8th Street Corridor Study

Myrtle Ave to Main St

Jacksonville, FL (Duval County)

December 2023

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Myrtle Ave to Main St

Jacksonville, FL (Duval County)

Prepared For:

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ACRONYMS

AADT	Annual Average Daily Traffic
aka	Also known as
BAC	Blood Alcohol Content
CIP	Capital Improvement Plan
COJ	City of Jacksonville
DIA	Downtown Investment Authority
FDOT	Florida Department of Transportation
FDM	FDOT Design Manual
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
MLK	Martin Luther King, Jr.
mph	Miles per hour
MVM	Million Vehicle Miles
MSV	Maximum Service Volume
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

SNAPP	Strategic Neighborhood Action Program for Pedestrians
TOD	Transit Oriented Development
TPO	Transportation Planning Organization
U2C	Ultimate Urban Circulator
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 to conduct the 8th Street Corridor Study. This study is intended to examine existing conditions and build on previously completed planning efforts to identify improvements designed to further the City of Jacksonville's desire to create a safer and more pleasurable walking and biking experience along 8th Street.

1.2 PROJECT LOCATION

8th Street is an east-west street located approximately one mile north of downtown Jacksonville in the Springfield, Hogan's Creek and Durkeeville neighborhoods. Figure 1 depicts the study corridor, which extends from Myrtle Avenue on the west to Main Street on the east. Benesch divided the approximately 1.3-mile corridor into three segments, based on ownership, typical section and neighborhood boundaries.

- Segment 1: Myrtle Avenue to Francis Street; City of Jacksonville jurisdiction (Durkee Gardens Historic District).
- Segment 2: Francis Street to Boulevard; FDOT jurisdiction.
- Segment 3: Boulevard to Main Street; City of Jacksonville jurisdiction (Springfield Historic District). This segment was reconstructed as a single complete streets project 10 to 15 years ago.

Looking along 8th St, east of Myrtle Ave.

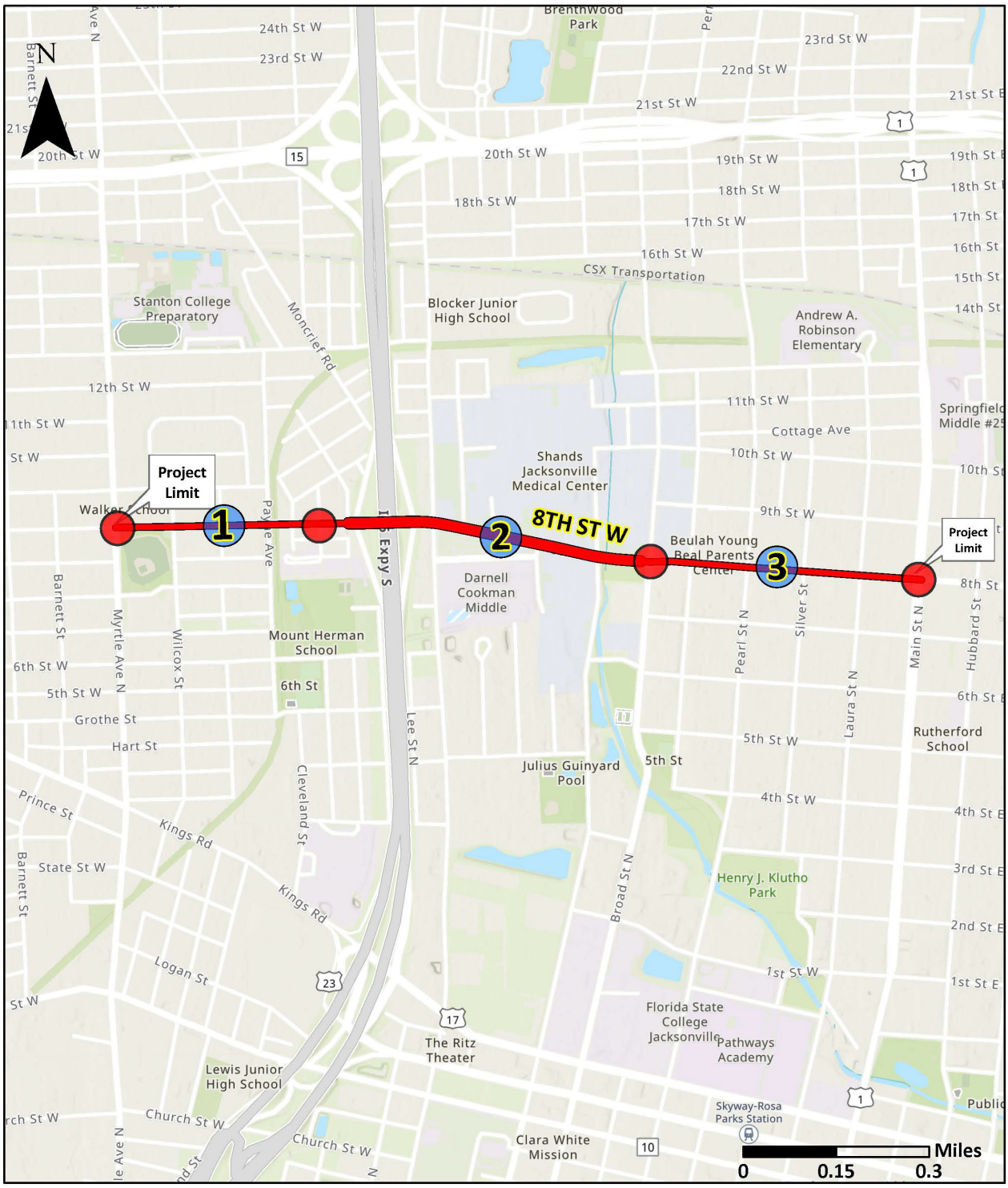


Figure 1 – 8th St Study Corridor

2 STUDY AREA DESCRIPTION

2.1 LAND USE AND ZONING

West of I-95, existing land use on the study corridor is primarily single family residential with the exception of the Myrtle Avenue intersection, which includes commercial and recreation uses. East of I-95, institutional land uses dominate from I-95 to Boulevard, transitioning to mixed use from Boulevard to Main Street. The future land use map and zoning follow the existing land uses on the corridor, with Medium Density Residential (MDR) west of I-95; Community/General Commercial (CGC) and Public Buildings and Facilities (PBF) from I-95 to Boulevard, and Commercial-Residential-Office (CRO) from Boulevard to Main Street.

2.2 COMMUNITY FACILITIES

Community facilities within the study area include schools, medical facilities and public parks. Many of the facilities are located on or near Segment 2, which offers a mix of commercial, institutional and professional land uses surrounded by residential neighborhoods. Destinations and points of interest along the corridor include the following:

- UF Health Jacksonville Campus
- Jacksonville VA Outpatient Clinic
- Duval County Health Department
- James P Small Park
- Emmett Reed Park
- John N McPherson Park
- Connection to the S-Line Urban Greenway
- Mt. Herman Exceptional Student Center
- Darnell-Cookman School of the Medical Arts (middle school)
- Springfield Middle School
- Main Street Shopping and Restaurants

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 the Jacksonville Transportation Authority's (JTA's) Complete Streets initiative, City of Jacksonville (COJ) Mobility Fee projects, recommendations from the City of Jacksonville Pedestrian and Bicycle Master Plan, Downtown Investment Authority (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. The Hogans Creek project is associated with the Emerald Trail Urban Greenway. A baseball museum as well as facility improvements will be constructed at James P. Small Park, which is at the southeast corner of Myrtle Avenue and 8th Street. These projects should be considered when making recommendations for multimodal improvements to 8th Street. These projects may already include or serve as an opportunity to add such improvements to a programmed project.

Table 1 –COJ CIP Projects

Department	Project No.	Description	Description	Prior FY	Funding Years	Total	Beyond 5
Public Works	-	8th St – I-95 to Boulevard Landscaping/Tree Planting	Landscaping, tree planting & hardscape Improvements (brick pavers, irrigation, historic lighting, benches, etc.) within the existing 8th St right-of-way to match the recently completed streetscape improvements on Jefferson St between 8th and 10th St.	-	-	-	$1.3M
Parks, Recreation & Community Services	1205	Hogans Creek Greenway	The Hogans Creek Greenway is vital in linking the Springfield / Eastside neighborhoods to downtown via a bike/pedestrian walkway. Site furnishings and landscape that reflect the historic neighborhood will be added to the existing Hogans Creek Phase I and II Greenway. Street crossings and connections will be enhanced with this project. This project is expected to tie into the Emerald Necklace.	$1.003M-	FY 23-24 FY 24-25	$250,000 $1.75 M	-
Park & Recreation	010426	James P. Small Park	The project will provide new lighting, field turf, restrooms, museum upgrades and design for a waterpark.	$6M	-	$6.6M	$600,000

2.3.2 FDOT District 2

FDOT District 2 is currently conducting a Project Development and Environment (PD&E) study for I-95, from I-10 to SR 115 (US 1) (Martin Luther King, Jr. Parkway), to evaluate alternatives to improve safety, capacity and traffic operations on I-95. The proposed project will add up to two 12-foot travel lanes in each direction on I-95. The project is also evaluating intersection and roadway improvements as well as potential changes in access to and from I-95 ramp terminals. The image below depicts a concept for the I-95 and Myrtle Avenue interchange (FPID 442414-1) to update and expand the current diamond interchange.

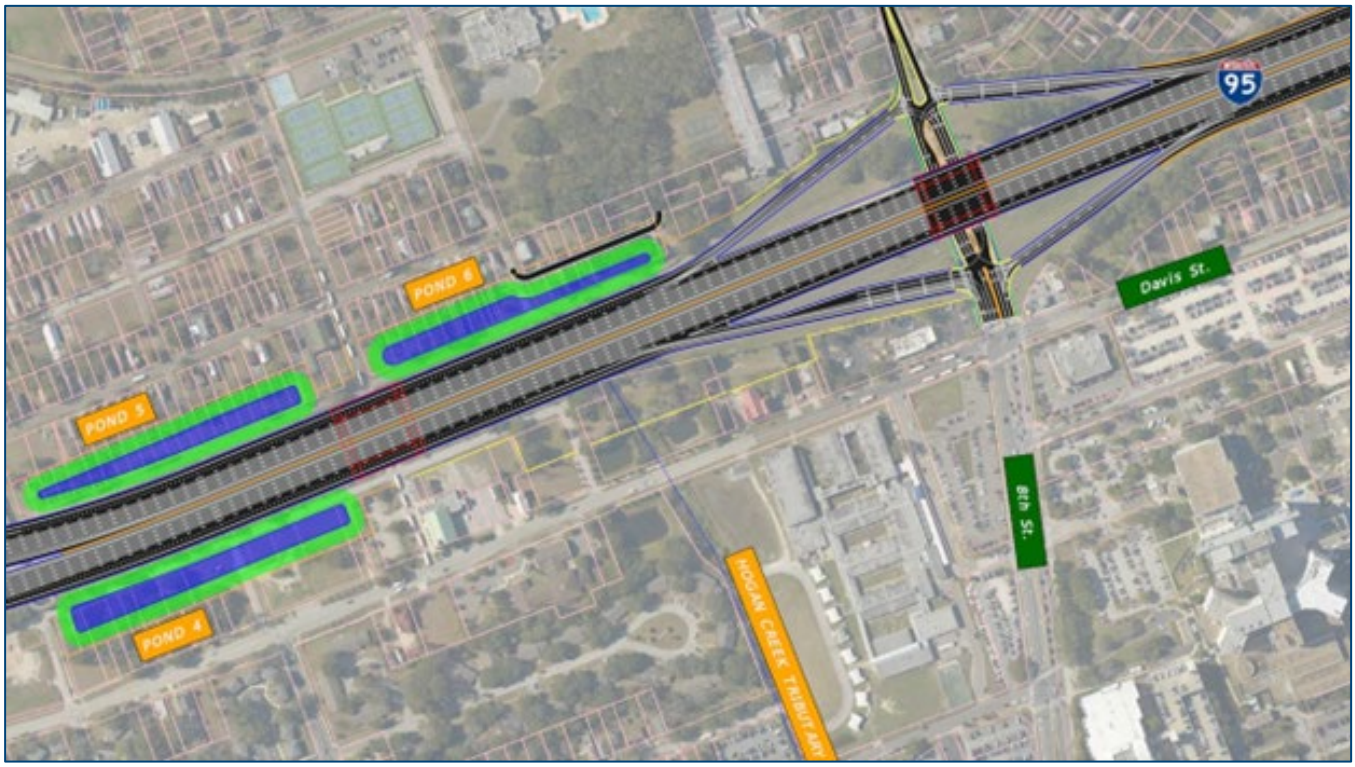
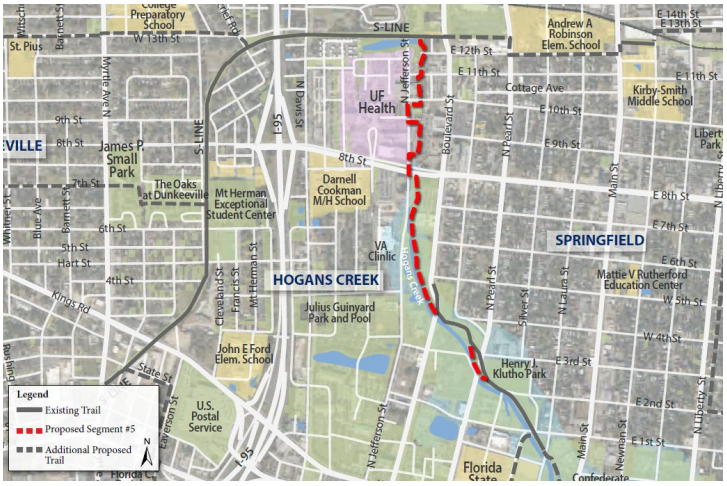


Image: FDOT

2.3.3 GroundWork Jacksonville Hogans Creek Restoration

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. Approximately six miles of the Emerald Trail are already in place, including the 1.5-mile S-Line Trail that crosses 8th Street east of Payne Avenue.

As part of the ongoing effort, Groundwork Jacksonville is partnered with the City of Jacksonville on the Hogans Creek restoration project which will restore natural creek bed and banks and will construct the Emerald Trail adjacent to the creek.



The Hogans Creek Greenway and S-Line Urban Greenway will provide connections to 8th Street as part of the 30-mile Emerald Trail. (Image: Groundwork Jacksonville)

The Hogans Creek Greenway segment is a Tier 1 project and will cross 8th Street at Jefferson Street. A future PD&E study will determine the best alternative for crossing, with 8th Street potentially spanning the restored creek via a bridge structure.

3 SUMMARY OF TRANSPORTATION PLANS, PROJECTS AND STUDIES

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

3.1 CITY OF JACKSONVILLE

3.1.1 Pedestrian and Bicycle Master Plan

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 8th Street:

- Bike Lanes – Myrtle Ave to Francis Street
- Shared Use Path - Francis Street to Davis Street (I-95 underpass)
- Separated Bike Lanes – Boulevard to Davis Street

3.1.2 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:

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

Most desired changes over the next 20 years are:

- Planned growth
- Economic revitalization
- Community services for youth

3.1.3 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 indicated 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:

- 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

3.2 JACKSONVILLE TRANSPORTATION AUTHORITY

3.2.1 JTA Mobility Works

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

Needs and recommendations specific to the 8th Street corridor include the following:

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

An artist's view of improvments to 8th St at James Hall Dr

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

3.2.2 JTA Ultimate Urban Circulator

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

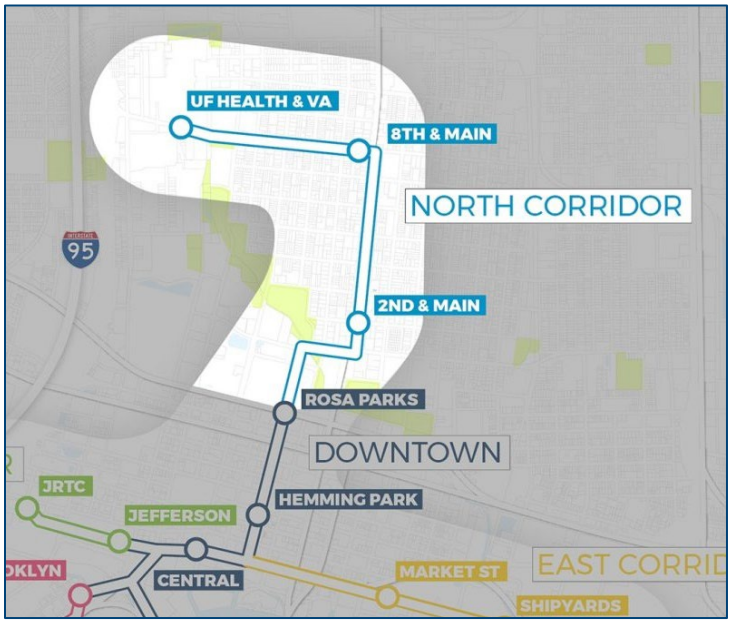
8th Street is served by the North Corridor, one of three planned future Neighborhood Extensions. JTA was awarded a RAISE grant in 2021 expected to fund the design of this phase, which is anticipated to run at grade. Stations are proposed for the UF Health Campus, plus the intersections of 2nd and Main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

Image (upper and lower): JTA

3.2.3 JTA TOD Pilot Project

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

The plan sets forth a vision to "strengthen Springfield's Main Street Corridor with strategic and context-sensitive residential and commercial Infill Development anchored by transit-centric Community Nodes at the 2nd Street and 8th Street U2C Stations."



JTA is studying the feasibility of TOD on the 8th Street corridor. Image: JTA

3.3 MISCELLANEOUS

3.3.1 2021 UF Health Jacksonville Vision Plan

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

The 2021 UF Health Jacksonville Vision Plan will make upgrades to the existing campus on 8th Street. (Image: UF Health Jacksonville)

In addition to facility upgrades, the 2021 Vision Plan includes access management enhancements, such as landscaped median islands, sidewalk and intersection improvements, between Davis Street and Boulevard.

3.4 DESIGN GUIDELINES

The study identifies appropriate and applicable design feature opportunities for 8th Street. Therefore, the products and recommendations will be 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 will include recommendations from Chapter 3.3, Speed Management, and Table 202.3.1, Strategies to Achieve Desired Operating Speed.

Additional guidelines include the 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 Federal Highway Administration (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)

4 FACILITY CHARACTERISITCS

This section describes the characteristics of 8th Street throughout the study corridor. For each segment, Benesch describes the typical section and summarizes corridor elements.

4.1 CONTEXT CLASSIFICATION

While a provisional (existing) context classification context classification applies only to FDOT roads, we assumed a context classification of C4 (Urban General) for the entire study corridor based on the FDOT District 2 Context Classification map and a review of the built environment. 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.

4.2 MAINTAINING AGENCY

Segment 1 and Segment 3 are maintained by the City of Jacksonville. Segment 2, from Francis Street to Boulevard, has FDOT jurisdiction.

4.3 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.

Table 2 details the ROW width by segment. Segments 1 and 3 have similar minimum ROW widths (66 LF to 70 LF) which is consistent with a two-lane typical section. Segment 2 is a four-lane typical section and has a minimum ROW of 104 LF.

Table 2 – ROW Width

Segment	From	To	Minimum ROW (LF)	Pavement Width (LF)
1	Myrtle Ave	Frances St	70	40
2	Frances St	Boulevard	104	64
3	Boulevard	Main St	66	41

4.4 FUNCTIONAL CLASSIFICATION

The four-lane section of 8th Street (Segment 2) is classified as an Arterial. Segments 1 and 3 are classified as a Minor Arterial (Urban).

4.5 EXISTING TRAFFIC VOLUMES

Traffic volumes on the corridor were obtained from the FDOT Florida Traffic Online website and from the City of Jacksonville Planning and Development Department. The counts are provided in Table 5. There are no counts for the west end of the corridor from Myrtle Avenue to I-95

The highest traffic volumes are recorded near Dr. Baker Street, between I-95 and the entrance to UF Health Jacksonville. At this location, the annual average daily traffic volume (AADT) is 18,400 vehicles per day (vpd) which decreased to 12,500 vpd west of Boulevard and 9,172 vpd east of Pearl Street. Similar to the AADT, the highest peak hour volumes east of Dr. Baker Street, with approximately 1,500 vehicles per hour (vph) in the a.m. and p.m. peak hours.

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 3. At current peak hour traffic volumes, 8th Street is operating at above the level of service (LOS) standard and has ample capacity for current traffic volumes.

The counts, LOS Tables and supporting documentation are provided in Appendix A.

