Jacksonville Transportation Authority

MOBILITY ACCESS PROGRAM

August 2015
COMMENTS AND SUGGESTED REVISIONS

The System Planning department at the JTA welcomes your comments and suggestions for revisions to this handbook. Please use this form and mail it to:

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**INTRODUCTION**

**1.1 Jacksonville Transportation Authority (JTA)**

The mission of JTA is to improve Northeast Florida’s economy, environment and quality of life by providing safe, reliable and efficient multimodal transportation services and facilities.

The JTA provides a number of transportation options to the community. These include fixed-route bus, Skyway, Trolley, community shuttle, JTA Connexion (paratransit), and stadium shuttle services. All fixed-route buses are equipped with lightweight bike racks for the convenience of cyclist, who ride the bus and JTA vehicles are ADA accessible. JTA also builds roads and bridges.

More information regarding JTA and its services can be found at jtafla.com.

**1.2 What is MAP?**

The Mobility Access Program (MAP) was initially established by JTA in 2003 to provide bus stop guidelines throughout the service area. JTA’s intent for developing MAP was to fulfill a number of objectives both directly and indirectly related to the provision of transportation services. Those objectives are as follows:

- Improve access to transportation services
- Promote safety and security on transit vehicles and at stops
- Ensure the satisfaction of its customers
- Accommodate neighborhood “place” in the design of transit stops
- Improve the operations of transportation services
- Promote local government and private sector partnerships
- Coordinate land use with the provision of transportation services
- Provide opportunities for developments along the service routes to encourage Transit Oriented Development

Additionally, JTA desires to address accessibility and promote public transportation utilization throughout Duval County and northeast Florida.

**1.3 The Implementation of MAP**

To help execute the objectives and goals the MAP handbook was prepared by JTA. This document can be utilized by contractors, consultants and local governments as part of their planning and zoning process as well as communities seeking to further the accessibility and mobility of residents and visitors. It also serves at the official guidelines for JTA staff.

Many of the MAP standards are JTA specific enhancements based on various resources, such as:

- FDOT Accessing Transit
- FDOT Transit Facilities Guidelines
- FDOT Design Standard Index
- City Ordinance Code
- Manual on Uniform Traffic Control Devices (MUTCD)
- American Association of State Highway and Transportation Officials (AASHTO)
- Federal Register, 49 CFR Parts 27 and 37
- Florida Administrative Code
- ADA Accessibility Guidelines for Buildings and Facilities

When referencing these publications, it is the user’s responsibility to ensure use of the latest version of these manuals.
2 DESIGN GUIDELINES

2.1 Classification of Bus Stops

MAP has been established to improve the access, safety, security, operations and aesthetics of transit stops. Bus stop classifications are designed to assist in the organization of standards and guidelines for the appropriate level of features relative to customer activity and transit service design.

There are six classification types for bus stops in the JTA fixed-route system. They are as follows:

- Local Bus Stop
- Bus Stop with Bench
- Bus Stop with Shelter
- High Frequency Corridor Stop
- Neighborhood Hubs
- Park-n-Ride Facilities

First Coast Flyer (FCF) stations, Skyway, intermodal facilities and Park-n-Ride facilities are higher-level stop classifications that typically represent increased transit infrastructure investments. As a result, they will be defined and designed on an individual basis in conjunction with JTA staff. However, it is important to recognize that many of the infrastructure and design considerations included in this handbook have application to them as well.

For the classification of transit stops, the main criteria is the amount of passenger volume activity that typically occurs at a location. The potential for bus passenger activity at any particular stop can be influenced by a number of variables, including the population density of the surrounding area, the intensity and types of nearby land uses, the accessibility and design of the site and the condition of adjacent traffic facilities. In addition, transit service design can impact stop design requirements, such as in the case of route structure necessitating the transfer of passengers between routes.

In addition to the potential for bus passenger activity, the following general system characteristics are also used to classify transit stops.

- Consistent spacing
- Increased concentration in downtown and activity centers
- More distance between stops
- Orientation of design and access
- Location relative to the intersection [near-side, far-side, mid-block]
- Visibility
- Relationship to roadway
- Ridership

The following criteria are used when evaluating the location of a transit stop:

- Right-of-way availability
- Pedestrian access
- ADA accessibility
- JTA safety evaluation
- Bus route design
- Turning requirements
- Stop spacing
- Land use trip generation
- Customer requests
- meaugBus operator recommendations

2.1.1 TYPE 1 - Local Bus Stop

Local bus stops are defined as stops that have the lowest passenger boarding and alighting volumes. These stops account for the majority of JTA’s service stops and provide for system access over a large geographical area.

Curb cuts and sidewalk connections are also typical in order to satisfy pedestrian and ADA requirements. The JTA departments that will review and approve requests for new stop locations consist of the following:

- Long Range Planning and System Development
- Facilities
- Transit Operations
- ADA
- Safety and Security

Additional infrastructure improvements may exist at these stops based upon community and/or private sector investments.

The following amenities are essential for a local bus stop:
1. Sidewalk connectivity
2. Bus stop signage with route identification
3. ADA landing pad

The local bus stop signage must display the route numbers that serve the stop and the stop number. See Appendix C for the JTA bus stop sign details.

When installing JTA bus stop signs, the following guidelines are adhered to:

- Route indicators must be included per ADA
- Must be installed outside the accessible path with 5 ft. minimum sidewalk clearance maintained

Although there are many existing locations with signage installed in the grass or within the concrete, the preferred JTA installation method is surface-mounted. The location of the bus stop sign should align with the front of the bus when stopped.

Further design details for local bus stops can be found in the FDOT Accessing Transit.
2.1.2 TYPE 2 – Bus Stop with Bench

A Type 2 bus stop is characterized as a stop with low intensity land use that usually has a ridership of 15 or more.

The following amenities are essential for a Type 2 bus stop:
- Sidewalk connections
- Bus stop sign with route information
- Concrete boarding and alighting pad
- Bench

There are two different types of benches encountered at Type 2 bus stops:
- JTA-owned Bench
- Leased Bench

Although bus benches are not a requirement, they are recommended when a shelter with seating is not provided and if passenger waiting period will be longer than 15 minutes. The preferred bench type is the strap-metal with a back.

When installing benches, the following guidelines must be adhered to:
- Maintain minimum dimensions per ADA in Section 2.5
- Install outside the clear zone in non-curbed areas
- Maintain a minimum of 5 ft. clearance for pedestrian and wheelchair traffic on all sidewalks
- Coordinate with local jurisdictions and state regulations

The FDOT Accessing Transit manual is a great resource for additional information regarding design of a bus stop with bench. The JTA Facilities Department can assist with amenities and maintenance concerns.

2.1.3 TYPE 3 - Bus Stop with Shelter

Type 3 bus stops with shelters go in where a stop has over 40 boardings or where a group of nearby stops equal 40 boardings. A shelter may be placed at one of the locations. For special circumstances involving the elderly, disabled and children, please contact the JTA System Planning department for approval prior to installing a shelter.
The following amenities are essential for Type 3:
- Bus stop sign with route
- Paved shelter pad with landing area
- Passenger shelter
  - Standard 2 ft. x 10 ft. or 5 ft. x 10 ft.
  - Bench seating for 2-4 persons
  - Solar lighting when possible
  - System map
  - Trash receptacle
  - Bike rack

2.1.3.1 Ad Panel vs. Non-Ad Panel Shelters

The typical size of an ad panel is 5 ft. deep, and the depth of the non-ad shelter is only 2 ft. However, the differences are much more complex than a mere 3 ft. dimension.

City of Jacksonville Ordinance 2009-401-E determines where an ad panel may be utilized based on the zoning limitations. The proximity of residential housing, side drains, driveways, as well as fire hydrants are all additional factors to consider. Once the minimum zoning requirements have been determined, the following additional design criteria must be adhered to prior to the installation of a JTA shelter:
- Line of sight
- Clear zone
- Right-of-Way

The FDOT Design Standard Index is a great resource for additional information regarding line of sight and clear zones. For right-of-way verifications, contact the FDOT Right-of-Way office. The contact information is found in Appendix A.

As stated previously, the type of shelter to be installed will vary based on the location. Please contact JTA System Planning Department for the correct type of amenities and proper installation. See Appendix G for sample shelter sizes and amenities.

2.1.4 TYPE 4 - High Frequency Corridor

High frequency transit corridors represent the primary corridors for transit service. They are characterized by high ridership and frequent service. The passenger amenities are consistent with this high level service. The minimum ridership must be at least 80 boarding passengers per day to add a large shelter to a bus stop. For special circumstances involving the elderly, disabled and children, please contact the JTA System Planning Department for approval.

The following amenities are essential for Type 4 transit stops on high frequency transit corridors:
- Sidewalk connections
- Bus stop sign with route and system map holder
- Paved shelter pad appropriate to shelter size with minimum 5 ft. x 8 ft. paved landing area for ADA accessibility
- Passenger shelter
  - Large size 2 ft. x 15 ft. or 5 ft. x 15 ft.
  - System map
  - Seating for six to eight persons
  - Solar lighting when possible
- Trash receptacle
- Bike rack

A high frequency corridor stop can be appropriate anywhere on the JTA Frequent Transit Network where boarding meet the requirements of Type 4. When appropriate, the following amenities may also be incorporated:
- Real-time Passenger Information variable message sign
- TVM (Ticket Vending Machine)
- LCD screen

Electronic equipment is only installed where power is readily available, which is not likely, unless it becomes part of another major project. Please note provisions must be made for the electronic equipment connections and required communications systems. Coordination with JTA’s Technology and Innovation Department is mandatory. JTA encourages bus pull-off bays at lay overs.
locations such as the Jacksonville Beach area. Please see the FDOT Accessing Transit for further information.

2.1.4.1 First Coast Flyer Bus Rapid Transit (BRT)

BRT corridors are high frequency bus corridors that JTA has branded as the First Coast Flyer. They have 10-minute peak and 15-minute off-peak headways and offer limited stop service.

