



## B. Transportation Element

### Introduction

This Transportation Element has been prepared to meet the requirements of Chapter 163, Florida Statutes. The Transportation Element “shall provide for a safe, convenient multimodal transportation system, coordinated with the future land use map or map series and designed to support all elements of the comprehensive plan.” (Section 163.3177(6)(b), Florida Statutes). In addition, the element addresses traffic circulation; alternative modes of travel; parking; hurricane evacuation capacity; land use densities to support public transportation and energy efficient strategies for reducing greenhouse gases. Existing and planned Transportation Facilities are identified within Maps B-1, B-2, B-3, and B-4 of the Future Land Use Map Series.

This Transportation Element provides an analysis of transportation and mobility issues within the City of Atlantic Beach. A planning timeframe of twenty years is incorporated into the analysis of future conditions. Traffic data from the Florida Department of Transportation (FDOT) and the City has been compiled into this element.

### Quality/Level of Service (Q/LOS) Standards and Criteria

According to the 2023 FDOT Multimodal Q/LOS Handbook, quality of service (QOS) is a traveler-based perception of how well a transportation service or facility operates. Level of Service (LOS) is essentially a measure of the quality of the operating characteristics of a street or highway for each travel mode. There are four major travel modes: automobile, pedestrian, bicycle, and transit. Factors involved in determining the LOS include speed and safety, as well as travel time; traffic conflicts and interruptions; freedom to maneuver; convenience and comfort; and operating costs. Motorized vehicle LOS quantifies quality of service into six letter grades:

**LOS A** – This is a condition of free flow, accompanied by low volumes and high speeds. Traffic density is low, with uninterrupted flow speeds controlled by driver desires, speed limits, and physical roadway conditions. Little or no restriction in maneuverability due to the presence of other vehicles enables drivers to maintain their desired speeds and arrive at their destinations with little or no delay.

**LOS B** – This is a condition of stable flow, with operating speeds somewhat restricted by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted. The lower limit (lowest speed, highest volume) of this Level of Service has been used in the design of highways.

**LOS C** – This is still a stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. Most drivers are restricted in their freedom to select their own speed, change lanes or pass. A relatively satisfactory operating speed is still obtained, with service volumes suitable for urban design practice.

**LOS D** – This Level of Service approaches unstable flow, with tolerable operating speeds being maintained, though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds.

Drivers have little freedom to maneuver, and comfort and convenience are low. These conditions can be tolerated, however, for short periods of time.

**LOS E** – This Level of Service cannot be described by speed alone, but represents operations at low operating speeds, typically, but not always, in the neighborhood of 30 miles per hour, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration. This Level of Service is associated with operation of a roadway at capacity flow.

**LOS F** – This describes a forced-flow operation at low speeds, where volumes are well above capacity. In the extreme, traffic comes to a standstill. These conditions usually result from vehicles backing up from a restriction. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially, and standstills may occur for short or long periods of time because of the downstream congestion.

The FDOT's LOS Policy sets the motorized vehicle Level of Service targets for roadways on the State Highway System. The LOS target for an urbanized area of over 500,000 people apply to roadways within Atlantic Beach, since the City of Atlantic Beach is part of the Jacksonville Urbanized Area. The FDOT motorized vehicle LOS target for state roadways during peak travel hours in urbanized areas is LOS D.

The 2023 handbook uses level of traffic stress (LTS) as a performance measure to evaluate bicycle and pedestrian quality of service. LTS only addresses comfort traveling along a facility as it relates to facility type, width, and continuity; vehicular posted speeds; vehicular volumes; and separation from traffic. It does not address the impacts of intersection design or delay, crossing frequency, or number of driveways. Bicycle level of stress BLTS is a performance measure that quantifies the amount of discomfort that people feel when they bicycle close to traffic. BLTS considers bicycle facility type, facility width, posted speed, separation from traffic, and traffic volume to assess the roadway environment. BLTS designates quality of service in to four categories:

**BLTS 1:** The level that most children can use confidently.

**BLTS 2:** The level that will be tolerated by most adults.

**BLTS 3:** The level tolerated by confident cyclists who still prefer having their own dedicated space for riding.

**BLTS 4:** The level tolerated only by those with limited route or mode choice or cycling enthusiasts that choose to ride under stressful conditions.