Table 3 – Traffic Volumes

Location	Year	AADT	LOS Std	Peak Hour MSV[1,2]	Peak Volume		LOS	
					AM	PM	AM	PM
8th St, E/O Dr. Roy Baker St. [FDOT]	2022	18,400	D	3,412	1,515	1,488	C	C
8th St, 200 ‘ W/O Boulevard [FDOT]	2022	12,500	D	3,412	917	1,083	C	C
8th St, 150' E/O Pearl St [COJ]	2023	9,172	E	2,041	677	743	D	D

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

[2] *Maximum Service Volume*

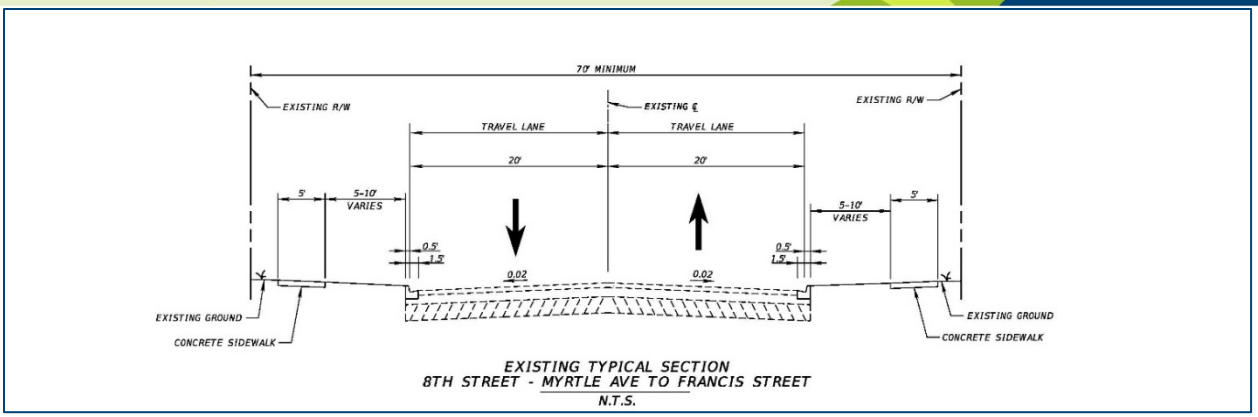
4.6 TYPICAL SECTION

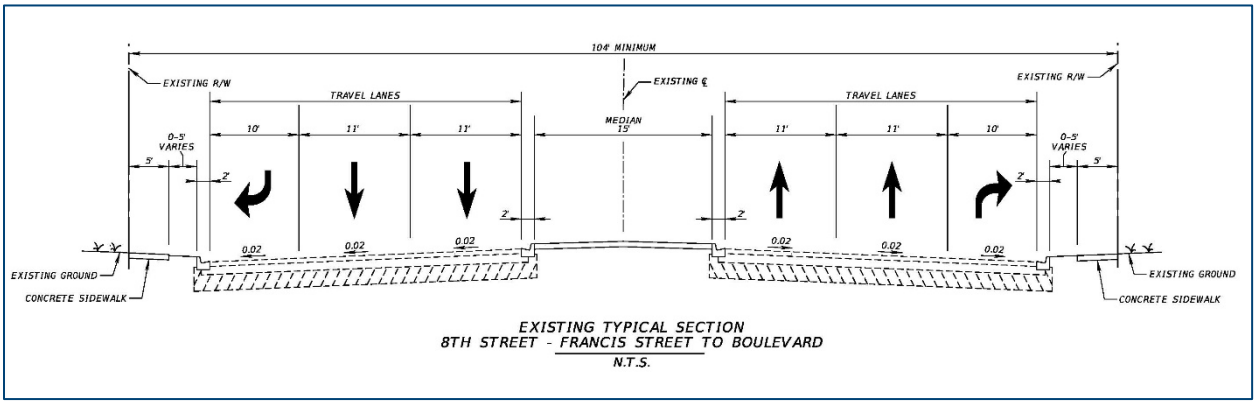
The existing typical sections for 8th Street are described below and depicted in Figure 2. They are also provided in Appendix B.

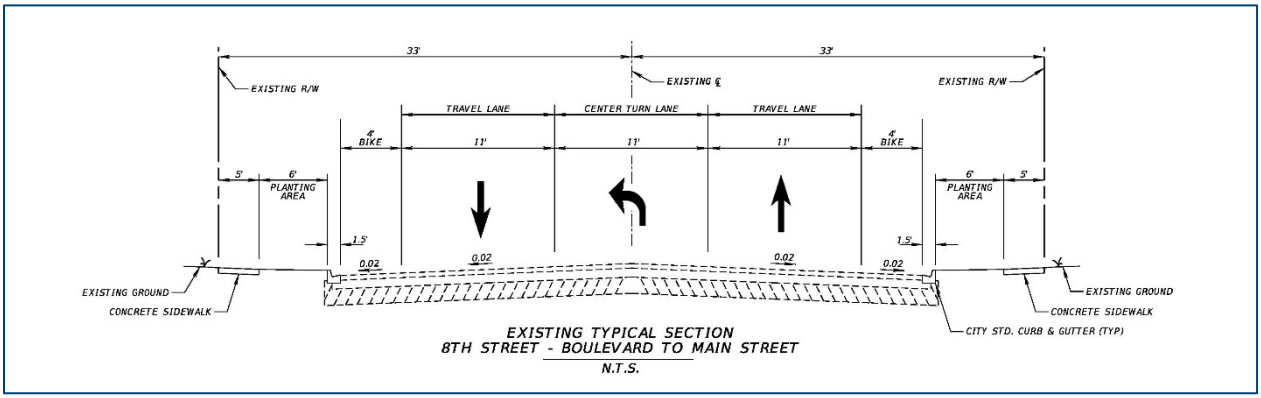
- Segment 1 (Myrtle Avenue to Francis Street): 2, 20-LF lanes with curb and gutter and a 5-LF sidewalk on both sides.
- Segment 2 (Francis Street to Boulevard): 4, 11-LF lanes with a 15-LF raised median and a 5-LF sidewalk on both sides. Left and/or right turn lanes at key intersections.
- Segment 3 (Boulevard to Main Street): 2, 11-LF lanes with a center turn lane or median island, 4-LF bike lanes and a 5-LF sidewalk on both sides.

4.7 POSTED SPEED LIMIT

The 8th Street corridor has a 30 mph posted speed limit (PSL) throughout the study limits. Although PSL is a different element from design speed, the posted speed is indicative of the design speed.







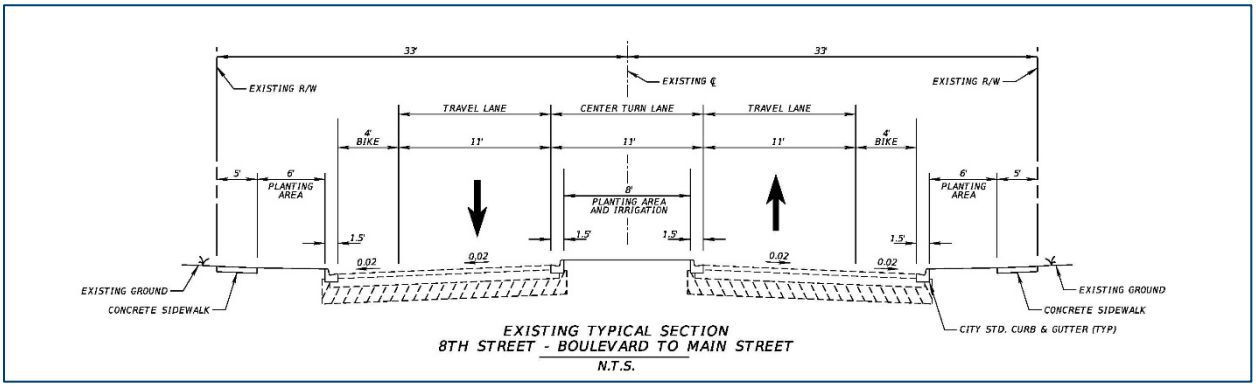


Figure 2 – Existing Typical Sections

4.8 SIGNALIZED INTERSECTIONS AND CROSSINGS

Ten signalized intersections are on the corridor. Table 4 describes the intersection geometry and signal equipment. Protected pedestrian crosswalks are present throughout the corridor at signalized intersections, as indicated in the table. Additionally, a marked crossing for the S-Line Urban Greenway is located east of Payne Avenue. The crosswalk is equipped with an RRFB and advance warning flashers.

Table 4 – Signalized Intersections and Crossings

Cross St	Turn Lanes	Crosswalks	Signal Backplates	FYA	Pedestrian Equipment
Myrtle Ave	NB Left SB Left	Standard crosswalks on 4 legs	No	No	Non-countdown pedestrian signals
I-95 SB Ramps	WB Left	Standard crosswalks, north and south legs	No	No	Countdown pedestrian signals
I-95 NB Ramps	NB Left/NB Right EB Left WB Right	Standard crosswalks on north leg Special Emphasis crosswalks on south leg	No	No	Countdown pedestrian signals
Davis St	NB Left SB Left EB Left WB Left	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
Dr. James Hall Dr	NB Left/NB Right SB Right	Special Emphasis crosswalks on east and south legs	No	No	Countdown pedestrian signals
Illinois St	SB Left EB Left/EB Right WB Left/WB Right	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
Jefferson St	NB Left SB Left/SB Right EB Left/EB Right WB Left/WB Right	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
Boulevard	NB Left SB Left EB Left/EB Right WB Left	Special Emphasis crosswalks on 4 legs	No	No	Countdown pedestrian signals
Pearl St	EB Left WB Left	Decorative stamped asphalt crosswalks on 4 legs	No	No	Non-countdown pedestrian signals

Cross St	Turn Lanes	Crosswalks	Signal Backplates	FYA	Pedestrian Equipment
Main St	NB Left SB Left EB Left WB Left	Decorative stamped asphalt crosswalks on 4 legs	No	No	Countdown pedestrian signals

4.9 LIGHTING

From Myrtle Avenue to Jefferson Street, overhead single Cobra light fixtures are on the south side of the road. From Jefferson Street to Boulevard, Cobra fixtures are on both sides of the road. Between Boulevard and Main Street, pedestrian scale, decorative street lights on both sides of the road.

4.10 UTILITIES

On the 8th Street study corridor, multiple utility companies and infrastructure are along, under and above the road. Based on information provided through Sunshine One Call (Sunshine 811), Utility Agent/Owners (UAOs) are listed in Table 5 and include cable, fiberoptic and telephone lines; electric and gas; and overhead electric.

Above ground pedestals, poles, junction boxes and other utility markers adjacent to existing right of way are present along the corridor and at study intersections.

Table 5 – Utilities

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

Source: Sunshine OneCall (Sunshine 811)

4.11 RAILROADS

There are no at grade rail crossing on the 8th Street study corridor.

4.12 BICYCLE AND PEDESTRIAN FEATURES

As depicted in the typical sections, there are no bicycle facilities in Segments 1 or 2. In Segment 3, between Boulevard and Main Street, 4-LF bike lanes are on both sides of the road.

In all three segments, a continuous 5-LF sidewalk is along 8th Street on both sides of the roadway throughout the study corridor. The existing facilities are mainly in good condition.

From a multimodal perspective, improving the connectivity along 8th Street provides opportunities to reduce pedestrian/bicycle/auto conflict points and increase multimodal safety within the corridor. Increased multimodal connectivity may also reduce short local auto trips.

4.13 TRANSIT DATA/ROUTES

JTA provides transit service throughout the Jacksonville metro area and has several routes that serve 8th Street, east of I-95.

- Route 1 (North Main) – Stop at 8th Street and Main Street
- Route 3 (Moncrief) – Stop at 8th Street and UF Health Jacksonville
- Route 21 (Boulevard) – Stop at 8th Street and Boulevard

West of I-95, Route 12 (Myrtle/Lem Turner) makes multiple transit stops on Myrtle Avenue although there is no stop at 8th Street. The closest stop to this section of the corridor is at Myrtle Avenue and 13th Street.

4.14 ENVIRONMENTAL JUSTICE

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

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

- Calculate the countywide average threshold for each indicator
- Assign indicator categories to block groups based on the standard deviation of the indicator's dataset
- Calculate the comparative score for each indicator
- Calculate the equity composite score
- Assign the equity composite score category to each block group

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

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

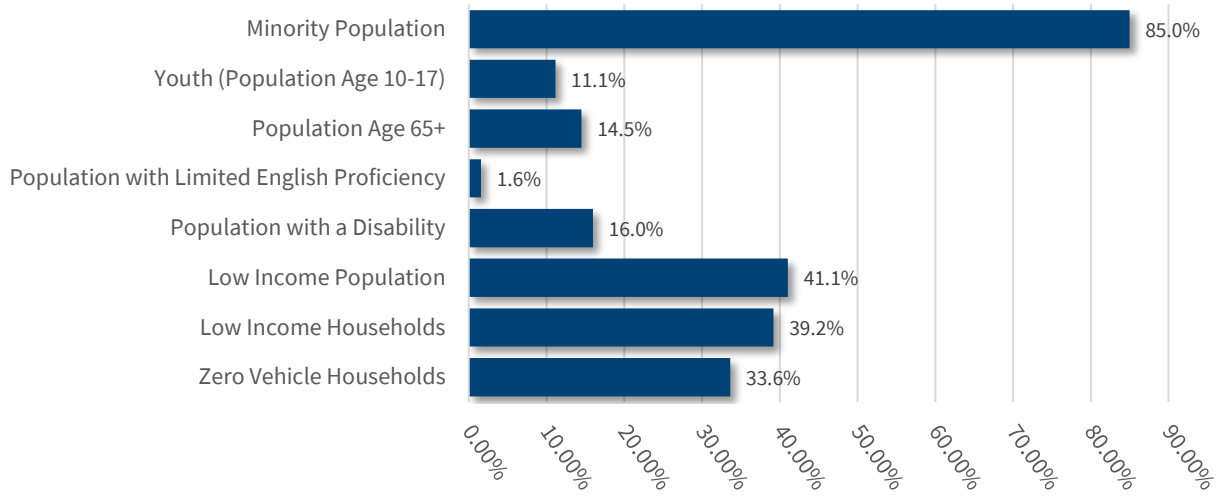


Figure 3 – Corridor Demographic Indicators

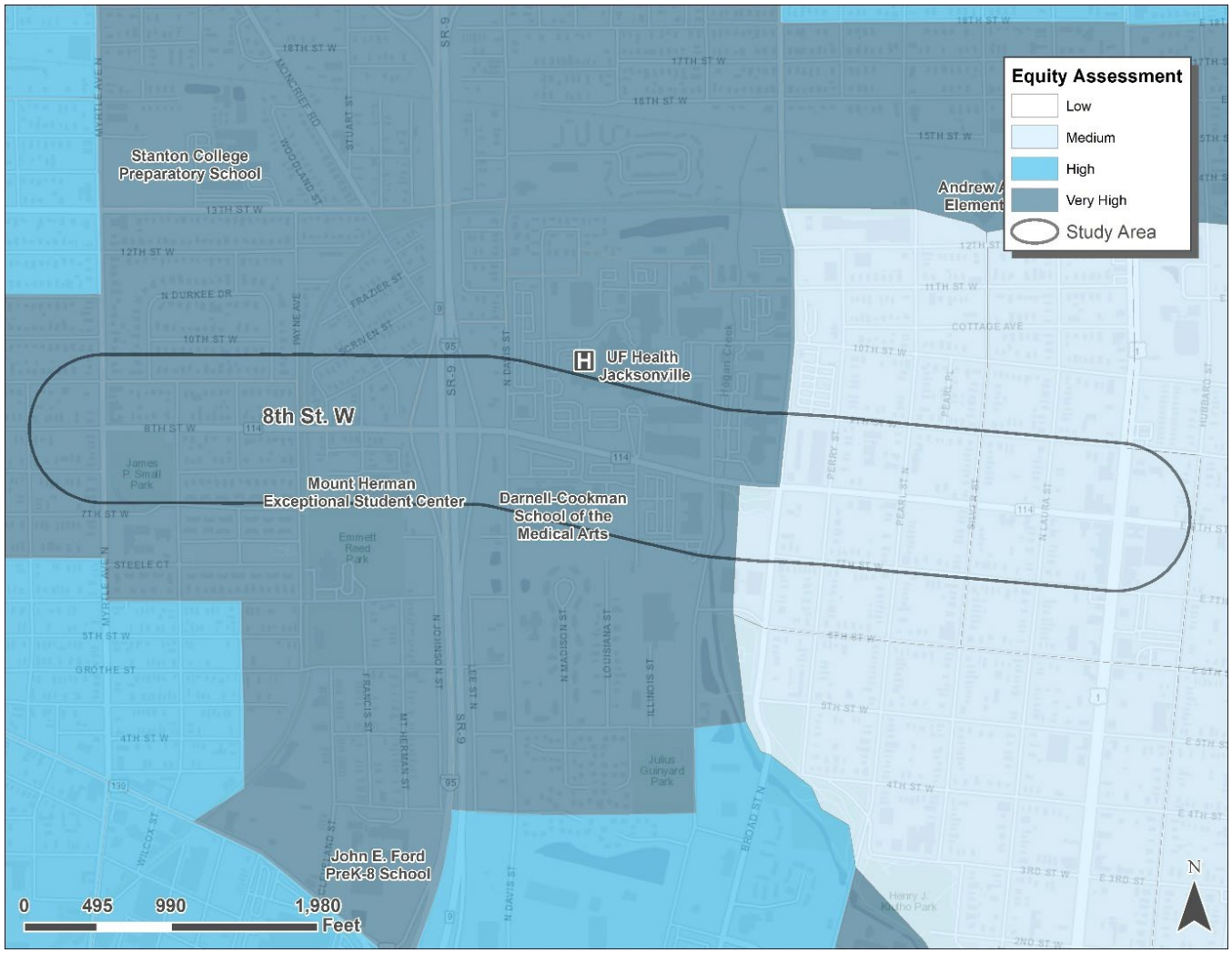


Figure 4 – Environmental Justice Composite Rankings

5 SAFETY ASSESSMENT

Crash records were obtained for the study corridor for a six-year period (2015 through 2020) from the University of Florida's Signal Four Analytics. Although a five-year review of crashes is typical, a six-year analysis was performed to account for the unusual trends that arose during the height of the Covid-19 pandemic in 2020. A review of total crashes including pedestrian and bicycle crashes were conducted.

5.1 TOTAL CRASH REVIEW

There were 641 total reported crashes during the crash review period, which are summarized by severity in Figure 5. Of the 641 crashes, approximately 70% (451) of the crashes were property damage only (PDO) crashes or crashes that didn't result in an injury or possible injury. No fatalities occurred as a result of a traffic crash during the review period, but eight incapacitating/serious injury crashes occurred.

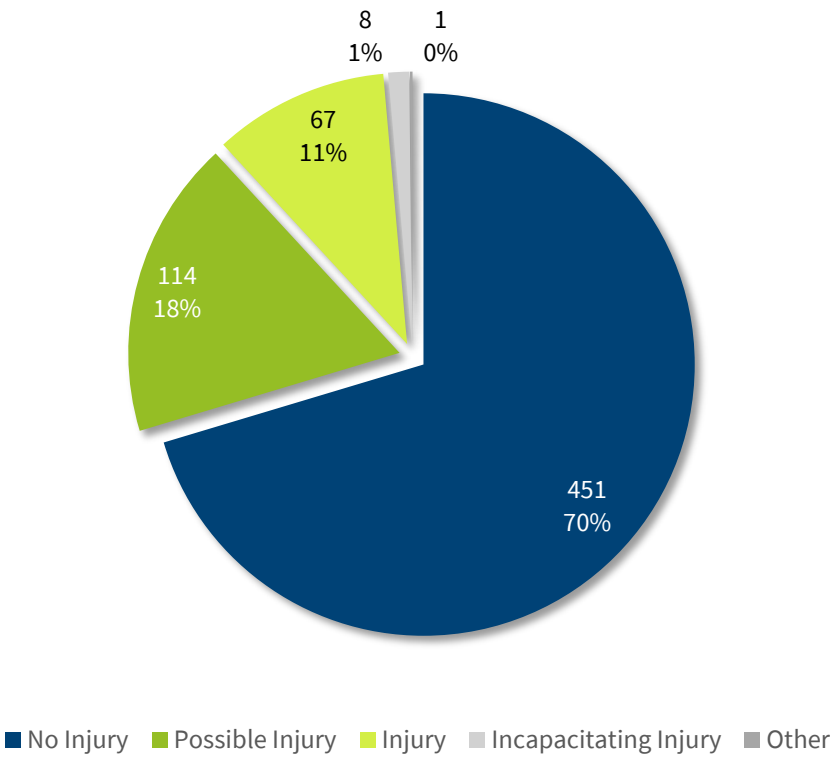


Figure 5 – Crash Injury Severity Summary

Figure 6 shows the annual distribution of total crashes throughout the corridor; as shown, 2018 recorded the most crashes with 126, and while the 98 crashes in 2020 are an improvement from the high mark, the number of crashes in 2020 was higher than the number of crashes (95) at the beginning of the review period in 2015.

