Moncrief Road Corridor Study

13th Street to US 1/New Kings Road

Jacksonville, FL (Duval County)

Draft Report

June 2024

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Jacksonville, FL (Duval County)

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ACRONYMS

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
aka	Also known as
BAC	Blood Alcohol Content
CIP	Capital Improvement Plan
COJ	City of Jacksonville
CPTED	Crime Prevention Through Environmental Design
DIA	Downtown Investment Authority
FDOT	Florida Department of Transportation
FDM	FDOT Design Manual
FEC	Florida East Coast Railway
FHWA	Federal Highway Administration
FPID	Financial Project Identification
JPDD	Jacksonville Planning and Development Department
JTA	Jacksonville Transportation Authority
KSI	Killed/Severely Injured
LF	Linear Feet
LOGT	Local Option Gas Tax
LOS	Level of Service
MLK	Martin Luther King, Jr.
MPH	Miles per hour
MSV	Maximum Service Volume
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials

PD&E	Project Development and Environment
PDO	Property Damage Only
PSL	Posted Speed Limit
ROW	Right-of-Way
RRFB	Rectangular Rapid Flashing Beacon
RRR	Resurfacing, Restoration and Rehabilitation
SHSP	Strategic Highway Safety Plan
SNAPP	Strategic Neighborhood Action Program for Pedestrians
S.R.	State Road
TEM	FDOT Traffic Engineering Manual
TPO	Transportation Planning Organization
U.S.	United States Highway
UAO	Utility Agent/Owners
VPD	Vehicles per Day
VPH	Vehicles per Hour

1 INTRODUCTION

1.1 PROJECT DESCRIPTION

The North Florida Transportation Planning Organization (North Florida TPO, the TPO) is partnering with the City of Jacksonville (COJ) and coordinating with the Jacksonville Transportation Authority (JTA) to conduct the Moncrief Road Corridor Study. The purpose of the Study is twofold: 1) identify and analyze existing access-management issues and 2) identify and analyze feasible strategies to improve the safety and performance of the corridor for all users. Study results and documentation will provide the level of detail necessary to explore grant funding opportunities or move into the initial phase of project implementation.

1.2 PROJECT LOCATION

Figure 1 depicts the Moncrief Road study corridor, which extends from 13th Street on the south to US 1/New Kings Road on the north. The corridor spans from Durkeeville on the south to Lincoln Villas on the north.

1.3 DEVELOPMENT OF THE REPORT

Benesch analyzed the approximately 5.25-mile corridor as six segments, based on urban context, logical termini within the roadway network, streetscapes, land uses, built environment, neighborhood boundaries and roadway design. For each segment, data is compiled and analyzed to develop an understanding of transportation, land use and environmental factors. Benesch also reviewed five years of crash reports to determine corridor trends.

- Segment 1: 13th Street to Martin Luther King, Jr. (MLK) Parkway (Durkeeville neighborhood)
- Segment 2: MLK Parkway to Golfair Boulevard (Moncrief neighborhood)
- Segment 3: Golfair Boulevard to W. 45th Street (Moncrief and Royal Terrace neighborhoods)
- Segment 4: W. 45th Street to S.R. 111/Edgewood Avenue. COJ Lane Repurposing Concept. (Moncrief and Royal Terrace neighborhoods)
- Segment 5: S.R. 111/Edgewood Avenue to Soutel Drive (Lake Forest Hills, Edgewood Manor, Ribault Carver Manor, and Harborview neighborhoods)
- Segment 6: Soutel Drive to US 1/New Kings Road (Lincoln Villas neighborhood; within the Soutel-Kings CRA boundaries)

Overall, the body of the report focuses on recommendations and next steps for the Moncrief Road study corridor, developed from background information provided in the appendices. A roll plot depicting recommendations is provided as Appendix A, with other supporting documentation provided in Appendix B through E.

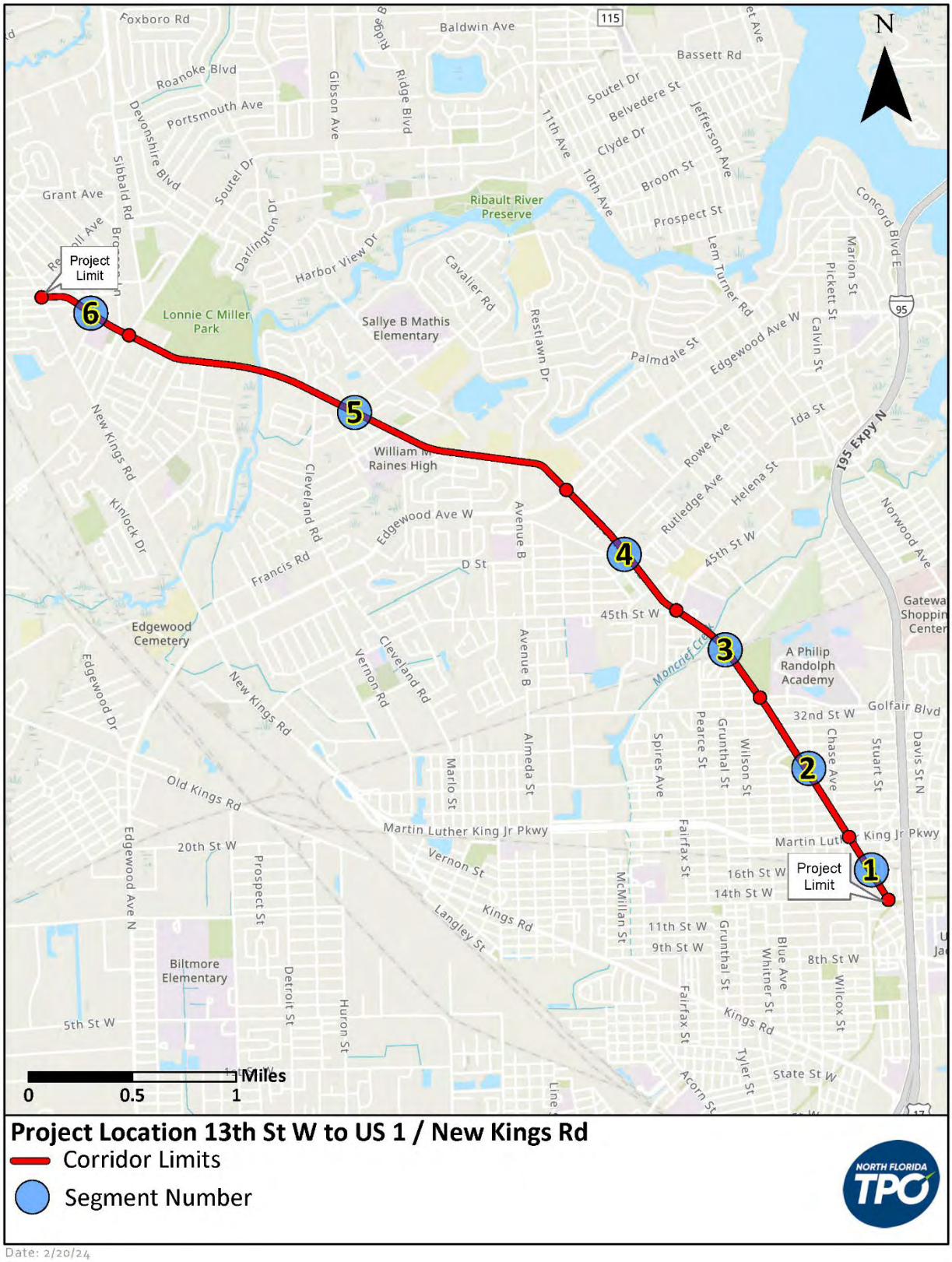


Figure 1 – Moncrief Road Study Corridor

2 STUDY AREA DESCRIPTION

2.1 LAND USE/ZONING

Existing land use in the area surrounding the study corridor is illustrated in Figure 2. Future land use and zoning are depicted in Figure 3 and Figure 4, respectively.

The project incorporates a 5.25-mile-long corridor that is best described as a classic example of "strip"/highway commercial and mixed-use. This pattern evolved from a stated land use strategy of "Radial Development" along established roadway corridors over decades of urban growth in Jacksonville.

Historically large, contiguous rural properties were bisected by Moncrief Road. Over time these rural lands were converted to more defined neighborhoods that often evolved into stand-alone places and communities. As basic infrastructure extended outward from the urban core, municipal and county zoning along the corridor was changed to accommodate more intensive densities and mixed-use activity centers at key arterial and major collector intersections. Those activity centers were typically 5 to 15 acres in size, facilitating unified site planning and access control for shopping centers and other large tract uses.

The result of the Radial Development strategy over time has been that infill blocks between those key intersections have also been rezoned to permit traditional small-shop retail commercial uses, personal service businesses and essential public services such as schools, parks, utility infrastructure and government offices. This "strip" pattern of non-residential development occurred on lot depths of 160 to 210 feet, which limited site design and promoted individual driveways and curb cuts for each parcel.

Following Jacksonville/Duval County consolidation in 1969 and consideration of future land use planning, the City's Future Land Use Map mirrored what had already been approved through earlier, vested zoning. For that reason, the future land use map, existing land use map and zoning map are practically identical.

2.2 COMMUNITY FACILITIES

One hundred twenty three (123) community facilities are located within the study area include libraries (4), schools (50), medical facilities (23), public parks (39), community centers and cemeteries. Their locations are depicted in Figure 5. Examples include:

- S-Line Urban Greenway and Regeneration Park (Segment 1), Simonds-Johnson Park (Segment 2), Clanzel T. Brown Community Center and Park and First Tee of North Florida (Segment 3)
- Stanton College Preparatory School (Segment 1), A. Philip Randolph Career Academies (temporary home of Jean Ribault Middle School) (Segment 2), Northwestern Legends Elementary School (Segment 3), William Raines Senior High School (Segment 5)
- Eartha's Farm and Market (Segment 3)
- Dr. C.B. McIntosh Community Achievement Center (Segment 5)
- Mt. Olive (Segment 4), Memorial, Pine Hurst and Restlawn Cemeteries (Segment 5)

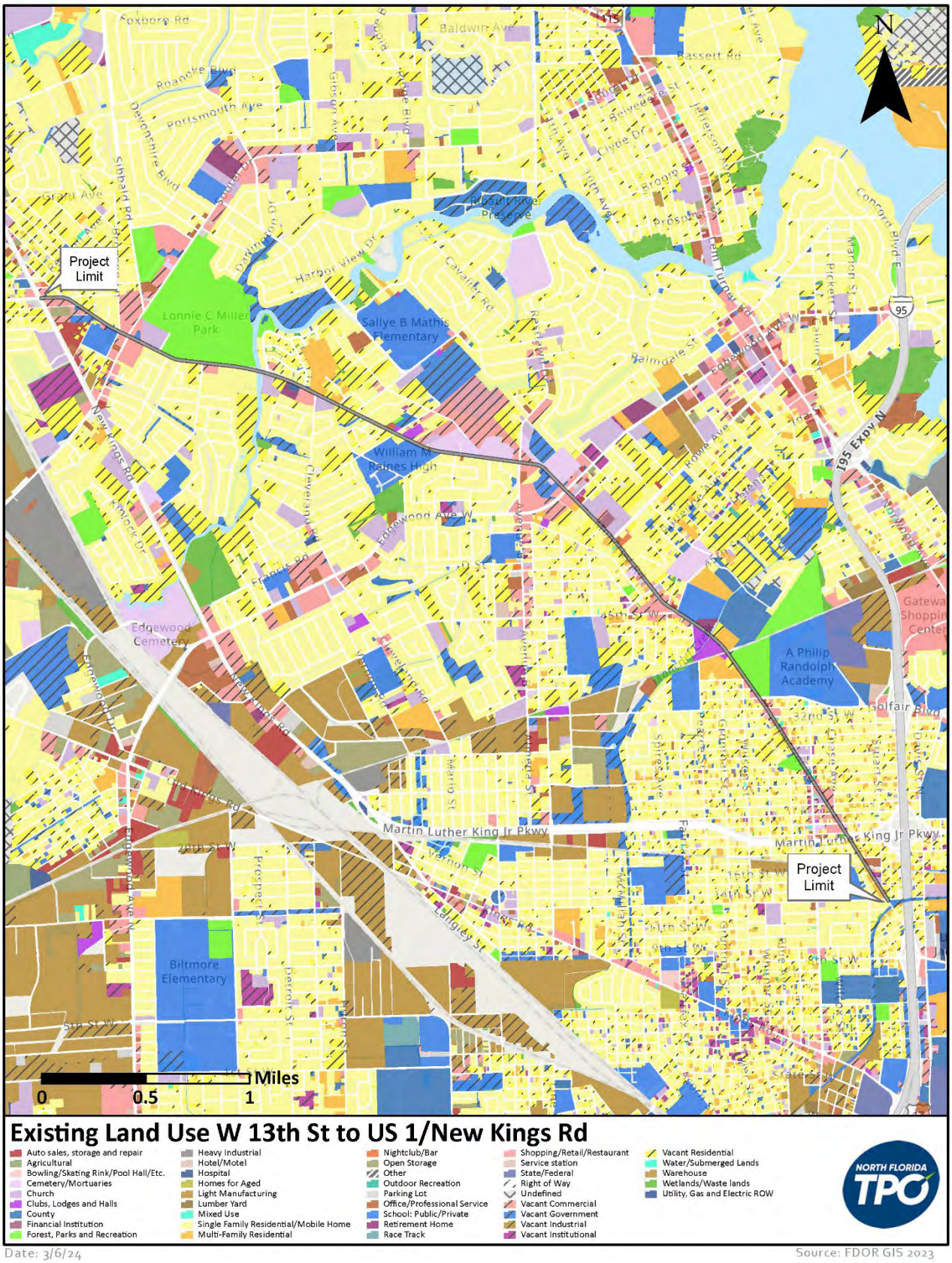


Figure 2 – Existing Land Use

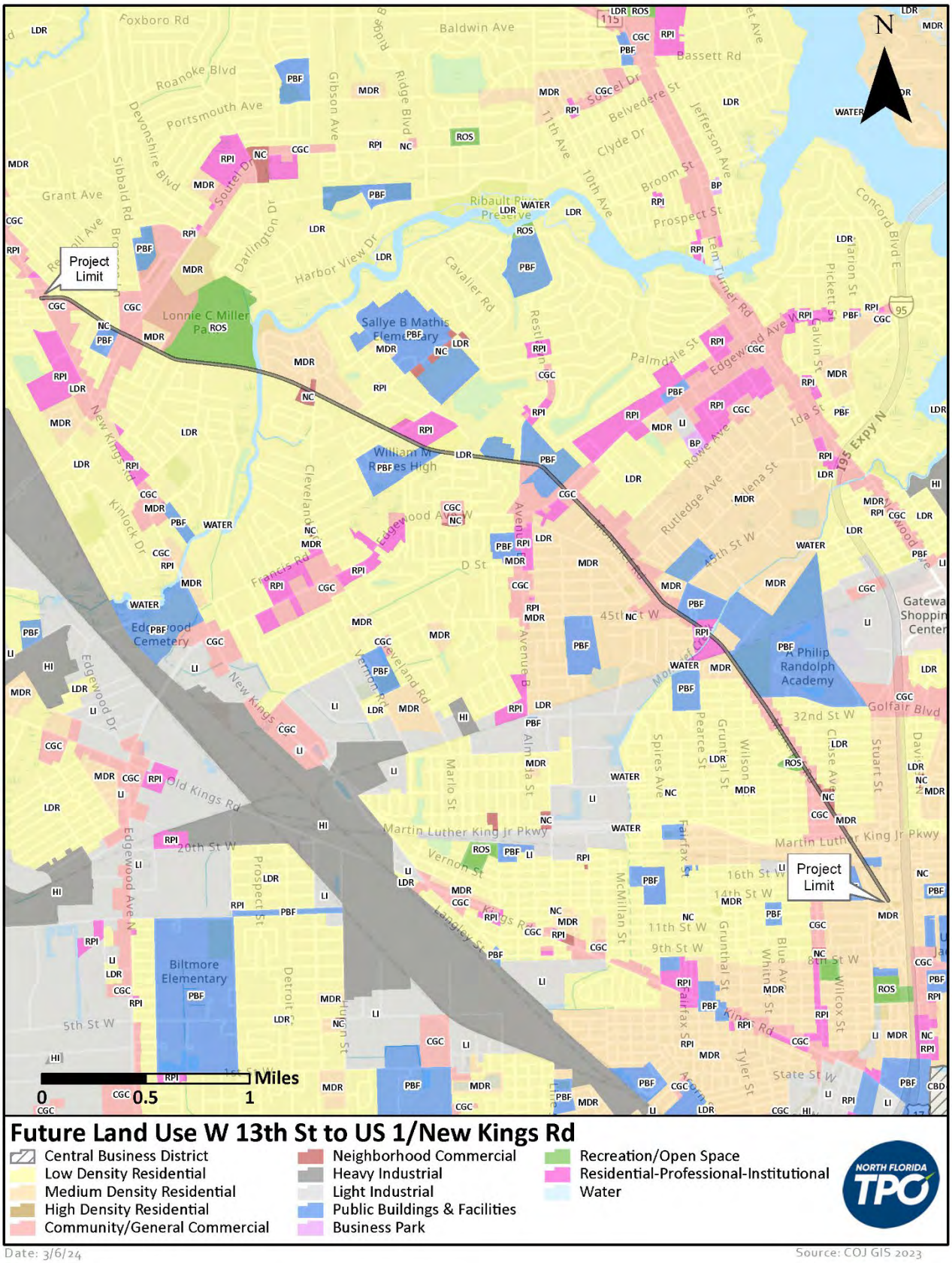
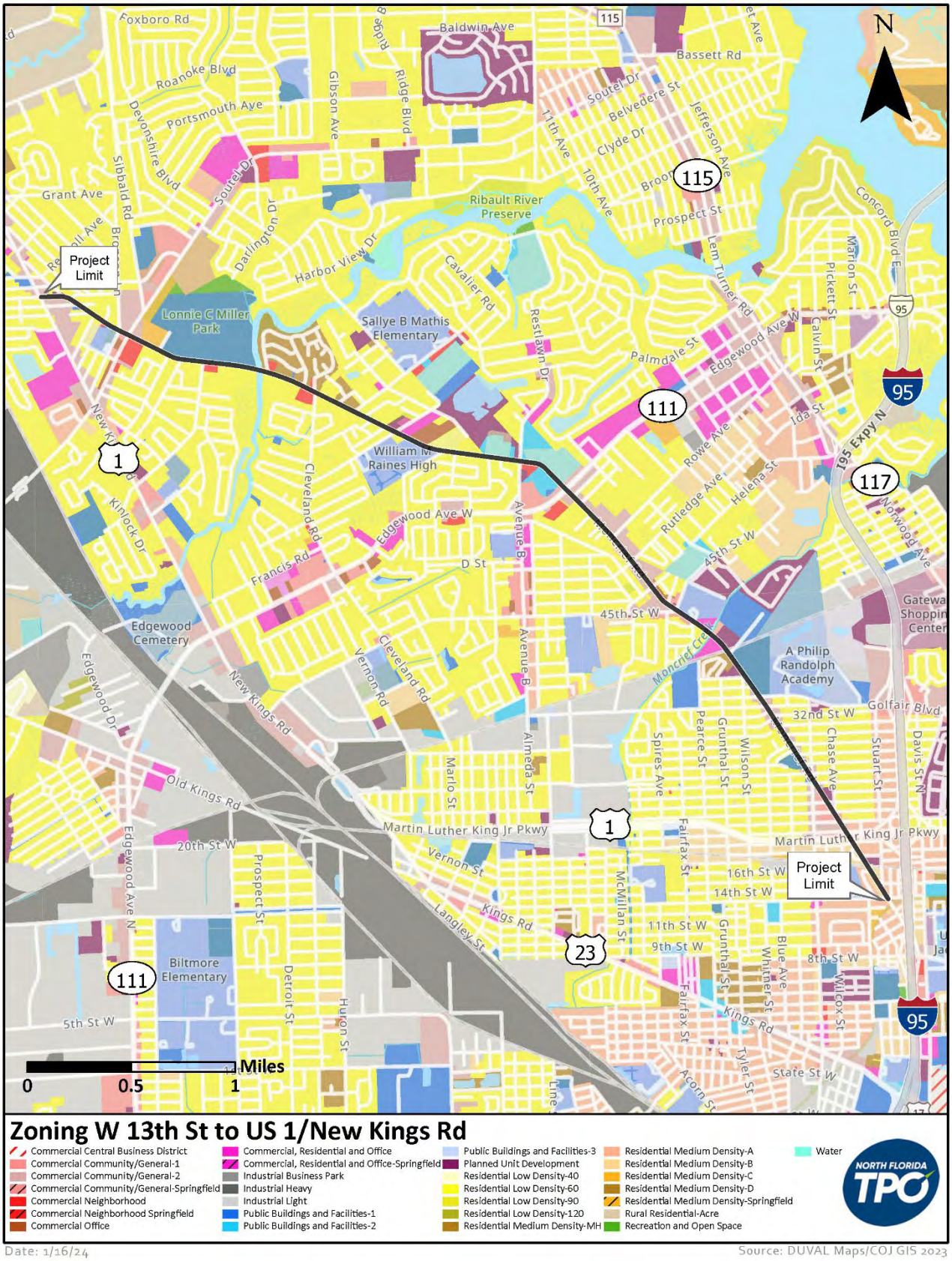


Figure 3 – Future Land Use



Zoning W 13th St to US 1/New Kings Rd

- Commercial Central Business District
- Commercial Community/General-1
- Commercial Community/General-2
- Commercial Community/General-Springfield
- Commercial Neighborhood
- Commercial Neighborhood Springfield
- Commercial Office
- Commercial, Residential and Office
- Commercial, Residential and Office-Springfield
- Industrial Business Park
- Industrial Heavy
- Industrial Light
- Public Buildings and Facilities-1
- Public Buildings and Facilities-2
- Public Buildings and Facilities-3
- Planned Unit Development
- Residential Low Density-40
- Residential Low Density-60
- Residential Low Density-90
- Residential Low Density-120
- Residential Medium Density-MH
- Residential Medium Density-A
- Residential Medium Density-B
- Residential Medium Density-C
- Residential Medium Density-D
- Residential Medium Density-Springfield
- Rural Residential-Acre
- Recreation and Open Space
- Water

Date: 1/16/24

Source: DUVAL Maps/COJ GIS 2023

Figure 4 – Zoning

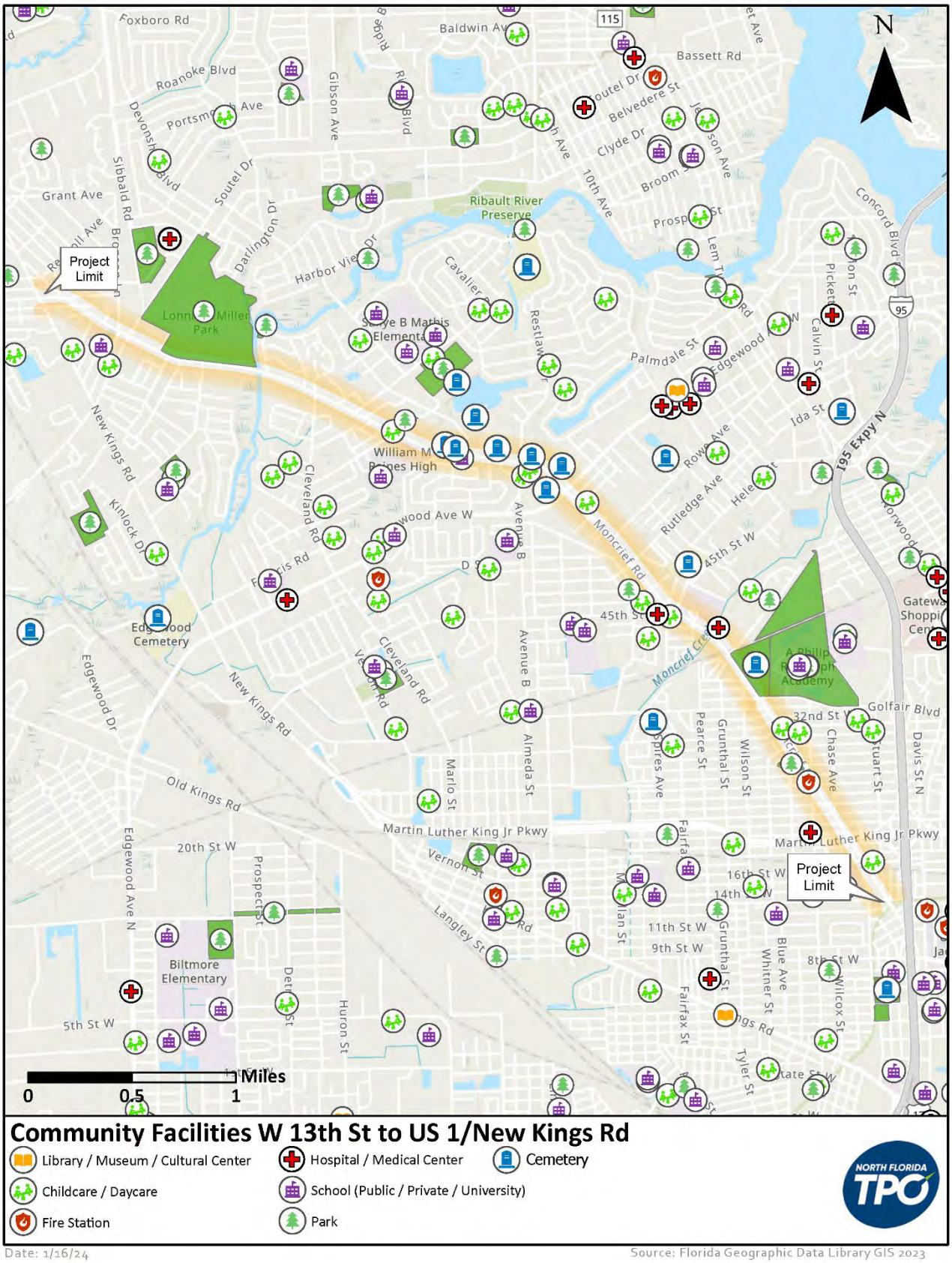


Figure 5 – Community Facilities

2.3 PLANNED PROJECTS

Projects described in the following sections are on or adjacent to the study corridor and funded for construction. Additional projects, such as those identified in JTA's Complete Streets initiative, COJ Mobility Fee projects, recommendations from the City of Jacksonville Pedestrian and Bicycle Master Plan, DIA projects, etc. are planned long-term improvements but are unfunded.

2.3.1 FY 2023-2027 Adopted Capital Improvement Plan (CIP)

Programmed projects in the current adopted CIP that are on the study corridor are identified in Table 1 and Table 2. The projects include infrastructure and parks improvements which will provide new and expanded education and recreation opportunities for the community.

These projects should be considered when making recommendations for multimodal improvements to Moncrief Road. These projects may already include or serve as an opportunity to add such improvements to a programmed project.

2.3.2 FDOT District 2

FDOT District 2 is currently constructing multiple improvements to the SR 9/I-95 at SR 115/US 1/MLK Parkway interchange and surrounding roadway network to improve safety, reduce conflicts and congestion, and increase operational capacity. The completed project (FM No. 433899-2) will reconstruct the both I-95 and pedestrian bridges over MLK Parkway to widen and increase vertical clearances.

Interchange improvements at MLK Parkway and I-95 are expected to be complete by the summer of 2026.

The project will also modify existing ramp configurations, add lanes, and install noise barriers. The lane configuration of MLK Parkway at the Moncrief Road intersection will remain unchanged. New lanes and traffic signals, however, will be added in both the eastbound and westbound directions for the I-95 southbound on/off ramps, approximately 750 LF east of the study corridor.

2.3.3 Mobility Fee Projects

The 2045 Mobility Plan identifies and prioritizes a list of corridor roadway, bicycle and pedestrian projects in each of the 10 mobility zones. Moncrief Road is in Mobility Zone 9. Projects eligible for Mobility Fee funding are listed in Table 3.

Table 1 – COJ CIP Projects

Department	Project No.	Title	Description	Prior FY	Funding Years	Total	Beyond 5
Public Works	010805	Moncrief Rd. and W. 20th St. Road Improvements	Install cul de sac on 20th St to remove connection to Moncrief Rd and create parallel parking spaces	-	FY 23-24	$350,000	-
Park & Recreation	003033	Clanzel T. Brown Park	The project will develop outdoor covered multiuse court/event space.	$1,650M	-	$1,950M	$300,000

Table 2 – COJ CIP Projects (Ongoing)

Project	Project Title	Revised Budget	Actuals	Encumbered	Balance
006346	Moncrief Road Diet	$50,002.00	$42,881.78	$0.00	$7,120.22
009022	Moncrief Rd Beautification (W. 34th Street/Golfair Boulevard - W. 45th Street)	$3,600,002.00	$156,543.98	$314,474.22	$3,128,983.80
010220	Moncrief Road Pedestrian Bridge	$1,952,041.00	$157,672.84	$211,269.32	$1,583,098.84
010250	Cemetery Entrance Enhancements	$1,900,600.00	$77,849.29	$38,809.27	$1,783,941.44

Table 3 – COJ Mobility Fee Projects (Zone 9)

Type	Facility Name	From	To	Improvement	Owner Agency	Link Length (Miles)	Mobility Fee Cost
Motorized	Moncrief Road	MLK Parkway	Edgewood Avenue	Context Sensitive design, enhance the streetscape, add bike lanes, ped facilities.	City	1.08	$2,073,600
Standalone Bicycle	Moncrief Road	34th Street	S Line existing trail	Buffered Bike Lanes	City	1.19	$69,107
	Moncrief Road	Golfair Boulevard	Edgewood Avenue	Protected Bike Lanes	City	1.38	$79,104
	Moncrief Road	Soutel Drive	Edgewood Avenue	Protected Bike Lanes	City	2.28	$358,730
Stand Alone Pedestrian	Moncrief Road	Soutel Drive; Rowe Street	Owen Avenue; George R Kearns Boulevard	Sidewalks	City	2.19	$410,099

3 PLANNING CONCEPT DEVELOPMENT

3.1 DESIGN STANDARDS

The typical section alternatives and concepts developed for this study generally follow the guidelines and standards listed below. Additional guidance for best practices is listed in Appendix B, Section 1.3.

- FDOT Design Manual (FDM) and Standard Plans
- Manual on Uniform Traffic Control Devices (MUTCD)
- FDOT Traffic Engineering Manual (TEM)
- Minimum Standards for Design, Construction, and Maintenance Streets and Highways (AASHTO Greenbook)

3.2 RECOMMENDED TYPICAL SECTION/CORRIDOR PLAN

This study provides recommendations to address access management and to improve the safety and performance of the corridor for all users. Based on the existing facility characteristics described in Appendix C, Benesch focuses the recommendations "between the curbs" to utilize existing infrastructure and leverage the opportunity to make improvements during Resurfacing, Restoration and Rehabilitation (RRR) projects. Safety recommendations, such as midblock crosswalks, are based on field observations and the crash analysis provided in Appendix D.

Nine proposed typical sections are described in the following sections with a roll plot of the proposed concept layout plans provided in Appendix A. The roll plot fully depicts improvements to the corridor from south of 13th Street to north of Spirea Street E. (Segments 1 through 5 (part)). The 2.3-mile section between Spirea Street E. and US 1/New Kings Road shares a consistent typical section and is depicted only at major intersections with crosswalks and other improvements noted Sections 3.2.8 and 3.2.9.

- Moncrief Road at Cleveland Road
- Moncrief Road at Soutel Drive
- Moncrief Road at US 1/New Kings Road

The proposed typicals generally follow corridor segmentation but do not match exactly due to varying right-of-way (ROW) and existing conditions. Lane width recommendations are based on FDM Table 210.2.1 and consider context class and target speed. Although Moncrief Road is under the jurisdiction of the City of Jacksonville, improvements at intersections with FDOT roads (MLK Parkway, S.R. 111/Edgewood Avenue and US 1/New Kings Road) will require coordination with District 2.

The overall improvements are based on a mill and resurfacing (RRR) of Moncrief Road. Multimodal facilities are provided using a combination of lane reallocation and sidewalk widening. Much of the work is accommodated within the existing curb line to limit reconstructing curb and drainage structures. Benesch reviewed as built plans and historic plat maps to determine existing ROW and typical sections along the corridor. As part of the design process, an engineering survey and utility coordination should be conducted to establish the ROW line and verify existing conditions.

The concept plan estimate includes upgraded lighting fixtures along the corridor. Crash analysis indicates that the number of nighttime crashes minimally exceeds the State average. A lighting study during the design phase should review current levels and recommend appropriate upgrades, particularly for multimodal users.

3.2.1 13th Street to MLK Parkway

Segment 1 is located within the Durkeeville neighborhood. Recommendations are based on a C4 context class and a target speed of 30 MPH. The minimum ROW is 60 LF.

As depicted in Figure 6, the proposed typical section widens the existing sidewalk on one side of Moncrief Road to an 8 LF shared use path. The path begins at the S-Line Urban Greenway south of W. 13th Street on the west side of Moncrief Road, where there's adequate separation from the travel lane to fit a trail between the ROW line and utility poles. The path extends across the Norfolk Southern rail line and eliminates the existing sidewalk gap.

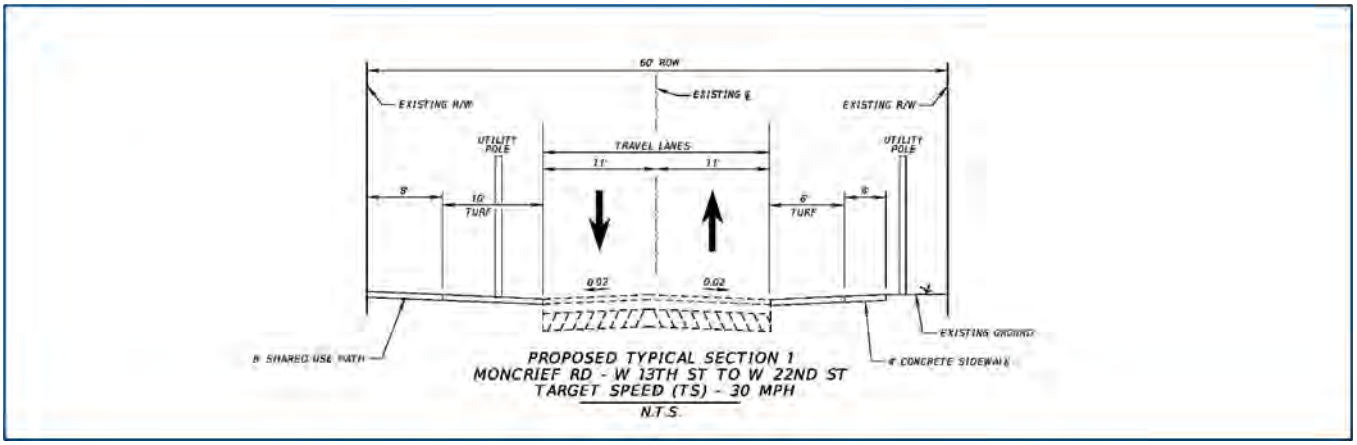
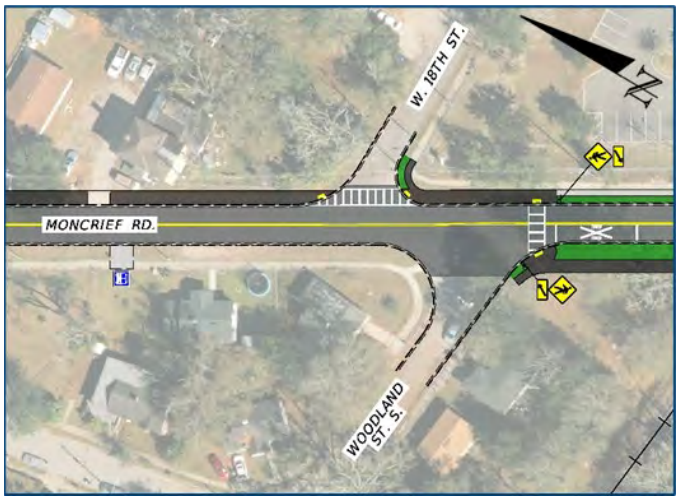


Figure 6 – Proposed Typical Section (13th Street to MLK Parkway)

The ROW begins to widen near MLK Parkway. At Woodland Street S., the path crosses to the east side of the road via a midblock crosswalk, providing cyclists with a low stress location to make the transition before reaching MLK Parkway and the proposed cycle track on the east side of Moncrief Road.

A depiction of the recommended improvements for Segment 1 is provided in Figure 7, which details an area from Stuart Street to W. 13th Street (refer to Appendix A for the full roll plot).



The proposed shared use path will cross Moncrief Road from west to east at Woodland Street S.

Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: W. 13th Street, Stuart Street, W. 16th Street, W. 18th Street, W. 19th Street and MLK Parkway.
- Refresh stamped asphalt crosswalks at W. 21st Street and W. 22nd Street.
- Midblock crossing at Woodland Street S.
- Upgrade existing light fixtures to LEDs.
- Replace the existing wood tie crossing at the Norfolk Southern rail crossing between W. 16th Street and Woodland Street with a rubberized panel crossing.
- Upgrade existing light fixtures to LEDs.

The City should conduct outreach with residents, churches, property owners and City Council representatives (District 7 and At Large) regarding the proposed project. The existing verge is used for parking and it appears that some structures and fences may intrude within the ROW. Survey and utility coordination will be key parts of the design and construction process to address this and any impacts to utility poles or underground utilities.

Upper: Looking south, the sidewalk on the east (left) side of Moncrief Road would be widened to 8 LF. Vehicles are parked within the ROW.

Lower: The rail grade crossing north of W. 16th Street would be upgraded as part of the corridor improvements, including a shared used path on the east side of Moncrief Road.

Design and construction of improvements within the rail ROW also requires coordination between the City of Jacksonville and Norfolk Southern.