Pedestrian level of stress (PLTS) quantifies the amount of discomfort that people feel when they walk along a road within the right of way. PLTS considers existence of sidewalks, sidewalk continuity, sidewalk width, posted speed, separation from traffic, and vertical separation to assess the roadway environment. PLTS designates the quality of service into four categories:

**PLTS 1:** The level suitable for all users including teenagers traveling along, the elderly, and people using a wheeled mobility device. People feel safe and comfortable on the pedestrian facility and all users are willing to use the pedestrian facility.

**PLTS 2:** The level where all users are able to use the facility and most users are willing to use the facility.

**PLTS 3:** The level where some users are willing to use the facility, but others may only use the facility when there are limited route and mode choices available.

**PLTS 4:** The facility is difficult or impassible by a wheeled mobility device or users with other limitations in their movement and most likely used by users with limited route and mode choice.

### Roadway Classifications

The FDOT utilizes two roadway classification systems, the traditional functional classification of roadways and the newer context classification of roadways. Functional and context classification should be considered together when determining the role and function of a roadway. Functional classification defines the role that a particular roadway plays in servicing the flow of vehicular traffic through the transportation network. Roadways are assigned to one of several possible functional classifications within a hierarchy described below and in accordance with the FDOT 2020 Functional Classification Handbook. See Map B-1 for functional classification of roadways within the city.

- **Principal Arterial:** Serves a large percentage of travel between cities and other activity centers, especially when minimizing travel time and distance is important.
- **Minor Arterial:** Provides service for trips of moderate length, serves geographic areas that are smaller than their higher arterial counterparts, and offers connectivity to the higher arterial system.
- **Collector:** Collects traffic from local streets and connects them to arterials; more access to adjacent properties compared to arterials.
- **Local:** Any road not defined as an arterial or collector; primarily provides access to land with little or no through movement.

More significant than FDOT's functional classification of roadways, is the newer system of context classifications. This new system is used to plan and design roadways in greater harmony with the surrounding land use characteristics. The context classification assigned to a roadway helps identify anticipated users of a roadway and is used to inform key design elements such as design speeds, lane widths, and types of pedestrian and bicycle facilities. The classification system includes:

- C1 – Natural
- C2 – Rural
- C2T – Rural Town
- C3R – Suburban Residential
- C3C – Suburban Commercial
- C4 – Urban General
- C5 – Urban Center
- C6 – Urban Core

### Existing Operating Conditions

Roadways – An inventory of the existing transportation network within the City of Atlantic Beach was undertaken to determine the type of transportation systems available, functional classification of roadways, and context classification of state roadways. Within the city, there are two arterial roadways - Atlantic Boulevard (SR 10) and Mayport Road (SR 101). Both roadways are state operated and designated hurricane evacuation routes (Map A-3b). The FDOT's current context classification, as shown in Map B-2, assigns Atlantic Boulevard west of Seminole Road and Mayport Road north of Dutton Island Road as C3C. It assigns Atlantic Boulevard east of Seminole Road and Mayport Road south of Dutton Island Road as C4.

Atlantic Boulevard (State Road 10) is one of three major roadway corridors from I-95 to the County's beaches. A construction project was completed in 2002 that widened Atlantic Boulevard to six-lanes over the Intracoastal Waterway. Commercial establishments are located on both the north and south sides of Atlantic Boulevard, and much of the existing traffic results from motorists entering and exiting driveways that serve these establishments.

Mayport Road extends from the southern limits of the City at Atlantic Boulevard to the northern limits of the City near Assisi Lane. Mayport Road continues within the City of Jacksonville providing access to the Mayport Naval Station and on to the north as State Road A1A. Numerous local public streets and driveways intersect with Mayport Road on both sides of the roadway. These streets and driveways serve mostly low to moderate density residential and strip-type commercial developments. In March 2002, the Mayport Flyover was completed and opened to traffic. The Mayport Flyover provides an interchange at the intersection of the two most traveled roadways within the City of Atlantic Beach. Construction of the Flyover alleviated a traffic problem identified in the 1990 Traffic Circulation Element. The intersection of Atlantic Boulevard and Mayport Road was identified as operating at LOS F prior to completion of the Mayport Flyover. The Wonderwood Connector, which was completed and open to traffic in 2007 provides an alternative east-west connection between the City of Atlantic Beach, Mayport Village, Naval Station Mayport and I-295.