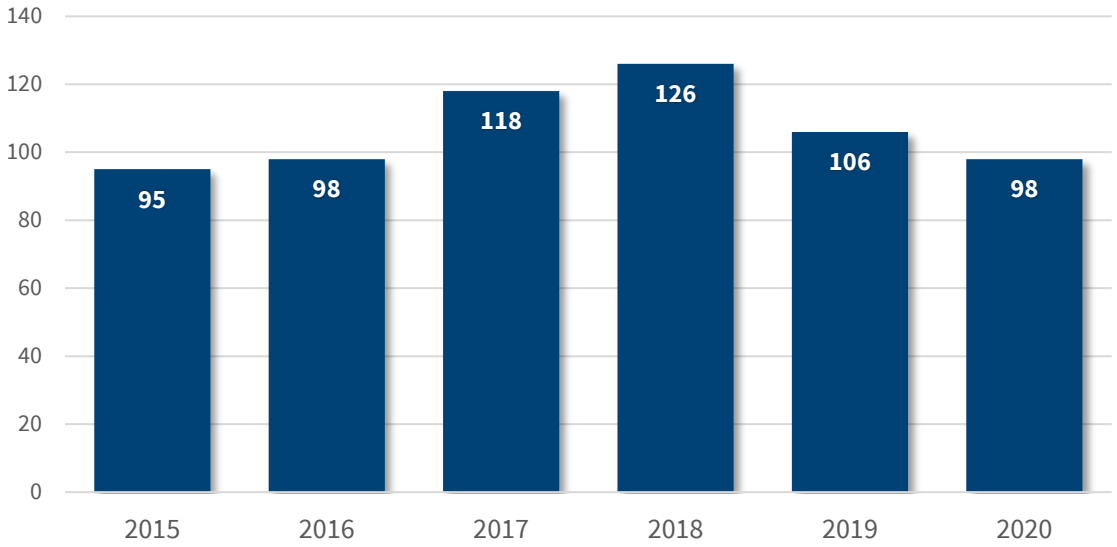


Figure 6 – Total Crash Annual Distribution

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

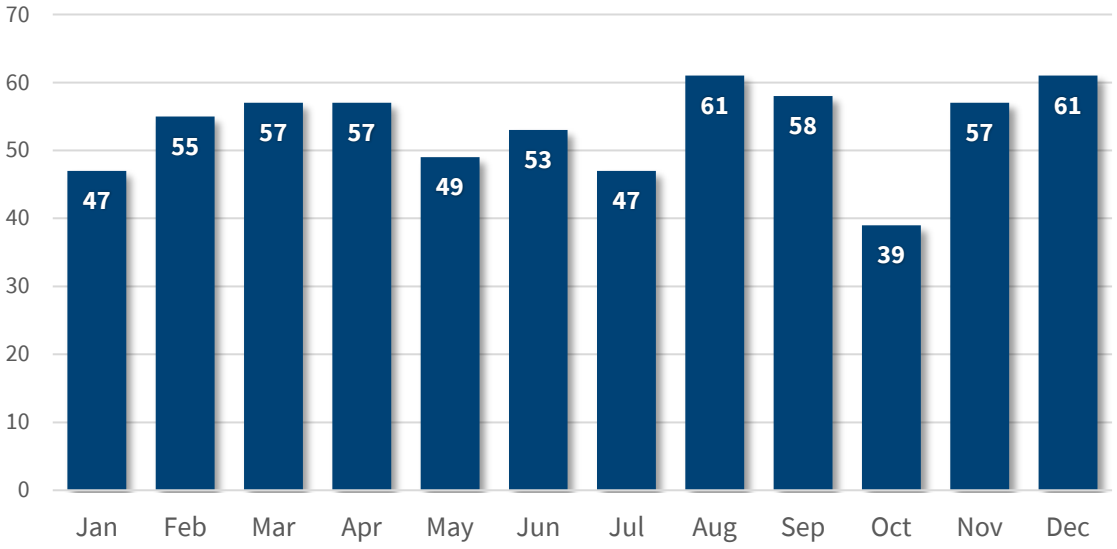


Figure 7 – Total Crashes by Month

Figure 8 shows crashes by day of the week. The number during weekdays was relatively consistent, with Tuesdays having the most with 116 and Sundays having the fewest crashes with 44 during the six-year period.

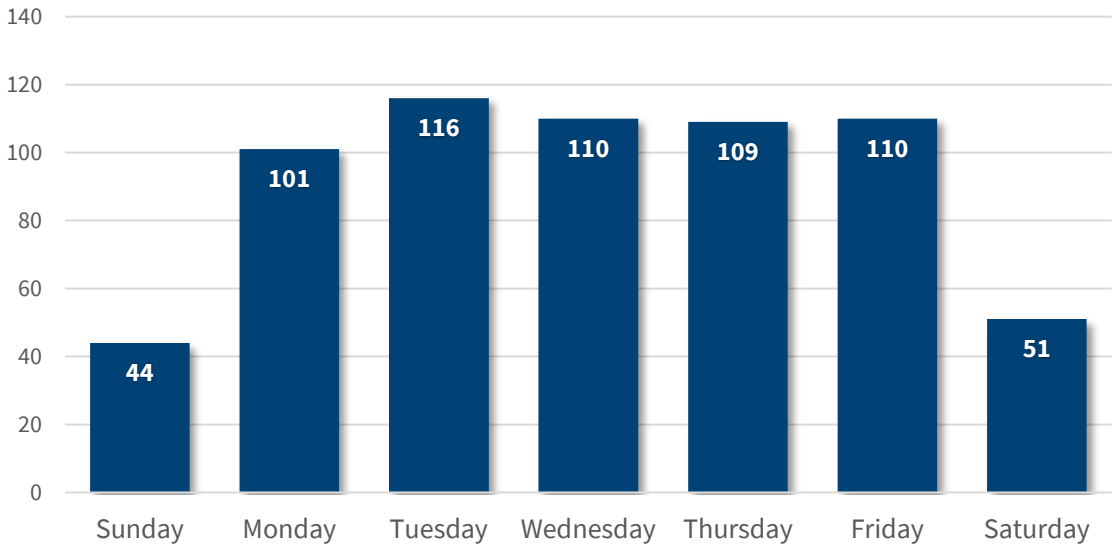


Figure 8 – Total Crashes by Day of the Week

Figure 9 details crashes by time of day. Outside the 4 p.m. and 9 a.m. hours, total crashes within the corridor are relatively constant throughout the daytime hours.

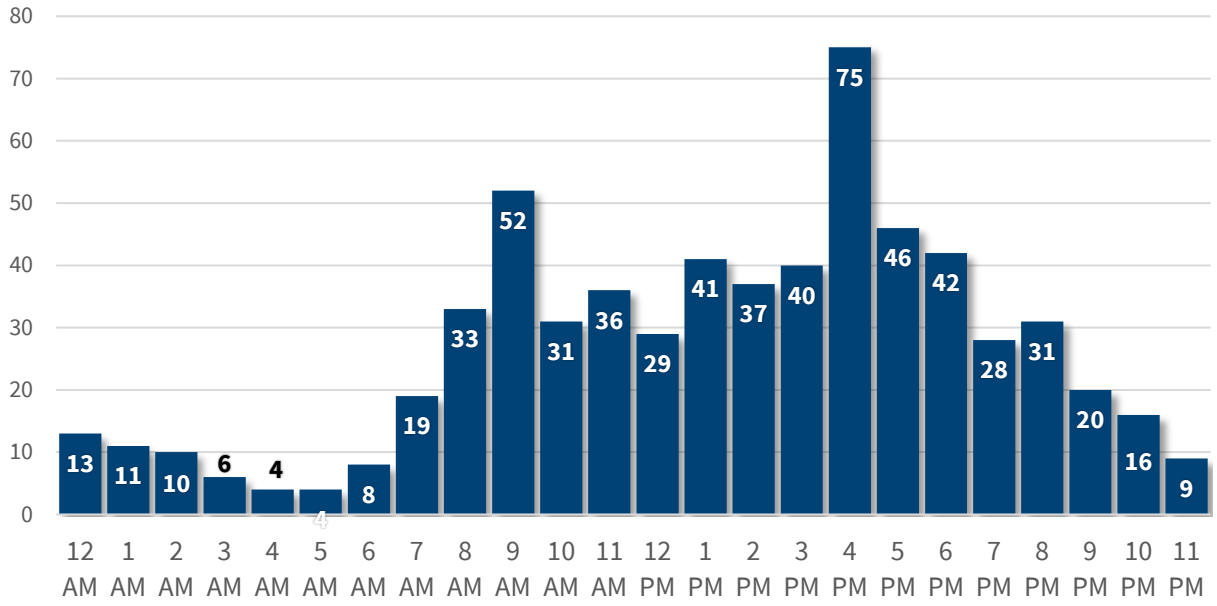


Figure 9 – Total Crashes by Time of Day

Additional contributing crash factors were evaluated to better understand the conditions and locations where crashes have occurred. Figure 10 shows the distribution of total crashes by lighting condition, as shown over 75% of the crashes occurred during daylight conditions.

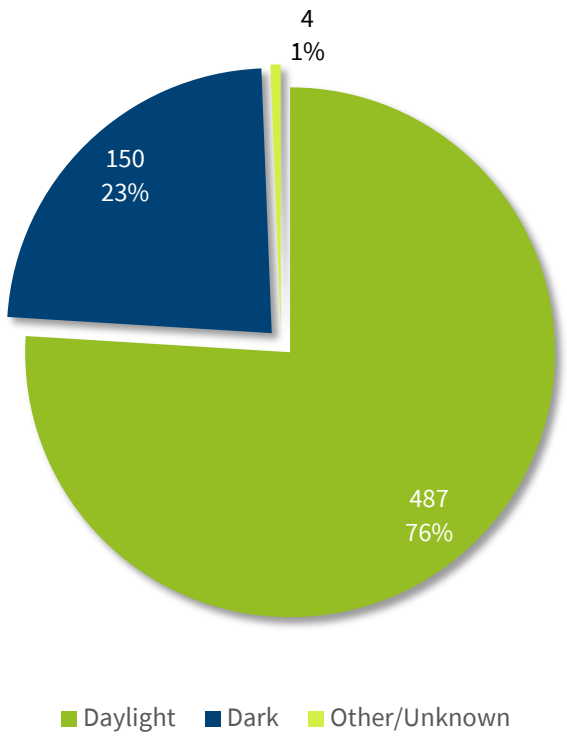


Figure 10 – Total Crashes by Lighting Conditions

Figure 11 shows the distribution of total crashes by weather conditions, 78% of the crashes occurred during clear weather conditions, with just 7% occurring during rainy conditions.

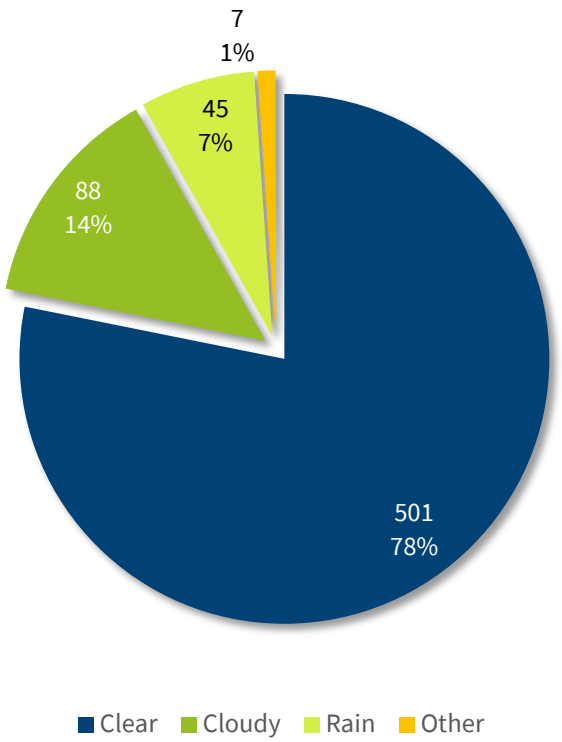


Figure 11 – Total Crashes by Weather Conditions

Figure 12 shows the distribution of total crashes based on the location of the crash in relation to an intersection. As shown, over half (54%) of the total crashes along 8th Street occurred at or near an intersection.