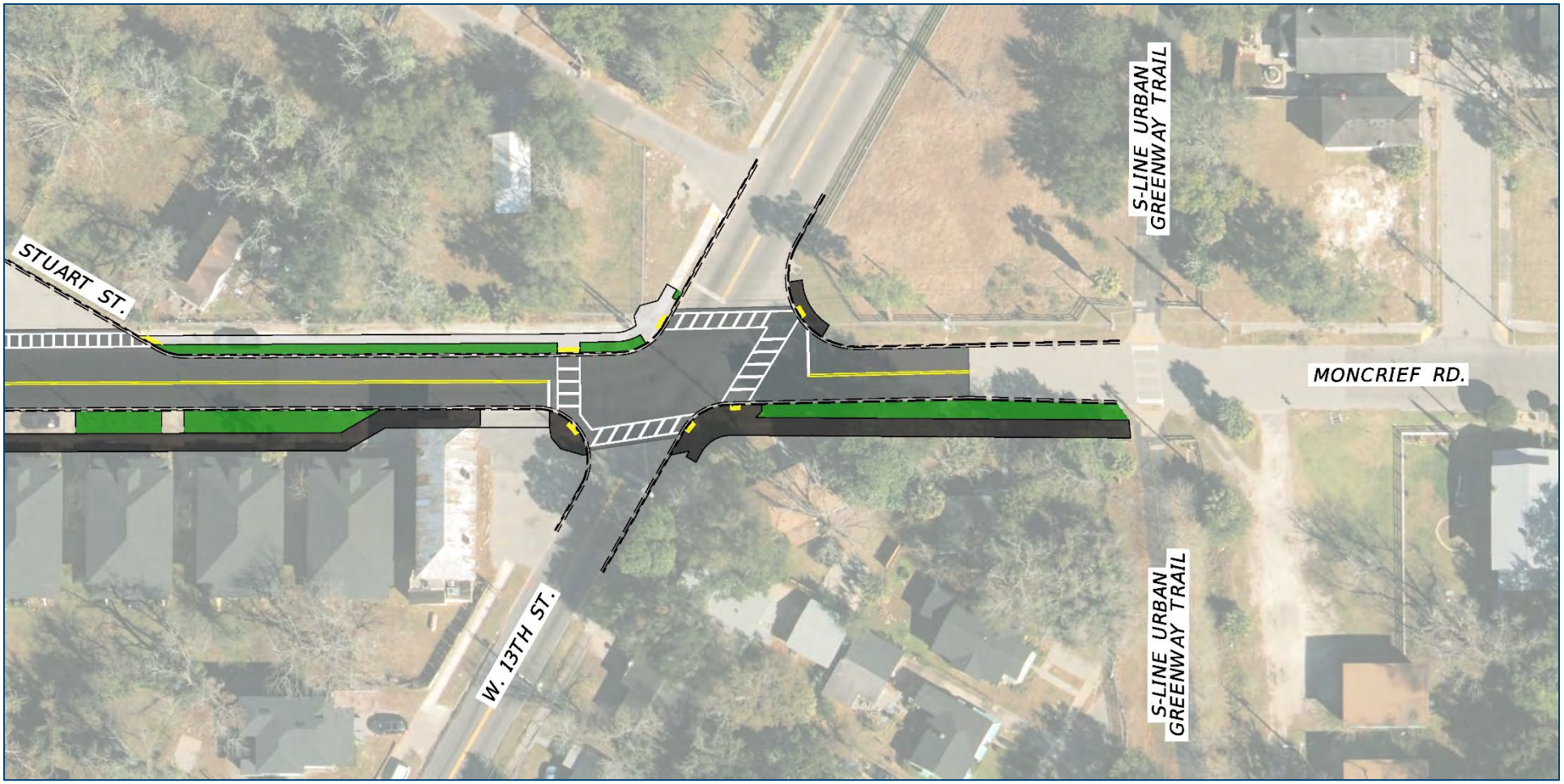


Figure 7 – Detail of Roll Plot (S-Line Trail to Stuart Street)

3.2.2 MLK Parkway to W. 22nd Street

This wide three block segment serves as a transition between recommended typical sections within the Moncrief neighborhood. Recommendations are based on a C4 context class and a target speed of 30 MPH.

In the first three blocks of Segment 2, lanes are reduced from 19 LF to 10.5 LF. The remaining pavement width is reallocated to an 8 LF cycle track with modular traffic separator (northbound), such as mountable curbing or Zicla Zipper system, and painted bulb outs (southbound).

Recommended improvements are illustrated in Figure 8, which details the area between MLK Parkway and W. 22nd Street (refer to Appendix A for the full roll plot). Spot treatments are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: W. 20th Street.
- Refresh the stamped asphalt crosswalks at W. 21st Street, W. 22nd Street and Case Avenue.
- Transverse green bicycle markings across intersections.
- Raised bus platform at JTA stop at W. 22nd Street (northbound).
- Upgrade existing light fixtures to LEDs.

Although Moncrief Road in this area is not signed for parking, vehicles were observed parked on both sides adjacent to area businesses. The City should conduct outreach with businesses and City Council representatives (District 10 and At Large) during the design and construction process regarding the perceived loss of parking.

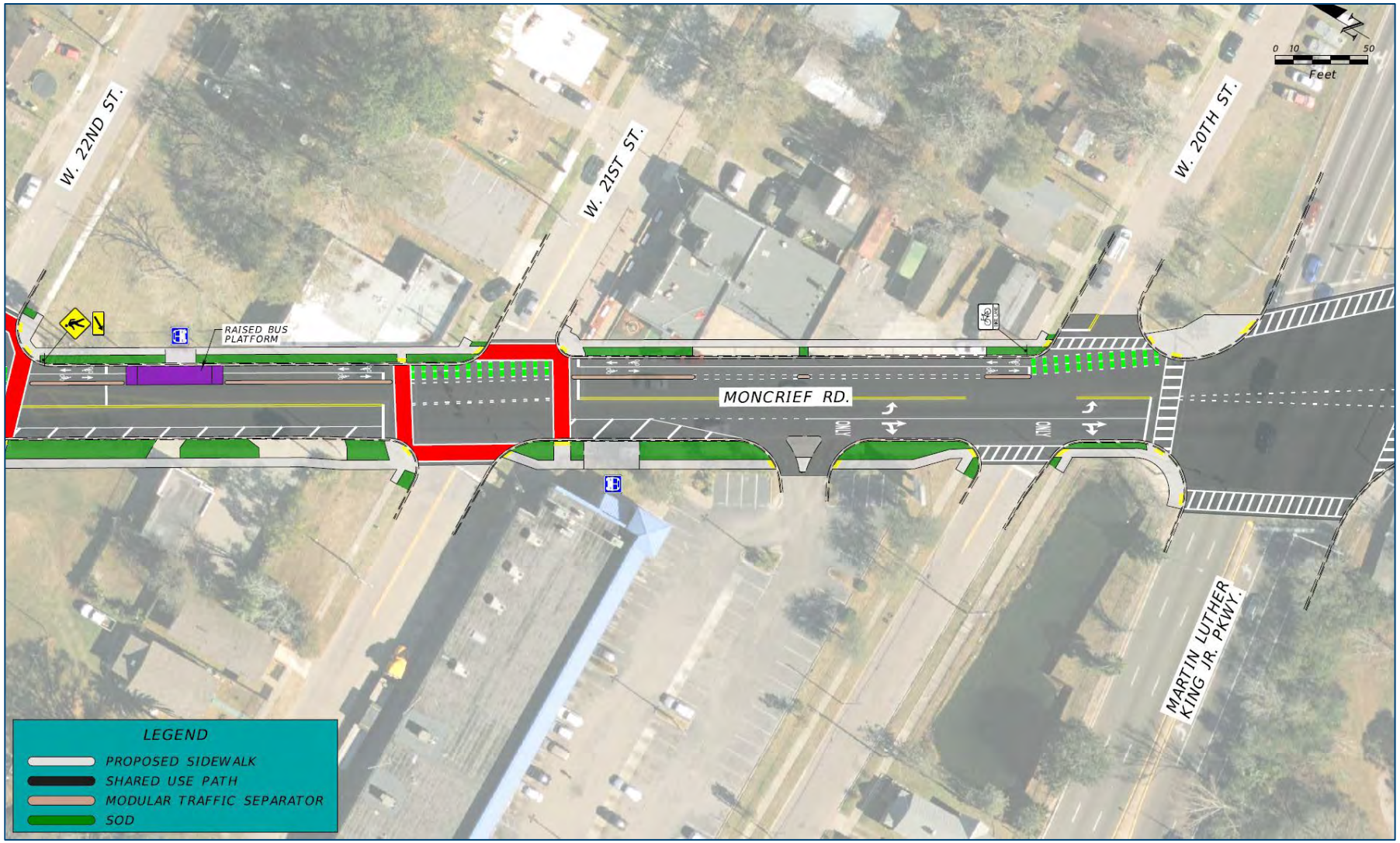


Figure 8 – Detail of Roll Plot (MLK Parkway to W. 22nd Street)

3.2.3 W. 22nd Street to Myrtle Avenue

This four-block section of Segment 2 is located within the Moncrief neighborhood. The minimum ROW is 60 LF. Recommendations are based on a C3R context class and a target speed of 30 MPH.

As illustrated in Figure 9, the proposed typical section eliminates the center turn lane, narrows the existing travel lanes from 12 LF to 10.5 LF and reallocates the space to an 8 LF cycle track with modular traffic separator (northbound) and on street parking (southbound).

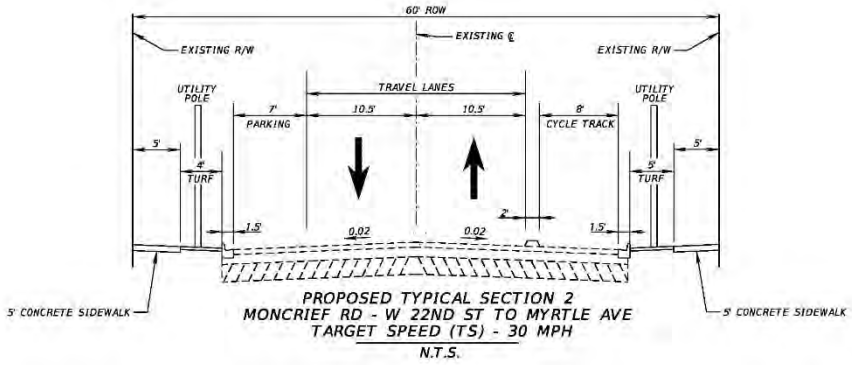
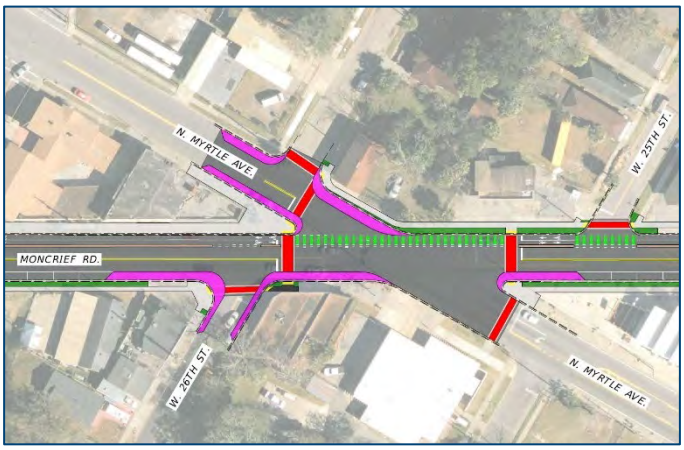


Figure 9 – Proposed Typical Section (W. 22nd Street to Myrtle Avenue)

Recommended improvements are also depicted in Figure 10, which details the area between W. 22nd Street to south of W. 25th Street (refer to Appendix A for the full roll plot).

The intersection of Myrtle Avenue, Moncrief Road, W. 25th and W. 26th Streets (aka "The Point") was once a commercial hub for the Moncrief neighborhood. Current businesses and services include North Point Town Center, Holley's BBQ and Jacksonville Fire and Rescue Department Fire Station No. 18. As depicted in the adjacent image, proposed improvements include mountable curb bulb outs and stamped asphalt crosswalks.



Proposed improvements at The Point are an opportunity to activate a neglected space and connect neighborhoods and small businesses.

Spot treatments are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: W. 23rd Street.
- Refresh the stamped asphalt crosswalks at W. 25th Street, W. 26th Street and Myrtle Avenue.
- Midblock crossing at W. 23rd Street
- Transverse green bicycle markings across intersections.
- Raised bus platform at JTA stop south of W. 25th Street (northbound).
- Upgrade existing light fixtures to LEDs.

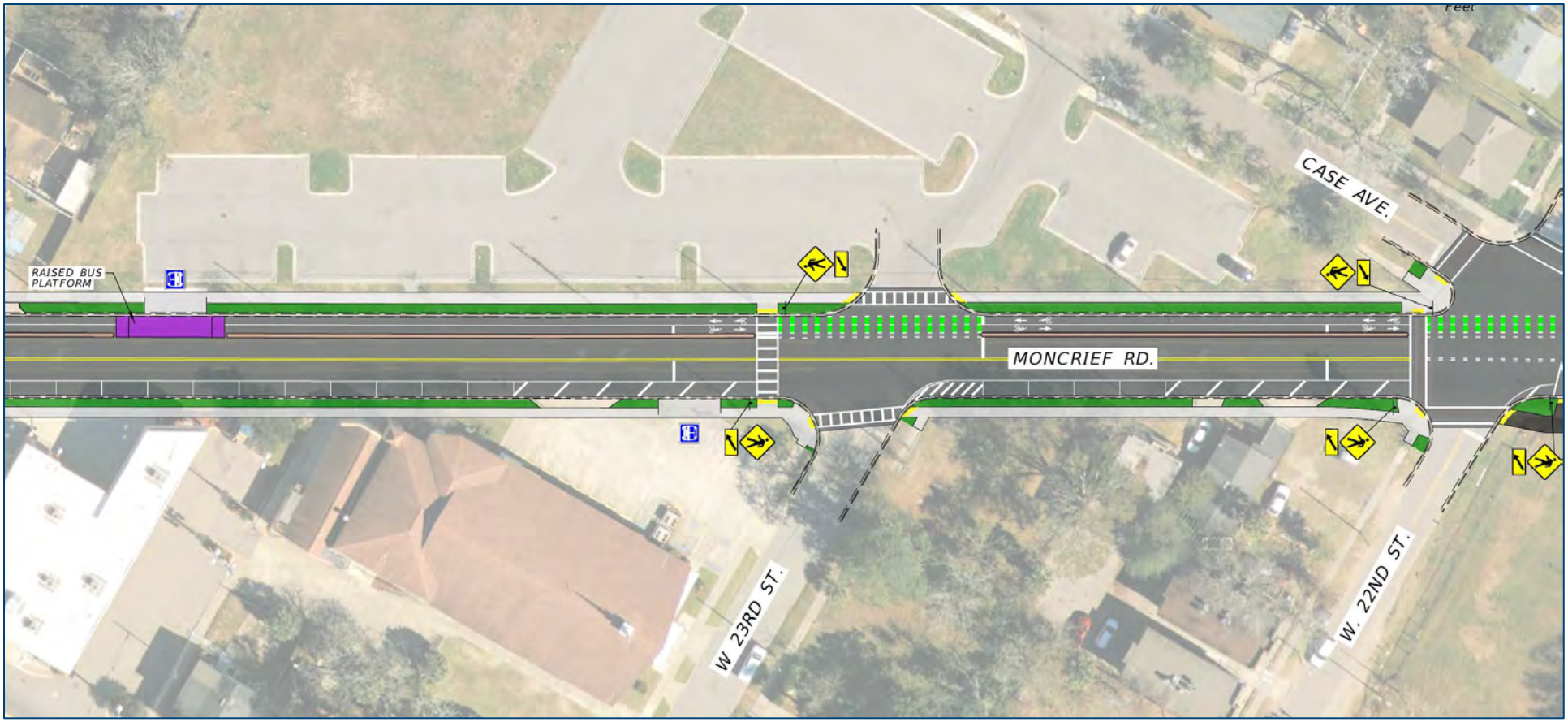


Figure 10 – Detail of Roll Plot (South of W. 25th Street to W. 22nd Street)

3.2.4 Myrtle Avenue to Golfair Boulevard

This approximately 0.5 mile section of Segment 2 is located within the Moncrief neighborhood. Recommendations are based on a C4 context class and a target speed of 30 MPH. The minimum ROW is 60 LF.

The existing pavement section is wide (~38 LF). As illustrated in Figure 12, the proposed typical section narrows the existing lanes from 19 LF to 10.5 LF, reallocating the pavement to a 7 LF parking lane on the southbound side and an 8 LF cycle track with modular traffic separator on the northbound side. This reallocation removes on street parking on the northbound (east) side of Moncrief Road. Although Moncrief Road in this area is not signed for parking, vehicles were observed parked on both sides adjacent to area homes, businesses, parks and churches.

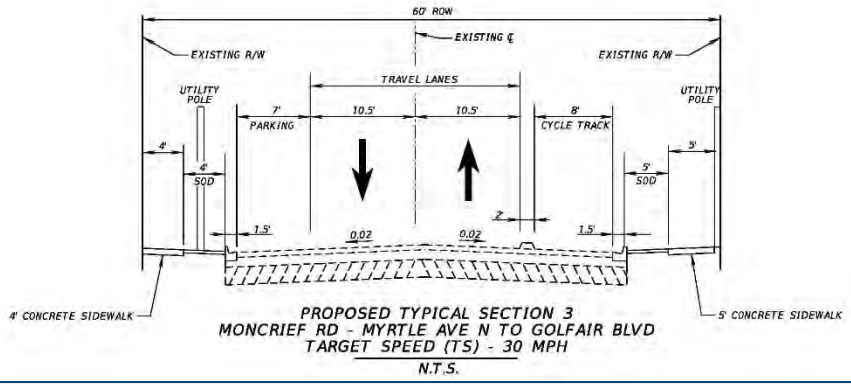
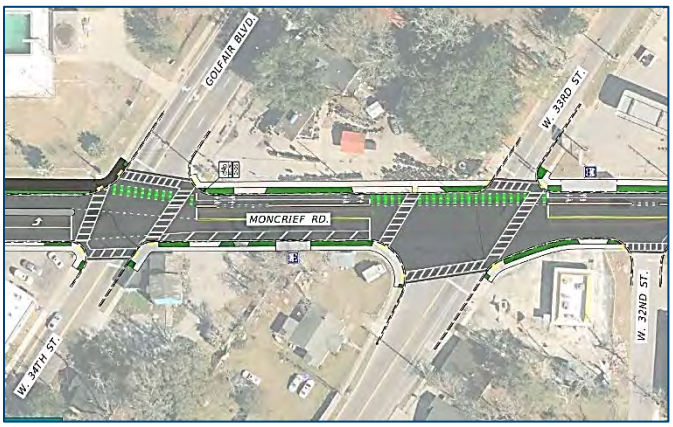


Figure 11 – Proposed Typical Section (Myrtle Avenue to Golfair Boulevard)

An example of the recommended improvements for this segment is provided in Figure 12, which details the area between W. 27th Street and W. 29th Street (refer to Appendix A for the full roll plot). Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: W. 27th Street, W. 28th Street, Royal Court Lane, W. 29th Street, W. 30th Street, W. 31st Street, Mitchell Stret, W. 32nd Street, W. 33rd Street and Golfair Boulevard (W. 34th Street).
- Transverse green bicycle markings across intersections.
- Midblock crossing at W. 27th Street, Mason Avenue/W. 29th Street and Mitchell Street/W. 32nd Street.
- Transverse green bicycle markings across intersections.



The segment between Golfair Boulevard and W. 33rd Street serves as a transition between the adjacent three and four-lane existing typical sections.

- Raised bus platform at JTA stop north of W. 27th Street (northbound) and between W. 28th Street and W. 29th Street (northbound).
- Painted bulb out (southbound) between W. 33rd Street and Golfair Boulevard.
- Upgrade existing light fixtures to LEDs.

The City should conduct outreach with businesses, residents and City Council representatives (District 10 and At Large) during the design and construction process regarding the perceived loss of parking.

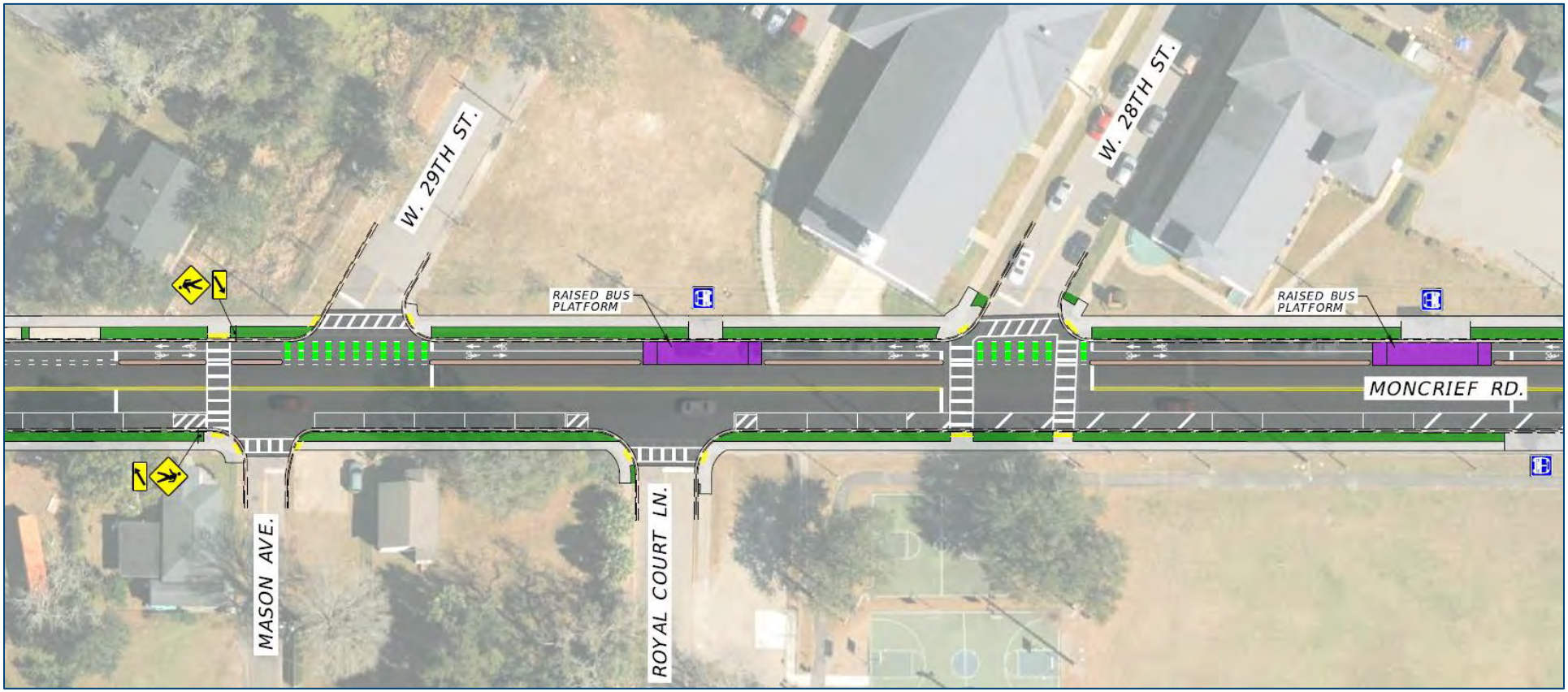


Figure 12 – Detail of Roll Plot (W. 27th Street to W. 29th Street)

3.2.5 Golfair Boulevard to W. 45th Street

This segment corresponds to the City of Jacksonville CIP Project No. 009022 (Moncrief Rodd Beautification). Segment 3 is approximately 0.6 miles long and located within the Moncrief and Royal Terrace neighborhoods. This segment has the highest AADT on the corridor (17,100 VPD, FDOT Florida Traffic Online 2023). Benesch recommendations are based on a C4 context class and a target speed of 35 MPH. The minimum ROW is 66 LF.

The existing typical section consists of 4, 11 LF lanes. The proposed typical section, illustrated in Figure 13, is consistent with the City of Jacksonville concept plans for the *Moncrief Road Lane Repurposing Traffic Study Report* (discussed in Section 1.1.7 of the Summary of Transportation Plans, Projects and Studies, located in Appendix B).

Looking south at the intersection of Moncrief Road at W. 36th Street. Clanzel T. Brown Park can be seen on the left (northbound) side.

The proposed typical section consists of a bidirectional two-lane divided roadway with a 16 LF center median that can be used for landscaping or as a two-way turn lane at spot locations. A 10 LF shared use path on the east (northbound) side replaces the existing sidewalk. On the west (southbound) side ,the 5 LF sidewalk remains in place.

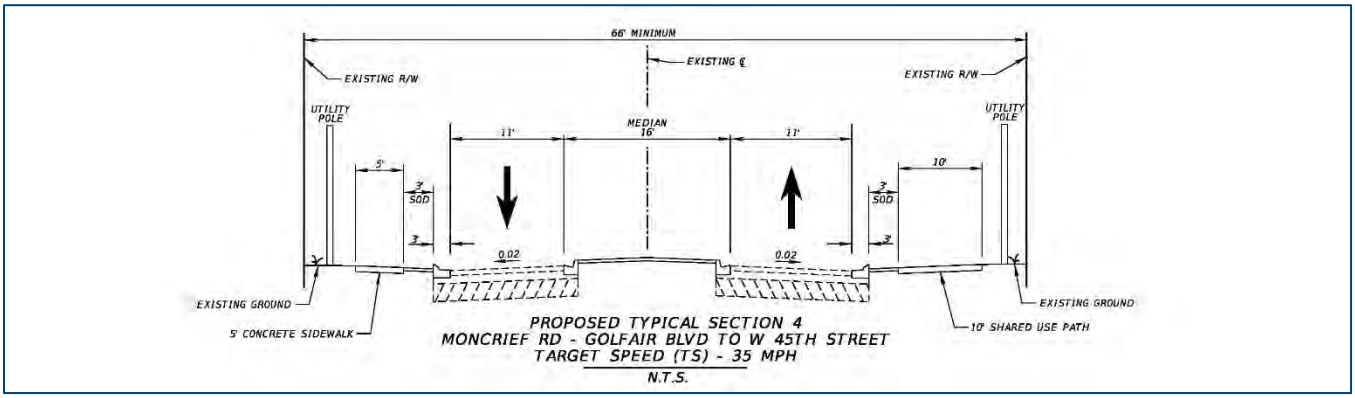


Figure 13 – Proposed Typical Section (Golfair Boulevard to W. 45th Street)

An existing pedestrian overpass at W. 45th Street provides connectivity across the south leg of the intersection. Pedestrian facilities (sidewalk and proposed shared use path) pass on the outside on bridge structure.

A crosswalk is added on the north leg as well.

Looking north at W. 45th Street: the pedestrian overpass provides a protected crossing between the residential neighborhoods on either side of Moncrief Road and to the school in the southeast quadrant of the intersection.

An example of the recommended improvements for this segment is provided in Figure 14 Figure 24and in the roll plot in Appendix A. Spot treatments throughout the segment include the following:

- Special Emphasis Crosswalks at intersections: Flynn Avenue, George R. Kerns Boulevard, Glenvale Road, Golfair Boulevard, W. 35th, W. 36th and W. 45th Streets.
- Transverse green bicycle markings across the east leg of Golfair Boulevard to transition between the cycle track and shared use path.
- Bulb outs (southbound) at Glenvale Road.
- Upgrade existing light fixtures to LEDs.
- Three midblock crossings between George R. Kerns Boulevard and Glenvale Road, all of which utilize the center median for pedestrian refuge.
- Upgrade existing light fixtures to LEDs.

Midblock pedestrian crossings are provided between George R. Kerns Boulevard and Glenvale Road, all of which utilize the center median for pedestrian refuge.

The concrete CSX rail crossing at George R. Kerns Boulevard is in good condition. Design and construction of any improvements within the rail ROW requires coordination between the City of Jacksonville and CSX.

The City should coordinate an easement with the Duval County School Board due to the shared use path encroaching onto the grounds of Northwestern Legends Elementary School (former St. Clair Evans Academy) at the pedestrian bridge at Moncrief Road and W. 45th Street.

The shared use path will encroach minimally into Duval County School Board property at the pedestrian overpass ramp.

Figure 14 – Detail of Roll Plot (on either side of George R. Kerns Boulevard)

3.2.6 W. 45th Street to S.R. 111/Edgewood Avenue

Segment 4 is approximately 0.75 miles long and located within the Moncrief and Royal Terrace neighborhoods. The proposed typical section, illustrated in Figure 15, extends the road diet north from W. 45th Street with the intent to lower the target speed while adding a consistent bike facility the length of the corridor. Recommendations are based on a C3R context class and a target speed of 35 MPH. The minimum ROW is 102 LF.

Similar to Segment 3, the proposed typical section reallocates the existing four-lane section (10 LF lanes) to two, 11 LF lanes with an 18 LF center median that can be used for landscaping or as a two-way turn lane at spot locations. At the north leg of the W. 45th Street intersection, the shared use path transitions from the northbound side (east) to southbound (west) side of Moncrief Road. On the east (northbound) side ,the 5 LF sidewalk remains in place

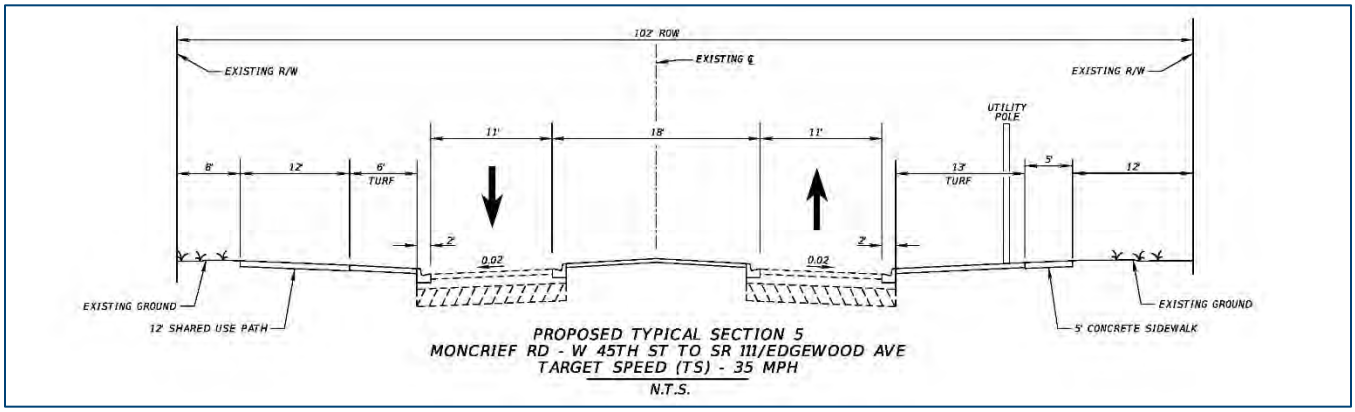
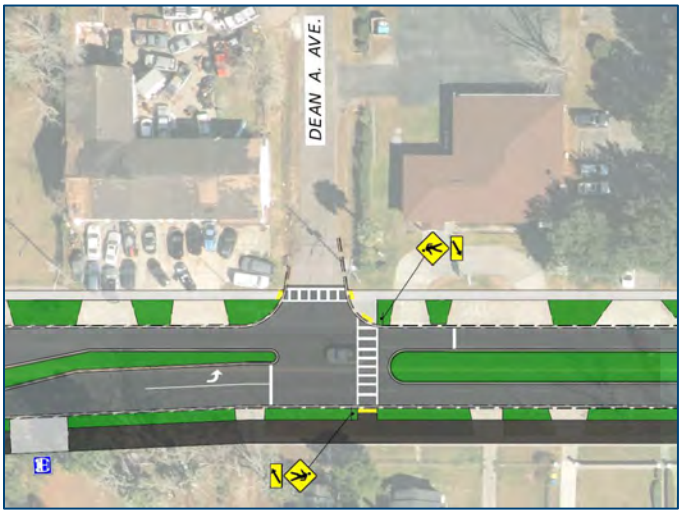


Figure 15 – Proposed Typical Section (W. 45th Street to Edgewood Avenue)

An example of the recommended improvements for this segment is provided in Figure 15 which details the area between W. 27th Street and W. 29th Street (refer to Appendix A for the full roll plot). Spot treatments throughout the segment are identified on the roll plot and include the following:

Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: Audubon Street, Dean A. Avenue, Edgewood Avenue, Frank E. Avenue, Lentie Road, Meharry Avenue/Rutledge Avenue, Rowe Avenue and Sycamore Street/Voorhies Road.
- Transverse green bicycle markings across intersections.
- Upgrade existing light fixtures to LEDs.



A pedestrian crosswalk is added across Moncief Road at Dean A. Avenue.

3.2.6 W. 45th Street to S.R. 111/Edgewood Avenue

Segment 4 is approximately 0.75 miles long and located within the Moncrief and Royal Terrace neighborhoods. The proposed typical section, illustrated in Figure 15, extends the road diet north from W. 45th Street with the intent to lower the target speed while adding a consistent bike facility the length of the corridor. Recommendations are based on a C3R context class and a target speed of 35 MPH. The minimum ROW is 102 LF.

Similar to Segment 3, the proposed typical section reallocates the existing four-lane section (10 LF lanes) to two, 11 LF lanes with an 18 LF center median that can be used for landscaping or as a two-way turn lane at spot locations. At the north leg of the W. 45th Street intersection, the shared use path transitions from the northbound side (east) to southbound (west) side of Moncrief Road. On the east (northbound) side ,the 5 LF sidewalk remains in place

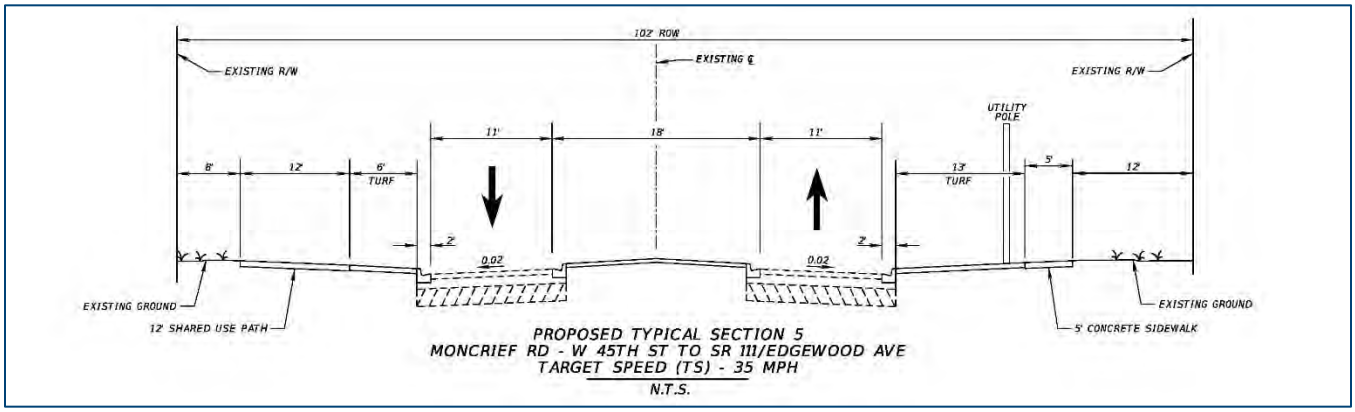
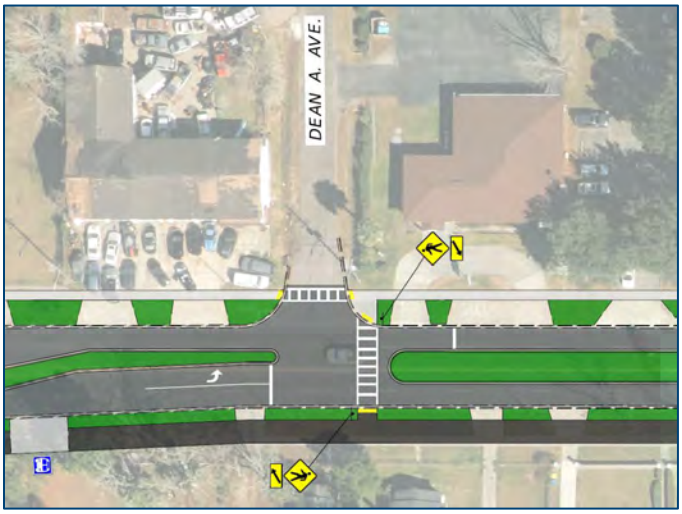


Figure 15 – Proposed Typical Section (W. 45th Street to Edgewood Avenue)

An example of the recommended improvements for this segment is provided in Figure 15 which details the area between W. 27th Street and W. 29th Street (refer to Appendix A for the full roll plot). Spot treatments throughout the segment are identified on the roll plot and include the following:

Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: Audubon Street, Dean A. Avenue, Edgewood Avenue, Frank E. Avenue, Lentie Road, Meharry Avenue/Rutledge Avenue, Rowe Avenue and Sycamore Street/Voorhies Road.
- Transverse green bicycle markings across intersections.
- Upgrade existing light fixtures to LEDs.



A pedestrian crosswalk is added accross Moncief Road at Dean A. Avenue.

Figure 16 – Detail of Roll Plot (Sycamore Street to Audubon Street)

3.2.7 S.R. 111/Edgewood Avenue to Avenue B/Restlawn Drive

This 0.25 mile section of Segment 5 is flanked by Restlawn Cemetery. This section Figure 11is a continuation of the road diet concept but features on street separated bike lanes. Recommendations are based on a C3R context class and a target speed of 35 MPH. The minimum ROW is 69 LF.

As illustrated in Figure 17, the proposed typical section reallocates the existing 5-lane pavement section to two, 11 LF lanes with a 16 LF center median and 6 LF separated bike lanes on each side.

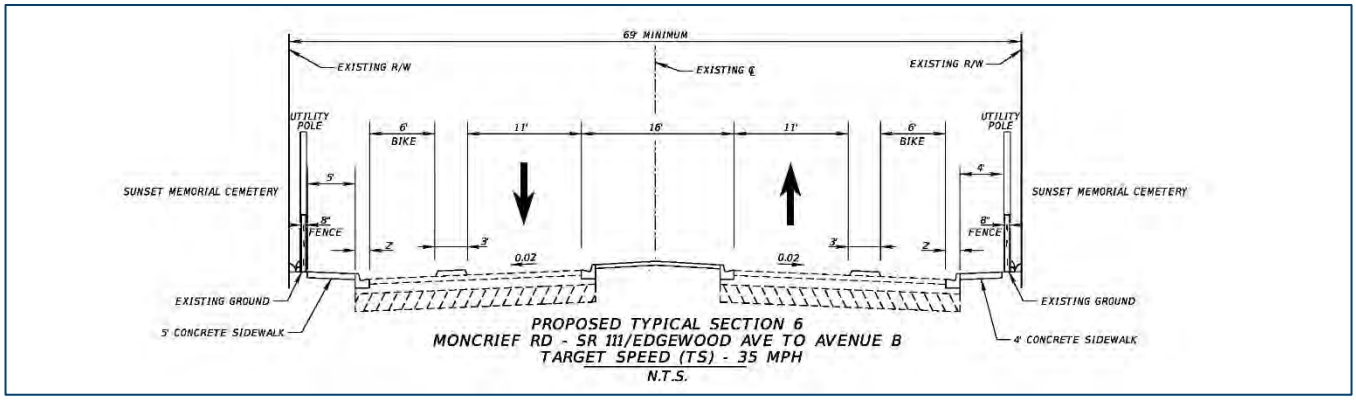
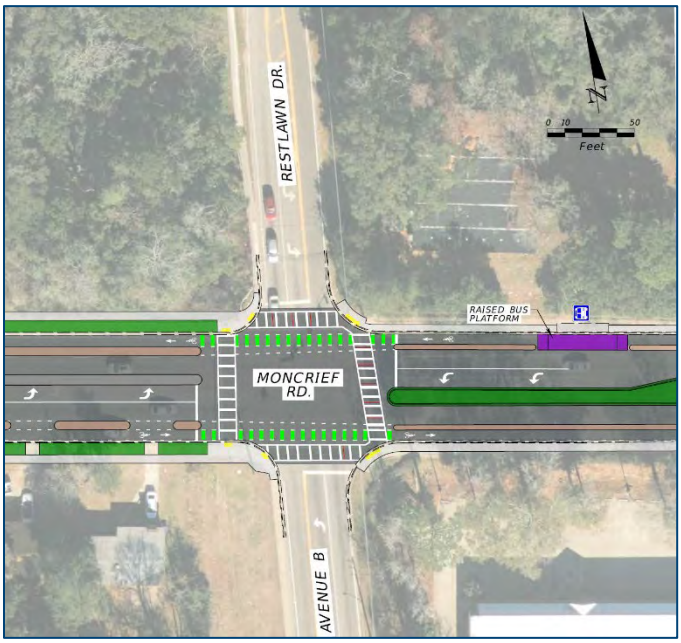


Figure 17 – Proposed Typical Section (Edgewood Avenue to Avenue B)

An example of the recommended improvements for this segment is provided in Figure 18 which details the area between Edgewood Avenue and Avenue B (refer to Appendix A for the full roll plot). Spot treatments throughout the segment include the following:

- Special Emphasis Crosswalks at intersections: Restlawn Drive/Avenue B.
- Midblock crossing at Restlawn Cemetery entrance road, with center median refuge island.
- Transverse green bicycle markings across intersections
- Raised bus platform at JTA stop east of Restlawn Drive (northbound) and east of Avenue B (southbound).
- Upgrade existing light fixtures to LEDs.