All other streets within the city are designated as collector or local roadways, see Map B-1. Seminole Road, Ocean Boulevard, Plaza, and Sherry Drive are urban collectors, which primarily serve the residential areas north of Atlantic Boulevard, and east of Mayport Road. Similarly, Levy Road and Dutton Island West are collectors that primarily serve the residential and commercial areas west of Mayport Road. Local roads predominately serve single- and two-family residential developments. These are all two-way, two-lane roadways and experience relatively low traffic volumes with low accident rates. Due to the built-out status of the city, no significant changes in traffic volumes are expected on these roadways.

**Table B-1. FDOT Traffic Volumes**

<b>Street</b>	<b>Link</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Atlantic Boulevard	San Pablo Rd to Florida Blvd exit	49,000	48,000	51,500	42,500	41,500	51,500
Atlantic Boulevard	Florida Blvd exit to Penman Rd	34,500	37,000	38,500	31,000	40,500	36,500
Atlantic Boulevard	Penman Rd to 3 <sup>rd</sup> St	23,000	24,500	25,000	21,000	26,000	24,500
Atlantic Boulevard	Mayport Rd to Westbound on-ramp	12,000	12,000	12,500	11,000	11,000	11,000
Atlantic Boulevard	Westbound exit to Mayport Rd	5,800	5,800	5,600	5,300	7,400	5,900

<u>Mayport Road</u>	<u>Atlantic Blvd to Forrestal Circle S</u>	<u>29,000</u>	<u>26,700</u>	<u>28,200</u>	<u>23,800</u>	<u>26,400</u>	<u>22,500</u>
<u>Mayport Road</u>	<u>Forrestal Circle S to Donner Rd</u>	<u>36,000</u>	<u>35,500</u>	<u>38,000</u>	<u>29,500</u>	<u>34,500</u>	<u>34,500</u>
<u>Mayport Road</u>	<u>Donner Rd to SR-A1A</u>	<u>27,400</u>	<u>27,500</u>	<u>30,500</u>	<u>25,500</u>	<u>29,500</u>	<u>27,000</u>
<u>Mayport Flyover</u>	<u>Atlantic Blvd to W 6<sup>th</sup> St</u>	<u>8,900</u>	<u>8,700</u>	<u>9,500</u>	<u>8,300</u>	<u>8,600</u>	<u>8,900</u>
<u>Seminole Road</u>	<u>Atlantic Blvd to 17<sup>th</sup> St</u>	<u>6,800</u>	<u>6,900</u>	<u>7,000</u>	<u>6,800</u>	<u>6,800</u>	<u>6,800</u>
<u>Sherry Drive</u>	<u>Atlantic Blvd to Seminole Rd</u>	<u>5,400</u>	<u>5,500</u>	<u>5,600</u>	<u>5,400</u>	<u>5,400</u>	<u>5,400</u>

Source: Florida Department of Transportation (FDOT)

**Table B-2. City Traffic Volumes**

<b>Average Daily Traffic (ADT)</b>				
<b>Street</b>	<b>Block</b>	<b>Classification</b>	<b>Year</b>	<b>ADT</b>
Donner Road	200	Collector	2023	1,368
Dutton Island Rd W	200	Collector	2019	2,351
East Coast Drive	500	Collector	2023	1,782
Levy Road	200	Collector	2020	2,740
Ocean Boulevard	300	Collector	2023	1,465
Plaza	800	Collector	2023	7,814
Royal Palms Drive	300	Collector	2020	2,874
Sailfish Drive	500	Collector	2023	2,087

Source: City of Atlantic Beach

Traffic counts for each location were conducted over one week. Where more than one count was completed for the same street, the most recent data was used.

