



RRR Scoping Report

FM# 446239-1



**SR 826 Frontage Road
At NW 77th Court
(87260524 | MP 0.153 – 0.746)
Miami-Dade County, Florida**



Prepared for
Florida Department of Transportation District 6
Planning and Environmental Management Office
1000 NW 111th Avenue
Miami, Florida 33172



FDOT Project Manager: Nicolas Danu, P.E.
Contract C-AD92, Task Work Order 01
FPID: 446239-1-52-01

ENGINEER'S CERTIFICATION

I, hereby certify that I am a registered professional engineer in the State of Florida, practicing with GOAL Associates Inc., a Florida Corporation under Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes, and by the State of Florida, Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for:

Project: RRR Scoping Report for SR 826 Frontage Roads at NW 77th Court
FM# 446239-1-52-01 | Roadway ID: 87260524 | MP 0.153 – 0.746

Location: Miami-Dade County, Florida

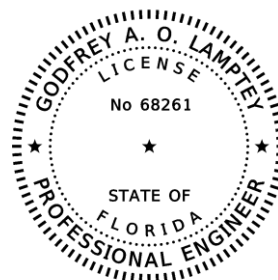
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I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

Signature: _____
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Date: 11/09/2022



SUMMARY OF PROJECT SCOPE ELEMENTS

The following list is provided as a basis for the Scope of Services for the Design Phase.

Summary of Project Information

- Description: SR 826 Frontage Roads at NW 77th Court
- County: Miami-Dade
- Project Type: RRR (Work Mix 0012)
- Project Limits: 87260524 | MP 0.153 – 0.746
- Highway Systems: N/A
- Functional Classification: N/A
- Context Classification: C4 Urban General
- Bridges: N/A
- Railroad Crossing: N/A
- Design Speed: 30 mph
- Posted Speed: 30 mph

1 PURPOSE

- Major work mix includes: 0012, Resurfacing
- Major work groups include: 3.1 Minor Highway Design
- Minor work groups include: 4.1.1 Miscellaneous Structures
7.1 Signing, Pavement Marking & Channelization
7.2 Lighting
7.3 Signalization
15.0 Landscape
8.2 Design, Right of Way, Construction Surveying
- Known alternative construction contracting methods include: N/A

2.1 Project General and Roadway (Activities 3, 4, and 5)

- Public Involvement: CAP Level 2 anticipated. The District Public Information Office (PIO) consultant is responsible for coordination of all public involvement activities during the Design Phase. The Designer is expected to attend a Public Information Meeting.
 - Other Agency Meetings: Miami-Dade DTPW, Town of Miami Lakes
 - Joint Project Agreements (JPAs): N/A
 - Specification Package Preparation: Yes, Specifications Package required
 - Value Engineering: N/A
 - Risk Assessment Workshop: N/A
 - Plan Type: Roadway Plans required (6 sheets)
 - Typical Section: 4 Typical Sections
 - Pavement Design: 2 Pavement Design
 - Milling and Resurfacing
 - Shoulder Widening
 - Pavement Type Selection Report(s): N/A
 - Cross Slope: N/A
 - Access Management Classification: N/A
 - Transit Route Features: N/A
- Major Intersections/Interchanges: No additional plan sheets required
- Roadway Alternative Analysis: N/A
 - Level of Temporary Traffic Control Plans: Level I
 - Temporary Lighting: N/A
 - Temporary Signals: N/A
 - Temporary Drainage: N/A
 - Design Variations/Exceptions: 6-10* DV:
 - Design variation for Lane Width
 - Design variation for Shoulder Width
 - Design Variation for Border Width
 - Design Variation for Lack of Bicycle Lanes
 - Design Variation for Clear Sight Triangles
 - Design Variation for Lateral Offset
 - Design Variation for Cross Slope*
 - Design Variation for Vertical Clearance*
 - Design Variation for Horizontal alignment*
 - Design Variation for Superelevation*

* Additional survey is required to determine compliance with criteria.

- Back of Sidewalk Profiles: N/A

2.2 Drainage (Activity 6)

The existing drainage pattern is recommended to remain. The proposed improvements will require additional stormwater facilities to accommodate the additional impervious area. The Designer is responsible to coordinate with the District Maintenance Office to determine if any outstanding drainage maintenance issues should be addressed by this project.

2.3 Utilities Coordination (Activity 7) N/A

The project utility coordination is to be completed by the District Utilities Group and the Project Utility Coordinator consultant. Utility coordination tasks include processing of any JPA, Utility Work Schedules (UWS), and Utility Clear Letters. Twelve (12) Utility Agencies/Owners (UAOs) are identified within 0.25 mile of the project limits. No significant utility impacts are anticipated for this RRR Project. However, the Designer should perform Subsurface Utility Exploration (SUE) tests to verify any utility conflicts within the project limits.

2.4 Environmental Permits, Compliances, and Clearances (Activity 8)

The project will occur within the State Highway System (SHS) right-of-way and is therefore exempt from state and local environmental permitting requirements pursuant to Section 335.02, Florida Statutes and 62-330-051, F.A.C. Peters Pike Canal is adjacent to the project limits. If work or staging is to occur within the canal right of way, a Miami-Dade County Class III permit will be required.

The project is also within the South Florida Urban Bat Area (consultation area) for the Florida bonneted bat, which is listed as an endangered species. Any tree impacts (removal, relocation, trimming, pruning) should be clearly identified in the subsequent plans reviews.

2.5 Structures (Activities 9 – 18) N/A

2.6 Signing and Pavement Markings (Activities 19 & 20)

Signing and Pavement Marking Plans are required (6 sheets at 1:40 Scale). Signing improvements include the upgrade of all substandard ground-mounted signs to meet current FDOT and MUTCD requirements. All pavement markings within the limits of milling and resurfacing shall be replaced to meet current FDOT Standard Plans for Road Construction.

2.7 Signalization (Activities 21 & 22)

There are no signalized intersections within the project limits. However, there are two school

zone flashers mounted on mast arms.

2.8 Lighting (Activities 23 & 24)

The designer should perform lighting justification and provide lighting if warranted.

2.9 Landscape Architecture (Activities 25 & 26)

This project may require addressing impacts to existing trees including trimming/relocation of trees/vegetation obstructing intersection sight triangles, or signals and signs visibility and ADA unobstructed sidewalk clearance. Coordination with the District Maintenance Office to review if this maintenance falls under any existing maintenance agreement with Town of Miami Lakes for existing landscape will be required.

2.10 Survey (Activity 27) N/A

Survey services to be provided by the District. The Designer will create the Project Control sheets from data extracted from the project survey and sign and seal the Project Control Sheets.

2.11 Photogrammetry (Activity 28) N/A

Aerial photography to be provided by the District.

2.12 Mapping (Activity 29) N/A

Right of Way Mapping services to be provided by the District.

2.13 Terrestrial Mobile LiDAR (Activity 30) N/A

2.14 Architecture (Activity 31) N/A

2.15 Noise Barriers (Activity 32) N/A

2.16 Intelligent Transportation Systems (Activities 33 & 34) N/A

2.17 Geotechnical (Activity 35) N/A

Geotechnical services to be provided by the District. Pavement core borings are being performed for the proposed pavement resurfacing. The Designer is responsible for including the Project geotechnical information in the Roadway Plans component set.

2.18 Project Schedule (as of 10/03/2022)

- Begin Roadway Plans 02/10/2023
- Production Date 08/16/2024
- Transmit PS&E Package 01/21/2025
- Letting Date 03/27/2025

2.19 Submittal Schedule (as of 10/03/2022)

- 60% Plans Submittal 08/11/2023
- 90% Plans Submittal 01/11/2024
- 100% Plans Submittal 05/08/2024
- Plans Completed Submittal 07/09/2024
- PS&E Submittal 12/16/2024

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LIST OF UNITS

mph miles per hour
 psi pounds per square inch

LIST OF ABBREVIATIONS

| | | | |
|--------|--|-----------------|--|
| AADT | Annual Average Daily Traffic | NB | Northbound |
| AASHTO | American Association of State Highway and Transportation Officials | NHS | National Highway System |
| ADA | Americans with Disabilities Act | NMSA | Non-Major State Action |
| ADAAG | ADA Accessibility Guidelines | NOAA | National Oceanic and Atmospheric Administration |
| CAP | Community Awareness Plan | PCS | Pavement Condition Survey |
| DHW | Design High Water | PECCDR | Pavement Evaluation Coring and Condition Data Report |
| DTPW | Department of Transportation and Public Works | PIF | Permit Involvement Form |
| EB | Eastbound | PIO | Public Information Office |
| ETRM | Exfiltration Trench Reference Manual | PLEMO | Planning and Environmental Management Office |
| ESAL | Equivalent Single Axle Load | POP | Pavement-Only Project |
| FAST | Florida Analysis System for Targets | PROWAG | Public Right of Way Accessibility Guideline |
| FAC | Florida Administrative Code | RCI | Roadway Characteristics Inventory |
| FC | Friction Course | RRR | Resurfacing, Restoration, and Rehabilitation |
| FDOT | Florida Department of Transportation | RT | Right |
| FDM | FDOT Design Manual | SB | Southbound |
| FM | Financial Management (Number) | SHS | State Highway System |
| FPDM | Flexible Pavement Design Manual | SIS | Strategic Intermodal System |
| FPID | Financial Project Identification Number | SLD | Straight Line Diagram |
| FWD | Falling-Weight Deflectometer | SMO | State Materials Office |
| FY | Fiscal Year | SN | Structural Number |
| HCL | High Crash List | T ₂₄ | Truck Factor (% Trucks) |
| JPA | Joint Project Agreement | TTC | Temporary Traffic Control (Plan) |
| LBR | Limerock Bearing Ratio | TEM | Traffic Engineering Manual |
| LRE | Long Range Estimate | UAM | Utility Accommodation Manual |
| LT | Left | UAO | Utility Agency/Owner |
| MP | Milepost | UWS | Utility Work Schedule |
| MR | Resilient Modulus | WB | Westbound |
| MUTCD | Manual on Uniform Traffic Control Devices for Streets and Highways | | |

1.0 INTRODUCTION

GOAL Associates was retained by the Florida Department of Transportation (FDOT) District 6 Planning and Environmental Management Office (PLEMO) to prepare a RRR Scoping Report for Project FM 446239-1: A Resurfacing, Restoration, and Rehabilitation (RRR) Project along 826 Frontage Road at NW 77th Court. This Scoping Report is based on the requirements from the current edition of the FDOT Design Manual (FDM), Section 114, and the District 6 Design Handbook (revised May 2021). This project will be required to comply with the design criteria in the latest FDOT Design Manual (FDM); therefore, this Scoping Report considers the design criteria from the current edition of the FDM (dated January 2022). This Scoping Report documents the existing physical, operating, and safety conditions through office and field reviews. This Scoping Report also documents the design criteria, deficiencies, and recommended improvements to be addressed by the programmed RRR Project.

1.1 Project Purpose and Need

Project Purpose

The primary purpose of this RRR Project is to preserve and extend the service life of the existing pavement.

Objective

- Correct the deficient pavement conditions by milling and resurfacing.

Justification

- The project originated from the 2019 Pavement Condition Survey (PCS) Ratings, which identified the pavement within the project limits to be deficient for crack rating.
- Pavement age was the key primary factor for the origination of this project.
- Field reviews confirmed that overall, the existing pavement is in poor condition with multiple locations presenting deterioration. These included severe longitudinal and transverse cracking, eroded canal bank, and deficient guardrail.

Additional Project Needs

The following additional project needs are identified to be addressed by this project:

- Evaluate sight distance obstructions.
- Upgrade all substandard ground-mounted signs and pavement markings.
- Upgrade pedestrian facilities to comply with the Americans with Disabilities Act (ADA).
- Trim trees and shrubs to comply with clear sight triangle and ADA requirements.