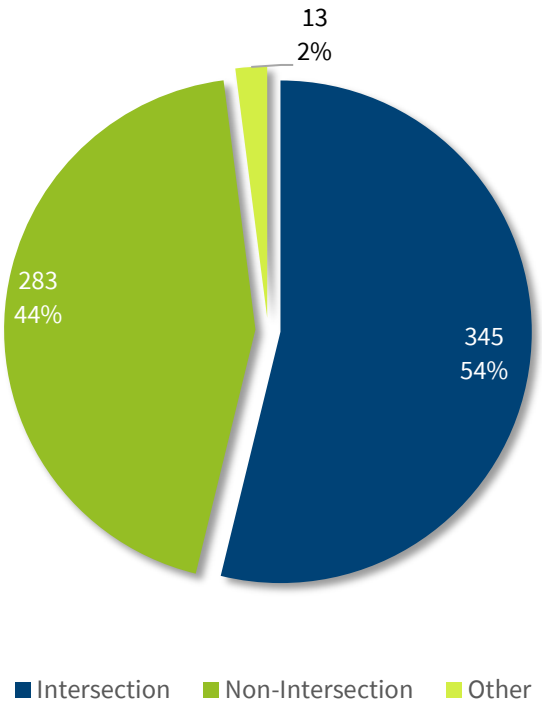


Figure 12 – Total Crashes by Location

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

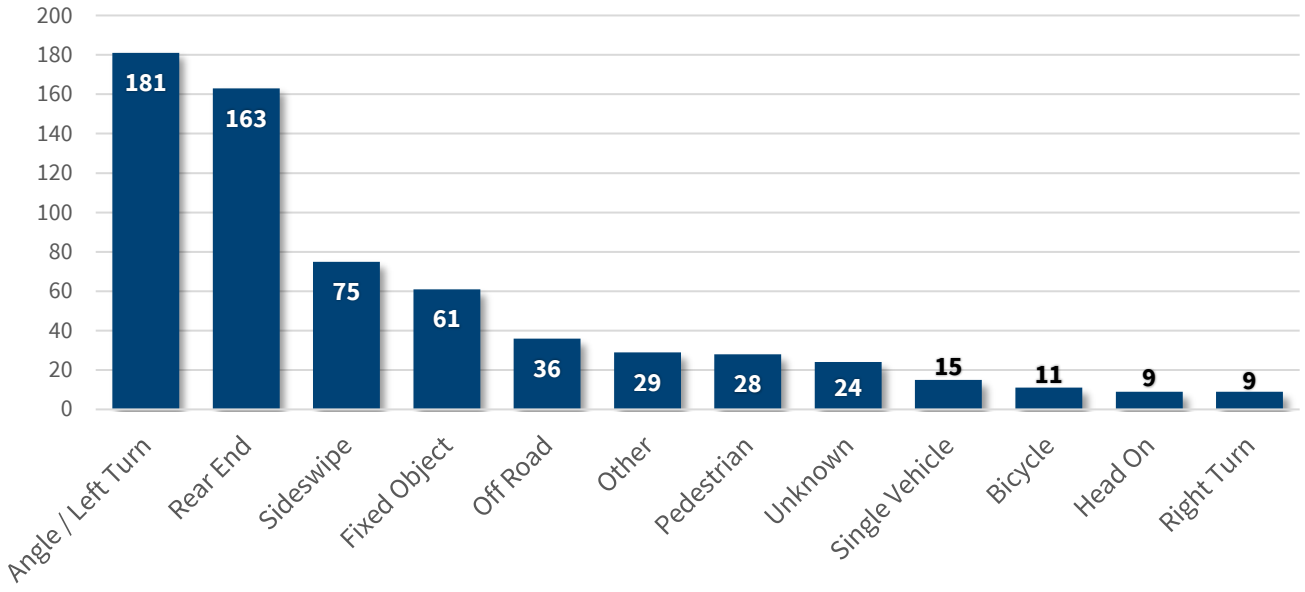


Figure 13 – Total Crashes by Crash Type

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

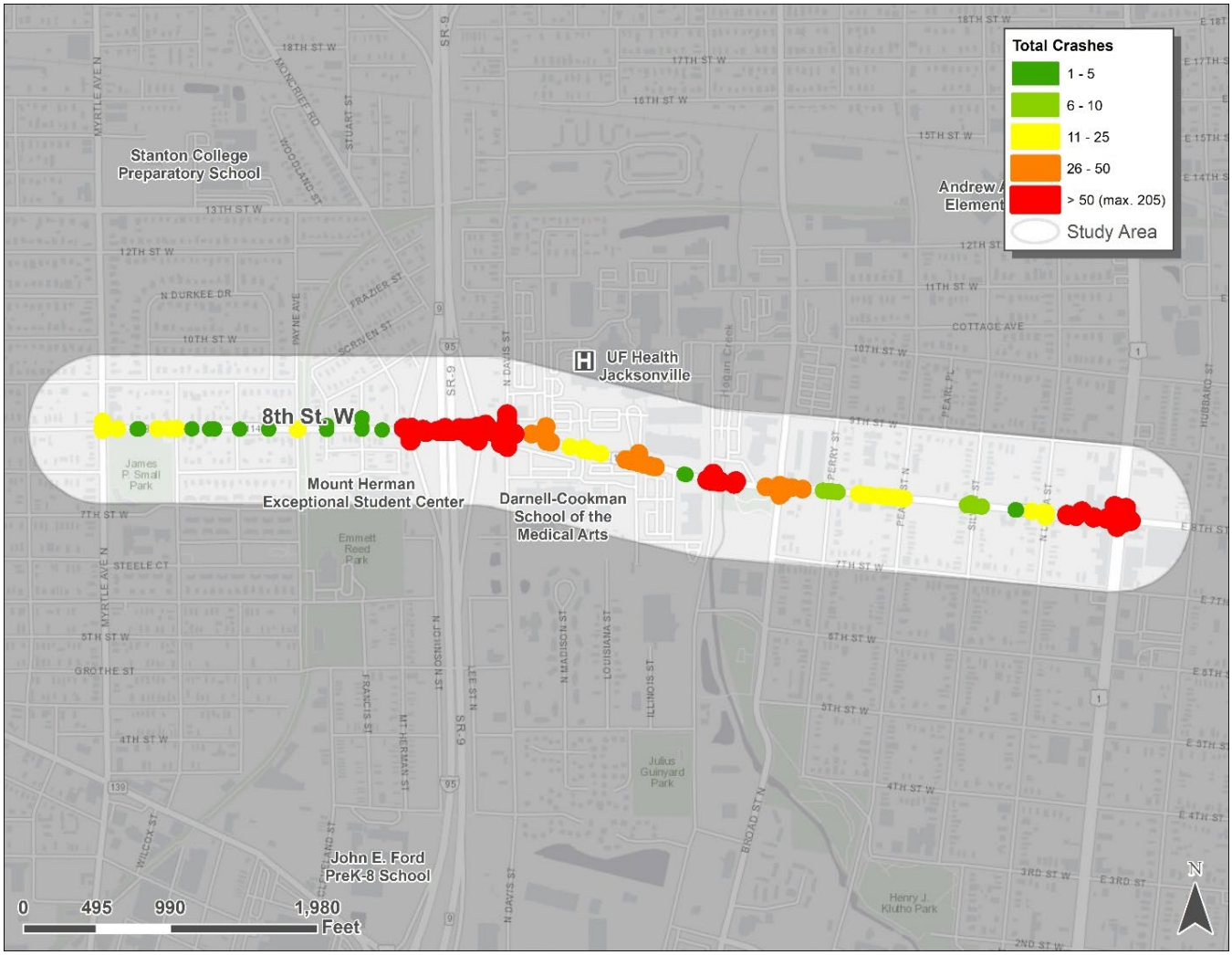


Figure 14 – Total Crash Locations and Frequency

5.2 PEDESTRIAN AND BICYCLE CRASH REVIEW

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

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

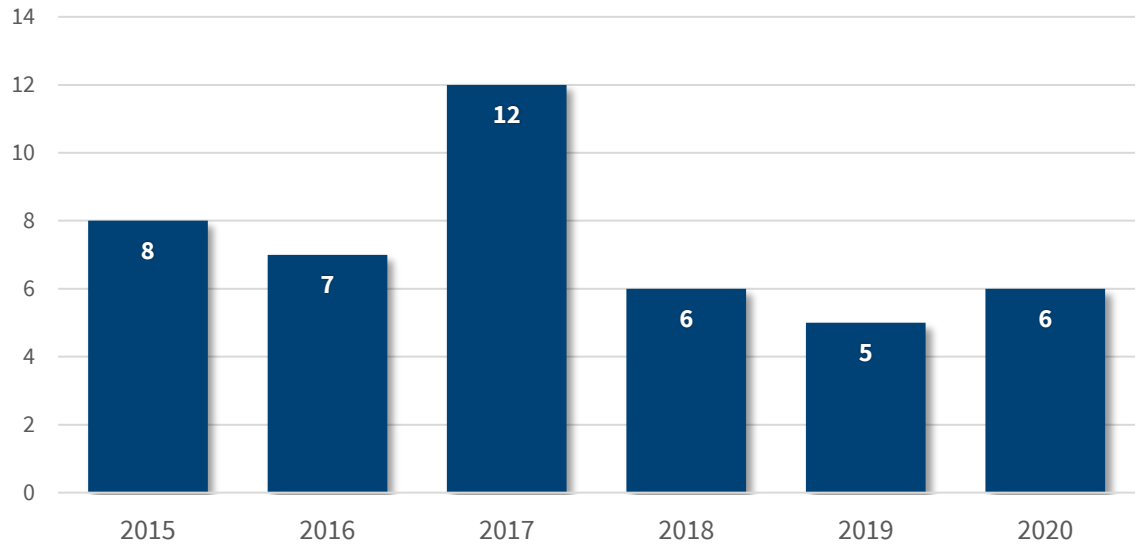


Figure 15 – Pedestrian and Bicycle Crash Annual Distribution

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

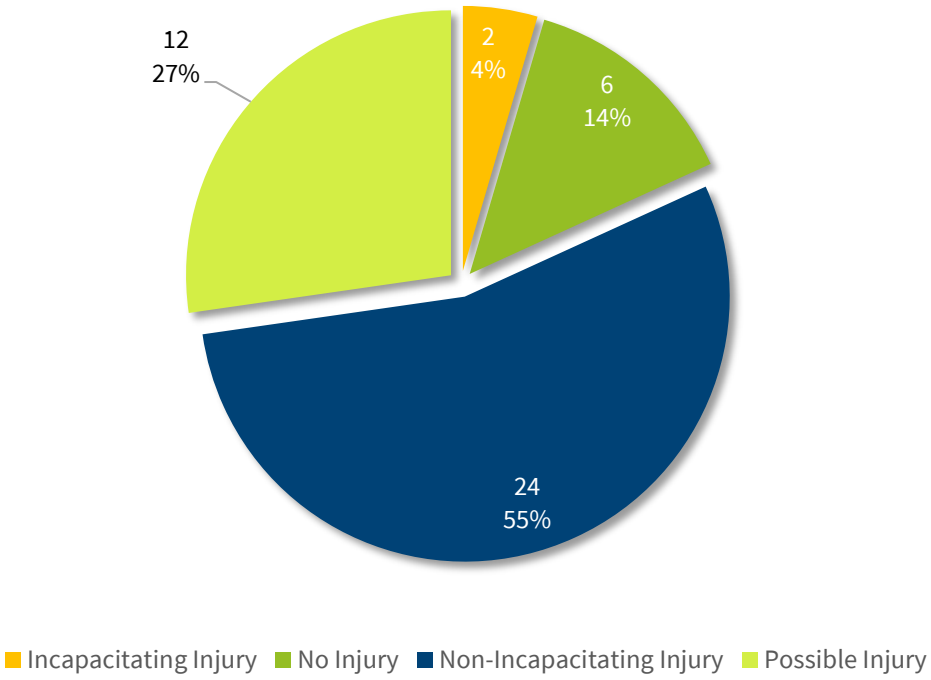


Figure 16 – Pedestrian and Bicycle Crash Injury Severity Summary

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

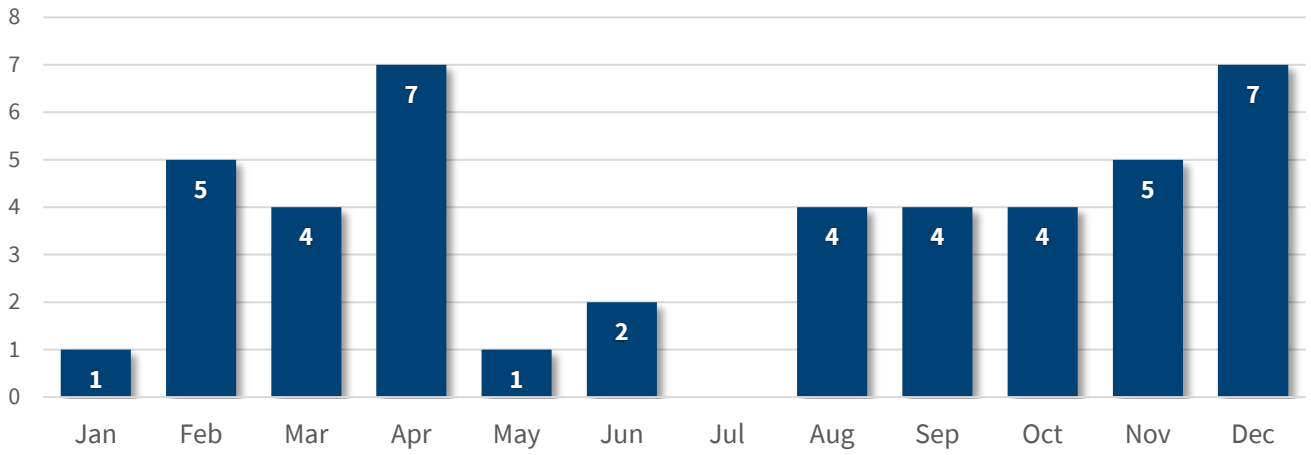


Figure 17 – Pedestrian and Bicycle Crashes by Month

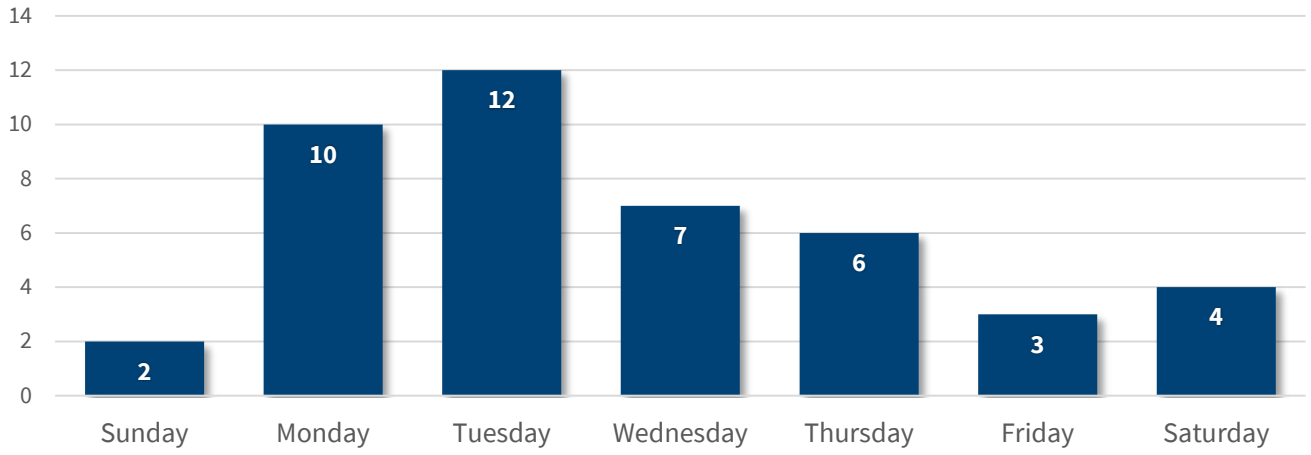


Figure 18 – Pedestrian and Bicycle Crashes by Day of the Week

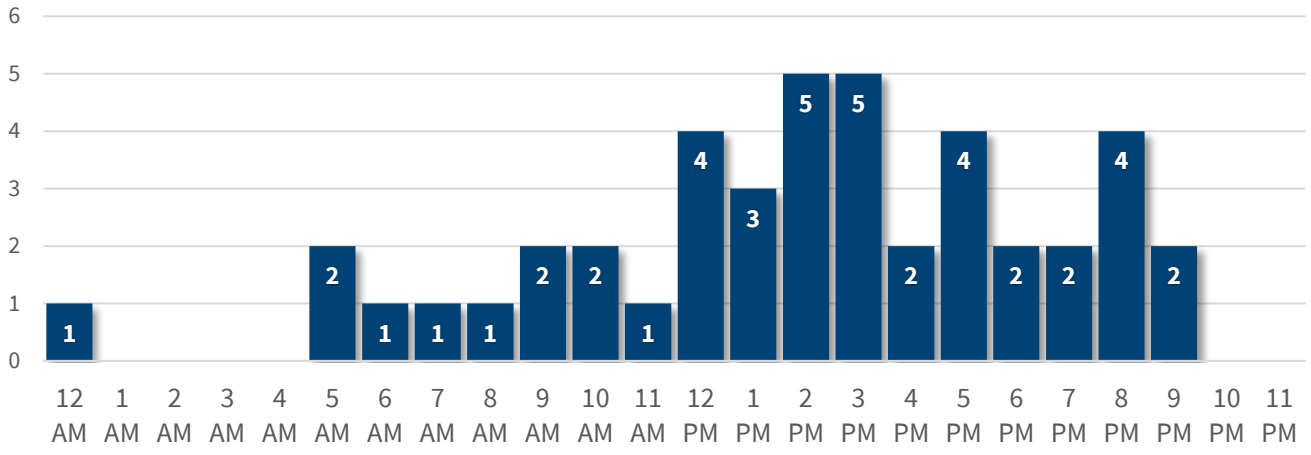


Figure 19 – Pedestrian and Bicycle Crashes by Time of Day

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

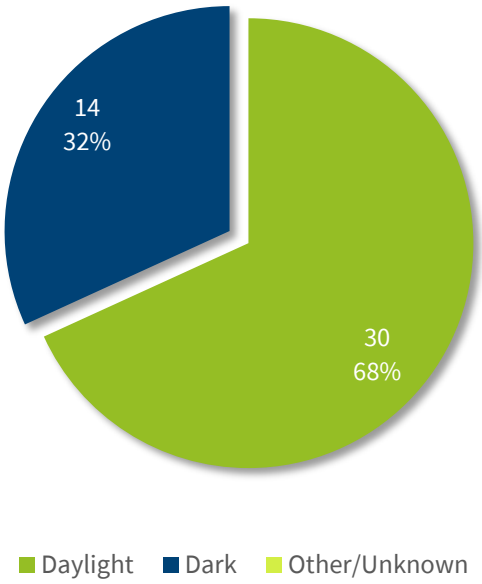


Figure 20 – Pedestrian and Bicycle Crashes by Lighting Conditions

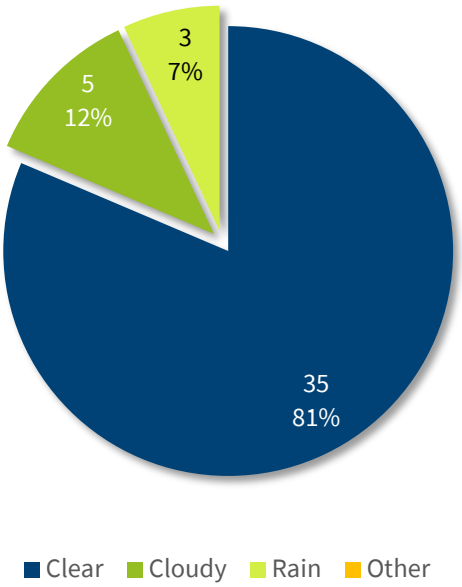


Figure 21 – Pedestrian and Bicycle Crashes by Weather Conditions

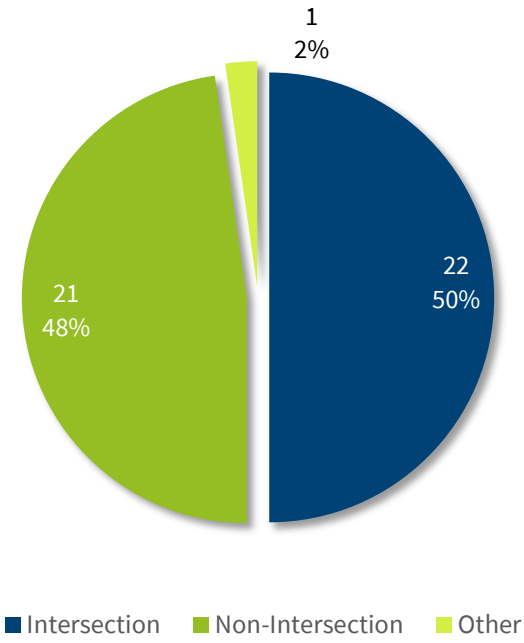


Figure 22 – Pedestrian and Bicycle Crashes by Location

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

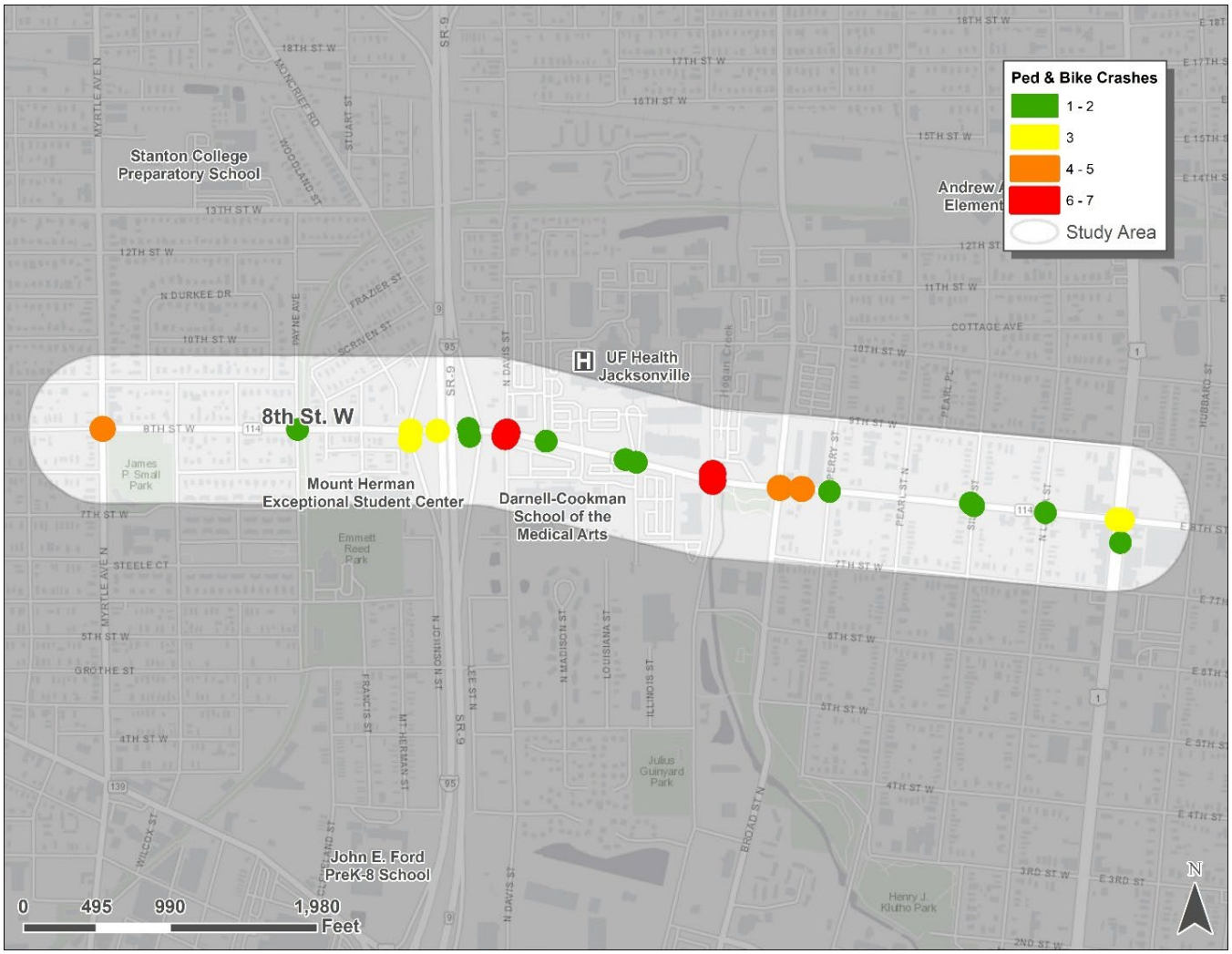


Figure 23 – Pedestrian and Bicycle Crash Locations and Frequency

6 PLANNING CONCEPT DEVELOPMENT

6.1 DESIGN STANDARDS

The typical section alternatives and concepts developed for this study generally follow these guidelines and standards:

- 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)

Additional guidance for best practices is listed in Section 3.4.

6.2 RECOMMENDED TYPICAL SECTION

This study recommends modifications to 8th Street which create a safer and more pleasurable walking and biking experience on the 8th Street corridor. Within the City of Jacksonville jurisdiction (Segments 1 and 3), Benesch focuses many of the recommendations "between the curbs" in order to utilize existing infrastructure and leverage the opportunity to make improvements during Resurfacing, Restoration And Rehabilitation (RRR) projects. Segment 2 is within FDOT jurisdiction and recommendations reflect the current interchange concept (FPID 442414-1).

The proposed typical sections are depicted in Figure 24 through Figure 26 and also provided in Appendix B. A roll plot of the proposed concept layout plans is provided in Appendix C. Recommendations are grouped by segment using a target speed of 30 mph on 8th Street.

6.2.1 Segment 1 (Myrtle Avenue to Francis Street)

This segment is under the jurisdiction of the City of Jacksonville. As illustrated in Figure 24, the proposed typical section narrows the existing lanes from 20 LF to 10 LF, reallocating the pavement to an 8 LF parking lane on the westbound (north) side of the road and a 9 LF cycle track with a modular traffic separator (e.g. mountable curbing or Zicla Zipper system) on the eastbound (south) side. This reallocation removes the on street parking on the south side of 8th Street.

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

- Raised intersection at 8th Street and Myrtle Avenue
- Stamped Asphalt Crosswalks at Myrtle Avenue intersection
- Special Emphasis Crosswalks at intersections: Wilcox Street, Eaverson Street, Payne Avenue, Cleveland Street and Francis Street.
- Reconfigured driveway on north side of 8th Street, east of Myrtle Avenue

- Transverse green bicycle markings across intersections
- Raised crosswalk, green crosswalk markings and RRFBs at the S-Line trail crossing, east of Payne Avenue

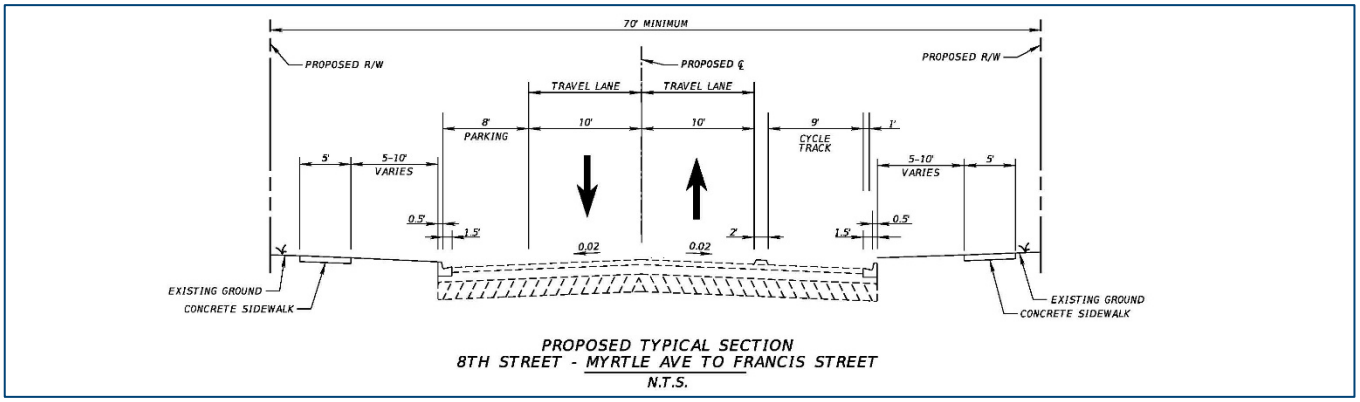
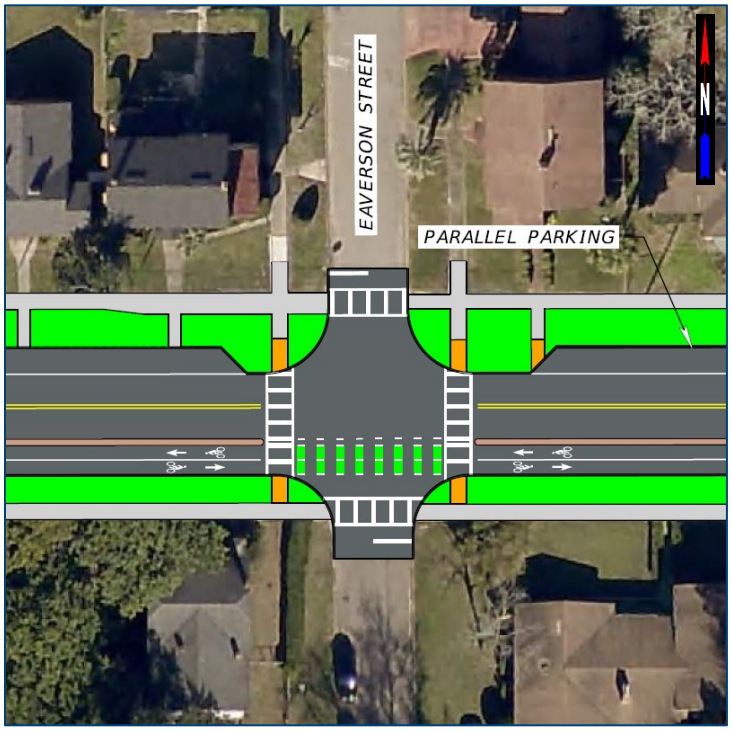


Figure 24 – Proposed Typical Section (Segment 1)

The image at the right illustrates the proposed concept with a cycle track on the south side of 8th Street which is physically separated from the vehicular traffic lanes (refer to Appendix C for the full roll plot). Parking is provided on the north side of 8th Street and upgraded pedestrian and bicycle features are provide at intersections.



A detail from the roll plot illustrates the cycle track on 8th St at Eaverson St.