Table B-3 below shows the assessed vehicle level of service (LOS) and level of traffic stress (LTS) for arterial and collector roadways within the city. Context classifications were assigned for collector roadways based on their surrounding land uses and development patterns in accordance with the 2022 FDOT Context Classification Guide. The LOS and LTS ratings for Atlantic Boulevard and Mayport Road were derived using 2021 traffic volume data and the 2023 FDOT QLOS Handbook generalized service volume tables. The vehicle LOS for collector roadways is based on the QLOS Handbook criteria for non-state roadways. The bicycle and pedestrian LTS ratings for collector roadways were completed in accordance with the criteria below which was influenced by the 2023 FDOT QLOS Handbook. Note that all collector roads are two-lane and 25 MPH.

**Bicycle LTS:**

Arterials: follow flow charts within the QLOS Handbook.

Collectors:

- 8'+ Shared use path on both sides of the road = LTS 1
- Separated (physical barrier) bicycle lanes = LTS 1
- 8'+ Shared use path on one side of the road = LTS 2
- Bicycle lanes or paved shoulders = LTS 2
- No facilities = LTS 3

Local roads:

- Shared use path, bicycle lanes, or paved shoulders = LTS 1
- No facilities with residential land use = LTS 2
- No facilities with commercial land use = LTS 3

Pedestrian LTS:

Arterials: follow flow charts within the QLOS Handbook.

Collector and Local roads:

- Continuous sidewalk on both sides of the road = LTS 1
- Continuous sidewalk on one side of the road = LTS 2
- No sidewalk and ADT = or < 1,000 ADT = LTS 3
- No sidewalk and over 1,000 ADT = LTS 4

**Table B-3. Roadway LOS & LTS**

<u>Street</u>	<u>Functional Classification</u>	<u>Context Classification</u>	<u>Vehicle LOS</u>	<u>Bicycle LTS (BLTS)</u>	<u>Pedestrian LTS (PLTS)</u>
Atlantic Boulevard	Principal Arterial				
<i>West of Flyover Ramp</i>		C3C	C	4	3
<i>Ramp to A1A to W A1A Junction</i>		C3C	F	4	4
<i>East of Mayport Rd</i>		C3C & C4	D	4	2
Donner Road	Collector	C3R	C	2	2
Dutton Island Road W	Collector	C3R	C	3	2
East Coast Drive	Collector	C3R	C	3	2
Levy Road	Collector	C4	D	3	2
Mayport Road	Minor Arterial				
<i>South of Dutton Island Rd</i>		C4	C	4	3
<i>North of Dutton Island Rd</i>		C3C	C	4	3
Ocean Boulevard	Collector	C3R	C	3	1
Plaza	Collector	C3R	C	2	1
Royal Palms Drive	Collector	C3R	C	3	2
Sailfish Drive	Collector	C3R	C	3	2
Seminole Road	Collector	C3R	C	1	1
Sherry Drive	Collector	C3R	C	2	2

Table B-3 shows that all roadways, except for a 0.4 mile stretch of Atlantic Boulevard, meet or exceed their respective minimum vehicle LOS. Collector roadways are operating well under the LOS D service volume (ranging from roughly 5% to 40% of the service volume).

### Needs Assessment and Future Traffic Projections

There have been a number of traffic improvements within and surrounding the City of Atlantic Beach that have addressed capacity issues on major roadways. The Mayport Flyover addressed the capacity problems experienced at the intersection of Mayport Road and Atlantic Boulevard. The widening of Atlantic Boulevard to six-lanes over the Intracoastal Waterway significantly increased capacity for the improved segments of Atlantic Boulevard. Completion of the Wonderwood Connector has improved traffic patterns within the northeast section of the County. The City is close to build out and the majority of future development will be infill redevelopment. As a result, the city's permanent population is stabilizing and local and collector roadways are not expected to experience significant increases in traffic volume. Therefore, the city is focused on enhancing multi-modal transportation options with a focus on pedestrians and bicyclists and will continue to coordinate with the FDOT, North Florida TPO, and Duval County in doing so. Further, access management is a priority, notably on the city's two arterial roadways, for improved safety for all roadway users.

