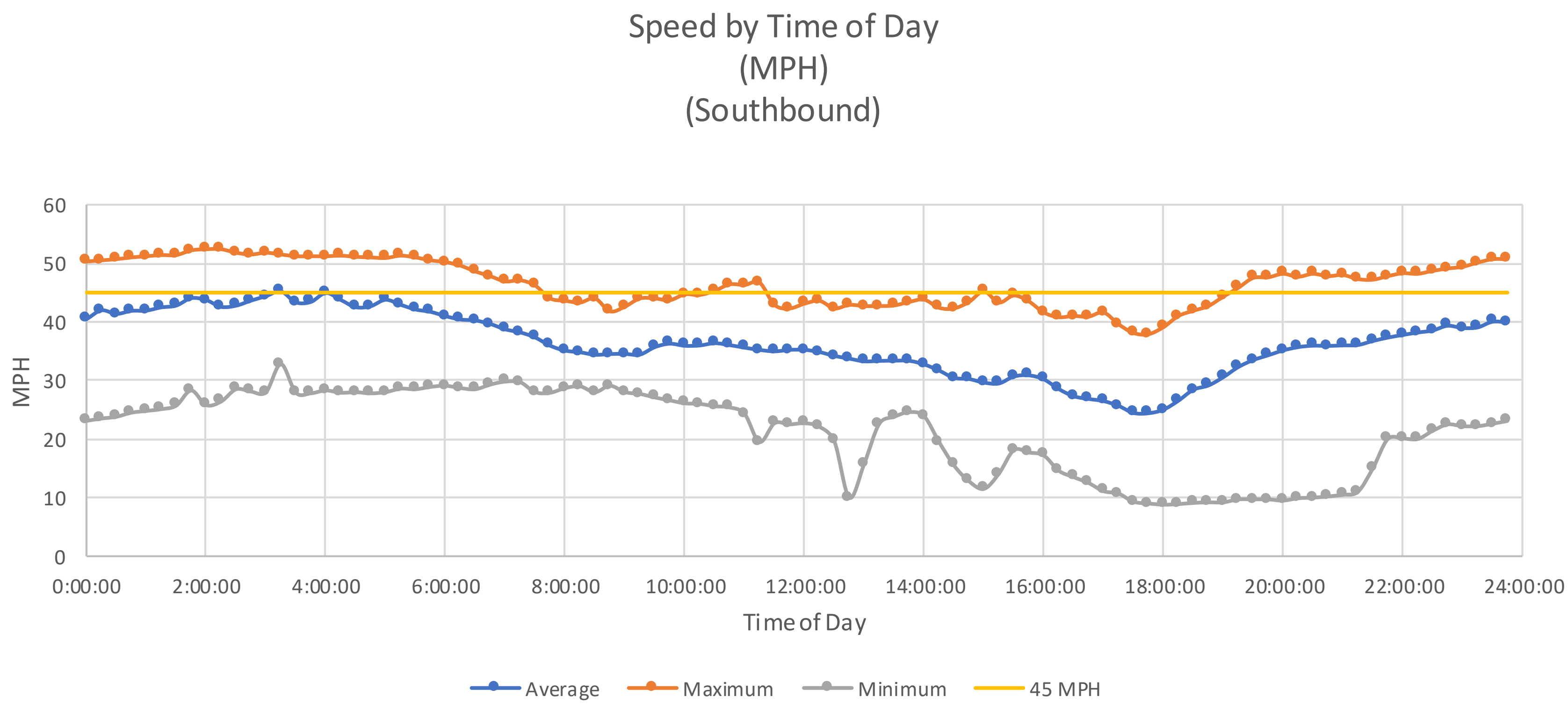

Speed by Time of Day
(MPH)
(Northbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH



Speed by Time of Day
(MPH)
(Southbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

