North Florida TPO

8th Street Corridor Study

October 2022

8th Street Corridor Study

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Contract No. P-21-018
Task Authorization No. 1
UPWP Task 5.19

October 2022

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Introduction

The North Florida Transportation Planning Organization (TPO) partnered with the City of Jacksonville to conduct the 8th Street Corridor Study. This study is intended to examine existing conditions and build on previously completed planning efforts to identify improvements designed to further the City of Jacksonville's desire to create a safer and more pleasurable walking and biking experience along 8th Street.

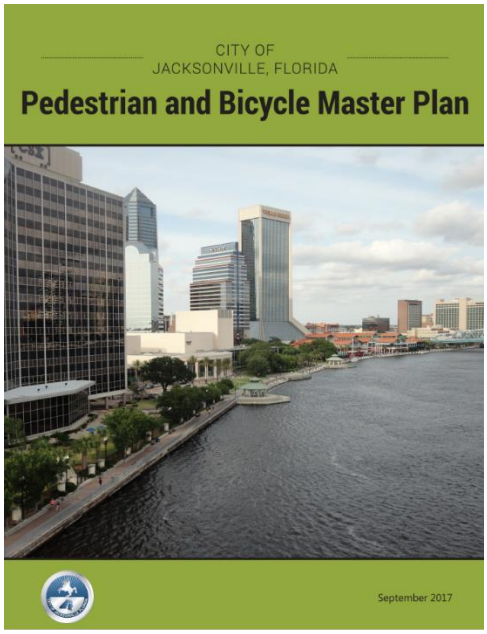
8th Street near Silver Street

8th Street, east of Myrtle Avenue

Background

City of Jacksonville Pedestrian and Bicycle Master Plan (2017)

The City of Jacksonville Pedestrian and Bicycle Master Plan provides a roadmap for transforming Jacksonville into a city that is recognized as one of the most walkable and bike-friendly in the Southeast. The Pedestrian and Bicycle Master Plan identified four key goals to lead this transformation.



Goal 1: Create a Roadmap for Change

The Pedestrian and Bicycle Master Plan articulates a series of guiding principles that establish the importance of dramatically improving the walking and bicycling environment in Jacksonville, to save lives and ensure a bright and sustainable economic future for the community. Building upon recent and current efforts the Plan offers a series of benchmarks and measures that define what success really means, and to which the City can hold itself accountable.

Goal 2: Identify Action Items

While the Master Plan identified concrete actions, it also recognizes that while engineering issues and solutions are critical in improving the environment for walking and bicycling, there must be a more holistic approach that identifies action items and needs in the areas of education, enforcement, encouragement, and evaluation. In summary, the Plan calls for the creation of a Strategic Neighborhood Action Plan for Pedestrians to systemically improve the pedestrian environment and improve accessibility and safety, implement Targeted Roadway Improvements for Pedestrian Safety to address high crash locations, to implement and install a prioritized bikeway network and enhanced pedestrian crossings, and immediate action on a series of high priority projects to demonstrate the city's commitment to making Jacksonville more walkable and bike-friendly.

Goal 3: Develop Specific Strategies in Key Areas

Working with its partners the City will update and adopt roadway design standards that reflect the most current bikeway and pedestrian design safety features, coordinate on implementing plans, projects, and programs to maximize the effective use of funding, and work to increase funding levels to implement pedestrian and bicycle projects in the City.

Goal 4: Establish Benchmarks and Performance Measures

The success of the Pedestrian and Bicycle Master Plan will be determined by the ability to establish meaningful, measurable targets that guide decisions that result in fewer traffic fatalities and crashes and more walking and bicycling. The plan established two overarching goals that are to be met by 2030; walking and bicycling should account for 10% of all trips and there should be no pedestrians or bicyclists killed or seriously injured in traffic crashes.

Pedestrian Safety Action Plan

Identified by the Federal Highway Administration (FHWA) as a Pedestrian Safety Focus City, the City of Jacksonville has embraced developing a Pedestrian Safety Action Plan (PSAP) to address pedestrian safety issues. Completed as part of the Pedestrian and Bicycle Master Plan, the PSAP provided the city with a data-driven approach that could be tailored to meet the city's local needs. The PSAP identified three key elements that also became the cornerstones of the Pedestrian and Bicycle Master Plan. One element proposes a strategic approach to tackling the chronic lack of basic pedestrian infrastructure (e.g., accessible sidewalks and crosswalks) throughout the community. A second element identifies design changes for high-crash and high-demand corridors on city streets, using five common street types found throughout the city. The third element is based on a preferred countermeasure, rectangular rapid flashing beacons (RRFB), and recommended locations where they can be most effectively deployed to reduce pedestrian crashes.

Systemic Neighborhood Action Program for Pedestrians (SNAPP)

A component of the PSAP is SNAPP, modeled after the City's stormwater management program, is designed to strategically address sidewalk needs while maximizing efficiency. The plan recommends an approach to improving sidewalks and crosswalks throughout the city that tackles all maintenance needs, as well as minor installation projects (e.g., filling in a missing section of sidewalk) in a defined neighborhood or area in one concentrated effort, rather than in a reactive, piecemeal approach in individual locations all over the city. The SNAPP approach identified several recommended steps to implement:

- Create maps of priority areas using council district boundaries
- Establish priority neighborhoods in each council district
- Convene a neighborhood assessment walk
- Establish sidewalk prioritization
- Complete sidewalk repairs, replacement, and infill immediately

Additionally, the SNAPP approach identified three important elements to design pedestrian safety and comfort in residential areas:

- Sidewalk width
- Sidewalk buffers
- Curb radii

Targeted Roadway Improvements for Pedestrian Safety (TRIPS)

Commonly, there is a lack of adequate infrastructure for safe, convenient, and accessible travel by foot. The Master Plan study team found that only two of the five typical street types have basic sidewalk and crosswalk facilities. To address this issue the PSAP and Master Plan created the Targeted Road Improvements for Safety (TRIPS) Guidelines, designed to address more complex solutions and target different roadway types with context-appropriate improvements for pedestrian safety, mobility, and comfort.

To help better target countermeasures, five different street contexts were identified. These included Residential, Neighborhood Collectors, Downtown, Neighborhood Commercial, and Major Arterials/Regional-Serving Corridors. Within each street type, common design elements and appropriate countermeasures were identified. The following provides an overview of the five street context types, their design elements, and potential solutions to improve pedestrian safety, mobility, and comfort.

Residential Neighborhoods

Residential neighborhood streets serve the transportation needs of every person every time they leave their homes. As such, it is especially important that residential streets are safe and comfortable for all users including people who walk and bike. Most crashes take place close to home and those crashes often involve Jacksonville's most vulnerable users, such as children walking to school. A complete sidewalk network is vital to any pedestrian safety strategy and addressing motor vehicle speed is the key to enhancing safety.

Typical Design Elements:

- Two-lane roadways
- Limited sidewalks
- Wide buffer areas
- Limited curb ramps and ADA-compliant truncated domes
- Wide curb radii
- No marked crosswalks

Safety Enhancements:

- Install sidewalks where missing and increase sidewalk widths
- Continue to provide ample sidewalk buffers
- Reduce curb radii at intersections
- Mark crosswalks along routes which should expect high numbers of pedestrians
- Install traffic calming, including chicanes, mini-traffic circles, and humps, bumps, and speed tables

Neighborhood Collector Streets

Collector streets provide access to and through neighborhoods and provide cross-town connections. As such, they often have high volumes of bicyclists and pedestrians and can create barriers for those who need to cross. When these roadways are designed with a focus on motorized vehicles, crashes are likely to occur. In the Jacksonville area, neighborhood collector streets are the location of a high number of pedestrian and bicycle crashes.

Typical Design Elements:

- Four-lane roadways, two-lane roadways with on-street parking, or three-lane roadways with a center turn-lane
- Limited or no marked crosswalks
- Limited or no pedestrian median-islands
- Wide curb radii
- Fast speeds and speed limits
- And, less frequently:
  - Missing sidewalks
  - Sidewalks located adjacent to the roadway (with no buffer)

Safety Enhancements:

- Fill sidewalk gaps and install sidewalks across driveways
- Include buffers from the roadway when installing new sidewalks and retrofitting existing sidewalks
- Prioritize lane reductions and road diets on four-lane or two-lane roadways with parking
- Install high visibility crosswalks with frequency
- Install center median islands with frequency
- Reduce curb radii
- Identify locations for and install RRFB
- Ensure all major arterials have sidewalks of sufficient width that are buffered from the roadway

Downtown

Downtown Jacksonville is one of the city's major hubs, and its street design can create an atmosphere that attracts new services and employment opportunities as well as places to dine, shop, and live. Employers and residents are attracted to downtowns that are attractive to pedestrians and bicyclists, include transit access to other parts of the city, and have great public spaces. Providing access for all modes can accommodate the greatest number of users for the least cost. As new commercial and residential hubs emerge in Jacksonville, the attributes of the downtown may extend into new regional centers which are also best served by varied transportation options.

Typical Design Elements:

- Narrow sidewalks
- Limited or no space for sidewalk cafes and outdoor dining
- No bicycle facilities
- Multi-lane one-way streets
- Automatic pedestrian signals

Safety Enhancements:

- Convert one-way streets to two-way
- Consider lane reductions/road diets
- Widen sidewalks
- Create a bicycle network throughout downtown
- Use parklets or wide sidewalks to create outdoor seating
- Install sidewalks across driveways and limit driveway width
- Keep curb radii narrow
- Add mid-block crossings

Neighborhood Commercial Streets

Jacksonville is served by a plethora of neighborhood-serving commercial districts. While attractive to residents from afar, these commercial areas consist of small enterprises with a focus on serving the needs of the immediate neighborhood. Neighborhood commercial streets in Jacksonville could be made safer and more comfortable for patrons, most who live a short walk or bicycle ride away.

Typical Design Elements:

- Narrow, interrupted, and indirect sidewalks often with obstacles
- Some outdoor retail space (for seating, signage, etc.)
- Abundant vehicular parking including front-in diagonal parking
- Limited bicycle parking and accommodation

Safety Enhancements:

- Repair, replace, and install sidewalks with a clear pedestrian zone, outdoor seating areas, and buffers from the roadway
- Reduce driveway widths and remove parking that has replaced the original sidewalk area
- Install curb extensions
- Realign diagonal parking from front-in to back-in
- Reduce curb radii
- Install traffic calming measures such as raised crosswalks and raised intersections

Major Arterials and Regional-Serving Retail Centers

Major arterials are typically focused on quickly moving cross-town vehicular traffic. They have higher speeds and higher volumes than other roadways and often include multiple lanes. To accommodate through movements, cross-traffic is limited. Because major arterial roadways allow quick access from across the region, retail centers that serve a regional clientele are often positioned along with them and located on large parcels. Their placement is typically vehicle-oriented and includes large parking lots at the front of buildings, no bicycle facilities, and no or limited pedestrian connections. However, many regional retail centers are also destinations for adjacent residents – providing both jobs and places to shop – who arrive by foot or bicycle. The vehicle-oriented design of major arterial roadways and adjacent regional retail centers has resulted in a very high number of crashes along these corridors. These major arterial roadways are often the routes of cross-town bus services. Bus stops along the roadway further attract pedestrians. Most roadways are managed by FDOT, requiring special state-level approval to install safety measures.

Typical Design Elements:

- High-speed multi-lane roadways
- Limited locations for crossing
- Large driveway widths and turn radii
- Large blocks
- Limited pedestrian connections
- No (or basic/minimum) bicycle facilities

Safety Enhancements:

- Consider lane reductions/road diets where possible
- Include pedestrian phasing, no right turns on red, and automatic in place of actuated pedestrian signals at signalized intersections
- Use high visibility marked crosswalks at all crossing locations
- Reduce curb radii at signalized and unsignalized intersections
- Identify locations and install rectangular rapid flashing beacons (RRFB)
- Provide frequent opportunities to cross the roadway
- Install medians that reduce conflicts by creating right-in and right-outs
- Reduce driveway widths and driveway curb radii
- Create safe and attractive connections to adjacent neighborhoods
- Realign buildings to front the roadway
- Ensure all major arterials have sidewalks of sufficient width that are buffered from the roadway

Recommended Locations for Rectangular Rapid Flashing Beacons

The PSAP addresses general issues of pedestrian safety and accessibility in neighborhoods (SNAPP), and targeted improvements on typical streets in the city (TRIPS). The third approach to addressing pedestrian safety is to address individual crashes or high priority locations with specific countermeasures. The city identified RRFBs as one countermeasure to supplement standard uncontrolled pedestrian crossings and help enhance pedestrian safety. The city identified areas with high concentrations of senior residents and school-aged children as priority populations. The PSAP identified a three-step approach to completing the RRFB assessment:

- Conduct a review of national and regional best practices for RRFB installation
- Complete a demand analysis to understand where pedestrian activity is expected and identify general corridors where pedestrian activity may benefit from installing RRFBs
- Analyze corridor-based data to identify and prioritize a list of recommended locations for RRFB installation

A Roadmap for Change

The Pedestrian and Bicycle Master Plan is an important and valuable stand-alone document. However, neither the Plan, nor walking and bicycling itself, exist in a vacuum. The future of the Plan and active transportation in Jacksonville depend on the actions of many players. The Master Plan provides an approach and actionable list of projects that will help to address the safety and mobility needs of the city's citizens while working to improve conditions for walking and biking as part of a broader quality of life strategy.

To address the issues identified in the Master Plan and solidify the commitment to improving safety for people walking and biking a bold step is needed. To further demonstrate a commitment to improving pedestrian and bicycle safety, the Plan recommends that the city adopt a bold Vision Zero policy that places pedestrian and bicycle safety in the context of a much broader commitment to eliminate all traffic fatalities and serious injuries in the city by 2030. The benefits of this approach are:

- Walking and bicycling issues are still somewhat marginalized within the City and public perception. Vision Zero is an initiative that explicitly benefits all road users (and thus the entire community) and uses a data-driven approach to focus on particularly vulnerable populations and road users. In this context, improving the safety of pedestrians and bicyclists shifts from being a special interest issue, as it is sometimes perceived, to an issue that is firmly in the public interest.
- The singular focus of a Vision Zero approach ensures a coordinated multi-agency, multi-disciplinary approach that can harness the demonstrated commitment of numerous City departments and partner agencies to collaborate in improving traffic safety.
- The Vision Zero and Safe Systems approach eliminates the tendency we all have to accept traffic crashes as an inevitable part of daily life, and to explain away crashes by blaming the victims, especially in relation to pedestrian and bicyclist crashes. A significant cultural change is needed in Jacksonville (and throughout the country) to shift perceptions about poor pedestrian and bicyclist behavior and to address inadequate roadway design and

enforcement that enables speeding, aggressive, distracted, and impaired driving to create unsafe and unpleasant conditions.

The Pedestrian and Bicycle Master Plan identified several other key recommendations aimed at improving walking and bicycling safety and mobility throughout the city, the following is an overview of these key recommendations:

- The city will sustain an annual funding commitment, to be determined by the City Council and Administration, to implement pedestrian and bicycle projects in the Master Plan and incorporate incidental projects into the ongoing work of the city and partner agencies.
- The city commits to immediately pursue four Statement Projects emerging from the Master Plan to demonstrate the city's commitment to implement the plan and achieve the goals set out in the document.
- The city will establish a regular director-level meeting every six-months coordinate the work programs and planning activities of the Planning, Public Works, and Parks departments, the JTA, DIA, and to the extent possible, the FDOT.
- The City of Jacksonville and partner agencies should update their roadway design standards and guidance to reflect the most current bikeway and pedestrian design treatments applicable to urban roadways.
- The city or a partner agency should implement a comprehensive facility planning and design training program as soon as these new guidance documents are complete. Within six months, training should be delivered to engineers, planners, and landscape architects (urban designers) working for all area public agencies including FDOT, COJ, NFTPO, JTA, and DIA. Consultants working for these agencies should be expected to attend this training program.

Benchmarks and Performance Measures

The ultimate success of the Master Plan relies on the ability to establish meaningful, measurable targets that guide decisions that result in fewer traffic fatalities and crashes and more walking and bicycling in Jacksonville. The Plan establishes two key benchmarks that are to be met by 2030:

- Walking and bicycling should account for 10% of all trips (up from less than 2% in 2014)
- No pedestrian or bicyclists should be killed or seriously injured in traffic crashes (Vision Zero)

Additional benchmarks and performance measures identified in the Plan include:

- Annual number of pedestrian and bicycle fatalities, serious injuries, and crashes
- Participation in walking and bicycling in the City of Jacksonville
- Designation in national benchmarking studies
- Pedestrian and bicycle-related outputs, e.g., miles of sidewalk and bikeways completed, number of training course participants, number of RRFBs installed, etc.

JTA Mobility Works Plan

The Jacksonville Transportation Agency (JTA) is committed to developing and enhancing multimodal transportation along key transit routes throughout Jacksonville. JTA has initiated a Complete Streets program (Mobility Works) to address all travel modes with consideration to potential redevelopment that is planned or envisioned. The 8th Street, Myrtle Avenue, and Moncrief Road study was completed to identify potential improvements that would create complete streets along these critical and diverse corridors.

Community Engagement

The Mobility Works study included significant input from the community regarding transportation needs, safety and operational concerns related to various travel modes. Beyond receiving input on concerns and problem areas, the study's outreach sought to gain insight into the community's future vision for the community at large and the subject corridors. Input from the various community members was solicited during a charrette that included walking tours of the corridors and the development of improvement concepts and strategies. In addition, an open house and public workshop were held. At the completion of the public input process, the study team worked to combine the public's input and observations into a series of sketches and concepts. Multiple solutions including roundabouts, streetscaping, signage, enhanced crosswalks, upgraded intersections, bike facilities, and aesthetic improvements were explored. The ideas were then blended and evaluated against physical and fiscal constraints and prioritized into categories of most need.

Area-Wide Recommendations

Through the various public outreach and engagement events, JTA synthesized a community vision for the study area, and while some variations are based on location and context of the street, the central theme for the study corridors was to enhance safety, accessibility, and connectivity for people walking and riding bicycles, while still enabling the movement of motor vehicles. In essence, the desire is to create a multi-modal context where all users feel safe and comfortable no matter what travel mode they choose.

To make this vision a reality, the study identified opportunities for mixed land uses, improved trail connectivity, and improving the relationship of buildings to the corridor. Thematically, the plan calls

to create a multimodal corridor with enhanced safety, accessibility, and connectivity for people biking or walking. Some major improvements identified included:

- ***Lower motor vehicle operating speeds***, lower operating speeds increase safety for people walking and riding bikes and are consistent with design elements that support a walkable corridor.
- ***An evenly balanced streetscape***, there should be a balance between the roadside and the area where motor vehicles operate.
- ***Dedicated facilities for bicyclists***, the 8th St and Moncrief Rd corridors will continue to function as arterials. Shared-lane use is not appropriate for most bicyclists. Dedicated bicycle facilities, such as lanes or parallel paths, are necessary.
- ***Wide sidewalks***, especially within the commercial areas along the corridors, sidewalks should be wider than the minimum standard. They should provide for adequate spacing from adjacent buildings and permit individuals to comfortably pass each other while walking in opposite directions.
- ***Sidewalk buffer***, there should be a physical buffer between the sidewalk and the traveled way, whether it be on-street parking, street trees, or a planting strip.
- ***Building placement***, buildings should be oriented towards the street with minimum setbacks. Large parking areas between buildings and the street should be avoided.
- ***Improved pedestrian-scale lighting***, except for Myrtle Ave, almost the entire study area is devoid of pedestrian-scale lighting. The existing lighting is designed for vehicular traffic but does not provide an adequate level of lighting for other roadway users which makes the roadside uncomfortable and unsafe for pedestrians.
- ***Install Rectangular Rapid Flashing Beacons (RRFB)*** and other crossing enhancements to S-Line crossing.

Other identified design elements for the corridors include the following:

- ***Lane Width*** – Currently, lane widths vary from less than 11 feet to as high as 20 feet. For all corridors, lane widths for travel lanes are recommended to be between 10 and 11 feet. Narrowing lane widths achieves two purposes:
    - Encourage appropriate motor vehicle speeds
    - Frees up additional right-of-way for other design elements, such as bicycle lanes, on-street parking, wider sidewalks, etc.
- ***Curb-Radii*** – The size of curb radii has a direct influence on the roadway's character. Currently, all corridors have wide curb radii at most street intersections, ranging from 25 to 30 feet to as high as 75 feet. When reconstructing curbs in the corridor, the smallest practical curb return radii is recommended. This will encourage vehicles to turn at appropriate speeds, increase pedestrian accessibility and reduce the amount of pavement that must be crossed on foot.