The following amenities are for Type 4 transit stops on First Coast Flyer (BRT) corridors:
- Sidewalk connections
- Bus stop signs with route
- Paved boarding area equal to 12 ft. x 120 ft.
- Two large size 5 ft. x 16 ft. passenger shelters
- Two seating benches
- Electricity
- Lighting
- Two trash receptacles
- Two bike racks
- Totem 10 ft. with Real-time Passenger Information variable message sign
- TVM (Ticket Vending Machine)

JTA's First Coast Flyer has the following features:
1. Bus Queue Jumps - a type of roadway geometry used to provide preference to buses at intersections consisting of an additional travel lane on the approach to a signalized intersection restricted to transit and emergency vehicles only.
2. Transit Signal Priority (TSP) - a signal preference for transit and emergency vehicles to improve service and reduce delay at intersections (or junctions) controlled by traffic signals.

Provisions must be made for the electronic equipment connections and required communications systems. Coordination with JTA’s Technology and Innovation Department is mandatory. Bus pull-off bays are required where appropriate. See the FDOT Accessing Transit for further information.

2.1.5 TYPE 5 - Neighborhood Hubs

A neighborhood hub is a larger bus staging area used where multiple services come together at a point in the system. It may also be a new hub with a development of 500 to 1,000 residential units. Most important for a neighborhood hub is for it to be a public space that has a relationship with the community in which it is located. The neighborhood hub acts as a community focal point and a transit system destination/transfer station. Neighborhood hubs may function as key access points to corridor service development of express and/or bus rapid transit services.

In addition to the minimum requirements for the Type 4 transit stop, the Type 5 neighborhood hub needs a high volume of customers, frequency of buses and significant JTA route transfer activity.

To be designated as a neighborhood hub, JTA uses the following criteria:
- Major development trip generator
- Large passenger volumes
- Property rights
- Pedestrian access
- ADA accessibility
- JTA safety evaluation
- Bus route operational characteristics
- Stop spacing
- Land use trip generation
- Customer requests
- Bus operator recommendations

The following amenities are for a neighborhood hub:
- Multi-route identification kiosk
- TVM
- Bus staging area
- Paved shelter pad based on shelter size including required ADA 5 ft. x 8 ft. landing
- Specialty passenger shelter
  - Very large size or multiple large size shelters
  - System map
  - Seating for at least six to eight persons
  - Solar lighting when possible
  - Real-time Passenger Information variable message sign
- Trash receptacle
- Landscaping
- Bike rack

2.1.6 TYPE 6 Park-n-Ride Facilities

Park-n-Ride facilities are vehicle parking lots with public transport connections that allow commuters and other people to leave their vehicles while they travel outside the area. They may travel by transit, Skyway or carpool. Park-n-Ride lots intercept traffic flowing through a commuter shed toward a major employment destination.

To be successful, it is recommended that the following conditions must be present within the urban region for Park-n-Ride programs:
1. High parking costs in the urban core
2. Long commute times
3. Heavy roadway congestion
4. High fuel prices

Successful Park-n-Ride lots also include the following characteristics:
- Distance – Located not less than five miles, and preferably 10+ miles from work areas
- Major congested corridor - Located along a major travel corridors having severe traffic congestion and long commute times
- Safety - Located to be highly visible from the approach roads that serve the major commuting corridor(s) and well-lit for safety purposes
- Easy access
- Community integration – Provides easy access to transit service
- High land use densities in the broader areas surrounding the lot
- Frequent transit service during peak hours
- High parking costs – Parking costs at destination significantly higher than the combined costs of the Park-n-Ride lot plus transit use
- User amenities

The JTA Park-n-Ride Manual provides more detailed guidance when planning Park-n-Ride facilities.

2.2 Placement and Spacing of Bus Stops

The willingness of choice riders to use public transportation instead of their automobiles is directly dependent on the convenience with which they can access the system. Bus stop spacing and locations are significant factors in designing for convenient access to public transportation. The minimum requirements for bus stop placement are as follows:
- Must be on an accessible route
- May be on paved shoulder or sidewalk
- Must have accessible approach
- Slope requirements must be maintained
- Must be firm, slip-resistant and stable surface

2.2.1 Bus Stop Spacing

For transit system planning purposes, it is a common rule-of-thumb that people are willing to walk up to one-quarter of a mile to reach a bus stop. Following this general principle, it is logical that local bus service routes should be spaced no farther than one-quarter mile apart to provide the greatest coverage to an area. Well-connected, grid street patterns provide better access to transit lines than curvilinear streets with few route options.

2.2.2 Factors for Proposed Locations

Common to all stops is a basis for determining the location of new bus stops within the JTA service area. Each new bus stop location takes into consideration a number of factors, including the following but not limited to:
- Spacing along the route
- Location of the expected primary passenger traffic generator
- Traffic safety
- Pedestrian safety and access
- Availability of adequate right-of-way
- Curb clearance
- Operational effectiveness issues
- Security

Because of the number of factors involved, each new or relocated stop must be examined on a case-by-case basis to ensure that all of these issues are addressed satisfactorily. However, general guidelines for stop spacing and placement are included in the following sections.

2.2.3 Stop Spacing Standards

Bus stop spacing is an important consideration in the placement of stops. Through JTA’s Route Optimization Initiative (ROI), the current standards in Section 2.2.4 were developed. It has a significant influence on a person’s decision to utilize transit, and also can impact transit vehicle operation and the overall performance of a transit system. Bus stops should be close enough to maintain reasonable walking distance, but must be balanced with the increase in travel time that occurs with many closely spaced stops. JTA’s service standards based on ROI are located in Appendix E.

Available right-of-way, density of the surrounding geographical boundaries, existing and potential ridership in the area, traffic conditions, and route operations/efficiency should all be considered in the spacing of stops.

In short, spacing should be appropriate for the level of service provided along a corridor, with longer stop spacing on major corridors or those with high ridership.

While these spacing standards are the general rule, exceptions may be made in special circumstances.
2.2.4 Bus Stop Location

The actual location of bus stops can influence the convenience of transit access, which, in turn, can impact ridership. JTA’s large buses cannot efficiently maneuver through most parking lots. Therefore, JTA bus stops usually are located on the street, rather than at building entrances. Accessible walking paths should be made in site plans that accommodate pedestrians as they walk between bus stops and building entrances.

Bus Stop Location Considerations

Near-Side Intersection

Advantages

• Minimizes interference when traffic is heavy on the far side of the intersection.
• Passengers access buses closest to crosswalk.

Disadvantages

• Conflicts with right turning vehicles are increased.
• Stopped buses obscure curbside traffic control devices and crossing pedestrians.
• Sight distance is obscured for crossing vehicles stopped to the right of the intersection.
• Through lane may be blocked during peak periods by queuing buses.
• Increases sight distance problems for crossing pedestrians.

Mid-Block

Advantages

• Minimizes sight distance problems for vehicles and pedestrians.
• Passenger waiting areas experience less pedestrian congestion.

Disadvantages

• Requires additional distance for no parking restrictions.
• Encourages patrons to cross street mid-block (mid-block crossings can alleviate safety problems.)
• Increases walking distance for patrons crossing at intersections.

Far-Side Intersection

Advantages

• Minimizes conflicts between right turning vehicles and buses.
• Provides additional intersection capacity by making curb lane available for traffic.
• Minimizes sight distance problems on approaches to intersection.
• Encourages pedestrians to cross behind the bus.
• Requires shorter acceleration and deceleration distances for buses.
• Gaps in traffic flow are created for buses re-entering the traffic flow at signalized intersections.

Disadvantages

• Intersections may be blocked during peak periods by queuing buses.
• Sight distance is obscured for crossing vehicles stopped to the right of the intersection.
• Increases sight distance problems for pedestrians.
• Conflicts with right turning vehicles from side street can result.
• Rear-end collisions can increase, as motorists may not expect buses to stop after clearing the intersection.


When considering new bus stop locations and size, the designer should always consider single family residential properties as well as the preservation of trees when possible. Since street corners naturally attract development, typically are equipped with pedestrian crosswalks and often provide intersections with two major routes, they serve as the best locations for transit stops.

Sometimes block lengths are long and increase walking distances to mid-block land uses. When this scenario is present, mid-block transit stop locations often are used to provide more direct transit linkages to area land uses.

There are both advantages and disadvantages to the placement of stops at either near side, far side or mid-block locations. Along with the land use mix of the area to be served by a transit stop, these disadvantages and advantages should be reviewed to ensure a location that will present transit riders with the most convenient access while minimizing traffic congestion and safety concerns.

For JTA, the bus stop location standards are as follows:

• A far-side stop is preferred in all locations where obstacles do not exist to such a stop.
• A near-side stop should be used only where a safe far side location is impossible.
• A mid-block stop only should be used in instances where activity centers are substantial distances from an intersection.

2.2.5 Relationship to Land Use Development

In addition to the previous general spacing and placement guidelines, local planning and zoning reviews shall consider site specific needs for transit access by addressing requirements during the development review process. Trip generation data provided by a development application should be used appropriately to determine the quantity and transit stop type needed for development approval.
2.3 Design of Bus Stops

2.3.1 Bus Stop Dimensions

Information regarding typical dimensions for JTA’s on-street bus stops by type of stop is provided in the FDOT Accessing Transit manual.

2.3.2 Bus Stop Layout

The standard for the placement of JTA bus stop signs is for the sign to be located at a position that would correspond to the front of a bus when it is stopped to board passengers (i.e. near the front door of the bus). This will help passengers understand where they should stand to wait for a bus; it also will provide a visual cue for bus operators to help them position their vehicles at the stop. Additional information regarding bus stop layout is provided in the FDOT Accessing Transit manual.