1.2 Project Type Determination

Due to the extensive pavement deterioration, the project is programmed as a RRR project and the scope of work shall meet the requirements of the FDM: Development and Processes, Section 114 Resurfacing, Restoration and Rehabilitation (RRR).

1.3 Project Location and Limits

The project is located in Miami-Dade County, within the Town of Miami Lakes. The project limits are along SR 826/Frontage Roads at NW 77th Court (87260524 | MP 0.153 – 0.746). The Project Location Map is shown in **Figure 1-1**.

1.4 Adjacent Projects

No previous projects were identified within the project limits. However, the following adjacent projects were identified and are attached in **Appendix F**.

- FPID 430821-3-52-01 (FY 2015)
NW 77th Court resurfacing from NW 82nd Avenue to NW 154th Street
- FPID 435760-1-52-01 (FY 2029)
SR 826/Palmetto Expressway widening from I-75 to North of Canal C-8 Bridge (NW 162nd Street)



Figure 1-1 Project Location Map

2.0 ASSESSMENT OF EXISTING CONDITIONS

The existing conditions were evaluated, and deficiencies identified through office and field reviews performed as part of the study.

2.1 Office Reviews

The office reviews included the review of documents provided by the District and data collection from other sources. Documents reviewed included the following:

- Aerial Photography, dated 2021
- Right of Way Maps
- Existing traffic volumes
- Straight Line Diagram (SLD)
- Roadway Characteristics Inventory (RCI)
- Identification of Utilities (Sunshine State One-Call of Florida)
- Pavement Condition Forecast, Resilient Modulus (MR) Recommendation Memos, and 18-kip Equivalent Single Axle Load (ESAL) Report
- As-Builts and Design Plans from previous projects

2.2 Field Reviews

Field reviews were conducted in June 2022 for this Scoping Report, based on the District 6 Field Review Checklists. Photos documenting these field reviews are included in the relevant sections of this report.

2.3 Design Controls

2.3.1 Highway Functional Classification

SR 826 Frontage Road is not part of the National Highway System and is not functionally classified.

2.3.2 Context Classification

SR 826 Frontage Road is designated as a C4-Urban General Context Classification.

2.3.3 Design, Posted and Target Speeds

No existing plans are available for this roadway segment. Based on the field review, the existing posted speed limit is 35 mph. However, due to the highly urbanized nature of the corridor with residential and commercial developments along the corridor, a Target Speed of 30 mph is recommended for the corridor. According to FDM 201.5.1., the Design Speed should reflect the

Target Speed. As such, both the design and posted speeds are recommended to be reduced to 30 mph to match the target speed.

2.3.4 Traffic Volume and Design Year

Traffic Volume

There is no traffic count station located within the project limits. 72-hour classification counts were performed within the study limits from Tuesday, May 3, 2022, through Thursday, May 5, 2022. The traffic volume data is listed in **Table 2-1**.

| Table 2-1 Existing Traffic Volume Characteristics (2022) | | | | | |
|--|-----------------------------------|--------|-----------------|-----------------|---------------------------------|
| Segment | Location Description | AADT | K ₃₀ | D ₃₀ | Truck Factor (T ₂₄) |
| 1 | NW 77th Court from MP 0.153-0.746 | 15,103 | 9.0% | 56% | 2.74% |

Design Period

FDM Section 201.3 recommends a Design Period of 12 to 20 years for projects with milling. The Flexible Pavement Design Manual (FPDM) recommends a pavement Design Period of 15 to 20 years (Pavement Overlay with Milling, Non-Limited Access Facilities). A Design Period of 20 years is selected for this RRR Project. The Opening Year is 2026 and Design Year is 2046.

2.4 Existing Typical Section

There are three existing roadway typical sections along the project corridor as shown in

Figure 2-1 to Figure 2-3.

The first typical section extends from MP 0.153 to the Bob Graham Education Center (MP 0.385) and consists of a two-lane undivided roadway with curb and gutter on both sides of the roadway, 5-foot sidewalk on the west side and guardrails on the east along the canal.

The second typical section consists of a two-lane undivided roadway from MP 0.385 to MP 0.696 with no paved shoulders, guardrails on the east side of the roadway. There is existing sidewalk on the west side from MP 0.385 to MP 0.509; however, the remainder of the segment has no sidewalks.

The third typical section consist of a two-lane undivided roadway from MP 0.696 to MP 0.746 with no paved shoulders, guardrails on the west side of the roadway and no sidewalks.