  In most cases, a curb radius of 15 feet at cross-streets and 5 feet at driveways is appropriate. However, at locations where larger vehicles, such as JTA buses, turn frequently, a radius of 25

feet may be used, unless such vehicles are turning into a roadway with multiple receiving lanes into which they can safely encroach.

In locations where a bicycle lane is located between the outside motor vehicle travel lane and the curb, the "effective radius" should be used. This is the distance from the edge of the outside lane to the edge of the receiving outside lane, not the physical curb, which can have a much smaller radius.

- ***Mid-Block Crossings*** – The corridor assessments found that the corridors have long stretches with no signalized crossing, forcing pedestrians to travel out of direction or cross at undesignated locations. Adding trail crossings on 8th St and Myrtle Ave brings elevated levels of people walking and riding bikes to what are typically automobile-dominated streets.

  Raised median crossings shall be considered on sections that have more than two travel lanes and traffic volumes greater than 15,000 vehicles per day. Raised median crossings have several benefits, including:
  - Creating a safe refuge for pedestrians
  - Breaking one long, complex crossing into two shorter ones
  - Encouraging appropriate motor vehicle speeds through horizontal deflection, and
  - Providing an opportunity for landscape enhancements

Site-Specific Recommendations

While several improvements should be made throughout the three-corridor study area, the different corridors have unique and specific needs. The following summarizes the needs and recommendations specific to the 8th Street corridor.

- ***From Myrtle Ave to I-95:***
  - Reduce lane widths, add parallel parking on one side of roadway, and add bike lanes to both sides of the roadway
  - Upgrade all crossings to current ADA standards and provide pedestrian countdown timers at signalized intersections
  - Upgrade lighting to current standards, including pedestrian-scale lighting
- ***From I-95 to Boulevard Street:***
  - Replace the outer turn lanes with protected bike lanes
  - Upgrade lighting to current standards, including pedestrian-scale lighting
  - Add planted median to east leg of 8th St at Boulevard St
  - Narrow travel lanes and widen the existing medians, with plantings where possible
  - Expand/add planted median to west leg at Jefferson St
  - Expand existing sidewalks at I-95 interchange to multi-use paths, construct bike lane transitions on both sides to connect bike lanes across the interchange
- ***At James Hall Dr:***
  - Remove northbound lane from northern leg of intersection and construct curb with smaller radii
  - Expand/add planted median to east leg

- Plant existing medians on west leg
- Add crosswalk across west leg
- Adjust crosswalk along east leg

- ***From Boulevard St to Main St:***
  - Upgrade all crossing to current ADA standards and provide pedestrian countdown timers at signalized intersections
  - Upgrade lighting to current standards, including pedestrian-scale lighting

Other Planning, Program, and Project Efforts

In addition to the City's Pedestrian and Bicycle Master Plan and JTA's Mobility Works Complete Streets Study several recent and ongoing efforts aimed at improving safety and mobility. These efforts include the following:

- City of Jacksonville Capital Improvement Program (CIP)
- City of Jacksonville Comprehensive Plan, including plans for the Emerald Trail and S-Line
- University of Florida Health Campus Plan
- JTA Ultimate Urban Circulator
- JTA Transit Oriented Development (TOD) Pilot Program

An overview of these planning and transportation-related efforts is included in Appendix A.

Existing Conditions

8th Street is an east-west street located approximately 1 mile north of downtown Jacksonville in the Springfield, Brentwood, Hogan's Creek, and Durkeeville neighborhoods (Figure 1). This approximately 1.3-mile-long corridor extends from Main Street to Myrtle Avenue and is defined as Residential Neighborhood by the city's Pedestrian and Bicycle Master Plan TRIPS classification. Several destinations and points of interest along the corridor, including:

- UF Health Jacksonville Campus
- Jacksonville VA Outpatient Clinic
- Duval County Health Department
- James P Small Park
- Emmett Reed Park

- John N McPherson Park
- Connection to the S-Line Urban Greenway
- Mt Herman Exceptional Student Center
- Darnell-Cookman School of the Medical Arts (middle school)
- Springfield Middle School
- Main Street Shopping and Restaurants

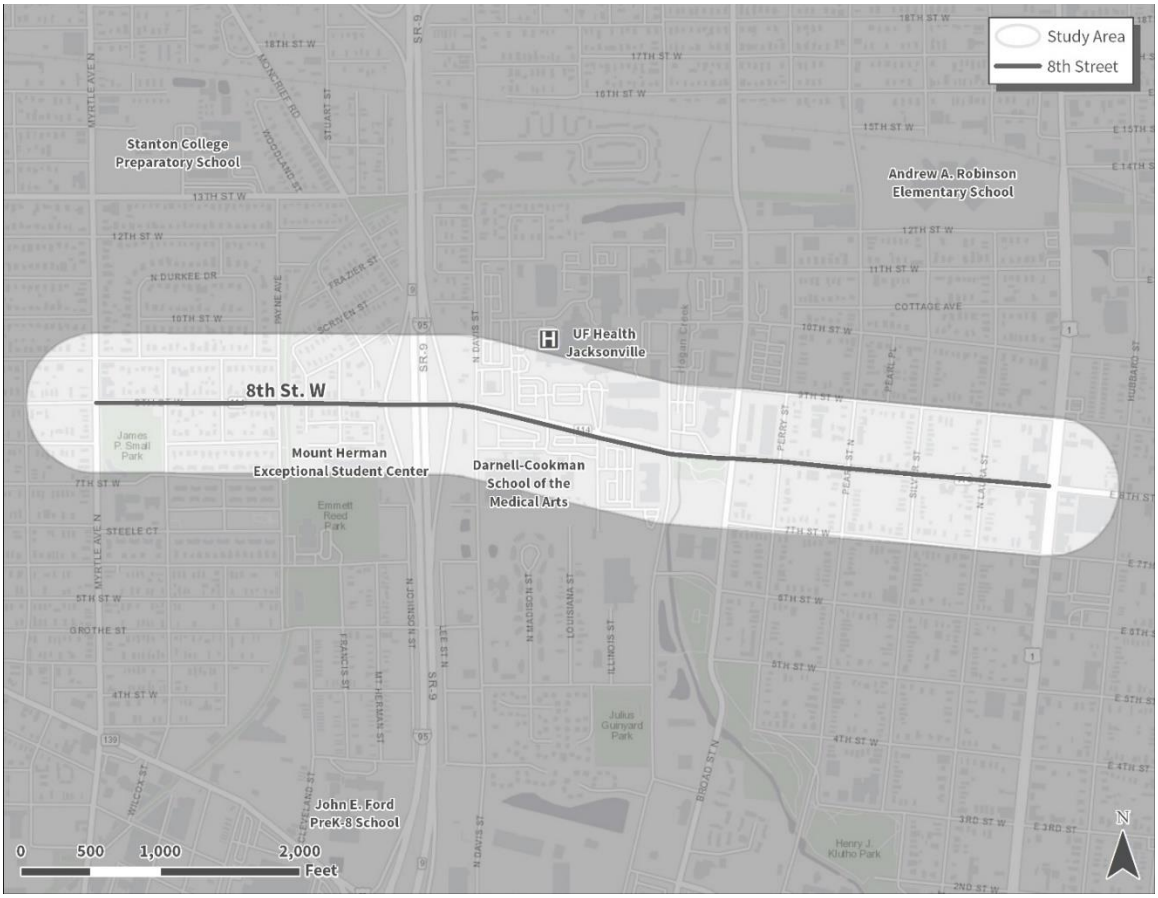


Figure 1: 8th Street Corridor Study Area

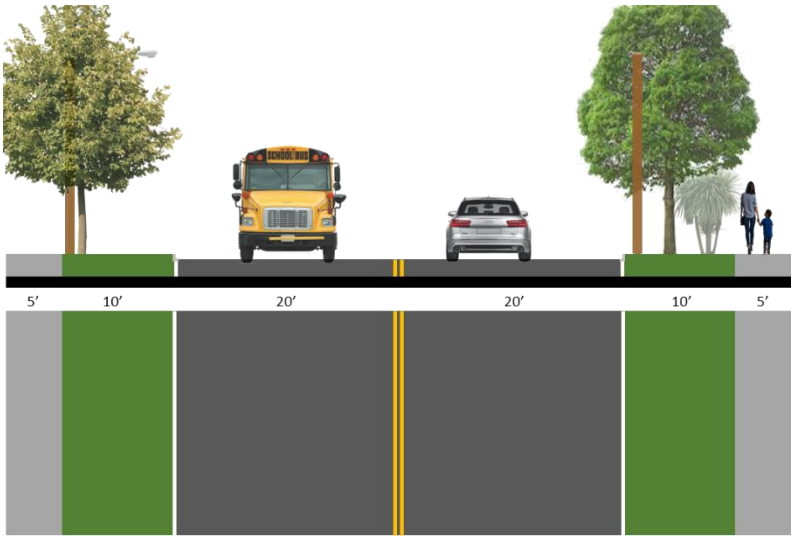
Typical Section

Four primary street configurations throughout the 8th Street corridor are, moving west to east:

- 8th Street from Myrtle Avenue to Francis Street
- 8th Street from Francis Street to Davis Street
- 8th Street from Davis Street to Boulevard Street
- 8th Street from Boulevard Street to Main Street

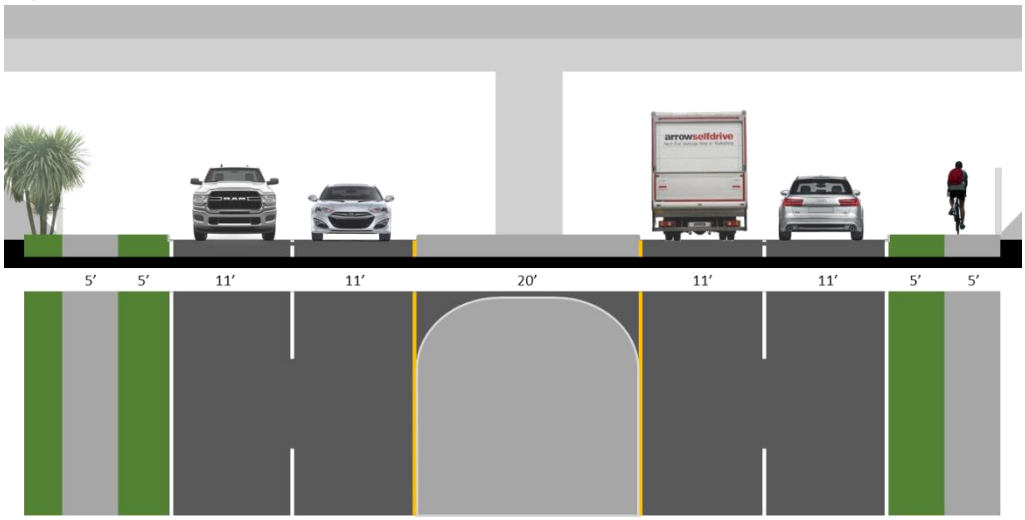
The following pages provide an overview of the four primary street configurations.

8th Street, Myrtle Avenue to Francis Street



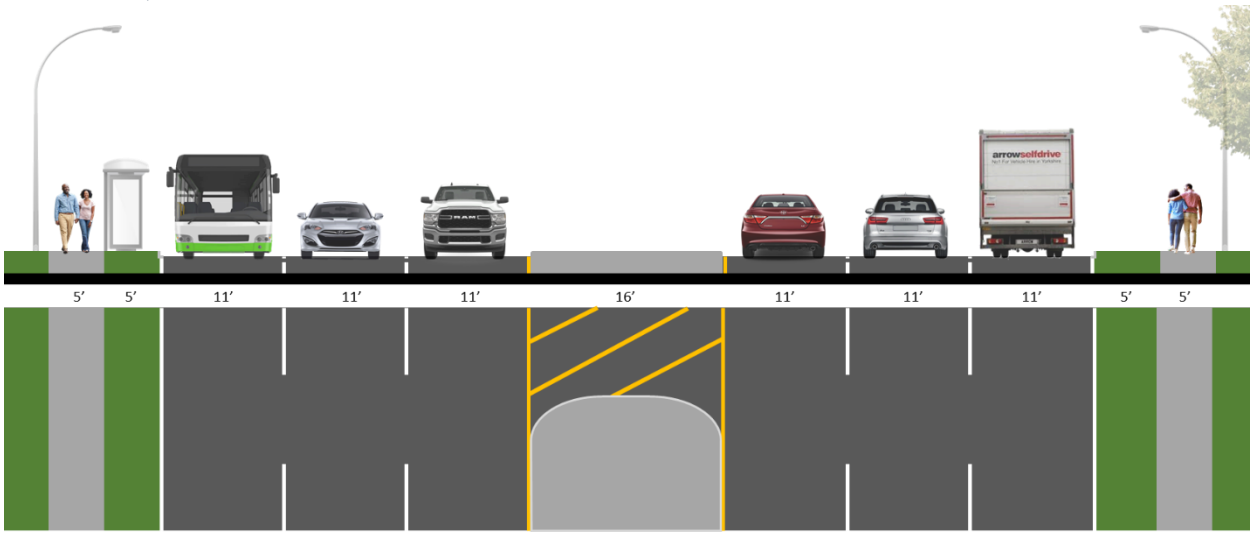
Travel Lanes	Travel Lane Width(s) Ft	Median	Posted Speed Limit (MPH)	On-Street Parking
2	20'	None	30	Yes – near Myrtle Ave
Existing Sidewalks	**Existing Bicycle Facility**	**Lighting**	**TRIP Roadway Type**	**Primary Land Use**
Yes – 5' both sides	None	Yes - Overhead	Residential	Residential (Single Family)

8th Street, Francis Street to Davis Street



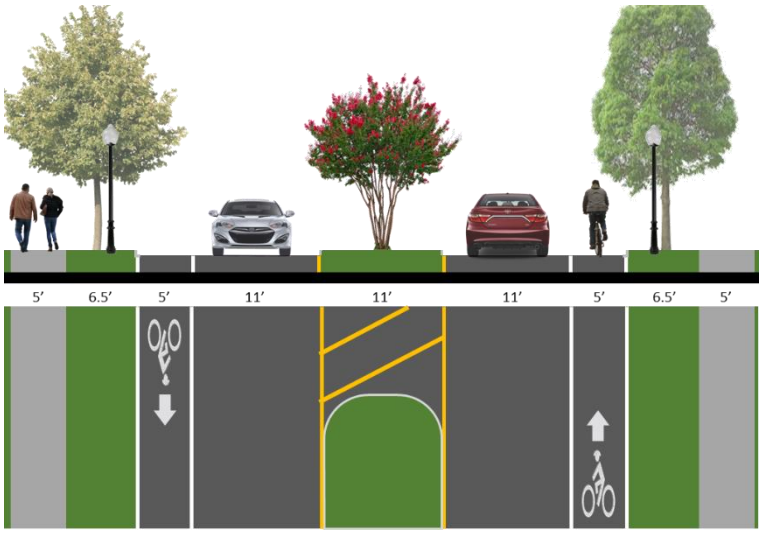
Travel Lanes	Travel Lane Width(s) Ft	Median	Posted Speed Limit (MPH)	On-Street Parking
4	11'	Raised	30	None
Existing Sidewalks	**Existing Bicycle Facility**	**Lighting**	**TRIP Roadway Type**	**Primary Land Use**
Yes – 5' both sides	None	Yes - Overhead	Residential	Interstate Interchange

8th Street, Davis Street to Boulevard Street



Travel Lanes	Travel Lane Width(s) Ft	Median	Posted Speed Limit (MPH)	On-Street Parking
4 – 6	11’	Raised	30	None
Existing Sidewalks	**Existing Bicycle Facility**	**Lighting**	**TRIP Roadway Type**	**Primary Land Use**
Yes – 5’ both sides	None	Yes – Overhead	Residential	Institutional (Hospital)

8th Street, Boulevard Street to Main Street



Travel Lanes	Travel Lane Width(s) Ft	Median	Posted Speed Limit (MPH)	On-Street Parking
2	11'	Raised	30	None
Existing Sidewalks	**Existing Bicycle Facility**	**Lighting**	**TRIP Roadway Type**	**Primary Land Use**
Yes – 5' both sides	Yes – 5' Bike Lanes	Yes – Pedestal	Residential	Commercial & Residential

Signalized Intersections and Crossings

Protected pedestrian crosswalks are present throughout the corridor at signalized intersections. Eight signalized intersections are on the corridor at Myrtle Ave, at Davis St, at James Hall Dr, at Illinois St, at Jefferson St, at Boulevard St, at Pearl St, and at Main St. Additionally, a marked crossing for the S-Line Urban Greenway is located east of Payne Ave. Figure 2, shows the locations of crossings along the corridor.

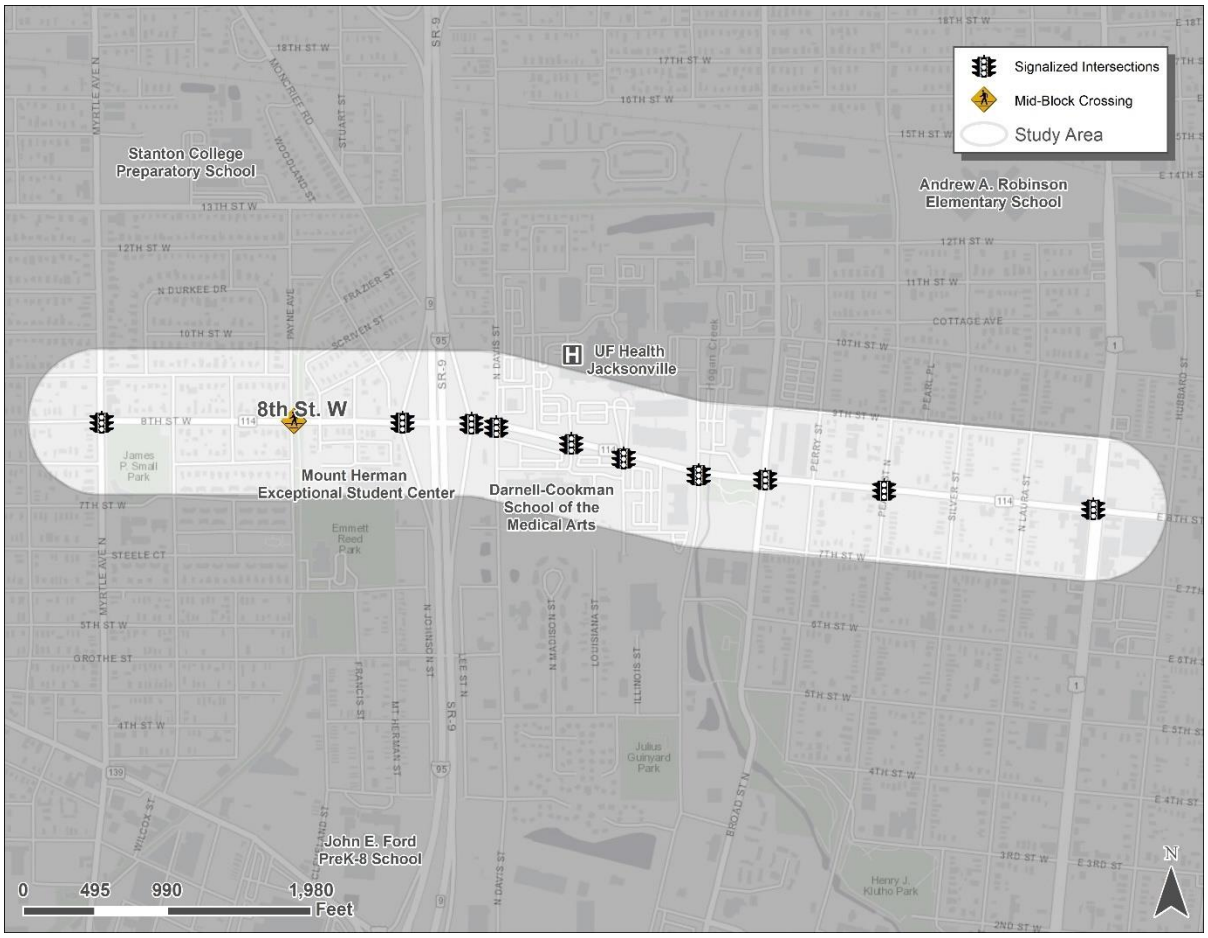


Figure 2: Pedestrian Crossing Locations

Environmental Justice

Environment Justice is the public policy goal of ensuring that the adverse human health or environmental effects of government activities do not fall disproportionately upon minority populations or low-income populations. From a transportation standpoint, environmental justice seeks to ensure that both equitable access to transportation services and equitable protection from the environmental hazards of infrastructure development are maintained.