The Restlawn Drive/Avenue B intersection is upgraded with special emphasis crosswalks, transverse green bicycle markings, separated bike lanes and a raised bus platform.

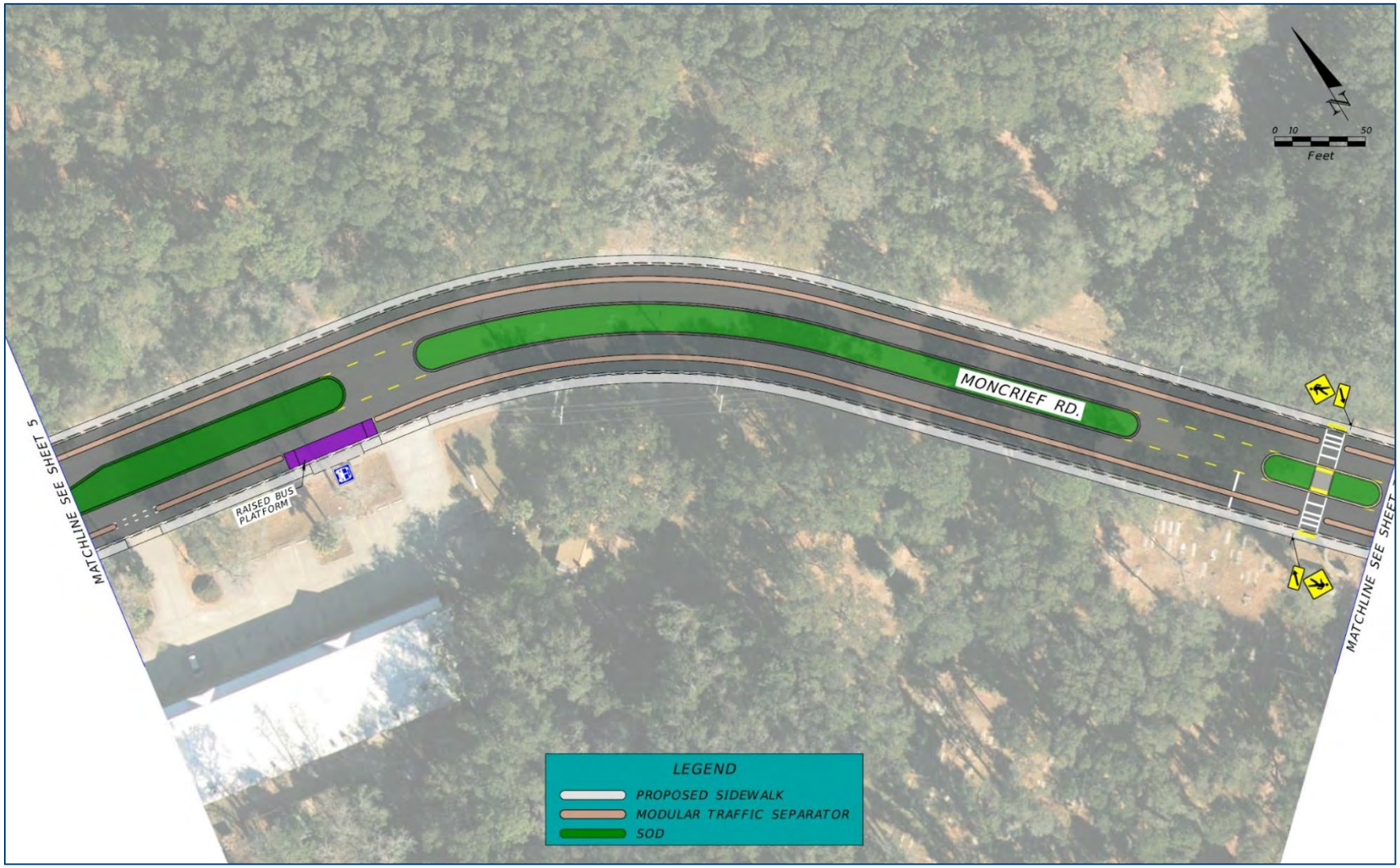


Figure 18 – Detail of Roll Plot (between Edgewood Avenue and Avenue B)

3.2.8 Avenue B to Soutel Drive

This 2-mile section of Segment 5 includes Restlawn Cemetery, William R. Raines Senior High School and Lonnie Miller, Sr. Regional Park. The proposed roadway is a continuation of the road diet concept with on street separated bike lanes. Recommendations are based on a C3R context class and a target speed of 35 MPH. The minimum ROW is 90 LF and 77 LF on the Rutledge H. Pearson Memorial Bridge.

As illustrated in Figure 19 (roadway) and Figure 20 (bridge), the proposed typical section reallocates the existing 5-lane pavement section to two, 11 LF lanes with a 16 LF center median and 7 LF separated bike lanes on each side.

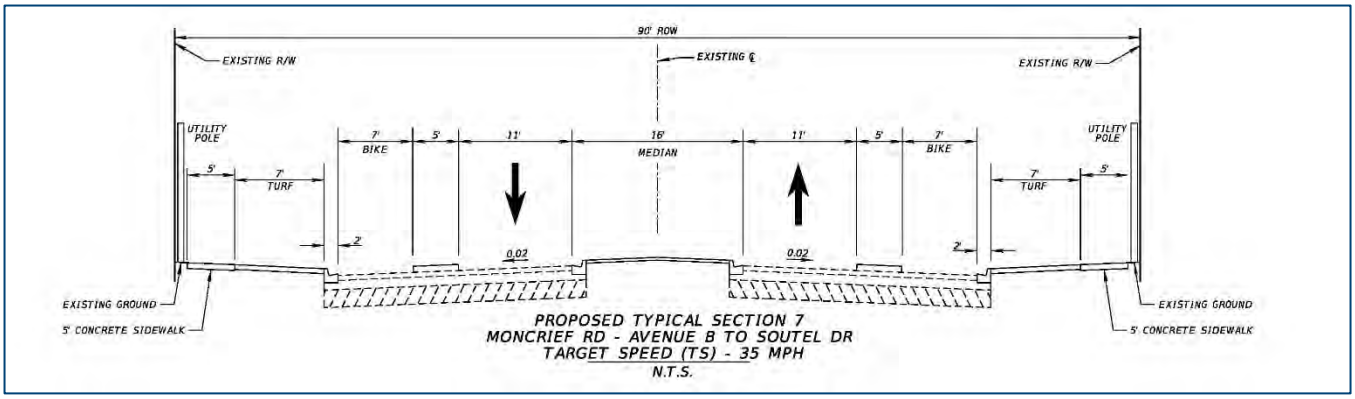


Figure 19 – Proposed Typical Section (Avenue B to Soutel Drive)

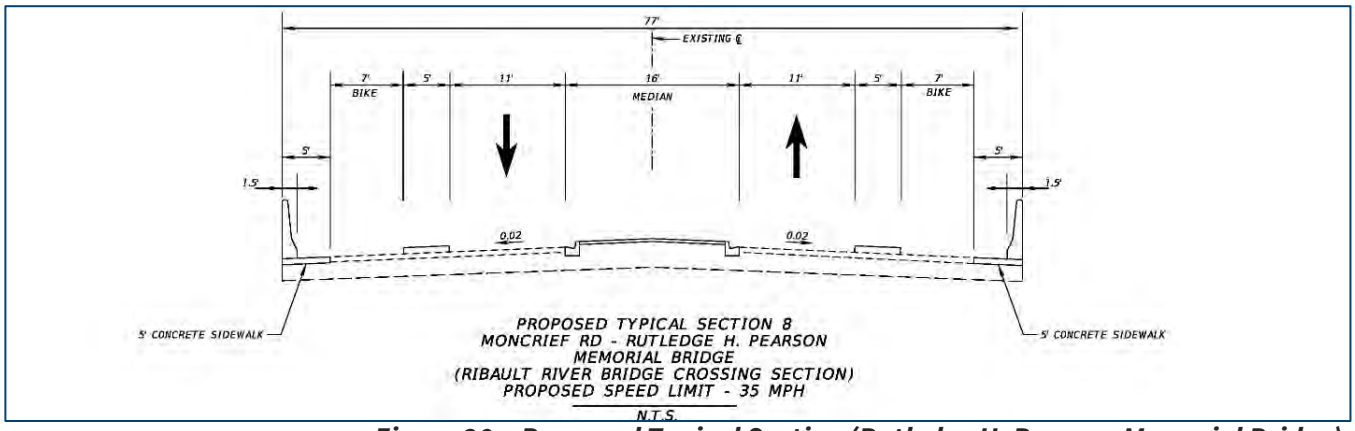


Figure 20 – Proposed Typical Section (Rutledge H. Pearson Memorial Bridge)

A depiction of the recommended improvements at the Cleveland Road and Soutel Drive intersections are provided in Figure 21 and Figure 22 and in the roll plot in Appendix A. Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: Strawflower Place, Spirea Drive E., Lobelia Street, Raines Avenue, Owen Avenue, Ernjo Road, Gillislee Drive, Robert C. Weaver Drive, Winton Drive, Leonnie Road, Cleveland Road, Ken Knight Drive E., Ken Knight Drive E., Richardson Road, Irving Scott Drive, Dostie Drive E., Ellis Court and Soutel Drive.
- Transverse green bicycle markings across intersections.

- Raised bus platform at JTA stop south of Ken Knight Drive E. (northbound) and Soutel Drive (southbound)
- Upgrade existing light fixtures to LEDs.

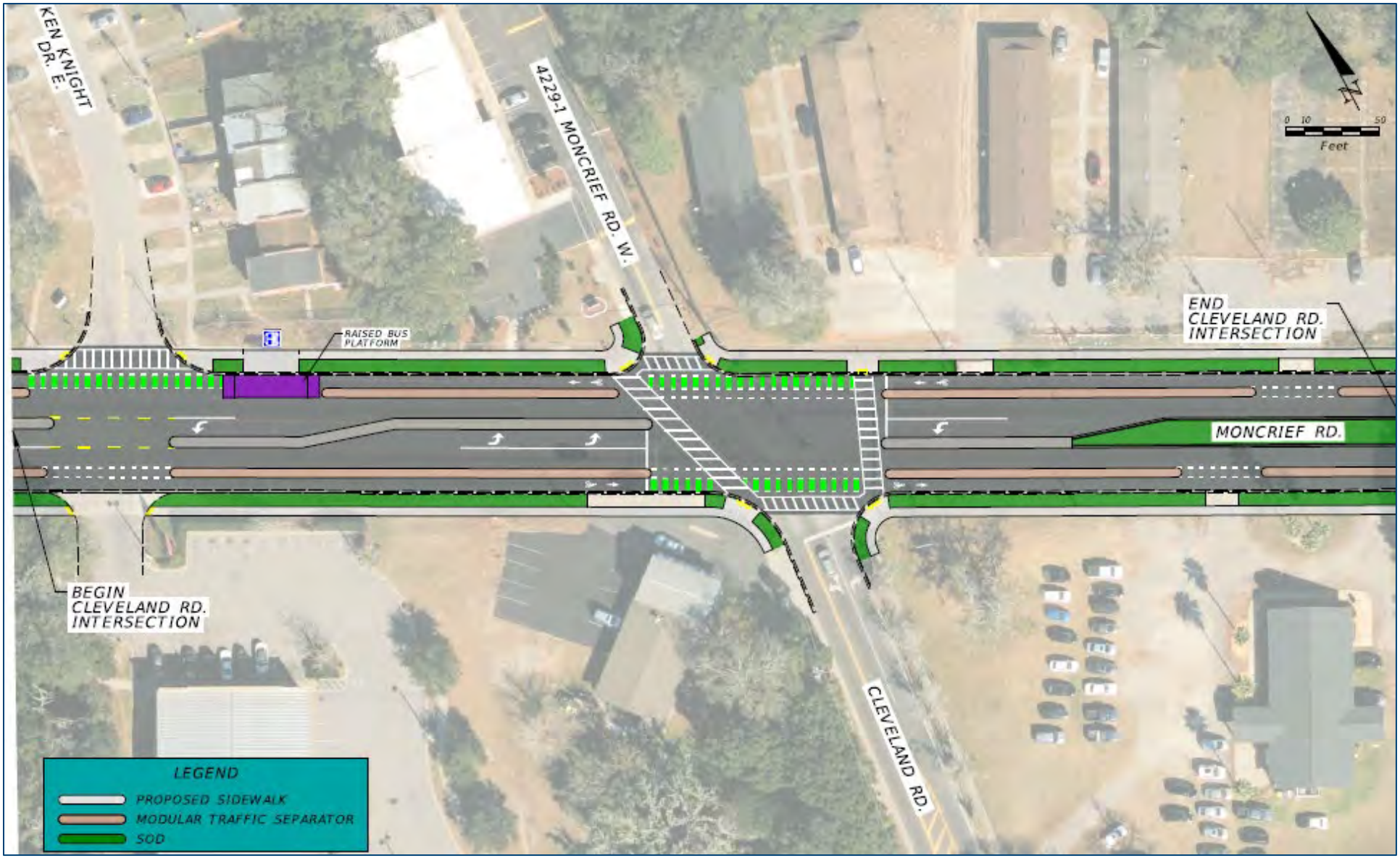


Figure 21 – Detail of Improvements at Cleveland Road

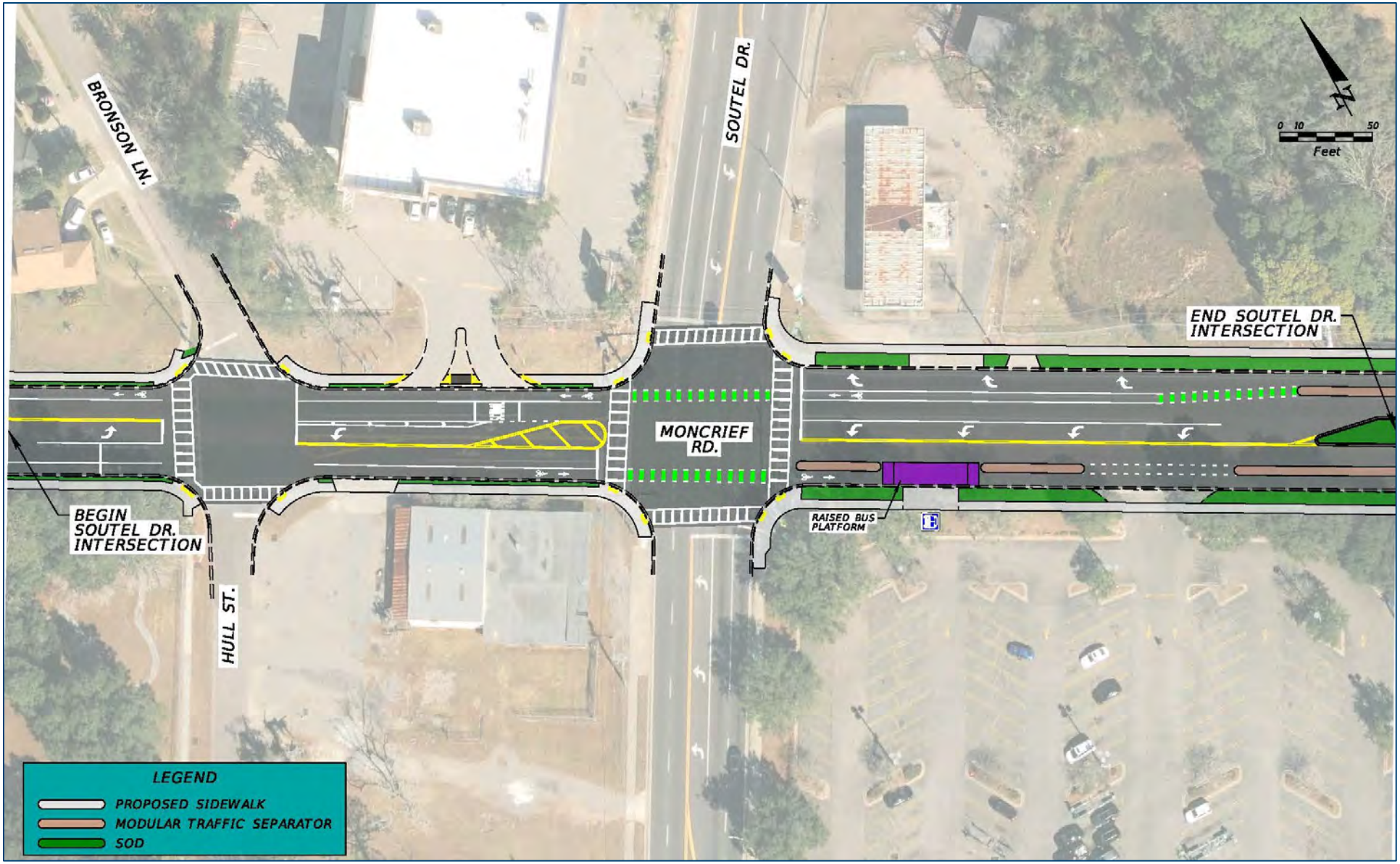


Figure 22 – Detail of Improvements at Soutel Drive

3.2.9 Soutel Drive to US 1/New Kings Road

Segment 6 is approximately a half mile in length, with a minimum ROW of 100 LF. Recommendations are based on a C3R context class and a target speed of 35 MPH.

As depicted in Figure 23, the recommended typical section narrows the existing lanes from 12 LF to 11 LF and the center turn lane from 14 LF to 12 LF. The 4 LF is reallocated to provide a 6 LF bike lane on each side. The existing 5 LF sidewalks remain.

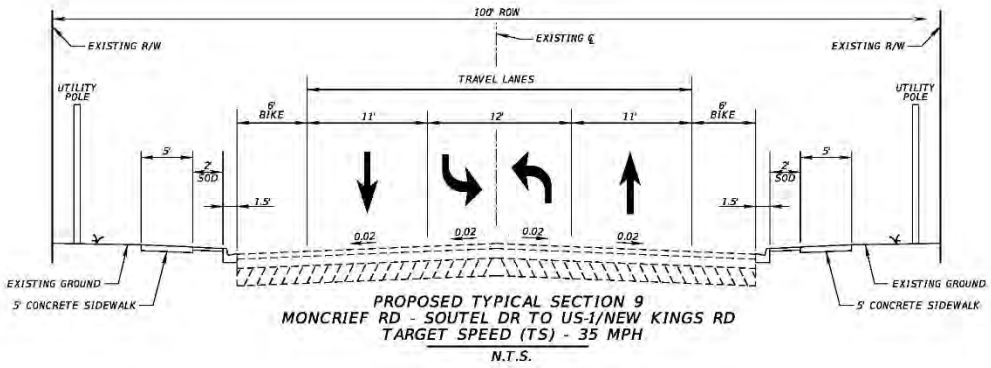


Figure 23 – Proposed Typical Section (Soutel Drive to US 1/New Kings Road)

A depiction of the recommended improvements at the US 1/New Kings Road intersection is provided in Figure 24 and in the roll plot in Appendix A. Spot treatments throughout the segment include the following:

- Special Emphasis Crosswalks at intersections: Bronson Lane/Hull Street, Chappie James Court, Dunmire Avenue, Liston Road, Moncrief Road W. and US 1/ New Kings Road (crosswalk added on east and south approaches)
- Midblock crossing at Liston Road with center median refuge island.
- Transverse green bicycle markings across intersections
- Upgrade existing light fixtures to LEDs.

Looking east on Moncrief Road at the US 1/New Kings Road intersection.

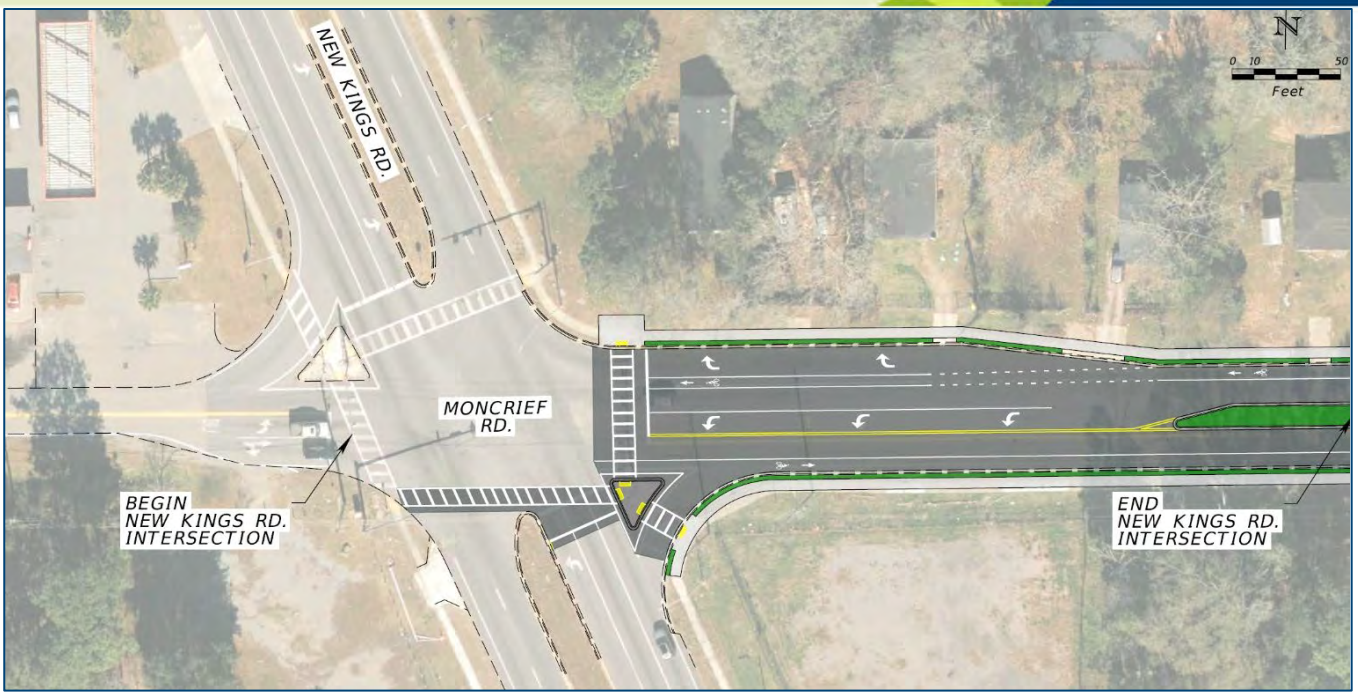


Figure 24 – Detail of Improvements at US 1/New Kings Road

3.3 COST ESTIMATES

As part of the implementation plan development, Benesch developed a concept level construction cost estimate for the identified potential improvements. Table 4 provides a summary of the estimated costs. The overall project is estimated to cost approximately $19 million. The cost estimate is provided in Appendix E.

Pay item costs are based on the FDOT 12 Month Moving Market Area Averages(02/01/2023 through 01/31/2024). The cost estimate is based on the concept plan and is for planning purposes only. The estimate may be revised following additional evaluation, engineering feasibility and design. The cost estimate does not include additional evaluation, engineering feasibility, ROW acquisition, utility relocation or design. Also, environmental permitting is not included and should be added once design is underway.

3.4 PRIORITIZATION

Benesch prioritized the segments based on the analysis and coordination with the area councilperson.

The highest priority is Segment #3 (Golfair Boulevard to 45th Street). This link is already identified in the CIP and is funded in the COJ budget (Project #009022).

The next tier should include one or more of the following segments:

- Segment #5 – Edgewood Avenue to Soutel Drive (includes the cemetery from Edgewood Avenue to Avenue B)
- Segment #2 – MLK Parkway to Golfair Boulevard (includes Myrtle/Moncrief intersection)
- Segment #4 – W 45th Street to Edgewood Avenue

Lower priority projects include the first and last segments:

- W 13th Street to MLK Parkway
- Soutel Drive to US 1

Table 4 – Construction Cost Estimate[1]

Component	Percentage	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Segment 6	Total
Roadway		$294,753	$699,748	$874,140	$1,389,788	$6,106,831	$880,368	$10,245,627
Signing and Pavement Marking		$36,532	$118,079	$41,999	$56,766	$117,272	$36,874	$405,023
Lighting		$32,550	$104,125	$54,075	$72,625	$209,563	$42,875	$330,000
Rail Crossing Reconstruction		$80,000						$80,000
Subtotal		**$443,835**	**$921,952**	**$970,214**	**$1,519,179**	**$6,433,665**	**$960,117**	**$11,496,462**
Mobilization	10%	$44,383	$92,195	$97,021	$151,918	$643,366	$96,012	$1,149,646
MOT	10%	$44,383	$92,195	$97,021	$151,918	$643,366	$96,012	$1,149,646
Construction Subtotal		$532,602	$1,106,343	$1,164,257	$1,823,015	$7,720,398	$1,152,140	$13,795,754
Contingency	10%	$53,260	$110,634	$116,426	$182,302	$772,040	$115,214	$1,379,575
Construction Total		**$585,862**	**$1,216,977**	**$1,280,683**	**$2,005,317**	**$8,492,438**	**$1,267,354**	**$15,175,330**
CEI	15%	$79,890	$165,951	$174,639	$273,452	$1,158,060	$172,821	$2,069,363
PE	15%	$79,890	$165,951	$174,639	$273,452	$1,158,060	$172,821	$2,069,363
Environmental Permitting		-	-	-	-	-	-	
Subtotal		**$159,780**	**$331,903**	**$349,277**	**$546,905**	**$2,316,119**	**$345,642**	**$4,138,726**
PROJECT TOTAL		**$745,642**	**$1,548,880**	**$1,629,960**	**$2,552,221**	**$10,808,557**	**$1,612,996**	**$18,898,256**

[1] *Slight variations in totals due to rounding*

[2] *FDOT Area 5 (Duval County) 12-Month Moving Market Area Averages (2/1/2023 – 1/31/2024)*

[3] *Environmental permitting is not included and should be considered once design is underway*

4 NEXT STEPS

This study is a guide to identifying opportunities to improve access-management and the safety and performance of the corridor for all users of Moncrief Road. Implementing potential improvements along the Moncrief Road corridor will require effective coordination and collaboration between various jurisdictions, government agencies and departments and community stakeholders.

Key players along Moncrief Road include:

- North Florida TPO
- City of Jacksonville
- Jacksonville Transportation Authority (JTA)
- Florida Department of Transportation (FDOT)
- Local businesses and residents

To help facilitate the project, the Jacksonville Planning and Development Department (JPDD) should coordinate internally with Public Works to implement the recommendations as a potential RRR resurfacing project, where feasible. The City can also utilize Zone 9 Mobility Fees.

The District 7 and District 10 Jacksonville City Councilpersons will be key allies in this process to establish funding and the support of residents and businesses. Additional recommendations for next steps include:

- Conduct survey and utility coordination to address impacts to adjacent properties, structures, fences, etc., as well as impacts to utility poles or underground utilities.
- Conduct engagement with area business and residents, particularly from 13th Street to W. 22nd Street and from Myrtle Avenue to Golfair Boulevard, regarding perceived loss of parking, impacts to adjacent properties, and community support.
- Coordinate with the Duval County School Board for an easement to widen the existing sidewalk around the pedestrian bridge at Moncrief Road and W. 45th Street.
- Coordinate construction plans with Norfolk Southern to replace the rail crossing surface between W. 16th Street and Woodland Street with a rubberized panel crossing.
- Coordinate with CSX for any improvements within the rail ROW at George R. Kerns Boulevard.

APPENDIX A

Corridor Roll Plot

REVISIONS					NORTH FLORIDA TPO			MONCRIEF ROAD CONCEPT (NEW KINGS RD. INTERSECTION)	SHEET NO.
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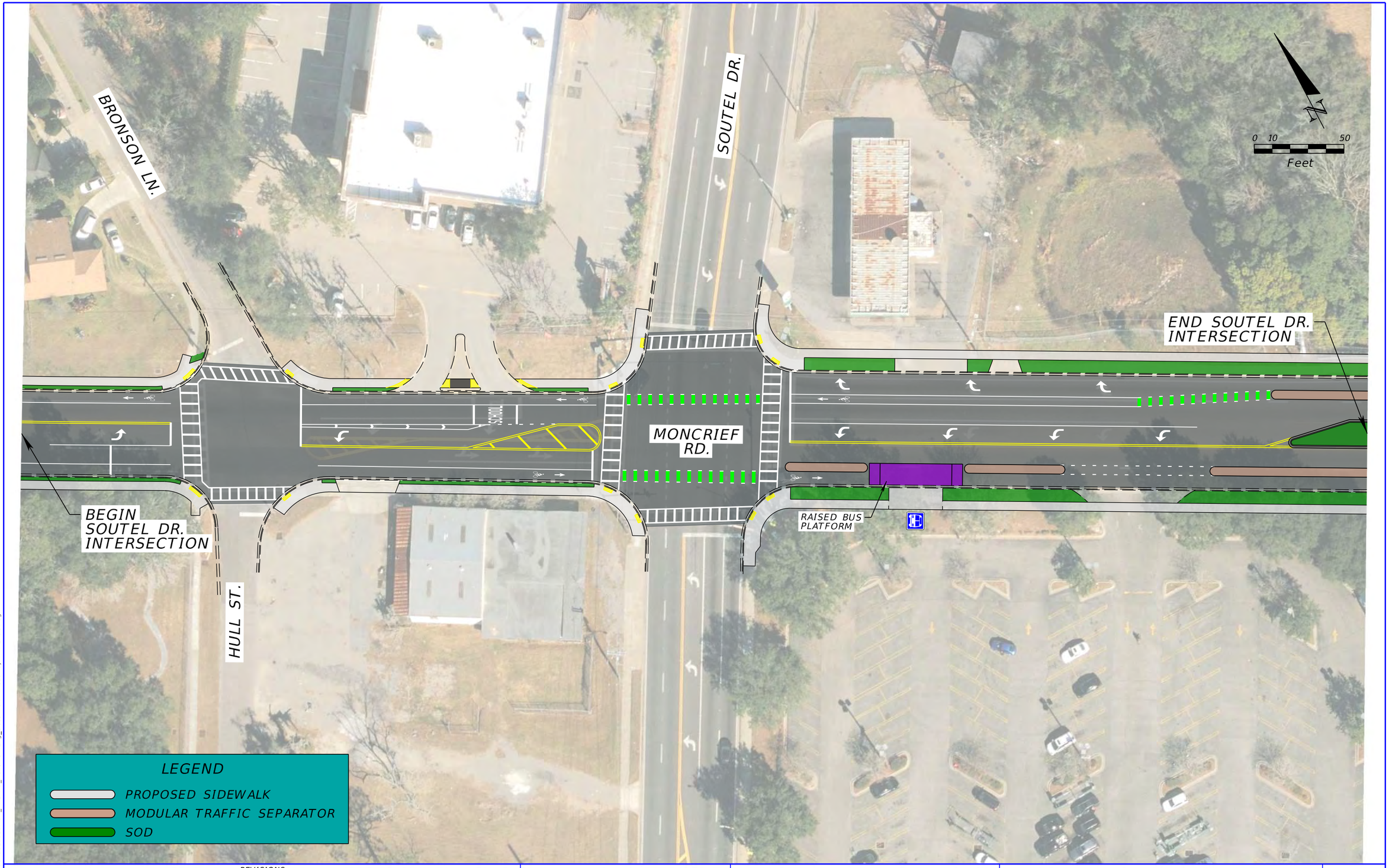

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FAC NOTE

KEN KNIGHT DR. E.

4229-1 MONCRIEF RD. W.

RAISED BUS PLATFORM

BEGIN CLEVELAND RD. INTERSECTION

END CLEVELAND RD. INTERSECTION

MONCRIEF RD.

CLEVELAND RD.

N

0 10 50

Feet

LEGEND

- PROPOSED SIDEWALK
- MODULAR TRAFFIC SEPARATOR
- SOD

REVISIONS					STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			MONCRIEF ROAD CONCEPT (CLEVELAND RD. INTERSECTION)	SHEET NO.
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FAC NOTE

RESTLAWN DR.

MONCRIEF RD.

AVENUE B

STRAWFLOWER PL

RAISED BUS PLATFORM

MATCHLINE SEE SHEET 4

MATCHLINE SEE SHEET 6

0 10 50

Feet

LEGEND

- PROPOSED SIDEWALK
- MODULAR TRAFFIC SEPARATOR
- SOD

REVISIONS					NORTH FLORIDA TPO			MONCRIEF ROAD CONCEPT	SHEET NO.
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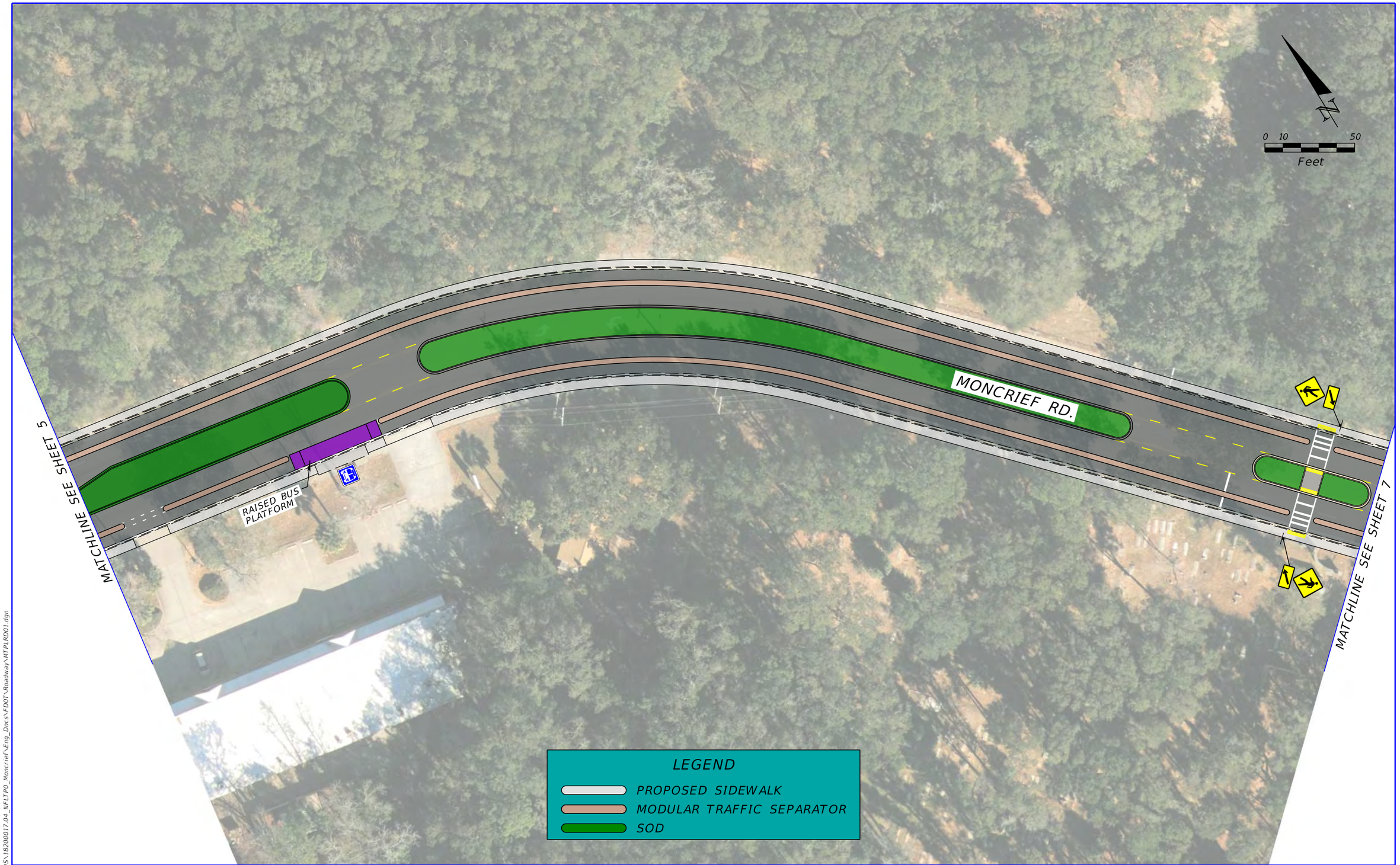

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NORTH FLORIDA TPO

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MONCRIEF ROAD CONCEPT

SHEET NO. 8

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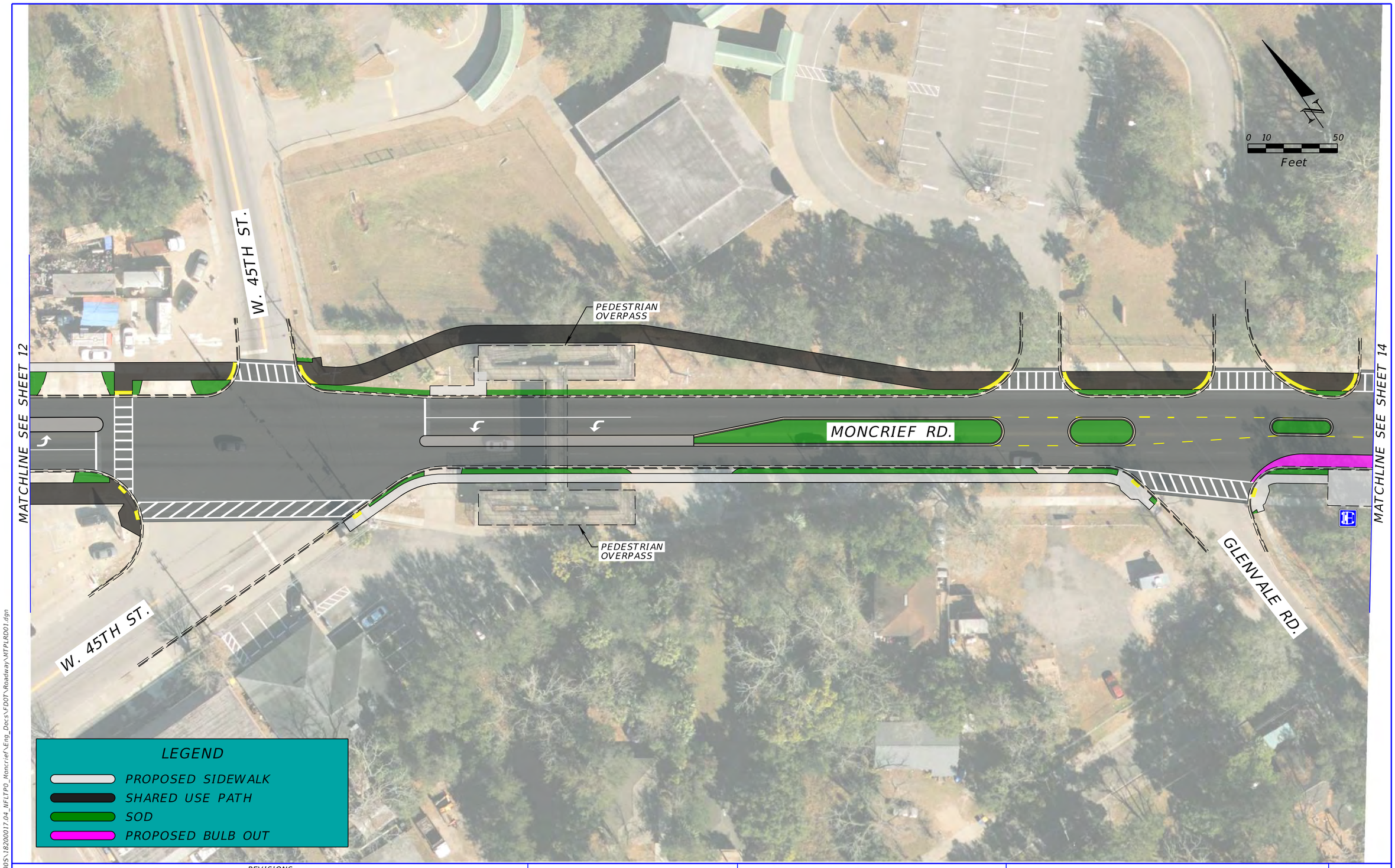

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DATE	DESCRIPTION	DATE	DESCRIPTION	

NORTH FLORIDA TPO

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MONCRIEF ROAD CONCEPT

SHEET NO. 13

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MONCRIEF RD.