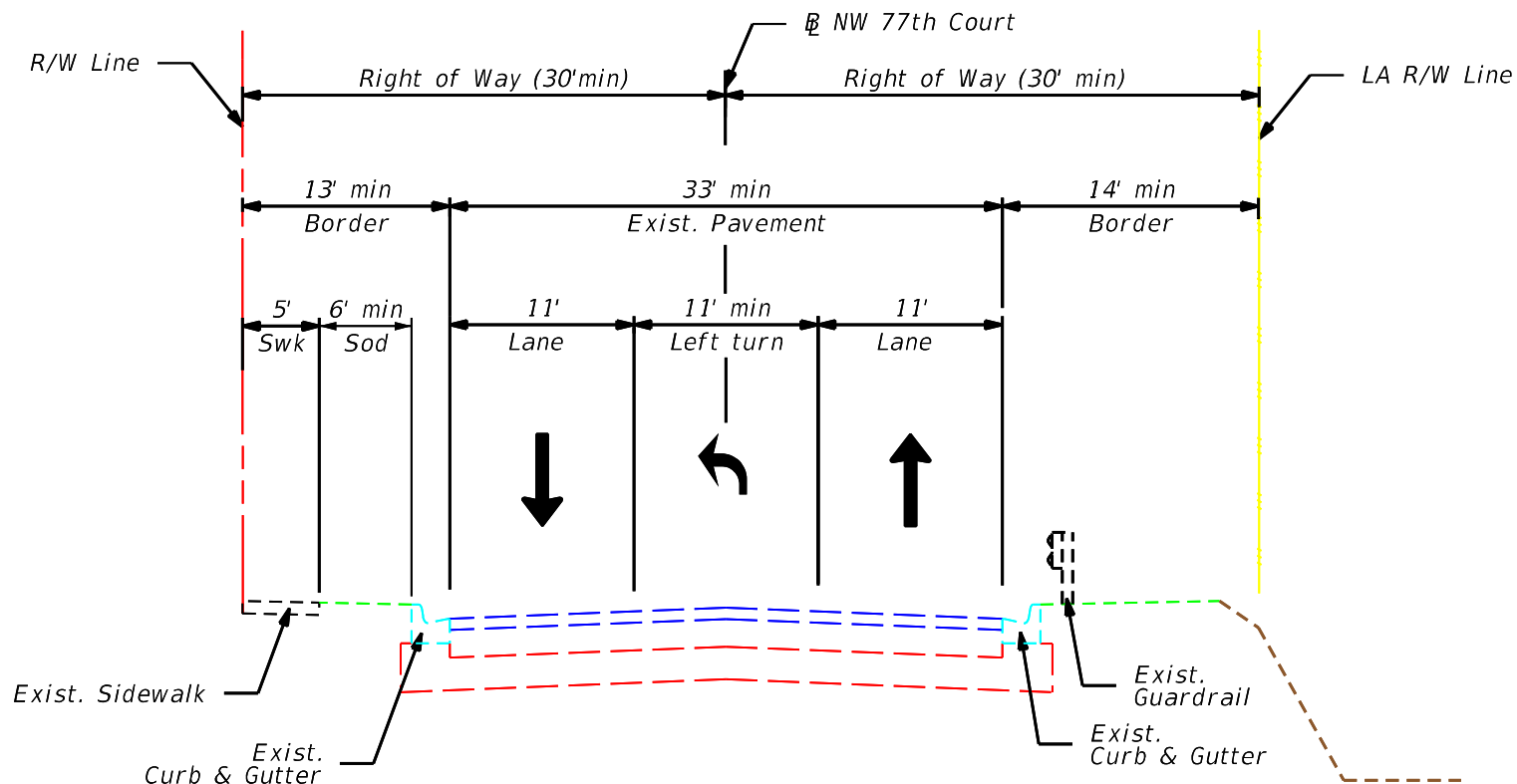


Figure 2-1 Existing Typical Section NW 77th Court from MP 0.153 to MP 0.385

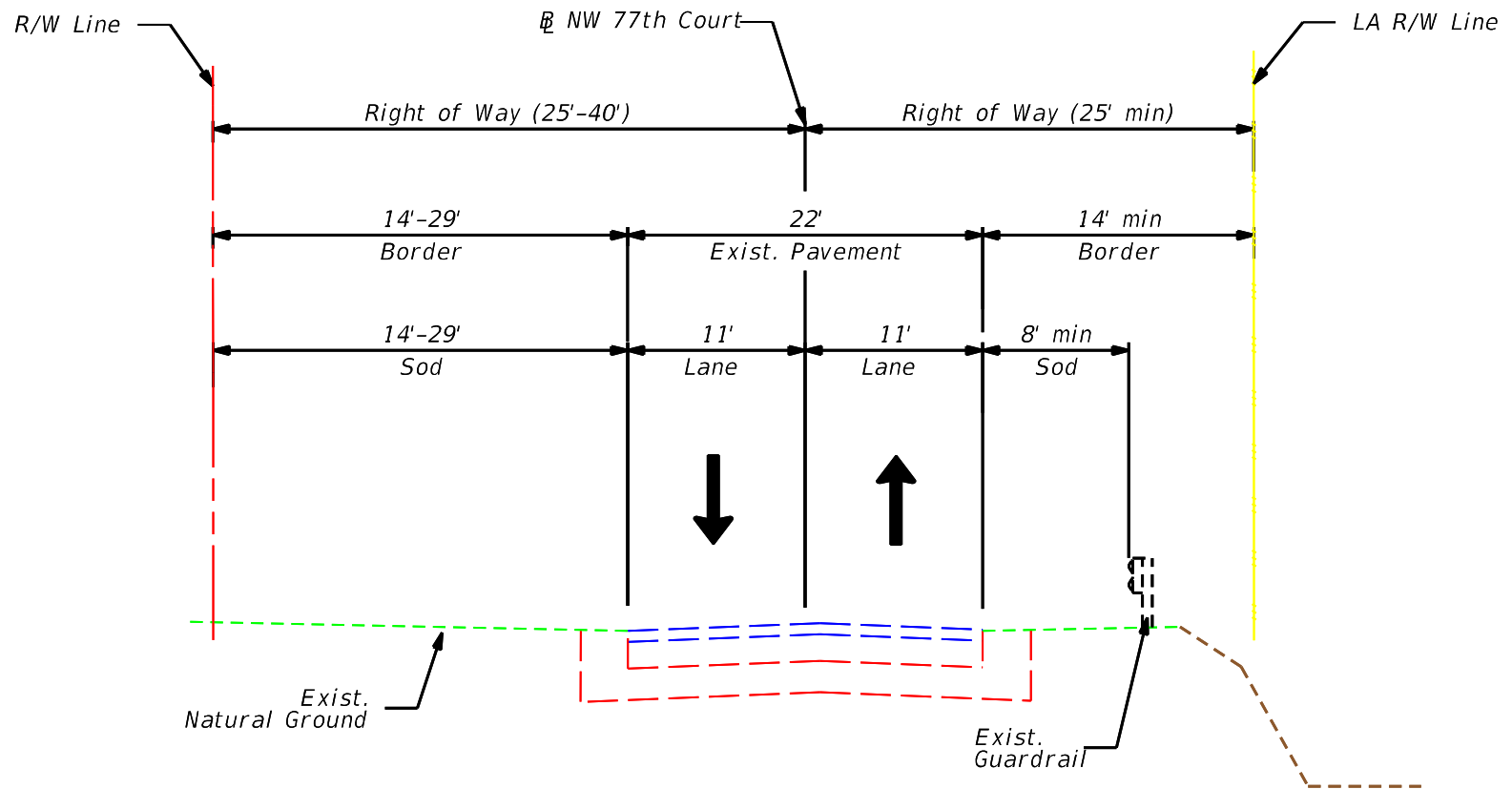


Figure 2-2 Existing Typical Section NW 77th Court from MP 0.385 to MP 0.696

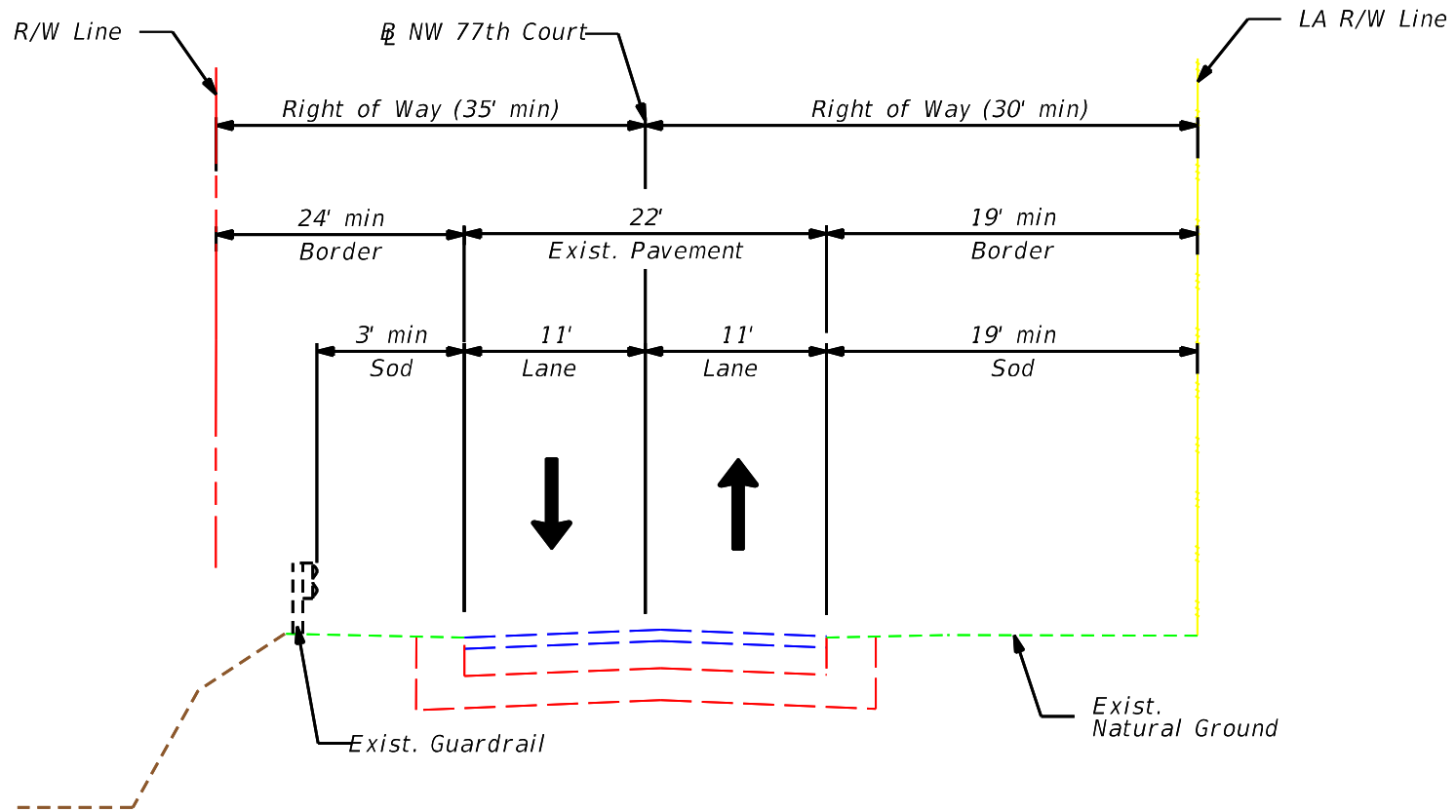


Figure 2-3 Existing Typical Section NW 77th Court from MP 0.696 to MP 0.746

2.5 Existing Pavement

2.5.1 Pavement History

It is unknown when the existing pavement was last resurfaced. The designer should request pavement cores to determine the existing pavement layer types and thicknesses along the project corridor.

2.5.2 Existing Pavement Conditions

Based on a visual inspection of the pavement during our field reviews, the existing pavement condition appears to be poor with severe longitudinal and transverse cracking, rutting and utility cuts observed at several locations within the limits of the project; examples are shown in **Figure 2-4**.



Figure 2-4 Existing Pavement Conditions

2.5.3 Pavement Condition Survey

The project corridor is not on the state highway system, as such, the District conducted a pavement condition survey for only cracking and identified the segment as deficient for the 35-mph posted speed limit on the left and right sides of the roadway. No pavement ratings for ride or rut were performed for this project segment. The PCS rating from 2019 is listed in **Table 2-2**.

| Table 2-2 Pavement Condition Ratings | | | | |
|--------------------------------------|------------------|------------------|------|-----|
| Milepost Limits | Side (Direction) | 2019 PCS Ratings | | |
| | | Crack | Ride | Rut |
| MP 0.153 – 0.746 | Both | 6.0 | N/A | N/A |

2.5.4 Ground-Penetrating Radar

A Ground-Penetrating Radar (GPR) Test for this project was completed in November 2021; the results are summarized in **Table 2-3**. The GPR test results indicate the existing asphalt thickness varies from 1.07 to 4.65 inches, with an average of 2.17 inches on the left side of the roadway and 0.94 to 4.82 inches with an average of 2.13 inches on the right side of the roadway. The GPR Results are shown in **Appendix D**.

| Table 2-3 Summary of GPR Test Results | | | | | | | | |
|---------------------------------------|----------------------------------|------|---------|--------------------|-------------|------|---------|--------------------|
| Lane # | Total Asphalt Thickness (inches) | | | | | | | |
| | L-Direction | | | | R-Direction | | | |
| | Min | Max | Average | Standard Deviation | Min | Max | Average | Standard Deviation |
| 1 | 1.07 | 4.65 | 2.17 | 0.53 | 0.94 | 4.82 | 2.13 | 0.58 |

2.6 Analysis of Existing Deficiencies

2.6.1 Design Criteria

This Scoping Report analyzes the existing conditions for compliance with the design criteria from the current edition of the FDM (January 2022). Existing components reviewed include roadway, signing & pavement markings, and signalization. It is the Designer's responsibility to implement the design criteria from the latest edition of the FDM and FDOT Standard Plans effective for this project (Letting Date July 2024). Other documents used for review of this RRR Project include the latest editions of the following manuals or guidelines:

- American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets
- FDOT Utility Accommodation Manual (UAM)
- Americans with Disabilities Act (ADA) Standards for Accessible Design
- ADA Standards for Transportation Facilities
- AASHTO Roadside Design Guide (RSDG)
- FDOT District 6 Design Handbook
- FDOT Drainage Design Guidelines
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- Public Right-of-Way Accessibility Guidelines (PROWAG)
- FDOT Speed Zoning Manual
- Manual of Uniform Traffic Control Devices (MUTCD)
- FDOT Traffic Engineering Manual (TEM)

2.6.2 Lanes

2.6.2.1 Lane Width

Based on our field review, the existing travel lane and turn lanes widths are 11 feet throughout the project limits. Auxiliary lanes are typically the same width as the adjacent travel lane. Per FDM Table 210.2.1, the minimum lane width for a two-lane road is 12 feet. As such, a design variation for lane widths is required to maintain the existing 11 feet lanes

2.6.2.2 Pavement Cross Slope

The existing pavement cross slopes will be documented by the Design Survey to be performed as part of the final Design Phase of this project. An analysis of the digital terrain model (DTM) to identify specific locations with substandard cross slopes is not included in this report. It is assumed the existing cross slopes may be substandard within the project limits.

Based on the Department’s Practical Design Guidelines, minor cross slope correction should be eliminated from Resurfacing Projects, if the existing cross slopes are within the allowable ranges per FDM, Section 210.2.4.1, Table 210.2.3. The District Design Handbook states “cross slope correction should be included in the scope of work only when historical crash data can be directly attributed to the deficient cross slope and the cross-slope correction can be practically constructed without extreme constraints or impacts.”

At the time of this report submittal, the District Traffic Operations Office has not identified a significant crash pattern directly related to substandard cross slopes within the project limits. The Designer is responsible for reviewing the most recent five-year crash data and coordinating with the District Traffic Operations Office to determine if there is a historical crash pattern directly attributed to the deficient cross slopes.

2.6.2.3 Roadway Transitions

The existing roadway typical section from MP 0.153 to MP 0.323 is a two-lane roadway with a wide painted median which varies from approximately 11 feet to 14 feet. This transitions to a two-lane undivided roadway section from MP 0.323 to MP 0.746.

2.6.3 Median

There is an existing painted median from MP 0.153 to MP 0.323. The width of the painted median varies from approximately 11 feet to 14 feet.

2.6.4 Shoulders

Existing Type F curb and gutter is located on the outside of the roadway from MP 0.153 to MP 0.385. The remaining segment of the project corridor has no paved shoulders. As part of the proposed improvements, 5-foot paved shoulders will be provided within the flush shoulder segment from MP 0.385 to MP 0.746.

2.6.5 Curbed Roadways

Existing Type F curb and gutter is located along both sides of the roadway from MP 0.153 to MP 0.385. The existing curb placement meets current FDM criteria.

2.6.6 Roadside Slopes

The existing roadside slopes adjacent to the Peter’s Pike canal on the east side from MP 0.153 to MP 0.696 and on the west side from MP 0.696 to MP 0.746 were observed to be eroded. The

canal embankment is shielded by guardrails; however, in some areas, the structural integrity of the guardrails seems to be affected by the eroded canal banks. The existing guardrails are recommended to be replaced to meet standards and structural integrity. The canal front slopes are also recommended to be regraded to meet standards.

2.6.7 Border Width

The existing border width along the project limits meet the 8 feet minimum requirement for this roadway segment. However, the proposed paved shoulder width will reduce the border width to a minimum width of 5.5 feet. as such, a design variation for border width is required.

2.6.8 Horizontal Alignment

There are no existing plans to verify the horizontal alignment along the corridor. However, based on the field review and aerials there are 5 horizontal curves within the project limits. The existing horizontal alignment is to remain; however, the designer should verify the existing horizontal alignment with the design survey. A design variation for horizontal alignment may be required.

2.6.9 Superelevation

There are 5 horizontal curves within the project limits. However, only the first curve at the beginning of the project is superelevated. There are no existing plans to verify the curve radius or superelevation. However, based on the field measurements, the existing superelevation ranges from 3.5% - 4.5%. Since this is an urbanized corridor, the maximum superelevation rate of 5% will apply. The designer should verify the existing superelevation with the design survey. A design variation for superelevation may be required.

2.6.10 Vertical Alignment

2.6.10.1 Grades

No existing plans were available.

2.6.10.2 Vertical Curvature

No existing plans were available.

2.6.10.3 Vertical Clearance

Overhead Signals and Signs: There is an existing school zone flasher mounted on an existing mast arm. Existing overhead signs are also mounted on mast-arm signal poles. The exact vertical clearances are unknown at this time and will be documented by the Design Survey to be performed as part of the final Design Phase of the project.

Utilities: Existing utility lines cross over the roadway at one location within the project limits. The exact vertical clearances for the utilities are unknown at this time.

2.6.11 Sight Distance

2.6.11.1 Stopping Sight Distance

No existing plans were available to determine if there is a stopping sight distance issue associated with any existing crest curves.

2.6.11.2 Clear Sight Triangles

Clear sight triangles were evaluated at the intersections and driveways within the project limits. Based on field observations and an office review, obstructions to intersection sight distance were identified at several locations within the project limits as shown on the Roadway Plans. **Figure 2-5** shows examples of existing intersection sight distance issues within the project limits.