2.3.3 Bus Shelters

The dimensional standards for JTA’s typical shelter types are illustrated in Appendix G. The neighborhood-specific design criteria that will embellish and enhance these shelters are included in the previous discussion of JTA’s typical shelter types. For additional information on bus shelters, contact the JTA Project Development and Construction Department.

2.3.4 Bus Shelter Placement

When considering bus shelter placement, the minimum shelter setback from the curb is 4½ ft. However, the desired shelter placement for locations with sufficient right-of-way available includes a setback of at least 6 ft. Additional information regarding the placement of bus shelters is provided in the FDOT Accessing Transit manual. Proper consideration for sight distance from intersections and road offsets for horizontal clearance requirements are imperative. FDOT line of sight (FDOT Standard Index 546 – Sight Distance) and clear zone (FDOT Standard Index 700 – Road Offset) requirements are discussed in full detail within the FDOT Design Standards manual.

2.3.5 Bus Pull-Off Bays

JTA bus stops that are located on roads with large traffic volumes typically have high ridership or otherwise need longer dwell time. These types of areas are candidates for bus pull-off bays. Pull-off bays enable safe passenger loading and unloading without causing traffic delays.

Bus bay pull-offs are not bus passenger amenities. We install them on busy streets at layover locations, since we should only stop in the moving lane when passengers are boarding or alighting.

In the future, one potential application for bus pull-off bays that JTA will consider is the implementation of a pull-off bay on a high speed corridor that is utilizing signal priority for transit.

2.3.6 Pavement Composition

Bus Lane

Roadway pavements must be able to withstand the axle loads that JTA buses apply on a regular and repetitive basis. Areas of particular concern are those that accommodate bus starts, stops and turns because of the increased loads associated with these movements. Therefore, the pavement composition of the streets and roadways that are regularly utilized by buses is an important design consideration. For design specifications for pavement composition for different situational cases, FDOT Design Standards Manual is to be used.

It is important to recognize that exact pavement design will need to be based on particular site-specific characteristics, such as average daily traffic volume and the condition and resistance of the soil at that location. For bus pull-off bays, a standard 9-inch thick fiber reinforced 4,000 psi concrete pad is recommended.

Bus Shelter Pad

In the case of the implementation of a paved shelter pad, the size of the pad will be an important consideration. A 10 ft. x 30 ft. concrete pad is the standard size for a JTA bus stop. However, the minimum size for a bus stop pad should not be less than 8 ft. x 20 ft. to maintain ADA compliance. A typical paved bus stop shelter pad is shown below. The pad’s length should be based on the maximum length of the buses that will be accessing the stop, as well as the number of buses that will be using the stop simultaneously. Pavement markings must comply with maintaining agency regulations and standards in the MUTCD.
2.4 Bus Stop Infrastructure

One method for helping make transit more attractive to potential riders is to improve the level of infrastructure available at JTA bus stops. A stop with seating and a shelter is much more inviting than a stop that consists of only a JTA bus stop sign. These infrastructure improvements also will improve the comfort and overall transit experience of patrons. Depending upon area type, ridership volume and frequency and transit stop classification, the infrastructure found at JTA facilities may vary. Some of the potential infrastructure items that may be incorporated into the range of current JTA facilities can include the following:

- Curb ramp
- Passenger mobility information
- Restrooms
- Water fountain
- Real-time passenger information
- Security camera
- Shelter
- Trash receptacle
- Bike rack
- Solar lighting
- System route map and schedule
- Information kiosk
- Textured/colored paving
- Bus pull-off bay
- Lighting
- Bollards
- Landscaping
- Bench
- Telephone
- LCD screens
- TVM
- Shopping cart storage
- Automobile parking
- Concrete bus pad

2.4.1 Sustainability

JTA is committed to making sustainability a part of its overall strategic objectives. By identifying sustainability champions and allocating proper resources, JTA has set baseline measurements on key indicators.

To accomplish these objectives, JTA has developed a sustainability program including the following initiatives:

1. Reduce energy usage and greenhouse emissions
   - Solar-powered lighting
   - LED (CAD/AVL) panels
   - Installation of occupancy sensors
   - Automatic light timers at Skyway stations
   - LED lighting at various locations

2. Reduce water usage and stormwater runoff
   - Installation of low flow aerators
   - Pervious pavement at Park-n-Ridelots
   - Sustainable landscape standards

3. Reduce, reuse, recycle
   - Implementation of recycling program
   - Solar powered trash compactors pilot program
   - Installation of coreless toilet tissue and motion sensor paper towel dispensers

4. Build healthy places and people
   - Transit Oriented Development (TOD) policy in place
   - Bike sharing program
   - Shade trees

2.5 ADA Accessibility Guidelines

It is important to understand the effect that the Americans with Disabilities Act of 1990 (ADA) and its guidelines have on bus stop placement, planning and design. The ADA specifies physical dimension requirements and also seeks to ensure the accessibility of persons with disabilities from their point of origin to their final destination.

In the case of a bus transit trip, the parts of this journey for which JTA has responsibility include barrier-free bus stops and shelters that are connected to sidewalks; nearby curb cuts and other supportive infrastructure; accessible motorbus vehicles that are either low-floor in nature or have operating wheelchair lifts; and user-friendly transit information that meets the needs of persons with vision impairments, including stop announcements.

The JTA developed the Bus Stop Improvement Plan to upgrade existing bus stop locations. It focuses on facility needs over the next 10 years to include shelter upgrades as well as ADA access improvements.

2.5.1 Fixed Route

Following are brief overviews of some of the fixed-route ADA-related design issues that must be considered in the development of new bus stops and/or the refurbishing of old ones.

*Bus Stop Pads*-Bus stops where a lift or ramp is to be deployed should have a firm, stable bus pad with a minimum clear length of 8 ft. (measured from the curb or vehicle roadway edge) and a minimum clear width of 5 ft. (measured parallel to the vehicle roadway).
Accessible Routes—All bus stops should be connected to streets, sidewalks or pedestrian paths by an accessible route that has a minimum clear width of 36 in.

Surfaces—Surfaces must be stable, firm and slip-resistant. Abrupt changes in grade should be avoided and any drop greater than ½ in. or surface grade steeper than 1:20 requires a ramp.

Clear Space—The minimum clear floor or ground space requirement to accommodate a single, stationary wheelchair and occupant is 30 in. by 48 in. and may be positioned for a forward or parallel approach to an object.

Forward and Side Reach—If the clear floor space only allows a forward approach to an object, the maximum high forward reach allowed is 48 in. and the minimum low forward reach is 15 in. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high and low side reaches allowed are no more than 54 in. and no less than 9 in., respectively.

Boarding and Alighting (B&A) Areas—All B&A areas must maintain the following:
- Minimum of 5 ft. x 8 ft. of clear space
- Connection to streets, sidewalks or pedestrian paths by an accessible route
- Minimum clear width of 4 ft. and vertical clearance of 7 ft. from the sidewalk to the bus stop
- Maximum allowed cross slope is 2 percent

Bus Stop Signage—Signs must include route indicators. The wheelchair logo is optional.

Bus Benches—Bench must not obstruct the 5 ft. x 8 ft. minimum B&A area.

Bike Racks—Bike racks may not be installed within the B&A area and must not obstruct the 5 ft. x 8 ft. minimum B&A area.

The following graphic illustrates typical design guidelines and minimum dimensions that must be accounted for in the continuing development of JTA transit stops. Additional information regarding ADA design at bus stops is provided in the FDOT Accessing Transit manual as well as the FDOT Design Standard Index. Specific guidance on design considerations for persons with disabilities can also be found in the latest version of the ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) found at http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards.

The guidelines include considerations for accessible routes, space and reach allowances, wheelchair lifts, passenger loading zones and other related issues that have application to transit. Another resource for best practices regarding mobility transportation concerns is the Easter Seals Project ACTION website found at www.project-action.org as well as ADA.gov.

2.5.2 Complimentary Paratransit Services

Connexion is a complimentary paratransit service provided by JTA. This service is required by the American with Disabilities Act (ADA) for people with disabilities that are functionally unable to use regular accessible fixed-route bus service for some or all of their transportation needs. It also serves people who are Transportation Disadvantaged.

Complimentary paratransit services accommodate patrons within ¾ of a mile from fixed-bus route. To qualify, riders must meet the functional eligibility assessment requirements and be ruled eligible to ride under the ADA. Outside of the ¾ of a mile radius from any bus route, JTA offers the Transportation Disadvantaged (TD) service. Unlike the disabled-based paratransit service, TD is income-based.

In regard to accessible transportation, all JTA vehicles are equipped with ramps or wheelchair lifts to assist passengers upon request. Additionally, accessible boarding for wheelchair users is available in all bus and Skyway stations as well as many of the surface locations. Special accommodations such as braille and large print of all JTA printed documents are available upon request. Other examples of special accommodations that are currently in use throughout the JTA transportation system include the following:
- Ticket Vending Machines (braille and audio options)
- Water fountains
- Skyway elevators equipped with braille
- Reduced fare Star Card
- Wheelchair accessible ADA entry gate at Skyway stations (braille and audio options)
- Warning flashing lights with audio alarm at exposed Skyway rails

To request special accommodations a customer simply contacts JTA Customer Service Department. The contact information is in APPENDIX A. Most requests take approximately seven to 10 days for processing.