Eight demographic indicators for the corridor were summarized using U.S. Census Bureau (2019 American Community Survey) block group data. As shown in Figure 3, approximately 85% of the population within the block groups along the corridor are minorities, nearly 40% of the households are low income, and a third of the households have no regular access to a motor vehicle. Figure 4 shows the outcomes of an equity analysis that generates assignment of equity area scores to geographies in the study area. The methodology to calculate the equity areas include:

- Calculate the countywide average threshold for each indicator
- Assign indicator categories to block groups based on the standard deviation of the indicator's dataset

- Calculate the comparative score for each indicator
- Calculate the equity composite score
- Assign the equity composite score category to each block group

The equity area assignment is based on the block group's final composite score relative to the average composite score for all block groups in the county:

- Low – less than average composite score for all block groups
- Medium – equal to or greater than countywide average but less than +1 standard deviation from average composite score for all block groups
- High – equal to or greater than +1 standard deviation but less than +2 standard deviation from average composite score for all block groups
- Very High – equal to or greater than +2 standard deviation from average composite score for all block groups

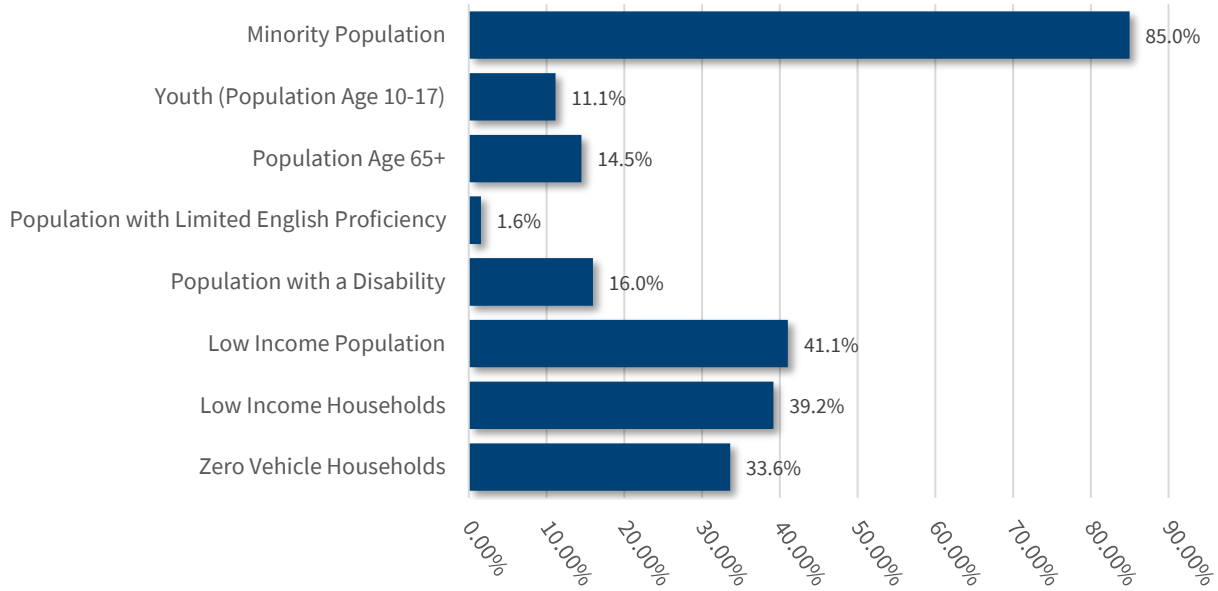


Figure 3: Corridor Demographic Indicators

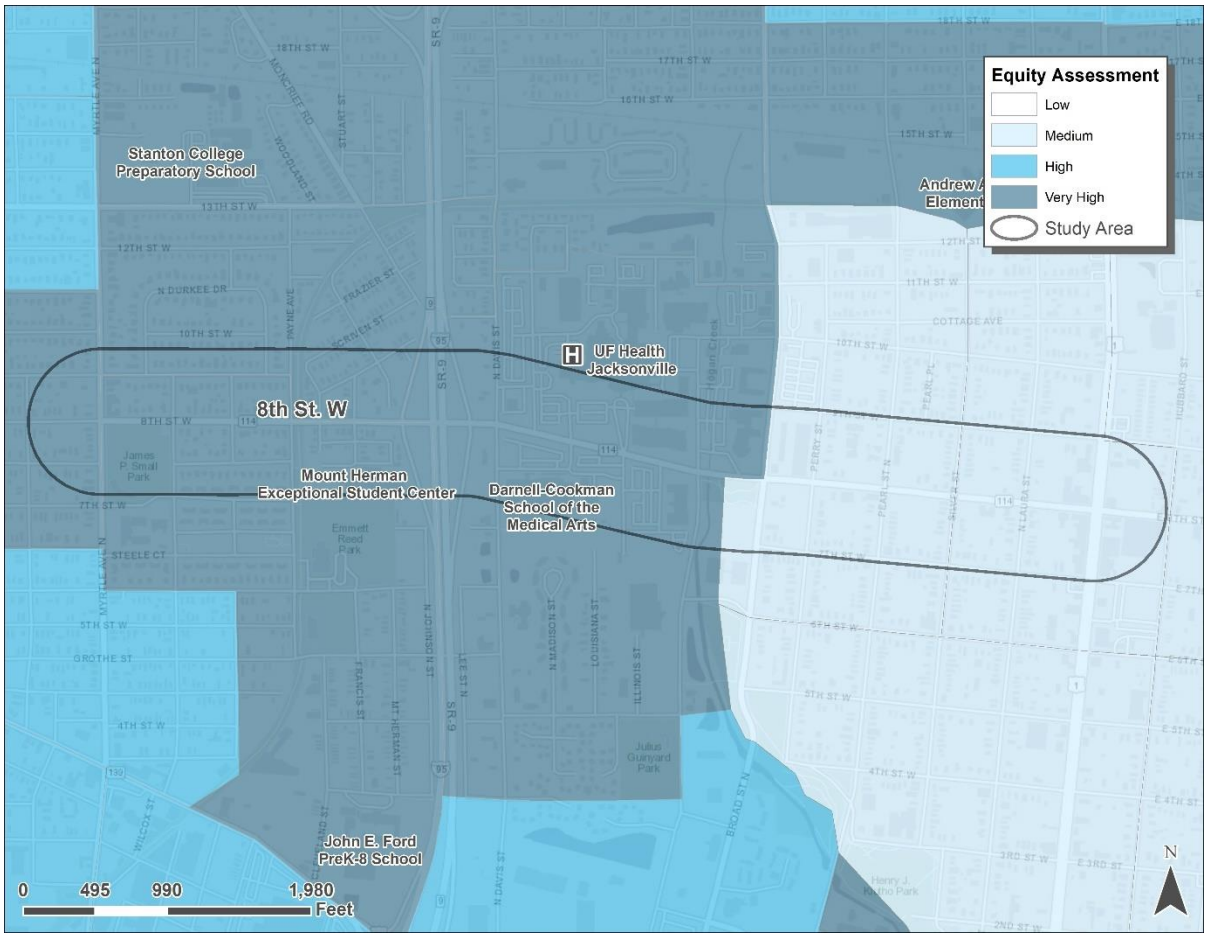


Figure 4: Environmental Justice Composite Rankings

Historical Crash Review

Crash data along the study corridor was obtained through Signal Four Analytics. A review of crash data was completed for a six-year period from January 1, 2015 to December 31, 2020. Although a five-year review of crashes is typical, a six-year analysis was performed to account for the unusual trends that arose during the height of the Covid-19 pandemic in 2020. A review of total crashes including pedestrian and bicycle crashes were conducted.

Total Crash Review

There were 641 total reported crashes during the crash review period. Of the 641 total crashes, approximately 70% (451) of the crashes were property damage only crashes or crashes that didn't result in an injury or possible injury. No fatalities occurred as a result of a traffic crash during the review period, but eight incapacitating/serious injury crashes occurred (Figure 5). Figure 6 shows the annual distribution of total crashes throughout the corridor; as shown, 2018 recorded the most crashes with 126, and while the 98 crashes in 2020 are an improvement from the high mark, the number of crashes in 2020 was higher than the number of crashes (95) at the beginning of the review period in 2015.

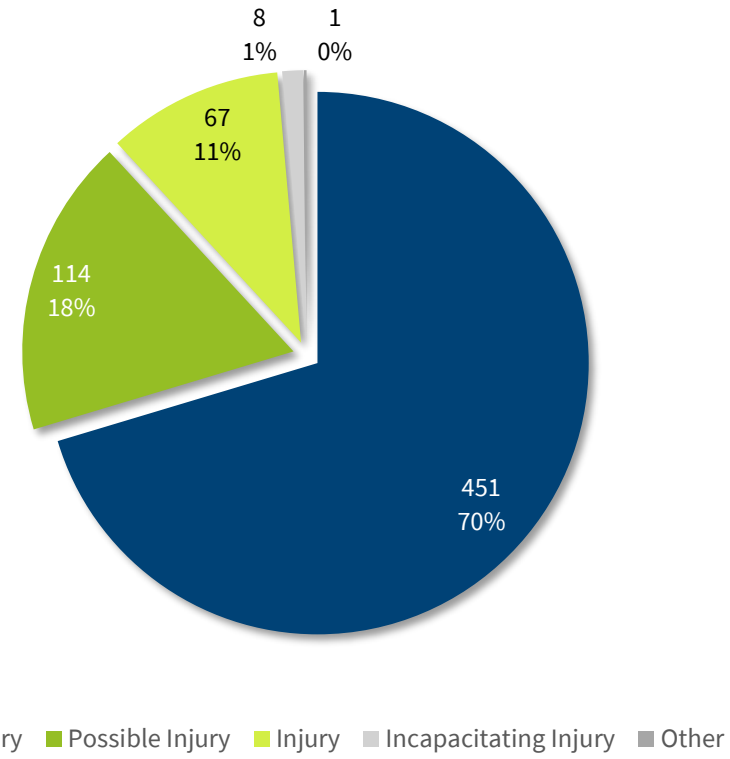


Figure 5: Crash Injury Severity Summary

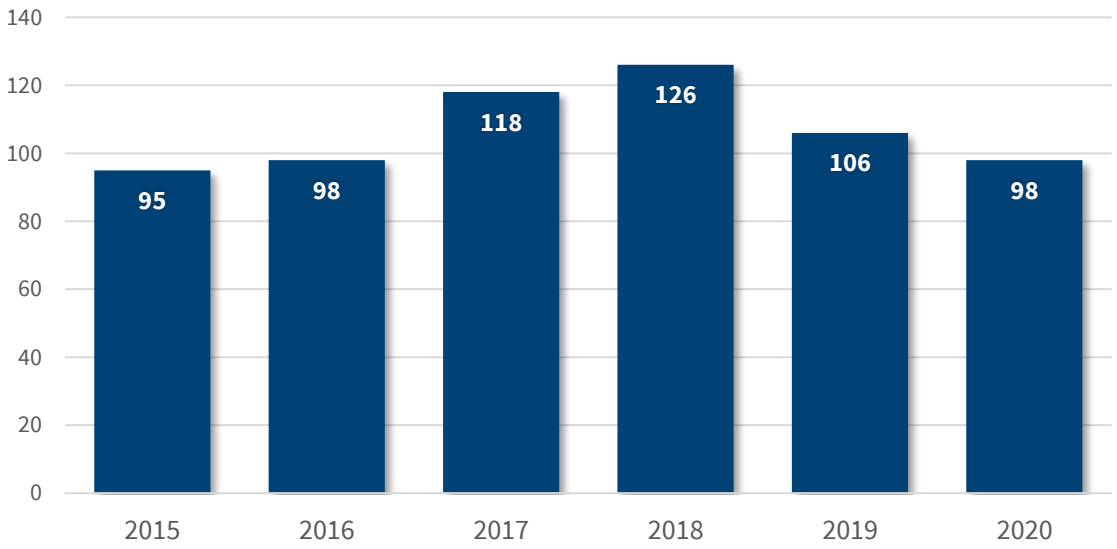


Figure 6: Total Crash Annual Distribution

To further examine the temporal crash trends, crashes by month of the year, day of the week, and hour of the day were analyzed. Figure 7 shows that total crashes were highest in August and December, with a noted sustained higher frequency between February and April. Figure 8 shows crashes by day of the week. The number during weekdays was relatively consistent, with Tuesdays

having the most with 116 and Sundays having the fewest crashes with 44 during the six-year period. Outside the 4 p.m. and 9 a.m. hours, total crashes within the corridor are relatively constant throughout the daytime hours, Figure 9.

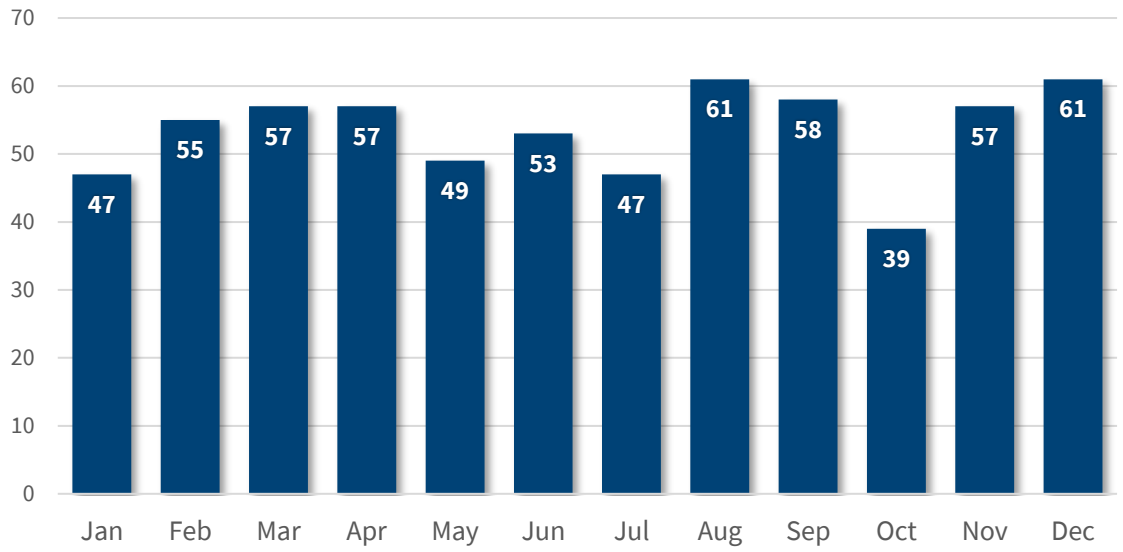


Figure 7: Total Crashes by Month

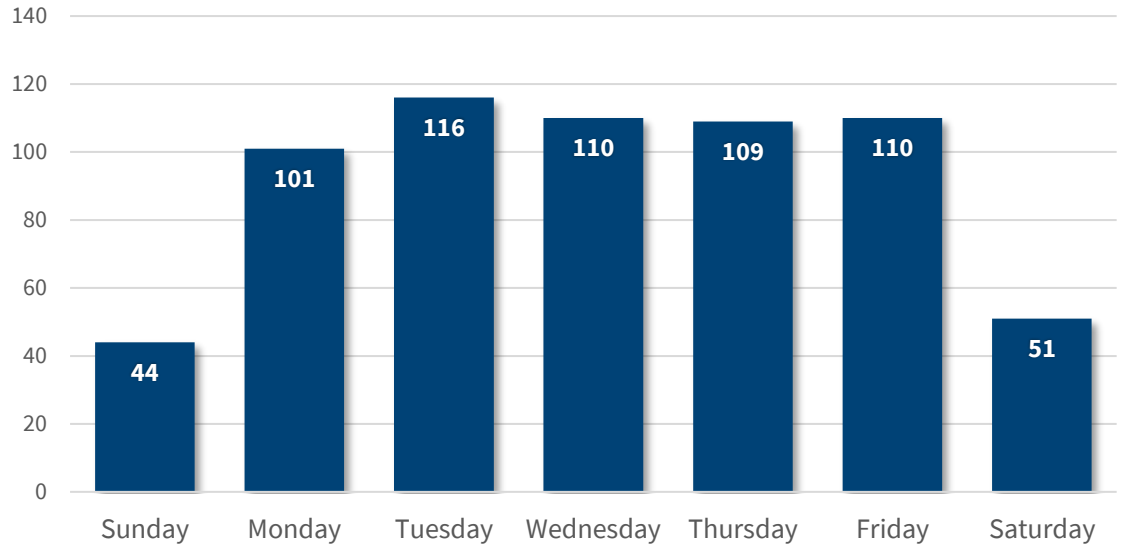


Figure 8: Total Crashes by Day of the Week

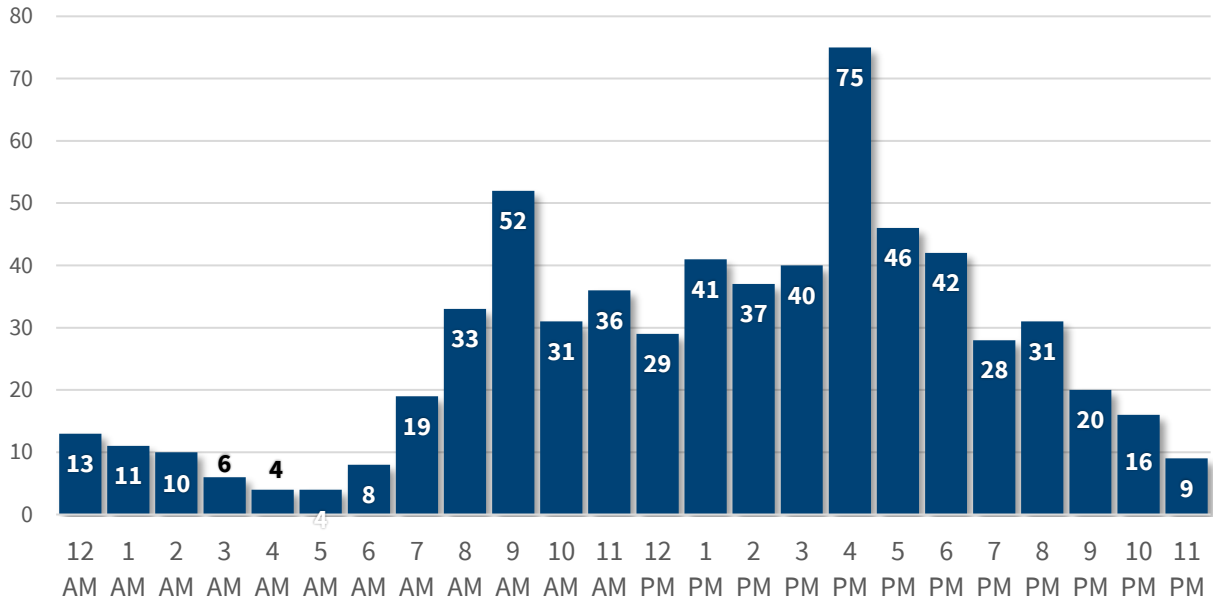


Figure 9: Total Crashes by Time of Day

Additional contributing crash factors were evaluated to better understand the conditions and locations where crashes have occurred. Figure 10 shows the distribution of total crashes by lighting condition, as shown over 75% of the crashes occurred during daylight conditions. Figure 11 shows the distribution of total crashes by weather conditions, 78% of the crashes occurred during clear weather conditions, with just 7% occurring during rainy conditions. Figure 12 shows the distribution of total crashes based on the location of the crash in relation to an intersection. As shown, over half (54%) of the total crashes along 8th Street occurred at or near an intersection.