6.2.2 Segment 2 (Francis St to Boulevard)

This segment is under the jurisdiction of FDOT so any recommended improvements must be coordinated with District 2. For the west end, from Francis Street to Davis Street, the proposed typical section and corridor roll plot are based on the interchange concept developed under the I-95 Systems Interchange Modification Report (SIMR) (FPID 442414-1, October 2022). The proposed typical section converts the existing 11 LF eastbound/westbound outside through lanes to shared through/right lanes and reallocates the right turn lanes to 7-LF separated bikes lanes with modular traffic separators.

At current peak hour traffic volumes , Segment 2 is operating at LOS C and 44% of the maximum service volume (MSV) for LOS D, as per the generalized tables in the FDOT 2023 Multimodal Quality/Level of Service Handbook. With the recommended changes and converting the right turn lanes to a bike lane between Davis Street and Boulevard, the corridor is expected to continue to operate at LOS C and 47% of MSV. Further operational analysis and coordination with be required with FDOT as part of the interchange ramp redesign process to confirm impacts to 8th Street and adjacent intersections.

Recommended improvements are illustrated in Figure 25. Spot treatments throughout the segment are identified on the roll plot and include the following:

- Special Emphasis Crosswalks at intersections: I-95 northbound on and off ramps, I-95 southbound on and off ramps, Davis Street, James Hall Drive, Illinois Street, Calhoun Street and Jefferson Street.
- Transverse green bicycle markings across intersections
- Extend the east median nose at the James Hall Drive intersection to provide pedestrian refuge

Both GroundWork Jacksonville and JTA have projects which impact this segment and require coordination with FDOT, City of Jacksonville and UF Health Jacksonville. These include:

- Emerald Trail: the proposed alignment follows Jefferson Street. The City should coordinate with GroundWork Jacksonville on impacts to 8th Street from the Hogans Creek restoration design, which may include an 8th Street bridge structure spanning the creek.
- JTA Mobility Works Complete Streets Improvements

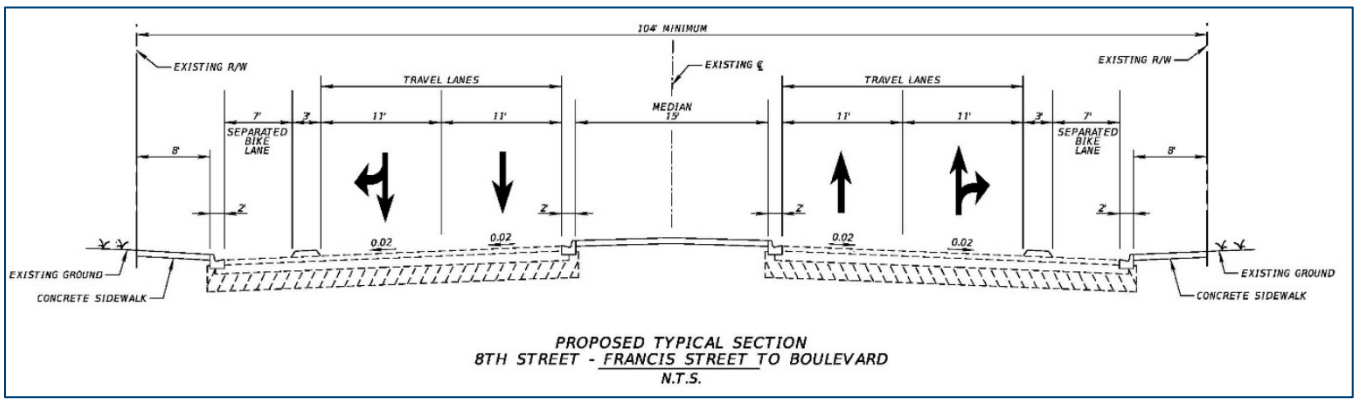


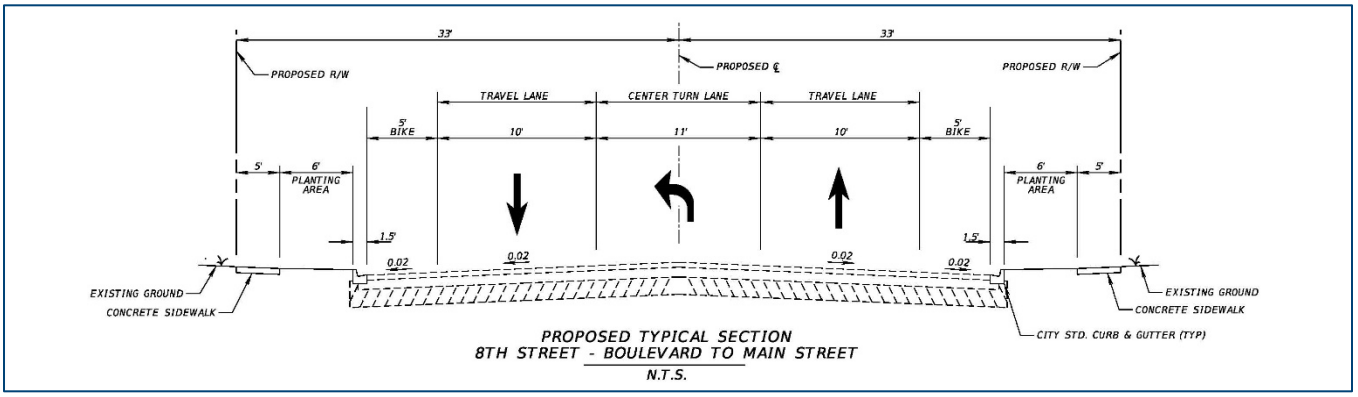
Figure 25 – Proposed Typical Section (Segment 2)

6.2.3 Segment 3 (Boulevard to Main Street)

This segment is under the jurisdiction of the City of Jacksonville. As illustrated in Figure 26, there are two typical sections, one with a center turn lane and one with a center raised curb median island. In both, the proposed typical section narrows the existing travel lanes from 11 LF to 10 LF, reallocating the pavement to widen the bike lane from 4 LF to 5 LF.

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

- Special Emphasis Crosswalks at intersections: Boulevard, North Pearl Street, Silver Street and North Laura Street.
- Transverse green bicycle markings across intersections



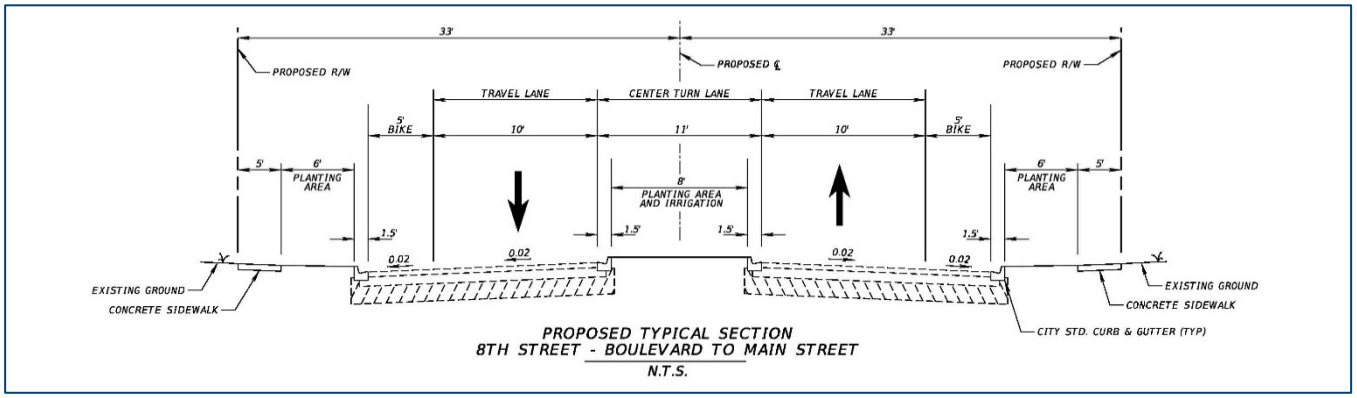


Figure 26 – Proposed Typical Sections (Segment 3)

6.3 COST ESTIMATES

As part of the implementation plan development, Benesch developed a concept level construction cost estimate for the identified potential improvements in Segments 1 and 3. Segment 2, Francis Street to Boulevard, is under FDOT jurisdiction and any improvements will be designed and funded under the District 2 Work Program.

Table 6 provides a summary of the estimated costs associated with the potential improvements identified within this report. The overall project is estimated to cost approximately $3.4 million. The cost estimate is provided in Appendix D. Improvements envisioned for Segment 1 are estimated to cost $1,324,734, including the cost of the raised intersection at Myrtle Avenue. Segment 2 is estimated to cost $2,055,062. Pay item costs are based on the FDOT 12-Month Moving Market Area Averages (06/01/2022 through 05/31/2023), both statewide and for Area 5 (Duval County). 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. Environmental permitting is not included and should be added once design is underway.

Table 6 – Cost Estimate for COJ Segments

Component	Percentage	Segment 1	Segment 3	Total
Roadway[1]		$626,252	$1,066,812	$1,693,064
Signing and Pavement Marking[1]		$162,280	$156,439	$318,719
Subtotal		**$788,532**	**$1,223,251**	**$2,011,783**
Mobilization	10%	$78,853	$122,325	$201,178
MOT	10%	$78,853	$122,325	$201,178
Construction Subtotal		**$946,239**	**$1,467,901**	**$2,414,140**
Contingency	10%	$94,624	$146,790	$241,414
Construction Total		**$1,040,863**	**$1,614,691**	**$2,655,554**
CEI	15%	$141,936	$220,185	$362,121
PE	15%	$141,936	$220,185	$362,121
Environmental Permitting		-	-	-
Subtotal		**$283,872**	**$440,370**	**$724,242**
PROJECT TOTAL		**$1,324,734**	**$2,055,062**	**$3,379,796**

[1] *FDOT Area 5 (Duval County) 12-Month Moving Market Area Averages*

7 NEXT STEPS

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

- North Florida TPO
- City of Jacksonville
- Jacksonville Transportation Authority (JTA)
- Florida Department of Transportation (FDOT)
- GroundWork Jacksonville
- UF Health Jacksonville
- Residents and Business Owners

Effective coordination and collaboration will be required from all involved parties. This study is a guide towards improvements that are designed to make 8th Street a safe, accessible, comfortable and inviting street that supports the community's overall initiatives and goals. To help facilitate the project, the Jacksonville Planning and Development Department (JPDD) should coordinate internally with Public Works to implement the recommendations in Segments 1 and 3 as a potential RRR resurfacing project. For Segment 2, JPDD should coordinate with FDOT District 2, JTA, GroundWork Jacksonville and UF Health Jax to integrate ongoing projects with the study recommendations.

APPENDIX A

Traffic Count Data

Q/LOS Tables

COUNTY: 72
STATION: 5099
DESCRIPTION: SR 114 (8TH ST.) E. OF DR. ROY BAKER ST.
START DATE: 12/08/2022
START TIME: 0930

	DIRECTION: E					DIRECTION: W					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	15	17	12	19	63	24	19	18	13	74	137
0100	14	12	13	11	50	15	19	18	8	60	110
0200	11	12	8	11	42	13	8	10	8	39	81
0300	9	15	6	13	43	9	6	9	10	34	77
0400	9	10	18	19	56	10	8	18	13	49	105
0500	24	35	37	67	163	14	24	17	30	85	248
0600	60	139	143	169	511	52	62	78	77	269	780
0700	153	202	205	211	771	99	119	169	211	598	1369
0800	210	184	204	155	753	219	132	134	110	595	1348
0900	188	156	152	190	686	110	108	131	122	471	1157
1000	135	144	178	140	597	135	149	131	161	576	1173
1100	147	127	128	146	548	164	155	179	164	662	1210
1200	141	176	149	161	627	168	161	171	162	662	1289
1300	173	169	161	147	650	126	169	155	157	607	1257
1400	157	163	146	155	621	171	174	226	173	744	1365
1500	164	153	150	121	588	263	221	240	188	912	1500
1600	107	110	115	143	475	229	218	252	206	905	1380
1700	109	144	134	115	502	240	176	178	141	735	1237
1800	114	120	140	100	474	125	114	94	102	435	909
1900	77	78	82	59	296	102	103	101	75	381	677
2000	58	58	57	42	215	66	71	54	58	249	464
2100	65	47	44	35	191	51	42	55	42	190	381
2200	26	38	35	35	134	37	35	37	39	148	282
2300	36	35	25	20	116	38	21	46	31	136	252
24-HOUR TOTALS:					9172					9616	18788

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	715	828	730	731	715	1546
P.M.	1245	664	1615	916	1445	1519
DAILY	715	828	1615	916	715	1546

AM PHT = 1,546 * 0.97 * 1.01 = 1,515
PM PHT = 1,519 * 0.97 * 0.99 = 1,488

GENERATED BY SPS 5.0.0.61

COUNTY: 72
STATION: 5100
DESCRIPTION: SR 114 (8TH ST.) 200' W. OF BOULEVARD AVE.
START DATE: 09/27/2022
START TIME: 0800

	DIRECTION: E					DIRECTION: W					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	17	17	10	22	66	17	8	11	7	43	109
0100	13	11	18	9	51	12	14	9	9	44	95
0200	12	11	5	7	35	12	5	5	8	30	65
0300	9	7	8	13	37	6	12	6	7	31	68
0400	10	5	12	19	46	11	15	13	11	50	96
0500	17	15	30	33	95	16	22	26	39	103	198
0600	24	45	45	59	173	29	36	70	56	191	364
0700	46	76	101	76	299	74	68	88	99	329	628
0800	113	123	101	103	440	148	125	130	102	505	945
0900	89	80	105	92	366	97	93	87	92	369	735
1000	79	83	91	93	346	97	93	107	110	407	753
1100	79	92	98	114	383	98	78	105	89	370	753
1200	85	107	99	97	388	131	103	110	110	454	842
1300	103	70	120	96	389	113	124	110	122	469	858
1400	94	112	101	101	408	129	137	117	103	486	894
1500	156	125	134	132	547	117	140	149	138	544	1091
1600	148	121	144	116	529	150	125	155	144	574	1103
1700	121	102	81	88	392	156	130	117	119	522	914
1800	121	69	69	74	333	100	98	98	101	397	730
1900	80	81	76	64	301	86	59	64	44	253	554
2000	58	65	52	47	222	52	48	51	52	203	425
2100	37	37	43	40	157	37	43	42	39	161	318
2200	21	37	29	30	117	28	23	34	20	105	222
2300	31	11	17	12	71	31	18	15	14	78	149
24-HOUR TOTALS:					6191					6718	12909

PEAK VOLUME INFORMATION

	DIRECTION: E		DIRECTION: W		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	800	440	800	505	800	945
P.M.	1500	547	1630	585	1515	1116
DAILY	1500	547	1630	585	1515	1116

AM PHT = 945 * 0.97 * 1.00 = 917
PM PHT = 1,116 * 0.97 * 1.00 = 1,083

GENERATED BY SPS 5.0.0.61

Peggy Malone and Associates

WEEKLY SUMMARY FOR LANE 1 Page: 1
Starting: 3/22/2023

Station #: NW233 File: NW233.prn
Site ID: 000000010676 Info: 23- 029 RJ MIN
Loc: 8TH ST 150' E/O PEARL ST GPS: 30.34600,-81.65727
Direction: EAST

TIME	MON		TUE		WED		THU		FRI		SAT		SUN		WK TOT		WK AVG	
					22													
Lane 1	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15					13	81									13	81	13	81
00:30					12	82									12	82	12	82
00:45					7	81									7	81	7	81
01:00					12	95									12	95	12	95
01:15					6	75									6	75	6	75
01:30					4	89									4	89	4	89
01:45					5	98									5	98	5	98
02:00					5	90									5	90	5	90
02:15					8	87									8	87	8	87
02:30					6	100									6	100	6	100
02:45					4	97									4	97	4	97
03:00					5	82									5	82	5	82
03:15					5	116									5	116	5	116
03:30					7	113									7	113	7	113
03:45					4	123									4	123	4	123
04:00					3	85									3	85	3	85
04:15					4	110									4	110	4	110
04:30					3	99									3	99	3	99
04:45					12	108									12	108	12	108
05:00					10	103									10	103	10	103
05:15					12	118									12	118	12	118
05:30					8	91									8	91	8	91
05:45					24	102									24	102	24	102
06:00					30	96									30	96	30	96
06:15					31	83									31	83	31	83
06:30					28	61									28	61	28	61
06:45					29	69									29	69	29	69
07:00					35	69									35	69	35	69
07:15					45	62									45	62	45	62
07:30					61	55									61	55	61	55
07:45					64	61									64	61	64	61
08:00					80	72									80	72	80	72
08:15					94	50									94	50	94	50
08:30					91	48									91	48	91	48
08:45					85	60									85	60	85	60
09:00					95	44									95	44	95	44
09:15					62	35									62	35	62	35
09:30					77	45									77	45	77	45
09:45					83	34									83	34	83	34
10:00					66	32									66	32	66	32
10:15					86	28									86	28	86	28
10:30					65	26									65	26	65	26
10:45					69	27									69	27	69	27
11:00					78	24									78	24	78	24
11:15					127	11									127	11	127	11
11:30					90	19									90	19	90	19
11:45					87	28									87	28	87	28
12:00					71	22									71	22	71	22
TOTALS					5294										5294		5294	
AM Times					11:00										11:00		11:00	
AM Peaks					382										382		382	
AM PHF					0.75										0.75		0.75	
PM Times					15:15										15:15		15:15	
PM Peaks					437										437		437	
PM PHF					0.89										0.89		0.89	

Peggy Malone and Associates

WEEKLY SUMMARY FOR LANE 2 Page: 2
Starting: 3/22/2023

Station #: NW233
Site ID: 000000010676
Loc: 8TH ST 150' E/O PEARL ST
Direction: WEST

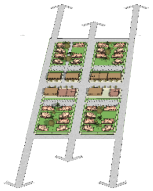
File: NW233.prn
Info: 23- 029 RJ MIN
GPS: 30.34600,-81.65727

TIME	MON		TUE		WED 22		THU		FRI		SAT		SUN		WK TOT		WK AVG	
Lane 2	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm
00:15					13	86									13	86	13	86
00:30					12	68									12	68	12	68
00:45					8	70									8	70	8	70
01:00					7	63									7	63	7	63
01:15					9	71									9	71	9	71
01:30					5	80									5	80	5	80
01:45					3	77									3	77	3	77
02:00					3	91									3	91	3	91
02:15					8	85									8	85	8	85
02:30					7	84									7	84	7	84
02:45					4	86									4	86	4	86
03:00					8	71									8	71	8	71
03:15					4	86									4	86	4	86
03:30					6	83									6	83	6	83
03:45					4	94									4	94	4	94
04:00					8	55									8	55	8	55
04:15					5	103									5	103	5	103
04:30					7	105									7	105	7	105
04:45					3	89									3	89	3	89
05:00					5	73									5	73	5	73
05:15					9	74									9	74	9	74
05:30					18	85									18	85	18	85
05:45					18	95									18	95	18	95
06:00					19	68									19	68	19	68
06:15					26	77									26	77	26	77
06:30					30	53									30	53	30	53
06:45					38	66									38	66	38	66
07:00					31	52									31	52	31	52
07:15					40	54									40	54	40	54
07:30					66	54									66	54	66	54
07:45					82	46									82	46	82	46
08:00					104	54									104	54	104	54
08:15					92	51									92	51	92	51
08:30					89	46									89	46	89	46
08:45					85	44									85	44	85	44
09:00					69	43									69	43	69	43
09:15					80	31									80	31	80	31
09:30					53	38									53	38	53	38
09:45					67	32									67	32	67	32
10:00					53	28									53	28	53	28
10:15					55	25									55	25	55	25
10:30					56	26									56	26	56	26
10:45					46	24									46	24	46	24
11:00					49	15									49	15	49	15
11:15					2	17									2	17	2	17
11:30					52	19									52	19	52	19
11:45					51	17									51	17	51	17
12:00					79	12									79	12	79	12
TOTALS					4454										4454		4454	
AM Times					08:00										08:00		08:00	
AM Peaks					370										370		370	
AM PHF					0.89										0.89		0.89	
PM Times					16:15										16:15		16:15	
PM Peaks					370										370		370	
PM PHF					0.88										0.88		0.88	

Total = 5,294 + 4,454 = 9,748 VPD
AADT = 9,748 * 0.97 * 0.97 = 9,172
AM PHT = 720 * 0.97 * 0.97 = 677
PM PHT = 790 * 0.99 * 0.99 = 743

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

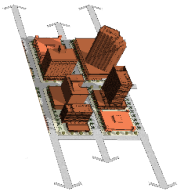
	B	C	D	E
2 Lane	*	*	17,600	24,000
4 Lane	*	24,400	36,100	40,800
6 Lane	*	44,700	56,800	60,400
8 Lane	*	52,300	66,900	70,900