In 2018, the Mayport Road Vision Implementation Plan was completed. As part of this study, an initial analysis of roadway capacity and level of service (LOS) was performed on the section of Mayport Road south of Dutton Island Road. The analysis demonstrated that Mayport Road currently operates well below its capacity, suggesting that the roadway, in its current state, is wider than needed which encourages speeding and pass-through trips. The Mayport Road Vision Implementation Plan recommends the following transportation improvements to the roadway:

- Reduce the posted speed of Mayport Road from 45 MPH to 35 MPH to improve safety for all users, including pedestrians and cyclists.
- Provide intersection improvements at Plaza and Donner streets, such as bricked crosswalks, gateway signage, bulb-outs and better pedestrian lighting to improve safety.
- Providing enhanced landscaping in the form of street trees within the right-of-way to provide a sense of enclosure and calm traffic.
- Provide pedestrian refuges within existing medians.
- Reduce building setbacks along Mayport Road to define the street edge and enhance the pedestrian experience.
- Initiate a Complete Streets Plan or a Lane Reduction Plan.

**Table B-4. Projected Annual Average Daily Trips (AADT)**

<u>Street</u>	<u>Link</u>	<u>2027</u>	<u>2030</u>	<u>2035</u>	<u>2040</u>
Atlantic Boulevard	San Pablo Rd to Mayport Flyover	56,931	58,968	62,363	65,757
Atlantic Boulevard	Mayport Flyover to Mayport Rd	50,697	52,348	55,100	57,851
Atlantic Boulevard	Mayport Rd to 3 <sup>rd</sup> St.	34,414	35,479	37,254	39,029
Mayport Road	Atlantic Blvd to Dutton Island Rd	34,725	35,745	37,445	39,144

<u>Mayport</u> <u>Road</u>	<u>Dutton Island Rd to</u> <u>Wonderwood Dr</u>	<u>25,286</u>	<u>25,988</u>	<u>27,159</u>	<u>28,330</u>
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Source: Florida Department of Transportation (FDOT)

### **Mass Transit**

Transit service within the City of Atlantic Beach is provided by the Jacksonville Transportation Authority (JTA). The JTA operates two routes through the City. Route 10 is a local route operating along Atlantic Boulevard, connecting the South Beach area of Jacksonville Beach to downtown Jacksonville. Route 24 is the other local route providing a loop between Mayport Village to the north of the City and the Atlantic Village shopping center on Atlantic Boulevard. There is also the Mayport express route operating rush hour service six days a week north of the City between Naval Station Mayport and the Regency area of Jacksonville. The transit routes, which serve the City of Atlantic Beach, are part of a larger system of transit routes that were redesigned as a result of JTA's efforts to enhance service within eastern Duval County. These routes have been successful in meeting the transit needs for the City of Atlantic Beach.

Following the discontinuation of the Beaches Trolley, the JTA partnered with Beach Buggy to provide transportation to residents and visitors of Atlantic Beach. Beach Buggy provides free rides and operates zero-emission, long range, electric carts and passenger vans.

### **Bicycle and Pedestrian Facilities**

In 2021, the City completed a bicycle and pedestrian connectivity plan to serve as a long-range planning tool to shape the direction, development and delivery of on and off-street facilities that help create safe and comfortable connections to neighborhoods, recreation amenities, commercial districts, schools, community centers and the beach, and as a guide to assist with decision-making on matters pertaining to budgeting on and off street amenities. This document analyzed existing conditions, identified opportunities, and provided cost estimates and implementation tools. Previous studies and plans were used to inform this plan including a pathway planning and public participation study in collaboration with the City of Neptune Beach and the City of Jacksonville Beach in 2002. This collaboration produced a general and conceptual plan for a system of bike and pedestrian routes to connect each of the three beach Cities, and also provides for a better system of east-west bikeway connections within each City and to other existing or planned facilities. Based on the findings of the study a priority list of desired routes was developed and the City of Atlantic Beach has adopted a phased development approach to implement the interconnected multi-use path system. The first phase of the City's bikeway plan was completed in 2004. The plan was updated in early 2009, and development of future phases will continue as budget resources permit with consideration to community desires. In addition, the North Florida TPO completed the 2019 Regional Multi-Use Trail Plan which included recommendations for bicycle facilities including bike lanes, sharrows, and wayfinding on local roadways. These recommendations were incorporated into the city's connectivity plan.