Figure 2-5 Clear Sight obstructions at intersections

Sight triangle obstructions consist of trees, light poles, and signposts. At the time of this Scoping Report submittal, the District Traffic Operations Office has not documented any specific

intersections where a significant crash history is directly related to the existing sight triangle obstructions. Where intersection sight distance obstructions are located within the right of way and are easily movable, the Designer should consider relocation of the obstruction. Any proposed tree relocation/removal should be coordinated with the District Landscape Architect. If relocation/removal of any obstructions is deemed unfeasible, a design variation for clear sight distance is required.

2.6.12 Intersections

This RRR Scoping Report does not include an evaluation of the existing intersections to determine if a Traffic Engineering Study is required.

2.6.13 Lane Tapers & Auxiliary Lanes

Existing turn lanes are present at 2 intersections within the project limits as shown in **Table 2-4**. Based on the field review, the taper length meets the required length of 50 feet for a single turn lane. Deceleration lengths for the turn lanes were evaluated based on minimum criteria from FDM Exhibit 212-1. The minimum deceleration distance of 145 feet is provided at both locations. At the time of this Scoping Report submittal, the District Traffic Operations Office has not documented any specific intersections with a significant crash history related to turn lanes, a need to extend the existing left-turn lanes, or a need to construct new turn lanes. It is recommended to restripe the taper lengths to 50 feet as per standards.

| Table 2-4 Existing Turn Lane Length | | | | |
|-------------------------------------|---------------------|-------------------|-------------------|---|
| Intersection | Turn Lane Direction | Total Length (ft) | Taper Length (ft) | Meets Minimum Deceleration Distance per FDM 212.6 |
| Children’s Paradise Daycare | NB Left | 200 | 80 | Yes |
| Courtyard Marriott Hotel | NB Left | 200 | 110 | Yes |

2.6.14 Driveways

Existing driveways typically consist of asphalt driveway with radial returns across the sidewalk. No inactive driveways were encountered from our site visits. At the time of this Scoping Report submittal, no ADA complaints have been received concerning the sidewalk or driveway cross slope deficiencies within the project limits.

2.6.15 Drainage

The existing drainage within the project limits typically consists of a combination of open and closed drainage systems. The first segment of the project from MP 0.153 – 0.385, includes curb and gutter with curb inlets and ditch-bottom/curb inlets at side-street intersections. The second segment from MP 0.385 – 0.746 has flush shoulders with flat swales that drain into the adjacent Peter’s Pike canal. **Figure 2-6** shows some drainage inlets with debris encountered during the field review.



Figure 2-6 Existing Drainage Issues

There is an existing culvert that crosses the roadway at the north end of the corridor that connects the Peter’s Pikes Canal on either side of the roadway. The headwall for the culvert on the east side is damaged and needs to be repaired. This Scoping Report does not include an evaluation of the hydraulic, safety and physical adequacies of the existing drainage system. However, the proposed improvements include providing 5 feet paved shoulders along the project corridor. This will require an evaluation of the drainage system to provide adequate water quality and quantity for the additional impervious area.

2.6.16 Pedestrian, Bicyclists, and Transit Facilities

2.6.16.1 Sidewalks

Existing sidewalks are located on the west side of the roadway from MP 0.153 to the Bob Graham Education Center. The sidewalk widths are 5 feet as indicated in the existing typical sections.

Locations of uneven and damaged sidewalks were identified at some locations within the project limits. **Figure 2-7** shows some of the deficiencies encountered during the field review.



Figure 2-7 Damaged or Uneven Sidewalks

For RRR projects, the FDM recommends that unaltered sidewalk with a width of 4 feet or greater may be retained within any context classification. As such, the existing sidewalk widths are recommended to remain. However, the following are substandard conditions identified.

- Unobstructed Sidewalk Width

Clear sidewalk width less than 48 inches was identified at some locations as illustrated in **Figure 2-8** and shown in the roadway concept plans. At the mast arm location, additional sidewalk area will be provided to meet the 48 inches clear sidewalk width requirement. Landscape obstructions should be trimmed.

- Sidewalk Vertical Clearance

The existing shade trees on the west side of the corridor at the beginning of the project does not provide the 8.5 ft minimum vertical clearance required for vegetation over the sidewalk. These low hanging tree branches should be trimmed.

- Sidewalk Connectivity

There is a sidewalk gap from where the existing sidewalk ends at the Bob Graham Education Center to the end of the project. For sidewalk connectivity, a 10-foot shared use path is recommended on the west side between MP 0.509 and MP 0.696 and a 6-foot sidewalk on the east side between MP 0.696 and MP 0.746 to connect to the existing sidewalk on the north side. A mid-block crossing is also proposed at MP 0.696 (see **Appendix C** for Mid-Block crossing study)



Figure 2-8 Sidewalk Obstructions

2.6.16.2 Curb Ramps and Detectable Warnings

Existing pedestrian blended transitions ramps are located at three intersections within the project limits. The existing pedestrian ramps were evaluated for compliance with the FDOT Standard Plans and ADA Standards. Based on our field review, several curb ramp deficiencies were identified including missing/worn out detectable warnings and substandard transition slopes at commercial driveways and side streets. **Figure 2-9** shows examples of the deficiencies encountered within the project limits. It is recommended to upgrade all the deficient curb ramps within the project limits.



Figure 2-9 Existing Curb Ramps

2.6.16.3 Crosswalks

There is only one marked crosswalk within the project limits at the driveway to the Lucida Apartments. The existing marked crosswalks 10 feet wide with 12" parallel standard crosswalk markings.

2.6.16.4 Bicycle Facilities

There are no bicycle lanes within the limits of the project. Due to the limited right of way and the presence of canals along the project corridor, 5 feet marked paved shoulders are being proposed along the corridor as part of this project within the flush shoulder segment from MP 0.385 to MP 0.746. In addition, we recommend the provision of sharrow markings within the curb and gutter segment from MP 0.153 to MP 0.385. A design variation for lack of bicycle facilities is required.

2.6.16.5 Pedestrian Signals

There are no pedestrian signals within the project limits. The proposed improvements include a midblock crossing to provide sidewalk connectivity along the project corridor and also provide a safe route for access to the school from the adjacent residential communities. We recommend installing a Rectangular Rapid Flashing Beacon (RRFB) at the proposed midblock crossing location to facilitate safe crossing of the roadway.

2.6.16.6 Transit Facilities

There are no transit routes within the project limits.

2.6.17 At-grade Railroad Crossing

There are no railroad crossings within the project limits.

2.6.18 Lighting

There are 4 conventional light poles located within the last 650 feet of project corridor. This Scoping Report does not include an analysis of the existing vertical illumination levels within the project limits. At the time of this report submittal, the District Lighting Engineer has not documented specific lighting recommendations to be addressed by this RRR Project. Since this is an urban corridor, the designer should perform a lighting justification analysis to determine if roadway lighting is warranted along the entire corridor. If warranted, it is recommended to install roadway lighting to meet the FDM standards. Additional lighting is also required for the proposed midblock crossing to meet current FDM criteria.

2.6.19 Signing and Pavement Markings

Existing signing includes ground-mounted signs on the shoulders along the project corridor. There are also signs mounted on overhead mast-arms of the school zone. Faded, broken or substandard signs were observed within the project limits.

Based on field observations, the existing pavement markings are generally in poor condition, with faded striping as well as raised reflective pavement markers that are missing or with low reflectivity. **Figure 2-10** illustrates examples of substandard signing and pavement markings within the project limits.



Figure 2-10 Existing Signs and Pavement Markings

An existing sign inventory is not included in this Scoping Report. A review of all existing signage with the Manual on Uniform Traffic Control Devices (MUTCD), the FDOT Traffic Engineering Manual (TEM) and FDOT Speed Zone Manual criteria should be conducted at the Design Phase. Based on field observations, there are some existing signs within the project limits that are defaced/damaged, and therefore do not comply with the latest standards. Most of the existing single-post signs along the roadside comply with the standard placement per Index 700-101. In addition, school zone signing, and pavement markings need to be upgraded to comply with FDOT's Speed Zoning Manual.

2.6.20 Signalization

There are no signalized intersections within the project limits. However, two school zone signals are located within the project limits which consist of flashing signals mounted horizontally on mast arms. We recommend installing an RRFB along the project corridor to facilitate safe crossing of the roadway. In addition, the school zone flashers do not meet current standards and are recommended to be upgraded to meet standards. The designer should evaluate if the existing mast arms can accommodate the new sign panels for the school flasher per the FDOT Speed Zoning Manual requirements. If not, new mast arms for the school zone flashers should be provided. The school zone limits shall be identified using roadside options for the flashing beacon assembly, and associated school zone signs per Figure 15-4 of the Speed Zoning Manual.

2.6.21 Bridges Structures

There are no bridges within the project corridor.

2.6.22 Roadside Safety

2.6.22.1 Lateral Offset & Control Zone

Light Poles

The existing lighting consists of 4 conventional light poles located within the last 650 feet of the project corridor. The existing light poles have a lateral offset of greater than 6 feet from the flush shoulder of the frontage road.

Signal Poles

All existing mast-arms for the school flashers meet the minimum required lateral offset of greater than 6 feet from the from the travel lane and satisfy the minimum requirement for RRR.

Trees

All the existing landscape trees along the corridor meet criteria for lateral offset of greater than 1.5 feet from the face of the curb for the curbed roadway segment or greater than 6 feet for the flush shoulder of the frontage roadway segment to satisfy the minimum requirement for RRR.

Aboveground Utilities

There are some existing above ground utility poles within the project limits that have a lateral offset of greater than 1.5 feet from the face of curb and satisfy the minimum lateral offset or clear zone requirements.

Traffic Control Signs

There are some existing ground-mounted signs that do not meet the minimum 5-foot lateral offset requirement from the face of the guardrail.

Guardrails

Within the flush shoulder segment of the roadway, the proposed guardrails are located adjacent to the shoulder due to right of way constraints and the adjacent canals. This does not meet the required 12-foot offset per FDM. Within the curb and gutter section, the existing guardrails do not meet lateral offset to the face of the curb and will need to be upgraded. In addition, the guardrail does not meet the minimum of 6' lateral offset from the canal front slope.

Based on the evaluation of the existing lateral offsets, some of the existing or proposed features within the project limits have substandard lateral offset. A design variation for lateral offset is required.

2.6.22.2 Roadside Barriers

There are guardrails along the east side of the road along the Peter's Pike canal and transitions to the west side when the canal crosses to the west side. The existing guardrails are in poor condition, do not have miscellaneous asphalt and do not meet the current standards. In addition, some of the guardrails located on the canal banks appear to be tilted. We recommend replacing all the guardrails along the corridor.

2.6.23 Ancillary Structures

Existing ancillary structures within the project limits include existing mast arm poles for the school zone flashers, light poles, and utility poles. The designer should evaluate if the existing mast arms can accommodate the new sign panels for the school flasher. If not, new mast arms for the school zone flashers should be provided.

2.6.24 Landscape

There are some landscape trees on both sides of the roadway. Trim trees that are obstructing the visibility of road signs. Coordinate with the Town of Miami Lakes for any tree trimming as needed. When corrective pruning is required, the designer shall use the pay item for Tree Root and Branch Pruning, to ensure the corresponding specification is added to the project.

2.7 Operating Conditions

2.7.1 Access Management

NW 77th Court within the project limits does not have an access management classification since it is not on the state highway network. The existing condition is primarily a two-lane undivided roadway. The existing conditions include 4 unsignalized intersections within the project limits. The existing condition is to remain.

2.7.2 Maintenance Concerns

At the time of this Scoping Report, the District Maintenance Office (North Dade Yard) has not documented any specific maintenance issues within the project limits to be addressed by this RRR Project. The project corridor is under a Maintenance of Agreement (MOA) with the Town of Miami Lakes. It is the Designer's responsibility to coordinate with the District Maintenance Office to determine if any additional outstanding maintenance issues within the project limits will be addressed or should be included in the scope of work for this RRR Project.