(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

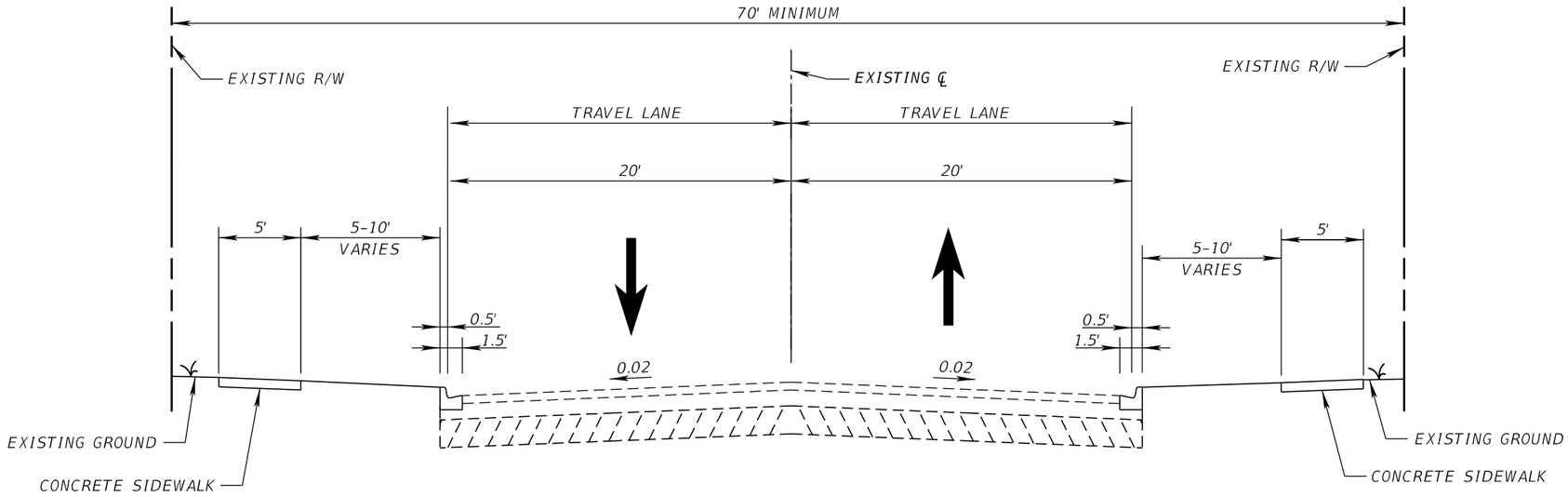
Adjustment Factors

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

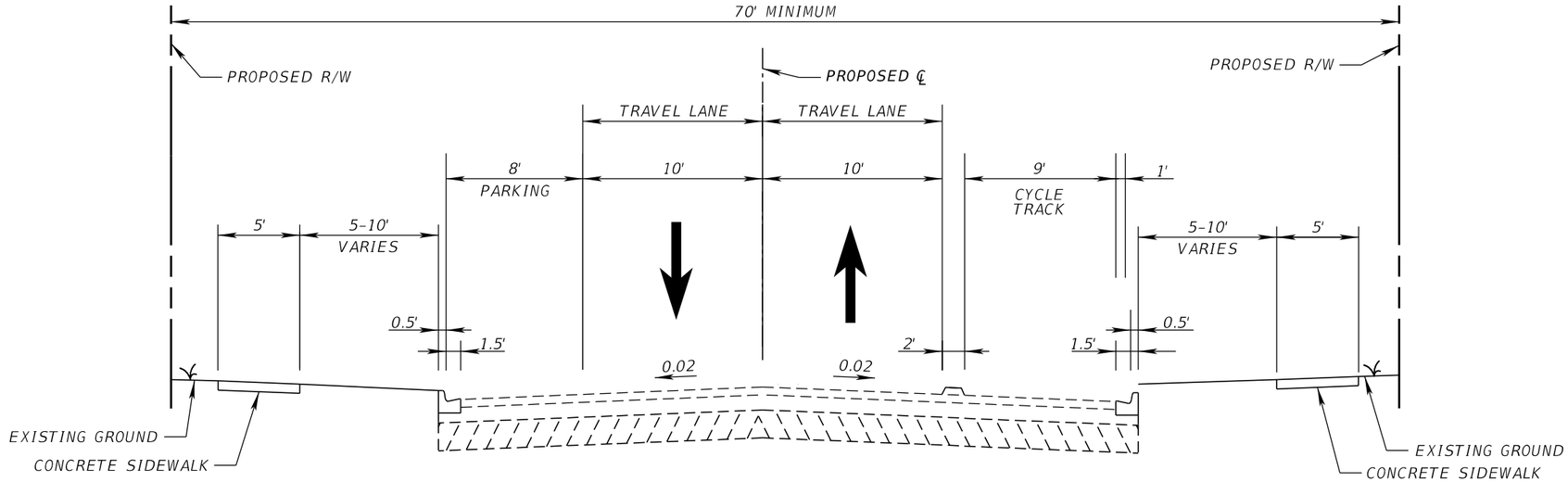
This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.
*Cannot be achieved using table input value defaults. **Not applicable for that level of service 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 B

Existing and Proposed Typical Sections



EXISTING TYPICAL SECTION
8TH STREET - MYRTLE AVE TO FRANCIS STREET
N.T.S.



PROPOSED TYPICAL SECTION
8TH STREET - MYRTLE AVE TO FRANCIS STREET
N.T.S.

REVISIONS				ENGINEER OF RECORD				
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	WEST 8TH STREET TYPICAL SECTION SEGMENT 1
								SHEET NO. 1

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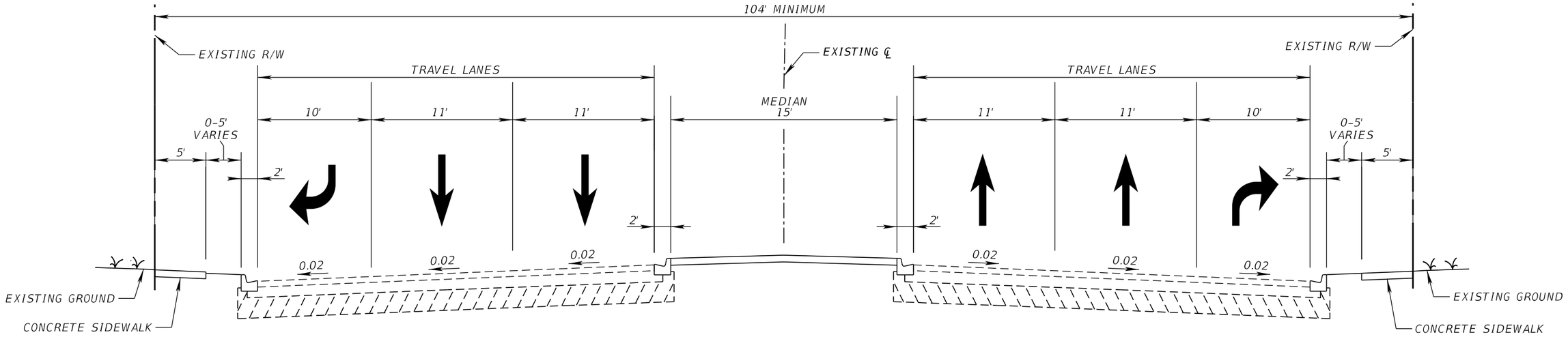
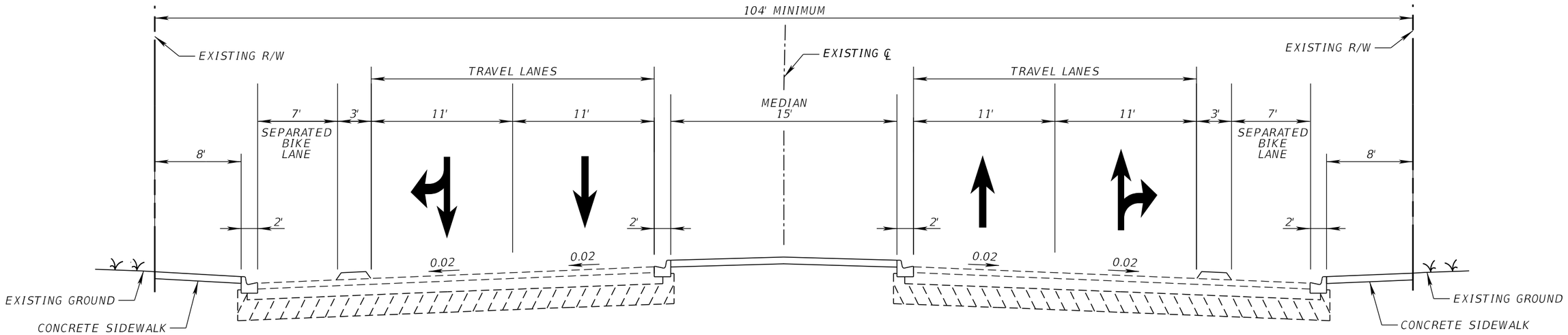


EXISTING TYPICAL SECTION
8TH STREET - FRANCIS STREET TO BOULEVARD
N.T.S.



PROPOSED TYPICAL SECTION
8TH STREET - FRANCIS STREET TO BOULEVARD
N.T.S.

REVISIONS				ENGINEER OF RECORD				WEST 8TH STREET TYPICAL SECTION SEGMENT 2	SHEET NO.
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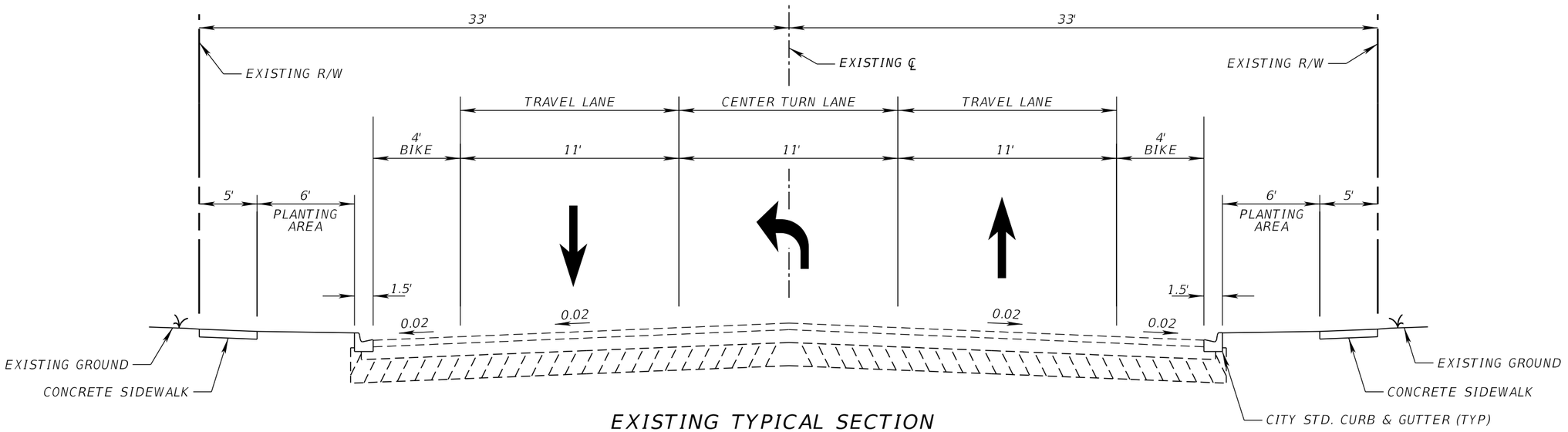
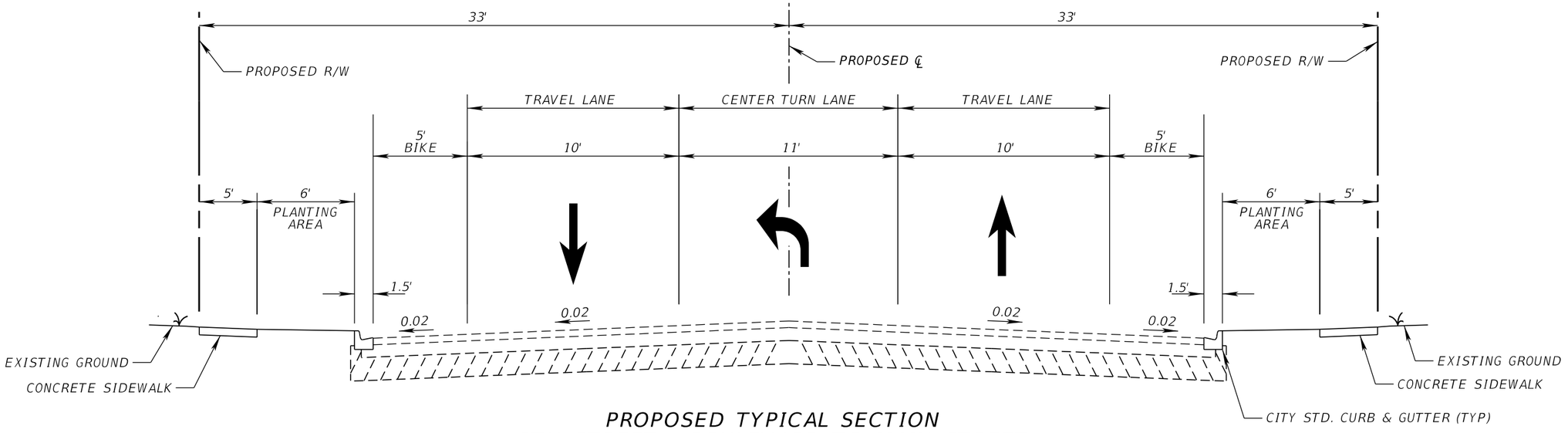


EXISTING TYPICAL SECTION
8TH STREET - BOULEVARD TO MAIN STREET

N.T.S.



PROPOSED TYPICAL SECTION
8TH STREET - BOULEVARD TO MAIN STREET

N.T.S.

REVISIONS				ENGINEER OF RECORD					
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									3

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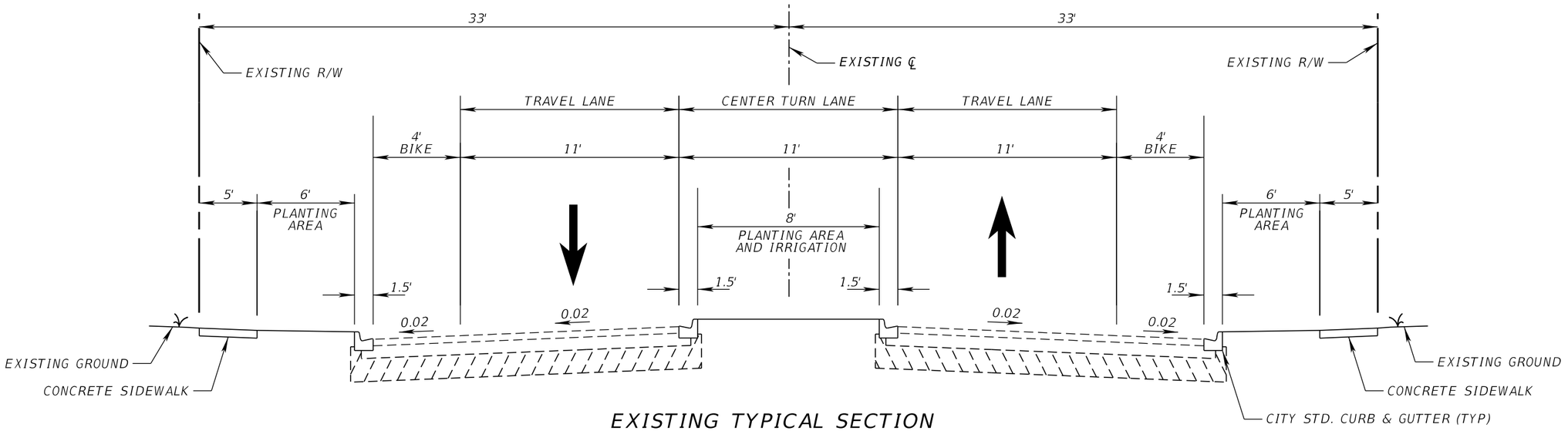
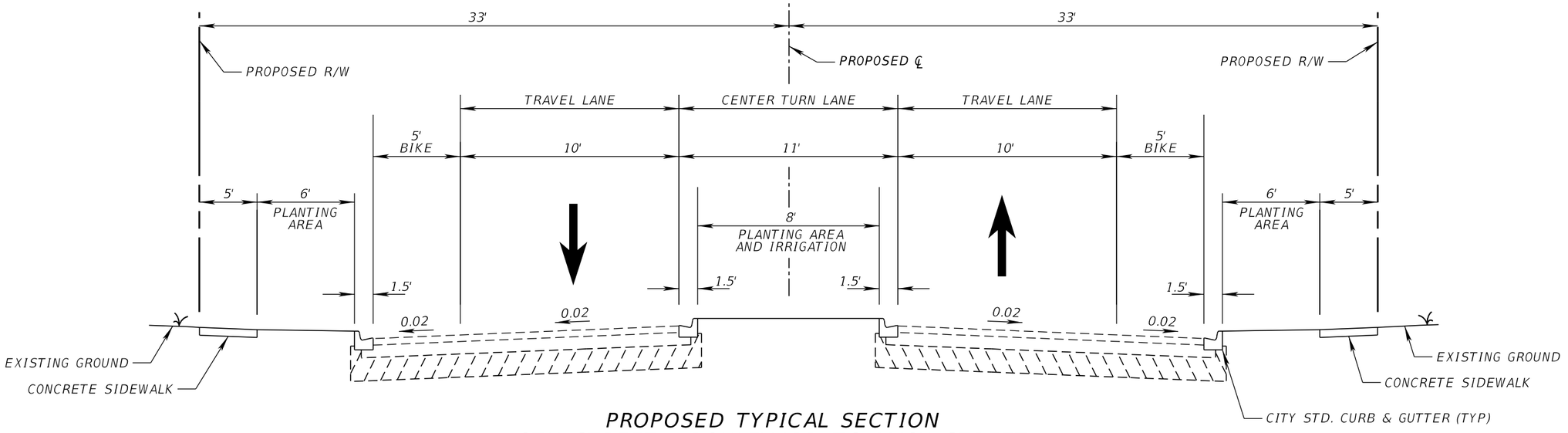


EXISTING TYPICAL SECTION
8TH STREET - BOULEVARD TO MAIN STREET
N.T.S.



PROPOSED TYPICAL SECTION
8TH STREET - BOULEVARD TO MAIN STREET
N.T.S.