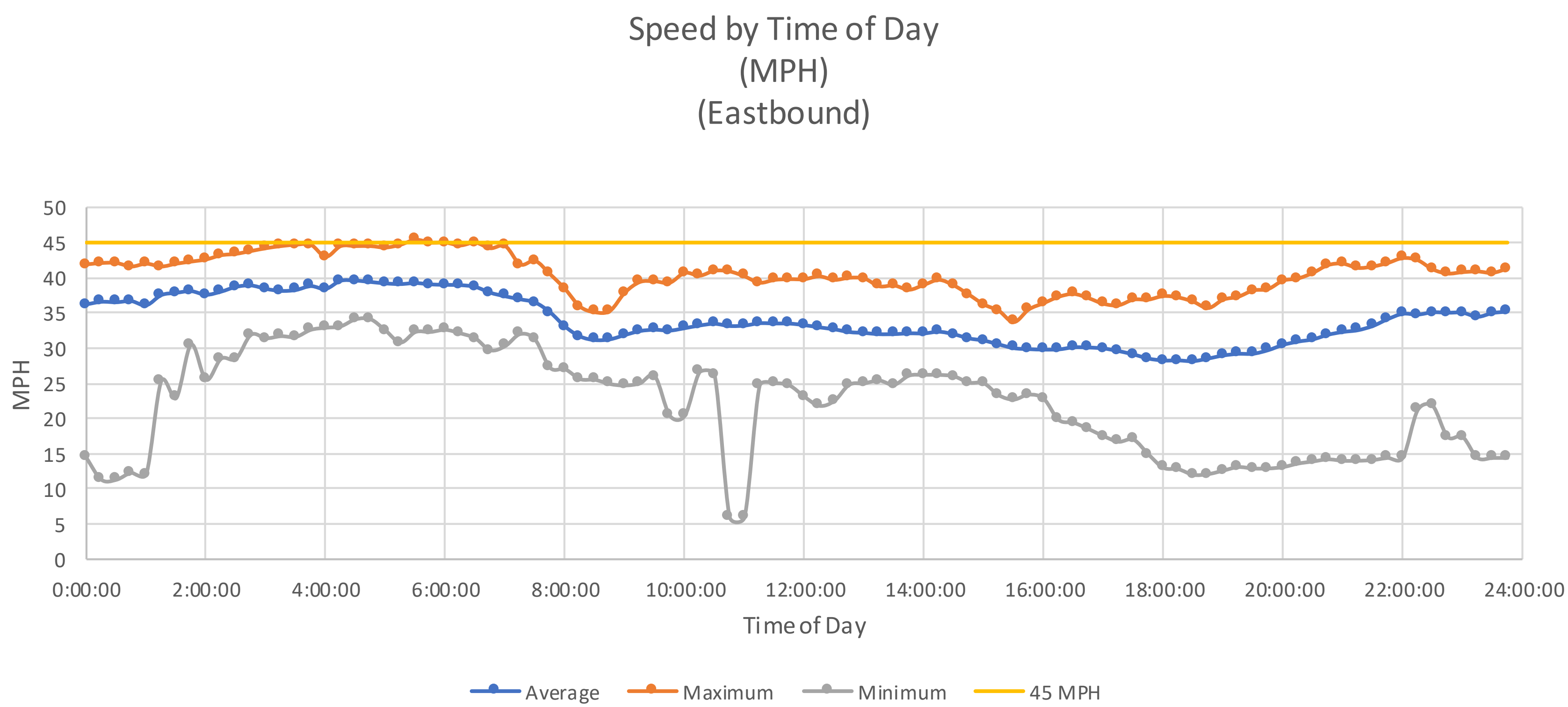
# US-17 Speed Graph


Speed by Time of Day
(MPH)
(Northbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH