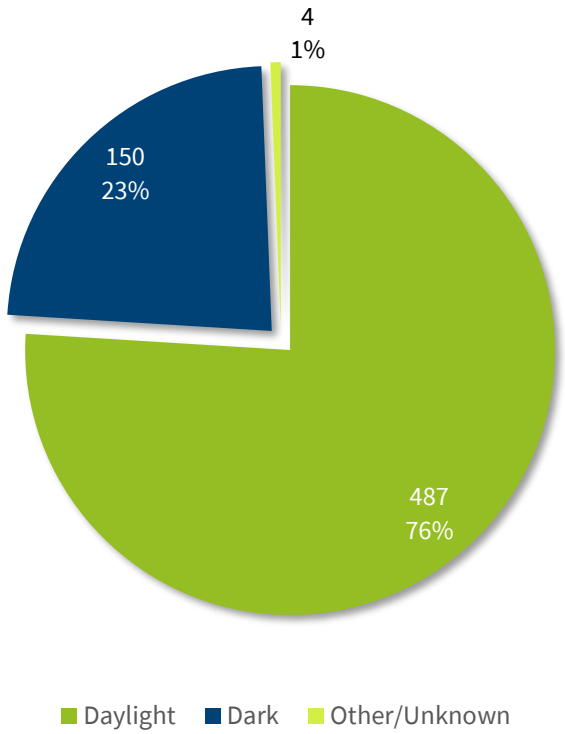


Figure 10: Total Crashes by Lighting Conditions

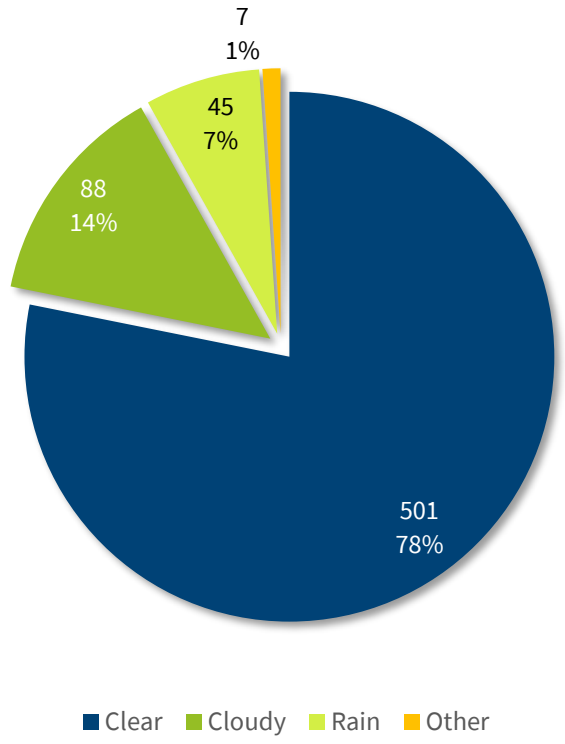


Figure 11: Total Crashes by Weather Conditions

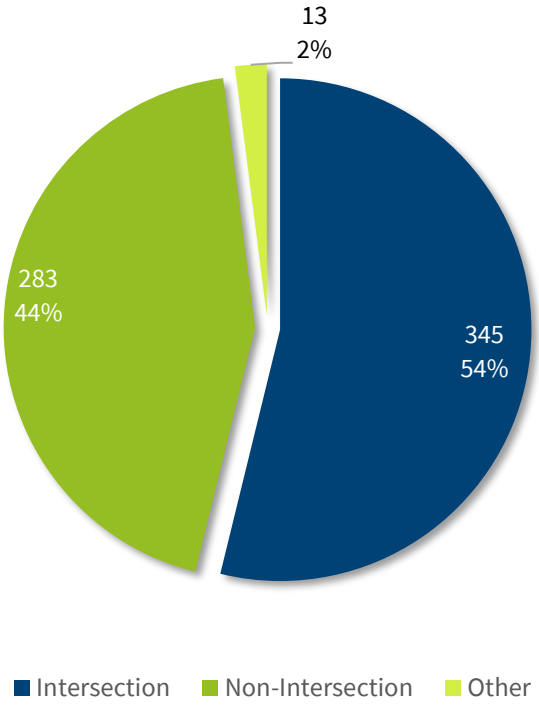


Figure 12: Total Crashes by Location

Figure 13 shows total crashes distributed by crash type crash type. As shown Angle and Left Turn crashes, which are often associated with intersections, were the most frequent crash type with 181 crashes or about 28% of the total crashes. Rear-end crashes were the next most frequent crash type and accounted for approximately 25% of the crashes along 8th Street. Pedestrians were involved in 28 crashes or about 4.4% of the total crashes, bicyclists were involved in 11 crashes (1.7%) during the six-year review period.

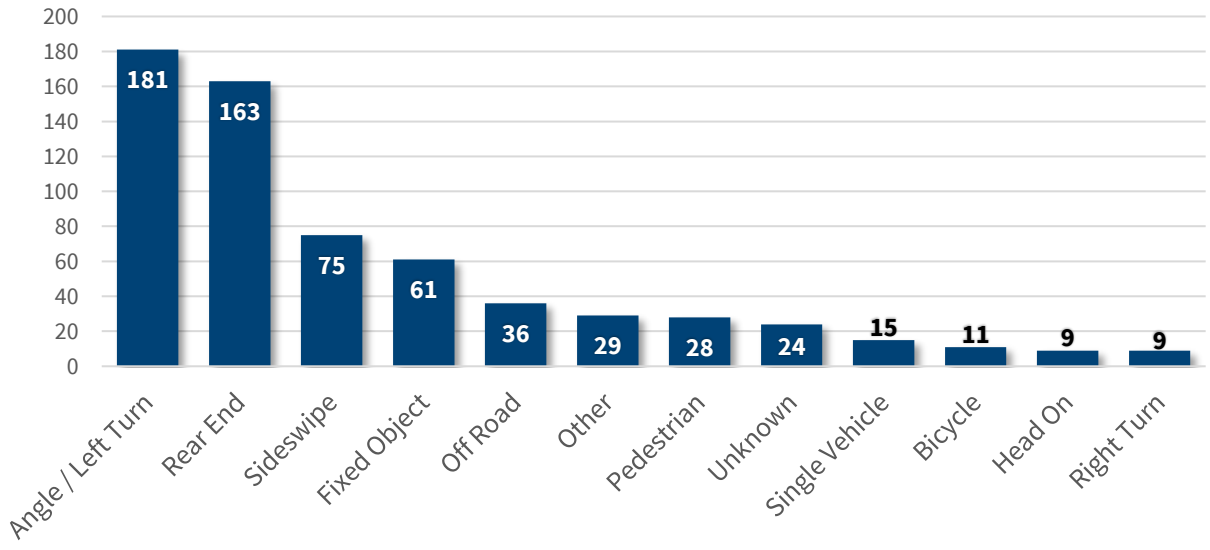


Figure 13: Total Crashes by Crash Type

Finally, the crashes along the corridor were mapped; this process used a cluster-based analysis that grouped crashes based on their proximity to each other to form crash frequency clusters. As shown in Figure 14, the areas along the corridor with the highest frequency of crashes are the I-95 Interchange and Davis St area, the Jefferson St intersection area, and the area at and near Main St; approximately 58% of the crashes that occurred along the corridor occurred within these three areas. Approximately 66% of the total crashes along 8th Street occurred along the 4 to 6-lane section of 8th Street between the I-95 Interchange and Boulevard Street.

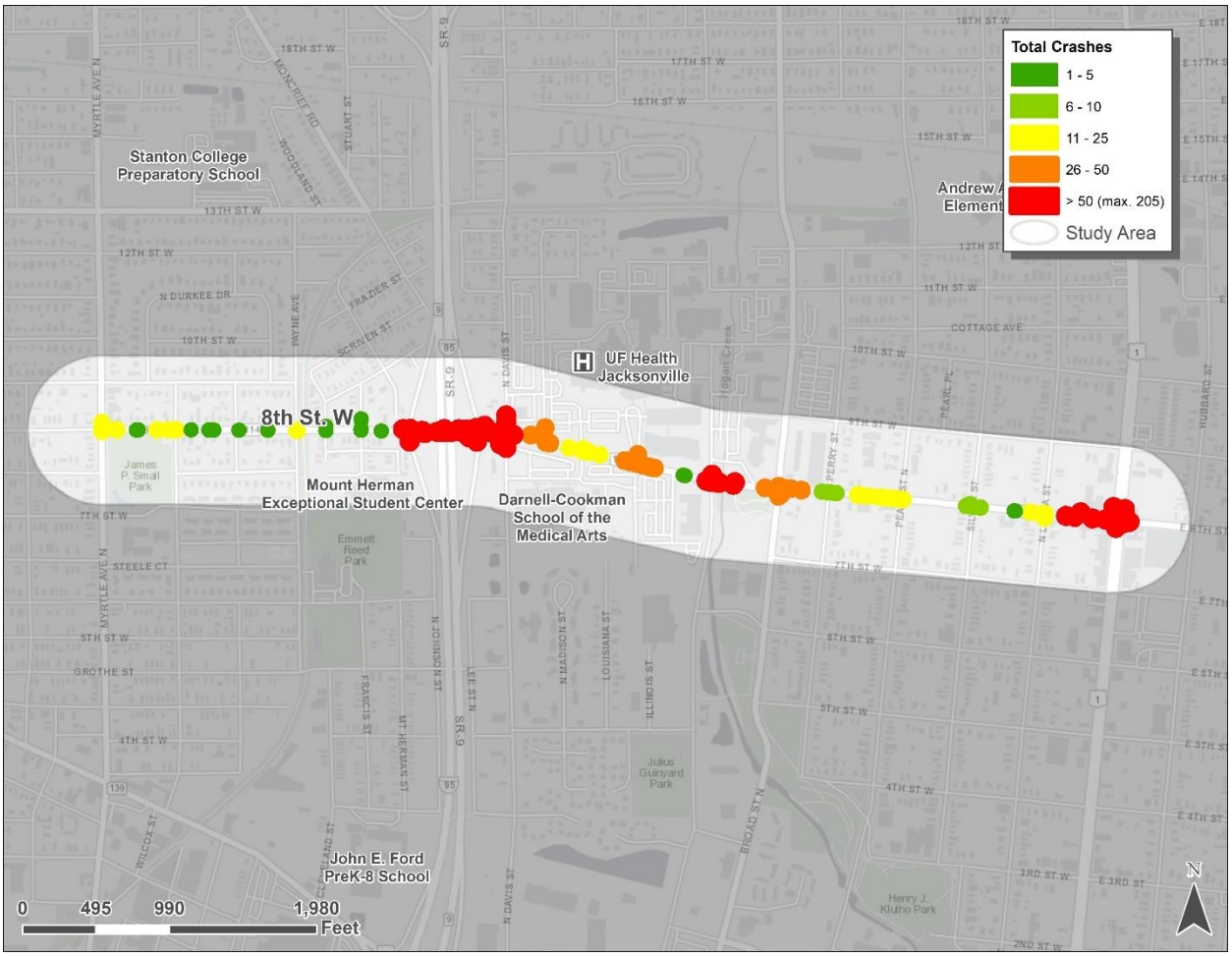


Figure 14: Total Crash Locations and Frequency

Pedestrian and Bicycle Crash Review

While improving overall safety is a goal of this Study, the primary objective is to improve safety and mobility for people walking and riding bicycles along the corridor. A review of pedestrian and bicycle involved crashes was conducted to better understand the trends, factors, and locations where pedestrian and bicycle crashes have occurred.

Figure 15 shows the annual distribution of pedestrian and bicycle crashes along 8th Street. Through the six-year period a slight downward trend in crashes occurred. A noticeable spike in crashes was observed in 2017, otherwise, the annual number of crashes has ranged between five and eight crashes per year.

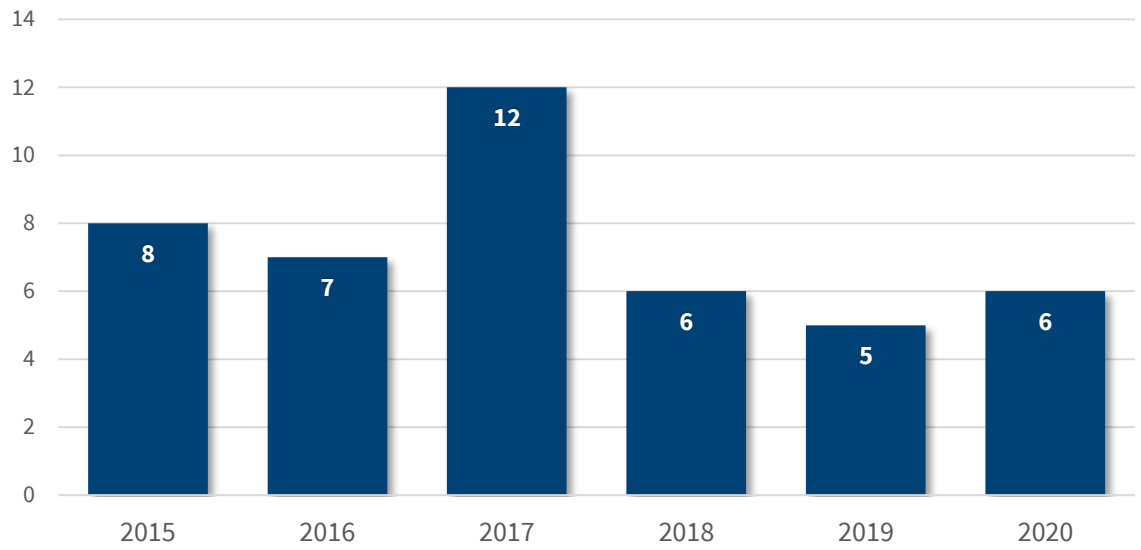


Figure 15: Pedestrian and Bicycle Crash Annual Distribution

Unlike total crashes, where 70% of the crashes resulted in no injuries, only 14% of the pedestrian and bicycle crashes were property-damage-only crashes that didn't have a reported injury (Figure 16). Two crashes resulted in a serious/incapacitating injury, while 55% resulted in a non-incapacitating injury and 27% as a possible injury.

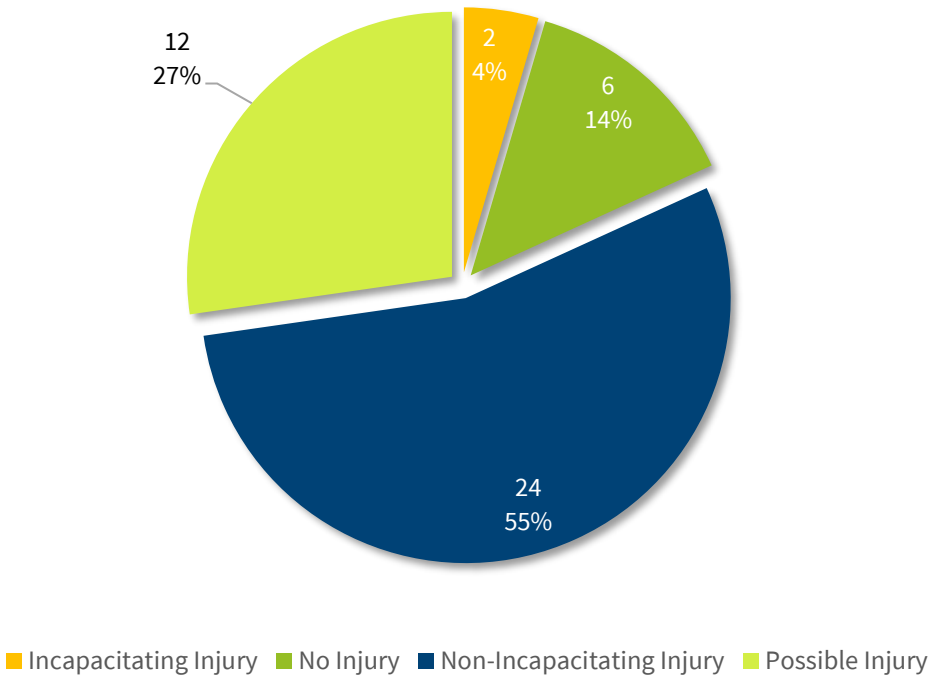


Figure 16: Pedestrian and Bicycle Crash Injury Severity Summary

Pedestrian and bicycle crashes by month (Figure 17), day of the week (Figure 18), and time of day (Figure 19) were reviewed. The months of April and December had the most crashes, each with seven. An apparent relationship is noticed when the weather is more conducive to walking and riding a bicycle with the fall, winter, and early spring months having the higher frequency of crashes. Half of the pedestrian and bicycle crashes occurred on either a Monday or Tuesday. As for time of day, a slight increase in crash frequency during the afternoon hours, between 12 p.m. and 4 p.m., no pedestrian or bicycle crashes were reported between the hours of 1 a.m. and 5 a.m.

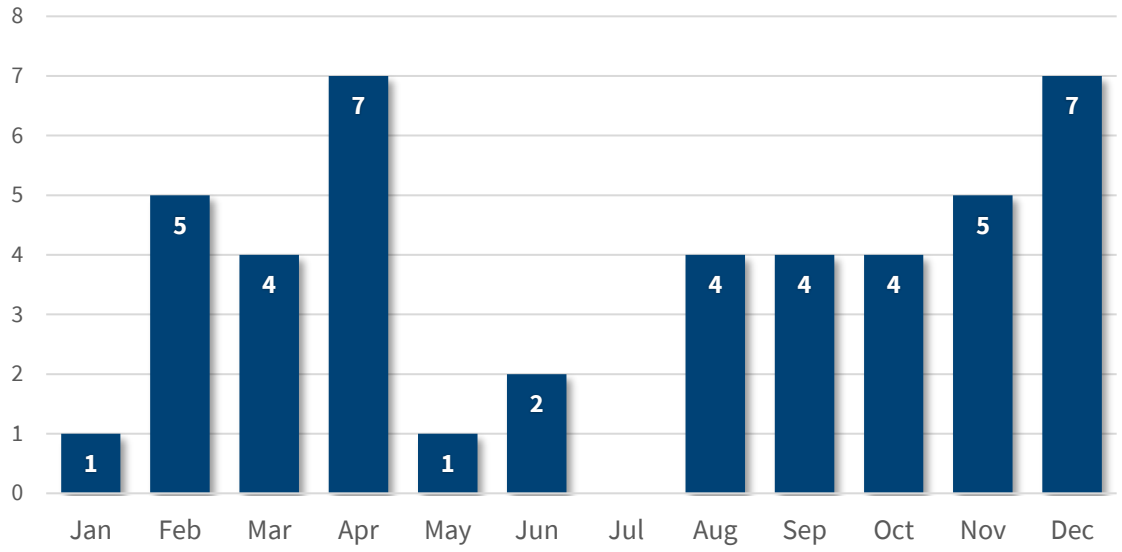


Figure 17: Pedestrian and Bicycle Crashes by Month

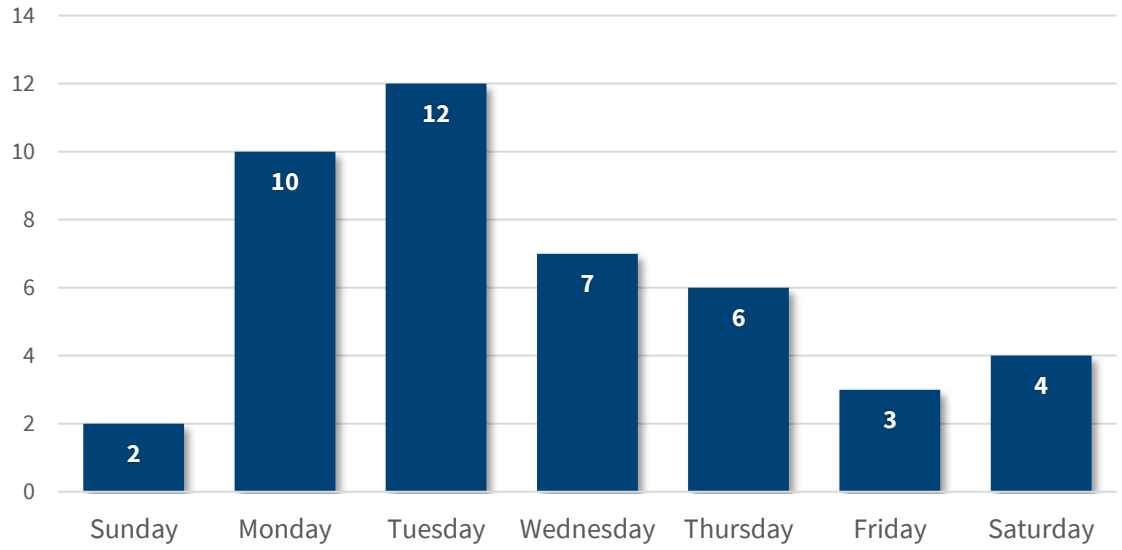


Figure 18: Pedestrian and Bicycle Crashes by Day of the Week

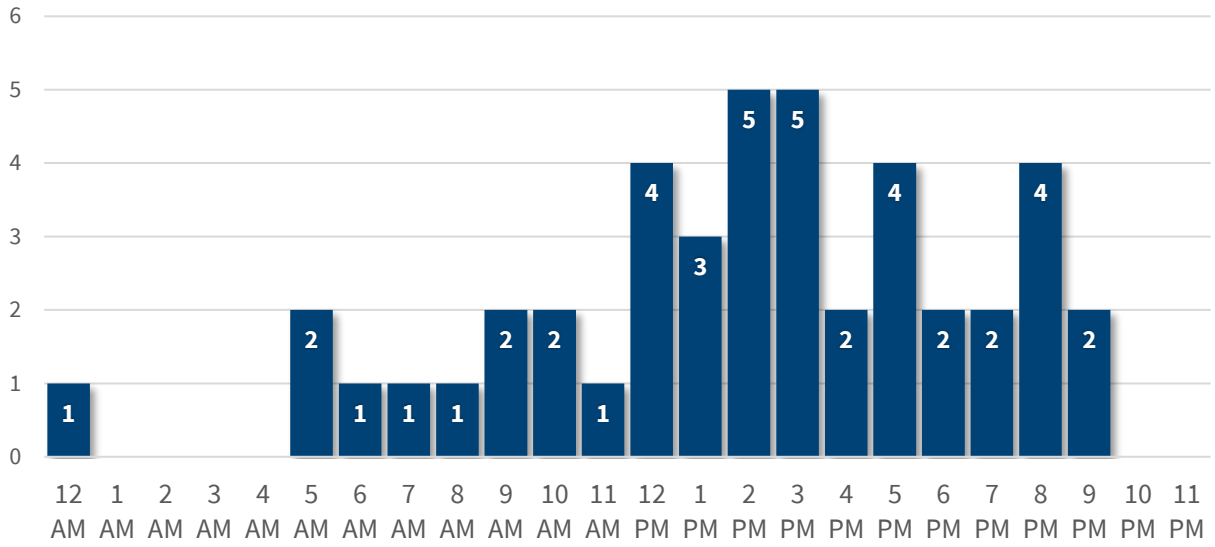


Figure 19: Pedestrian and Bicycle Crashes by Time of Day

68% of the pedestrian and bicycle crashes occurred during daylight conditions, with 32% occurring during dark conditions (Figure 20). 81% of the crashes occurred during clear conditions (Figure 21). Like the total crash distribution, pedestrian and bicycle crashes were almost evenly split between intersection and non-intersection locations (Figure 22), with 50% of the pedestrian and bicycle crash occurring at or near an intersection, 48% at non-intersection locations, and 2% or one crash occurring at neither an intersection nor non-intersection location.