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Feet

MATCHLINE SEE SHEET 13

MATCHLINE SEE SHEET 15

LEGEND

- PROPOSED SIDEWALK
- SHARED USE PATH
- SOD
- PROPOSED BULB OUT

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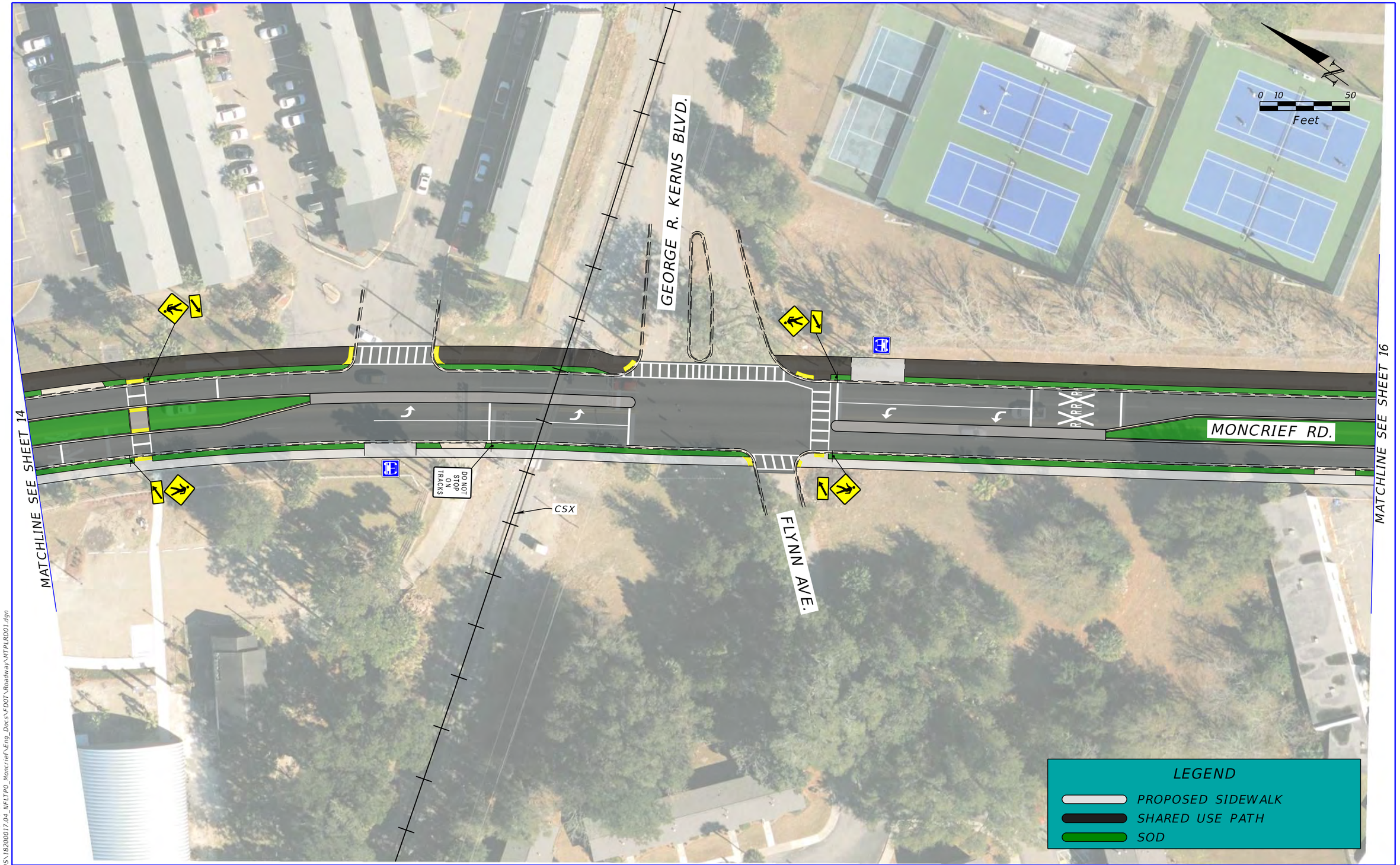

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MATCHLINE SEE SHEET 15

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LEGEND

- PROPOSED SIDEWALK
- SHARED USE PATH
- SOD

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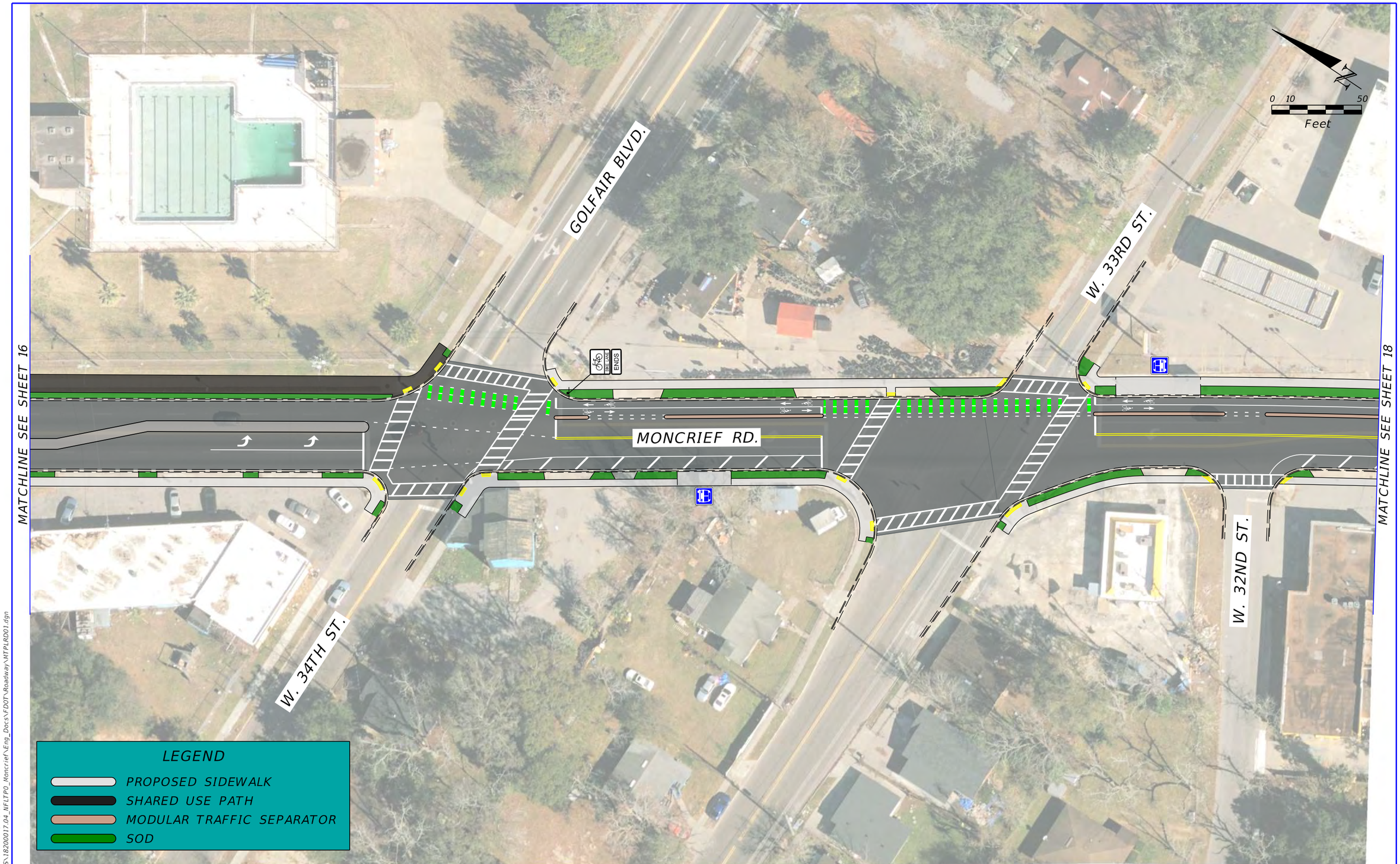

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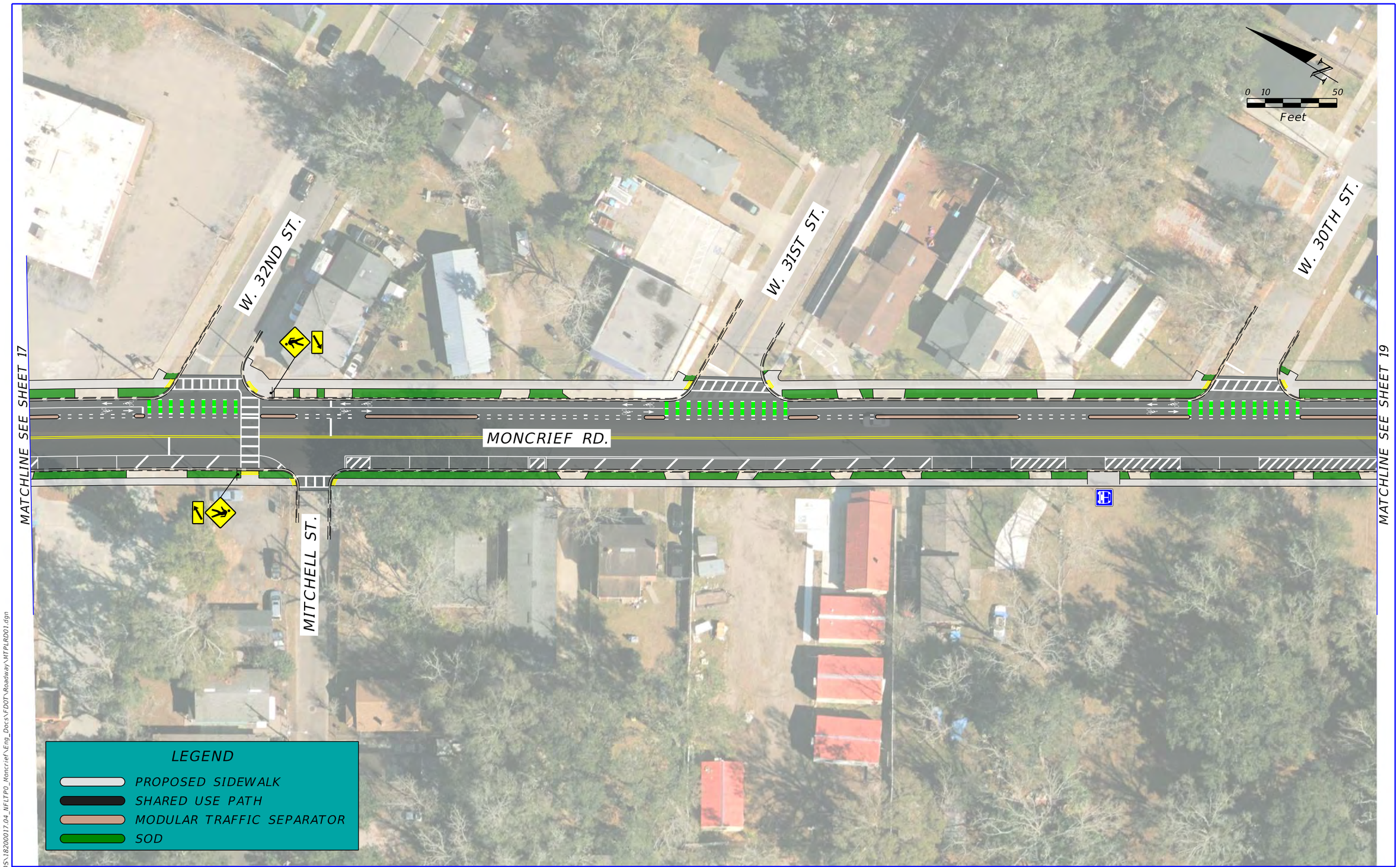

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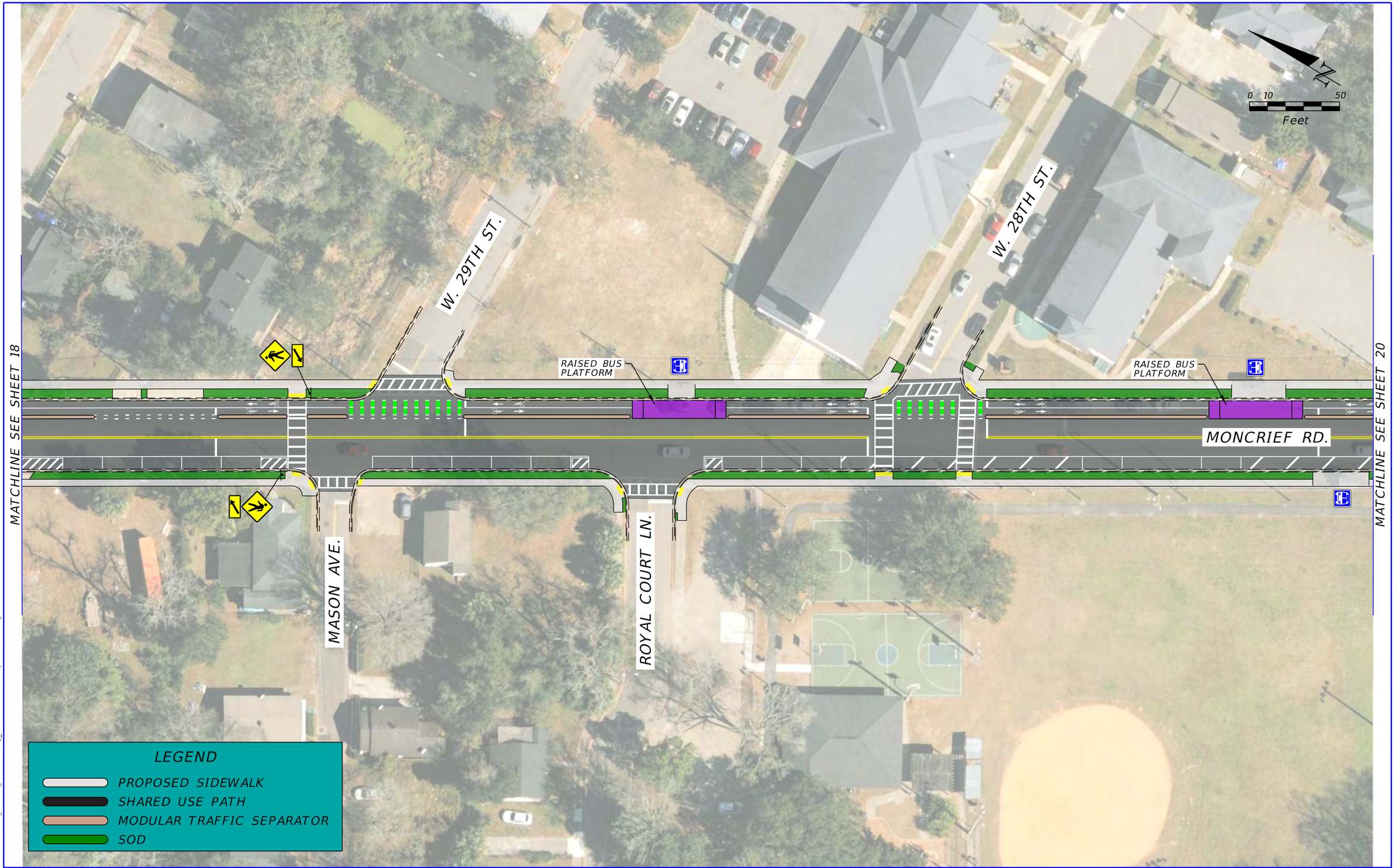

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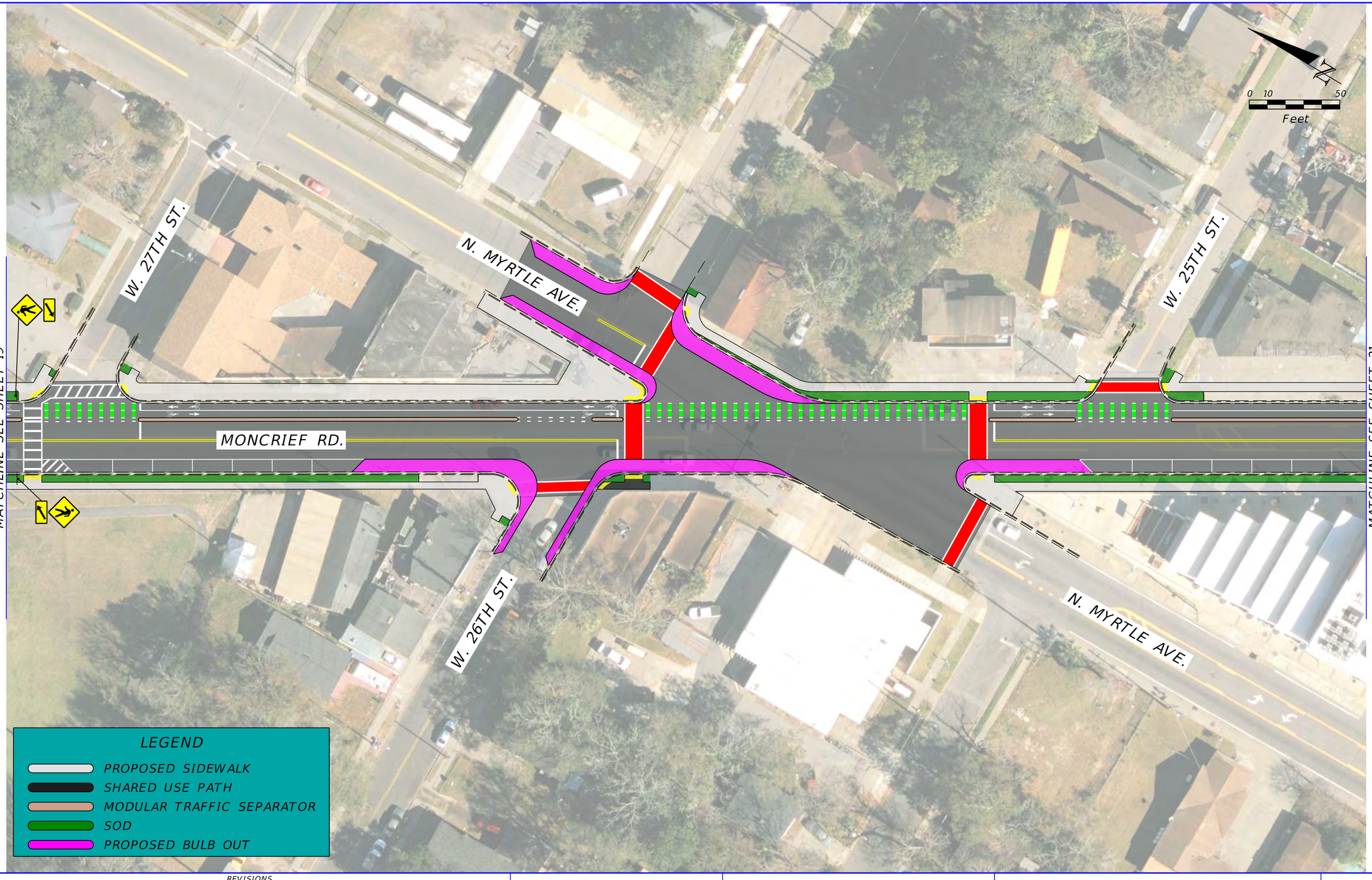

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MONCRIEF ROAD CONCEPT

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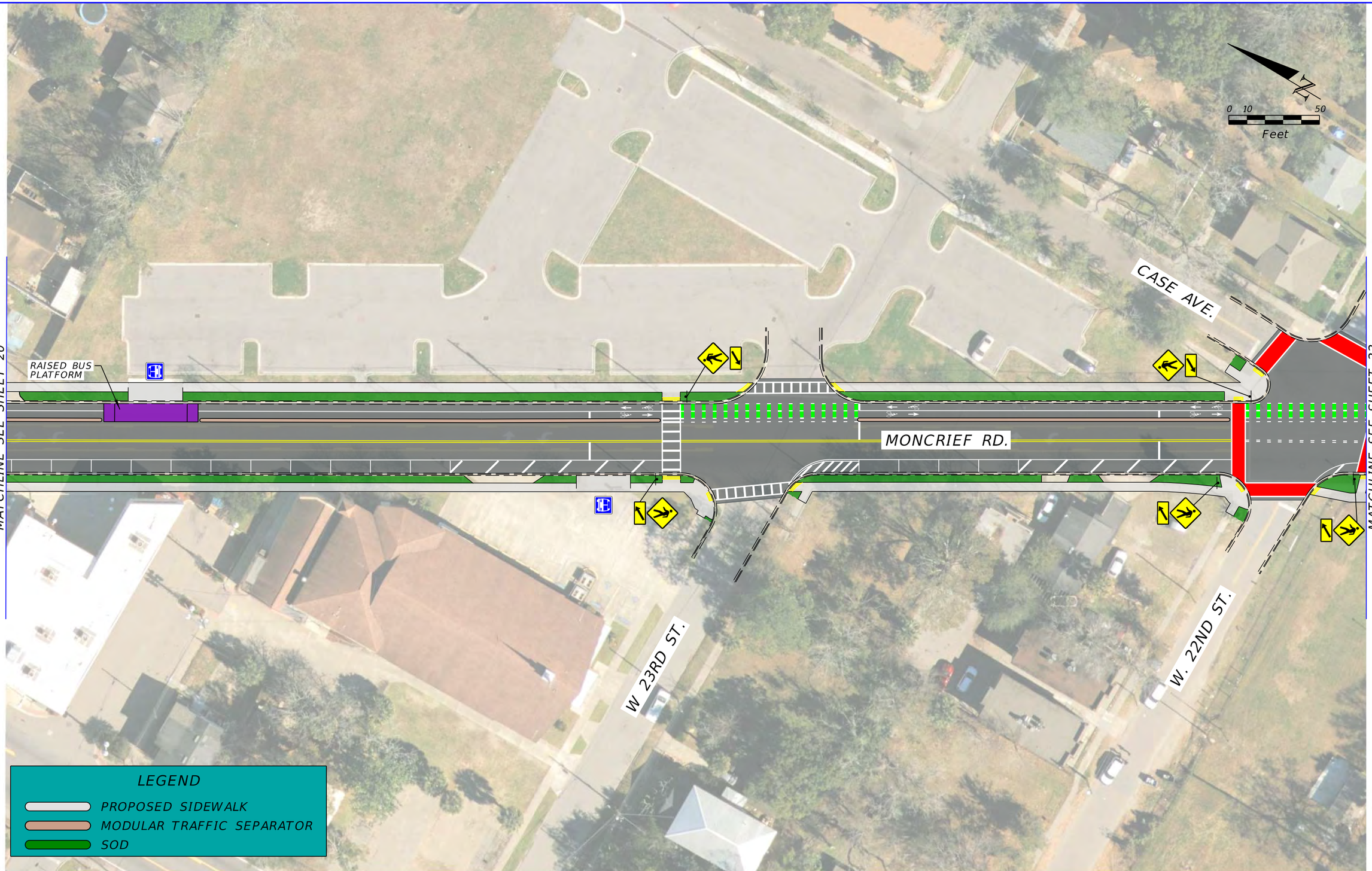

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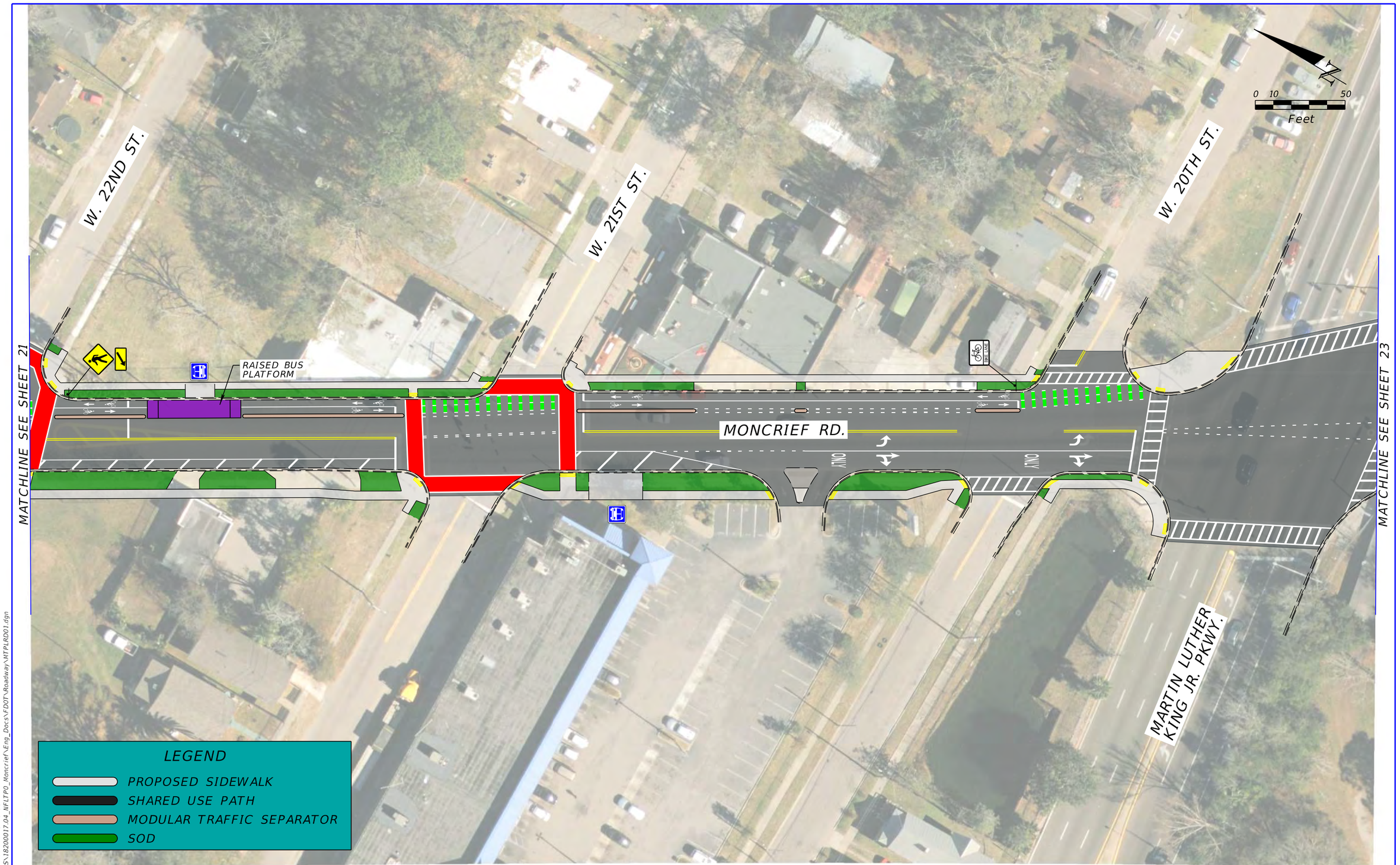

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MARTIN LUTHER KING JR. PKWY.

W. 19TH ST.

W. 18TH ST.

MONCRIEF RD.

WOODLAND ST. S.

WOODLAND ST. S.

MATCHLINE SEE SHEET 22

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Feet

RR

LEGEND

PROPOSED SIDEWALK

SHARED USE PATH

SOD

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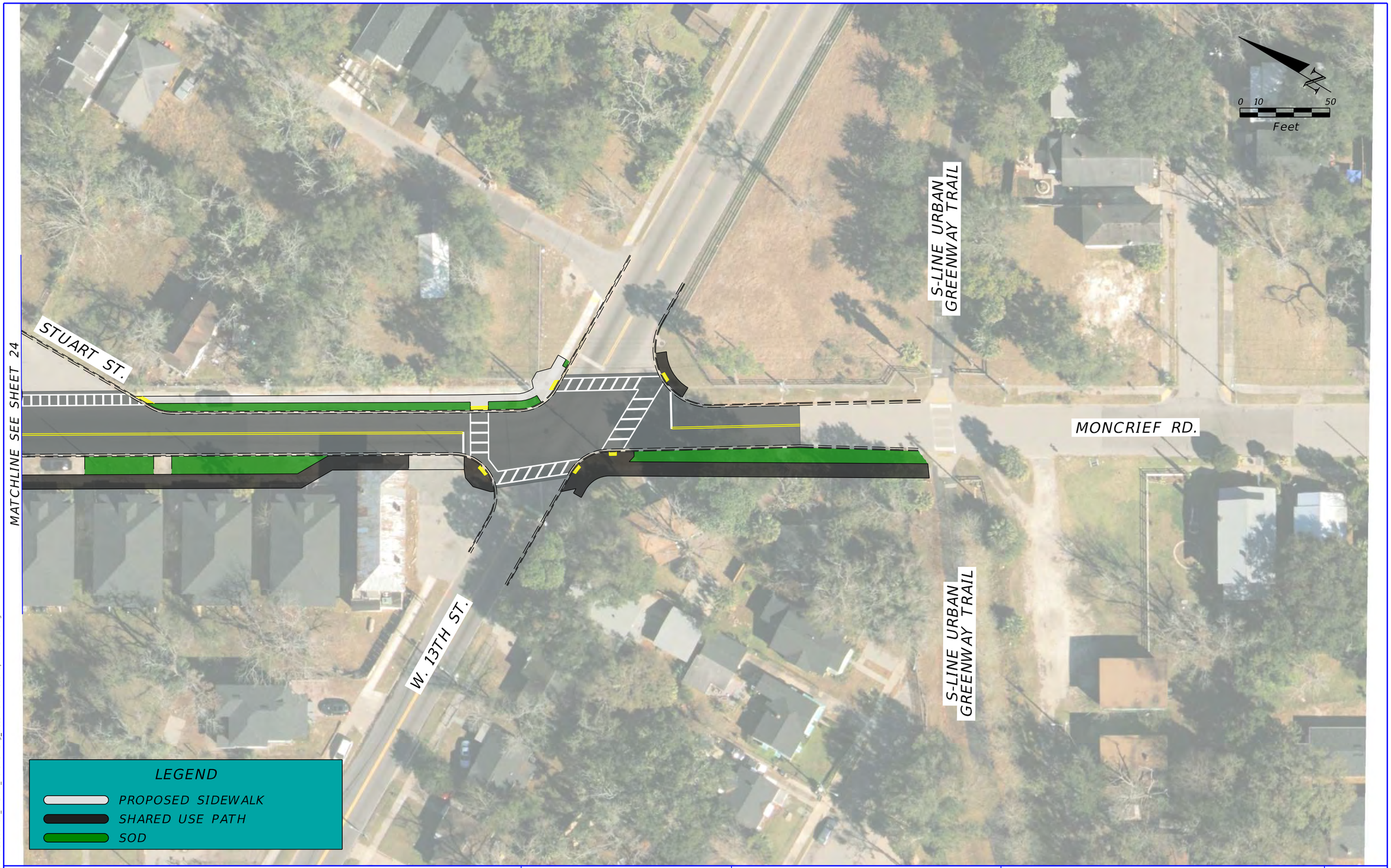

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APPENDIX B

Summary of Transportation Plans, Projects and Studies

1 SUMMARY OF TRANSPORTATION PLANS, PROJECTS AND STUDIES

Background data was obtained to document the transportation, land use and environmental information pertinent to developing the study. Listed below are reports, studies, data and other information that may be useful in later phases of the study.

1.1 CITY OF JACKSONVILLE

1.1.1 Pedestrian and Bicycle Master Plan (September 2017)

The plan outlines a roadmap for the City to improve bicycling and walking opportunities. Key elements are existing conditions, developing a safety action plan, and identifying a Strategic Neighborhood Action Program for Pedestrians (SNAPP) and bicycle network recommendations and prioritization.

The plan recommends the following improvements for Moncrief Road:

- Separated Bike Lanes – Soutel Drive to Edgewood Avenue
- Shared Use Path - Edgewood Avenue to Golfair Boulevard
- Buffered Bike Lanes – Golfair Boulevard to MLK Jr. Parkway
- Buffered Bike Lanes; Bike Lanes; Sharrows – 34th Street to S Line Existing Trail
- Rectangular Rapid Flashing Beacons (RRFBs), Bus Stop Relocation, and Other Safety-Related Crossing Upgrades – 45th Street to Edgewood Avenue

1.1.2 Northwest Jacksonville Vision Plan

EDAW for City of Jacksonville Planning and Development Department, September 2003

The Plan took a broad look at development types, open spaces, connections and activity centers, rather than specific sites and individual properties within the district. Northwest residents most often cited proximity and easy transportation access as the features they liked most about their communities. Residents most disliked the poor physical appearance, particularly of housing. Northwest respondents also cited the lack of nearby stores and inadequate infrastructure as conditions that detract from their communities.

Northwest residents ranked public safety (specifically crime), the appearance of streets, types of businesses and housing appearance as the top priorities in the community.

The top priorities for vision plan improvements are as follows:

- Increased code enforcement
- Improved public safety
- Upgraded infrastructure (particularly water and sewer)

Most desired changes over the next 20 years are as follows:

- Planned growth
- Economic revitalization
- Community services for youth

1.1.3 Town Center Vision Plan – Myrtle and Moncrief Phase 1 Initiative

Prosser Hallock for City of Jacksonville Planning and Development Department, May 2004

The Myrtle and Moncrief Town Center is the commercial corridor along Myrtle Avenue, from 16th Street north to Moncrief Road and Moncrief Road, Myrtle Avenue south to MLK Parkway (20th Street), and MLK Parkway between Moncrief Road and Myrtle Avenue.

The report defines a vision for Myrtle Avenue and Moncrief Road through data collection, Vision concepts, and implementation recommendations. Final recommendations include an overlay district to include all or part of the Myrtle and Moncrief study area; commercial sign guidelines specific to Myrtle and Moncrief; architectural guidelines; CPTED (Crime Prevention Through Environmental Design) and code enforcement.

1.1.4 Urban Core Vision Plan

Zyscovich Architects for City of Jacksonville Planning and Development Department, June 2010

This plan was intended as the guiding document for planning and development in the Urban Core so that future growth is accommodated while achieving and maintaining a high quality of life. This included strengthening the connections between the Urban Core neighborhoods and downtown through numerous revitalization strategies.

Community comments received during the study included a desire to have the following:

- Improved connectivity of existing roadways
- Neighborhood connectivity
- Walkable neighborhoods
- “Walkable Destinations” within neighborhoods

Recommendations, which remain valid and are in some cases underway, included finding opportunities to do the following:

- Re-connect downtown and the surrounding neighborhoods
- Create walkable and connected neighborhoods
- Expand the Hogans Creek Park System
- Improve traffic circulation
- Continue connections with redevelopment
- Create gateways and new connections

1.1.5 Moncrief Road Midblock Crossing Study (December 2022)

City of Jacksonville Traffic Engineering Division (CRM #221024-001413)

From 22nd Street to Myrtle Avenue: The study was performed in response to a citizen request for a midblock crosswalk to cross Moncrief Road from North Point Town Center to the parking lot across the street. This study concluded that a proposed midblock crossing location within Zone 3 (location of CRM request) does not demonstrate the need for a marked crosswalk based upon collected pedestrian volumes and historical crash data at the time.

Based on further review along Moncrief Rd from W 22nd Street to Myrtle Avenue N, the following is recommended:

- Installation of additional marked crosswalks at the missing intersection legs of Moncrief Road at Myrtle Avenue N to help mitigate pedestrian/bicyclist crashes at unmarked or undesignated locations.
- Install pedestrian signage at the existing midblock crosswalks at the intersection of Moncrief Road at W 22nd Street to alert and enhance driver awareness of existing midblock crossing location.

1.1.6 Moncrief Road Roadway Repurposing Study (May 2019)

Metric Engineering for City of Jacksonville Traffic Engineering Division

From 33rd Street to 45th Street: The intent of the study was to determine potential operational and safety improvements that may be feasible to enhance pedestrian, bicyclist, and motorist safety, while maintaining the integrity of traffic operations of the0.64 mile corridor.

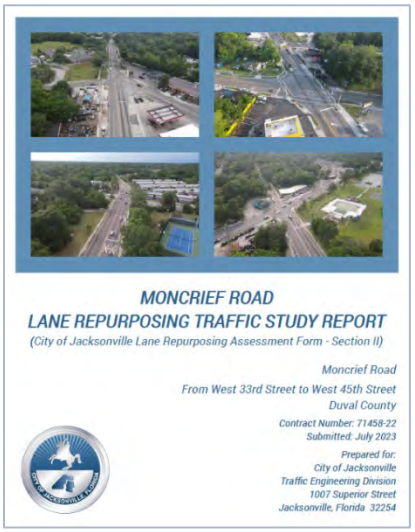
Long term recommendations include:

- Consider replacing the traffic signal with a roundabout at the Moncrief Road and W. 45th Street intersection.
- If a roundabout is not constructed, restripe the north leg to provide a dedicated southbound left-turn lane (converting the inside northbound through lane to a southbound left-turn lane).
- Construct a 10-foot wide multi-use path on the east side of Moncrief Road from W 34th Street/Golfair Road to W 45th Street.
- Re-profile the Moncrief Road roadway at the CSXT Railroad crossing.
- Replace the existing span wire traffic signals with new mast arm traffic signal installations at the following intersections on Moncrief Road: W. 33rd Street, W. 34th Street/Golfair Boulevard, W. 36th Street/Clanzel Brown Community Center and George R. Kerns Boulevard. Also replace the signal at W. 45th Street if a modern roundabout at the intersection is not feasible.
- Install decorative LED street lighting to enhance the appearance of the corridor.

1.1.7 Moncrief Road Lane Repurposing Traffic Study

Osiris 9 Consulting for City of Jacksonville Traffic Engineering Division, July 2023

From 33rd Street to 45th Street: The study reviews the traffic operations and safety implications of a proposed lane repurposing along Moncrief Road between West 33rd Street and West 45th Street. The proposed lane repurposing improvements are not anticipated to adversely affect the traffic operations within the impacted area. None of the intersections are projected to experience a significant reduction in the level of service.



1.1.8 Moncrief Road Lane Repurposing Assessment (February 2024)

City of Jacksonville Planning and Development Department

The screening examines the segment from Soutel Drive to 45th Street and concludes that the corridor is a Good candidate for lane repurposing. Other recommendations include:

- Consider a reduction is speed limit in conjunction with the lane repurposing
- Consider a Shared Use Path on Moncrief Road up to Edgewood Avenue and connect to path south of 45th Street
- Consider separated bike lanes from Edgewood Avenue to Soutel Drive
- Provide green paint at conflict points and through the intersections

1.1.9 Complete Streets Program Prioritization Summary Report, Final Draft

Michael Baker International, August 21, 2021

The report summarizes the updated methodologies and driving principles to deploy and establish long-term success of JTA's transit-driven Complete Streets Program. The Program prioritizes three (3) tiers of projects for potential funding and implementation: 1) projects currently identified for the new Local Option Gas Tax (LOGT) funding (Tier 1); 2) existing, unfunded Complete Street Program projects developed during the original JTA MobilityWorks Complete Streets planning phase completed in 2016 (Tier 2); and 3) new potential projects identified in the City of Jacksonville's Capital Improvement Plan (CIP) and Bicycle and Pedestrian Master Plan (Tier 3).