2.8 Safety Conditions

This Scoping Report does not include an assessment of the historical crash statistics by a qualified safety specialist. The District Traffic Operations Office has not yet provided a RRR Safety Review Technical Memorandum for this project corridor. Recommendations from the RRR Safety Review Technical Memorandum will be included in the scope of work for this RRR Project when available.

3.0 RECOMMENDATIONS IMPROVEMENTS

To address the project purpose and need and the deficiencies identified, the design of this project should implement the following recommendations.

3.1 Roadway

- Mill and resurface the existing pavement.
- Provide 5 feet paved shoulder on both sides of the roadway between MP 0.385 to MP 0.746.
- Upgrade the existing drainage system to accommodate the additional impervious area and repair/replace damaged drainage inlet tops.
- Adjust the existing storm drain manholes, utility manhole tops, and valves within the limits of milling & resurfacing or sidewalk reconstruction, as necessary.
- Replace existing guardrails along the existing canal including the appropriate end anchorages to meet standards.
- Regrade and stabilize the existing canal front slopes along the project corridor.
- Repair the damaged headwall for the culvert on the east side of the roadway

3.2 Pedestrian and Bicycle Facilities

- Upgrade deficient pedestrian curb ramps and related components such as detectable warning surfaces, pavement markings, pedestrian crossing signs and plaques.
- Reconstruct damaged sidewalk segments (lifted, sunken or broken sidewalk) and address the cause of said damage (tree roots etc.).
- Construct additional sidewalk areas at the mast arm pole locations to provide 48 inches unobstructed sidewalk width.
- Construct 10-foot shared use path on the west side between MP 0.0.509 and MP 0.696 and a 6-foot sidewalk on the east side between MP 0.696 and MP 0.746 to connect to the existing sidewalk on the north side. There is a small segment of sidewalk that connects to the existing sidewalk outside the FDOT right of way at the end of the project. A temporary construction easement will be required.
- Provide sharrow markings along the roadway pavement between MP 0.153 to MP 0.385 and marked shoulders from MP 0.385 to MP 0.746.

3.3 Signing and Pavement Markings

- Upgrade all broken and substandard ground-mounted signs to comply with the latest editions of the FDOT Standard Plans, the FDOT Traffic Engineering Manual (TEM), and the Manual on Uniform Traffic Control Devices (MUTCD).

- Replace and upgrade all pavement markings to meet the latest FDOT Standard Plans for Road Construction.
- Replace the existing 35 mph speed limit signs with 30 mph speed limit signs.
- Provide speed feedback signs along the project corridor.
- Install transverse raised rumble strips as per Standard Plans Index 546-001 in the northbound and southbound directions in advance of the mid-block crossing.
- Upgrade the school zone signing and pavement markings to comply with FDOT's Speed Zoning Manual.
- Provide a new mid-block pedestrian crossing at approximately MP 0.696 where the roadway crosses the canal.

3.4 Signalization

- Provide new rectangular rapid flashing beacons for the new mid-block pedestrian crossing at approximately MP 0.696.
- Upgrade the existing school flashers to meet standards. The designer should evaluate if the existing mast arms can accommodate the new sign panels for the school flasher. If not, new mast arms for the school zone flashers should be provided.
- Replace signal pull boxes impacted by the reconstruction of sidewalk and/or pedestrian curb ramps.

3.5 Lighting

- Perform a lighting justification analysis to determine if roadway lighting is warranted along the entire corridor. If warranted, it is recommended to install roadway lighting to meet the FDM standards.
- Replace the existing HPS cobra head luminaires to LED.
- Replace lighting pull boxes impacted by the reconstruction of sidewalk segments and/or pedestrian curb ramps.

3.6 Landscape

- Trim trees and shrubs to comply with vertical clearance and clear sight triangle requirements where feasible. When corrective pruning is required, the designer shall use the pay item for Tree Root and Branch Pruning, to ensure the corresponding specification is added to the project.

3.7 Safety Improvements

The District Traffic Operations Office provided a 3R Safety Review Technical Memorandum to identify significant crash locations, probable causes, suggested correction measures, or additional safety and non-safety improvements to be included in the scope of work for this RRR Project.

SR 826 Frontage Road at NW 77th Court - Segment wide

Non-Safety Improvements

- Consider installing a “Right Turn Only” (R3-5R) signs facing eastbound at the Royal Oaks Plaza Center Driveway.
- Consider removing the Curve (W1-2) signs on the northbound and southbound approaches to the curve at the south end of the segment and install a Turn (W1-1) signs.
- Consider replacing the worn out “School Exit” sign at the Bob Graham Education Center Pick-up/Drop-off Exit.
- Consider trimming the vegetation obstructing the speed limit sign facing southbound just north of Bob Graham Education Center.
- Consider installing a “Speed Limit 35” (R2-1) facing southbound just north of the curve at Royal Oaks Plaza.
- Consider widening the roadway north of Peter’s Pike Canal.

3.8 Other Improvement Recommendations

An Environmental Resource Desktop Analysis (ERDA) was prepared by the District PLEMO Environmental Consultant and is included in **Appendix B**.

3.9 Design Exceptions and Variations

A review of AASHTO and FDOT Design Criteria for this RRR Project identified the following Design Variations required for this project.

- Design variation for Lane Width
- Design variation for Shoulder Width
- Design Variation for Border Width
- Design Variation for Lack of Bicycle Lanes
- Design Variation for Clear Sight Triangles
- Design Variation for Lateral Offset

At the Design Phase, an additional review is required to determine compliance for the following elements. The Designer is responsible for reviewing the Design Survey to determine if the existing

conditions comply with the design criteria. A Design Variation may be required for the following elements:

- Design Variation for Cross Slope
- Design Variation for Vertical Clearance
- Design Variation for Horizontal alignment
- Design Variation for Superelevation

3.10 Recommended Typical Section

The existing cross sectional elements for the roadway typical section are recommended to remain the same as shown in **Figure 3-1** to **Figure 3-4**.

3.11 Concept Plans

Concept plans summarizing the existing deficiencies and recommended improvements are shown in **Figure 3-5**.