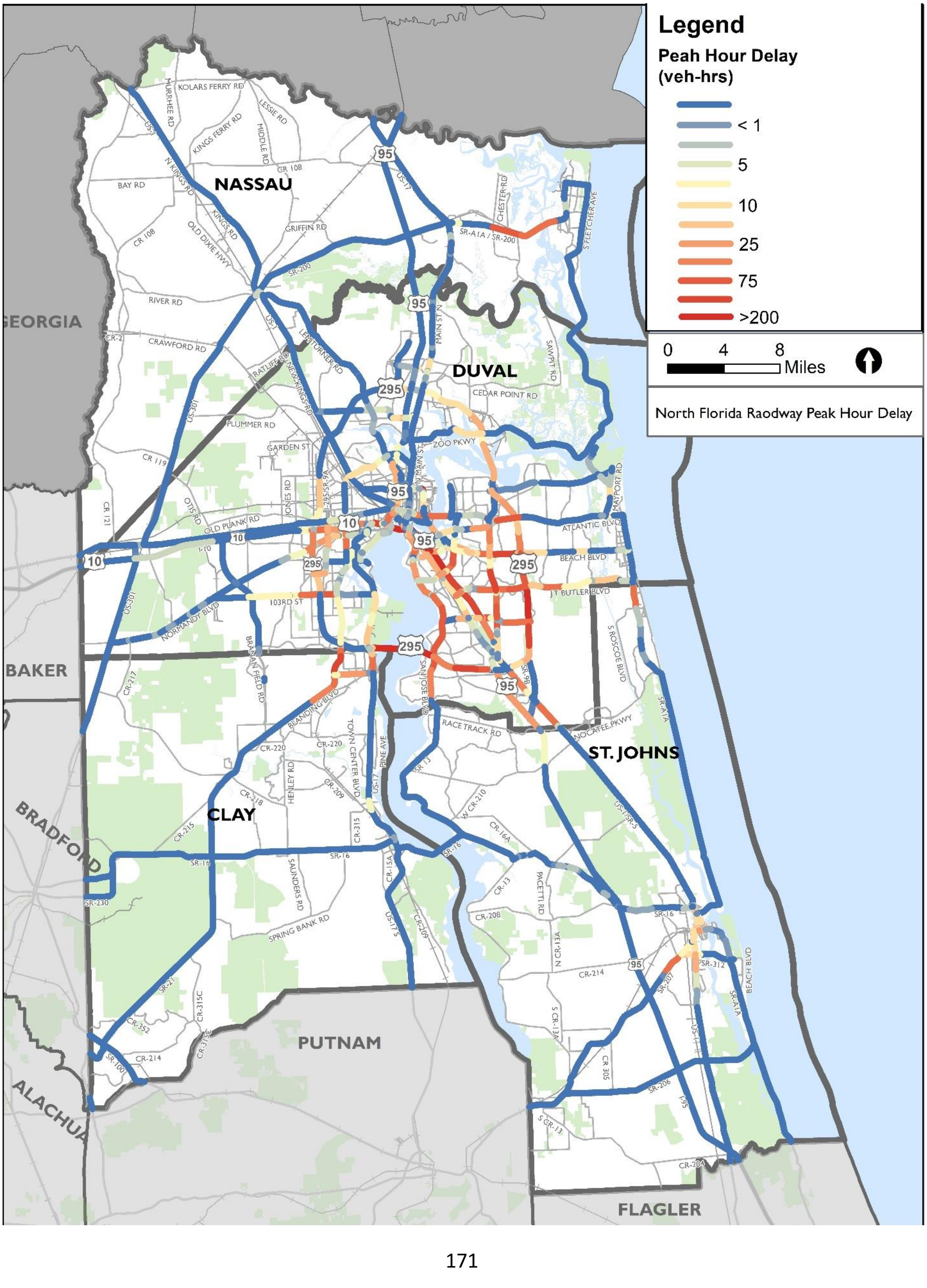
Speed by Time of Day
(MPH)
(Southbound)
60
50
40
30
20
10
0
MPH
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