The Moncrief Road Corridor (Edgewood to Myrtle) is considered a critical priority based on the final rankings. This represents the highest priority in terms of meeting JTA's goals for Complete Streets and/or implementation urgency. Specific projects identified for the Moncrief Corridor include:

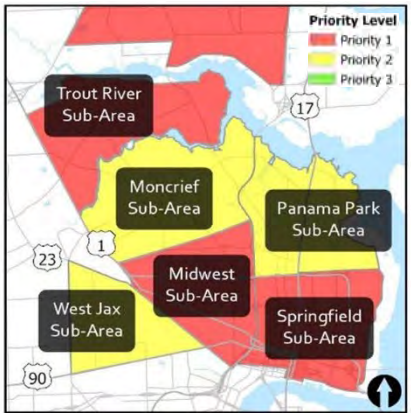
- Add buffered bike lanes on Moncrief Road from Soutel Drive to Edgewood Avenue
- Add sharrow markings along Myrtle Avenue from Moncrief Road to 8th Street
- Fill sidewalk and ADA access gaps at intersection of 36th Street and Moncrief Road

1.2 NORTH FLORIDA TRANSPORTATION PLANNING ORGANIZATION

1.2.1 Bicycle and Pedestrian Master Plan Update

Atkins, Summer 2023

The plan builds upon the recommendations from the 2013 report to develop a set of recommendations for future bicycle and pedestrian planning within the region comprised of Clay, Duval, Nassau and St. Johns counties. The study included a Moncrief Sub Area Study which received a total score of 23. Categories considered include bike fatalities, pedestrian fatalities, environmental justice screening, employment, population, students, zero car households, and the 2013 study ranking.



1.3 DESIGN GUIDELINES

The study identifies appropriate and applicable design feature opportunities for Moncrief Road. Therefore, the products and recommendations are consistent with current standards, policies and design guidelines for the City of Jacksonville and Florida Department of Transportation (FDOT). These include:

- COJ Context Sensitive Streets Guidelines
- COJ Land Development Procedure Manual and Standard Plans and Details
- FDOT Design Manual (FDM)

Guidance from the FDM includes recommendations from Chapter 3.3, Speed Management, and Table 202.3.1, Strategies to Achieve Desired Operating Speed.

Additional guidelines include the Federal Highway Administration (FHWA) *Improving Safety for Pedestrians and Bicyclists Accessing Transit*, FHWA *Improving Intersections for Pedestrians and Bicyclists*, NACTO *Designing for All Ages and Abilities*, NACTO *Don't Give Up at the Intersection*, NACTO *Urban Bikeway Design Guide*, and FHWA Bikeway Selection Guide.

In addition, the following guidelines from the FHWA and National Association of City Transportation Officials (NACTO) were reviewed.

- *Improving Safety for Pedestrians and Bicyclists Accessing Transit* (FHWA Report No.-SA-21-130, September 2022)
- *Improving Intersections for Pedestrians and Bicyclists* (FHWA Report No. SA-22-017, April 2022)
- *Bikeway Selection Guide* (FHWA, February 2019)
- *Designing for All Ages and Abilities – Contextual Guidance for High Comfort Bicycle Facilities* (NACTO, December 2017)
- *Don't Give Up at the Intersection – Designing All Ages and Abilities, Bicycle Crossings* (NACTO, May 2019)
- *Urban Bikeway Design Guide, 2nd Edition* (NACTO, March 2014)

APPENDIX C

Facility Characteristics

1 FACILITY CHARACTERISITCS

This section describes the characteristics of Moncrief Road throughout the study corridor, which is depicted in Figure 1. Benesch provides relevant maps, describes the typical section and summarizes corridor elements.

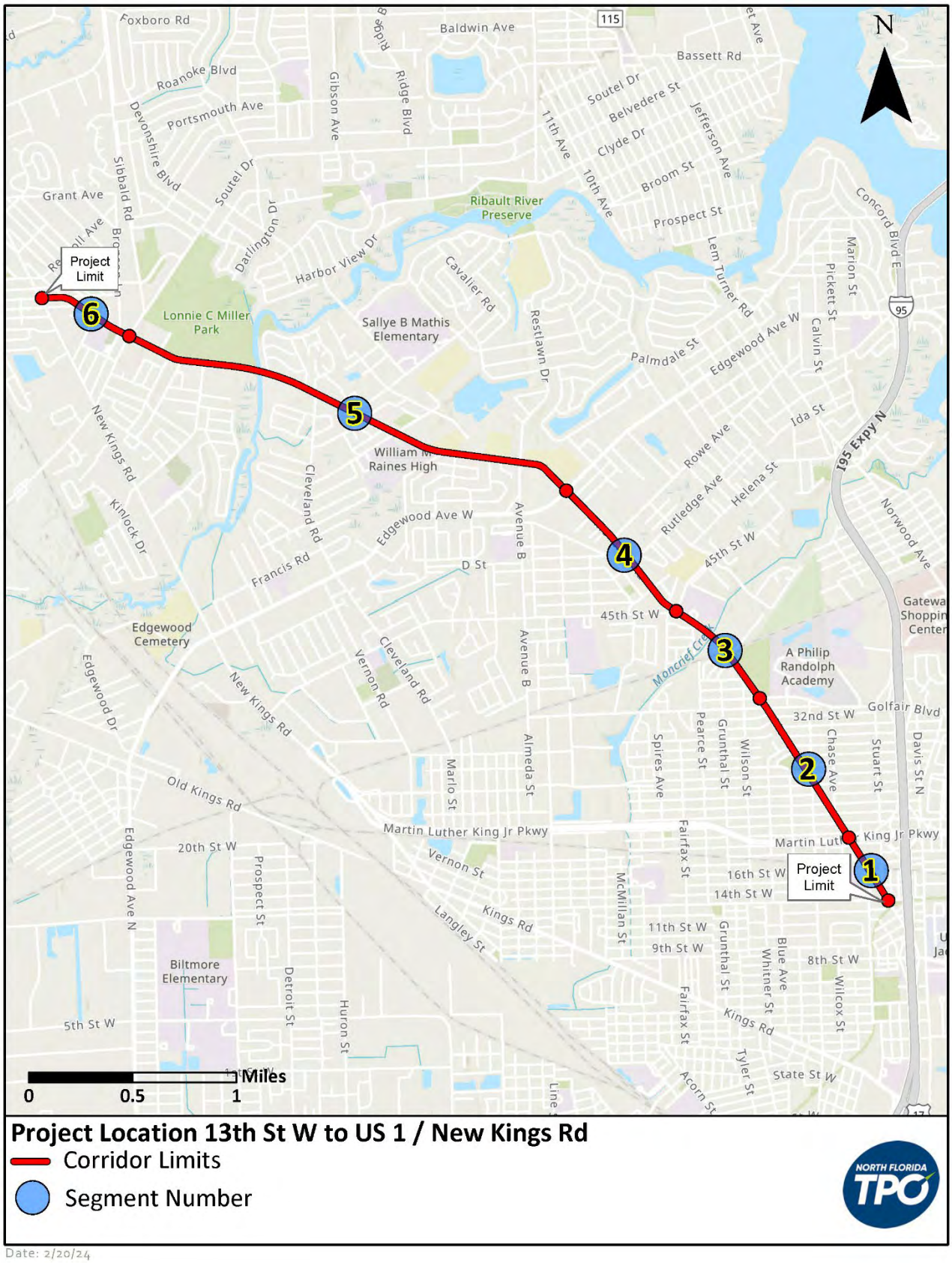


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Figure 1 – Moncrief Road Corridor Segment Limits

1.1 RIGHT OF WAY

Benesch determined the width of the existing right-of-way (ROW) along the corridor by reviewing as built plans and historic plat maps, located in the archives of the City of Jacksonville. Parcel maps for the corridor are illustrated in Figure 2 to Figure 7.

Table 1 details the minimum ROW width by segment. The south end of Moncrief Road has a narrower ROW, at 60 LF from 13th Street to the CSX grade crossing just north of George R. Kerns Boulevard. The segments north of the CSX rail line have considerably wider ROW, ranging from 90 LF to 102 LF.

Table 1 –ROW Width

Segment	From	To	Minimum ROW (LF)
1 & 2	13th Street	22nd Street	60
2	22nd Street	Myrtle Avenue	60
2	Myrtle Avenue	Golfair Boulevard	60
3	Golfair Boulevard	CSX Grade Crossing	60
3 & 4	CSX Grade Crossing	Edgewood Ave	102
5	Edgewood Avenue	Soutel Drive	90
6	Soutel Drive	US 1 New Kings Road	100

Figure 2 – Moncrief Road ROW (13th Street to 22nd Street)

Figure 3 – Moncrief Road ROW (22nd Street to Myrtle Avenue)

Figure 4 – Moncrief Road ROW (Myrtle Avenue to Golfair Boulevard)

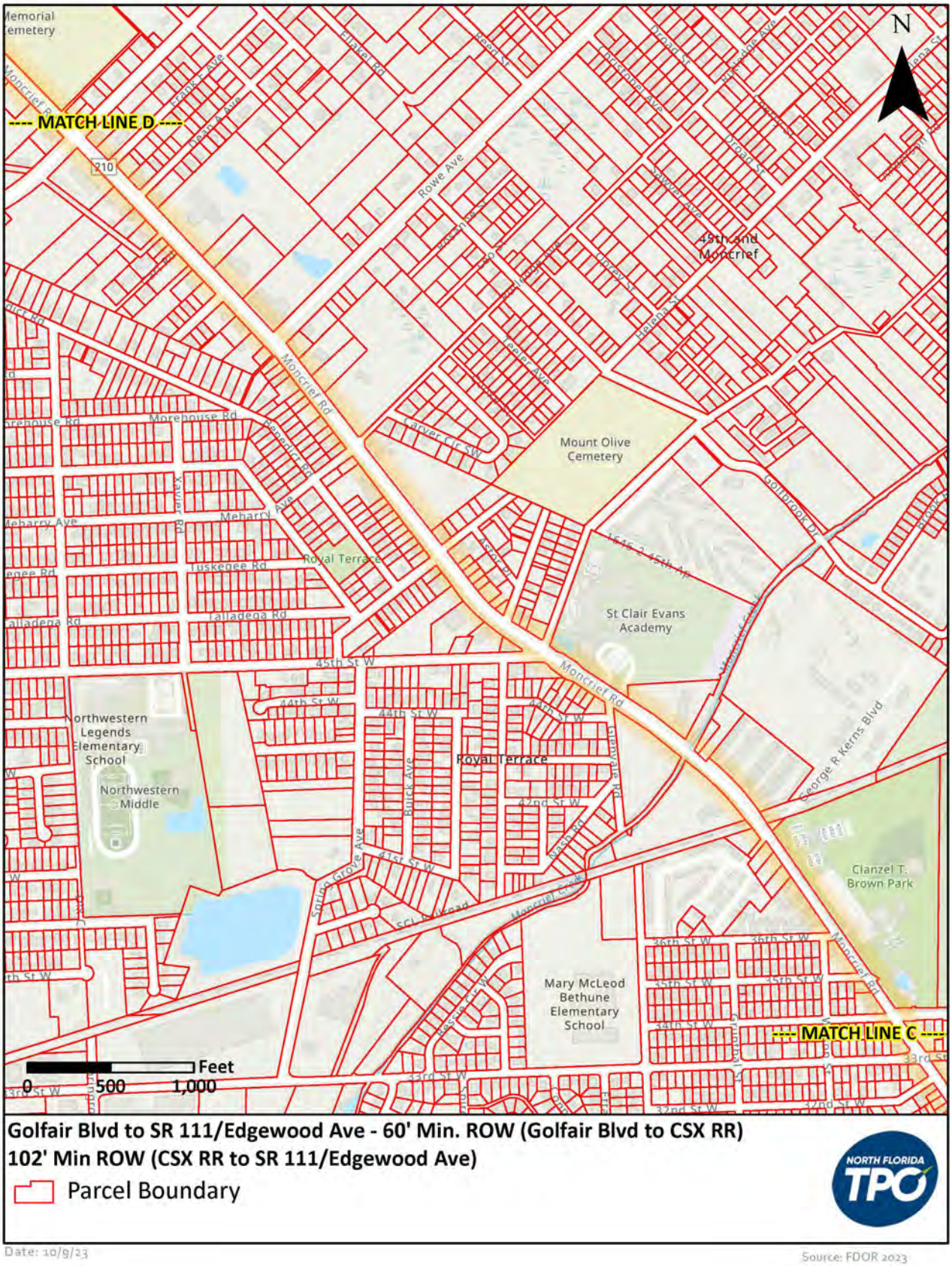


Figure 5 – Moncrief Road ROW (Golfair Boulevard to Edgewood Avenue)

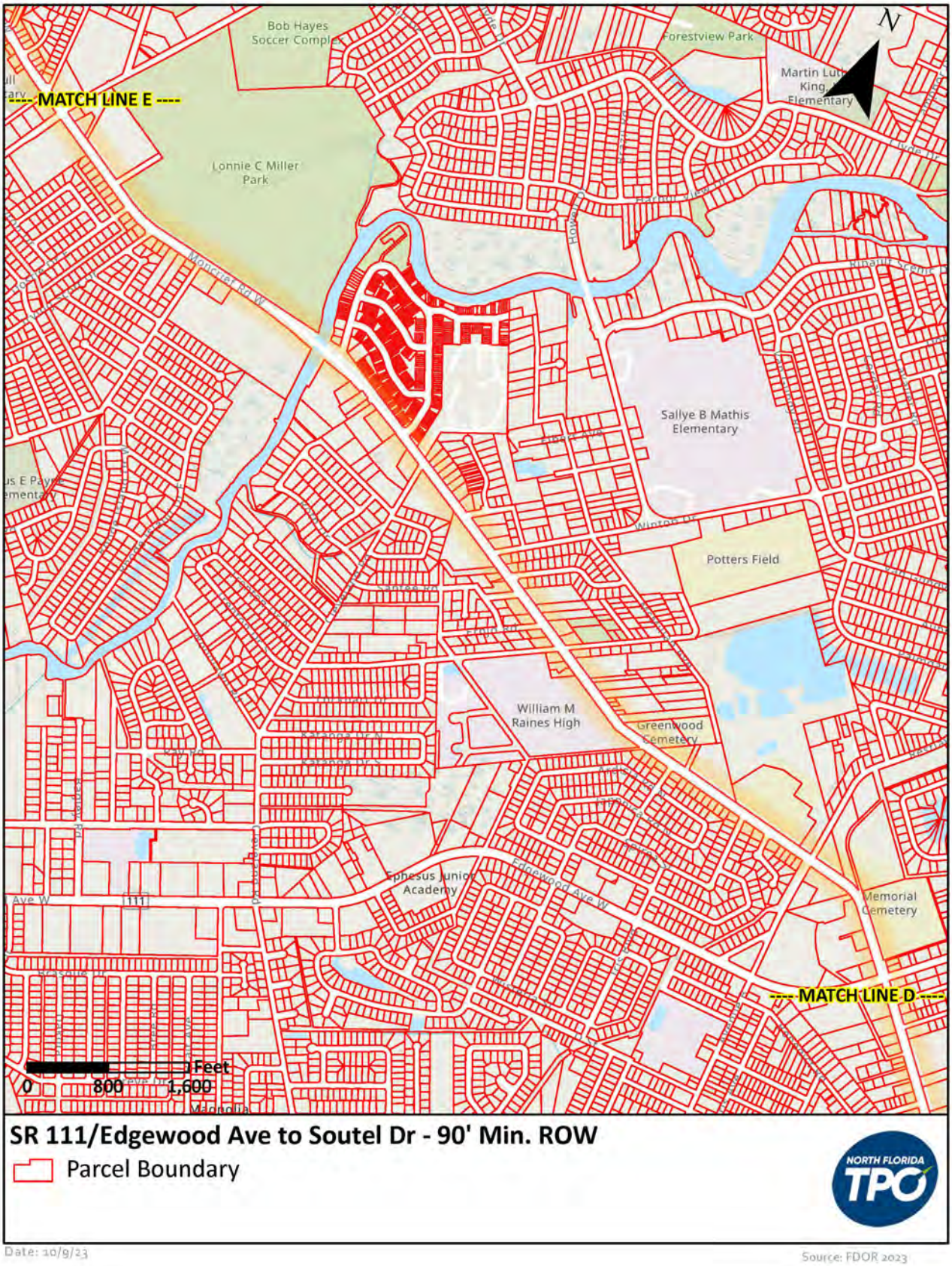


Figure 6 – Moncrief Road ROW (Edgewood Avenue to Soutel Drive)

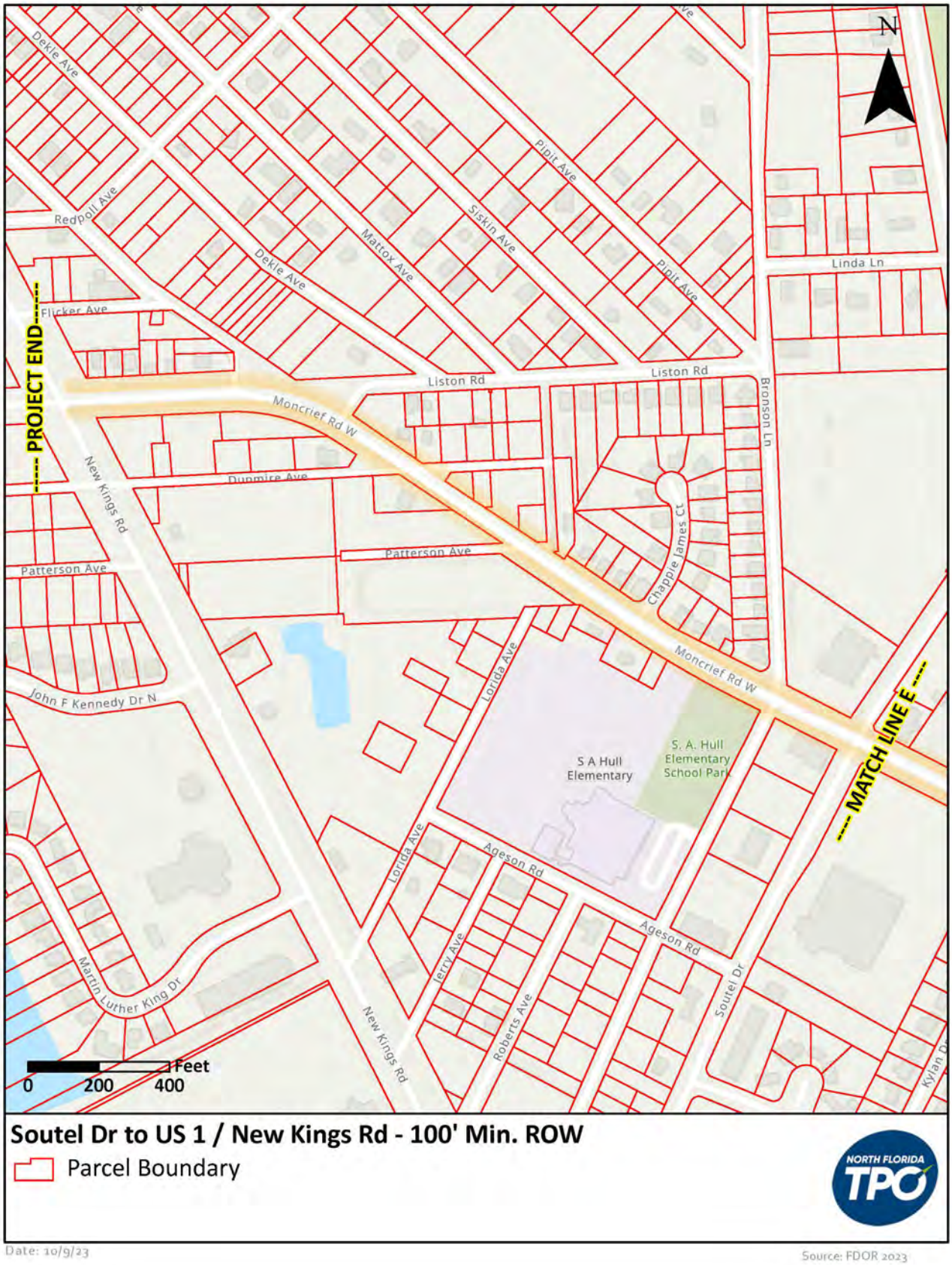


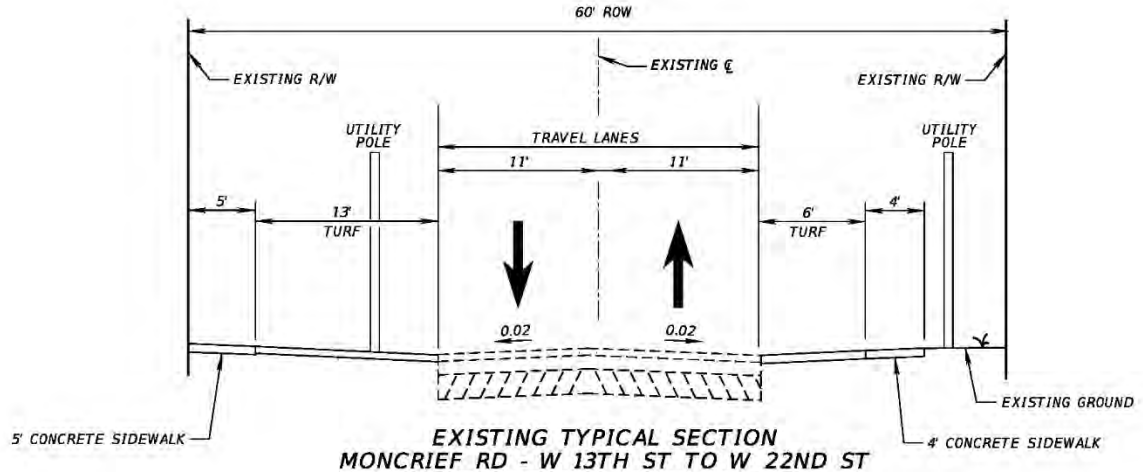
Figure 7 – Moncrief Road ROW (Soutel Drive to US 1 / New Kings Road)

1.2 TYPICAL SECTION

The existing typical sections for Moncrief Road are depicted in Figure 8 to Figure 12 and summarized in Table 2. The typical section is inconsistent, varying from two to five lanes with lane widths varying from 10 LF to 19 LF. Except for the first segment, the roadway is an urban section with curb and gutter. Sidewalks are generally 4 LF to 5 LF wide.

Table 2 – Typical Sections

From	To	No. Lanes	Lane Width (LF)	Center Turn Lane	Urban/Rural
13th Street	MLK Parkway	2	11	No	Rural
MLK Parkway	22nd Street	2	20	No	Urban
22nd Street	Myrtle Avenue	3	12	Yes (14 LF)	Urban
Myrtle Avenue	Golfair Boulevard	2	19	No	Urban
Golfair Boulevard	W. 45th Street	4	10 (1) 11 (3)	No	Urban
W. 45th Street	Edgewood Ave	4	10	No	Urban
Edgewood Avenue	Avenue B	5	11	Yes (12 LF)	Urban
Avenue B	Soutel Drive	5	12	Yes (14 LF)	Urban
Rutledge H. Pearson Memorial Bridge		5	12 (4)	Yes (13 LF)	Urban
Soutel Drive	US 1/New Kings Road	3	12	Yes (14 LF)	Urban



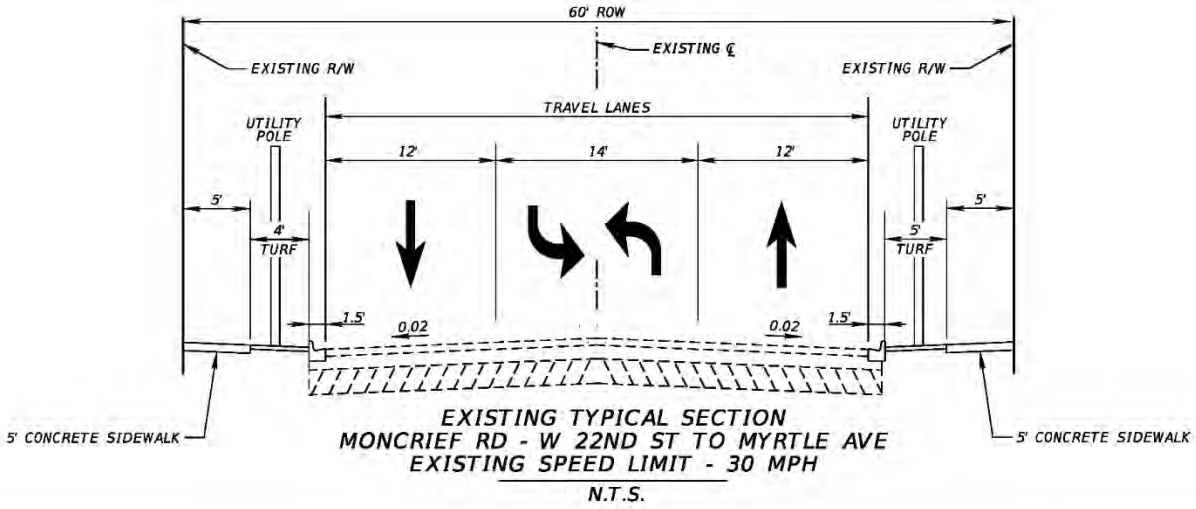
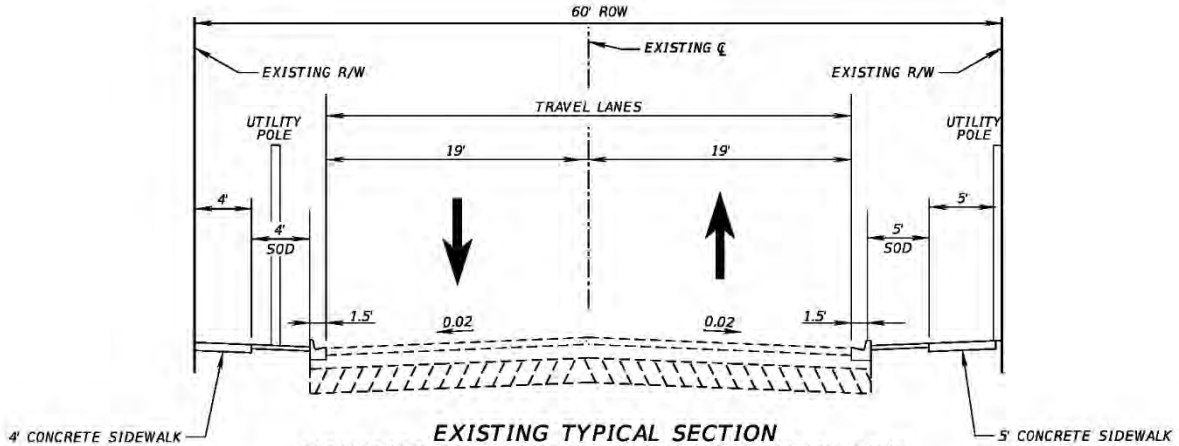


Figure 8 – Moncrief Road Typical Sections (13th Street to Myrtle Avenue)



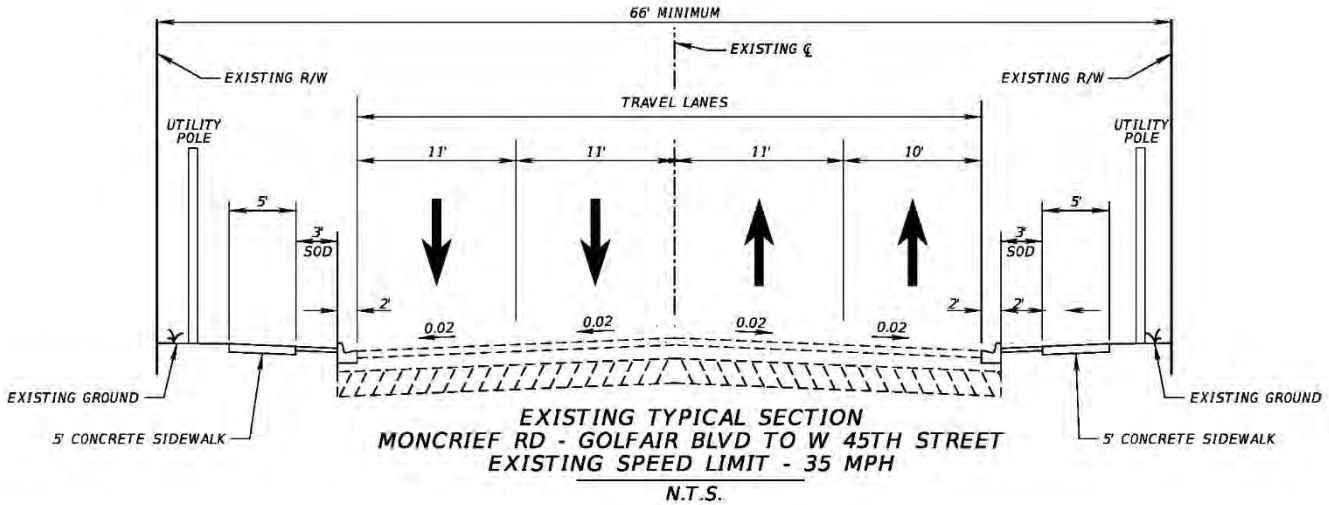
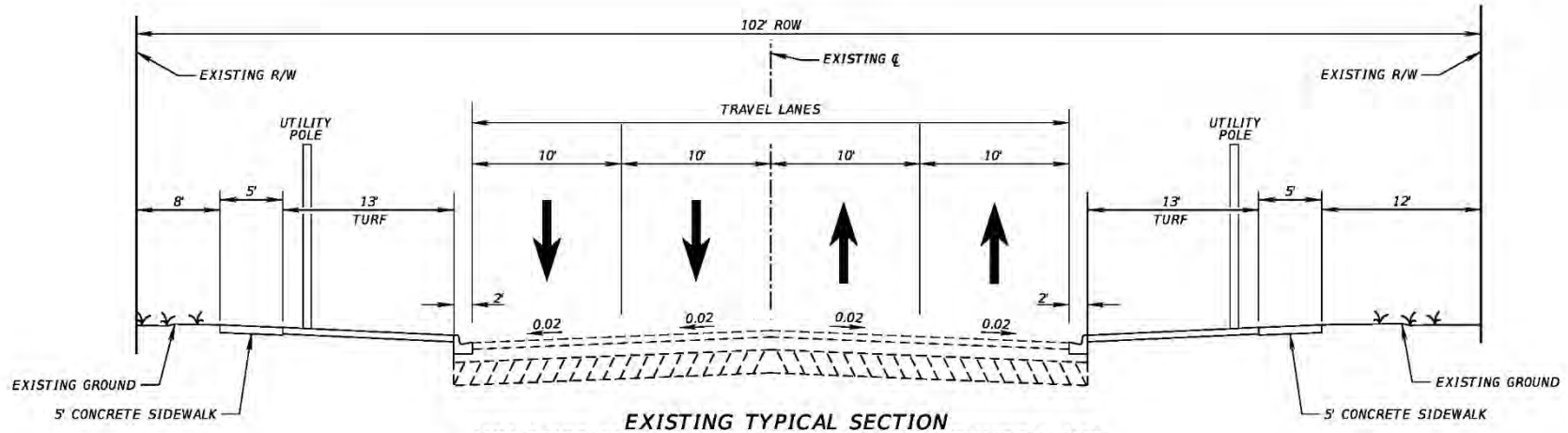


Figure 9 – Moncrief Road Typical Sections (Myrtle Avenue to 45th Street)



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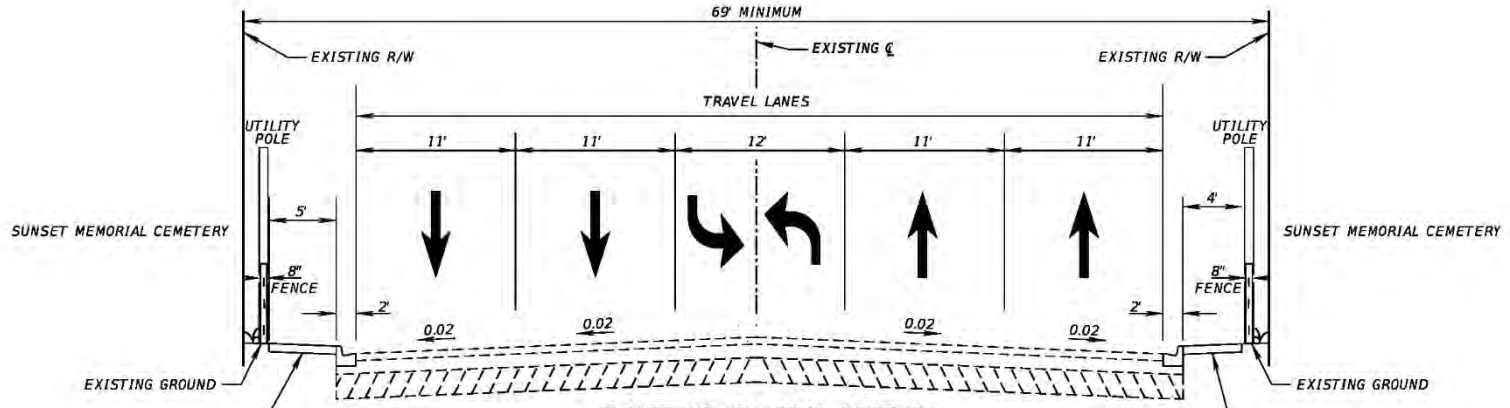


EXISTING TYPICAL SECTION
MONCRIEF RD - SR 111/EDGEWOOD AVE TO AVE B
EXISTING SPEED LIMIT - 35 MPH
N.T.S.

Figure 10 – Moncrief Road Typical Sections (45th Street to Avenue B)

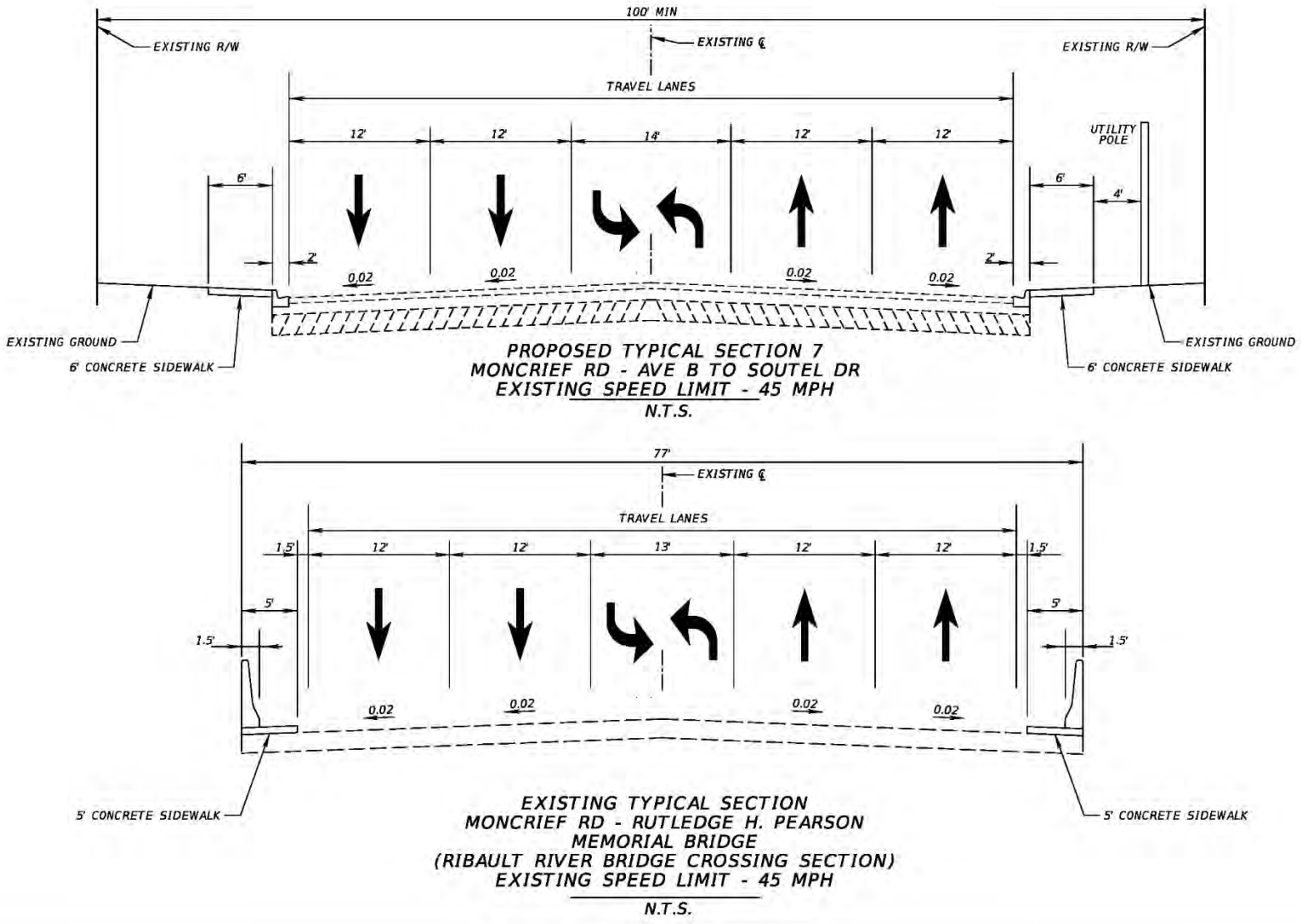
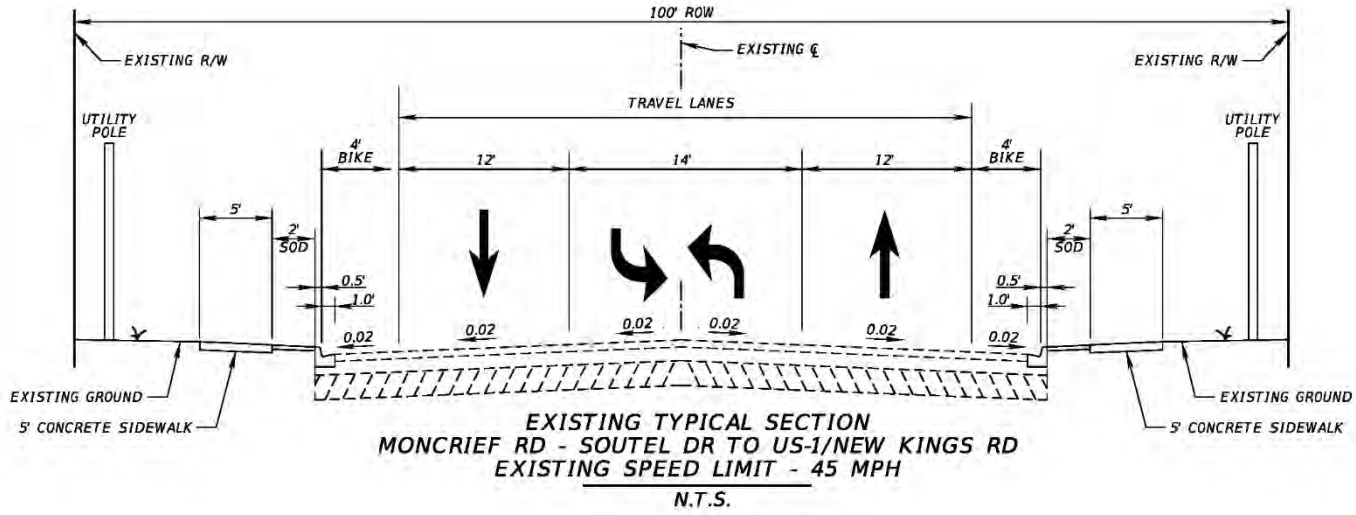


Figure 11 – Moncrief Road Typical Sections (Avenue B to Soutel Drive)



EXISTING TYPICAL SECTION
MONCRIEF RD - SOUTEL DR TO US-1/NEW KINGS RD
EXISTING SPEED LIMIT - 45 MPH
N.T.S.