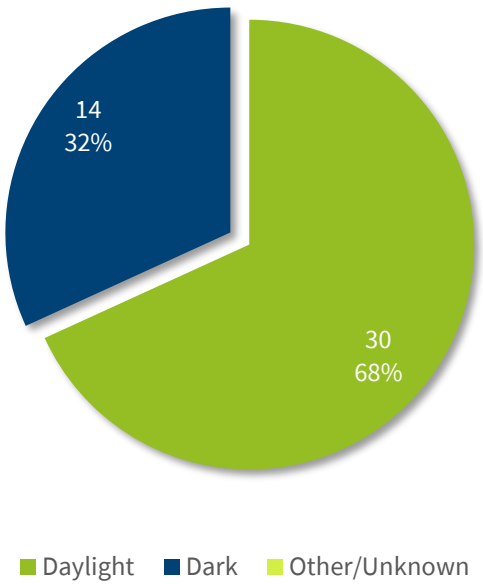


Figure 20: Pedestrian and Bicycle Crashes by Lighting Conditions

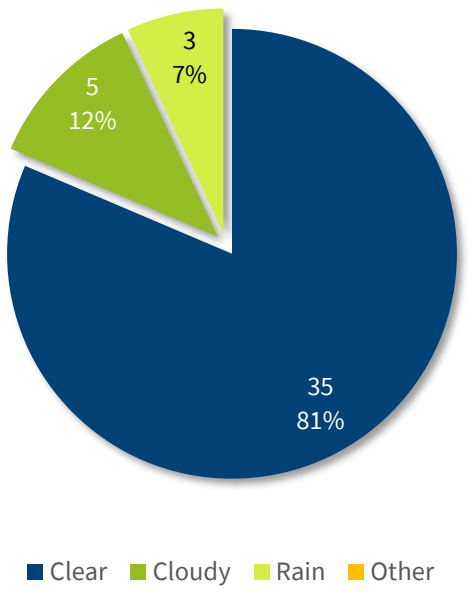


Figure 21: Pedestrian and Bicycle Crashes by Weather Conditions

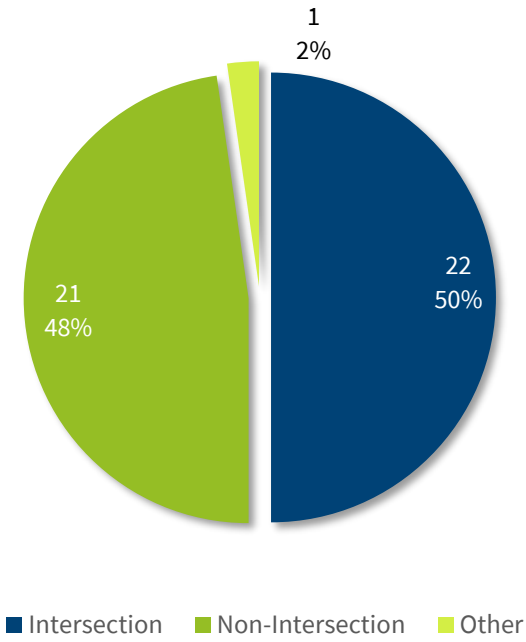


Figure 22: Pedestrian and Bicycle Crashes by Location

Using the cluster-based analysis process, pedestrian and bicycle crashes along the corridor were grouped and summarized to show locations with higher frequencies of crashes. As shown in Figure 23, pedestrian and bicycle crashes were clustered near the intersection of 8th Street and Davis Street, 8th Street and Jefferson Street, 8th Street and Myrtle Avenue, and 8th Street and Boulevard Street.

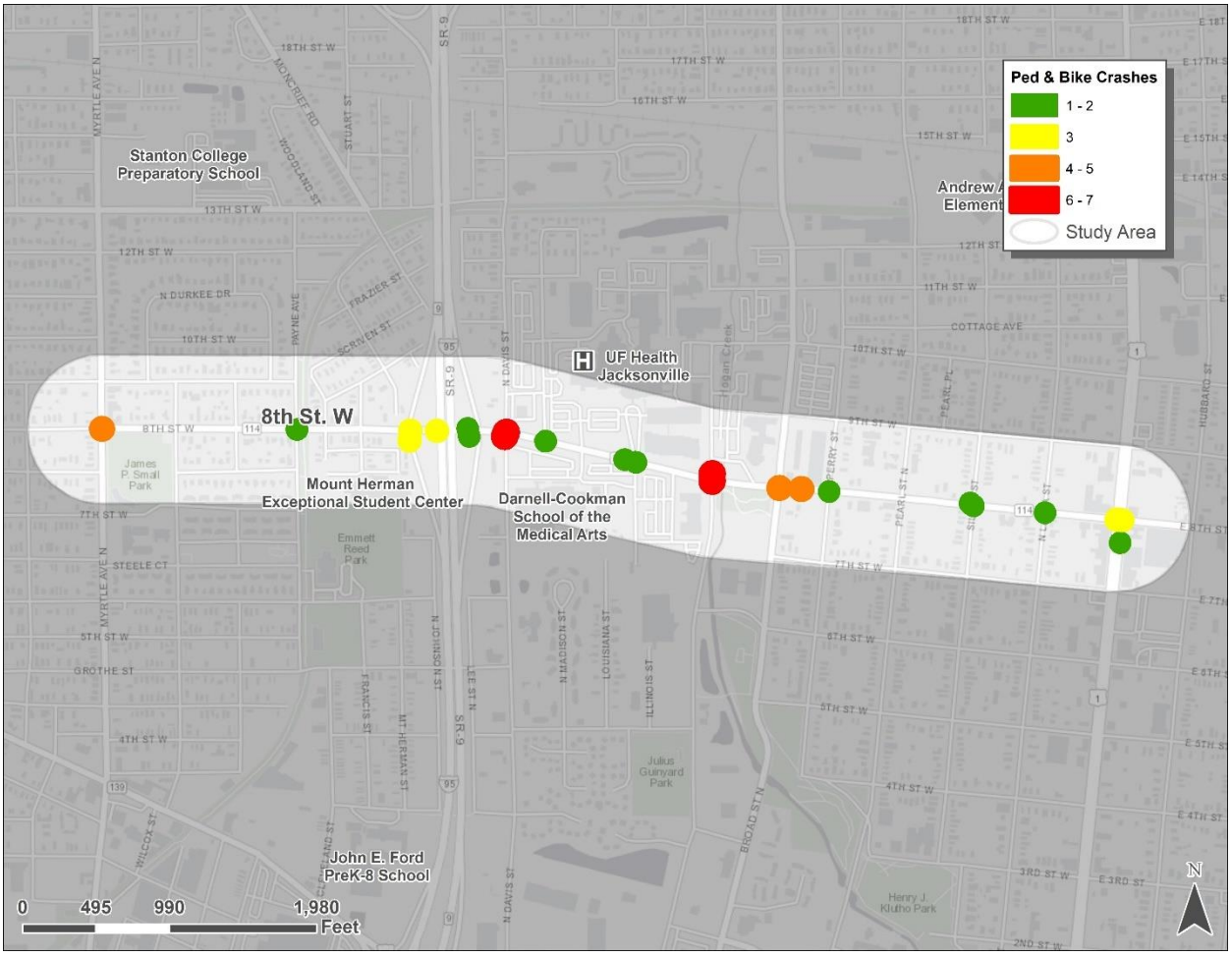


Figure 23: Pedestrian and Bicycle Crash Locations and Frequency

Recommendations

As mentioned earlier, the 8th Street corridor has been identified, according to the City of Jacksonville's TRIPS guidance, as a Residential Neighborhood street. These streets are supposed to serve the needs of all residents and it is especially important that they are safe and comfortable for all users including people who walk and bicycle. The City's Pedestrian and Bicycle Master Plan recommends the following tools to address pedestrian and bicycle safety and mobility on residential neighborhood streets:

- Increase sidewalk widths and complete sidewalk gaps
- Provide ample sidewalk buffers when feasible
- Reduce curb radii at intersections
- Mark crosswalks
- Install traffic calming

The JTA Mobility Works Complete Streets Study evaluated the 8th Street corridor and identified several general and site-specific recommendations. The following is an overview of those recommendations:

- Area-Wide Recommendations:
    - Lower motor vehicle operating speeds
    - An evenly balanced streetscape
    - Dedicated facilities for bicyclists
    - Wide sidewalks
    - Sidewalk buffer
    - Building placement
    - Improved pedestrian-scale lighting
    - Install Rectangular Rapid Flashing Beacons (RRFB)
    - Narrow lane widths
    - Reduce curb-radii
    - Provide mid-block crossings
- Site-Specific Recommendations:
    - From Myrtle Ave to I-95:
        - Reduce lane widths, add parallel parking on one side of roadway, add bike lanes to both sides of roadway
        - Upgrade all crossings to current ADA standards and provide pedestrian countdown timers at signalized intersections
        - Upgrade lighting to current standards, including pedestrian-scale lighting
    - From I-95 to Boulevard Street:
        - Replace the outer turn lanes with protected bike lanes
        - Upgrade lighting to current standards, including pedestrian-scale lighting
        - Add planted median to east leg of 8th St at Boulevard St
        - Narrow travel lanes and widen the existing medians, with plantings where possible
        - Expand/add planted median to west leg at Jefferson St

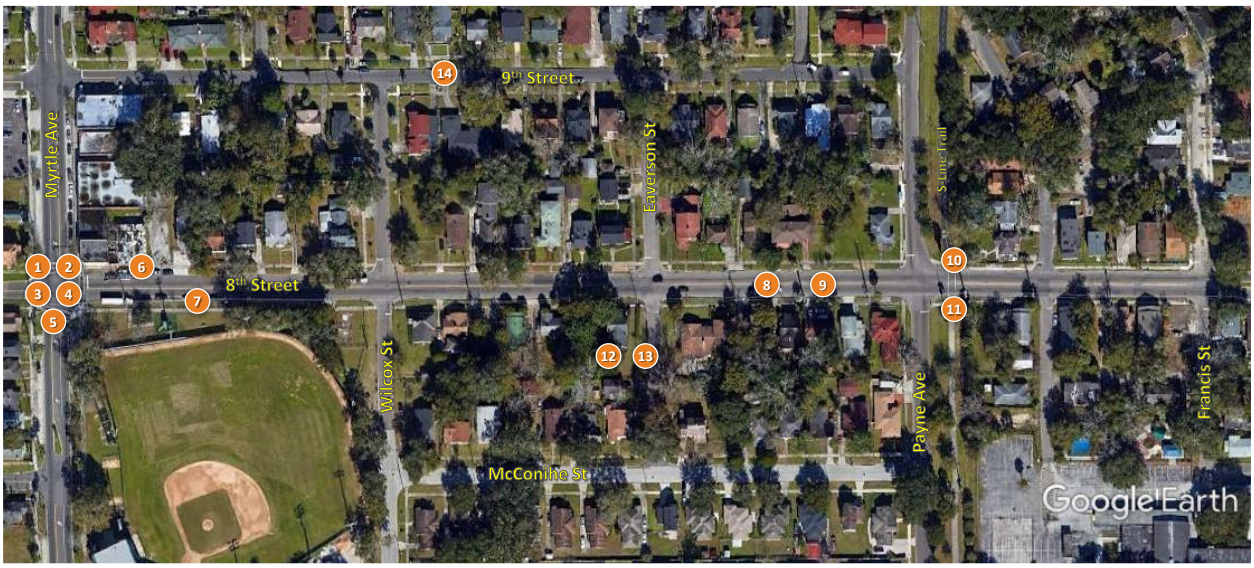
        - Expand existing sidewalks at I-95 interchange to multi-use paths, construct bike lane transitions on both sides to connect bike lanes across the interchange
    - At James Hall Dr:
        - Remove northbound lane from northern leg of intersection and construct curb with smaller radii
        - Expand/add planted median to east leg
        - Plant existing medians on west leg
        - Add crosswalk across west leg
        - Adjust crosswalk along east leg
    - From Boulevard St to Main St:
        - Upgrade all crossing to current ADA standards and provide pedestrian countdown timers at signalized intersections
        - Upgrade lighting to current standards, including pedestrian-scale lighting

Proposed Improvements

A set of proposed corridor improvements were developed based on the review and evaluation of existing plans, crash history, and existing conditions. The identified improvements are proposed to help make 8th Street a safe, comfortable, and accessible street for users of all ages and abilities. The City of Jacksonville's TRIP guidance and the JTA Mobility Works Complete Streets study were the basis for the proposed improvements in this document.

While an attempt to identify fatal flaws that would make a proposed improvement unfeasible was taken, it is important to note that the improvements identified in this study represent potential opportunities and are not necessarily recommendations; rather, they are suggestions for further consideration and evaluation. In many instances, the identified improvements will require additional evaluation, analysis, and/or engineering design to determine the full feasibility of each potential improvement.

8th Street, Myrtle Avenue to Francis Street



ID	Location	Potential Improvement
1	8th St at Myrtle Ave	Enhance crosswalk markings to high-visibility/special emphasis crosswalk markings.
2	8th St at Myrtle Ave	Construct curb extensions along the east side of the intersection in the northeast and southeast quadrants.
3	8th St at Myrtle Ave	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head to replace the existing 5-section signal heads on Myrtle Ave and the 3-section heads on 8th St. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
4	8th St at Myrtle Ave	Consider installing flexible retroreflective backplates on all signal heads.
5	8th St at Myrtle Ave	Evaluate existing intersection and crosswalk illumination and consider installing overhead lighting to supplement the existing pedestal lighting.
6	8th St east of Myrtle Ave	Determine where the existing right-of-way line along the north side of 8th St is just east of Myrtle Ave. Depending on the right-of-way evaluation, consider using the space that is currently an informal parking area to create a sidewalk buffer and then mark on-street parking spaces on the existing roadway pavement.

ID	Location	Potential Improvement
7	8th St, Myrtle Ave to Wilcox St	Consider extending the on-street parking along the south side of 8th St.
8	8th St, Wilcox St to Francis St	Consider installing curb extensions (bulb-outs) along 8th St at the side street intersections of Wilcox St, Eaverson St, Payne Ave, Cleveland St, and Francis St. The curb extensions could help to manage speeds, by creating horizontal deflection and by narrowing the street at select locations, could help reduce turning vehicle speeds, reduce pedestrian crossing distances, improve intersection sight lines, and provide an opportunity for enhanced streetscape features.
9	8th St, Wilcox St to Francis St	As an alternative to intersection curb extensions, evaluate opportunities to construct mid-block chicanes along 8th St as a speed management strategy and opportunity to enhance the streetscape.
10	8th St at S-Line Crossing	Enhance crosswalk markings to high-visibility/special emphasis crosswalk markings.
11	8th St at S-Line Crossing	Enhance the crossing to include curb extensions, rectangular rapid flashing beacons (RRFB), signage, and pavement markings indicating where vehicles are supposed to stop. If necessary, consider constructing the curb extensions using a mountable truck apron curb to better accommodate larger vehicles, such as buses, that may be turning at the intersection of 8th St and Payne St.
12	8th St, Myrtle Ave to Francis St	Conduct a lighting illumination evaluation and consider installing pedestrian-scale (pedestal) lighting along 8th St.
13	8th St, Myrtle Ave to Francis St	Consider marking the side street crossings along 8th St.
14	9th St, Myrtle Ave to Payne Ave	9th St is located one block (approximately 300') north and runs parallel to 8th St, this local residential street could provide a low-stress alternative to people traveling on bicycles to or from the S-Line Trail and the Myrtle Ave corridor. Consider adding shared lane markings, signage, and an accessible connection to the S-Line Trail at Payne Ave.