The JTA Connexion Quick Reference Guide provides information on reduced fare cards, reservations, service hours and more. It can be accessed on the JTA website at www.jtafla.com. For more information, contact JTA Customer Service.
Top rail logos are 7.83" x 7.83"

Logos and the bottom arrow on the windows are printed on 1-Way Vision

Top arrow on the windows are printed on 180C

Bus numbers are 4"

JACKSONVILLE, FLORIDA

3M Black

Stripes and logos are custom printed on both IJ180C and IJ8171-1-Way Vision color matching:
- Light Red - 819830-EX
- Dark Red - 819702-EX

PAINT (Dupont)

Silver Effect
Black Gloss
Clearcoat
Black - Hubs
Gillig to paint grilles:
- Light Red - 819830-EX
- Dark Red - 819702-EX
Cameras painted to match scheme
Paint chip to cust: ☐ Yes ☐ NO
Sales Eng: TM Date sent: NA
Approved: ☐ Yes ☐ NO
Paint Stencil: ☐ Yes ☐ NO
Hard ☐ Soft ☐

OTHER BUS DESIGN STANDARDS
3 OTHER BUS DESIGN GUIDELINES

3.1 Bus Vehicle Dimensions

It is important to incorporate the critical dimensions of the buses JTA currently operates in the design of its transit facilities. Detailed illustrations of the actual buses in use can be found by contacting the JTA Maintenance Department. They can provide the dimensional design standards required for the accommodation of JTA’s motorbus vehicle fleet. According to Accessing Transit Design Handbook for Florida Bus Passenger Facilities, buses should maintain the following vehicle characteristics:

- Dimensions to establish minimum functional street-side standards
- Impacts of roadway grades on bus performance and operations
- Reinforced concrete pads for high bus volume stops

Typical bus specs are 40 ft. long x 8.5 ft. wide x 11.2 ft. high. However, Appendix D has a list of all current bus dimensions within the fleet.

3.2 Bus Turning Templates

A significant design consideration for transit vehicle movement is the turning radius of a JTA bus. This especially is the case in the design of internal parking lot roads. Below are important factors to consider when designing turning radii:

- Add at least 1.5 ft. for buses with front-mounted bike racks
- Desirable minimum width for traffic lanes used by buses is 12 ft.
- Allow for more turning radii if buses

- Turning speeds > 10 mph
- Making reverse turns
- Turning with limits on sight distance
- Turns with changes in pavement grade
- Turns in areas that restrict the movement of the bus overhang

3.3 Vertical and Horizontal Clearance

One consideration for incorporating safety into the design of JTA transit facilities is ensuring that there is adequate clear zone around buses, particularly at bus stops and stations. This includes making sure that there are no obstructions overhead or along the roadside and that lane widths are adequate to accommodate typical JTA buses. The vertical and horizontal clearances are required not only at JTA bus stops but also along the entire transit route. See the diagram below for clearances.
TRANSIT ORIENTED DEVELOPMENT
4 TRANSIT ORIENTED DEVELOPMENT

4.1 Characteristics of Transit Oriented Development

Improving the design of public transportation facilities not only means improving bus service, bus stops and rail stations, it also means orienting development patterns to be more conducive to transit use. Transit Oriented Development (TOD) encompasses this pattern. Generally, TOD is characterized by compact, more dense activity centers and developments that are served and connected by high quality public transportation services. More efficient service creates “transit-friendly” nodes and corridors, resulting in increased transit use, walking and bicycling. Automobile use is still accommodated in a TOD but is not treated as the sole mode of transportation. Some significant site-related development characteristics that should be considered in a TOD include the location of automobile parking and building location and design. JTA’s Joint Use Development Officer may be contacted for additional information regarding the local bus stop needs.

4.2 Location of Parking

The easiest way to locate buildings close to the street is to move automobile parking away from the street. Vehicle parking does not have to be in the front of a building to be convenient for patrons. When all or part of a parking lot is located behind the building, the development can be made more pedestrian and transit friendly. This design shortens walking distances between transit vehicles and building entrances, as well as between adjacent buildings.

4.3 Building Location and Design

Buildings should be located as close as possible to the street to make them more accessible to those choosing alternative transportation modes. Most of JTA’s bus stops are located on the street to maintain schedules. Entering parking lots is cumbersome and time consuming for large buses. Riding JTA buses, therefore, is friendlier when buildings are also located near the street. Upon exiting JTA buses, passengers will have shorter and more pleasant walk to reach their destination when at least part of the land use fronts the street. Locating at least part of a development on the street also improves aesthetics by relocating automobile parking.

4.4 Clustered Development and Dense Street Corners

To enhance transit friendliness, other building design and location features should be incorporated into new development and redevelopment projects. These include:

- Clustering multiple buildings together
- Developing and filling in street corners first

When more than one building makes up the site (clustered), they should be located close together to minimize walking distances. Existing or new JTA bus stops should be located in a central location to the buildings.

Typically on dense street corners, JTA bus stops are often located at or near street corners, which often serve as natural focal points. Corners should be developed with transit supportive commercial uses, such as convenience stores, fast food restaurants, and services, such as banks and dry cleaners. Such development patterns make it easier for transit users to conduct many of their daily business activities without getting into an automobile.

4.5 Land Use and TOD

Certain land uses are better suited for a TOD than others. Those land uses that are typically of a higher density integrate a mix of uses, and do not have to rely strongly on automobile access for their patronage should be sited in a TOD or other area identified for increased transit, bicycle and walking access. Land uses that cater to the motorist should not be located in an area being developed as a TOD. The table below serve as a guide to the general transit supportiveness of various land uses.

4.6 Pedestrian and Bicycle Access to Bus Stops

4.6.1 Pedestrian Friendly Features

Pedestrian friendly design features are inherently also transit friendly, since all transit trips include a walking segment. Pedestrian friendly features should be incorporated throughout areas serviced by JTA. Pedestrian friendly design factors related to building design and location include:

- Interesting and varied façades
- Shaded, wide, continuous sidewalks and/or plazas linking all probable pedestrian movements
- Comfortable and functional street furniture that is shaded and protected from rainfall
- Buffering from vehicular traffic
- Traffic calming in areas where vehicles and pedestrians interact
- Minimized views of parking areas and other blank spaces
- Pedestrian-scale signage
- Textured, colored pavement and other features to delineate pedestrian areas from automobile areas

**Pedestrian Crossings**

Pedestrian systems and vehicle systems overlap at intersections, posing conflicts between different modes of travel. Marked crosswalks guide pedestrians to walk at the safest location and alert vehicle operators to the potential of a pedestrian’s presence. Crosswalks are essential to bus passengers who may have origins or destinations on either side of the roadway. It is
These include improved bicycle travel facilities between transit, therefore, should also be designed or retrofitted to serve crossing pedestrians. Streets within walking distance from a transit stop should be designed to accommodate pedestrians with an emphasis on pedestrian safety.

**Pedestrian Islands**

Pedestrian islands (also known as refuge islands) are extensions of the median into the crosswalk area in order to improve safety for pedestrians and vehicles. They provide an area within an intersection where pedestrians may safely wait until vehicular traffic clears, allowing them to cross streets. These islands are particularly helpful for older and disabled pedestrians unable to cross the street during the available signal time.

**Raised Pedestrian Crossing/Speed Table**

Speed tables raise the surface of the road over a short distance and promote the smooth flow of traffic at slow speeds at pedestrian crossings. However, they may make travel difficult mechanically and may result in passengers’ discomfort.

4.6.2 Bicycling and Transit

Successfully integrating bicycle transportation with public transportation means more than equipping JTA buses with bicycle racks. Other design improvements can be made to create a convenient intermodal transfer. These include improved bicycle travel facilities between residential areas and transit facilities and improved storage facilities at transit facilities. Examples of bicycle facility improvements that can enhance the integration of bicycle travel with JTA services include the following:

- Bicycle-compatible roadways or bicycle lanes along transit station access roads
- Bicycle paths into and through Park-n-Ride lots
- Priority locations of bicycle parking/storage facilities near the transit vehicle loading zone
- Bicycle paths from neighboring communities that are narrower in length than roadways
- Clearly visible signs using the bicycle symbol for bicycle routes, parking/storage facilities and bus stops serving bicyclists
- Transit station design and siting accommodating to bicycles (e.g. curb cuts at parking locations, locating parking/storage facilities in convenient locations that do not require bicycles to be carried up or down stairs or through crowds of people, and locating parking/storage facilities in clear view of the general public or station attendants)
- Lighting
- Protection from weather conditions at parking/storage sites.

Bicycles are allowed all day on the Skyway, as long as there is room in the train for the bike to ride safely.

**Bike Lanes**

Bike lanes are portions of the right-of-way set aside for exclusive or preferential use by bicyclists. They are designated by striping, signage and surface treatments. If properly designed, bike lanes provide a viable transportation network in a balanced transportation system. Additional information on bicycle facilities can be found in the *Guide for the Development of Bicycle Facilities* published by AASHTO. FDOT has bicycle policies and design criteria that can be found by looking on both the design office website at [http://www.dot.state.fl.us/safety/2A-Programs/Bike-Ped/PedBike Design.shtm](http://www.dot.state.fl.us/safety/2A-Programs/Bike-Ped/PedBike Design.shtm) and the safety office website at [http://www.dot.state.fl.us/safety/2A-Programs/Bicycle-Pedestrian.shtm](http://www.dot.state.fl.us/safety/2A-Programs/Bicycle-Pedestrian.shtm).

Bike networks should connect with other modes of transportation. Use of bikes in combination with public transit ensures improved low-density, urban and suburban public transportation. When designing bike lanes, conflict with other modes of transportation should be minimized. When conflicts are inevitable, the shared area should be marked for visual attention.

When a bus stop is located in a bus pull-off bay for example, a potential conflict will result between bicycles and transit vehicles. To alert to such potential conflicts, dashed line pavement markings are used where buses are allowed to move in and out of bike lanes.

**Bikes on Buses**

Travelling with bikes on buses is a free and convenient option for customers who want to ride their bikes and ride the bus.

**Bicycle Storage**

The popularity of the bicycle as an access mode to transit has increased significantly, especially since the implementation of bike racks on JTA’s buses. The following photographs illustrate the standard bicycle rack design that JTA utilizes. Implementation of proper planning and design is of utmost importance to accommodate bicycle use within the community. These racks will help prevent damage to transit facility infrastructure that can occur due to improperly stored and/or secured bicycles.