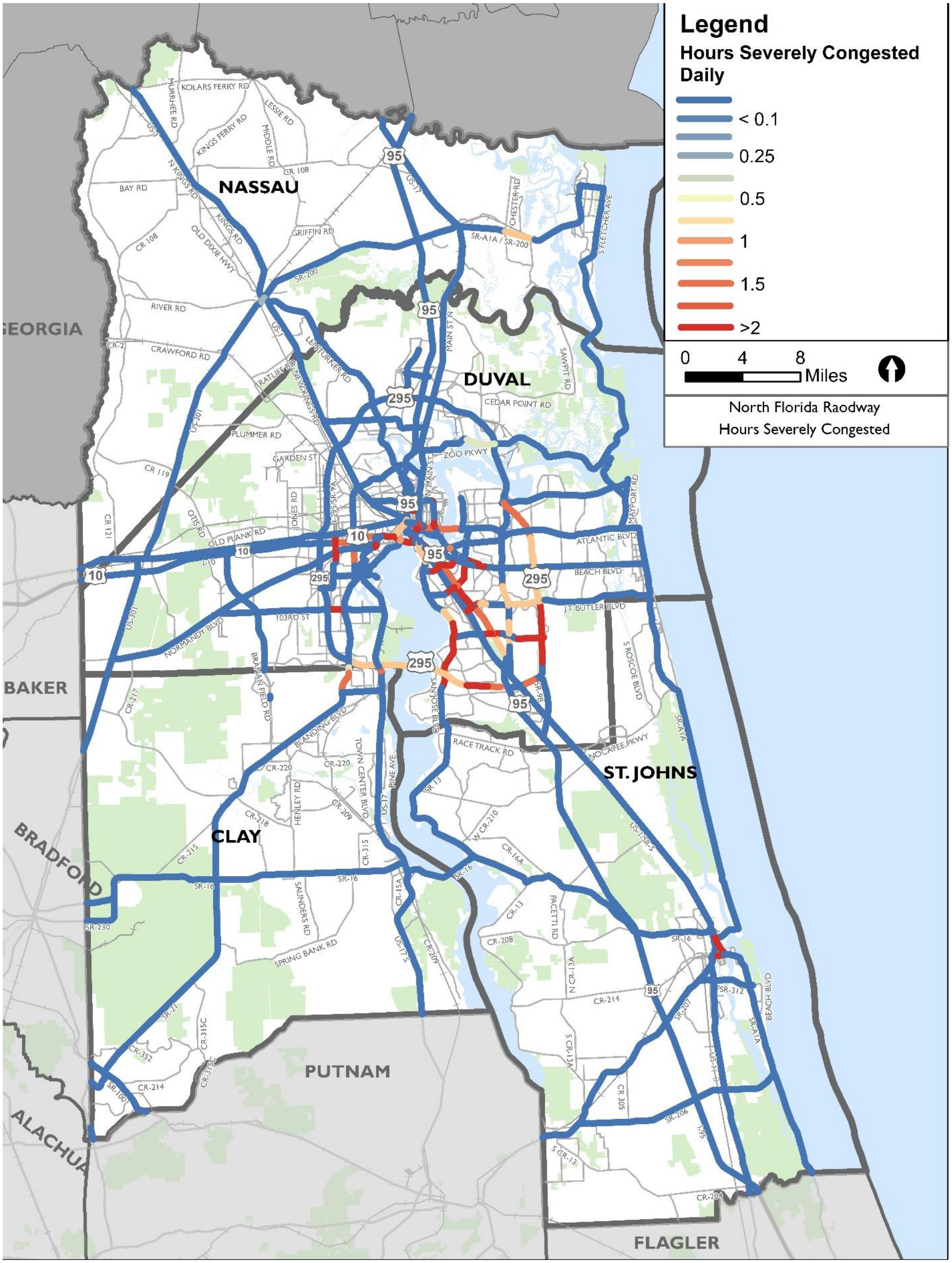
## US-90 Speed Graph

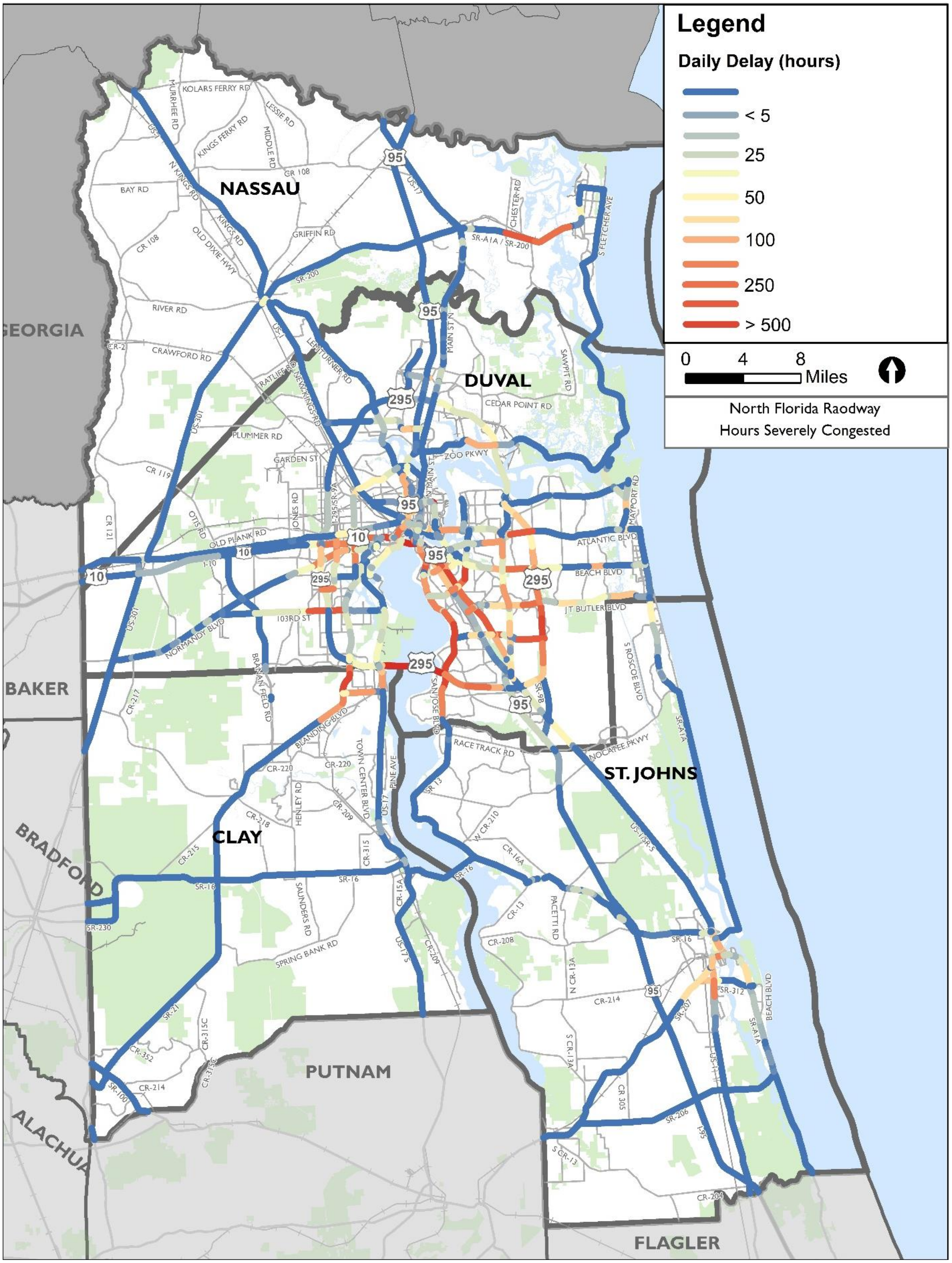

Speed by Time of Day
(MPH)
(Eastbound)
MPH
50
45
40
35
30
25
20
15
10
5
0
0:00:00
2:00:00
4:00:00
6:00:00
8:00:00
10:00:00
12:00:00
14:00:00
16:00:00
18:00:00
20:00:00
22:00:00
24:00:00
Time of Day
Average
Maximum
Minimum
45 MPH

# Appendix D

## Congestion Hot Spot Analysis Maps


Legend
Peah Hour Delay
(veh-hrs)
< 1
5
10
25
75
>200
0
4
8
Miles
North Florida Raodway Peak Hour Delay
NASSAU
DUVAL
CLAY
ST. JOHNS
PUTNAM
FLAGLER
BAKER
BRADFORD
ALACHUA
GEORGIA


Legend
Hours Severely Congested Daily
< 0.1
0.25
0.5
1
1.5
>2
0 4 8
Miles
North Florida Raodway
Hours Severely Congested
NASSAU
DUVAL
ST. JOHNS
CLAY
PUTNAM
FLAGLER
BAKER
BRADFORD
ALACHUA
GEORGIA


Legend
Daily Delay (hours)
< 5
25
50
100
250
> 500
0 4 8
Miles
North Florida Raodway
Hours Severely Congested
NASSAU
DUVAL
CLAY
ST. JOHNS
PUTNAM
FLAGLER
BAKER
BRADFORD
ALACHUA
GEORGIA
KOLARS FERRY RD
KINGS FERRY RD
BAY RD
CR 108
GRIFFIN RD
SR-200
RIVER RD
CRAWFORD RD
SR-A1A / SR-200
CEDAR POINT RD
ZOO PKWY
PLUMMER RD
GARDEN ST
CR 119
OLD PLANK RD
ATLANTIC BLVD
BEACH BLVD
JT BUTLER BLVD
103RD ST
NORMANDY BLVD
RACE TRACK RD
BLANDING BLVD
CR-220
CR-218
CR-215
SR-16
SR-230
SPRING BANK RD
CR-352
CR-214
CR-208
SR-312
SR-206
CR-204