Figure 12 – Moncrief Road Typical Sections (Soutel Drive to US 1 / New Kings Road)

1.3 MAINTAINING AGENCY

Moncrief Road is a City of Jacksonville maintained facility. Within the larger study area, major through routes include US 1/MLK Parkway, Edgewood Avenue and US 1/New Kings Road (the northern project limit), all of which are maintained by FDOT.

Figure 13 identifies the area roadways by maintaining agency.

1.4 FUNCTIONAL CLASSIFICATION

Moncrief Road is a non-state local road and is classified as a Major Collector (Urban) for the entire study corridor north of Myrtle Avenue. The northern study terminus, US 1/New Kings Road, is a Principal Arterial - Other (Urban). The functional classification of major roadways intersecting Moncrief Road includes Local (Urban) for 33rd Street, Major Collector (Urban) for Avenue B, 45th Street, and Myrtle Avenue; Minor Arterial (Urban) for Edgewood Avenue and Soutel Drive; and Principal Arterial - Freeway and Expressway (Urban) for MLK Parkway. Most roads that intersect with Moncrief Road are local low speed neighborhood streets.

Figure 14 depicts the functional classification along the corridor and within the surrounding area.

1.5 POSTED SPEED LIMIT

Posted speed limits (PSL) along the corridor and within the surrounding area are depicted in Figure 15. The Moncrief Road corridor PSL ranges from 30 to 45 MPH throughout the study limits, gradually increasing from south to north with changes occurring at Golfair Boulevard and Edgewood Avenue. Although PSL is a different element from design speed, the posted speed is indicative of the design speed.

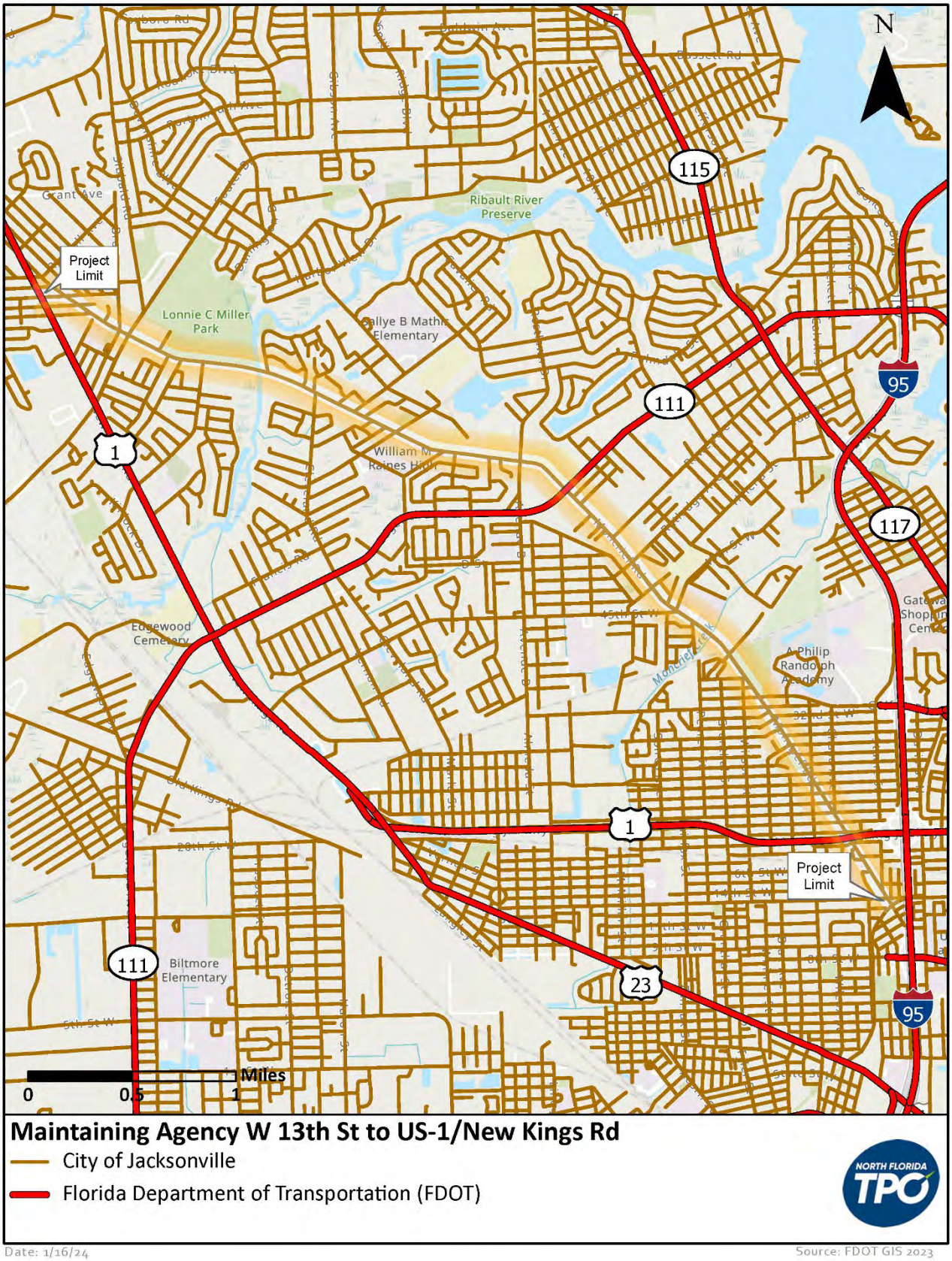


Figure 13 – Maintaining Agency

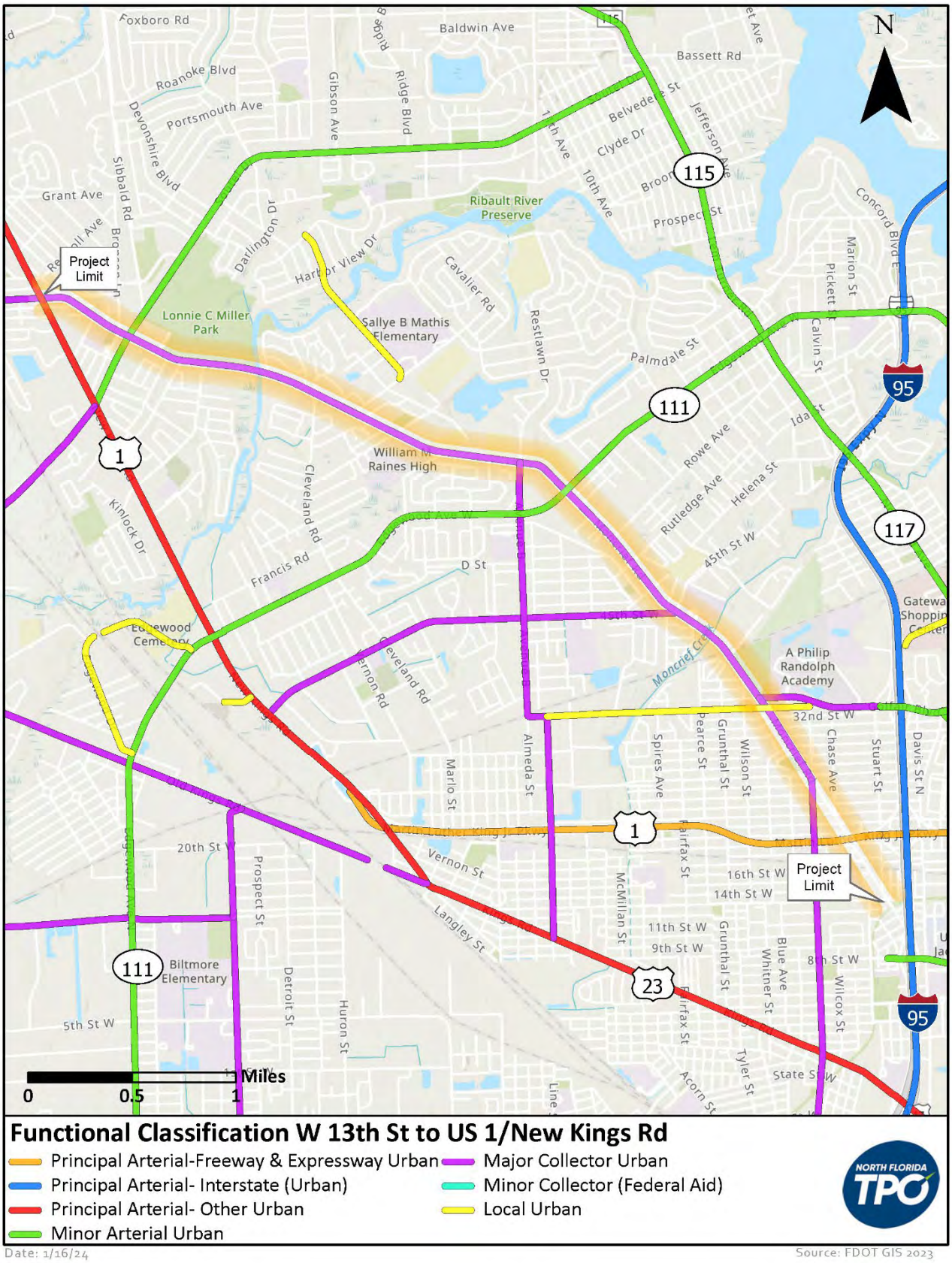


Figure 14 – Functional Classification

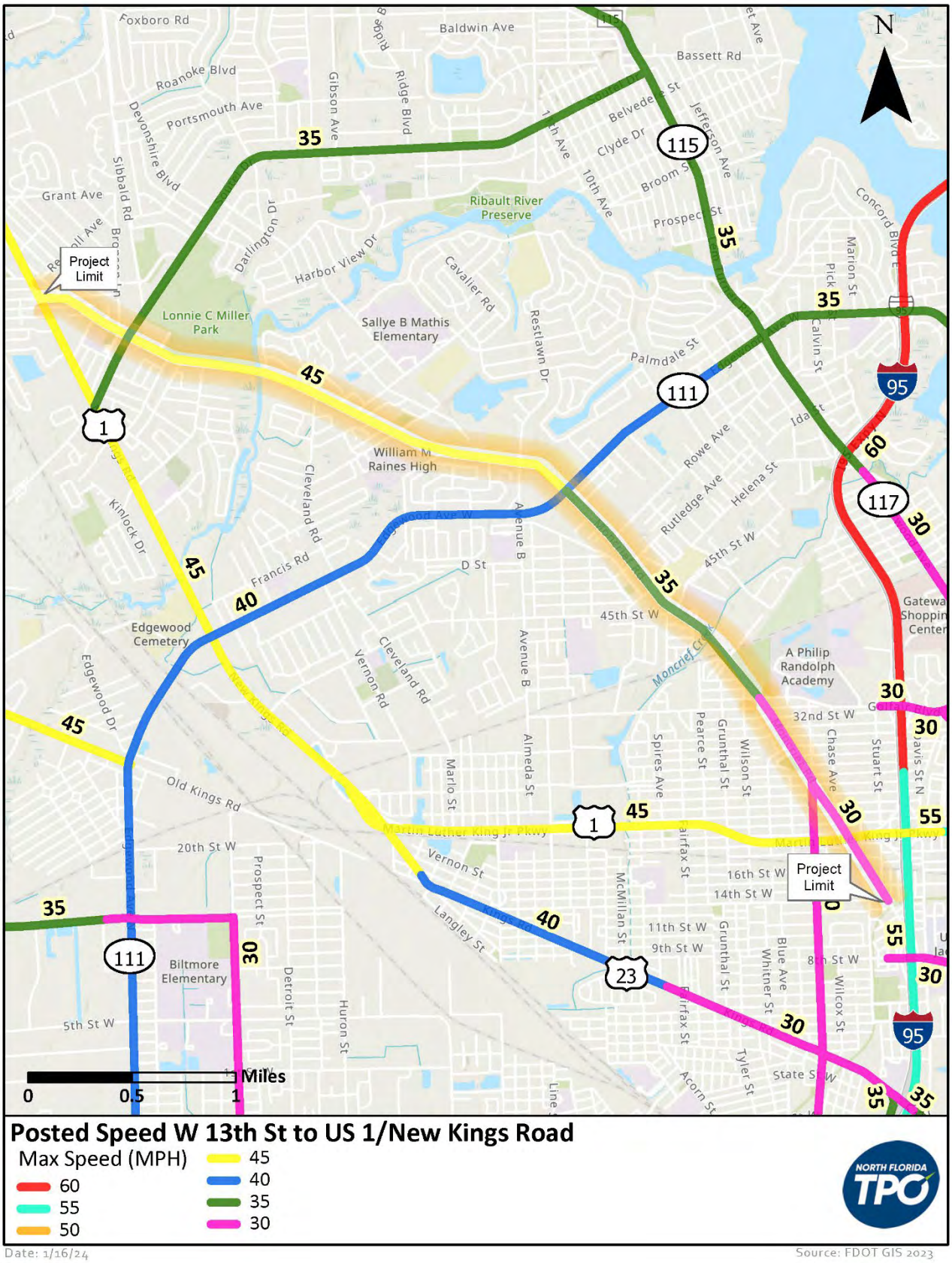


Figure 15 – Posted Speed Limits

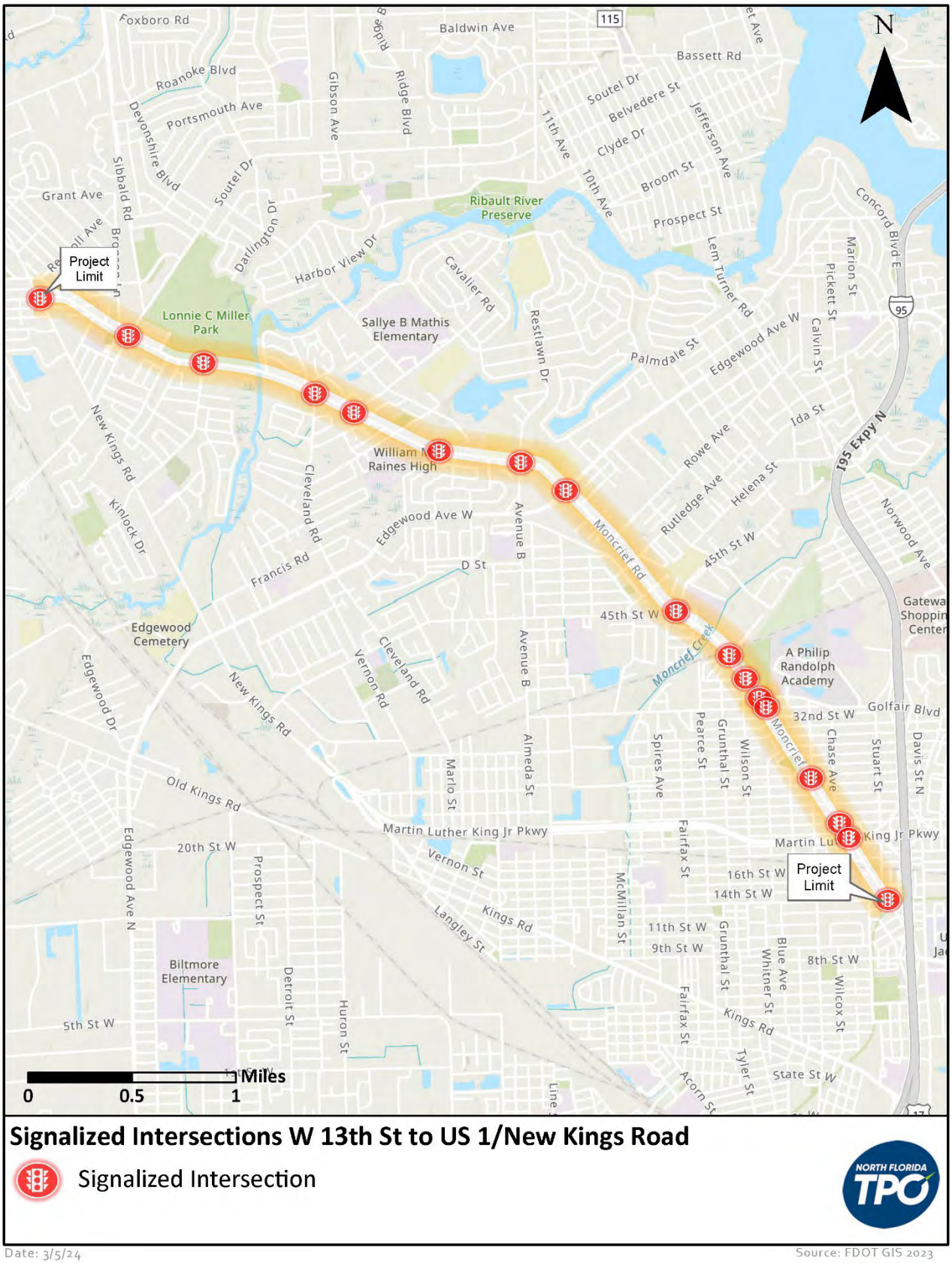
1.6 TRAFFIC SIGNALS

Seventeen (17) signalized intersections are located on the 5.25-mile corridor. Table 3 describes of the intersection geometry and signal equipment. Signal locations are shown in Figure 16.

Table 3 – Signalized Intersections

Cross St	Turn Lanes	Crosswalks	Signal Backplates	FYA	Pedestrian Equipment
13th Street	No	Standard crosswalk on west leg	No	No	No
MLK Parkway	NB Left, SB Left EB Left/EB Right, WB Left/WB Right	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
21st Street	No	Decorative stamped asphalt on 4 legs	Yes	No	Countdown pedestrian signals
Myrtle Avenue	NB (Moncrief) Left WB (Myrtle) Left	Decorative stamped asphalt on west (Myrtle) leg	No	No	No
33rd Street	NB Left, SB Left EB Left	Standard crosswalks on 4 legs	No	No	Non-countdown pedestrian signals
Golfair Boulevard	WB Right	No	No	No	No
36th Street	No	Standard crosswalks on north/west legs	No	No	Countdown pedestrian signals
George R. Kerns Boulevard	No	No	No	No	No
45th Street	EB Right	Standard crosswalks on east/west legs, Elevated pedestrian bridge on south leg	No	No	Non-countdown pedestrian signals
Edgeworth Avenue	NB Left, SB Left EB Left, WB Left	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
Avenue B / Restlawn Drive	NB Left, SB Left EB Left, WB Left	Standard crosswalks on 4 legs	Yes	No	Countdown pedestrian signals
Raines Avenue	NB Left, SB Left	Standard crosswalks on 4 legs	Yes	No	Countdown pedestrian signals

Cross St	Turn Lanes	Crosswalks	Signal Backplates	FYA	Pedestrian Equipment
Winton Drive	NB Left, SB Left	Standard crosswalks on south/east legs	Yes	No	Countdown pedestrian signals
Cleveland Road	NB Left, SB Left EB Right	Standard crosswalks on 4 legs	Yes	No	Countdown pedestrian signals
Richardson Road	NB Left, SB Left	Standard crosswalks on south/west legs	Yes	Yes	Countdown pedestrian signals
Soutel Drive	NB Left/NB Right, SB Left EB Left, WB Left	Special Emphasis crosswalks on 4 legs	No	No	Non-countdown pedestrian signals
US 1 / New Kings Road	NB Left/NB Right, SB Left EB Left, WB Left	Special Emphasis crosswalks on south (Moncrief)/east (US 1) legs	No	No	Countdown pedestrian signals



Signalized Intersections W 13th St to US 1/New Kings Road

Signalized Intersection

Date: 3/5/24

Source: FDOT GIS 2023

Figure 16 – Signalized Intersections

1.7 LIGHTING

Corridor lighting is primarily provided by overhead Cobra-style light fixtures on the north side of the road. Between MLK Parkway and Myrtle Avenue, there are pedestrian scale, ornamental street lights are on both sides of the road.

Table 4 – Lighting

Segment	Description	Lighting
Segment 1	13th Street to MLK Parkway	Cobra style overhead fixtures on the northeast side of road
Segment 2	MLK Parkway to Myrtle Avenue	Pedestrian scale, ornamental street lights on both sides of road
	Myrtle Avenue to Golfair Boulevard	Cobra style overhead fixtures on northeast side of road
Segment 3	Golfair Boulevard to 45th Street	Cobra style overhead fixtures on northeast side of road
Segment 4	45th Street to Edgewood Avenue	Cobra style overhead fixtures on northeast side of road
Segment 5	Edgewood Avenue to Soutel Drive	Cobra style overhead fixtures on northeast side of road
Segment 6	Soutel Drive to US 1/ New Kings Road	Cobra style overhead fixtures on both sides of road

1.8 UTILITIES

On the study corridor, there are multiple utility companies and infrastructure along, under and above the road. Based on information provided through Sunshine OneCall, there are nine Utility Agent/Owners (UAOs), which are summarized in Table 5. UAOs include cable, fiberoptic and telephone lines; electric, water, sewer and gas; and traffic signals/ITS.

Above ground pedestals, poles, junction boxes and other utility markers within the existing ROW are present throughout the corridor and at most of the study intersections.

Table 5 – Utilities

Service Area Name	Utility Type
AT&T	Telephone/Cable/Telecommunications
City of Jacksonville Traffic	Signals/ITS
Comcast Cablevision	Telephone/Cable/Telecommunications
Crown Castle Fiber	Internet/Telephone/Cable/Telecommunications
Jacksonville Electric Authority	Water/Wastewater/Reclaimed Water/Power
MCI	Telephone/Cable/Telecommunications
TECO Peoples Gas - Jacksonville	Gas
Traffic Control Devices Inc.	Signals/ITS
Uniti Fiber, LLC	Telephone/Cable/Telecommunications

Source: Sunshine OneCall (Sunshine 811)

1.9 RAILROADS

Two existing at-grade rail crossings are present on the Moncrief Road study corridor. As detailed in Table 6, both are public crossings used by freight trains with an estimated two switching trains per day and no daily through train movements, both have a combination of passive and activated advance warning devices, and both are illuminated by streetlights within 50 LF of the rail. Table 6 summarizes the crossing data for each.

Crossing 713577F is located approximately 800 LF south of MLK Parkway. Norfolk Southern is the primary operating railroad and the maximum timetable speed is 10 mph. Traffic control devices at this crossing include railroad crossing pavement markings, but no dynamic envelope. Activated warning devices include gate arms with flashing lights and bells. Crossing 621048S is located approximately 100 LF north of George R. Kerns Boulevard and operated by CSX. The maximum timetable speed at this crossing is 25 mph. Traffic control devices include advance warning signage (one, W10-1) and railroad crossing pavement markings, but no dynamic envelope. Activated warning devices include gate arms with flashing lights, mast-mounted flashing lights and bells.

Table 6 – Rail Crossing Data

Item	16th Street Crossing	George R. Kerns Boulevard Crossing
DOT Crossing No.	713577F	621048S
Location	Duval County, FL Between 16th St and 18th St	Duval County, FL Between George R. Kerns Blvd and Glenvale Rd
RR Milepost	0002.960	0642.520
Owner	Norfolk Southern	CSX
Type of Crossing	At-Grade	At-Grade
No. Thru Trains/Day	0	0
Total Switching Trains	2	2
Type of Track	Mainline – 1 track	Mainline – 1 track
Crossbuck Assemblies	2	2
Advance Warning Signs	No	W10-1 (1)
Pavement Markings	Stop lines, RR Xing symbols	Stop lines, RR Xing symbols
Illuminated	Yes	Yes
Quiet Zone	No	No

1.10 CONTEXT CLASSIFICATION

The provisional (existing) context classification of the two FDOT non-limited access roads intersecting the study corridor, US 1/New Kings Road and Edgewood Avenue, is C3C (Suburban Commercial). Other than MLK Parkway and I-95, which are both limited-access facilities, other state roads south and east of Moncrief Road have a context classification of C4 (Urban General) as they approach Downtown and transition into higher-density development patterns with smaller block sizes.

While context classification applies only to FDOT roads, we assigned provisional context classification for the study corridor based on a review of the built environment and the context classification of comparable roadways. As listed in Table 7, the context class varies between C4 (urban general) and C3R (suburban residential). Benesch will use the context classification in the concept development phase to inform key design elements, such as the design speeds, lane widths and types of pedestrian and bicycle facilities to be included in the design concept.

Table 7 – Moncrief Road Context Classification

Context Class	From	To	Description
C4	13th Street	MLK Parkway	Urban General
C3R	MLK Parkway	Myrtle Avenue	Suburban Residential
C4	Myrtle Avenue	45th Street	Urban General
C3R	45th Street	New Kings Road	Suburban Residential

1.11 BICYCLE AND PEDESTRIAN FEATURES

Sidewalk adjacent to the study corridor is illustrated in Figure 17. A continuous sidewalk exists along Myrtle Avenue on at least one side of the roadway except for the Norfolk Southern rail crossing between 16th Street and 18th Street. The sidewalk terminates on either side of the tracks, leaving a ~110 LF gap. Sidewalk condition is detailed in Table 8. The existing facilities are mainly in fair to good condition, with some grass overgrowth. Sidewalks are generally 4 LF to 5 LF wide and, from Edgewood Avenue to Soutel Drive, are directly adjacent to the curb with no utility strip or buffer.

Pedestrian facilities at signalized intersections along the study corridor are summarized in Table 3. In addition to these locations, there are multiple crosswalks at unsignalized intersections with smaller adjacent roadways within the limits of the study corridor. Most of these crosswalk facilities are towards the southern end of study corridor and cross two-lane neighborhood streets. There are five crosswalks that provide access across Moncrief Road in places where vehicles do not already stop at traffic signals. Each of these crossings has either decorative or special-emphasis crosswalk pavement markings, four have stop lines for vehicles and pedestrian crossing signage, and three (28th Street, Voorhies Road/Sycamore Street and Rowe Avenue) have standalone pedestrian signals equipped with Rectangular Rapid Flashing Beacons (RRFBs) to alert vehicles. The crosswalk facilities not associated with signalized intersections are described in Table 9.

Bicycle facilities are depicted in Figure 18, including study area recommendations from the City of Jacksonville's Pedestrian and Bicycle Master Plan.

From a multimodal perspective, improving the connectivity along Moncrief Road provides opportunities to eliminate pedestrian/bicycle gaps within the overall network, reduce pedestrian/bicycle/auto conflict points, and increase multimodal safety within the corridor. Increased multimodal connectivity may also reduce short local auto trips.

Table 8 – Moncrief Road Sidewalk Inventory

From	To	East	West	Condition
13th Street	22nd Street[1]	Yes	Yes	Fair
22nd Street	Myrtle Avenue	Yes	Yes	Good
Myrtle Avenue	Golfair Boulevard	Yes	Yes	Good
Golfair Boulevard	CSX Grade Crossing	Yes	Yes	Fair
CSX Grade Crossing	Edgewood Ave	Yes	Yes	Good
Edgewood Avenue	Soutel Drive	Yes	Yes	Fair
Soutel Drive	US 1/New Kings Road	Yes	Yes	Good

[1] *Sidewalk gap across Norfolk Southern rail crossing*

Table 9 – Other Crosswalk Facilities

Cross St	Crosswalks	Signage	Pedestrian Equipment
20th Street	Standard crosswalk on west leg	No	No
22nd Street	Decorative stamped asphalt on 5 legs	No	No
23rd Street	Standard crosswalk on east leg	No	No
25th Street	Decorative stamped asphalt on east leg	No	No
26th Street	Decorative stamped asphalt on east/west legs	No	No
27th Street	Standard crosswalk on east leg	No	No
28th Street	Special emphasis crosswalks on south/east legs	Yes	RRFB
Royal Court	Special emphasis crosswalk on west leg	No	No
29th Street/Mason Avenue	Special emphasis crosswalks on east/west legs	No	No
30th Street	Special emphasis crosswalk on east leg	No	No
31st Street	Special emphasis crosswalk on east leg	No	No
Mitchell Street	Standard crosswalk on west leg (poor condition)	No	No
32nd Street	Special emphasis crosswalks on east/west legs	No	No
35th Street	Standard crosswalk on west leg	No	No
St. Clair Evans Academy	Painted crosswalks on both driveways	No	No
Voorhies Road/Sycamore Street	Special emphasis crosswalk (75 LF south)	Yes	RRFB
Rowe Avenue	Special emphasis crosswalk (125 LF south)	Yes	RRFB
Strawflower Place	Standard crosswalk on west leg (poor condition)	No	No
Spirea Street	Standard crosswalk on west leg (poor condition)	No	No
Lobelia Street	Standard crosswalk on west leg (poor condition)	No	No
Irving Scott Drive	Standard crosswalk on west leg (poor condition)	No	No
Dostie Drive	Standard crosswalk on west leg (poor condition)	No	No
Price Road/Ellis Court	Standard crosswalk on east leg (poor condition)	No	No
Hull Street/Bronson Lane	Special emphasis crosswalk on north leg Standard crosswalks on east/west legs	Yes	No
Dunmire Avenue	Standard crosswalk on west leg (poor condition)	No	No
Liston Road	Standard crosswalk on east leg (poor condition)	No	No
Moncrief Road West	Standard crosswalk on east leg (poor condition)	No	No

Figure 17 – Sidewalk Facilities

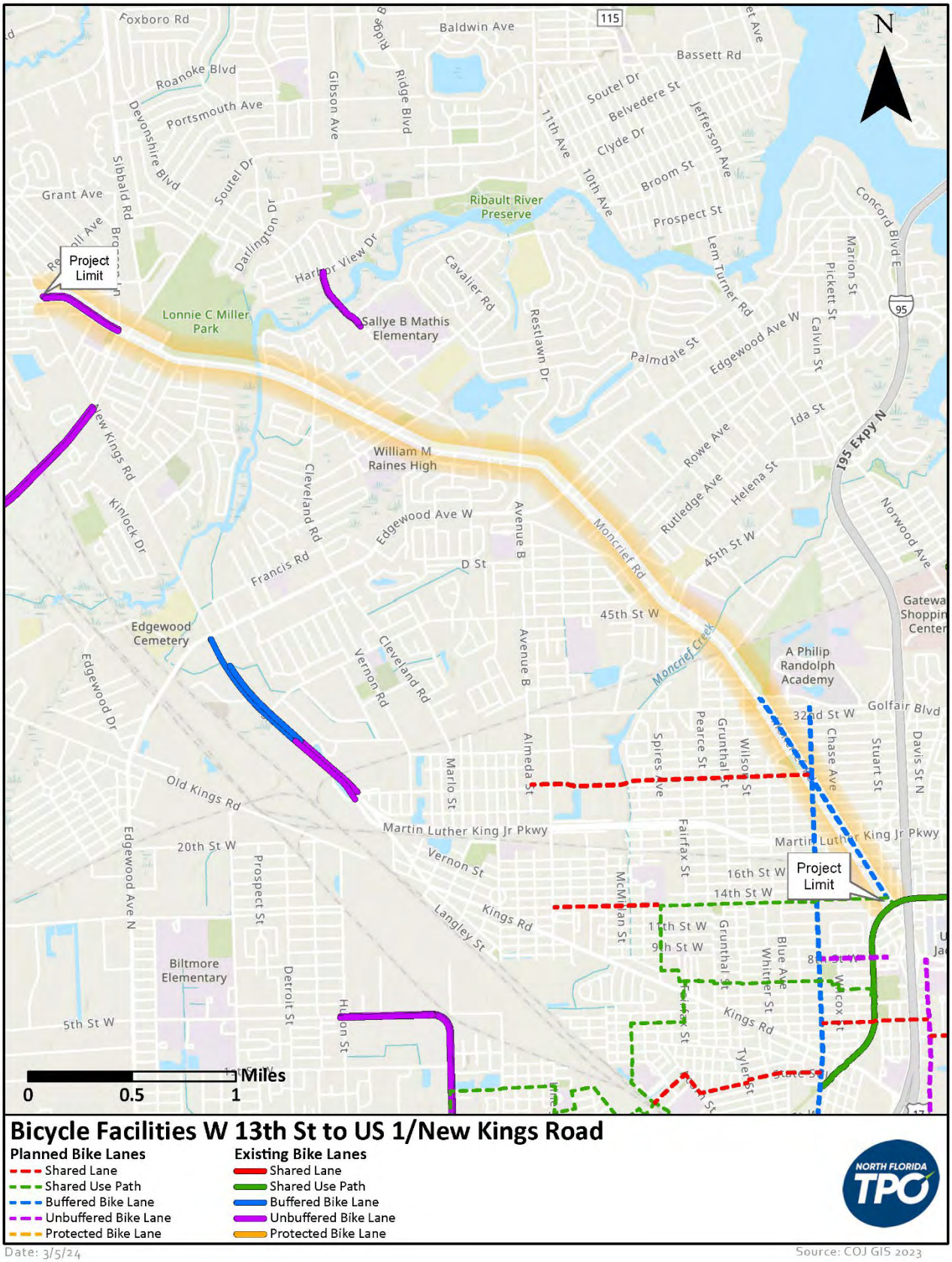


Figure 18 – Bicycle Facilities

1.12 TRAILS

The Emerald Trail is a planned 30-mile bicycle/pedestrian trail and linear park system that will connect 14 historic neighborhoods and downtown Jacksonville to local and regional trails, parks, schools, businesses, transit and other destinations. Segment 7, Northwest Connector, is a Tier 2 project (unfunded) which connects to the S-Line Rail Trail Urban Trail/Greenway. The S-Line currently crosses Moncrief Road just south of the study corridor. When completed, the 4.8-mile multiuse path will connect the Durkeeville, Springfield and Brentwood neighborhoods. The S-Line is accessible from the southern terminus of the study corridor between 12th Street and 13th Street at Regeneration Park.

The Northwest Connector and S-Line Urban Greenway will provide connections to Moncrief Rd as part of the 30-mile Emerald Trail. (Image: Groundwork Jacksonville)

1.13 TRANSIT DATA/ROUTES

JTA provides transit service throughout the Jacksonville metro area. Route 3 (Moncrief), which operates on Moncrief Road from 13th Street to Soutel Drive, is the primary transit route serving the study corridor. Several other local routes in the JTA system also operate along the corridor for shorter distances or along major intersecting roadways such as Myrtle Avenue, 45th Street, Edgewood Avenue, Avenue B, Cleveland Road, Soutel Drive and US 1/New Kings Road. Other JTA routes providing service to the study corridor include Route 4 (Myrtle/Lem Turner), Route 32 (McDuff), Route 22 (Avenue B), Route 51 (Edgewood) and Route 4 (Kings).

Moncrief Road has more transit stops at the south end of the corridor. North of Edgewood Avenue, the spacing between stops increases as the adjacent roadway network becomes less dense. Figure 19 depicts the transit route coverage and stop locations along the study corridor and within the surrounding area.

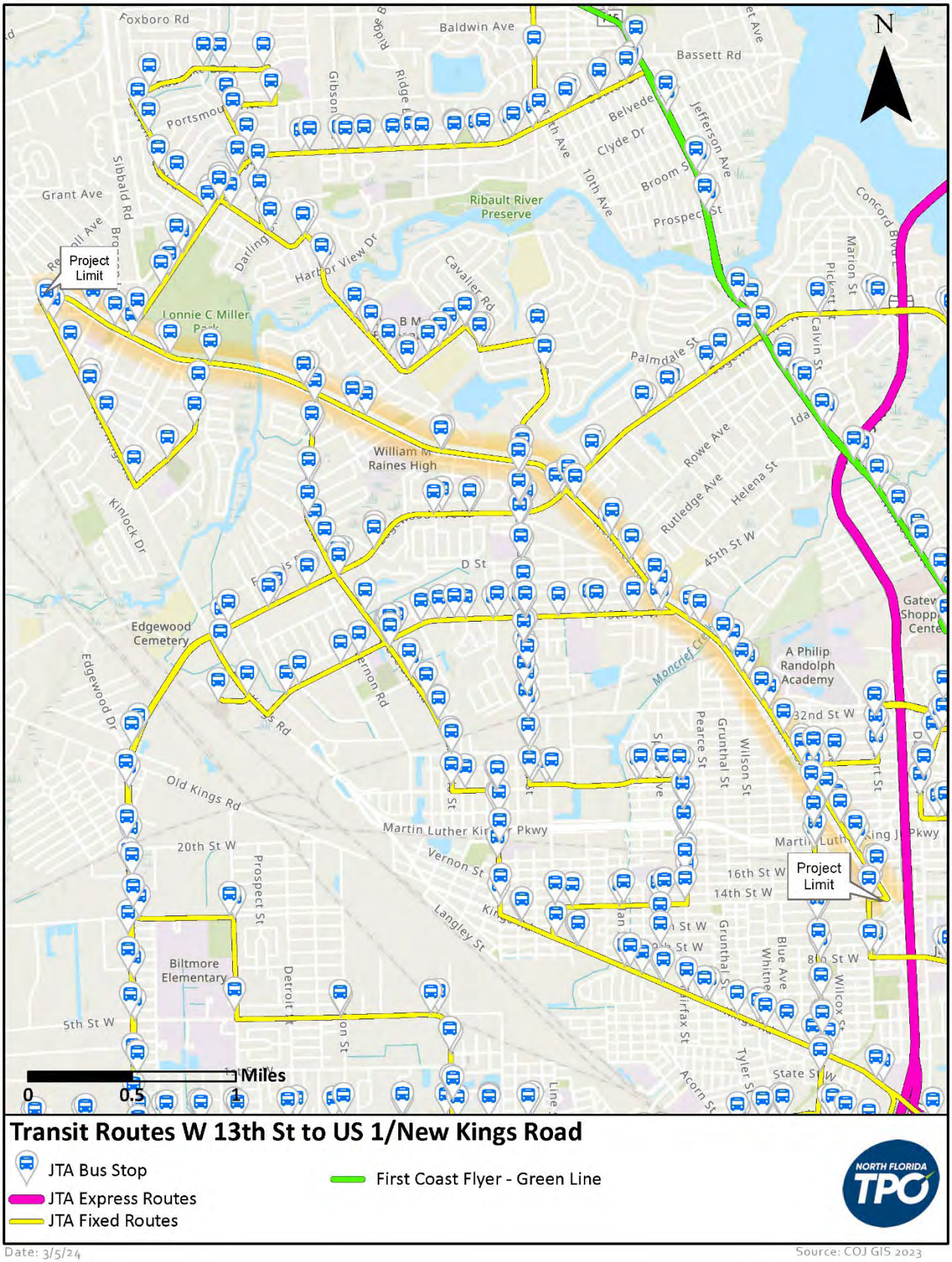


Figure 19 – Transit Routes

1.14 EXISTING TRAFFIC VOLUMES

Traffic volumes on the corridor were obtained from the City of Jacksonville Planning and Development Department and are provided in Table 10.

Traffic volumes (AADT) are highest between Edgewood Avenue and Golfair Boulevard, with the annual average daily at approximately 16,500 vehicles per day (vpd) and 1,400 – 1,500 vehicles per hour (vph) in the a.m. and p.m. peak hours. Traffic volumes tend to be higher near the three major corridor intersections at Edgewood Avenue, Golfair Boulevard and Soutel Drive.

A planning level analysis of existing peak hour traffic volumes was conducted using the generalized service volume tables in the FDOT *Multimodal Quality/Level of Service Handbook*. The results are also provided in Table 10. At current peak hour traffic volumes, Moncrief Road is operating at a minimum level of service (LOS) D in the AM and PM peak hours and has ample capacity for current traffic volumes.

The counts, LOS Tables and supporting documentation are at the end of this document.