Figure 24: Illustration of Concepts #1, #2, #6, #7

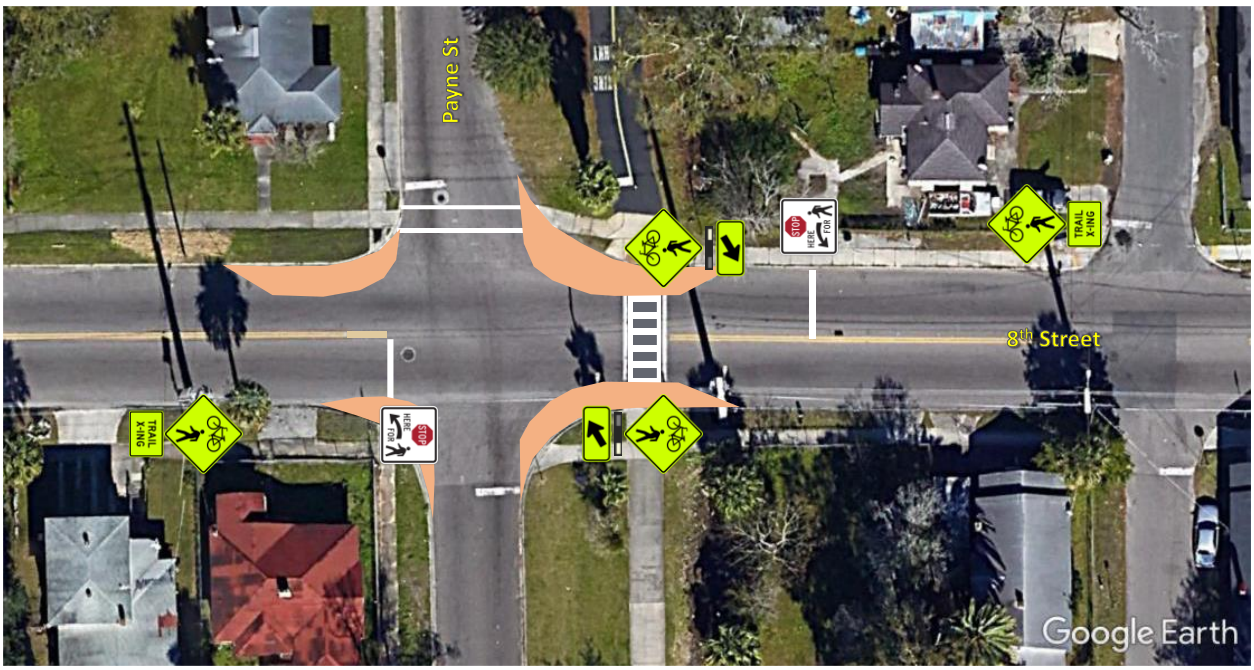


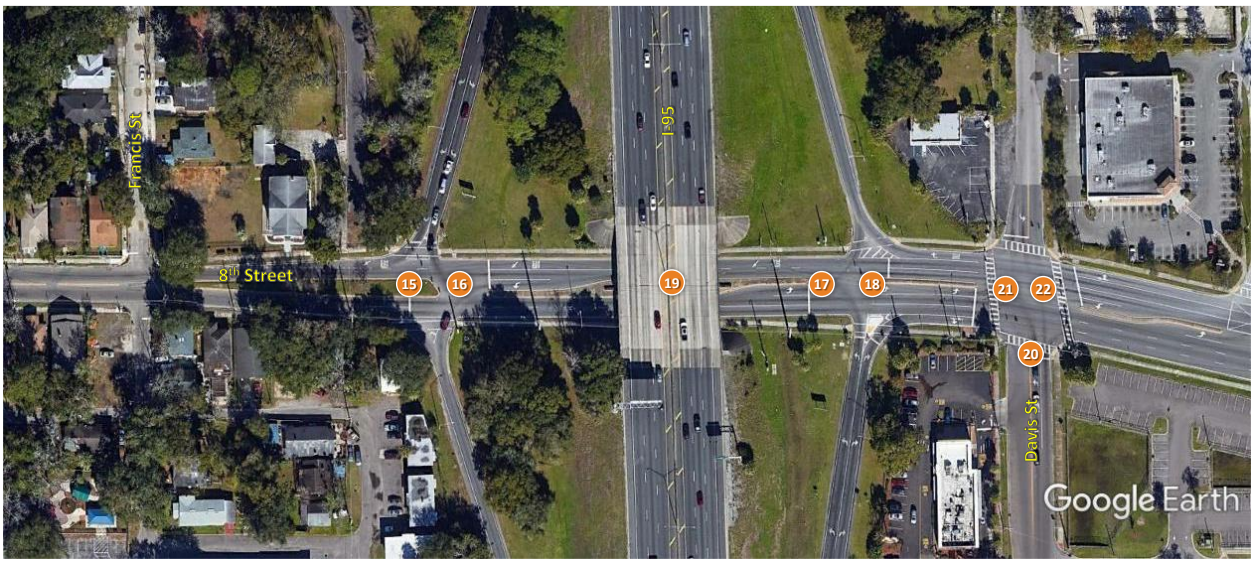
Figure 25: Illustration of Concepts #10, #11

Source: FDOT Design Manual Figure 202.3.1

Figure 26: Residential Street Mid-Block Chicane Concept #9

Figure 27: Bicycle Boulevard Example

8th Street, Francis Street to Davis Street



ID	Location	Potential Improvement
15	8th St at I-95 interchange southbound ramps	Evaluate the existing signal span-wire structure to determine if the 5-section signal head for westbound traffic could be replaced by a 4-section flashing yellow arrow signal assembly and an additional 3-section signal head. If feasible, replace the existing 5-section signal head with a 4-section flashing yellow arrow signal head assembly.
16	8th St at I-95 interchange southbound ramps	Consider installing flexible retroreflective backplates on all signal heads.
17	8th St at I-95 interchange northbound ramps	Evaluate the existing signal span-wire structure to determine if the 5-section signal head for eastbound traffic could be replaced by a 4-section flashing yellow arrow signal assembly and an additional 3-section signal head. If feasible, replace the existing 5-section signal head with a 4-section flashing yellow arrow signal head assembly.
18	8th St at I-95 interchange northbound ramps	Consider installing flexible retroreflective backplates on all signal heads.
19	8th St, Francis St to Davis St	Evaluate existing lighting conditions and enhance if necessary. Consider placing underdeck lighting to help illuminate the space under I-95.
20	8th St at Davis St	Consider realigning the crosswalk across the south leg of the intersection by relocating the pedestrian curb ramp on the west side of the intersection further south along Davis St.

ID	Location	Potential Improvement
21	8th St at Davis St	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
22	8th St at Davis St	Consider installing flexible retroreflective backplates on all signal heads.

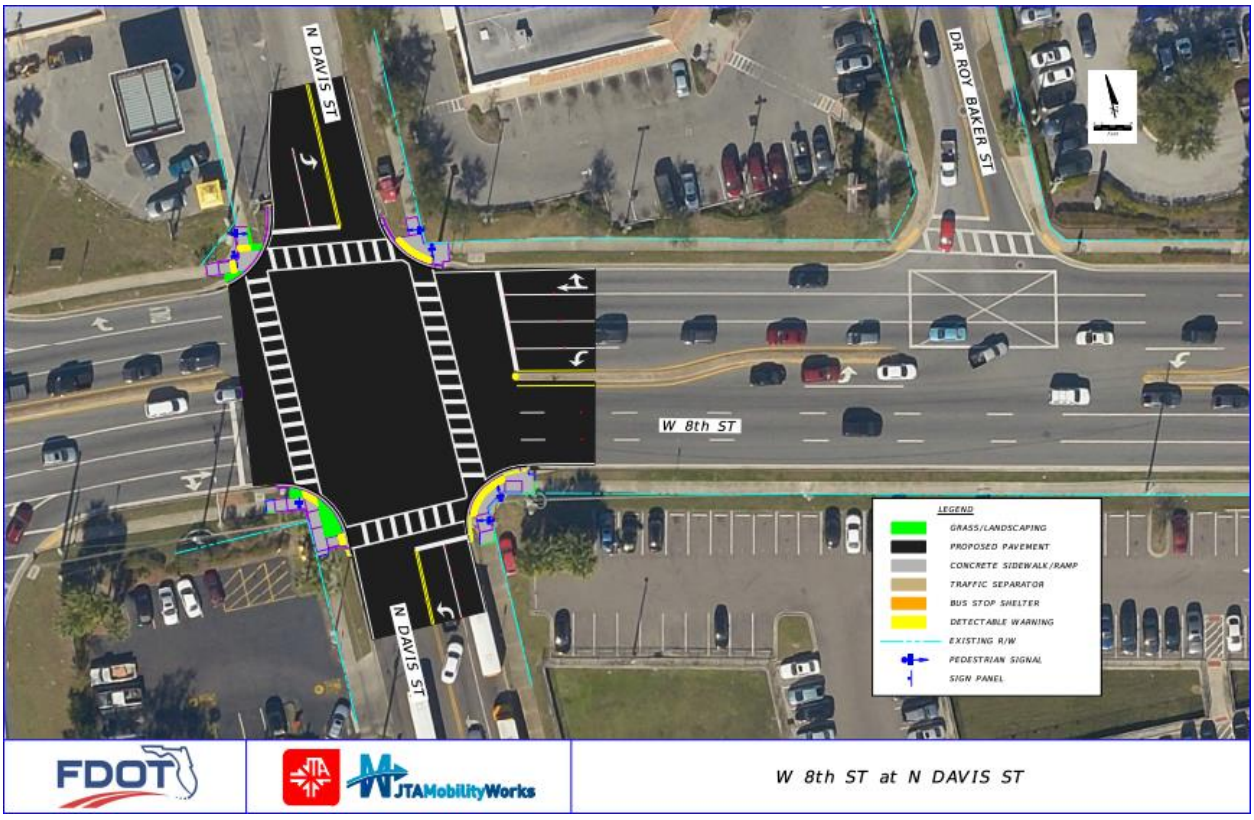
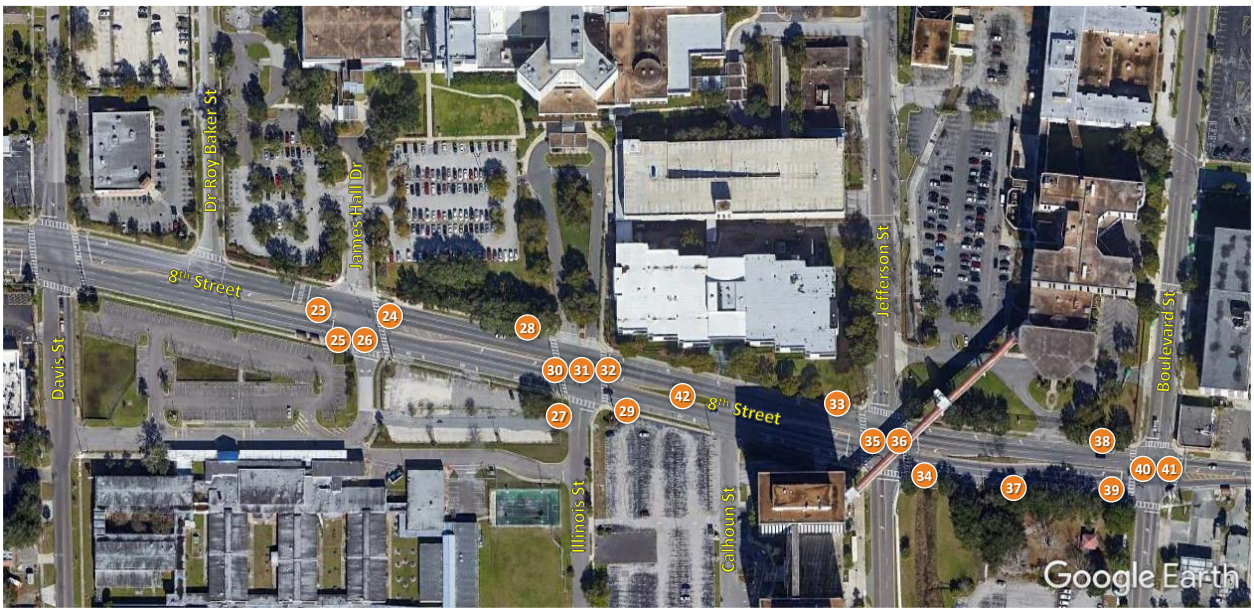


Figure 28: Illustration of Concept #20, from JTA Mobility Works

Figure 29: Flashing Yellow Left Turn Arrow with Yellow Retroreflective Backplate

8th Street, Davis Street to Boulevard Street



ID	Location	Potential Improvement
23	8th St at James Hall Dr	Add a new marked crossing to the west leg of the intersection; consider running the crossing through the median so that the median nose provides pedestrians with added protection. The eastbound signal in-pavement loop detectors may need to be modified to accommodate the new crossing.
24	8th St at James Hall Dr	Consider realigning the crosswalk across the east leg of the intersection to remove the skew. Consider widening the existing raised median using the painted median area and directing the crosswalk through the median nose.
25	8th St at James Hall Dr	Consider modifying/reducing the curb radii in the southeast quadrant along James Hall Dr.
26	8th St at James Hall Dr	Consider installing flexible retroreflective backplates on all signal heads.
27	8th St at Illinois St	Relocate the pedestrian curb ramp along the south side of 8th St for the west leg crossing approximately 30' to the west and then realign the crosswalk to eliminate the existing skew. In the northeast quadrant, relocate the pedestrian curb ramp along the north side of 8th St, for the east leg crosswalk, approximately 20' to the east and realign the crosswalk; the median east of the intersection would need to be pulled back approximately 10' to accommodate the realigned crosswalk. If needed, the eastbound left turn lane could be extended to accommodate needed storage capacity.

ID	Location	Potential Improvement
28	8th St at Illinois St	Consider extending the curb in the northwest quadrant of the intersection. Consider reducing the curb radii and extending the curb to follow the painted shoulder west of the intersection. Realign the crosswalks as needed.
29	8th St at Illinois St	Consider extending the curb in the southeast quadrant of the intersection. Consider reducing the curb radii and extending the curb into the eastbound right turn only lane. This could help mitigate potential merge issues and would reduce pedestrian crossing distance and exposure. Realign the crosswalks as needed.
30	8th St at Illinois St	Consider installing a LED no right turn on red blank-out sign to replace the static sign for the westbound right turn movement.
31	8th St at Illinois St	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
32	8th St at Illinois St	Consider installing flexible retroreflective backplates on all signal heads.
33	8th St at Jefferson St	Consider extending the curb in the northwest quadrant of the intersection along 8th St, utilizing the existing painted bulb-out.
34	8th St at Jefferson St	Consider extending the curb within the southeast quadrant utilizing part of the painted shoulder to carry the curb extension east of the intersection.
35	8th St at Jefferson St	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
36	8th St at Jefferson St	Consider installing flexible retroreflective backplates on all signal heads.

ID	Location	Potential Improvement
37	8th St, Jefferson St to Boulevard St	Consider using the painted shoulder area along the south side of 8th St to provide on-street parking and a shared use path. This could connect to the planned Hogan's Creek to S-Line Trail that is proposed to parallel Hogan's Creek and cross 8th St at Jefferson St.
38	8th St at Boulevard St	Consider extending the curb within the northwest quadrant along 8th St utilizing the existing painted bulb-out.
39	8th St at Boulevard St	Consider extending the curb within the existing painted shoulder along the south side of 8th St as part of a shoulder repurposing effort.
40	8th St at Boulevard St	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
41	8th St at Boulevard St	Consider installing flexible retroreflective backplates on all signal heads.
42	8th St, Davis St to Boulevard St	Conduct a lighting illumination evaluation and consider installing pedestrian-scale (pedestal) lighting along 8th St.

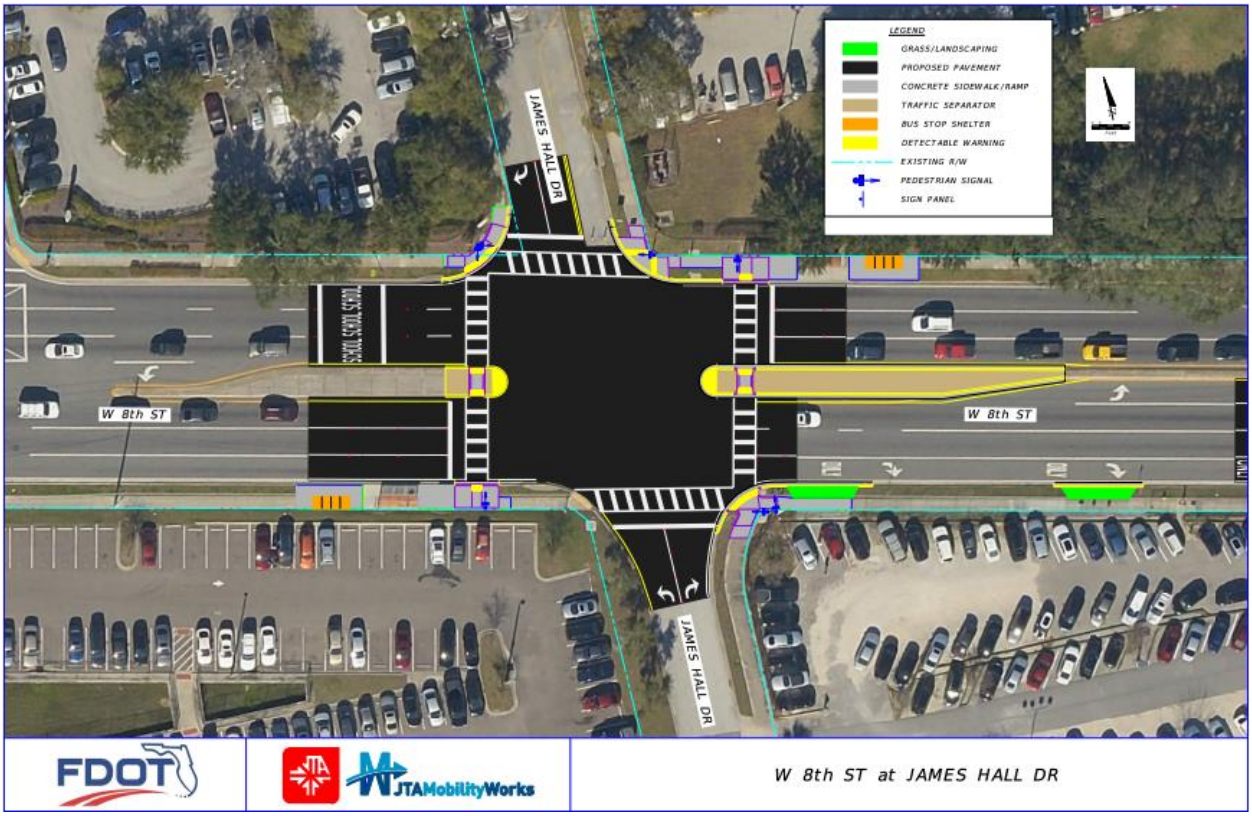


Figure 30: Illustration of Concepts #23 and #24, from JTA Mobility Works

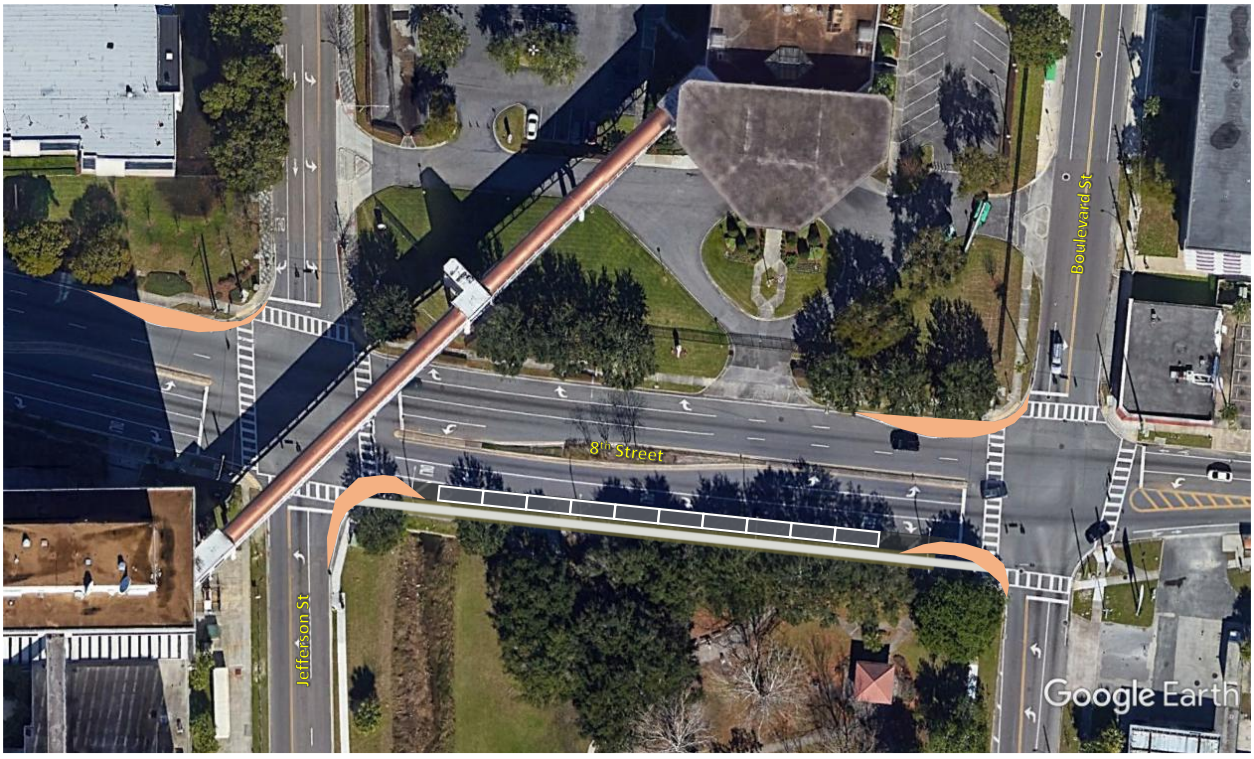
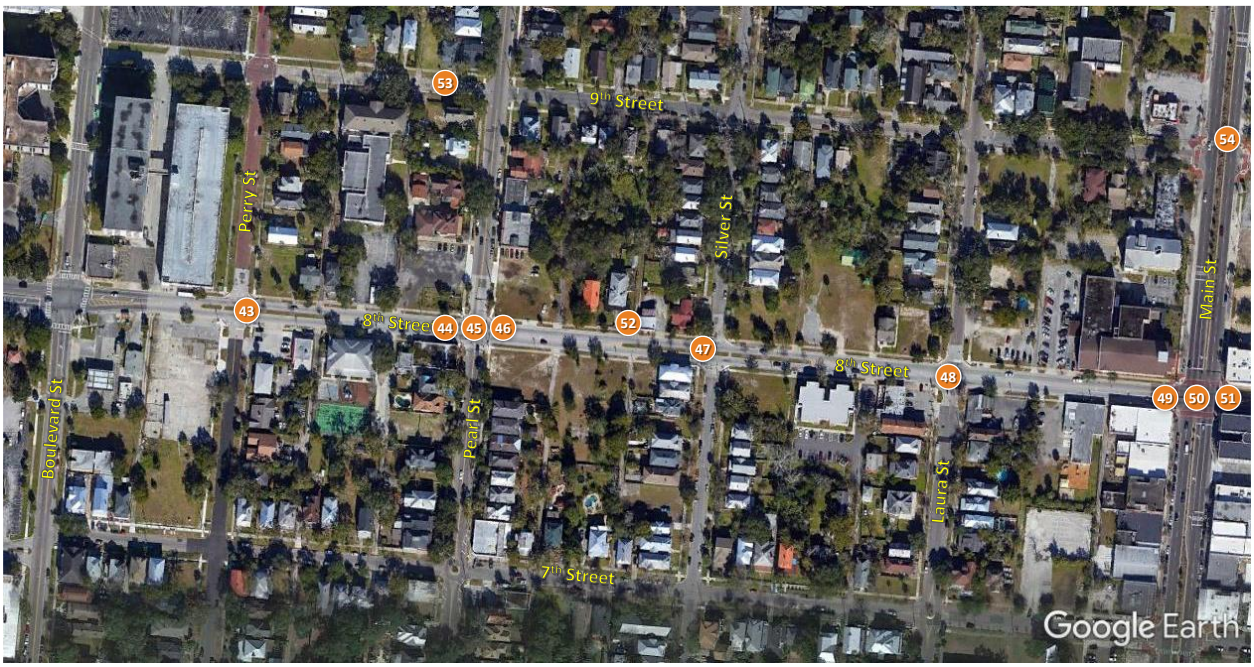


Figure 31: Illustration of Concepts #33, #34, #37, #38, #39

8th Street, Boulevard Street to Main Street



ID	Location	Potential Improvement
43	8th St at Perry St	Consider installing a mid-block crossing along the east leg of the intersection at 8th St and Perry St utilizing the existing median opening. Consider the use of high visibility/special emphasis crosswalk markings, rectangular rapid flashing beacons (RRFB), signage, stop line pavement markings, and enhanced lighting.
44	8th St at Pearl St	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings. The decorative features of the crossing can be maintained and included with the high-visibility markings.
45	8th St at Pearl St	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
46	8th St at Pearl St	Consider installing flexible retroreflective backplates on all signal heads.