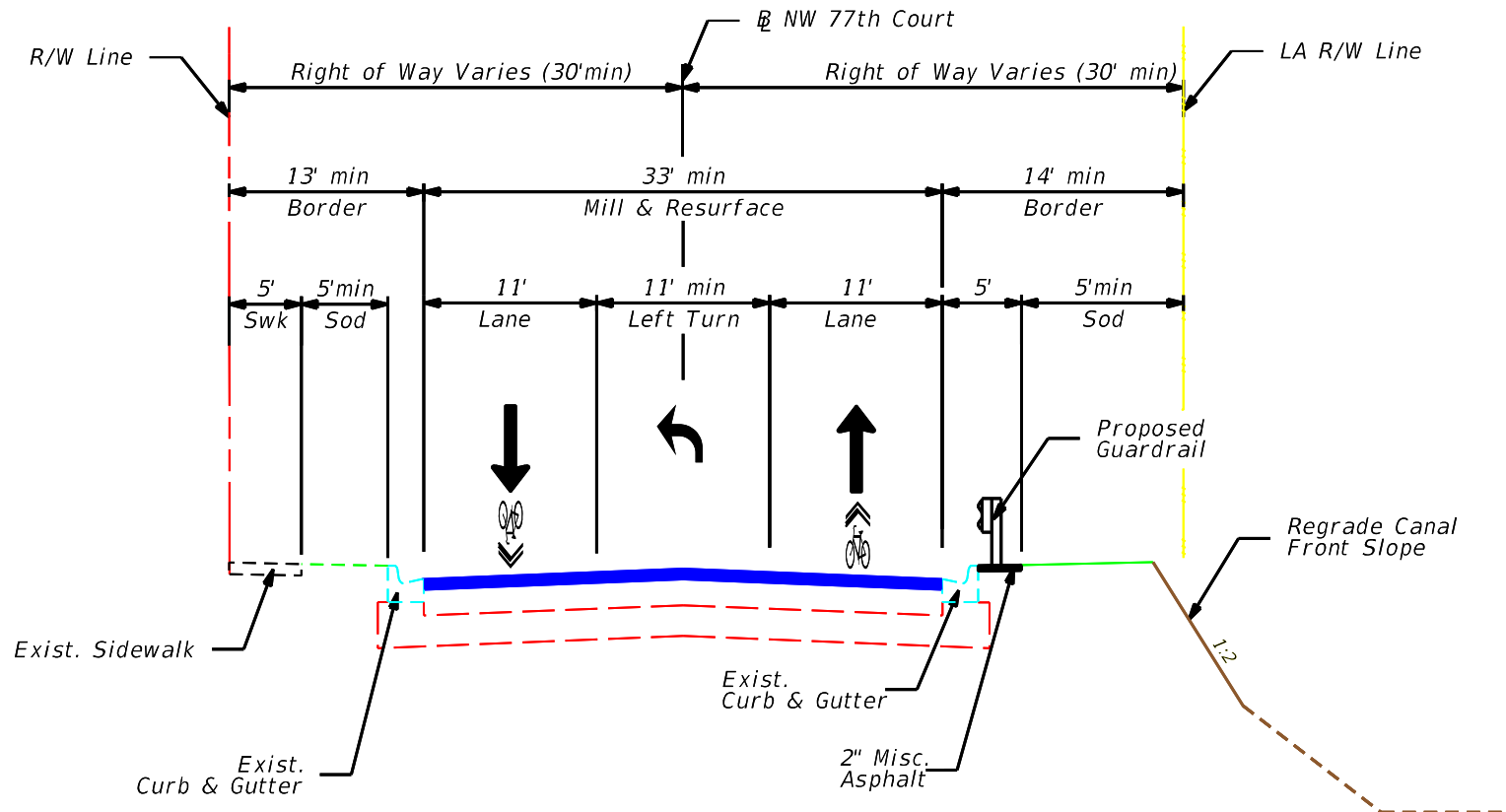


Figure 3-1 Recommended Typical Section NW 77th Court from MP 0.153 to MP 0.385

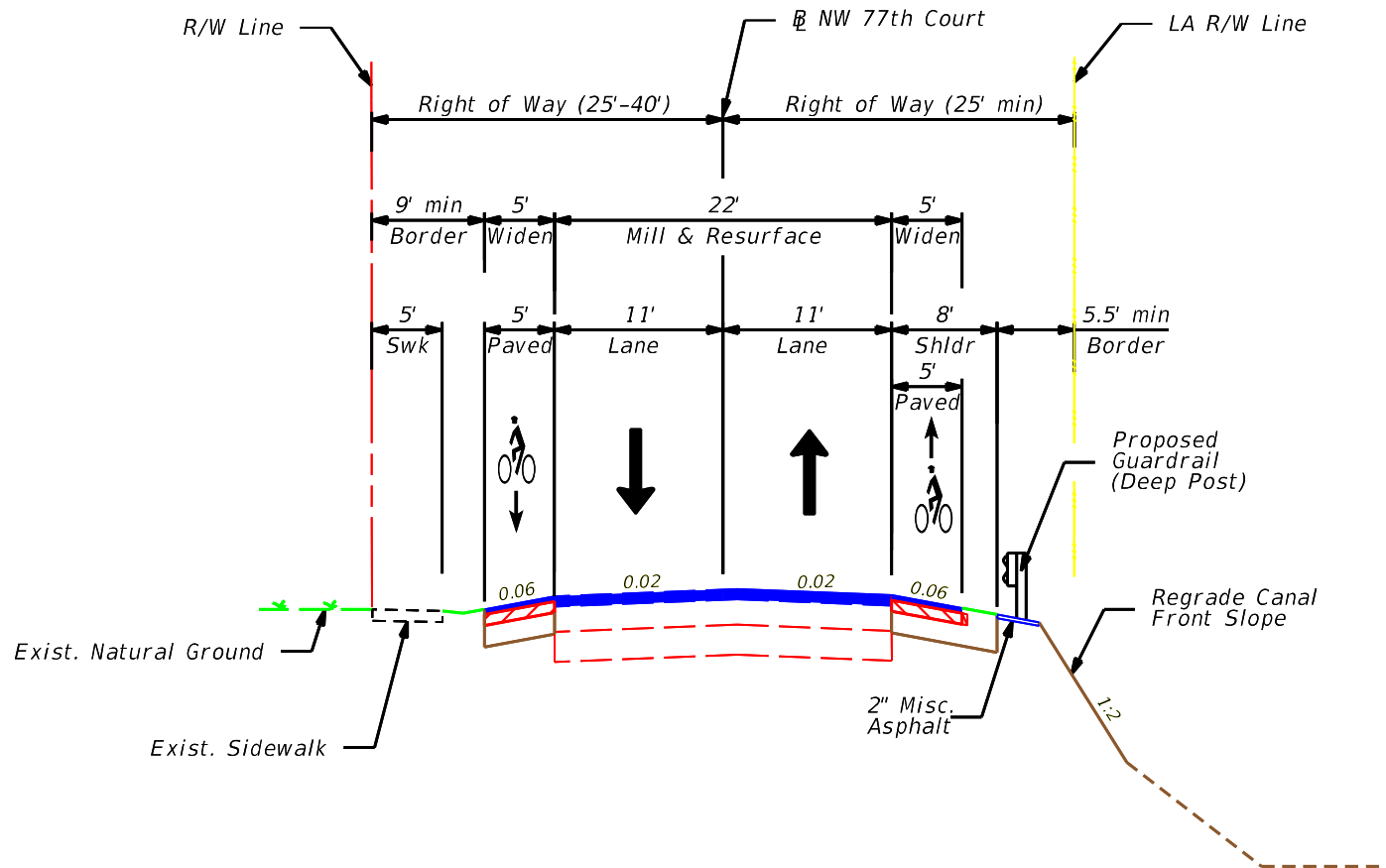


Figure 3-2 Recommended Typical Section NW 77th Court from MP 0.385 to MP 0.509

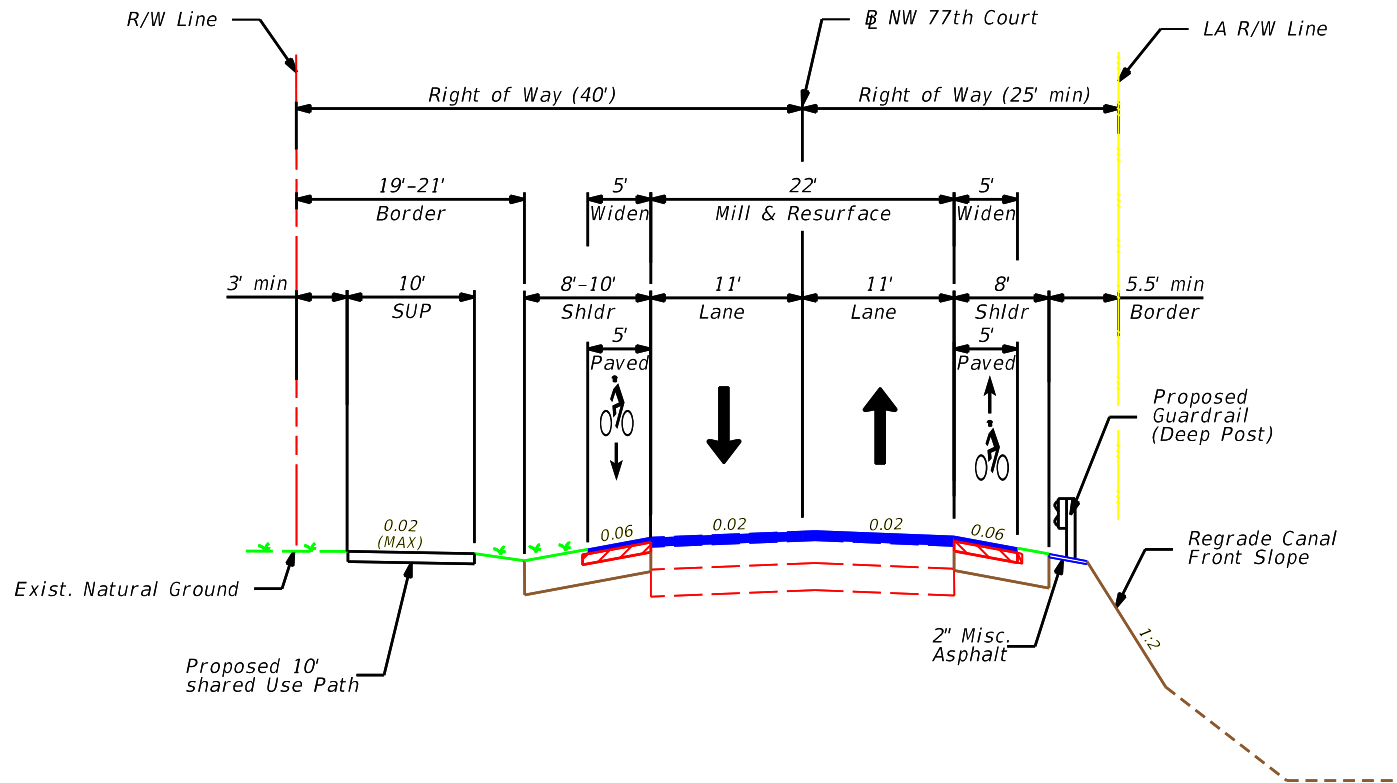


Figure 3-3 Recommended Typical Section NW 77th Court from MP 0.509 to MP 0.696

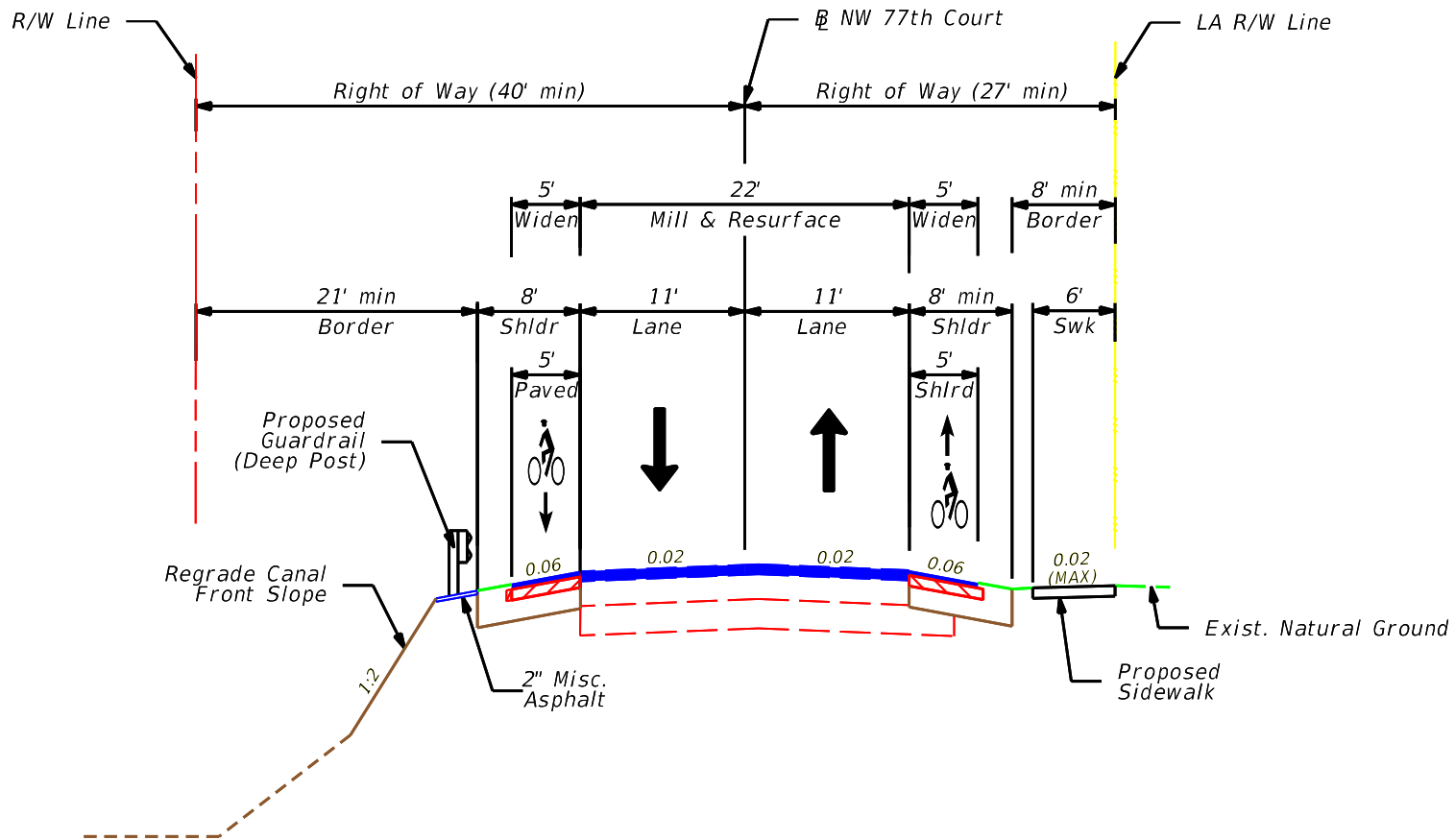
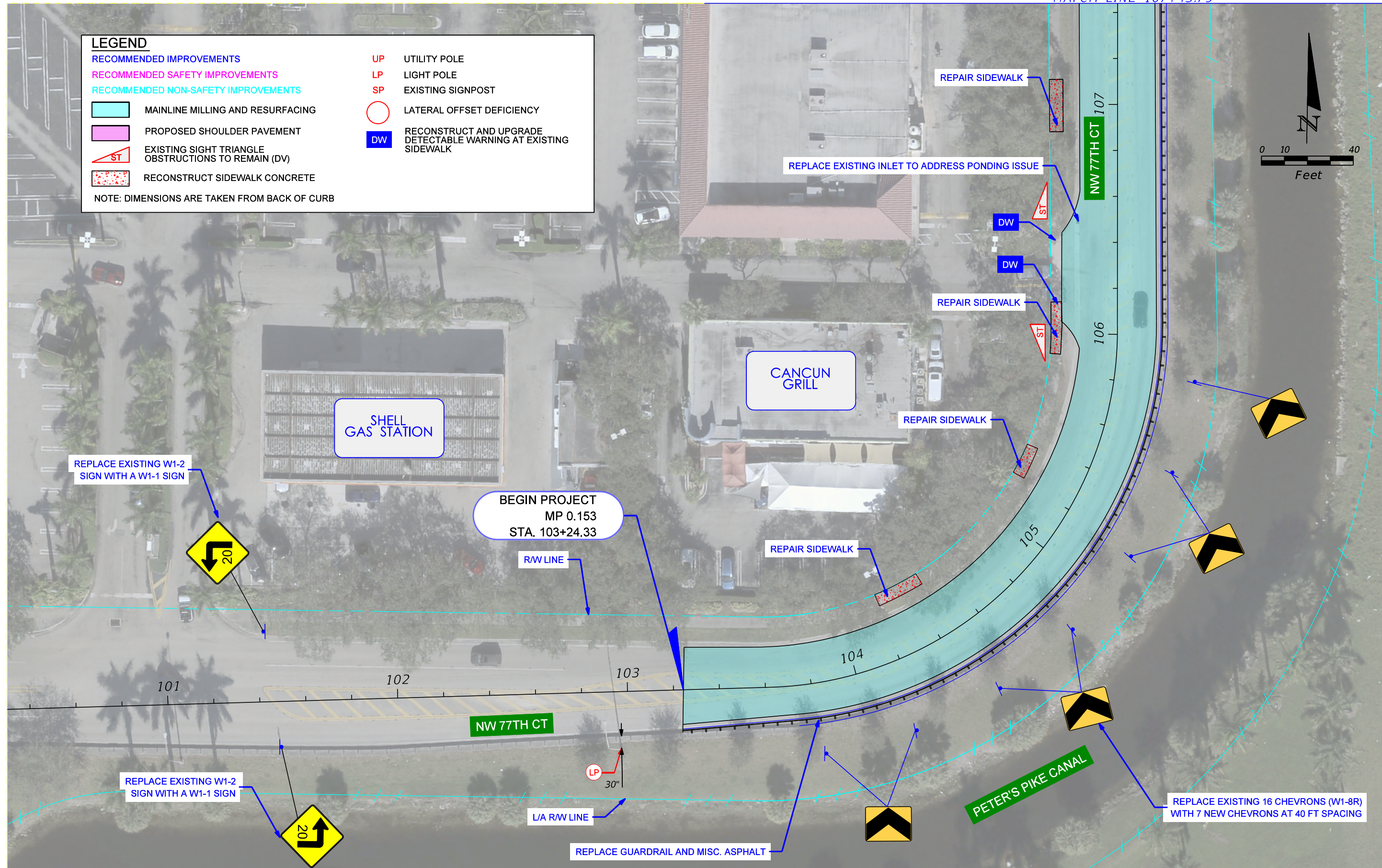
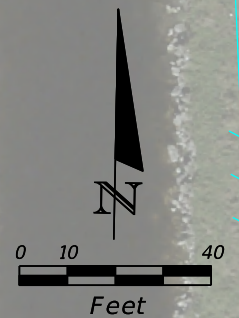