Bike and pedestrian facilities continue to be a high priority to this community in order to provide for a high level of recreational activity, energy efficiency and conservation and decreased reliance on vehicular transportation. In 2020, construction was completed on a Safe Routes to School project along Sherry Drive and Seminole Road that links approximately 1.4 miles of residential neighborhoods to the Atlantic Beach Elementary School with an eight foot multiuse path. In 2021, an eight foot multiuse path was completed along a one-half mile stretch of Seminole Road, south of City Hall, which connects residential areas with two parks, city hall, and to commercial businesses. In 2023, an eight foot multiuse path was also

constructed on the north side of Donner Road from Mayport Road to Sandpiper Lane. According to the Florida Pedestrian and Bicycle Strategic Safety Plan, corridors with C3C or C4 context have the highest likelihood of bicycle and pedestrian crashes based on the exposure and risk in these areas. Mayport Road and Atlantic Boulevard, the city's two arterial roadways, are designated as C3C and C4 roadways. To improve bicycle and pedestrian safety on Mayport Road, a lane re-purposing project that will include a shared use path along the east side of Mayport Road is included in the North Florida TPO's 2023-2027 Transportation Improvement Program (TIP). See Map B-4 for existing and planned bicycle and pedestrian facilities.

## **B. Transportation Element Goals, Objectives, and Policies**

All transportation related activities within the City of Atlantic Beach shall be in accordance with the following Goals, Objectives, and Policies.

### **Goal B.1**

**The City shall provide a safe, reliable and efficient roadway system with reasonable operational and maintenance characteristics.**

#### **Objective B.1.1**

##### **Safe Roadway Conditions**

The City shall develop and maintain a roadway system that provides the safest possible environment for motorists, bicyclists and pedestrians.

**Policy B.1.1.1** The City shall maintain a program to promote the safety of all activities occurring on streets and within right-of-ways under the City's jurisdiction.

**Policy B.1.1.2** The City's Department of Public Works shall be responsible for the planning, review, supervision and coordination of all activities that impact the safety characteristics of the roadway system.

**Policy B.1.1.3** The City shall develop and maintain its roadway system in accordance with the minimum criteria as set forth within the FDOT's Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways.

**Policy B.1.1.4** The City shall require warrants for installation of new traffic control devices and coordinate their efforts with FDOT.

**Policy B.1.1.5** The City shall coordinate traffic signal systems with FDOT.

## Objective B.1.2

### Construction and Maintenance Standards

The City shall maintain procedures for construction, reconstruction, and maintenance of all city roads, as well as utility and emergency services functions, which provide for safe roadway operating conditions during these activities.

**Policy B.1.2.1** The City shall continue to implement the Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways prepared by the FDOT for minimum requirements of work site safety.

**Policy B.1.2.2** The City shall maintain its program of work site safety, and all roadway plan reviews and permit applications shall be reviewed for compliance with established Maintenance of Traffic and Safety Practices.

**Policy B.1.2.3** The City shall coordinate construction scheduling within the public right-of-ways and shall minimize whenever possible, any adverse impacts to normal traffic flow resulting from such construction.

## Objective B.1.3

### Operating Conditions

The City shall provide streets with operating characteristics that conform to established and accepted standards so as to ensure safe conditions for vehicles, motorists, cyclists, and pedestrians.

**Policy B.1.3.1** The City shall accept the most recent Highway Capacity Manual definitions for Levels of Service, which utilize qualitative measures for establishing the operational characteristics of the various roadways.

**Policy B.1.3.2** The City shall manage land development regulation changes and prioritize transportation infrastructure improvements to meet or exceed the target minimum Level of Service (LOS) and Level of Traffic Stress (LTS) standards, as shown by the following tables.

**Table B-5. City of Atlantic Beach Planning Area Minimum Vehicle Levels of Service (LOS)**

Principal Arterials	Level of Service D
Minor Arterials	Level of Service E
Collector Streets	Level of Service E
Local Streets	Level of Service E

**Table B-6. Minimum Pedestrian Level of Traffic Stress (LTS)**

Roadway Classification	Minimum LTS	Minimum Facilities
Arterial (40 MPH or greater)	2	Continuous 6'+ sidewalk on both sides with vertical and horizontal separation.
Arterial (< 40 MPH)	2	Continuous 6'+ sidewalk on both sides with horizontal separation.

Collector (commercial)	1	Continuous sidewalk on both sides of the road.
Collector (residential)	2	Continuous sidewalk on one side the road.
Local (commercial)	1	Continuous sidewalk on both sides of the road.
Local (residential)		
ADT < 1,000	3	No facilities.
ADT = or > 1,000	2	Continuous sidewalk on one side of the road.