ID	Location	Potential Improvement
47	8th St at Silver St	Consider installing a mid-block crossing along the west leg of the intersection at 8th St and Silver St utilizing the existing median opening. Consider the use of high visibility/special emphasis crosswalk markings, rectangular rapid flashing beacons (RRFB), signage, stop line pavement markings, and enhanced lighting.
48	8th St at Laura St	Conduct a traffic signal warrant study to determine if a new traffic signal at the intersection of 8th St and Laura St would be warranted, consider evaluating the signal as part of a coordinate signal system. If it is determined that a traffic signal is not warranted, consider installing a mid-block crossing with RRFBs.
49	8th St at Main St	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings. The decorative features of the crossing can be maintained and included with the high-visibility markings.
50	8th St at Main St	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.
51	8th St at Main St	Consider installing flexible retroreflective backplates on all signal heads.
52	8th St, Boulevard St to Main St	Consider enhancing the existing side street crosswalk markings along 8th St.
53	9th St, Boulevard St to Main St	9th St is located one block (approximately 450') north and runs parallel to 8th St, this local residential street could provide a low-stress alternative to people traveling on bicycles between the UF Health campus and Main St. Consider adding shared lane markings and signage to distinguish 9th St as a preferred bicycle route.
54	9th St at Main St	Consider enhancing the existing marked crossing at the intersection of 9th St and Main St to include rectangular rapid flashing beacons (RRFB), high-visibility crosswalk markings, stop lines, and enhanced lighting.

Figure 32: Illustration of Concept #43

Figure 33: Illustration of Concept #47

8th Street, Corridor-Wide

ID	Location	Potential Improvement
55	8th St, Myrtle Ave to Main St	Install speed feedback signs (SFS)/dynamic speed displays to alert drivers of their speed related to the posted speed limit. Consider incorporating technology within the signage to capture SFS readings to enhance the availability of speed-related data along the corridor.
56	8th St, Myrtle Ave to Main St	Evaluate existing signal timing plans to determine if automatic recall for the pedestrian signal could be accommodated, at a minimum at the pedestrian signals for people walking along 8th St. Alternatively, consider implementing passive pedestrian detection system along the corridor.
57	8th St, Myrtle Ave to Main St	Evaluate opportunities to initiate a leading pedestrian interval (LPI) at the signalized intersections along the corridor to help pedestrians better establish their presence in the crosswalk.

Figure 34: Speed Feedback Signage Example

Implementation Plan

Implementation of potential improvements along the 8th Street corridor will require coordination between various jurisdictions, government agencies and departments, and community stakeholders. Key players to implement improvements include:

- North Florida TPO
- City of Jacksonville
- Jacksonville Transportation Authority (JTA)
- Florida Department of Transportation (FDOT)

Effective coordination and collaboration will be required from all involved parties. This study is a guide towards improvements that are designed to make 8th Street a safe, accessible, comfortable, and inviting street that supports the community's overall initiatives and goals. A list detailing the proposed improvements was developed into an implementation plan. The implementation plan (Appendix B) can be used to help track the next steps for the proposed improvements and the coordination with responsible agencies throughout the implementation process.

Cost Estimates

As part of the implementation plan development, high-level planning cost estimates were developed for the identified potential improvements. The cost estimates are based on costs from recently completed projects, FDOT historical average costs, and FDOT per mile cost estimates. Unless specifically mentioned, the cost estimates do not include additional evaluation, engineering feasibility, or design. Table 2 provides a summary of the estimated costs for specific treatments and Table 2 provides a summary of the estimated costs associated with the potential improvements identified within this report.

Table 1: Cost Estimate Basis

Item	Estimated Cost	Unit
Sidewalk	$275,000	Per Mile
Shared Use Path (12 feet wide)	$350,000	Per Mile
Bicycle Boulevard Treatment	$35,000	Per Mile
Curb Extensions	$15,000	Per Location
Mid-Block Crossing (RRFB)	$50,000	Per Location
Mid-Block Crossing (PHB)	$185,000	Per Location
Speed Feedback Signs	$5,000	Each
Intersection Lighting Enhancement	$15,000	Per Intersection
Corridor Lighting Enhancement	$300,000	Per Mile
FYA 4-Section Signal Head	$3,000	Each
Retroreflective Signal Backplates	$250	Per Signal Head
Leading Pedestrian Interval	$1,500	Per Intersection
Crosswalk Markings (High-Visibility)	$1,000	Per Crossing
Pedestrian Curb Ramp Modification	$7,500	Per Location
Signal Timing Adjustment	$3,000	Per Intersection
Chicane Treatment	$15,000	Set of Three

Table 2: Corridor Planning-Level Cost Estimate Summary

Improvement Category	Estimated Cost
Crosswalk markings, realignment, and enhancements	$158,000
Mid-block crossings	$271,000
Curb radii modification and curb extensions	$285,000
Signal enhancements (Left turn flashing yellow arrows, backplates, pedestrian signal recall, leading pedestrian intervals)	$339,500
Speed management	$630,000
Bicycle enhancements	$30,000
Lighting enhancements	$125,000
Other	$181,000
Corridor Improvements Total Cost Estimate	**$2,019,500**

Appendix A – Recent and Ongoing Plan, Program, and Project Review

Capital Improvement Plan

A review of the FY2021 to 2025 Capital Improvement Plan was completed to identify any upcoming projects that impact the corridor, including major facilities and generators along the corridor. The following capital projects were identified in Table A-1.

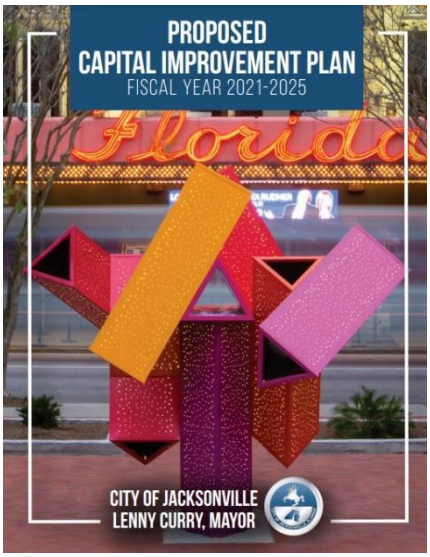


Table A-1: Planned Capital Improvements

Program Area	Project ID	Project Name	Scope	Location	Total Cost	Year of Expenditure
Environment/ Quality of Life	89	8th St – I-95 to Boulevard Landscaping/ Tree Planting	Landscaping, tree planting & hardscape Improvements (brick pavers, irrigation, historic lighting, benches, etc.) within the existing 8th Street right-of-way to match the recently completed streetscape improvements on Jefferson Street between 8th and 10th Street.	I-95 to Boulevard St	$1.3 Million	Beyond 2025
Roads/ Infrastructure/ Transportation	467	Emerald Trail – Eastside Connector	The City of Jacksonville's Eastside Connector will provide connections to the Springfield and Phoenix neighborhoods and add additional bicycle/pedestrian connections from the S-Line Rail Trail and the Hogan's Creek Greenway	Various	$4.2 Million	2024 and Beyond 2025
Parks/ Preservation Land/ Wetlands	252	Hogan's Creek Greenway	The Hogan's Creek Greenway is vital in linking the Springfield / Eastside neighborhoods to downtown via a bike/pedestrian walkway. Site furnishings and landscape that reflect the historic neighborhood will be added to the existing Hogan's Creek Phase I and II Greenway. Street crossings and connections will be enhanced with this project.	730 E Bay St	$2 Million	TBD

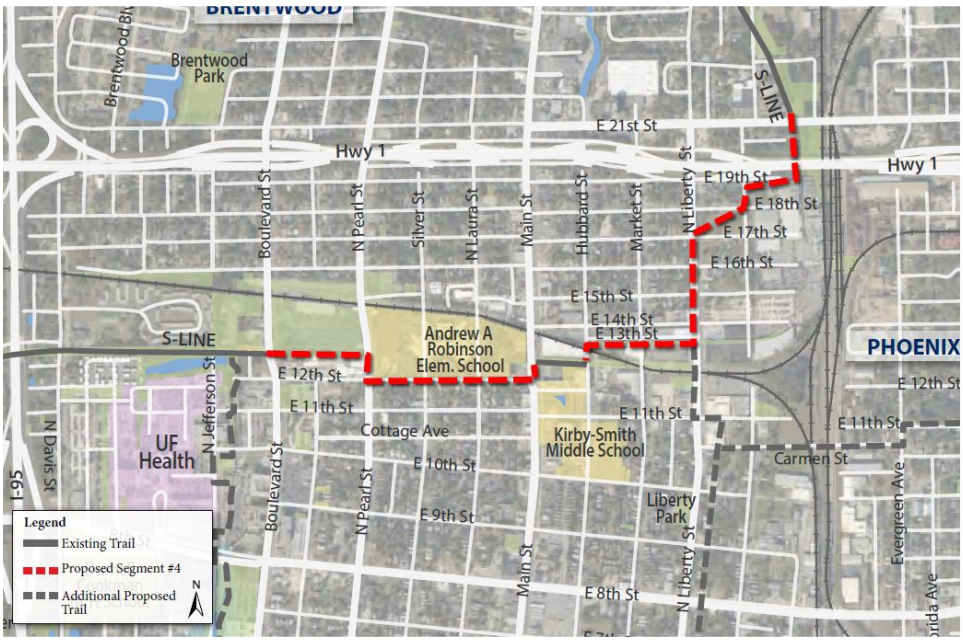
Comprehensive Plan

Emerald Trail & S-Line

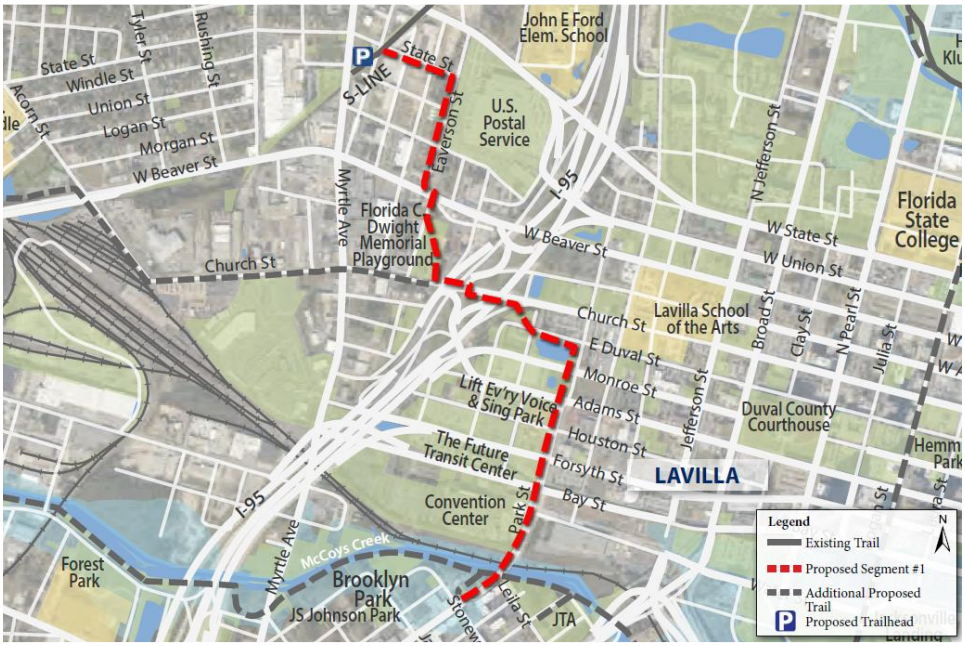
The Emerald Trail, with a guiding plan last updated in August 2021, is a planned 19.7 mile trail encircling Downtown Jacksonville to be completed by 2029. Approximately six miles of the Emerald Trail are already in place, including the 1.5-mile S-Line Trail that bisects and connects the subject corridors. The plan identified 13 segments, including programmed segments, breaking each into one of two funding priority tiers.

Four segments of the Emerald Trail intersect with or influence the mobility of the study corridors:

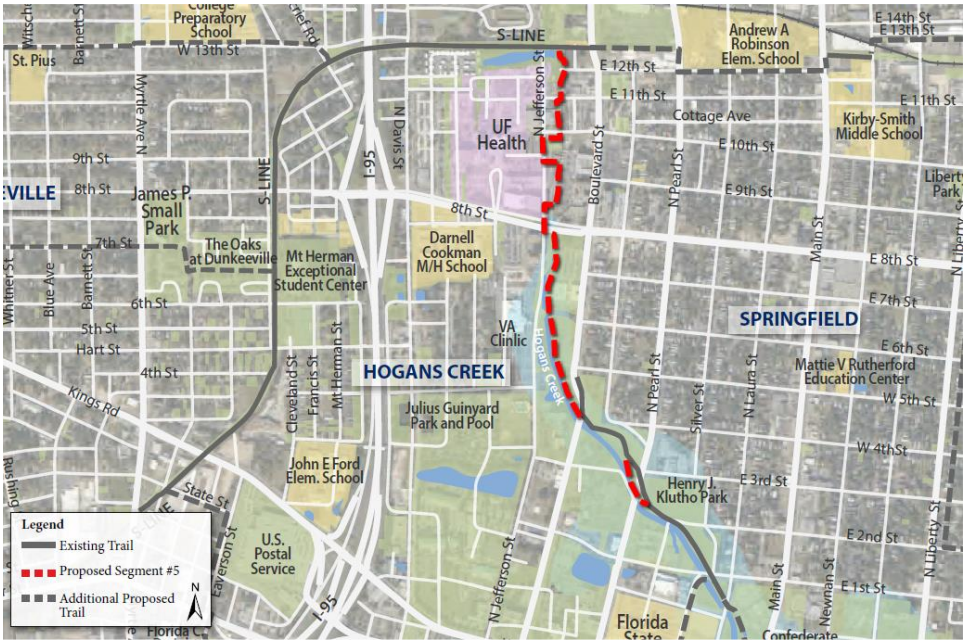
S-Line Connector (Model Project and Tier 1)



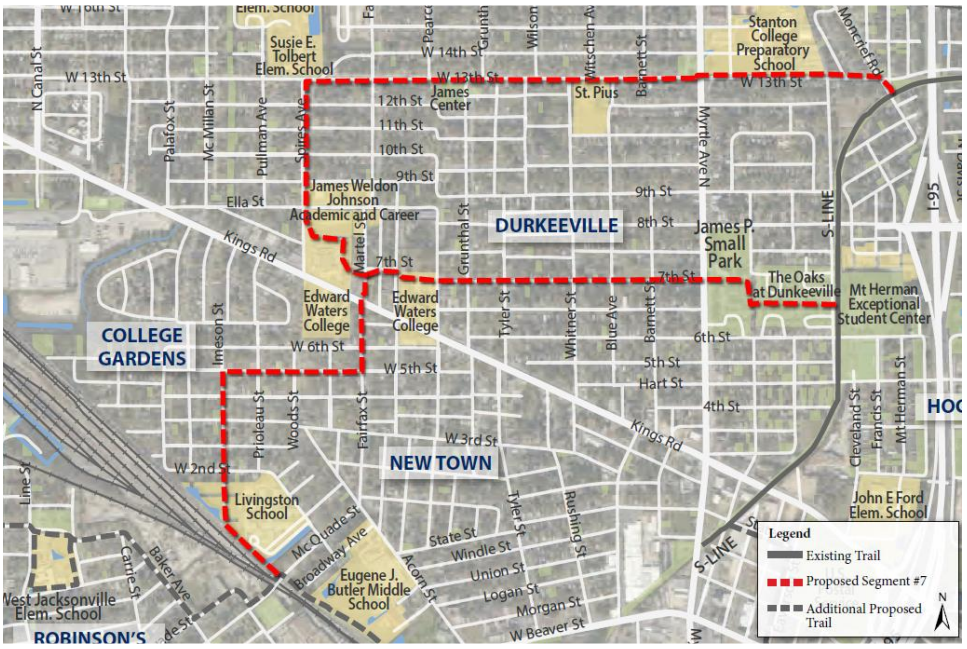
S-Line to Stonewall Street (Tier 1)



Hogans Creek Greenway (Tier 1)



Northwest Connector (Tier 2)



Hospital Campus Plan

The UF Health Jacksonville Campus is located directly along either side of the 8th Street Corridor, just east of I-95 and includes a full-service Emergency Department and includes the region's only Level 1 adult and pediatric trauma program. According to the University of Florida, the campus employs 4,800 employees. The campus is also home to the 100,000 SF Jacksonville VA Outpatient Clinic. Together, these facilities generate significant traffic along the corridor, including daily crossings of 8th Street by employees.

Relevant Transit Plans

JTA Ultimate Urban Circulator

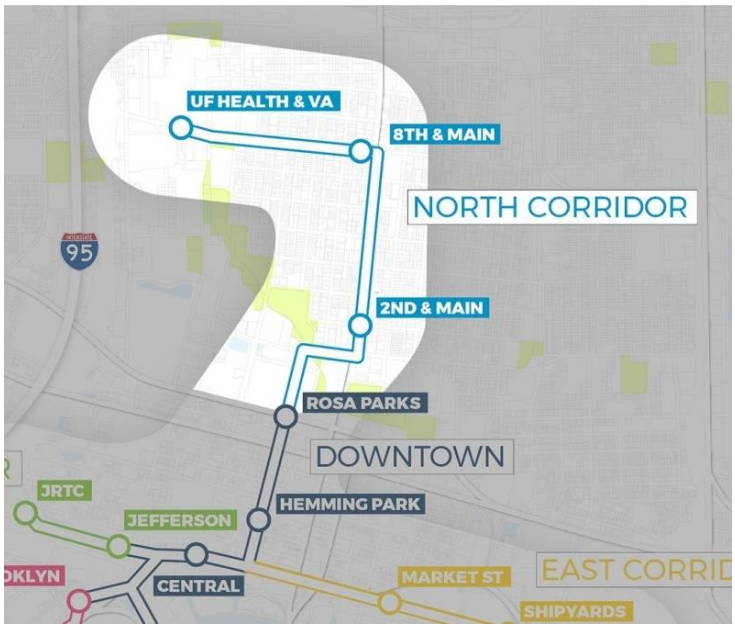
The Jacksonville Transportation Authority (JTA) is planning to replace and revitalize its existing Skyway monorail system with autonomous shuttles through the Ultimate Urban Circulator, or U2C, project. This consists of three primary phases, with the first posing as an innovation corridor, the second intended to modernize the existing, 2.5-mile, grade-separated Skyway system, and the third phase extending into adjacent neighborhoods. The final system is anticipated to extend 10 total miles.