**Electronic Lockers**

The JTA is in the process of procuring new electronic bike lockers at select locations throughout Jacksonville in the vicinity of JTA transit centers. The electronic bike lockers will interface with the JTA STAR Card system. All buses have bike racks that accommodate only two bikes at a time. The electronic bike lockers are meant to further strengthen and encourage the connection for patrons who ride bikes and take transit as their means of transportation around Jacksonville.
STANDARD REQUIREMENTS
5 COORDINATING WITH JTA

5.1 Plan Review and Submittals

The purpose of this section is for outside agencies/entities to coordinate plan approvals for bus transit and bus stop station amenities with JTA. Below is some information which you will find helpful with the process. Here are a few main points to keep in mind:

- Your plans will be reviewed by the System Planning department and distributed to the following departments for review and approval: Facilities, Project Development and Construction and the ADA Coordinator through this process.
- Email notifications will be sent out upon completion of the review process by System Planning.
- All documents submitted must be in PDF format.
- Plans that are digitally signed and sealed cannot be locked. (password protected).
- Plan review time frame is 30 days minimum.
- If you have something you need to tell the reviewer, make a PDF and forward to the email provided by the reviewer.

5.1.1 Preliminary Coordination

The focal point of all new bus stops is the placement and design and associated amenities. The key players in coordinating these efforts include: FDOT, City of Jacksonville, Neighborhood Groups, Businesses, Homeowners, Developers, Utility Companies, Sunshine 811 as well as JTA customers.

Proper planning for coordination can make all the difference when seeking a successful design and review process. When submitting plans or other documents to the JTA, the following are crucial for the process to move forward smoothly:

1. Coordination
   - Identify your key contacts
   - Know when and where to meet
   - Understand how things work at JTA
   - Be aware of current related issues
   - Obtain clarity of unanswered questions

2. Review and Comments
   - Obtain review comments in writing
   - Be specific regarding concerns
   - Have realistic expectations

3. Follow-up
   - Return calls promptly
   - Be on time
   - Create practical schedules
   - Be willing to accept input

5.1.2 Jurisdictions

There are certain areas in the JTA transit service area that require specific amenities. The Springfield, Riverside-Avondale and San Marco historic or overlay that restrict advertising and districts require a select style. Downtown Jacksonville is under the review of the Jacksonville Economic Development Commission’s Downtown Development Review Board. Special downtown passenger amenity styles are also required. The JTA facilities manager should be contacted to verify use of the correct historic passenger amenities in these areas in coordination with the City of Jacksonville.

5.2 Provisions During Construction

Roadway construction or improvement projects should have a Temporary Traffic Control Plan, which is a set of specific sheets, references to standard (typical) layouts, and/or notes on roadway plans describing how traffic should be controlled through a work zone. If a road improvement project affects transit services, transit agencies should be involved in the planning of traffic control during construction. The following should be considered while drafting the traffic plan:

- Traffic control devices should not be placed in locations where they will block transit stops or passenger access to stops.
- When detours are required, the geometry of the detour route should be compared against the operational requirements of transit vehicles.
- While designing detours, ADA requirements should be considered.
- If a transit stop or route needs to be relocated, appropriate signage and advance notification to passengers should be provided.
- Contact the JTA transit amenities coordinator for assistance 14 days in advance.

At transit stops, provisions should be made to ensure passengers can safely board and depart from transit vehicles. For instance, careful consideration should be given to transit operations and necessary arrangements should be made to minimize inconvenience to transit patrons.
5.2.1 Public Notice Mailing Procedure

This procedure is designed to ensure the public (businesses, property owners or persons within 300 ft. of the center line) receive notification 14 days in advance of the start of any construction or pre-construction projects.

1. JTA External Affairs (EA) department requires three weeks advance notification for mailings of less than 300 pieces.
2. Any mailings requiring 300 pieces or more must be submitted four weeks in advance.
3. The requestor will provide EA with an excel spreadsheet consisting of occupants and owners (if names are not the same), project specifics and a first draft of the communication. If the construction causes a bus route to deviate from its normal travel pattern, EA may design/create the appropriate collateral as a communication tool to notify customers and businesses of the inconvenience. The distribution may require additional outreach effort on the part of the consultant or the requesting department.

Appendix H contains template and signage examples. For more information, contact the JTA EA Department.

5.3 Permitting

For placement of benches and shelters, Rule 14-20 Florida Administrative Code (FAC) places the permitting process for state right-of-way with the local jurisdictions. The best practice is to coordinate with the local jurisdiction issuing the permit. Also, contacting the FDOT maintenance office and working with the District ADA Coordinator for ADA-related concerns would be beneficial.

5.4 Roadway Requirements

While FDOT is responsible for construction, maintenance and operation of state roads and transit facilities along state roads, non-state roads are maintained by local and county governments. Typically, county governments are responsible for traffic operations and other issues related to county roads. Local roads are mostly under the jurisdiction of local governments and constitute a high proportion of roadway mileage in the State of Florida. There are guidelines for transit facility related issues applicable to both state and non-state roads.

All applicable departments within the FDOT and/or local or county governments should be contacted during the planning process to identify site specific construction procedures and specifications. Agencies responsible for the following should be contacted during the planning process:
- Utilities
- Electricity supply and maintenance
- Traffic impacts and related issues
- Environmental planning
- Historic preservation
- Adjacent property owners
6 SAFETY AND SECURITY

6.1 Introduction

Safety and security are paramount in all transportation-related activities. The JTA is committed to developing, implementing and improving strategies, management systems and processes to ensure that our public transportation activities uphold the highest level of safety performance and meet or exceed national and industry standards. Based on this level of commitment, many exceptional methods have been adopted by the JTA.

Intentionally designing the environment around bus stops can greatly reduce the vulnerability to crime and is the ultimate objective of crime prevention. Implementation of other methods can greatly reduce passenger exposure to avoidable accident and injury as well.

The Authority was honored with a gold award for bus safety excellence by the American Public Transportation Association (APTA) in May 2015. JTA’s safety program focuses on the quality of training for bus operators, the locations of bus stops and the amount of accessibility and connectivity to each stop.

6.2 Safety Considerations

Well maintained facilities typically lead people to feel safer and more comfortable waiting for the bus and increase choice riders. Two important environmental factors associated with lower crime rates are:

1. Pedestrian presence
2. High visibility

A high pedestrian presence in any particular area of a bus stop provides more surveillance of the environment.

No matter the classification of the bus stop along the fixed-route system, the safety of patrons at bus stops should get top consideration. As such, there is much that can be done through the design of bus transit facilities to ensure passenger safety.

The absence of visual obstructions creates high visibility. This allows law enforcement, passers-by, local business people, passing motorist, random area security cameras, and others to keep an eye on the bus stop. All these measures can aid in the elimination of places to easily hide, lurk or loiter without notice.

6.3 Prevention of Crime

On average, non-transit riders are more likely than transit riders to perceive bus passenger facilities as unsafe and dangerous because of area crime. There is a strong correlation between perceptions of personal security and willingness to ride the bus. Due to these sensitivities and JTA’s desire to increase the number of choice riders, it is imperative to convey to the wider public that bus passenger facilities are safe, secure and crime free.

Safety Programs
JTA participates in the Jacksonville Urban Blight program. This program addresses ways to mitigate urban blight across the city. Additionally, JTA participates in routine Pedestrian Road Safety Audits (PRSA) in conjunction with local law enforcement, the City of Jacksonville’s Road Maintenance and Bicycle/Pedestrian Departments, FDOT as well as architectural and engineering consulting firms. The intent of these safety audits is to identify current roadway deficiencies and make recommendations to improve safety. The ultimate goal is to reduce pedestrian, bike and vehicular crashes.

Lighting
Providing sufficient lighting is paramount at all types of bus stops, especially at stops served by night routes (if street lights do not provide ample illumination). JTA typically installs either solar powered or LED lighting that is both resistant to tampering and energy-efficient.

Landscaping
Because overgrown brush can potentially present a security hazard and obstruct the walkway to bus stops, JTA regularly maintains the landscaping around and near the bus stops and transit facilities. The bus stop environment is also kept free of graffiti and litter, thus sending the message that the bus stop environment is actively looked after and well-kept.

Warning Signage
In addition to the rear bus safety messages, there are decals, signs and placards throughout the JTA transportation system to alert and warn passengers for a safer riding experience.

Mirrors
JTA has strategically placed beveled and low-lying mirrors in various locations throughout transportation system as well as on the bus to enable passengers and the drivers to have a clear view from behind.
**Alarms**
Loud noises from an alarm in conjunction with bright flashing lights help alert passengers to a potential danger for prevention of injuries. These features are located throughout the JTA transit system on infrastructure like the elevators, automatic doors, buses, Skyway, escalators and more. When activated, a similar alarm is activated inside the control center where the surveillance cameras are monitored.

**Security Officers and Local Police**
JTA hires security officers to monitor its facilities and some highly used bus stops and hubs. The Jacksonville Sheriff Office (JSO) is present at the main bus hub and Skyway’s Central Station for the majority of the day. The purpose is to cope with any crime that may occur on the buses and at bus stops as well as provide assistance to passengers in need. The JSO officers not only oversee safety of the ground level in these areas, but they also ride the Skyway while in use.

**Video Cameras**
Depending on the priority, JTA installs closed-circuit video cameras to monitor their transit facilities including some bus stops. Monitored security surveillance is also installed on both levels of each Skyway station and on the buses. These cameras have assisted local officials in solving many ADA issues, injuries, and crimes.

**Visibility**
Bike racks and other transit amenities are installed in highly visible areas. When possible, see through shelters are utilized in high crime neighborhoods. If fencing is used near the bus stop or transit facility, it is chain link to increase visibility.

**Safe Place**
Safe Place is a local program that enables anyone, especially kids, to get to a safe place when they feel they are lost or in danger. Since JTA is a participant in the national Safe Place Program, all JTA fixed-route buses and JTA facilities are considered Safe Place areas. Not only do children benefit from by this service, but any rider that feels threatened or unsafe can receive assistance.