**Table B-7. Minimum Bicycle Level of Traffic Stress (LTS)**

Roadway Classification	Minimum LTS	Minimum Facilities
Arterial	1	10'+ shared use path or separated bicycle lane on both sides of the road.
Collector	2	Shared use path (8'+) on one side of the road or buffered bicycle lanes on both sides of the road.
Local (commercial)	1	Shared use path, bicycle lane, or paved shoulder.
Local (residential)	2	No facilities.

**Policy B.1.3.3** The City shall make vehicle LOS determinations on an as needed basis by utilizing Average Daily Traffic (ADT) and/or peak hour data with the methods established in the most recent Highway Capacity Manual.

**Policy B.1.3.4** The City shall maintain provisions for landscaping and other buffering methods within the Land Development Regulations so as to prevent inappropriate land use relationships; prevent noise transmission; provide screening of unattractive views; and enhance the aesthetic qualities of streets, neighborhoods, and public areas of the City.

**Policy B.1.3.5** The City shall support the incorporation of bike paths and pedestrian way systems in the design of new roadway facilities and the upgrading of existing facilities in accordance with accepted design standards and in response to the demonstrated need for such facilities based on applicable data or information.

## Goal B.2

**The City shall provide an integrated system of streets that encourage and facilitate coordinated and compatible land use patterns, including the integration of private development with public transportation facilities.**

### Objective B.2.1 Operating Standards

The City shall meet all accepted design and operating standards in the design and construction of all streets within its jurisdiction.

**Policy B.2.1.1** The City shall coordinate with FDOT for the incorporation of minimum standards for roadway construction, reconstruction and maintenance for City streets as presented in

FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways and the FDOT Access Management Manual.

**Policy B.2.1.2** Minimum design standards for the construction of new streets or the reconstruction of existing streets shall be in accordance with FDOT roadway and traffic design standards.

**Policy B.2.1.3** Traffic control devices on private property shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, as published by the U.S. Department of Transportation, Federal Highway Administration.

## Objective B.2.2

### Private Driveways and Access Management

The City shall, to the extent feasible, provide for the satisfactory resolution of conflicts between the public roadway system and private driveways and parking areas in order to enhance public safety as well as existing and future neighborhood environmental conditions.

**Policy B.2.2.1** The City shall ensure proper management of the connections and access points of driveways and private roads to State roadways by coordination of development permitting with FDOT to achieve applicable design standards.

**Policy B.2.2.2** The City shall protect existing and future right-of-ways from building encroachment by on-going coordination with the North Florida TPO and FDOT to establish right-of-way requirements for future widening projects prior to issuance of development permits.

**Policy B.2.2.3** New development sites and redevelopment sites shall be required, where possible, to provide for interconnectivity and the sharing of existing access points to major arterials. Public streets shall not be used as an integral part of the internal circulation pattern of a commercial development.

**Policy B.2.2.4** The City shall coordinate traffic planning and development permitting with State and Federal agencies so as to assist in implementing air quality improvement programs. As part of the North Florida TPO, air quality status and future projection levels are monitored. FDOT uses the Northeast Florida Regional Planning Model (NFRPM) to monitor air quality. The future projections come from estimated building permit, housing and traffic projections provided by each entity in North Florida area.

**Policy B.2.2.5** The City shall continue to enforce land use and subdivision regulations to provide for the safe and convenient on-site traffic flow, considering motorized and non-motorized traffic movements and parking requirements.

**Policy B.2.2.6** The spacing and location of access points shall be predicated upon reducing conflicts between and among motor vehicles, pedestrians, and bicyclists.

## Objective B.2.3

### Provision of Sidewalks, Bikeways and Multi-use Facilities

All new right-of-ways established within the City shall be of adequate width to provide for bikeways, sidewalks or similar facilities as required to encourage safe and increased pedestrian and bicycle activity. Where possible, existing right-of-ways should provide for bikeways, sidewalks, or similar facilities to encourage safe and increased pedestrian and bicycle activity.