Figure 3-4 Recommended Typical Section NW 77th Court from MP 0.696 to MP 0.746

LEGEND

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| RECOMMENDED IMPROVEMENTS | UP UTILITY POLE |
| RECOMMENDED SAFETY IMPROVEMENTS | LP LIGHT POLE |
| RECOMMENDED NON-SAFETY IMPROVEMENTS | SP EXISTING SIGNPOST |
| MAINLINE MILLING AND RESURFACING | LATERAL OFFSET DEFICIENCY |
| PROPOSED SHOULDER PAVEMENT | RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK |
| EXISTING SIGHT TRIANGLE OBSTRUCTIONS TO REMAIN (DV) | |
| RECONSTRUCT SIDEWALK CONCRETE | |

NOTE: DIMENSIONS ARE TAKEN FROM BACK OF CURB

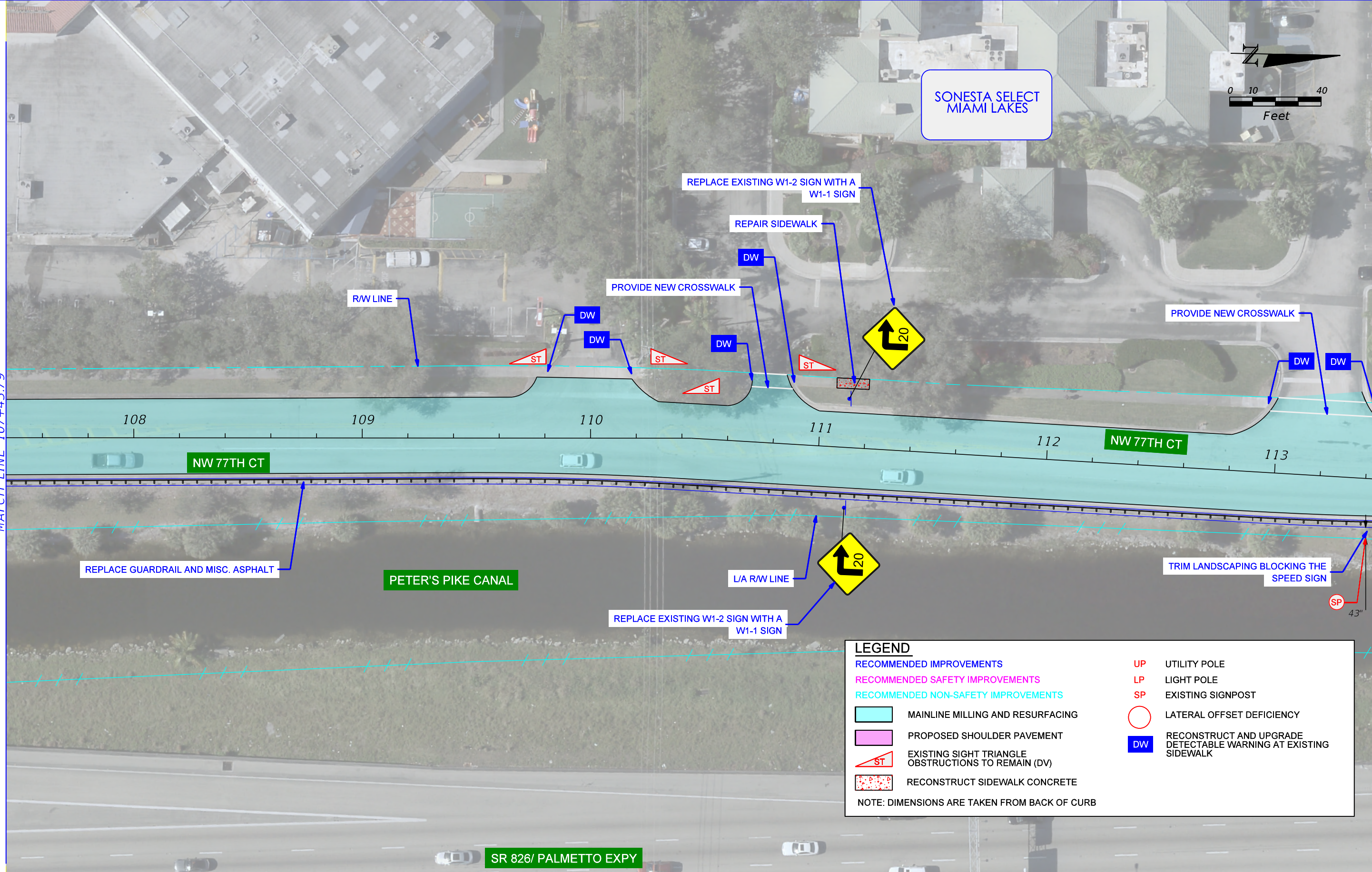


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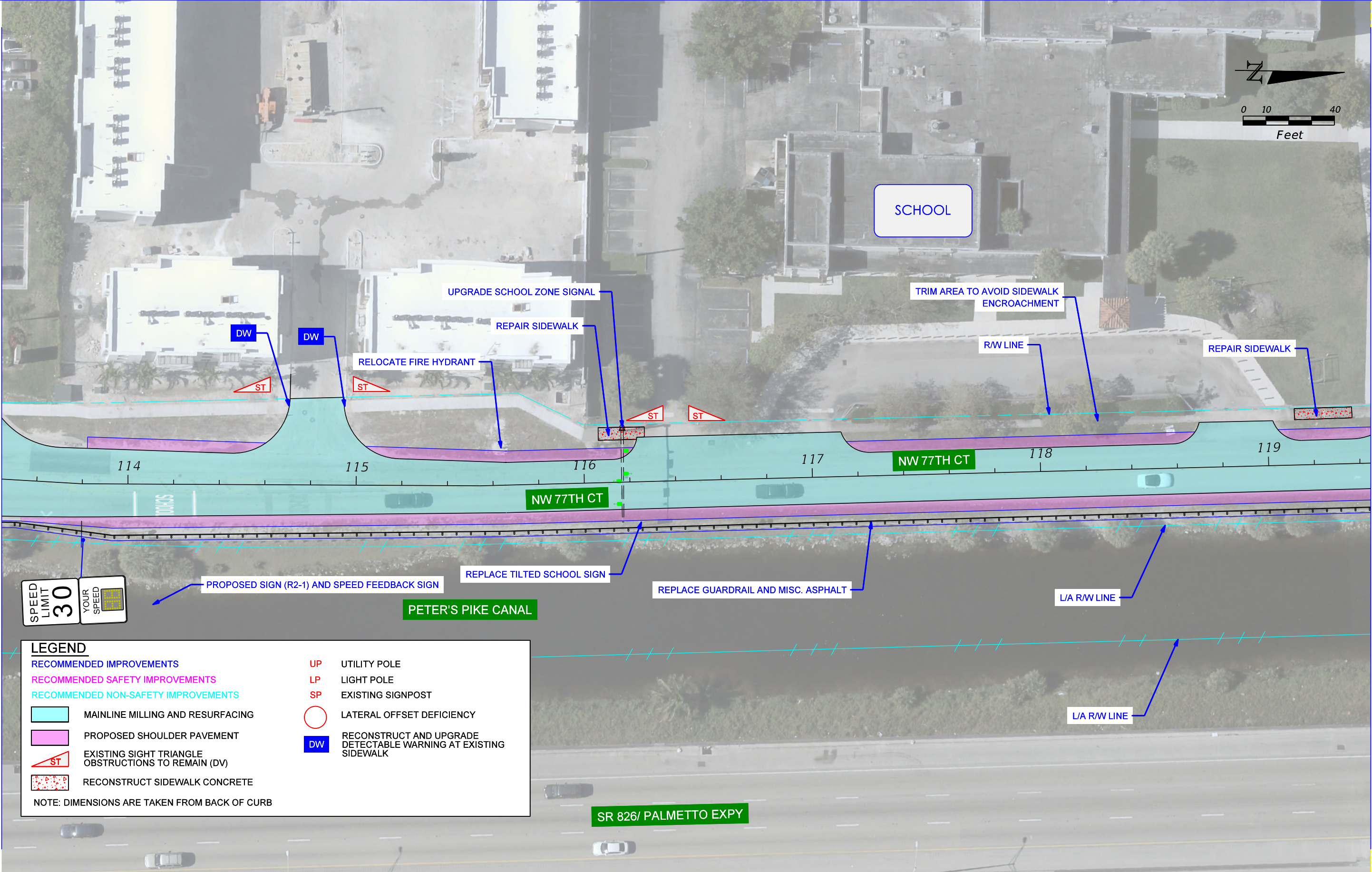
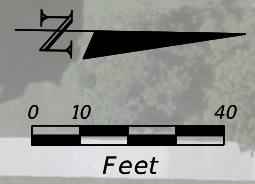
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| — | RECOMMENDED NON-SAFETY IMPROVEMENTS | SP | EXISTING SIGNPOST |
| | MAINLINE MILLING AND RESURFACING | | LATERAL OFFSET DEFICIENCY |
| | PROPOSED SHOULDER PAVEMENT | | RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK |
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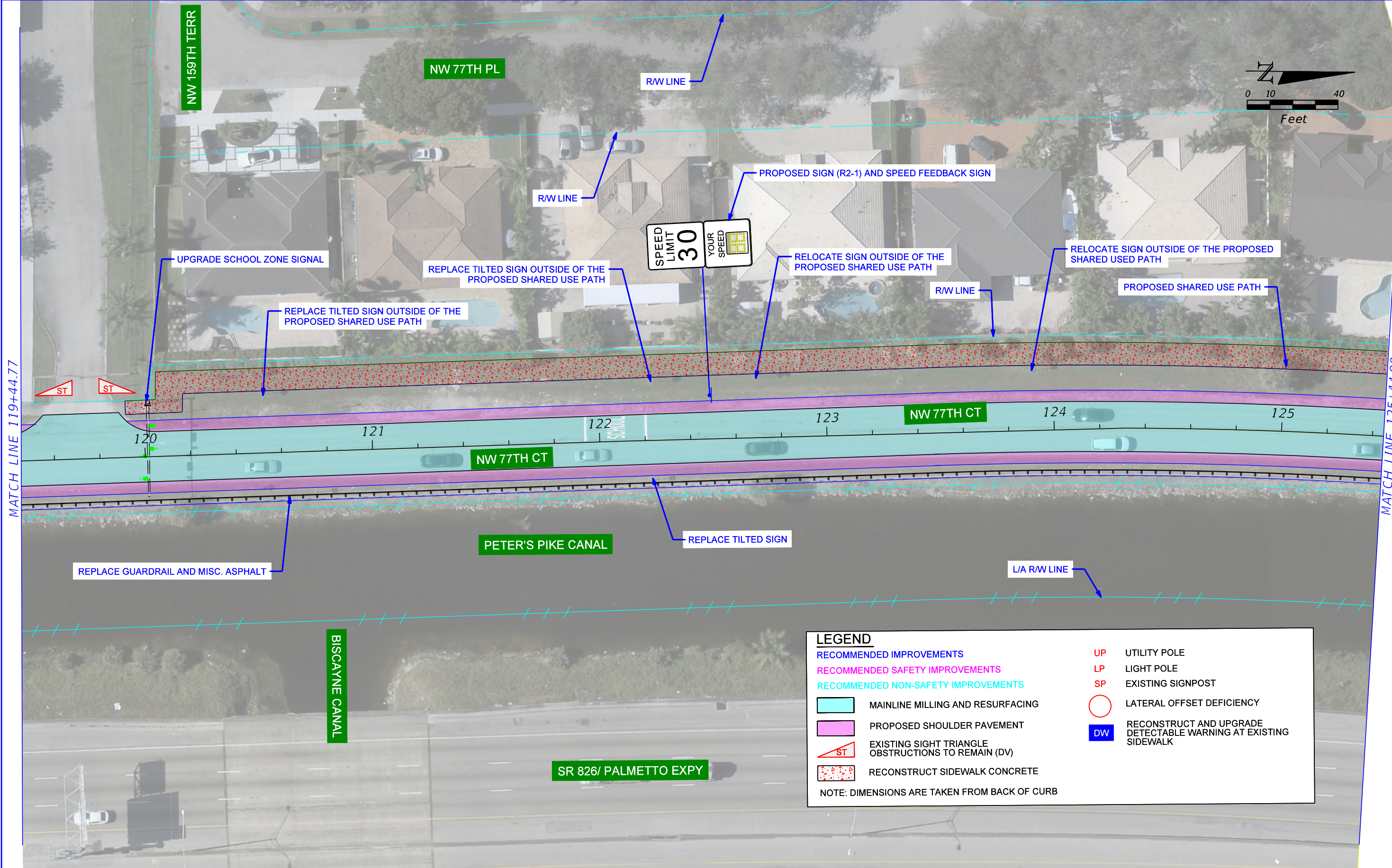
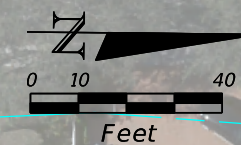
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| RECOMMENDED NON-SAFETY IMPROVEMENTS | SP EXISTING SIGNPOST |