**6.4 Minimization of Injuries**
In addition to JTA’s strategies to increase perceptions of safety at bus passenger facilities, there are many methods in use to minimize passenger injury.

**Bus Pull-off bays and Signal Controls**
When possible, JTA installs bus pull-off bays to allow the bus a safer stopping point and re-entry into traffic flow. Many automobile-pedestrian and bus-automobile conflicts occur during the bus’ re-entry into the flow of traffic. Signal controls like those used on the BRT system, provide a safer way to merge into the travel lanes.

**Informational Signage**
While various types of signage are used to assist in crime prevention, it similarly provides information to minimize injuries and accidents. At signalized crosswalks near transit stops, installation of pedestrian signals enhances the safety of both cyclist and pedestrians.

**ADA Compliance**
Installation and maintenance of ADA compliant infrastructure such as landing pads is required. ADA-mandated landing pads should be kept free of debris and obstruction. Section 2.5 of the ADA Accessibility Guidelines offers more information for compliance at fixed-route bus stops as well as JTA’s complimentary paratransit services that integrate with the overall transportation system.

**Maintenance**
Regular maintenance should be performed to ensure that sidewalks and other pedestrian routes remain accessible and free of obstacles. Hazardous objects should be identified, repaired or replaced upon notice.

**Assistance Devices**
Way-finding devices accessible by all are imperative to prevention of passenger injuries. It is especially helpful to those with impairments (mobility, visual and hearing) as well as the learning disabled to have these devices installed as is appropriate. When used in combination with alarms and flashing lights, many unnecessary accidents are prevented.
## APPENDIX A - CONTACT INFORMATION

<table>
<thead>
<tr>
<th>Agency</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>JTA</td>
<td></td>
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<tr>
<td>System Planning</td>
<td>(904) 633-8510</td>
</tr>
<tr>
<td>Project Development and Construction</td>
<td>(904) 632-5213</td>
</tr>
<tr>
<td>Main Phone Number</td>
<td>(904) 630-3181</td>
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<td>Facilities (Transit Amenities)</td>
<td>(904) 633-8518</td>
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<tr>
<td>Transportation Resource Center</td>
<td>(904) 265-6001</td>
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<td>Customer Service</td>
<td>(904) 630-3100</td>
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<td>Joint Use Development Officer</td>
<td>(904) 632-3802</td>
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<td>City of Jacksonville</td>
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<tr>
<td>Downtown Development Review Board</td>
<td>(904) 630-2689</td>
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<tr>
<td>Planning and Development Department</td>
<td>(904) 255-7817</td>
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<td>Building Department</td>
<td>(904) 255-8799</td>
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<td>Community Planning</td>
<td>(904) 255-7800</td>
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<td>Disabled Services Division</td>
<td>(904) 630-4940</td>
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<td>Florida Department of Transportation, District 2</td>
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<td>Main Number (Urban Office)</td>
<td>(904) 360-5400</td>
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<td>Maintenance</td>
<td>(904) 360-5200</td>
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<td>Construction/Public Information</td>
<td>(904) 360-5457</td>
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<td>Permitting</td>
<td>(904) 360-5375</td>
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<td>Right-of-Way</td>
<td>(386) 961-7457</td>
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<td>Jacksonville Beach</td>
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<td>Planning Division</td>
<td>(904) 247-6231</td>
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<td>Community Redevelopment</td>
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<td>Community Development</td>
<td>(904) 270-2400 ext 30</td>
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<td>Building Department</td>
<td>(904) 270-2400 ext. 4</td>
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<td>Jurisdictions</td>
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<tr>
<td>Springfield Preservation and Revitalization Council</td>
<td>(904)353-7727</td>
</tr>
<tr>
<td>Riverside-Avondale Preservation</td>
<td>(904) 389-2449</td>
</tr>
<tr>
<td>Downtown Development Review Board</td>
<td>(904) 630-2689</td>
</tr>
</tbody>
</table>
# APPENDIX B – BUS STOP CHECKLIST

## SHELTER DESIGN SUPPORT AND INVENTORY

### BUS STOP/SHELTER DESIGN SUPPORT (INVENTORY)

<table>
<thead>
<tr>
<th>Location (Address)</th>
<th>Vicinity Map</th>
<th>Comments/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>inventory/survey performed by: ___________________________ date: ______________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no. of boarding at this location: TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>roadway typical section: urban, __ lane __ divided __'s/w, __'u/s __ FDOT __ col __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>restrictions (review boards/districts): district __ __ __ ad signs allowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>level of design for shelter: minimal __ medium __ extensive __ ROW required __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ada compliance: yes __ no __ connectivity: yes __ no __ if not, scope of work in feet: __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shelter: yes __ no __ amenities: yes __ no __ if yes, comments: ____________________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>adequate ROW for bus pull-off: yes __ no __ adequate ROW for ad panel: yes __ no __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>lighting: yes __ no __ good __ fair __ poor __ landscaping: yes __ no __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>should the stop be considered for relocation? yes __ no __</td>
</tr>
<tr>
<td></td>
<td></td>
<td>any other comments/recommendations: ____________________</td>
</tr>
</tbody>
</table>

### PICTURES

---

**System Planning**

---

**PD & C**

---

**Facilities**

---

**Safety**

---

**Operations**

---

**ADA Coordinator**

---
APPENDIX C – BUS STOP SIGNAGE

Front Panel

EXHIBIT 1: Front-of-Sign Panel Graphics
Scale: 3" = 1' - 0"
Revised May 12, 2014
APPENDIX C – BUS STOP SIGNAGE

Back Panel

EXHIBIT 2: Back-of-Sign Panel Graphics
Scale: 3" = 1'-0"
Revised May 12, 2014
APPENDIX D – JTA BUS DIMENSIONS

Fleet Dimensions are:

40’ Long by 8.5’ Wide by 11’ High
- 2200 series Gillig Hybrids (2201-2206)
- 2400 series Gillig

40’ Long by 8.5’ Wide by 9.5’ High
- 1100 series (RTS)
- 1400 series (Long Gillig low floor, 1401-1425)
- 1600, 1700, 1900 and 2100 series Gillig low floor
- 2200 series Gillig BRT (2207-2213)

35’ Long by 8.5’ Wide by 9.5’ High
- 1400 series (Short Gillig low floor, 1426-1446)

32’ Long by 8’ Wide by 12’ High
- 1300 series Freightliner (Community Shuttles)

30’ Long by 8’ Wide by 11’ High
### APPENDIX E – JTA SERVICE

#### STANDARDS

<table>
<thead>
<tr>
<th>Service</th>
<th>Daytime Frequency</th>
<th>Minimum Service Hours</th>
<th>Weekends</th>
<th>Stop Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Coast Flyer</td>
<td>10-15 min.</td>
<td>5 AM – Midnight</td>
<td>Yes</td>
<td>1-2 per mile</td>
</tr>
<tr>
<td>Frequent Routes</td>
<td>15 min.</td>
<td>5 AM - Midnight</td>
<td>Yes</td>
<td>3-4 per mile</td>
</tr>
<tr>
<td>Radial Routes</td>
<td>30 min.</td>
<td>6 AM – 10:30 PM</td>
<td>Yes</td>
<td>5-7 per mile</td>
</tr>
<tr>
<td>Connectors/Feeders</td>
<td>60 min.</td>
<td>6 AM – 8 PM</td>
<td>Saturday</td>
<td>5-7 per mile</td>
</tr>
<tr>
<td>Express</td>
<td>4-5 trips per day</td>
<td>Peak only</td>
<td>No</td>
<td>Only near trip ends</td>
</tr>
<tr>
<td>Trolleys / Shuttes</td>
<td>&lt;15 min.</td>
<td>Varies</td>
<td>Yes</td>
<td>5-7 per mile</td>
</tr>
<tr>
<td>Community Shuttle</td>
<td>60 min.</td>
<td>6 AM – 7 PM</td>
<td>No</td>
<td>&lt;1 per mile</td>
</tr>
</tbody>
</table>
**APPENDIX F - GLOSSARY**

**Accessibility** - The extent to which facilities are barrier free and useable by disabled persons, including wheelchair users. It also represents a measure of the ability or ease of all people to travel among various origins and destinations.

**Accessory Pad** - A paved area that is provided for bus patrons and may contain a bench shelter, and/or other amenities.

**Activity Center** - An area with high population and concentrated activities that generate a large number of trips, such as a Central Business District, shopping center, business or industrial park, or recreational facility. Also known as a Trip Generator.

**Alight** - To get off a transit vehicle. Plural: “alightings.”

**Americans with Disabilities Act of 1990 (ADA)** - The law passed by Congress that makes it illegal to discriminate against people with disabilities in employment, services provided by state and local governments, public and private transportation, public accommodations, and telecommunications. The ADA requires that fixed-route transit be accessible and that complementary paratransit service be provided in the same geographic areas on the same days and hours as fixed-route service.

**Approach Angle** - A vehicle’s front clearance angle, which is formed by the base of the front vehicle tire, the front ground clearance height, and the roadway.

**Arterial Street** - A roadway that is designed to move large traffic volumes between various points within a region. Typically, these roadways have limited access and connect with smaller collector streets.

**Articulated Bus** - An extra-long bus (typically 54’ to 60’ in length) with the rear body section connected to the main body by a joint mechanism. The joint mechanism allows the vehicle to bend when in operation for sharp turns and corners, while maintaining a continuous interior passenger compartment.

**Board** - To go onto or into a transit vehicle. Plural: “boardings.”

**Bus Bulb** - A bus stop where the sidewalk is extended into the parking lane, allowing a bus to pick up/drop off passengers without leaving the travel lane. Also known as a Curb Extension or Nub.