Table 10 – Traffic Volumes

Location	Year	AADT	LOS Std	Peak Hour MSV [1, 2]	Peak Volume		LOS	
					AM	PM	AM	PM
Moncrief Rd, 300' N/O Myrtle Ave	2023	9,188	E	2,160	696	682	D	D
Moncrief Rd, btw Edgewood Ave & Golfair Blvd	2023	16,591	E	3,670	1,457	1,379	C	C
Moncrief Rd, 50 ft S/O 16th St	2023	3,000	E	1,616	393	283	C	C
Moncrief Rd, E/O Soutel Dr	2023	13,150	E	3,360	971	1,102	C	C
Moncrief Rd, 300 ft W/O Soutel Dr	2023	5,308	E	2,020	437	459	C	C
Moncrief Rd, N/O W 23rd St	2023	6,669	E	2,160	539	524	D	D
Moncrief Rd, 500' N/O Edgewood Ave	2023	11,330	E	3,670	1,012	949	C	C

[1] *FDOT 2023 Multimodal Quality/Level of Service Handbook, Generalized Service Volume Tables*

[2] *Maximum Service Volume*

Traffic Count Data

Q/LOS Tables

C3C & C3R

Motor Vehicle Arterial Generalized Service Volume Tables

(C3C-Suburban Commercial)

Peak Hour Directional

	B	C	D	E
1 Lane	*	760	1,070	**
2 Lane	*	1,520	1,810	**
3 Lane	*	2,360	2,680	**
4 Lane	*	3,170	3,180	**

Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,380	1,950	**
4 Lane	*	2,760	3,290	**
6 Lane	*	4,290	4,870	**
8 Lane	*	5,760	5,780	**

AADT

	B	C	D	E
2 Lane	*	15,300	21,700	**
4 Lane	*	30,700	36,600	**
6 Lane	*	47,700	54,100	**
8 Lane	*	64,000	64,200	**

(C3R-Suburban Residential)

	B	C	D	E
1 Lane	*	970	1,110	**
2 Lane	*	1,700	1,850	**
3 Lane	*	2,620	2,730	**

	B	C	D	E
2 Lane	*	1,760	2,020	**
4 Lane	*	3,090	3,360	**
6 Lane	*	4,760	4,960	**

	B	C	D	E
2 Lane	*	19,600	22,400	**
4 Lane	*	34,300	37,300	**
6 Lane	*	52,900	55,100	**

Adjustment Factors

The peak hour directional service volumes should be adjust by multiplying by 1.2 for one-way facilities
The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05
2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80
Exclusive right turn lane(s): Multiply by 1.05
Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95
Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75
Non-State Signalized Roadway: Multiply by 0.90

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.
* Cannot be achieved using table input value defaults.
** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

C2T, C4, C5, & C6

Motor Vehicle Arterial Generalized Service Volume Tables

(C2T-Rural Town)

Peak Hour Directional

	B	C	D	E
1 Lane	*	720	940	**
2 Lane	*	1,140	1,640	**
3 Lane	*	2,120	2,510	**

Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,310	1,710	**
4 Lane	*	2,070	2,980	**
6 Lane	*	3,850	4,560	**

AADT

	B	C	D	E
2 Lane	*	13,800	18,000	**
4 Lane	*	21,800	31,400	**
6 Lane	*	40,500	48,000	**

(C4-Urban General)

	B	C	D	E
1 Lane	*	*	870	1,190
2 Lane	*	1,210	1,790	2,020
3 Lane	*	2,210	2,810	2,990
4 Lane	*	2,590	3,310	3,510

	B	C	D	E
2 Lane	*	*	1,580	2,160
4 Lane	*	2,200	3,250	3,670
6 Lane	*	4,020	5,110	5,440
8 Lane	*	4,710	6,020	6,380

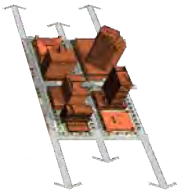
	B	C	D	E
2 Lane	*	*	17,600	24,000
4 Lane	*	24,400	36,100	40,800
6 Lane	*	44,700	56,800	60,400
8 Lane	*	52,300	66,900	70,900

(C5-Urban Center)

	B	C	D	E
1 Lane	*	*	690	1,080
2 Lane	*	1,290	1,900	2,130
3 Lane	*	1,410	2,670	3,110
4 Lane	*	2,910	3,560	3,640

	B	C	D	E
2 Lane	*	*	1,250	1,960
4 Lane	*	2,350	3,450	3,870
6 Lane	*	2,560	4,850	5,650
8 Lane	*	5,290	6,470	6,620

	B	C	D	E
2 Lane	*	*	13,900	21,800
4 Lane	*	26,100	38,300	43,000
6 Lane	*	28,400	53,900	62,800
8 Lane	*	58,800	71,900	73,600



(C6-Urban Core)

	B	C	D	E
1 Lane	*	***	790	1,030
2 Lane	*	***	1,490	1,920
3 Lane	*	***	2,730	2,940
4 Lane	*	***	3,250	3,490

	B	C	D	E
2 Lane	*	***	1,440	1,870
4 Lane	*	***	2,710	3,490
6 Lane	*	***	4,960	5,350
8 Lane	*	***	5,910	6,350

	B	C	D	E
2 Lane	*	***	16,000	20,800
4 Lane	*	***	30,100	38,800
6 Lane	*	***	55,100	59,400
8 Lane	*	***	65,700	70,600

Adjustment Factors

The peak hour directional service volumes should be adjust by multiplying by 1.2 for one-way facilities
The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities 2 Lane Divided Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05
2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80
Exclusive right turn lane(s): Multiply by 1.05
Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95
Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75
Non-State Signalized Roadway: Multiply by 0.90

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.
*Cannot be achieved using table input value defaults. **Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.
***LOS C thresholds are not applicable for C6 as C6 roadway facilities are neither planned nor designed to achieve automobile LOS C.

APPENDIX D

Safety Review

1 SAFETY ASSESSMENT

Benesch obtained five years of crash records (01/01/2018 to 12/31/2022) from the University of Florida's Signal Four Analytics for the study corridor. As part of the analysis, we thoroughly reviewed all crashes involving pedestrians, bicyclists, fatal and incapacitating crashes to confirm crash type, location, road surface and lighting conditions. We also reviewed the description of the crash events to determine if a crash pattern could be identified on the study corridor. Our analysis is intended to give a more detailed look at the trends and factors for all crashes, fatal and serious injury crashes and bicycle and pedestrian crashes.

Figure 1 depict the location of crashes along the corridor. As evident, the highest frequency crash locations are located at or near the major intersections of 45th Street, Edgewood Avenue, Golfair Boulevard, MLK Parkway, Soutel Drive and US 1/New Kings Road.

Table 1 summarizes the total crashes by type, injury severity, lighting conditions and surface conditions. Crash statistics are summarized in Figure 2.

A total of 686 crashes were identified during the study period along the corridor, with a predominance of rear-end crashes (148; 21.6%), left turn (141; 20.6%) and other crashes (115; 16.8%). The following crash trends were identified in the study corridor:

- Five bicycle and 25 pedestrian crashes
- Seven fatalities and ten incapacitating injury crashes.
- 95 wet pavement conditions crashes (13.8%)
- 211 night/dusk/dawn crashes (31%)
- An average of 137 crashes/year along the study corridor
- 64.3% of the total crashes resulted in no reported injuries
- 85.6% of all crashes occurred under dry pavement conditions

Crashes by time of day are detailed in Figure 3. Crashes generally correspond to morning, mid-day and evening peak hours. Approximately 31% of crashes occur in non-daylight hours, which is minimally higher than the statewide average (~30%).

The crashes can also be categorized into several Florida Strategic Highway Safety Plan (SHSP) emphasis areas:

- Roadways – Intersection Related (273) and Lane Departure (190)
- Road Users – Aging Road User (122), Teen Driver (58), Commercial Motor Vehicles (29)
- User Behavior – Distracted (35), Occupant Protection (no restraint) (33), Aggressive Driving (10)

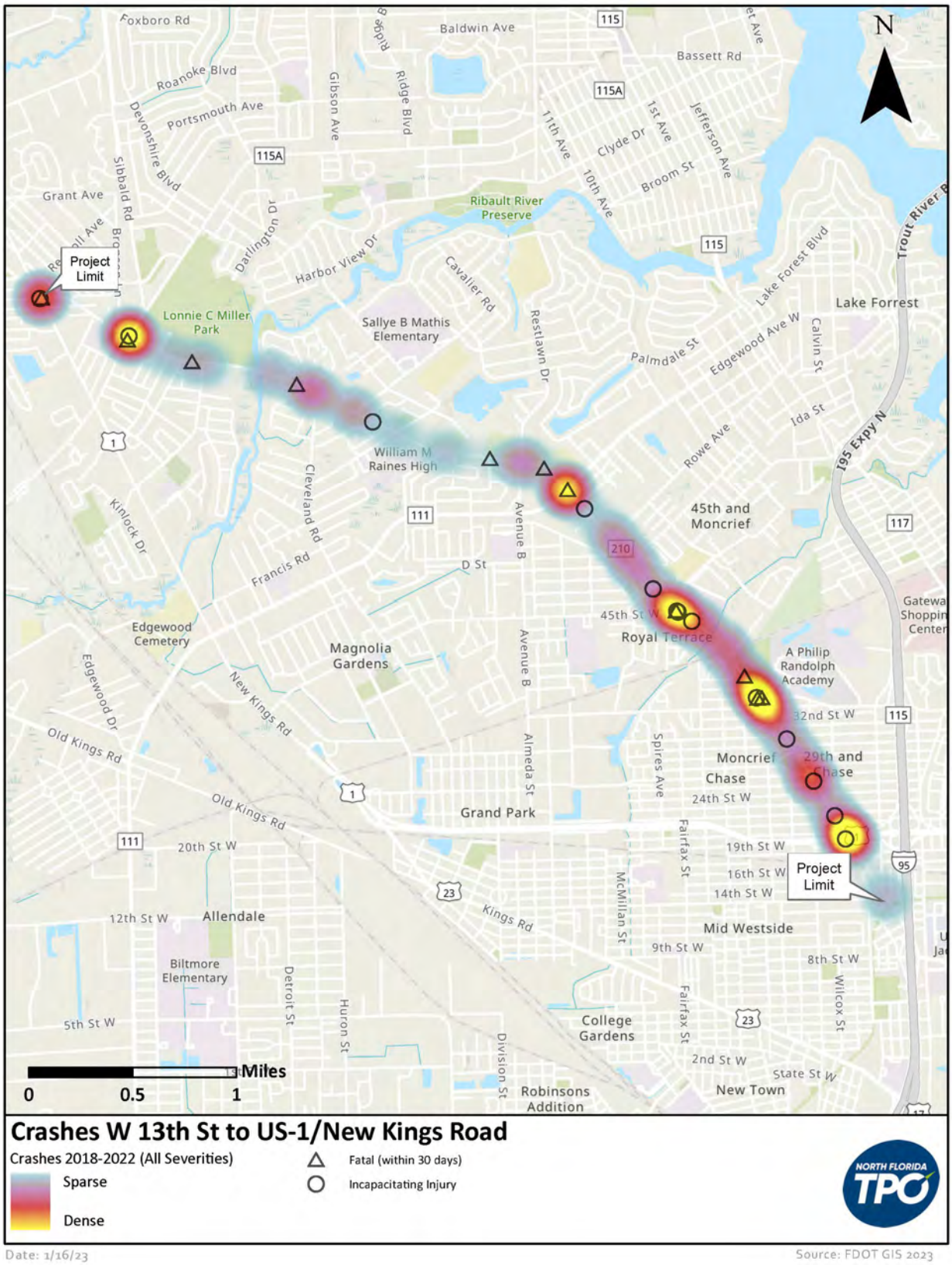


Figure 1 – Crash Location and Frequency

Table 1 – Crash Summary by Year

Moncrief Rd W. 13th St to US 1 (New Kings Rd)		Years					Total	Severe Crashes	Yearly Mean Crashes	%
		2018	2019	2020	2021	2022				
Crash Type	Animal	0	1	0	0	0	1	0	0.2	0.1%
	Angle	15	10	12	12	15	64	2	12.8	9.3%
	Bicycle	0	1	0	1	3	5	2	1	0.7%
	Head On	5	2	2	4	2	15	2	3	2.2%
	Left Turn	29	31	26	23	32	141	1	28.2	20.6%
	Off Road	18	9	7	11	13	58	2	11.6	8.5%
	Other	27	29	17	22	20	115	0	23	16.8%
	Pedestrian	4	4	3	9	5	25	6	5	3.6%
	Rear End	34	26	17	43	28	148	0	29.6	21.6%
	Right Turn	5	1	1	5	2	14	1	2.8	2.0%
	Sideswipe	12	17	10	17	16	72	0	14.4	10.5%
	Unknown	4	7	4	2	9	26	0	5.2	3.8%
	Total	***153***	***138***	***101***	***149***	***145***	***686***	***17***	***137.0***	***100%***
Injury Severity	Fatal (Within 30 Days)	2	2	1	1	1	7	-	1.4	1.0%
	Incapacitating Injury	0	3	1	3	3	10	-	2	1.5%
	Non-Incapacitating Injury	22	11	14	29	22	98	-	19.6	14.3%
	Possible Injury	23	27	19	25	36	130	-	26	19.0%
	No Injury	106	95	66	91	83	441	-	88.1	64.3%
	Total	***153***	***138***	***101***	***149***	***145***	***686***	***-***	***137.0***	***100%***
Lighting Condition	Daylight	108	91	65	107	104	475	6	94.9	69.2%
	Dawn	4	3	2	0	0	9	0	1.8	1.3%
	Dusk	4	4	5	7	4	24	0	4.8	3.5%

Moncrief Rd W. 13th St to US 1 (New Kings Rd)		Years					Total	Severe Crashes	Yearly Mean Crashes	%
		2018	2019	2020	2021	2022				
	Dark - Lighted	34	36	27	30	33	160	10	32	23.3%
	Dark - Not Lighted	2	4	2	5	4	17	1	3.4	2.5%
	Other	1	0	0	0	0	1	0	0.2	0.1%
	Total	***153***	***138***	***101***	***149***	***145***	***686***	***17***	***137.0***	***100%***
Surface Condition	Dry	118	129	82	130	128	587	16	117.3	85.6%
	Wet	35	7	18	19	16	95	1	19	13.8%
	Mud, Dirt, Gravel	0	1	1	0	0	2	0	0.4	0.3%
	Unknown	0	1	0	0	1	2	0	0.4	0.3%
	Total	***153***	***138***	***101***	***149***	***145***	***686***	***17***	***137.0***	***100%***

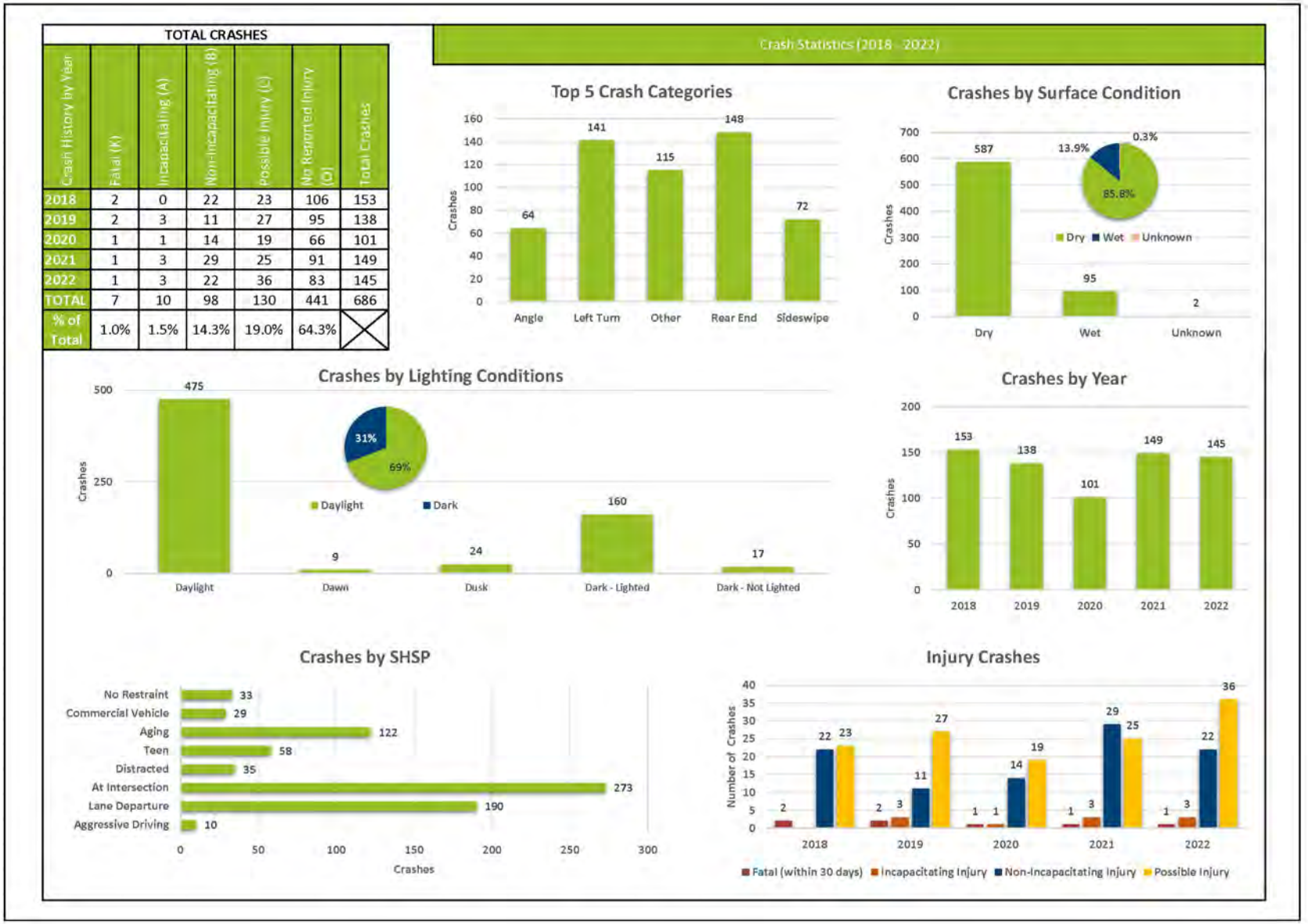


Figure 2 – Crash Statistics

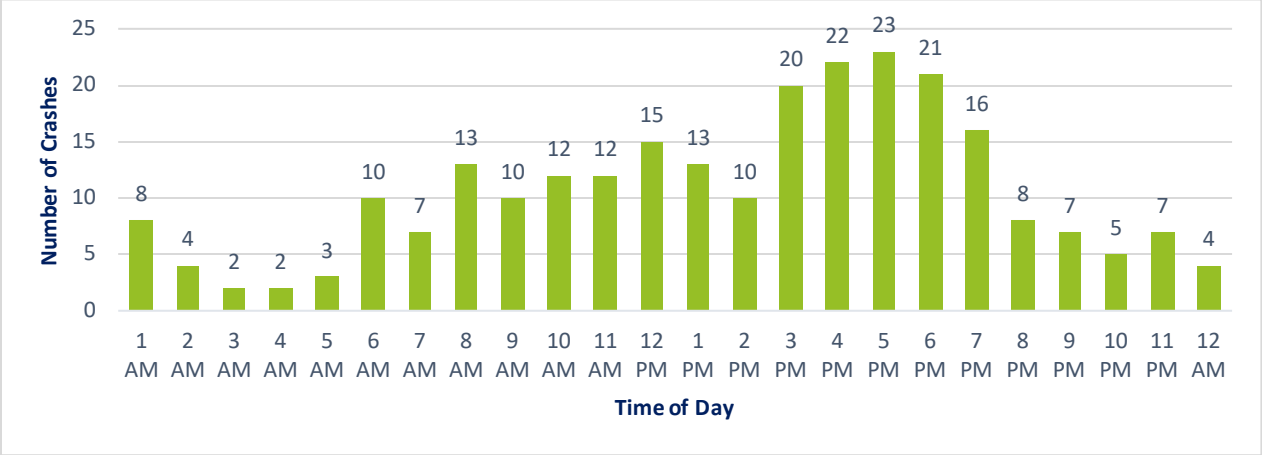


Figure 3 – Crashes by Time of Day

1.1 FATAL AND INCAPACITATING INJURY CRASHES

Benesch separately reviewed the circumstances of the crashes that resulted in serious injury or death (KSI crashes). There were seven fatal and ten incapacitating injury crashes throughout the study corridor, as depicted in Figure 4. A detailed summary is presented in Table 2.

The following trends were identified with fatal injury crashes.

- One pedestrian, one bicycle, one hit non-fixed object, two head on and two off road crashes.
- Five of seven fatal crashes occurred during nighttime.
- Six of seven fatal crashes occurred on dry pavement conditions.

The following trends were identified with incapacitating injury crashes.

- Five pedestrian, one bicycle, one right turn, two angle and 1 one left turn crashes resulted injury crashes.
- Five of ten incapacitating crashes occurred during nighttime.
- Three of five pedestrian incapacitating crashes occurred during nighttime.
- All incapacitating crashes occurred under dry pavement conditions.
- The left turn crash reported was a result of a westbound vehicle failing to yield the right-of-way when making a left turn and struck an eastbound vehicle.
- Angle crashes reported along the study corridor involved at-fault eastbound vehicles failing to yield the right-of-way at and struck by southbound vehicles.

The bicycle and pedestrian fatal and incapacitating crashes are discussed further in Section 1.3.

FHWA has developed a list of 28 countermeasures and strategies that are proven effective in reducing roadway fatalities and serious injuries. Table 2 also includes a recommendation of potential countermeasures that may address the KSI crashes, based on a review of the crash reports. Recommendations include a road diet (lane reconfiguration) to address speeds and reduce the number of crossing lanes for minor street vehicles; review intersection lighting levels; and a additional midblock crossing opportunities .

Table 2 – Fatal and Incapacitating Crash Summary

Date	Crash Type	Injury Severity	Day, Time, Lighting, Road Conditions	Brief Summary	Potential Countermeasure[1]
2/6/2018	Head On	Fatal (within 30 days)	Tuesday, 10:10 AM, Daylight, Dry	SB V1 left the designated lane of travel, drove into the opposing direction and was struck by NB V2. D1 was stated to operate V1 under the influence of drugs and alcohol. D1 was pronounced dead after arriving to the hospital.	Education, Enforcement
12/16/2018	Off Road	Fatal (within 30 days)	Sunday, 12:30 AM, Dark - Lighted, Dry	EB V1 lost control, left the roadway and impacted a tree on the south side of the road. D1 was pronounced dead at the scene.	Road diet (lane reconfiguration) to address speed
1/1/2019	Off Road	Fatal (within 30 days)	Tuesday, 10:02 PM, Dark - Lighted, Dry	NB V1 went off road and struck a tree. D1 likely suffered a medical episode causing her to leave the road.	-
3/25/2019	Pedestrian	Incapacitating Injury	Monday, 9:35 PM, Dark - Lighted, Dry	NB V1 struck a Ped 1 crossing EB. D1 stated that he did not see Ped 1. Ped 1 was witnessed not using the crosswalk when crossing the road.	Lighting: Review corridor lighting levels Provide additional opportunities for mid block crossings
11/3/2019	Pedestrian	Incapacitating Injury	Sunday, 12:19 AM, Dark - Lighted, Dry	NB Ped 1 was crossing the road and entered into the path of EB V1 and was struck by V1. D1 thought Ped 1 was going to stop.	Provide additional opportunities for mid block crossings Pedestrian refuge islands
11/5/2019	Head On	Fatal (within 30 days)	Tuesday, 8:20 AM, Daylight, Dry	EB V1 failed to negotiate a curve and maintain a single lane of travel, entered a path of oncoming traffic and struck WB V2 which also impacted WB V3.	Road diet (lane reconfiguration) to address speed Enhanced curve delineation
12/25/2019	Left Turn	Incapacitating Injury	Wednesday, 9:58 PM, Dark – Lighted, Dry	WB V1 attempted to make a left turn and failed to yield ROW and struck EB V2.	Lighting: Review corridor lighting levels Signing

Date	Crash Type	Injury Severity	Day, Time, Lighting, Road Conditions	Brief Summary	Potential Countermeasure[1]
2/1/2020	Angle	Incapacitating Injury	Saturday, 6:25 PM, Dark - Lighted, Dry	EB V1 failed to yield ROW at the stop sign and was struck by SB V2.	Lighting: Review corridor lighting levels Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
6/18/2020	Hit Non-Fixed Object	Fatal (within 30 days)	Thursday, 11:50 PM, Dark - Lighted, Dry	WB V1 was stopped on the roadway blocking the path of EB traffic when WB V2 attempted to avoid V1 and lost control, slid on the roadway, struck V1, D2 was ejected from V2 and struck by EB V3. D2 was pronounced dead at the scene.	-
6/12/2021	Right Turn	Incapacitating Injury	Saturday, 2:30 PM, Daylight, Dry	NB V1 made a right turn and struck EB V2.	-
6/17/2021	Pedestrian	Fatal (within 30 days)	Thursday, 8:48 PM, Dark - Lighted, Wet	WB Ped 1 walked onto oncoming traffic and was struck by NB V1.	Lighting: Review corridor lighting levels Provide additional opportunities for mid block crossings
10/8/2021	Pedestrian	Incapacitating Injury	Friday, 8:45 AM, Daylight, Dry	EB Ped 1 walked into the path of traffic and was struck by NB V1. Ped 1 failed to cross the road at the marked crosswalk and hence was struck by the vehicle.	Provide additional opportunities for mid block crossings
12/14/2021	Pedestrian	Incapacitating Injury	Tuesday, 6:37 PM, Dark - Not Lighted, Dry	SB Ped 1 failed to cross the road at the designated crosswalk and was struck by EB V2.	Provide additional opportunities for mid block crossings
1/17/2022	Angle	Incapacitating Injury	Monday, 3:15 PM, Daylight, Dry	EB V1 failed to yield ROW and struck SB V2.	Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
6/27/2022	Bicycle	Incapacitating Injury	Monday, 8:56 PM, Daylight, Dry	NB Bike 1 failed to yield ROW, darted onto oncoming traffic and was struck by NB V2.	Provide additional opportunities for mid block crossings

Date	Crash Type	Injury Severity	Day, Time, Lighting, Road Conditions	Brief Summary	Potential Countermeasure[1]
12/21/2022	Pedestrian	Incapacitating Injury	Wednesday, 6:31 AM, Dark – Lighted ,Dry	EB Ped 1 crossed the street without caution for oncoming traffic and was struck by NB V1.	Provide additional opportunities for mid block crossings and pedestrian refuge
12/22/2022	Bicycle	Fatal (within 30 days)	Thursday, 7:14 PM, Dark - Lighted, Dry	SB Bike 1 drove wrong way into the traffic lane and was struck by NB V1.	Provide improved bicycle/pedestrian facilities

[1] *FHWA Proven Safety Countermeasures*

[2] *Not one of the 28 Proven Safety Countermeasures*

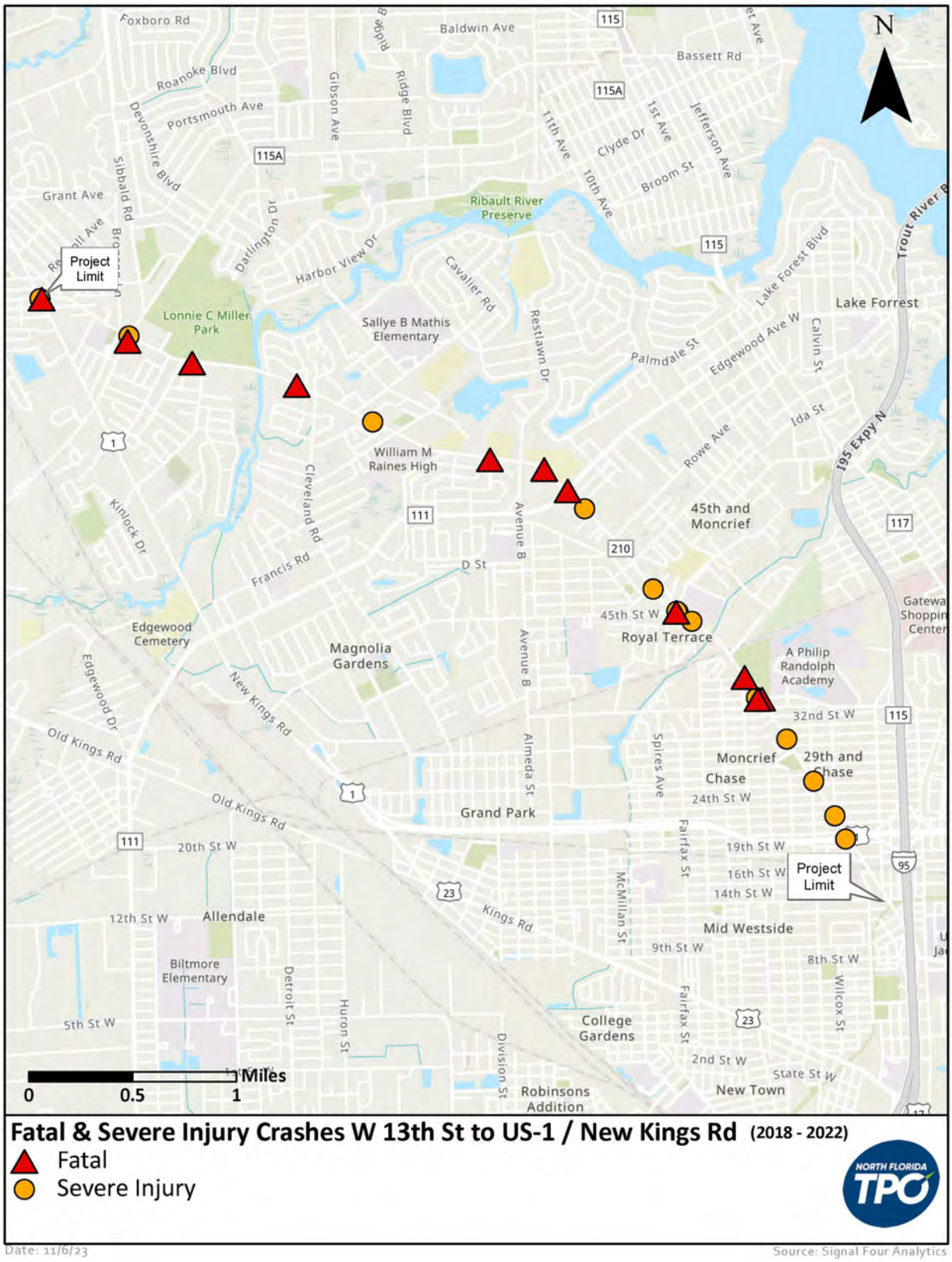


Figure 4 – KSI Crashes

1.2 PEDESTRIAN AND BICYCLIST CRASHES

As users are especially vulnerable to impacts from heavy, fast-moving vehicles, Benesch separately reviewed non-motorist crashes to identify any potential trends and the appropriate countermeasures. There were 25 pedestrian and five bicycle crashes during the study period (2018-2022).

The following trends were identified with pedestrian injury crashes.

- One pedestrian crash resulted in fatality. The crash was a result of a westbound pedestrian who walked into the path of oncoming traffic and was struck by a northbound vehicle.
- Five pedestrian crashes resulted in incapacitating injuries. Three of these crashes occurred during nighttime.
- All incapacitating pedestrian crashes occurred under dry pavement conditions.
- All incapacitating pedestrian crashes occurred as a result of pedestrians failing to cross the road at a marked crosswalk and crossing the road without caution for oncoming traffic.

The following trends were identified with bicycle injury crashes.

- Two KSI bicycle crashes, 1 fatal and 1 incapacitating injury crash, both occurring during the nighttime.
- The fatal crash was a result of the bicyclist riding against traffic; the cyclist was struck by a northbound vehicle.
- The incapacitating crash resulted from the bicyclist crossing the street without caution for oncoming traffic; the cyclist was struck by a northbound vehicle.
- All reported bicycle crashes occurred on dry pavement conditions.

Crashes by time of day are detailed in Figure 5. A higher frequency of pedestrian and bicycle crashes occur in the afternoon to evening hours from 2:00 PM to 8:00 PM.

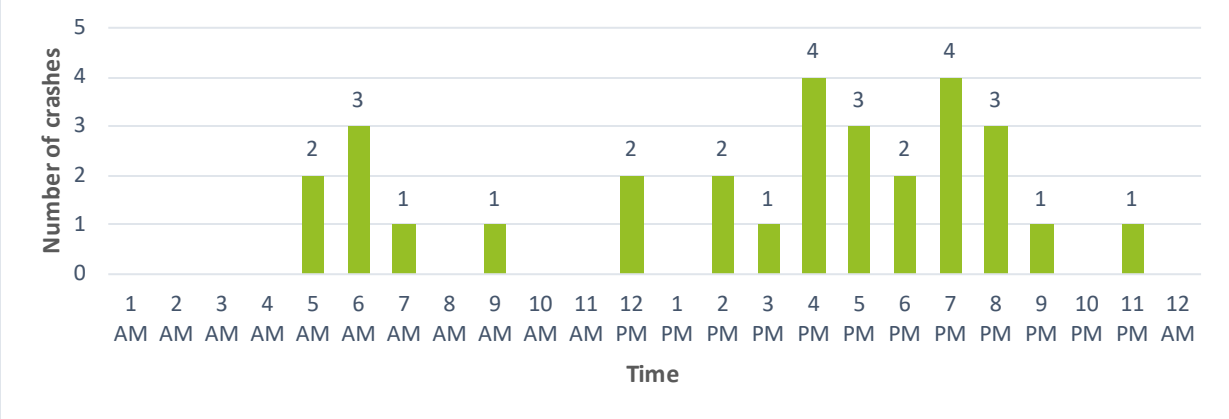


Figure 5 – Non-Motorist Crashes by Time of Day

Additional crash statistics are detailed in Figure 6. Details of the non-motorist crashes are summarized in Table 3 while the crash locations are depicted in Figure 7 through Figure 12.

PEDESTRIAN & BICYCLIST CRASHES

Crash History by Year	Fatal (K)	Incapacitating (A)	Non-Incapacitating (B)	Possible Injury (C)	No Reported Injury (O)	Total Crashes
2018	0	0	2	2	0	4
2019	0	2	0	3	0	5
2020	0	0	1	1	1	3
2021	1	2	5	1	1	10
2022	1	2	2	3	0	8
TOTAL	2	6	10	10	2	30
% of Total	0.3%	0.9%	1.5%	1.5%	0.3%	

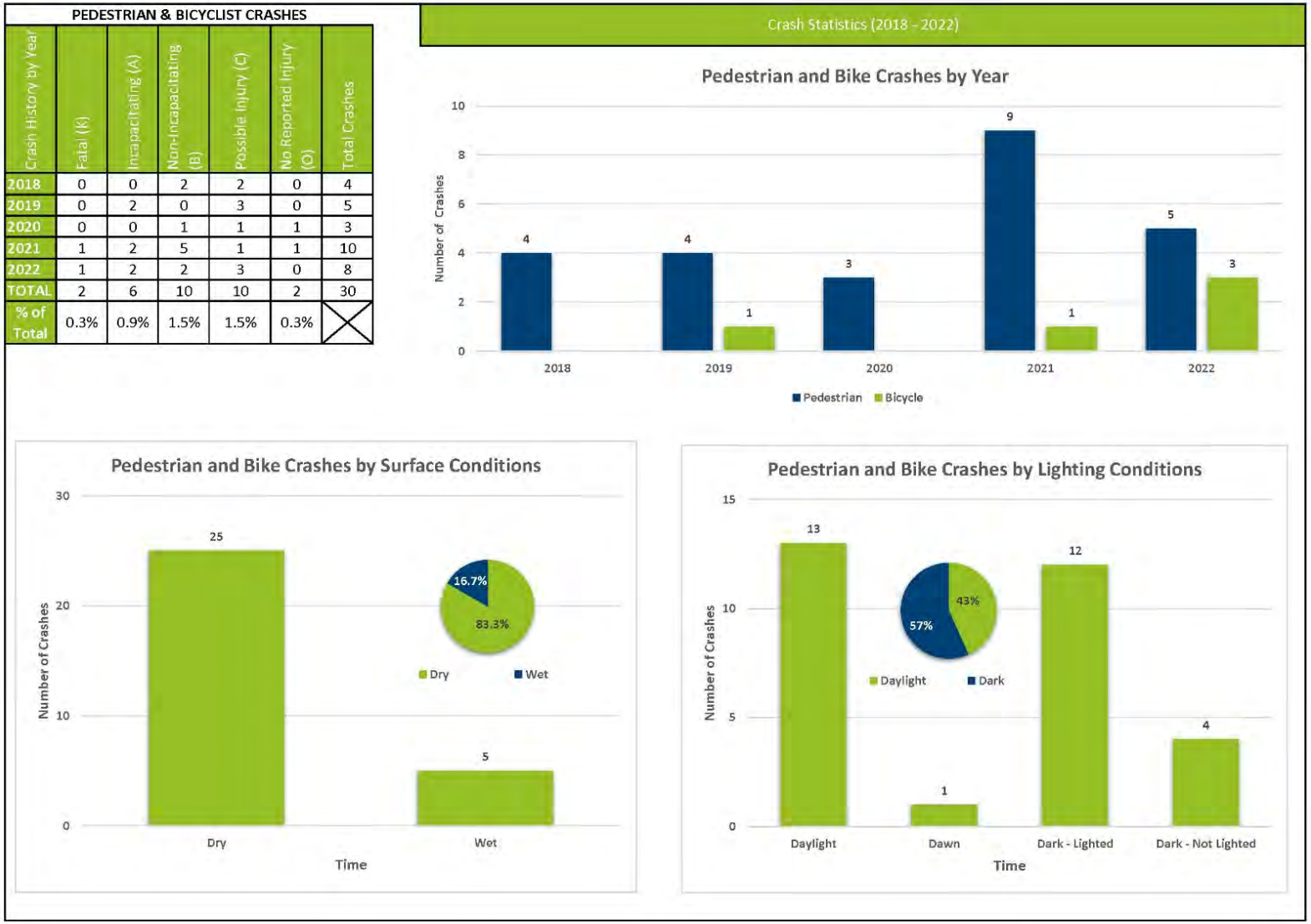


Figure 6 – Bicycle and Pedestrian Crash Statistics

Table 3 – Non-Motorist Crashes

Date	Crash Type	Injury Severity	Day, Time, Lighting , Road Conditions	Brief Summary
2/8/2018	Pedestrian	Non-Incapacitating Injury	Thursday, 5:10 PM, Daylight , Dry	EB Ped 1 was crossing the street and struck by SB V1, which fled the scene.
4/9/2018	Pedestrian	Possible Injury	Monday, 7:00 AM, Dawn , Wet	WB V1 struck SB Ped 1. Post collision, Ped 1 was thrown onto the windshield.
6/11/2018	Pedestrian	Possible Injury	Monday, 10:40 AM, Daylight , Dry	SB V1 made a right turn when exiting a gas station driveway and struck EB Ped 1 on the sidewalk. D1 had waved to allow Ped 1 and Ped 1 allowed D1 to continue through the driveway.
11/27/2018	Pedestrian	Non-Incapacitating Injury	Tuesday, 6:05 PM, Dark - Lighted , Dry	NB Ped 1 failed to yield ROW to oncoming traffic, was listening to music and stated that there were no cars coming as she crossed the road. Ped 1 was struck by EB V1.
3/25/2019	Pedestrian	Incapacitating Injury	Monday, 9:35 PM, Dark - Lighted , Dry	NB V1 struck Ped 1 crossing EB. D1 stated that he did not see Ped 1. Ped 1 was witnessed not using the crosswalk when crossing the road.
5/24/2019	Pedestrian	Possible Injury	Friday, 8:55 PM, Dark - Lighted , Dry	WB UNK V1 backed and struck Ped 1 who was walking out of a grocery store. Ped 1 was walking behind the rear passenger side of V1.
10/16/2019	Pedestrian	Possible Injury	Wednesday, 7:02 AM, Dark - Not Lighted , Dry	SB Ped 1 crossed the road 200 ft west of a marked crosswalk and was struck by EB V1.
10/24/2019	Bicycle	Possible Injury	Thursday, 1:20 PM, Daylight , Dry	EB V1 made a right turn and struck SB Bike 1 that was traveling SB on NB lanes.
11/3/2019	Pedestrian	Incapacitating Injury	Sunday, 12:19 AM, Dark - Lighted , Dry	NB Ped 1 was crossing the road into the path of EB V1 and was struck by V1. D1 thought Ped 1 was going to stop.