REVISIONS				ENGINEER OF RECORD				WEST 8TH STREET TYPICAL SECTION SEGMENT 3	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		4

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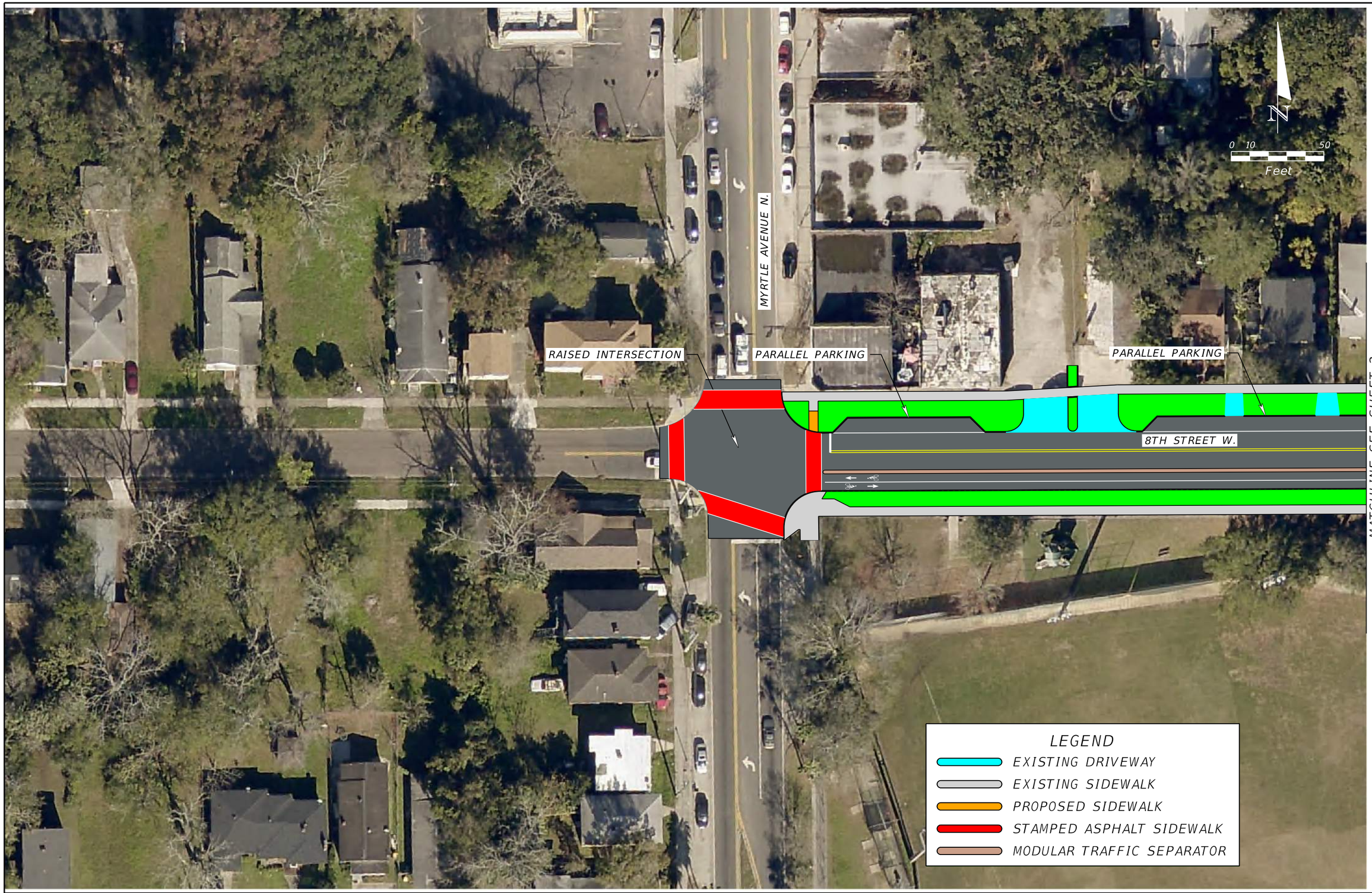
APPENDIX C

Corridor Roll Plot



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 1

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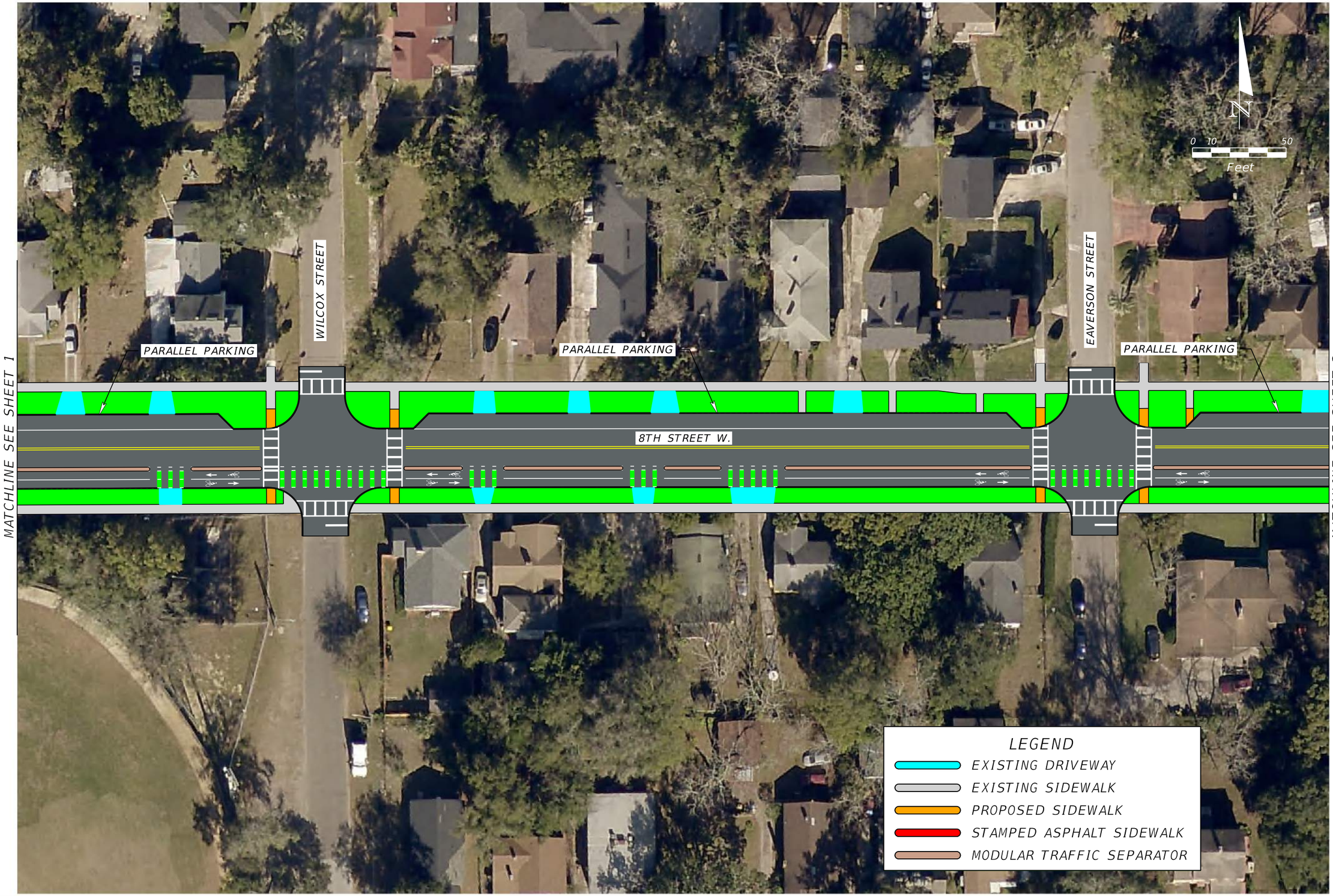

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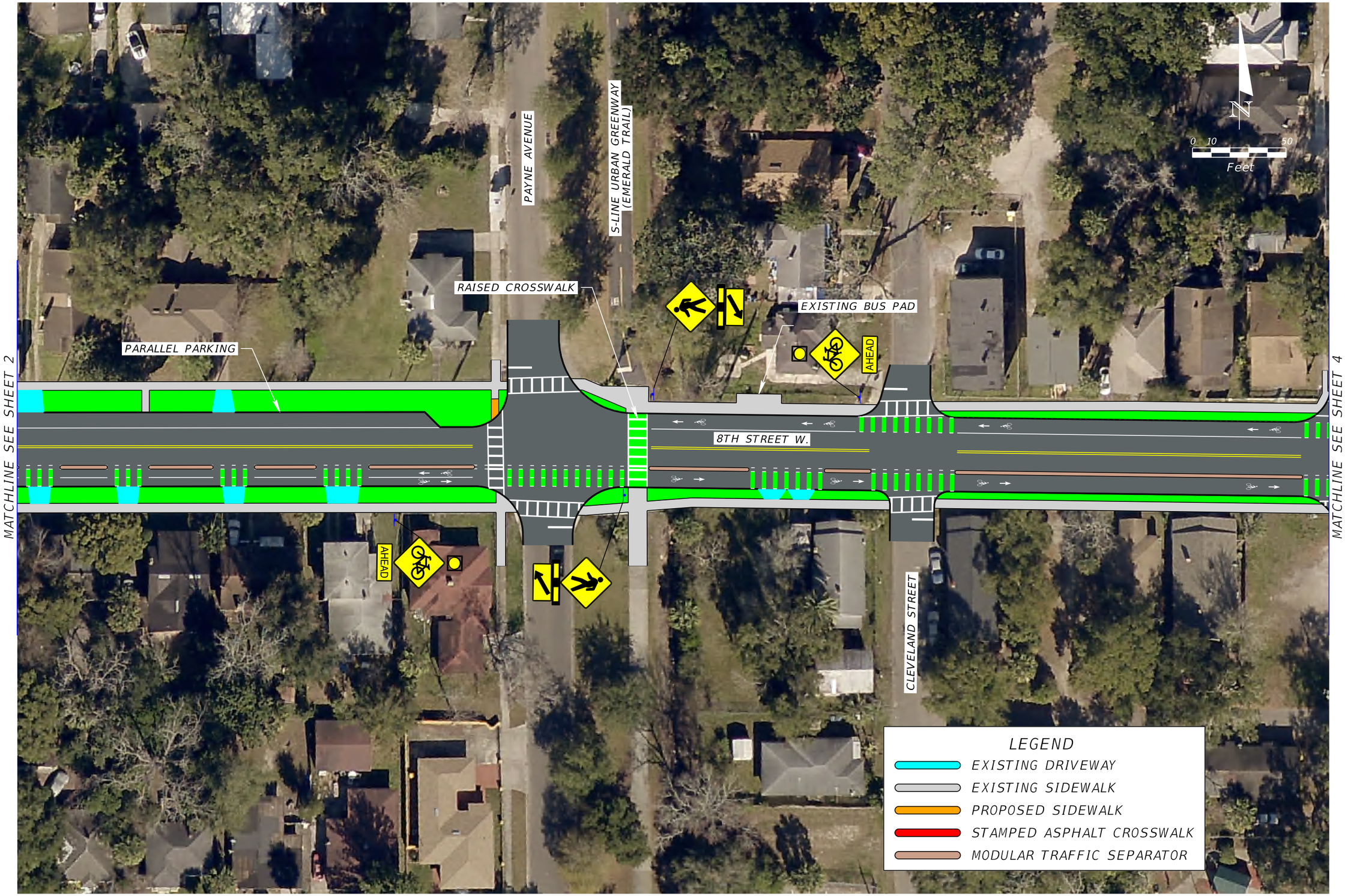

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DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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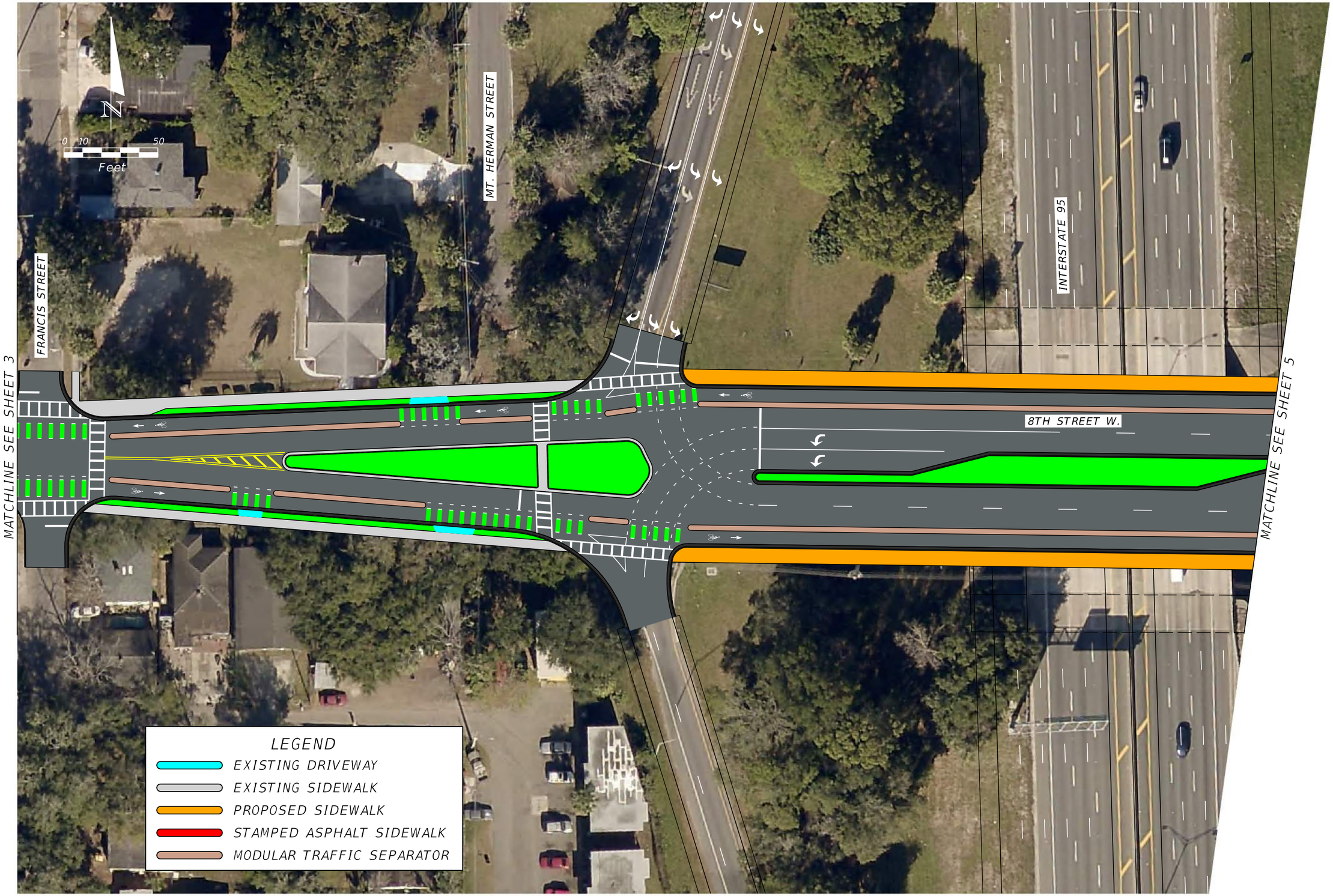

REVISIONS					
DATE	DESCRIPTION	DATE	DESCRIPTION	NORTH FLORIDA TPO	
				ROAD NO. / COUNTY / FINANCIAL PROJECT ID	8TH STREET CONCEPT
				NA / NA / NA	SHEET NO. 4

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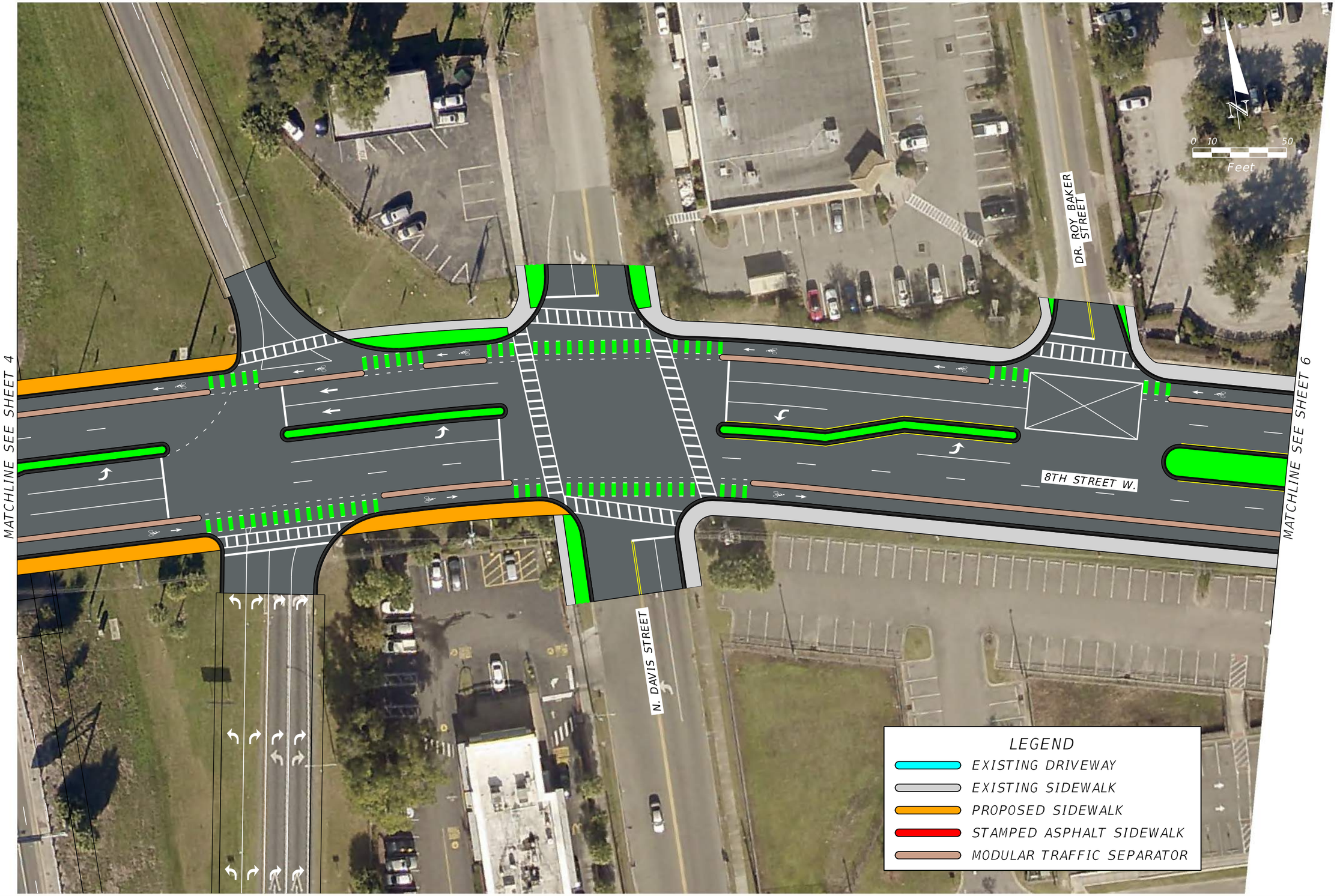

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 5

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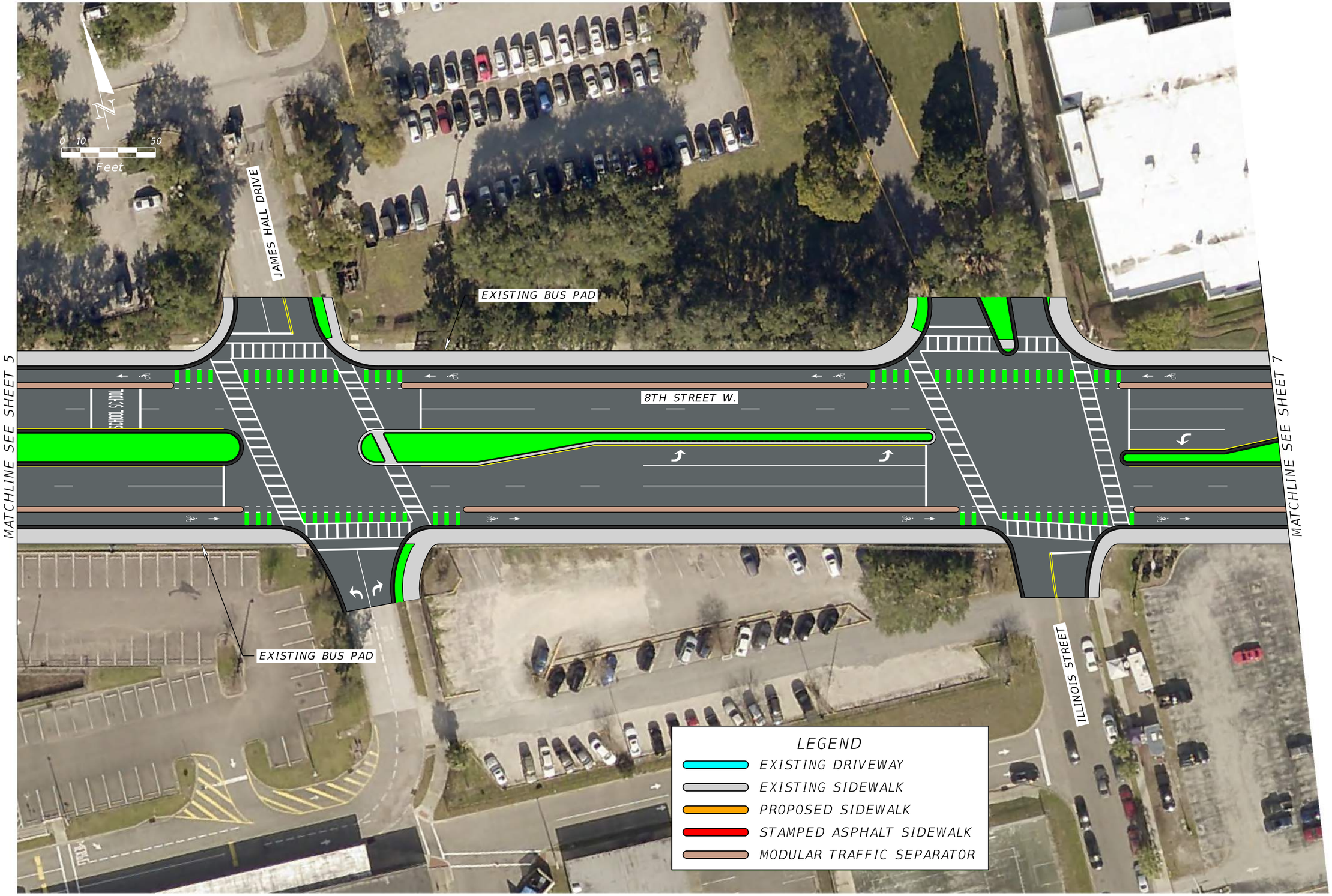