**Bus Pull-Off Bay** - A recessed bus stop area that allows a bus to leave the travel lanes to load and/or unload passengers. Also known as a Bus Turnout.

**Bus Route Spacing** - The distance between adjacent, parallel bus routes.

**Bus Shelter** - A building or other structure constructed at or near a bus stop that provides seating and protection from the weather for the comfort and convenience of waiting passengers.

**Bus Stop** - A point along a transit route at which passengers can board or alight from a bus. A bus stop is usually identified by a sign.

**Bus Stop Infrastructure** - The various elements that can be provided at a transit stop or station to help make transit more comfortable and convenient to patrons, including benches, shelters, lighting, vending machines, garbage receptacles, telephones, etc. These elements also are commonly referred to as “amenities.”

**Bus Stop Spacing** - The distance between consecutive transit stops.

**Bus Stop Zone Length** - The length of the portion of roadway that is signed or marked as being available for bus use to load and/or unload passengers.

**Bus Turnaround** - A roadway system that allows a bus to return to the street that it is serving in the opposite direction of travel.

**Bus Turning Radii** - The dimensions needed to accommodate bus turning movements.

**Bus Turnout** - See definition for Bus Pull-Off Bay.

**Central Business District (CBD)** - The downtown retail trade and commercial area of a city or an area of very high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and services.

**Clear Space** - The minimum unobstructed floor or ground space required to accommodate a single, stationary wheelchair and occupant (i.e., 30 inches in width by 48 inches in depth).

**Collector Street** - A roadway that serves internal traffic movements in an area by connecting several local streets with an arterial roadway.

**Community Neighborhood hub** - A large bus staging area used where many routes come together at a point in the system. The intent of a neighborhood hub is to not only serve as a transit system destination/transfer station, but also to act as a community focal point.

**Corner Curb Radii** - The radius of the circle formed by the curve of the curb at the corner of two intersecting
streets. It is used in street design as a measure of the sharpness of the corner.

**Curb Ramp** - A combined ramp and landing to accomplish a change of level at a curb in order to provide access to pedestrians using wheelchairs.

**Departure Angle** - A vehicle’s rear clearance angle, which is formed by the base of the rear vehicle tire, the rear ground clearance height, and the roadway.

**Discontinuous Sidewalk** - A sidewalk that is constructed to connect a bus stop with the nearest intersection. The sidewalk does not extend beyond the bus stop.

**Far-Side Stop** - A transit stop that is located immediately across an intersection.

**Fixed-Route** - Transit service provided on a repetitive, fixed-schedule basis along a specific route, with vehicles stopping to pick up passengers at and deliver passengers to specific locations.

**Floor to Area Ratio (FAR)** - Land use analysis quotient determined by dividing the gross floor area of all buildings on a given lot by the total area of the lot.

**Frequency** - The scheduled time interval between consecutive buses operating in the same direction on a given route. Also known as Headway.

**Grid Street Pattern** - A network of parallel and perpendicular streets intersecting at 90° angles, forming rectangular blocks of land that are typically equal in size and have perimeters measuring between 800’ and 1600’.

**Headway** - See definition for Frequency.

**Intermodal Facility** - A higher-level JTA transit stop classification that is designed specifically to accommodate the meeting of two or more transit modes of travel. Typically includes expanded passenger infrastructure.

**Kiosk** - A freestanding, often cylindrical, device that displays transit maps and schedules and other passenger information. Kiosks typically are located at higher passenger volume stops.

**Local Street** - A roadway that provides direct access to the adjacent land and typically accommodates a low volume of traffic.

**Local Transit Stop** - JTA stops that have the lowest passenger boarding/alighting volumes. These stops represent the most basic level of JTA’s Transit Stop Classification and account for the majority of the system’s service stops.

**Mid-Block Stop** - A transit stop that is located in between intersections.

**Mixed-Use** - In land use and transit planning, generally refers to different compatible land uses located within a single structure or in close proximity to each other.

**Mobility Access Program** - A program established by JTA to provide design standards and guidelines for transit stops throughout its service area so that particular transit stop characteristics will relate to and reflect the “sense of place” of each of the communities that are being served.

**Near-Side Stop** - A transit stop that is located immediately before an intersection.

**Overhang** - The portion of the bus vehicle body that extends beyond the front or rear axle.

**Passenger Activity** - The number of passenger boardings (“ons”) and alightings (“offs”) that occur at a transit stop during any particular time period.

**Paratransit** - Comparable transportation service required by the Americans with Disabilities Act of 1990 for individuals with disabilities who are unable, because of their disability, to use traditional fixed-route transportation systems.

**Park-n-Ride** - A higher-level JTA transit stop classification that incorporates a parking lot at a transit facility to accommodate the automobile as an access mode to transit. Park-n-Ride facilities also can be used to facilitate bicycle access to transit, as well as auto and bike access to vanpool/carpool services.

**Persons with Disabilities** - People who, by reason of illness, injury, age, congenital malfunction, or other disability, are unable to use local transit facilities and services, without adequate facilities, as effectively as people who are not so affected.

**Primary Local Transit Stop** - Also called a Primary Stop, these stops have a sufficient amount of passenger activity/land use orientation to warrant additional bus stop infrastructure.

**Shuttle** - A public or private vehicle that travels back and forth over a particular route, especially a short route or one that provides connections between transportation systems, employment centers, etc. Shuttle service may also provide connectivity between remote parking locations and large special events.

**Standard Bus** - A bus that is 35’ to 41’ in length.

**Tapers** - The portion of lane provided at each end of a
bus pull-off bay to accommodate bus speed changes when entering and exiting traffic.

**Transfer Center** - A fixed location where passengers interchange from one route or vehicle to another.

**Transit Hub** - A higher-level JTA transit stop classification that includes an expanded bus staging area and considerable passenger infrastructure.

**Transit Oriented Development (TOD)** - In general, TOD encompasses the specific tailoring of development patterns to be more conducive to transit use. Typically involves a mixed-use community or neighborhood surrounding a transit station, stop, or route that is designed to encourage transit use and pedestrian activity.

**Turning Radius** - The turning path of a vehicle established by the outer front overhang and the inner rear wheel.

**Waiting Pad** - A paved area that is provided for bus patrons and may contain a bench, shelter, and/or other infrastructure. Also known as an Accessory Pad.

**Wheelchair** - A mobility aid belonging to any class of three- or four-wheeled devices, usable indoors, designed for and used by people with mobility impairments, whether operated manually or powered.

**Wheelchair Lift** - A device used to raise and lower a platform in a transit vehicle for accessibility by patrons that require the use of a wheelchair or similar mobility aid.
APPENDIX G - SAMPLE BENCH

EXAMPLE: 1 2 1 0 4 - 1 2 1

DRAWING NUMBER CONFIGURATION A CONFIGURATION B CONFIGURATION C

1 2 1 0 4 - 1 2 1

3 1/4" STEEL PIPE SCH40 92 11/16" CUT LENGTH

SHEET SIZE 24" X 92 3/4" (12 GAUGE)

-23 5/8" - 23 5/8" -

COVER PLATE 1/4" THICK DETAIL B

DETAI A

WELD VGRANT BAR COVER PLATE 1/4" THICK DNG#14090-00

VGRANT BAR ALL AROUND

WELD ALL AROUND

DETAIL A

SHOE DNG#14091-00

CONFIRMATION A

1 PLANT 1
2 PLANT 2

CONFIRMATION B - ANCHORS

0 NO ANCHORS
1 1/2" X 3 3/4" SUP-R ANCHORS, ZINC
2 1/2" X 3 3/4" SUP-R ANCHORS, STN STL
3 1/2" X 4 1/4" SUP-R ANCHORS, ZINC
4 1/2" X 4 1/4" SUP-R ANCHORS, STN STL
5 1/2" X 3 3/4" HILTI TZ ANCHORS, ZINC
6 1/2" X 3 3/4" HILTI TZ ANCHORS, STN STL
7 1/2" X 4 1/2" HILTI TZ ANCHORS, ZINC
8 1/2" X 4 1/2" HILTI TZ ANCHORS, STN STL
9 SPECIAL - SPECIFIED ON SALES ORDER

CONFIRMATION C - FINISH

0 NONE
1 STANDARD POWDER COAT
2 STANDARD POWDER COAT WITH CLEAR COAT
3 PREMIUM POWDER COAT
4 PREMIUM POWDER COAT WITH CLEAR COAT
5 TBD
6 TBD
7 TBD
8 TBD
9 SPECIAL - SPECIFIED ON SALES ORDER

Teler Manufacturing Company, Inc
288 Market Circle, Camino, CA 92019

E. BENCH P2R #3 BARS

1/28/2010 J.W.

12104 B
SHOP ASSEMBLY

1. USE BACK SHEET TO BACKDRILL HOLES IN EXTRUSION AND SUPPORT FRAME.
2. INSTALL SHORT RIVETS THROUGH EXTRUSION, BACKSHEET, AND SUPPORT FRAME.
3. INSTALL LONG RIVETS THROUGH EXTRUSION, BACKSHEET, AND SUPPORT FRAME.
4. LARGE HOLES WILL BE USED TO MOUNT MAP CASE TO SCREEN.

TOP VIEW

1. TAMPER PROOF SCREW FOR SECURING REMOVABLE ARM BOTTOM & TOP

FRONT VIEW

ACRYLIC & POSTER SIZE
23 3/4" X 35 3/4"

VISIBLE SIZE
23" X 35"

SIDE VIEW
October 3, 2014

Dear Kings Avenue Garage Parking Patron:

The Jacksonville Transportation Authority (JTA) has hired Tagarelli Construction to perform maintenance on the Kings Avenue Park-N-Ride Garage at 1201 Kings Avenue. Construction will begin on Monday, October 6, 2014.

The estimated completion date is Friday, December 5, 2014.

My role is to serve as your point of contact. Therefore, if you have questions or concerns related to the project, please do not hesitate to contact me at (904) 598-8735 or VBrooks@jtafla.com.