Date	Crash Type	Injury Severity	Day, Time, Lighting , Road Conditions	Brief Summary
1/8/2020	Pedestrian	Possible Injury	Wednesday, 3:50 PM, Daylight , Dry	NB V1s view was obstructed by a truck stopped in the road and struck WB Ped 1.
2/6/2020	Pedestrian	No Injury	Thursday, 7:30 AM, Daylight , Dry	EB V1 made a left turn, struck WB Ped 1 and fled the scene.
4/8/2020	Pedestrian	Non-Incapacitating Injury	Wednesday, 10:26 PM, Dark - Lighted , Wet	EB V1 struck SB Ped 1. V1 was found to be DUI.
3/3/2021	Pedestrian	Possible Injury	Wednesday, 1:27 PM, Daylight , Dry	NB V1 struck EB Ped 1 who was crossing the road at a 90 degree angle approximately 100 ft away from the intersection.
5/27/2021	Pedestrian	Non-Incapacitating Injury	Thursday, 9:12 PM, Dark - Lighted , Dry	NB V1 was speeding and struck EB Ped 1, who was crossing outside of a designated crosswalk.
6/17/2021	Pedestrian	Fatal (within 30 days)	Thursday, 8:48 PM, Dark - Lighted , Wet	WB Ped 1 walked onto oncoming traffic and was struck by NB V1.
6/24/2021	Pedestrian	Non-Incapacitating Injury	Thursday, 4:45 PM, Daylight , Wet	SB V1 struck EB Ped 1 as a result of Ped 1 failing to cross the road at a crosswalk. D1 stated that Ped 1 darted across the road causing a crash.
9/1/2021	Pedestrian	No Injury	Wednesday, 6:37 AM, Dark - Lighted , Dry	UNK Ped 1 walked in front of oncoming vehicles and stopped on the road. EB V1 observed Ped 1 and hit the brakes but Ped 1 started walking toward V1 and made contact with V1. Ped 1 mumbled to herself and walked away from the scene.
10/8/2021	Pedestrian	Incapacitating Injury	Friday, 8:45 AM, Daylight , Dry	EB Ped 1 attempted to cross outside of a marked crosswalk and walked into the path of traffic and was struck by NB V1.

Date	Crash Type	Injury Severity	Day, Time, Lighting , Road Conditions	Brief Summary
12/3/2021	Bicycle	Non-Incapacitating Injury	Friday, 5:00 PM, Daylight , Dry	WB V1 ran a stop sign due to obstructed view caused by a building and business sign on both sides of the road and struck SB Bike 1.
12/3/2021	Pedestrian	Non-Incapacitating Injury	Friday, 5:56 PM, Dark - Not Lighted , Dry	SB Ped 1 failed to cross the road at the designated crosswalk and was struck by WB V1 who fled the scene.
12/6/2021	Pedestrian	Non-Incapacitating Injury	Monday, 5:47 PM, Dark - Not Lighted , Dry	V1 made a left turn EB and struck Ped 1 crossing SB. Ped 1 failed to use the provided cross walk.
12/14/2021	Pedestrian	Incapacitating Injury	Tuesday, 6:37 PM, Dark - Not Lighted , Dry	SB Ped 1 failed to cross the road at the designated crosswalk and was struck by EB V2.
3/24/2022	Pedestrian	Possible Injury	Thursday, 3:34 PM, Daylight , Wet	EB V1 made a left turn and struck WB Ped 1 crossing at a marked crosswalk. Ped 1 stated that V1 may have not seen him when he began crossing the road.
6/20/2022	Bicycle	Possible Injury	Monday, 6:15 PM, Daylight , Dry	WB V1 struck NB Bike that entered the intersection from a sidewalk.
6/27/2022	Bicycle	Incapacitating Injury	Monday, 8:56 PM, Daylight , Dry	NB Bike 1 failed to yield ROW, darted into oncoming traffic and was struck by NB V2.
7/23/2022	Pedestrian	Possible Injury	Saturday, 8:00 PM, Daylight , Dry	NB V1 had stopped to allow multiple pedestrians to cross the road and as she began to accelerate V1 struck Ped 1 who was the last pedestrian crossing in the group. Ped 1 did not use the crosswalk which was about 100 ft away.
8/14/2022	Pedestrian	Non-Incapacitating Injury	Sunday, 9:37 PM, Dark - Lighted , Dry	SB Ped 1 did not cross the road at the crosswalk and was struck by UNK V1 which fled the scene.

Date	Crash Type	Injury Severity	Day, Time, Lighting , Road Conditions	Brief Summary
11/12/2022	Pedestrian	Non-Incapacitating Injury	Saturday, 7:08 PM, Dark - Lighted , Dry	SB Ped 1 attempted to cross and was struck by UNK V1. Ped 1 did not cross the road at the crosswalk.
12/21/2022	Pedestrian	Incapacitating Injury	Wednesday, 6:31 AM, Dark - Lighted , Dry	EB Ped 1 crossed the street without caution for oncoming traffic and was struck by NB V1.
12/22/2022	Bicycle	Fatal (within 30 days)	Thursday, 7:14 PM, Dark - Lighted , Dry	SB Bike 1 was riding against traffic and was struck by NB V1.

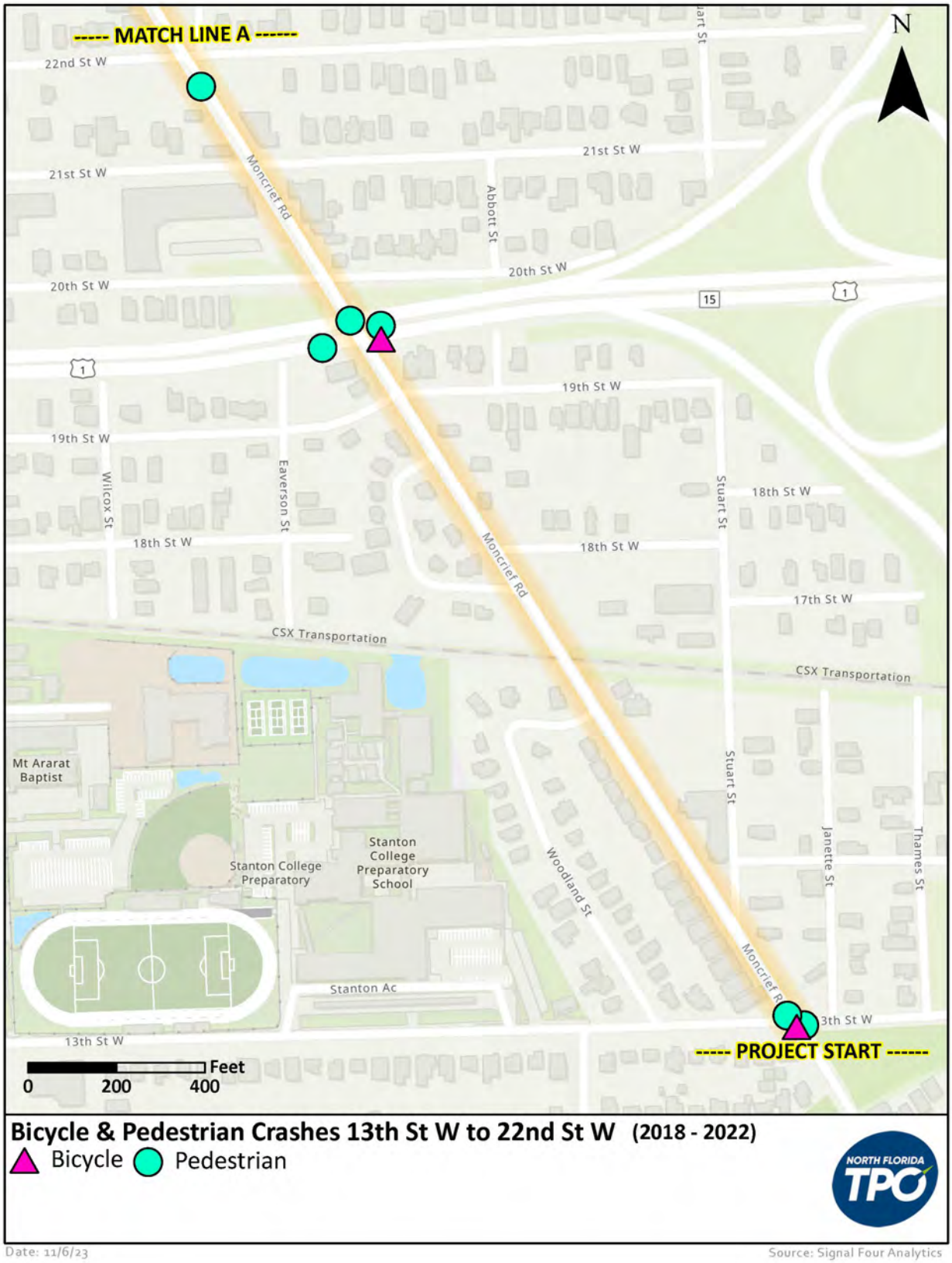


Figure 7 – Pedestrian and Bicycle Crashes Frequency and Location

Figure 8 – Pedestrian and Bicycle Crashes Frequency and Location

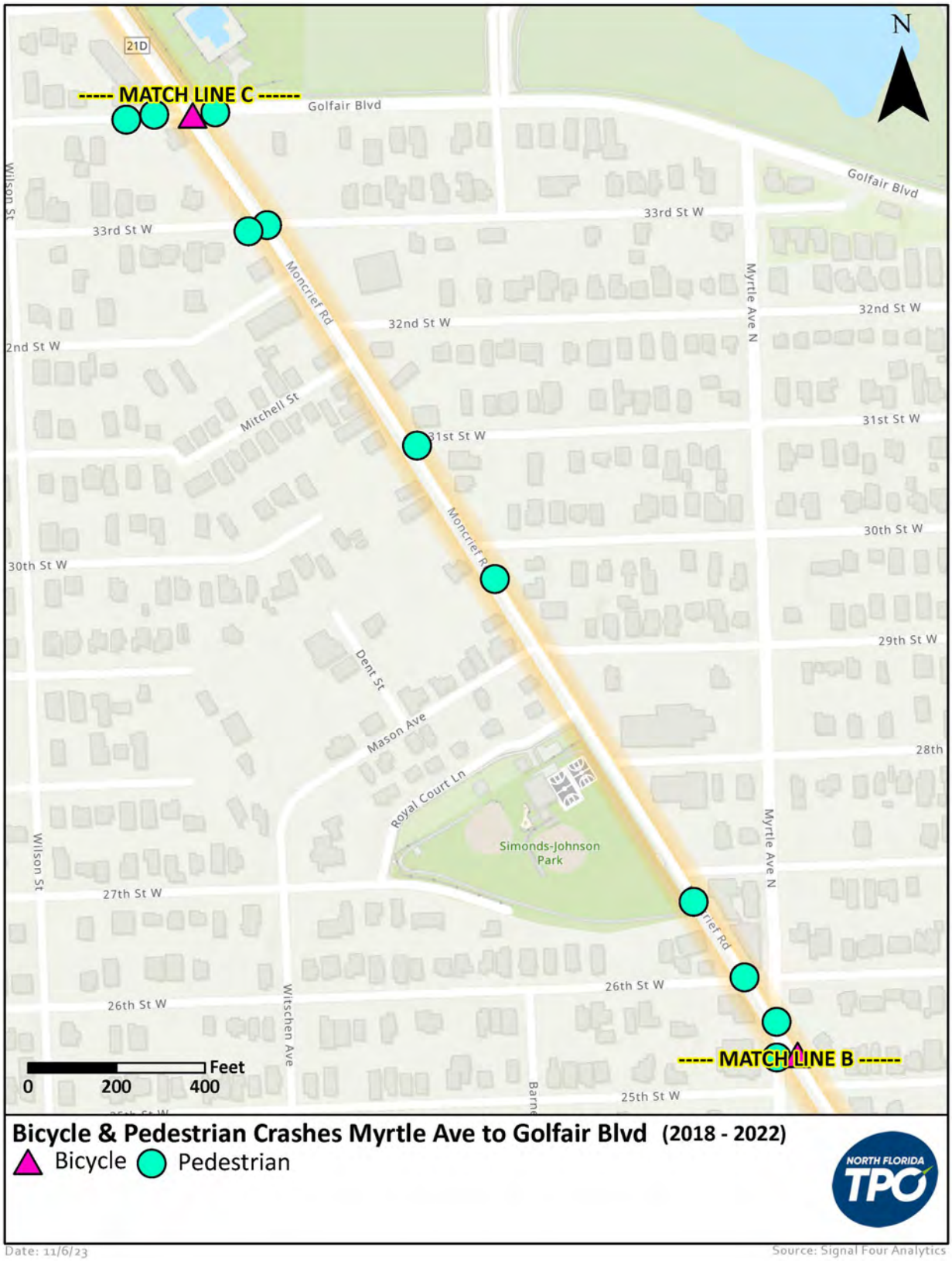


Figure 9 – Pedestrian and Bicycle Crashes Frequency and Location

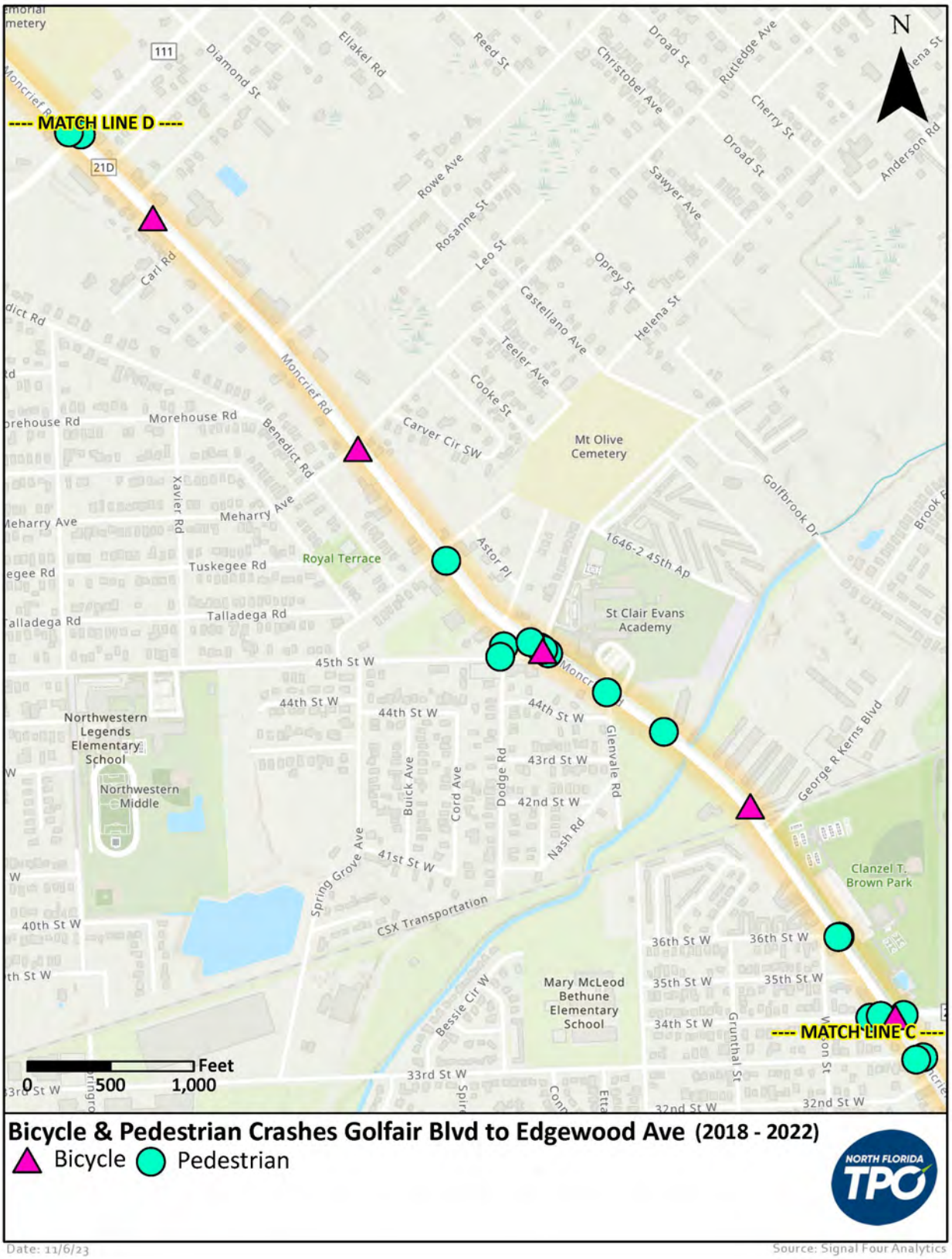


Figure 10 – Pedestrian and Bicycle Crashes Frequency and Location

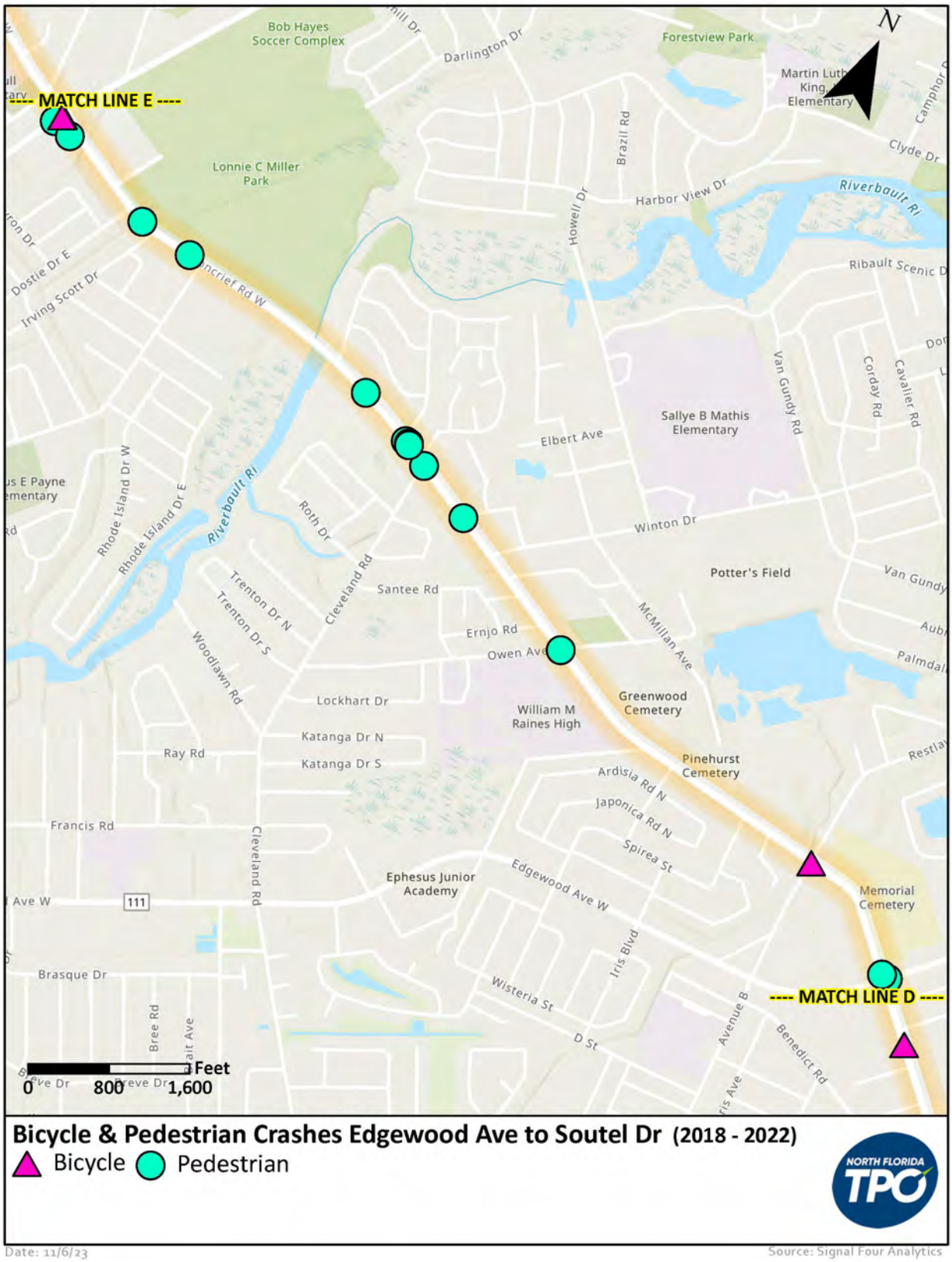


Figure 11 – Pedestrian and Bicycle Crashes Frequency and Location

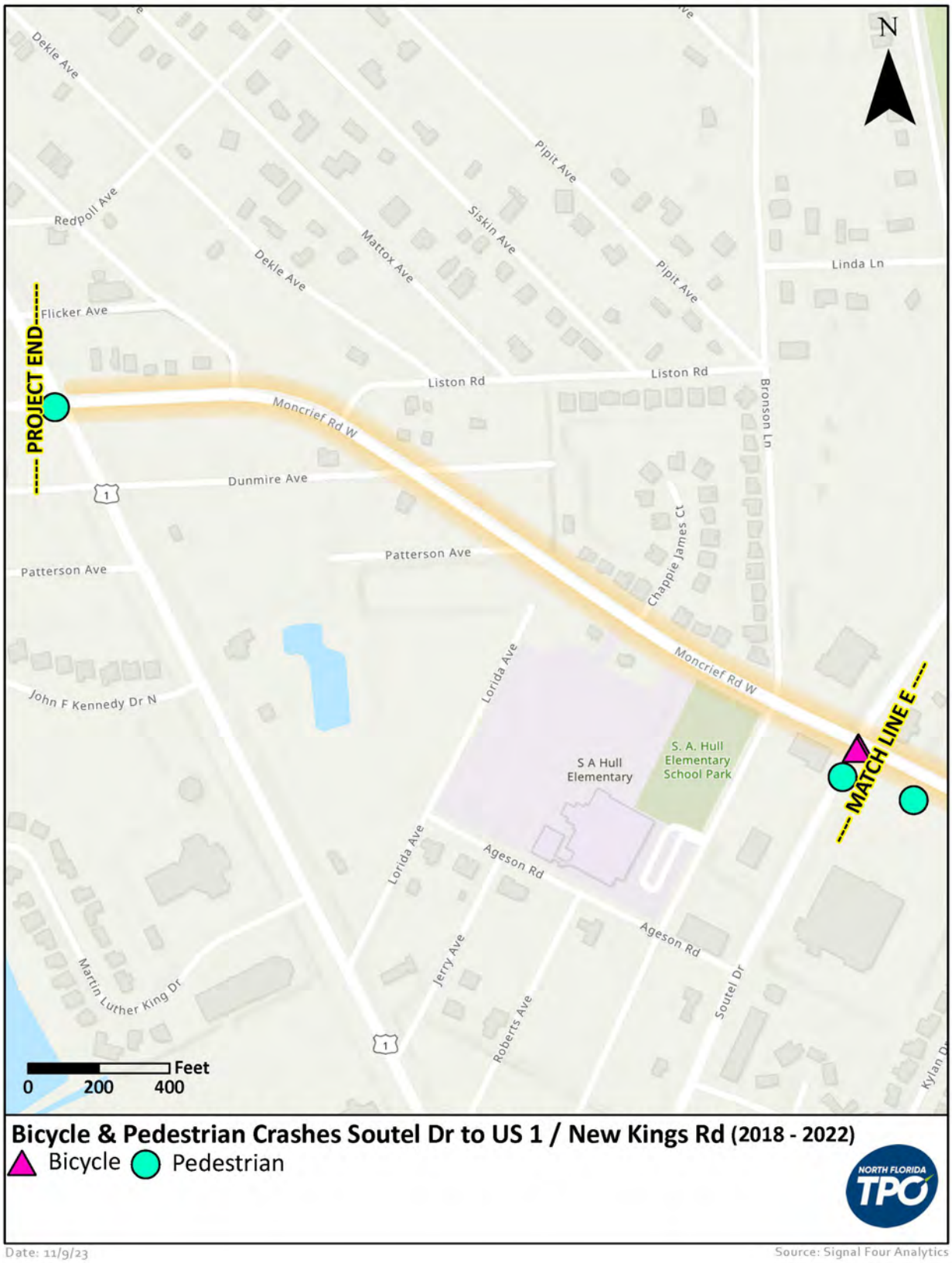


Figure 12 – Pedestrian and Bicycle Crashes Frequency and Location

APPENDIX E

Cost Estimate

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 1

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - 13th Street to MLK Parkway
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$294,752.94
300 - SIGNING & PAVEMENT MARKINGS		$36,531.77
COMPONENT SUB-TOTAL		$331,284.70
(102-1) MOT (Maintenance of Traffic)	10%	$33,128.47
SUB-TOTAL		$364,413.17
(101-1) MOB (Mobilization)	10%	$33,128.47
SUB-TOTAL		$397,541.64
Contingency	10%	$39,754.16
SUB-TOTAL		$437,295.81
CEI	15%	$59,631.25
SUB-TOTAL		$496,927.06
PROJECT GRAND TOTAL		**$496,927.06**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 1

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0160 4	TYPE B STABILIZATION	SY	1701	$20.22	$ 34,394.22
0285701	OPTIONAL BASE, BASE GROUP 01	SY	1701	$19.79	$ 33,662.79
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	7644	$2.69	$ 20,562.36
0334 1 53	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC, PG76-22	TN	140	$187.78	$ 26,364.31
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	526	$194.71	$ 102,320.11
0425 5	MANHOLE, ADJUST	EA	3	$1,439.61	$ 4,318.83
0425 6	VALVE BOXES, ADJUST	EA	3	$1,235.84	$ 3,707.52
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	606	$87.01	$ 52,728.06
0527 2	DETECTABLE WARNINGS	SF	238	$45.97	$ 10,940.86
0570 1 2	PERFORMANCE TURF, SOD	SY	1453	$3.96	$ 5,753.88
Roadway		**COMPONENT TOTAL**			**$ 294,752.94**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 1

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	10	$533.23	$ 5,332.30
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	1440	$4.12	$ 5,932.80
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	157	$8.26	$ 1,296.82
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.053	$2,925.61	$ 155.06
0711 11160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	2	$193.50	$ 387.00
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	1	$96.38	$ 96.38
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1202	$16.56	$ 19,905.12
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	0.012	$5,207.64	$ 62.49
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	0.642	$5,239.56	$ 3,363.80
Signing & Pavement Markings		**COMPONENT TOTAL**			**$ 36,531.77**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 2

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - MLK Parkway to Golfair Boulevard
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$699,747.73
300 - SIGNING & PAVEMENT MARKINGS		$118,079.44
COMPONENT SUB-TOTAL		$817,827.17
(102-1) MOT (Maintenance of Traffic)	10%	$81,782.72
SUB-TOTAL		$899,609.89
(101-1) MOB (Mobilization)	10%	$81,782.72
SUB-TOTAL		$981,392.60
Contingency	10%	$98,139.26
SUB-TOTAL		$1,079,531.86
CEI	15%	$147,208.89
SUB-TOTAL		$1,226,740.75
PROJECT GRAND TOTAL		**$1,226,740.75**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 2

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	30	$216.08	$ 6,482.40
0160 4	TYPE B STABILIZATION	SY	486	$20.22	$ 9,826.92
0285701	OPTIONAL BASE, BASE GROUP 01	SY	486	$19.79	$ 9,617.94
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	20554	$2.69	$ 55,290.26
0334 1 53	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC, PG76-22	TN	40	$187.78	$ 7,529.98
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	180	$194.71	$ 35,084.79
0425 5	MANHOLE, ADJUST	EA	7	$1,439.61	$ 10,077.27
0425 6	VALVE BOXES, ADJUST	EA	7	$873.93	$ 6,117.51
0520 5 41	TRAFFIC SEPARATOR CONCRETE- TYPE IV, 4' WIDE	LF	2158	$67.75	$ 146,204.50
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	3836	$87.01	$ 333,770.36
523-3	PATTERNED PAVEMENT, VEHICULAR AREAS - STAMPED PAVEMENT	SY	169	$126.00	$ 21,294.00
0527 2	DETECTABLE WARNINGS	SF	935	$45.97	$ 42,981.95
0570 1 2	PERFORMANCE TURF, SOD	SY	2557	$6.05	$ 15,469.85
Roadway		**COMPONENT TOTAL**			**$ 699,747.73**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 2

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	31	$533.23	$ 16,530.13
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	3501	$4.12	$ 14,424.12
0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	1028	$5.81	$ 5,972.68
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	421	$8.26	$ 3,477.46
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	1.079	$2,925.61	$ 3,156.73
0711 11160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	2	$193.50	$ 387.00
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	2	$96.38	$ 192.76
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1760	$16.56	$ 29,145.60
0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	44	$568.70	$ 25,022.80
0711 14170	THERMOPLASTIC, PREFORMED, WHITE, ARROWS	EA	44	$136.59	$ 6,009.96
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	1.241	$5,207.64	$ 6,462.68
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	1.292	$5,239.56	$ 6,769.51
0920714100	GREEN COLORED PAVEMENT MARKINGS, BIKE LANE	SY	32	$16.50	$ 528.00
Signing & Pavement Markings		**COMPONENT TOTAL**			**$118,079.44**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 3

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - Golfair Boulevard to 45th Street
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$874,139.75
300 - SIGNING & PAVEMENT MARKINGS		$41,999.36
COMPONENT SUB-TOTAL		$916,139.11
(102-1) MOT (Maintenance of Traffic)	10%	$91,613.91
SUB-TOTAL		$1,007,753.02
(101-1) MOB (Mobilization)	10%	$91,613.91
SUB-TOTAL		$1,099,366.93
Contingency	10%	$109,936.69
SUB-TOTAL		$1,209,303.63
CEI	15%	$164,905.04
SUB-TOTAL		$1,374,208.67
PROJECT GRAND TOTAL		**$1,374,208.67**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 3

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	30	$216.08	$ 6,482.40
0160 4	TYPE B STABILIZATION	SY	2942	$20.22	$ 59,487.24
0285701	OPTIONAL BASE, BASE GROUP 01	SY	2942	$19.79	$ 58,222.18
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	14592	$2.69	$ 39,252.48
0334 1 53	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC, PG76-22	TN	243	$187.54	$ 45,515.96
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	1003	$194.71	$ 195,333.07
0425 5	MANHOLE, ADJUST	EA	7	$1,439.61	$ 10,077.27
0425 6	VALVE BOXES, ADJUST	EA	7	$873.93	$ 6,117.51
0520 1 10	CONCRETE CURB & GUTTER	LF	1862	$64.80	$ 120,657.60
0520 5 42	TRAFFIC SEPARATOR CONCRETE- TYPE IV, 6' WIDE	LF	1160	$118.17	$ 137,077.20
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	1626	$87.01	$ 141,478.26
0527 2	DETECTABLE WARNINGS	SF	779	$45.97	$ 35,810.63
0570 1 2	PERFORMANCE TURF, SOD	SY	3079	$6.05	$ 18,627.95
					$ -
					$ -
					$ -
					$ -
Roadway		**COMPONENT TOTAL**			**$ 874,139.75**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 3

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	8	$533.23	$ 4,265.84
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	1772	$4.12	$ 7,300.64
0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	107	$5.81	$ 621.67
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	320	$8.26	$ 2,643.20
0711 11160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	3	$193.50	$ 580.50
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	14	$96.38	$ 1,349.32
0711 11241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.146	$3,037.00	$ 443.40
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1400	$16.56	$ 23,184.00
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	0.258	$5,207.64	$ 1,343.57
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	0.051	$5,239.56	$ 267.22
Signing & Pavement Markings		**COMPONENT TOTAL**			**$ 41,999.36**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 4

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - 45th Street to Edgewood Avenue
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$1,389,788.03
300 - SIGNING & PAVEMENT MARKINGS		$56,766.40
COMPONENT SUB-TOTAL		$1,446,554.43
(102-1) MOT (Maintenance of Traffic)	10%	$144,655.44
SUB-TOTAL		$1,591,209.87
(101-1) MOB (Mobilization)	10%	$144,655.44
SUB-TOTAL		$1,735,865.31
Contingency	10%	$173,586.53
SUB-TOTAL		$1,909,451.84
CEI	15%	$260,379.80
SUB-TOTAL		$2,169,831.64
PROJECT GRAND TOTAL		**$2,169,831.64**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 4

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	30	$216.08	$ 6,482.40
0160 4	TYPE B STABILIZATION	SY	5185	$20.22	$ 104,840.70
0285701	OPTIONAL BASE, BASE GROUP 01	SY	5185	$19.79	$ 102,611.15
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	21020	$2.69	$ 56,543.80
0334 1 53	SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC, PG76-22	TN	357	$187.78	$ 66,943.57
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	1445	$194.71	$ 281,375.42
0425 5	MANHOLE, ADJUST	EA	12	$1,439.61	$ 17,275.32
0425 6	VALVE BOXES, ADJUST	EA	12	$873.93	$ 10,487.16
0520 1 10	CONCRETE CURB & GUTTER	LF	5493	$64.80	$ 355,946.40
0520 5 42	TRAFFIC SEPARATOR CONCRETE- TYPE IV, 6' WIDE	LF	935	$118.17	$ 110,488.95
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	2164	$87.01	$ 188,289.64
0527 2	DETECTABLE WARNINGS	SF	556	$45.97	$ 25,559.32
0570 1 2	PERFORMANCE TURF, SOD	SY	10404	$6.05	$ 62,944.20
	OPTIONAL RAISED INTERSECTION (8TH AVENUE)	TN			$ -
Roadway		**COMPONENT TOTAL**			**$1,389,788.03**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 4

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	1871	$4.12	$ 7,708.52
0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	91	$5.81	$ 528.71
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	201	$8.26	$ 1,660.26
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.073	$2,925.61	$ 213.57
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	18	$96.38	$ 1,734.84
0711 11241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.116	$3,037.00	$ 352.29
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1591	$16.56	$ 26,346.96
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	1.94	$5,207.64	$ 10,102.82
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	1.54	$5,239.56	$ 8,068.92
0920714100	GREEN COLORED PAVEMENT MARKINGS, BIKE LANE	SY	3	$16.50	$ 49.50
Signing & Pavement Markings		**COMPONENT TOTAL**			**$ 56,766.40**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 5

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - Edgewood Avenue to Soutel Drive
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$6,106,830.73
300 - SIGNING & PAVEMENT MARKINGS		$116,771.74
COMPONENT SUB-TOTAL		$6,223,602.47
(102-1) MOT (Maintenance of Traffic)	10%	$622,360.25
SUB-TOTAL		$6,845,962.72
(101-1) MOB (Mobilization)	10%	$622,360.25
SUB-TOTAL		$7,468,322.97
Contingency	10%	$746,832.30
SUB-TOTAL		$8,215,155.26
CEI	15%	$1,120,248.44
SUB-TOTAL		$9,335,403.71
PROJECT GRAND TOTAL		**$9,335,403.71**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 5

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
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Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	30	$17.02	$ 510.60
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	84492	$2.69	$ 227,283.21
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	5809	$194.71	$ 1,131,031.45
0425 5	MANHOLE, ADJUST	EA	15	$1,439.61	$ 21,594.15
0425 6	VALVE BOXES, ADJUST	EA	15	$873.93	$ 13,108.95
0520 1 10	CONCRETE CURB & GUTTER	LF	13249	$64.80	$ 858,535.20
0520 5 11	TRAFFIC SEPARATOR CONCRETE-TYPE I, 4' WIDE	LF	18515	$118.57	$ 2,195,323.55
0520 5 42	TRAFFIC SEPARATOR CONCRETE- TYPE IV, 6' WIDE	LF	3231	$118.17	$ 381,807.27
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	12715	$87.01	$ 1,106,332.15
0527 2	DETECTABLE WARNINGS	SF	760	$45.97	$ 34,937.20
0570 1 2	PERFORMANCE TURF, SOD	SY	22540	$6.05	$ 136,367.00
Roadway		**COMPONENT TOTAL**			**$6,106,830.73**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 5

FINANCIAL PROJECT ID:	
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Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	3253	$4.12	$ 13,402.36
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	308	$8.26	$ 2,544.08
0711 11224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	4	$6.52	$ 26.08
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.802	$2,925.61	$ 2,346.34
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	47	$96.38	$ 4,529.86
0711 11241	THERMOPLASTIC, STANDARD, YELLOW, 2-4 DOTTED GUIDE LINE /6-10 DOTTED EXTENSION LINE, 6"	GM	0.876	$3,037.00	$ 2,660.41
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	2597	$16.56	$ 43,006.32
0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	28	$568.70	$ 15,923.60
0711 14170	THERMOPLASTIC, PREFORMED, WHITE, ARROWS	EA	28	$136.59	$ 3,824.52
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	3.1	$5,207.64	$ 16,143.68
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	2.3	$5,239.56	$ 12,050.99
0920714100	GREEN COLORED PAVEMENT MARKINGS, BIKE LANE	SY	19	$16.50	$ 313.50
Signing & Pavement Markings		**COMPONENT TOTAL**			**$116,771.74**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO - SEGMENT 6

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	Moncrief Avenue Corridor Concept - Soutel Drive to US 1 (New Kings Road)
PAY ITEM SPEC YEAR:	2023
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	February 29, 2024
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_02/24
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$880,367.65
300 - SIGNING & PAVEMENT MARKINGS		$34,873.94
COMPONENT SUB-TOTAL		$915,241.60
(102-1) MOT (Maintenance of Traffic)	10%	$91,524.16
SUB-TOTAL		$1,006,765.76
(101-1) MOB (Mobilization)	10%	$91,524.16
SUB-TOTAL		$1,098,289.92
Contingency	10%	$109,828.99
SUB-TOTAL		$1,208,118.91
CEI	15%	$164,743.49
SUB-TOTAL		$1,372,862.40
PROJECT GRAND TOTAL		**$1,372,862.40**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 02/01/2023 thru 01/31/2024

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 6

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
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Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	4	$17.02	$ 68.08
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	13156	$2.69	$ 35,389.64
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-12.5, PG 76-22	TN	904	$194.71	$ 176,095.72
0425 5	MANHOLE, ADJUST	EA	3	$1,439.61	$ 4,318.83
0425 6	VALVE BOXES, ADJUST	EA	3	$873.93	$ 2,621.79
0520 1 10	CONCRETE CURB & GUTTER	LF	2185	$64.80	$ 141,588.00
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	5747	$87.01	$ 500,046.47
0527 2	DETECTABLE WARNINGS	SF	176	$45.97	$ 8,090.72
0570 1 2	PERFORMANCE TURF, SOD	SY	2008	$6.05	$ 12,148.40
Roadway		**COMPONENT TOTAL**			**$ 880,367.65**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO - SEGMENT 6

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_02/24
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Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	989	$4.12	$ 4,074.68
0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	14	$5.81	$ 81.34
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	196	$8.26	$ 1,618.96
0711 11224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	40	$6.52	$ 260.80
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.048	$2,925.61	$ 140.43
0711 11160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	1	$193.50	$ 193.50
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	12	$96.38	$ 1,156.56
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	867	$16.56	$ 14,357.52
0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	6	$568.70	$ 3,412.20
0711 14170	THERMOPLASTIC, PREFORMED, WHITE, ARROWS	EA	6	$136.59	$ 819.54
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	1.182	$5,207.64	$ 6,155.43
0711 16102	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 8"	GM	0.029	$6,418.13	$ 186.13
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	0.444	$5,239.56	$ 2,326.36
0711 16231	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SKIP, 6"	GM	0.043	$2,104.53	$ 90.49
Signing & Pavement Markings		**COMPONENT TOTAL**			**$ 34,873.94**

NORTH FLORIDA TPO

benesch