**Policy B.2.3.1** All new streets, including unimproved existing right-of-ways, shall be constructed to provide for safe use by bicycles, and where sufficient right-of-way exists, separated bicycle paths shall be provided.

**Policy B.2.3.2** All new residential developments containing five or more dwelling units shall provide for internal sidewalks, bike paths, or multi-use paths, and it shall be the responsibility of the developer to construct such facilities and to provide connections to any other such public facilities existing on adjoining lands.

**Policy B.2.3.3** All existing rights-of-way shall be reviewed when resurfaced, redesigned or modified to provide for bikeways, sidewalks, multi-use paths, or similar facilities throughout the city to provide linkages to schools, parks, and other destination points.

**Policy B.2.3.4** The City shall seek opportunities to repurpose or add new rights of way to enhance connectivity for pedestrians and bicyclists.

## Objective B.2.4

### Coordination with Transportation Agencies

The City shall coordinate its transportation related activities with the plans and programs of all transportation facility providers including the North Florida Transportation Planning Organization (TPO), the Jacksonville Transportation Authority (JTA), and the Florida Department of Transportation (FDOT).

**Policy B.2.4.1** Coordination of transportation activities should include the following:

- Supervision and/or coordination of all activities to promote safe and efficient operation.
- Coordination of all activities to provide consistency within a given jurisdiction.
- Coordination with adjacent jurisdictions to develop a compatible transportation system.
- Coordination with other transportation modes to promote overall transportation efficiency.

## Objective B.2.5

### Energy Efficient Strategies

The City shall maintain its existing street patterns, which have developed to provide a network of connected neighborhoods and an ability to walk, bike and travel throughout the City with minimum vehicular travel miles and minimal traffic congestion.

**Policy B.2.5.1** New retail and commercial services development and redevelopment shall be designed to provide maximum opportunity for accessibility to transit, for pedestrians and bicycles and where possible, shall connect to adjacent commercial uses.

**Policy B.2.5.2** Strategies to promote mixed-use development and redevelopment in appropriate locations, which shall be those locations that currently have Commercial land use designations or High Density Residential land use designations, and where adjacent to other commercial development or adjoining commercial corridors, shall be used to provide opportunities for living in proximity to the workplace as an alternative housing and transportation choice.

**Policy B.2.5.3** Mixed-use development and redevelopment as described in the preceding Policy shall not be construed to permit industrial or intense commercial activities in combination with or close proximity to new or existing residential uses, but rather to provide for an appropriate mix of residential and neighborhoods serving retail, services and office types of uses where the need for vehicular miles travelled can be minimized.

**Policy B.2.5.4** The City may require new development and redevelopment to support alternative modes of transportation through such measures including, but not limited to, the provision of sidewalks, bikeways, transit stops or other facilities that support alternative modes of transportation.

## Goal B.3

**The City shall work towards developing an integrated and connected multimodal transportation system of Complete Streets that serves all neighborhoods.**

### Objective B.3.1 Complete Streets

Transportation projects shall strive to create a network of continuous bicycle- and pedestrian-friendly routes, including routes that connect with transit and allow for convenient access to work, home, commercial areas, and schools.

**Policy B.3.1.1** All new construction and reconstruction of roadways shall be planned, designed, constructed, and maintained to benefit all users, with consideration given to land use context, right-of-way availability and costs.

**Policy B.3.1.2** The City shall consider all elements of the right-of-way and utilize all applicable Complete Streets policies as part of roadway repaving and resurfacing projects.

**Policy B.3.1.3** The City shall work to ensure the gradual implementation of Complete Streets policies on existing streets, and incorporate these policies into applicable projects included in the Capital Improvements Program.

**Policy B.3.1.4** Street trees, landscaping and amenities that provide shade and promote aesthetically pleasing and comfortable environments for walking and cycling shall be incorporated into Complete Streets projects.

- Policy B.3.1.5** Promote infrastructure that facilitates crossing of the right of way, such as accessible curb ramps, crosswalks, refuge islands and pedestrian signals, where applicable.
- Policy B.3.1.6** Promote complete streets that contribute to the slowing down of traffic, reduce pollution and emissions, improve environmental quality and provides for local economic opportunities, where applicable.
- Policy B.3.1.7** The City shall request that Complete Streets policies are incorporated into projects funded by outside agencies such as FDOT.