I will work to address your concerns as efficiently as possible. Thank you for your patience during this time of inconvenience. We will do our best to minimize the impact that this project will have on you and/or your customers, while being mindful and respectful of your business operations.

Sincerely,

Vanessa P. Brooks, MA  
Senior Marketing & Communications Manager  
External Affairs  
Jacksonville Transportation Authority  
100 N. Myrtle Avenue  
Jacksonville, Florida 32204  
Office: (904) 598-8735
APPENDIX I - BUS STOP ACTION PLAN

Over the last 18 months the JTA has inventoried bus stops and amenities throughout the system to identify and prioritize improvements that address accessibility, security and operational issues. The assessment was initiated in response to JTA’s effort to bring bus stops throughout the system into compliance with accessibility requirements as well as identify all associated amenities for asset management.

Accessibility

Legal Requirements
The main source that governs accessibility is the Americans with Disabilities Act Accessibility Guidelines (ADAAG), the federal regulations governing buildings and public infrastructure. Under the ADA regulations, only stops that were added or modified after the 1991 enactment of the law are required to meet all ADA requirements.

The main requirements address physical infrastructure (shelters, bicycle racks, benches, signage), the boarding and alighting area at the bus stop, and connections from the bus stop to the accessible pathway. The requirements include ensuring that there are no obstructions at the stop or in shelters; boarding and alighting areas are the right size and slope, and signs are properly placed and comply with minimum font size and height requirements.

In addition, the ADA requires that public service be accessible to individuals with disabilities, although it does not have specific prescriptions for how that is to be achieved. This additional requirement creates a need for the JTA to create a plan which shows a path to creating a fully accessible transit system over the next ten years.

Improvement Needs
An analysis was undertaken to develop a comprehensive list of improvement needs. The improvement needs address a wide range of issues from installing paved boarding and alighting areas, to developing curb ramps at sidewalks and new sections of sidewalk.

Of current active JTA bus stops, 509 are fully compliant, meeting all ADA requirements. An additional 359 stops are deemed ‘functionally requirement’, meaning they fail to meet all requirements found in ADAAG guidance, but they nonetheless provide access to the transit system for those with mobility needs. The remaining 1,870 bus stops are identified as being non-accessible. Figure 1 shows the location of non-compliant stops.

Some additional observations on accessibility needs include:
1. The largest improvement need relates to the boarding/alighting area at bus stops.
2. Other improvement needs include correcting walkway and curb ramp slope deficiencies at bus stop and connecting walkway issues at some locations.
3. Opportunities for consolidating or relocating stops were reviewed. Some stops are recommended for consolidation with another stop due to their closeness to other bus stops and having low ridership patterns. Besides improving the efficiency of the service, consolidating these stops would eliminate the need for improvement upgrades.

Bus Shelters
The JTA does not have a legal requirement to provide shelters, but it is an amenity valued by many customers and frequently requested by both customers and other members of the public. The JTA shelter policy requires 40 or more boardings/day for a shelter to be installed.

Based on a review of existing shelters the JTA determined there is a need for 78 additional shelter installations based on stops that have 40+ weekday boardings/day. The total cost is estimated at $1.56 million for the purchase and installation of 78 shelters. Table 2 and Figure 3 show the location of each stop.

For stops with fewer than 40 boardings, the JTA has in the past installed shelters based on community request or other reason such as potential revenue. There are 272 shelters at bus stops that have less than 40 weekday boardings/day. This practice is acceptable given certain guidelines:
• These projects would be a lesser priority than other improvements found in this plan.
• Funding is identified and no funds necessary to implement higher priorities of this plan are compromised.
• Overall, JTA shelters are distributed geographically in a way that is representative of JTA ridership. An evaluation of current shelters at lower ridership stops indicates areas of the city are not treated uniformly in this regard.

For existing shelters should they fully depreciate and become in a state of disrepair, JTA will reassess the need to reinstall and/or include them in our consolidation effort with nearby bus stops.
Funding & Implementation Plan
The following efforts were undertaken to develop the funding plan:
1. Prepared cost estimates for the required improvements
2. Some identified available funding sources include:
   • Mobility Corridor funding
   • First Coast Flyer project funds (Figure 2 shows areas impacted)
   • Other FTA funds including 5307, 5310 and 5311 funds
   • State (FDOT) funding

Table 1 shows basic cost estimates for improvements recommended in the plan. Mobility corridor funding identified only includes $5 million designated specifically to improving bus stops. Both Table 2 and Figure 4 show that large numbers of the stops with recommended improvements are within Mobility Corridor eligible areas.

Improvements in the plan include those that represent a substantial investment over the ten year timeline of the plan. Other expenses that include shelter maintenance, refurbishment, and placement of lower cost amenities will continue to be an on-going cost during the plan duration.

Improvements will need to be phased in over the next ten years. Improvements should be continuous and will be prioritized based on several factors including:
• Ridership and the presence of adjacent land use (hospitals, schools, shopping, shopping center, low-income housing, etc.) were the two factors used to determine need. Stops with high ridership and transit related land use are rated higher in terms of needs. Ridership was evaluated through Automatic Passenger Counter (APC) data.
• Concerns received on accessibility of stops, particularly those from persons with disabilities
• Accessibility, operations, and security condition at each stop. The JTA has created and maintains detailed information including photos of all bus stops.
• Opportunity to partner on projects such as street projects of FDOT or the City of Jacksonville
• Funding eligibility under various programs

Next Steps
1. Move forward with current work program of bus stop improvement and the installation of shelters with a completion date of February 2016.
2. Developing an annual work program for the improvement program to for implementing the accessibility improvements.
3. Continued partnering with other groups such as FDOT and local developers to improve accessibility conditions.
4. Continue to seek and identify additional funding for bus stop improvements.
5. Use the Mobility Access Plan concerning the concepts of accessibility, safety/security, and operational efficiency to guide the design of new bus stops and facilities, as well as improvements to existing bus stops.
6. Review bus stops for necessary consolidation, relocation, additions and/or removals.
### Table 1

<table>
<thead>
<tr>
<th>ITEM</th>
<th>COUNT</th>
<th>PERCENT OF ACTIVE STOPS</th>
<th>COST</th>
<th>FUNDING SOURCES (10-year projection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Bus Stops</td>
<td>2,738</td>
<td>100%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>ADA Compliant Bus Stops (includes accessible only)</td>
<td>509</td>
<td>18%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Projected Locations for ADA Upgrade</td>
<td>1,870</td>
<td>67%</td>
<td>$11.22 million</td>
<td>$5 million (Mobility Corridor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$3.44 million (5307)</td>
</tr>
<tr>
<td>Existing Shelters</td>
<td>381</td>
<td>14%</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Shelter Need Based on 40+ boarding/day</td>
<td>78</td>
<td>3%</td>
<td>$1.56 million</td>
<td>$1.56 million (5307)</td>
</tr>
<tr>
<td>Benches (^1)</td>
<td>1,236</td>
<td>45%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$12.78 million</td>
<td></td>
</tr>
<tr>
<td>Unidentified Funds</td>
<td></td>
<td></td>
<td>$2.78 million</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Total Benches includes Metro Jacksonville benches, JTA owned benches, and other municipal benches at bus stops.
<table>
<thead>
<tr>
<th>Stop Number</th>
<th>Stop Name</th>
<th>Corridor Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>234</td>
<td>11717 McCormick Rd.</td>
<td></td>
</tr>
<tr>
<td>364</td>
<td>Central Pkwy. &amp; Beach Blvd.</td>
<td></td>
</tr>
<tr>
<td>464</td>
<td>Beach Blvd. &amp; Cortez Rd.</td>
<td></td>
</tr>
<tr>
<td>553</td>
<td>9341 Atlantic Blvd.</td>
<td></td>
</tr>
<tr>
<td>572</td>
<td>Sandhurst Rd. &amp; Townsend Blvd.</td>
<td>Merrill Rd.</td>
</tr>
<tr>
<td>655</td>
<td>Ft. Caroline Rd. &amp; University Club Blvd.</td>
<td></td>
</tr>
<tr>
<td>671</td>
<td>5959 Ft. Caroline Rd.</td>
<td></td>
</tr>
<tr>
<td>682</td>
<td>Holly Bell Dr. &amp; Justina Ter.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>690</td>
<td>Merrill Rd. &amp; Yellow Pine Dr.</td>
<td>Merrill Rd.</td>
</tr>
<tr>
<td>786</td>
<td>Acme St. &amp; India Ave.</td>
<td></td>
</tr>
<tr>
<td>817</td>
<td>University Blvd. &amp; Atlantic Blvd.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>884</td>
<td>University Blvd. &amp; Beach Blvd.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>908</td>
<td>Southside Blvd. &amp; Hogan Rd.</td>
<td></td>
</tr>
<tr>
<td>1122</td>
<td>University Blvd. &amp; Cruz Rd.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>1162</td>
<td>Philips Hwy. &amp; University Blvd. fs</td>
<td>Philips Hwy.</td>
</tr>
<tr>
<td>1181</td>
<td>Phillips Hwy. &amp; Mustang Dr.</td>
<td>Philips Hwy.</td>
</tr>
<tr>
<td>1248</td>
<td>8384 Philips Hwy.</td>
<td>Philips Hwy.</td>
</tr>
<tr>
<td>1286</td>
<td>San Jose Blvd. &amp; Sunbeam Rd.</td>
<td></td>
</tr>
<tr>
<td>1391</td>
<td>St. Augustine Rd. &amp; Christopher Rd.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>1400</td>
<td>University Blvd. &amp; St. Augustine Rd.</td>
<td>University Blvd.</td>
</tr>
<tr>
<td>1401</td>
<td>University Blvd. &amp; St. Augustine Rd. fs</td>
<td>University Blvd.</td>
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<td>Park St. &amp; Price St.</td>
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