One subject corridor, 8th Street, is served by the North Corridor, one of three planned future Neighborhood Extensions. JTA was awarded a RAISE grant in 2021 expected to fund the design of this phase, which is anticipated to run at grade. Stations are proposed for the UF Health Campus, plus the intersections of 2nd and Main Streets and 8th and Main Streets.

Images Source: JTA

JTA TOD Pilot Project

JTA, in concert with its U2C project, is studying opportunities for transit oriented development along each of the six identified corridors, particularly in the immediate vicinity of the stations at the UF Health Campus, 8th and Main Streets, and 2nd and Main Streets.



The plan set forth a vision to "strengthen Springfield's Main Street Corridor with strategic and context-sensitive residential and commercial Infill Development anchored by transit-centric Community Nodes at 2nd And 8th Street U2C Stations." It also identified five key strategies:

1. Make Connections. Connections by foot to transportation and neighborhood services are encouraged by enhancing the pedestrian experience with Complete Streets. Complete Streets' design features promote circulation within the 2nd & Main Station Area and improves connections to the Emerald Trail and Klutho Park.
2. Create Great Spaces. A network of pocket parks along Main Street and within adjacent blocks increases access to quality open spaces for Springfield residents. The improved pedestrian experience throughout the station area will be enhanced by a network of pocket parks providing additional recreation options.
3. Specify a Mix of Uses. A new neighborhood grocery store compliments additional retail and commercial uses along Main Street and addresses community needs. Townhomes and small apartment buildings 'fill-the-gaps' within blocks adjacent to U2C and should include workforce and affordable housing options. Diversifying uses within the station area, with a focus on serving residents, will strengthen the Main Street corridor.
4. Focus Density. New townhomes, apartments, and commercial buildings should be 2-3 stories in height to maintain Springfield's urban neighborhood character. The height and intensity of new development should blend seamlessly with, and compliment, the unique homes and buildings of Springfield.
5. Identify Opportunities. Vacant parcels and empty buildings found throughout the 8th & Main area are opportunities for responsible and sustainable infill development. "Fill-the-gaps" with residential and commercial development that enhances Springfield's unique character and creates a great place to live and visit.

Appendix B – Improvement Implementation Plan

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
1	8th St at Myrtle Ave	High-visibility crosswalk markings	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings.	The existing crosswalks are marked using standard/parallel crosswalk markings.	City of Jacksonville	Short-Term	$4,000
2	8th St at Myrtle Ave	Curb extensions	Construct curb extensions along the east side of the intersection in the northeast and southeast quadrants.	The existing curb radii are large.	City of Jacksonville	Mid-Term	$60,000
3	8th St at Myrtle Ave	Left turn flashing yellow arrow	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads on Myrtle Ave and the 3-section heads on 8th St. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly (on Myrtle Ave) and a 3-section signal head assembly (on 8th St).	City of Jacksonville	Short-Term	$15,000
4	8th St at Myrtle Ave	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000
5	8th St at Myrtle Ave	Intersection lighting	Evaluate existing intersection and crosswalk illumination and consider installing overhead lighting to supplement the existing pedestal lighting.	There is an overhead light along the south side of 8th St east of the intersection and pedestal lighting along Myrtle Ave, but there are no overhead lights located at the intersection.	City of Jacksonville	Short-Term	$15,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
6	8th St east of Myrtle Ave	On-street parking	Determine where the existing right-of-way line along the north side of 8th St is just east of Myrtle Ave. Depending on the right-of-way evaluation, consider using the space that is currently being used as an informal parking area to create a sidewalk buffer and then mark on-street parking spaces on the existing roadway pavement.	Unclear right-of-way is resulting in vehicles parking just off the street in an informal on-street parking lane. The existing lane widths along westbound 8th St are wide and could accommodate on-street parking spaces.	City of Jacksonville	Short-Term	$55,000
7	8th St, Myrtle Ave to Wilcox St	On-street parking	Consider extending the on-street parking along the south side of 8th St.	Currently 6 marked on-street parking spaces along the south side of 8th St, there appears to be adequate room to install additional on-street parking spaces.	City of Jacksonville	Short-Term	$6,000
8	8th St, Wilcox St to Francis St	Intersection curb extensions	Consider installing curb extensions (bulb-outs) along 8th St at the side street intersections of Wilcox St, Eaverson St, Payne Ave, Cleveland St, and Francis St. The curb extensions could help to manage speeds, by creating horizontal deflection and by narrowing the street at select locations, could help reduce turning vehicle speeds, reduce pedestrian crossing distances, improve intersection sight lines, and provide an opportunity for enhanced streetscape features.	8th St is a 2-lane street with wide (20') travel lanes; these wide lanes can lead to speeding and are not conducive to the surrounding context and land use of single single-family residential.	City of Jacksonville	Long-Term	$300,000
9	8th St, Wilcox St to Francis St	Mid-block chicanes	As an alternative to intersection curb extensions, evaluate opportunities to construct mid-block chicanes along 8th St as a speed management strategy and opportunity to enhance the streetscape.	8th St is a 2-lane street with wide (20') travel lanes; these wide lanes can lead to speeding and are not conducive to the surrounding context and land use of single-family residential.	City of Jacksonville	Long-Term	$300,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
10	8th St at S-Line Crossing	Enhance trail crossing	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings.	The existing trail crossing consists of standard crosswalk markings, standard signage, and advanced warning signage with a flashing beacon.	City of Jacksonville	Short-Term	$1,000
11	8th St at S-Line Crossing	Enhance trail crossing	Enhance the crossing to include curb extensions, rectangular rapid flashing beacons (RRFB), signage, and pavement markings indicating where vehicles are supposed to stop. If necessary, consider constructing the curb extensions using a mountable truck apron curb to better accommodate larger vehicles, such as buses, that may be turning at the intersection of 8th St and Payne St.	The existing trail crossing consists of standard crosswalk markings, standard signage, and advanced warning signage with a flashing beacon.	City of Jacksonville	Mid-Term	$100,000
12	8th St, Myrtle Ave to Francis St	Enhance lighting	Conduct a lighting illumination evaluation and consider installing pedestrian-scale (pedestal) lighting along 8th St.	Overhead lights are located along the south side of 8th St, but it is unknown how well they illuminate the sidewalks along the street.	City of Jacksonville	Mid-Term	$50,000
13	8th St, Myrtle Ave to Francis St	Side street crossings	Consider marking the side street crossings along 8th St.	The side street crossings along 8th St are unmarked.	City of Jacksonville	Short-Term	$10,000
14	9th St, Myrtle Ave to Payne Ave	Bicycle boulevard	9th St is located one block (approximately 300') north and runs parallel to 8th St, this local residential street could provide a low-stress alternative to people traveling on bicycles to or from the S-Line Trail and the Myrtle Ave corridor. Consider adding shared lane markings, signage, and an accessible connection to the S-Line Trail at Payne Ave.	Currently no dedicated bicycle facilities are along 8th St, 9th St is a relatively low-volume residential street that could provide people with a low-stress alternative to riding a bike along 8th St.	City of Jacksonville	Short-Term	$10,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
15	8th St at I-95 interchange southbound ramps	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if the 5-section signal head for westbound traffic could be replaced by a 4-section flashing yellow arrow signal assembly and an additional 3-section signal head. If feasible, replace the existing 5-section signal head with a 4-section flashing yellow arrow signal head assembly.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	FDOT D2	Short-Term	$20,000
16	8th St at I-95 interchange southbound ramps	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	FDOT D2	Short-Term	$1,500
17	8th St at I-95 interchange northbound ramps	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if the 5-section signal head for eastbound traffic could be replaced by a 4-section flashing yellow arrow signal assembly and an additional 3-section signal head. If feasible, replace the existing 5-section signal head with a 4-section flashing yellow arrow signal head assembly.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	FDOT D2	Short-Term	$20,000
18	8th St at I-95 interchange northbound ramps	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	FDOT D2	Short-Term	$1,500
19	8th St, Francis St to Davis St	Enhance lighting	Evaluate existing lighting conditions and enhance if necessary. Consider the placement of underdeck lighting to help illuminate the space under I-95.	Lighting was previously identified as a safety concern along the 8th St corridor. There is limited lighting for 8th St near the I-95 interchange. This is also one of the higher frequency crash locations, for total crashes and pedestrian and bicycle crashes, along the corridor.	FDOT D2	Short-Term	$10,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
20	8th St at Davis St	Realign crosswalk	Consider realigning the crosswalk across the south leg of the intersection by relocating the pedestrian curb ramp on the west side of the intersection further south along Davis St.	The existing crosswalk across the south leg of the intersection is skewed and uses a shared pedestrian curb ramp with the crosswalk across the west leg of the intersection.	City of Jacksonville	Mid-Term	$20,000
21	8th St at Davis St	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$20,000
22	8th St at Davis St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000
23	8th St at James Hall Dr	Missing crosswalk	Add a new marked crossing to the west leg of the intersection; consider running the crossing through the median so that the median nose provides pedestrians with added protection. The eastbound signal in-pavement loop detectors may need to be modified to accommodate the new crossing.	There is no marked crossing along the west leg of the intersection.	City of Jacksonville	Short-Term	$20,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
24	8th St at James Hall Dr	Realign crosswalk	Consider realigning the crosswalk across the east leg of the intersection to remove the skew. Consider widening the existing raised median using the painted median area and directing the crosswalk through the median nose.	The existing crosswalk is skewed creating a longer crossing distance.	City of Jacksonville	Mid-Term	$40,000
25	8th St at James Hall Dr	Curb radii	Consider modifying/reducing the curb radii in the southeast quadrant along James Hall Dr.	The curb radii in the southeast quadrant along James Hall Dr are large, which leads to longer pedestrian crossing distances and encourages higher motor vehicle turning speeds.	City of Jacksonville	Mid-Term	$25,000
26	8th St at James Hall Dr	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000
27	8th St at Illinois St	Realign crosswalk	Relocate the pedestrian curb ramp along the south side of 8th St for the west leg crossing approximately 30' to the west and then realign the crosswalk to eliminate the existing skew. In the northeast quadrant, relocate the pedestrian curb ramp along the north side of 8th St, for the east leg crosswalk, approximately 20' to the east and realign the crosswalk; the median east of the intersection would need to be pulled back approximately 10' to accommodate the realigned crosswalk. If needed, the eastbound left turn lane could be extended to accommodate needed storage capacity.	Crosswalks are skewed, creating longer pedestrian crossing distances, and increasing pedestrian exposure.	City of Jacksonville	Short-Term	$50,000
28	8th St at Illinois St	Curb extensions	Consider extending the curb in the northwest quadrant of the intersection. Consider reducing the curb radii and extending the curb to follow the painted shoulder west of the intersection. Realign the crosswalks as needed.	There is an existing painted bulb-out west of the intersection within the northwest quadrant.	City of Jacksonville	Mid-Term	$35,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
29	8th St at Illinois St	Curb extensions	Consider extending the curb in the southeast quadrant of the intersection. Consider reducing the curb radii and extending the curb into the eastbound right turn only lane, this could help mitigate potential merge issues and would reduce pedestrian crossing distance and exposure. Realign the crosswalks as needed.	There is an eastbound right turn only lane for traffic approaching the intersection, immediately after the intersection the outside travel lanes becomes another right turn only lane.	City of Jacksonville	Mid-Term	$35,000
30	8th St at Illinois St	Right turn on red restriction	Consider installing a LED no right turn on red blank-out sign to replace the static sign for the westbound right turn movement.	The westbound right turn movement currently has a no right turn on red restriction that is noticed by an advanced sign and a static sign attached to the signal span-wire.	City of Jacksonville	Short-Term	$5,000
31	8th St at Illinois St	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$15,000
32	8th St at Illinois St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
33	8th St at Jefferson St	Curb extension	Consider extending the curb in the northwest quadrant of the intersection along 8th St, utilizing the existing painted bulb-out.	There is a painted bulb-out located west of the intersection along the north side of 8th St.	City of Jacksonville	Mid-Term	$30,000
34	8th St at Jefferson St	Curb extension	Consider extending the curb within the southeast quadrant utilizing part of the painted shoulder to carry the curb extension east of the intersection.	The curb radii in the southeast quadrant are large, there is also a painted shoulder along the south side of 8th St east of Jefferson St.	City of Jacksonville	Mid-Term	$30,000
35	8th St at Jefferson St	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$15,000
36	8th St at Jefferson St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,500

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
37	8th St, Jefferson St to Boulevard St	Repurpose shoulder	Consider using the painted shoulder area along the south side of 8th St to provide on-street parking and a shared use path. This could connect to the planned Hogan's Creek to S-Line Trail that is proposed to parallel Hogan's Creek and cross 8th St at Jefferson St.	There is an existing painted shoulder along the south side of 8th St in front of McPherson Park.	City of Jacksonville	Mid-Term	$120,000
38	8th St at Boulevard St	Curb extension	Consider extending the curb within the northwest quadrant along 8th St utilizing the existing painted bulb-out.	There is a painted bulb-out located west of the intersection along the north side of 8th St.	City of Jacksonville	Mid-Term	$20,000
39	8th St at Boulevard St	Curb extension	Consider extending the curb within the existing painted shoulder along the south side of 8th St as part of a shoulder repurposing effort.	There is a painted shoulder along the south side of 8th St west of Boulevard St.	City of Jacksonville	Mid-Term	$50,000
40	8th St at Boulevard St	Left turn flashing yellow arrow	Evaluate the existing signal span-wire structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads for the eastbound/westbound directions. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$20,000
41	8th St at Boulevard St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
42	8th St, Davis St to Boulevard St	Enhance lighting	Conduct a lighting illumination evaluation and consider installing pedestrian-scale (pedestal) lighting along 8th St.	There are overhead lights located along the south side of 8th St, but it is unknown how well they illuminate the sidewalks and intersections along the corridor.	City of Jacksonville	Mid-Term	$50,000
43	8th St at Perry St	Mid-block crossing	Consider installing a mid-block crossing along the east leg of the intersection at 8th St and Perry St utilizing the existing median opening. Consider the use of high visibility/special emphasis crosswalk markings, rectangular rapid flashing beacons (RRFB), signage, stop line pavement markings, and enhanced lighting.	There are currently unmarked crossings at the intersection of 8th St and Perry St, providing marked and enhanced crossings could improve pedestrian accessibility, connectivity, mobility, and safety along the corridor. Additionally, landscaping in the median should be modified to ensure that maximum pedestrian visibility is maintained near the crossing.	City of Jacksonville	Short-Term	$60,000
44	8th St at Pearl St	High-visibility crosswalk markings	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings. The decorative features of the crossing can be maintained and included with the high-visibility markings.	The existing crosswalks are marked using standard/parallel crosswalk markings along with a decorative design within the crosswalk. While the decorative features coordinate with the sidewalk styling through this part of 8th St, they are not very visible to drivers, also the existing standard markings along the edges of the crosswalks are severely faded and worn.	City of Jacksonville	Short-Term	$4,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
45	8th St at Pearl St	Left turn flashing yellow arrow	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$20,000
46	8th St at Pearl St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000
47	8th St at Silver St	Mid-block crossing	Consider installing a mid-block crossing along the west leg of the intersection at 8th St and Silver St utilizing the existing median opening. Consider the use of high visibility/special emphasis crosswalk markings, rectangular rapid flashing beacons (RRFB), signage, stop line pavement markings, and enhanced lighting.	There are currently unmarked crossings at the intersection of 8th St and Silver St, providing marked and enhanced crossings could improve pedestrian accessibility, connectivity, mobility, and safety along the corridor. Additionally, landscaping in the median should be modified to ensure that maximum pedestrian visibility is maintained near the crossing.	City of Jacksonville	Short-Term	$60,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
48	8th St at Laura St	Signalized intersection	Conduct a traffic signal warrant study to determine if a new traffic signal at the intersection of 8th St and Laura St would be warranted, consider evaluating the signal as part of a coordinate signal system. If it is determined that a traffic signal is not warranted, consider installing a mid-block crossing with RRFBs.	Laura St is located approximately 450' west of Main St and is currently an unsignalized intersection. The land use and context surrounding this part of 8th St is supportive of non-motorized activity, which would be aided by additional protected crossing opportunities.	City of Jacksonville	Mid-Term	$50,000
49	8th St at Main St	High-visibility crosswalk markings	Enhance crosswalk markings to high visibility/special emphasis crosswalk markings. The decorative features of the crossing can be maintained and included with the high-visibility markings.	The existing crosswalks are a decorative (stamped brick) marking style edged with white lines.	City of Jacksonville	Short-Term	$4,000
50	8th St at Main St	Left turn flashing yellow arrow	Evaluate the existing signal mast-arm structure to determine if they could support a 3-section signal head and 4-section signal head in place of the existing 5-section signal heads. If feasible, consider installing a 4-section flashing yellow-arrow signal head assembly to control the protected/permissive left turn movements. Additionally, consider programming the left turn movement to protected only during higher traffic volume periods and synchronizing the signal to protected only when the pedestrian push button has been activated, potentially reducing conflicts between turning vehicles and crossing pedestrians and bicyclists.	Existing left turn operations are conducted through a protected/permissive signal phase utilizing a 5-section signal head assembly.	City of Jacksonville	Short-Term	$20,000
51	8th St at Main St	Yellow retroreflective backplates	Consider installing flexible retroreflective backplates on all signal heads.	The existing signal heads do not have retroreflective backplates.	City of Jacksonville	Short-Term	$2,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
52	8th St, Boulevard St to Main St	Side street crossings	Consider enhancing the existing side street crosswalk markings along 8th St.	The side street crossings along 8th St are marked, but the existing markings are severely worn and faded.	City of Jacksonville	Short-Term	$6,000
53	9th St, Boulevard St to Main St	Bicycle boulevard	9th St is located one block (approximately 450') north and runs parallel to 8th St, this local residential street could provide a low-stress alternative to people traveling on bicycles between the UF Health campus and Main St. Consider adding shared lane markings and signage to distinguish 9th St as a preferred bicycle route.	While there are bicycle lanes along 8th St between Boulevard St and Main St, bicycle boulevards on parallel streets can provide people riding bikes a low stress alternative.	City of Jacksonville	Mid-Term	$20,000
54	9th St at Main St	Enhance crossing	Consider enhancing the existing marked crossing at the intersection of 9th St and Main St to include rectangular rapid flashing beacons (RRFB), high-visibility crosswalk markings, stop lines, and enhanced lighting.	The existing marked mid-block includes continental (zebra) style crosswalk markings and pedestrian crosswalk signage.	City of Jacksonville	Short-Term	$50,000
55	8th St, Myrtle Ave to Main St	Speed feedback signs	Install speed feedback signs (SFS)/dynamic speed displays to alert drivers of their speed related to the posted speed limit. Consider incorporating technology within the signage to capture SFS readings to enhance the availability of speed related data along the corridor.	The existing speed limit along 8th St is 30 mph, while this is an ideal speed for a pedestrian focused corridor and the context and character of the corridor, speed was identified as a concern during the outreach that was completed as part of the JTA study.	City of Jacksonville	Short-Term	$30,000

ID	Location	Improvement (Short)	Improvement (Long)	Justification	Initial Responsibility	Time Frame	Cost
56	8th St, Myrtle Ave to Main St	Automatic pedestrian signal recall	Evaluate existing signal timing plans to determine if automatic recall for the pedestrian signal could be accommodated, at a minimum at the pedestrian signals for people walking along 8th St. Alternatively, consider implementing passive pedestrian detection system along the corridor.	Actuated pedestrian signals, where people need to push a button to get a walk signal, can lead to unnecessary pedestrian delay and can encourage people to cross against the walk signal or cross outside of the intersection area to avoid that delay. Consistent and predictable walk conditions enhance pedestrian mobility throughout a corridor.	City of Jacksonville	Short-Term	$50,000
57	8th St, Myrtle Ave to Main St	Leading pedestrian intervals	Evaluate opportunities to initiate a leading pedestrian interval (LPI) at the signalized intersections along the corridor to help pedestrians better establish their presence in the crosswalk.	Half of the pedestrian and bicycle crashes along the corridor occurred at signalized intersections. LPIs are a proven countermeasure that can be used to improve pedestrian safety.	City of Jacksonville	Short-Term	$50,000