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 6

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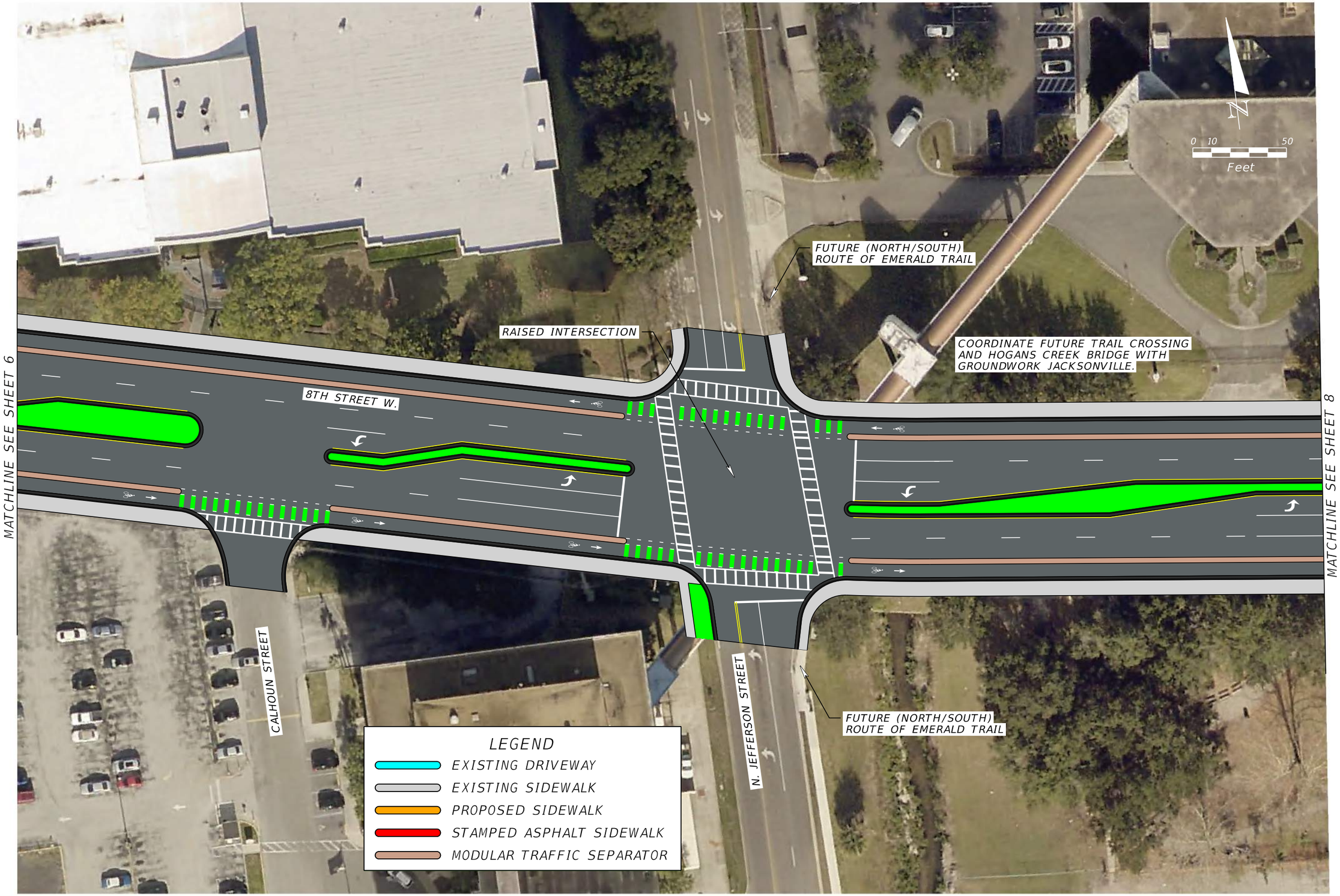

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 7

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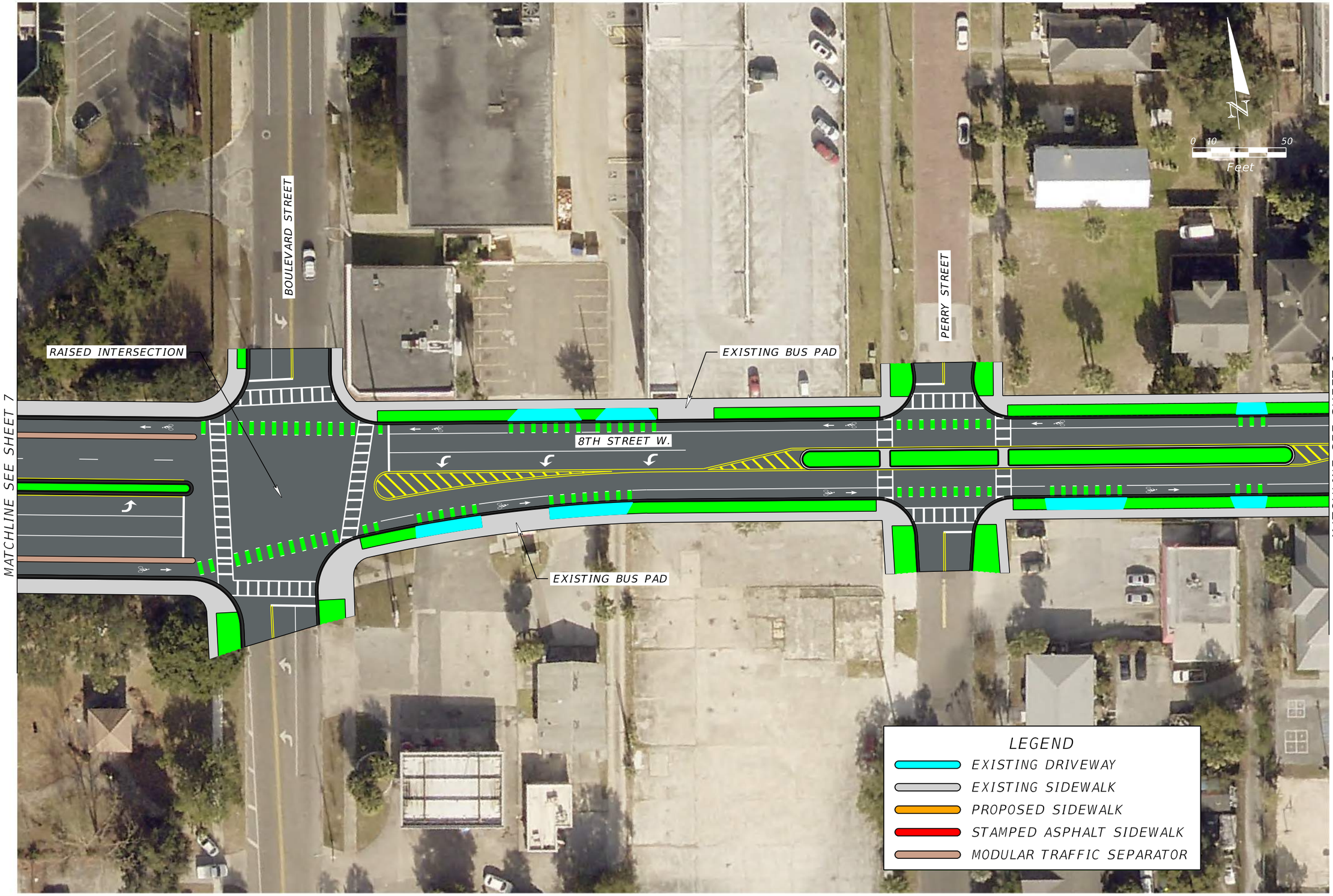

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DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 8

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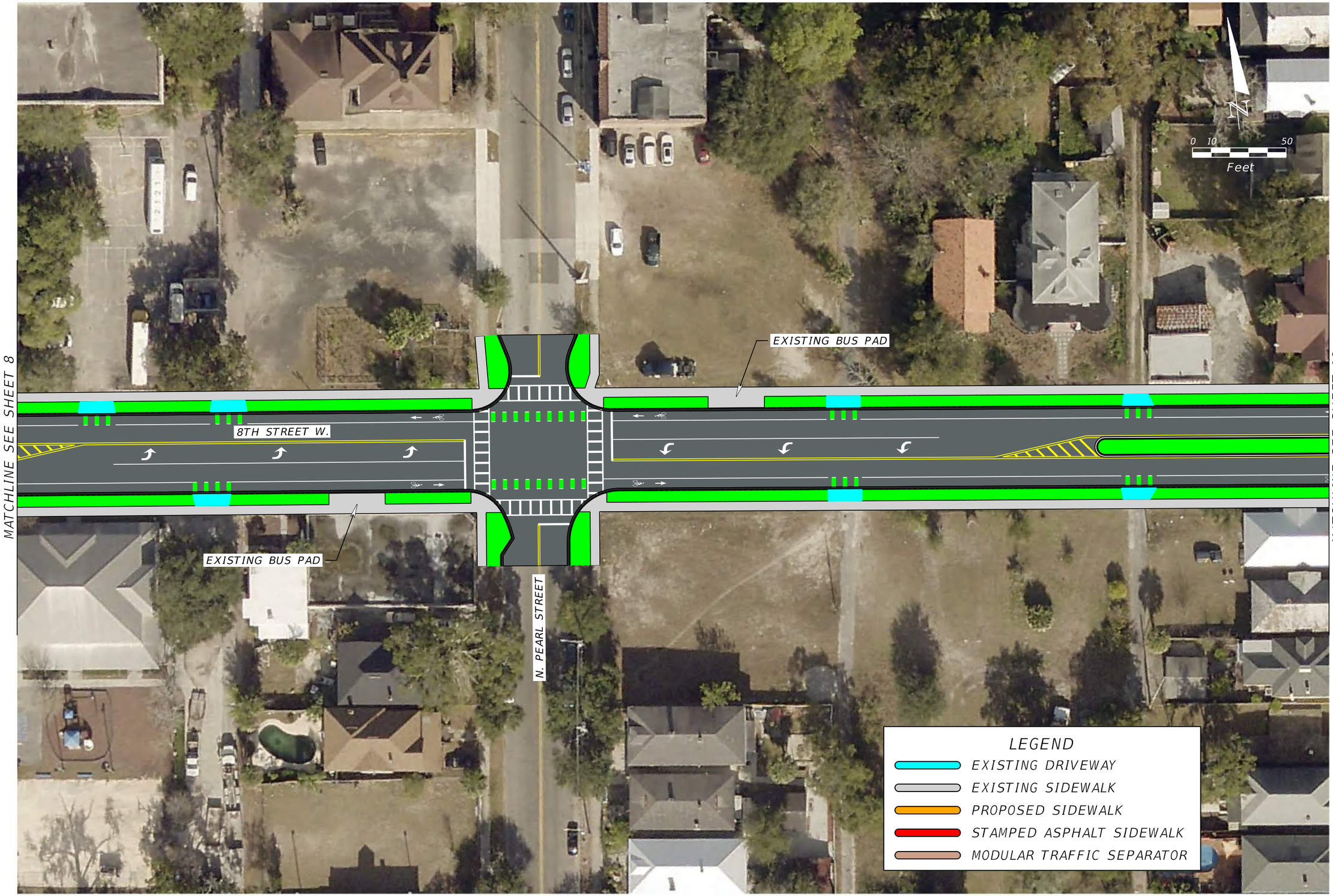

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NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

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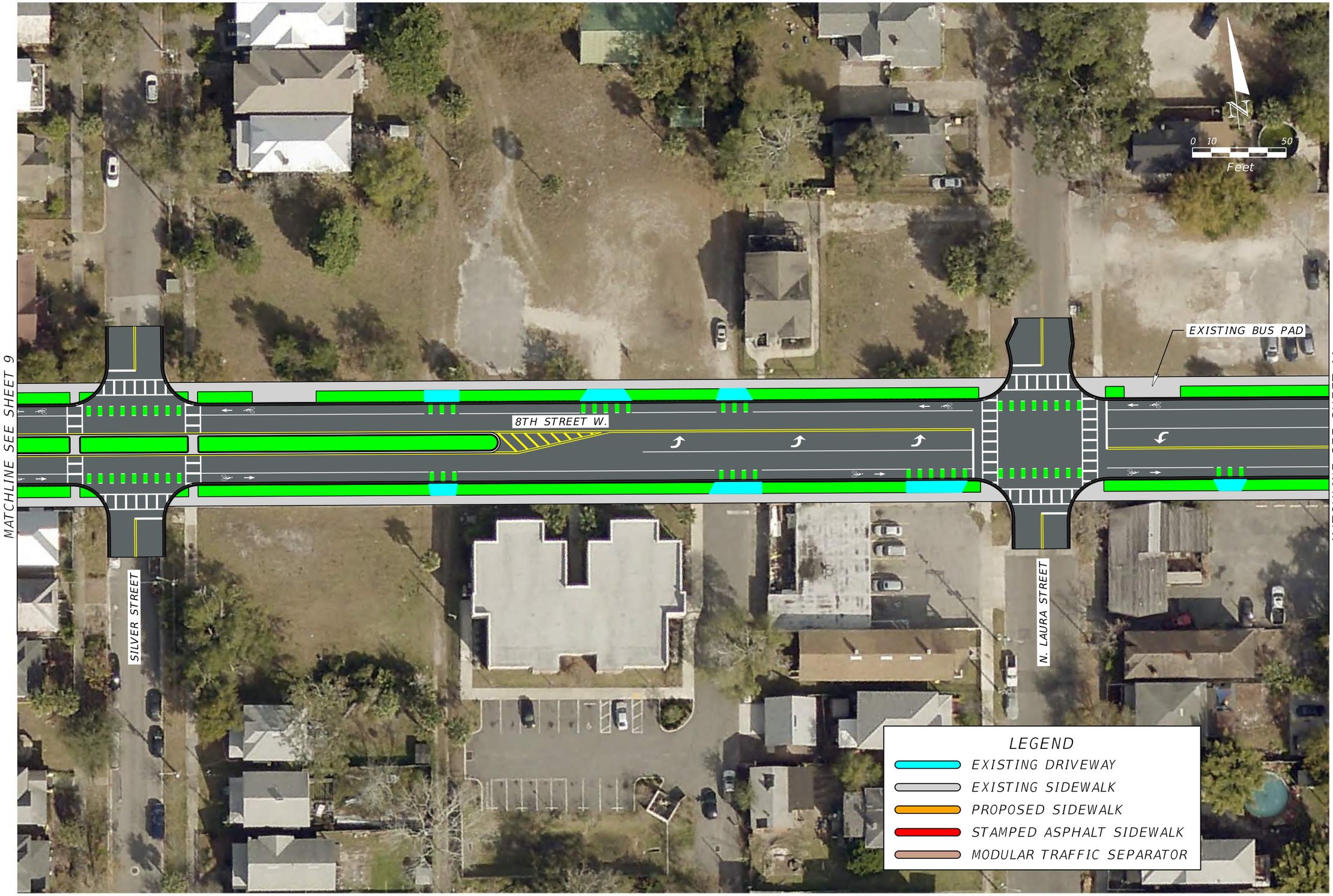

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

SHEET NO. 10

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

NORTH FLORIDA TPO

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
NA	NA	NA

8TH STREET CONCEPT

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APPENDIX D

Cost Estimates

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	8th Street Corridor Concept Segment 1
PAY ITEM SPEC YEAR:	2022
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	July 31, 2023
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha Moore, PE, PTOE, RSP1
PHONE NUMBER:	904491-2637
FILE VERSION:	EE_07/23
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$626,252.44
300 - SIGNING & PAVEMENT MARKINGS		$162,279.80
	COMPONENT SUB-TOTAL	$788,532.24
(102-1) MOT (Maintenance of Traffic)	10%	$78,853.22
	SUB-TOTAL	$867,385.47
(101-1) MOB (Mobilization)	10%	$78,853.22
	SUB-TOTAL	$946,238.69
Contingency	10%	$94,623.87
	SUB-TOTAL	$1,040,862.56
CEI	15%	$141,935.80
	SUB-TOTAL	$1,182,798.36
	PROJECT GRAND TOTAL	**$1,182,798.36**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 06/01/2022 thru 05/31/2023

Costs based on FDOT 12 Month Moving Market Area Averages, 06/01/2022 thru 05/31/2023

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_07/23
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	6	$172.94	$ 1,037.64
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	8770	$3.21	$ 28,151.70
0337 7 82	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5, PG 76-22	TN	463	$188.12	$ 87,099.56
0425 5	MANHOLE, ADJUST	EA	8	$1,500.16	$ 12,001.28
0425 6	VALVE BOXES, ADJUST	EA	8	$1,045.34	$ 8,362.72
0520 2 4	CONCRETE CURB, TYPE D	LF	3587	$83.50	$ 299,514.50
0520 70	CONCRETE TRAFFIC SEPARATOR, SPECIAL- VARIABLE WIDTH	SY	258	$248.28	$ 64,056.24
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS , 4" THICK	SY	49	$111.46	$ 5,461.54
0523 3	PATTERNED PAVEMENT, VEHICULAR AREAS, STAMPED PAVEMENT	SY	156	$400.00	$ 62,400.00
0570 1 2	PERFORMANCE TURF, SOD	SY	2642	$6.85	$ 18,097.70
	OPTIONAL RAISED INTERSECTION (MYRTLE AVE/8TH ST)	TN	213	$188.12	$ 40,069.56
Roadway		**COMPONENT TOTAL**			**$ 626,252.44**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_07/23
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
523-3	PATTERNED PAVEMENT, VEHICULAR AREAS, GREEN BIKE LANES	SY	236	$400.00	$ 94,400.00
0654 211	MIDBLOCK CROSSWALK: RECTANGULAR RAPID FLASHING BEACON, FURNISH & INSTALL- AC, COMPLETE SIGN ASSEMBLY- SINGLE DIRECTION	AS	2	$8,650.71	$ 17,301.42
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	1731	$3.75	$ 6,491.25
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	213	$7.75	$ 1,650.75
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.1379	$2,805.24	$ 386.84
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	3	$90.43	$ 271.29
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1184	$16.18	$ 19,157.12
0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	25	$548.68	$ 13,717.00
0711 14170	THERMOPLASTIC, PREFORMED, WHITE, ARROWS	EA	25	$153.16	$ 3,829.00
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	0.4754	$4,859.30	$ 2,310.11
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	0.5846	$4,729.76	$ 2,765.02
Signing & Pavement Markings		**COMPONENT TOTAL**			**$162,279.80**

ENGINEER'S ESTIMATE

NORTH FLORIDA TPO

FINANCIAL PROJECT ID # :	
PROJECT DESCRIPTION:	8th Street Corridor Concept Segment 3
PAY ITEM SPEC YEAR:	2022
SUBMITTAL TYPE:	Engineers Estimate (Initial)
COUNTY:	Duval
DATE:	July 31, 2023
ENGINEERING CONSULTANT FIRM:	Benesch
CONTACT NAME:	Martha L. Moore, PE, PTOE, RSP1
PHONE NUMBER:	904-491-2637
FILE VERSION:	EE_07/23
PAGE NUMBER:	1 of 3

COMPONENT GROUPS

200 - ROADWAY		$1,066,812.04
300 - SIGNING & PAVEMENT MARKINGS		$156,438.93
	COMPONENT SUB-TOTAL	$1,223,250.97
(102-1) MOT (Maintenance of Traffic)	10%	$122,325.10
	SUB-TOTAL	$1,345,576.07
(101-1) MOB (Mobilization)	10%	$122,325.10
	SUB-TOTAL	$1,467,901.17
Contingency	10%	$146,790.12
	SUB-TOTAL	$1,614,691.28
CEI	15%	$220,185.18
	SUB-TOTAL	$1,834,876.46
	PROJECT GRAND TOTAL	**$1,834,876.46**

NOTES:

Costs based on FDOT Area 5 (Duval County) 12 Month Moving Market Area Averages, 06/01/2022 thru 05/31/2023

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_07/23
PAGE NUMBER:	2 of 3

Roadway

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
0104 18	INLET PROTECTION SYSTEM	EA	6	$172.94	$ 1,037.64
0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	11743	$3.21	$ 37,695.03
0337 7 82	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5, PG 76-22	TN	646	$188.12	$ 121,525.52
0425 5	MANHOLE, ADJUST	EA	8	$1,500.16	$ 12,001.28
0425 6	VALVE BOXES, ADJUST	EA	8	$1,045.34	$ 8,362.72
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	LF	12565	$68.96	$ 866,482.40
0570 1 2	PERFORMANCE TURF, SOD	SY	2877	$6.85	$ 19,707.45
Roadway		**COMPONENT TOTAL**			**$ 1,066,812.04**

ENGINEER'S ESTIMATE
NORTH FLORIDA TPO

FINANCIAL PROJECT ID:	
FILE VERSION:	EE_07/23
PAGE NUMBER:	3 of 3

Signing & Pavement Markings

PAY ITEM #	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
523-3	PATTERNED PAVEMENT, VEHICULAR AREAS, GREEN BIKE LANES	SY	244	$400.00	$ 97,600.00
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF	1706	$3.75	$ 6,397.50
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	328	$7.75	$ 2,542.00
0711 11141	THERMOPLASTIC, STANDARD, WHITE, 2-4 DOTTED GUIDELINE/ 6-10 GAP EXTENSION, 6"	GM	0.0192	$2,805.24	$ 53.86
0711 11160	THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	20	$192.10	$ 3,842.00
0711 11 170	THERMOPLASTIC, STANDARD, WHITE, ARROW	EA	17	$90.43	$ 1,537.31
0711 11224	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONAL OR CHEVRON	LF	357	$6.16	$ 2,199.12
0711 14125	THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK	LF	1217	$16.18	$ 19,691.06
0711 14160	THERMOPLASTIC, PREFORMED, WHITE, MESSAGE	EA	20	$548.68	$ 10,973.60
0711 14170	THERMOPLASTIC, PREFORMED, WHITE, ARROWS	EA	20	$153.16	$ 3,063.20
0711 16101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE SOLID 6"	GM	0.7973	$4,859.30	$ 3,874.32
0711 16201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW SOLID 6"	GM	0.9863	$4,729.76	$ 4,664.96
Signing & Pavement Markings		**COMPONENT TOTAL**			**$ 156,438.93**

NORTH FLORIDA TPO

benesch