| MAINLINE MILLING AND RESURFACING | LATERAL OFFSET DEFICIENCY |
| PROPOSED SHOULDER PAVEMENT | DW RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK |
| EXISTING SIGHT TRIANGLE OBSTRUCTIONS TO REMAIN (DV) | |
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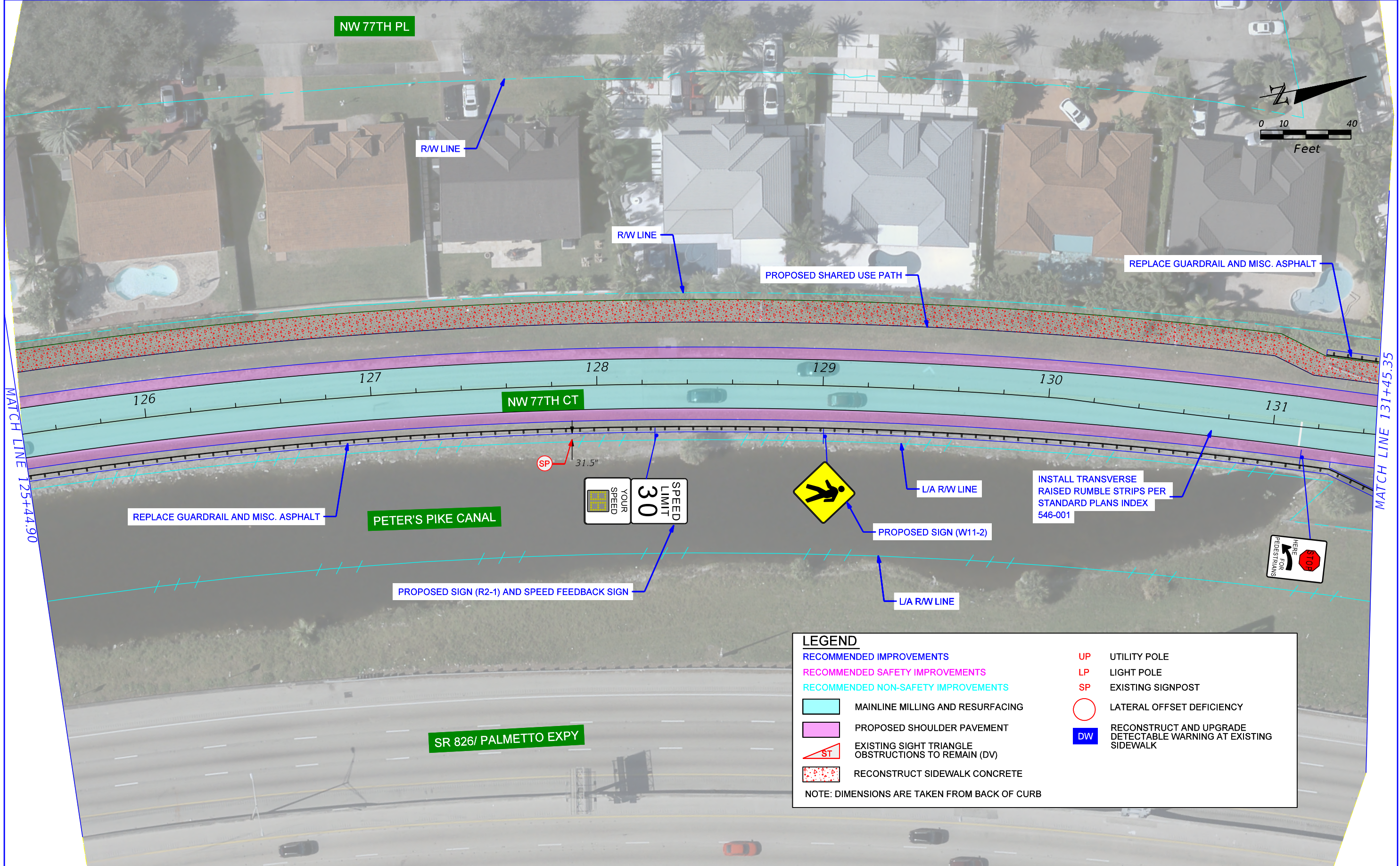


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| | RECOMMENDED NON-SAFETY IMPROVEMENTS | SP | EXISTING SIGNPOST |
| | MAINLINE MILLING AND RESURFACING | | LATERAL OFFSET DEFICIENCY |
| | PROPOSED SHOULDER PAVEMENT | | RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK |
| | EXISTING SIGHT TRIANGLE OBSTRUCTIONS TO REMAIN (DV) | | |
| | RECONSTRUCT SIDEWALK CONCRETE | | |

NOTE: DIMENSIONS ARE TAKEN FROM BACK OF CURB

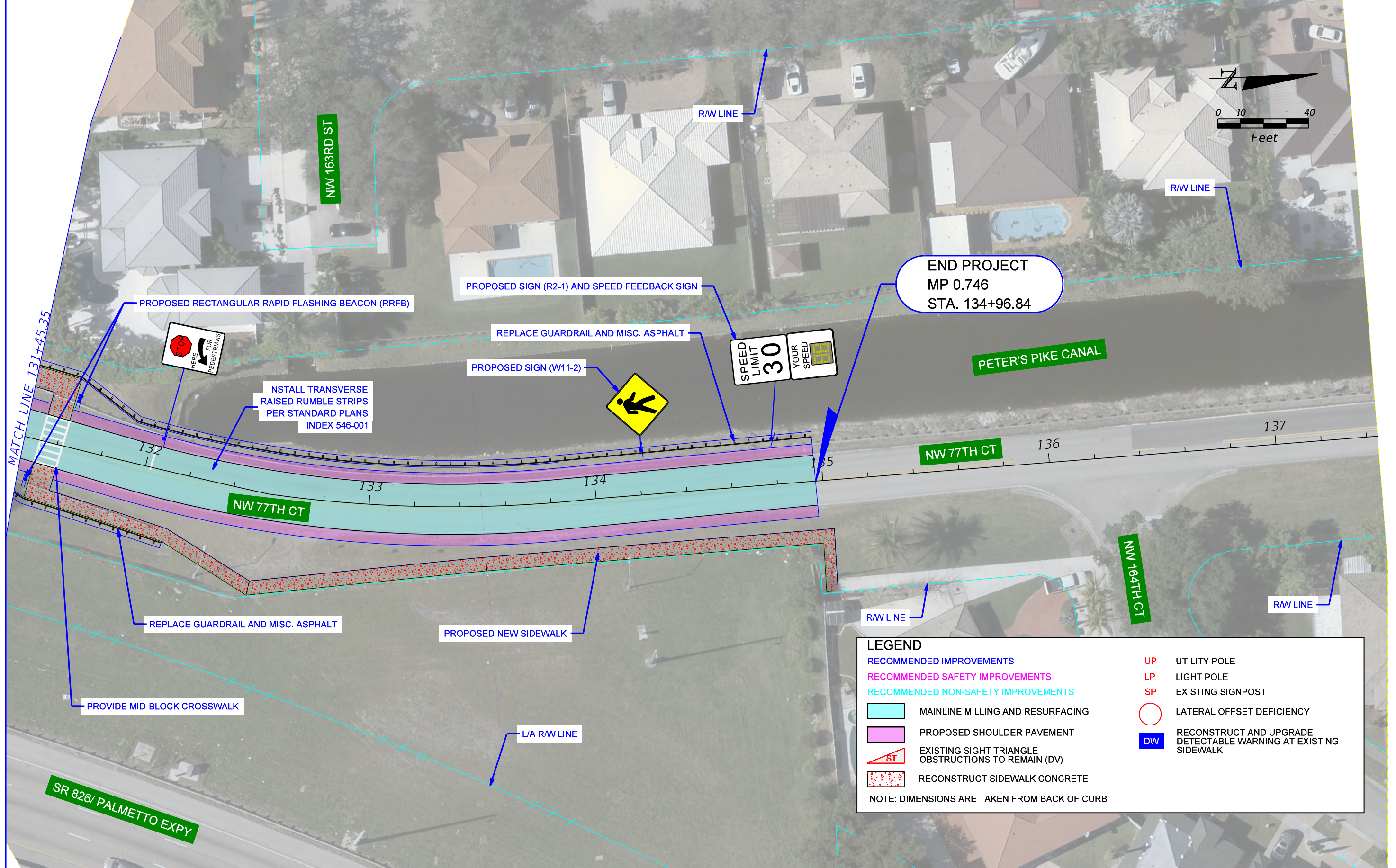
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| █ MAINLINE MILLING AND RESURFACING | UP UTILITY POLE |
| █ PROPOSED SHOULDER PAVEMENT | LP LIGHT POLE |
| ▒ RECONSTRUCT SIDEWALK CONCRETE | SP EXISTING SIGNPOST |
| ▒ RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK | ○ LATERAL OFFSET DEFICIENCY |
| ▒ EXISTING SIGHT TRIANGLE OBSTRUCTIONS TO REMAIN (DV) | DW RECONSTRUCT AND UPGRADE DETECTABLE WARNING AT EXISTING SIDEWALK |

NOTE: DIMENSIONS ARE TAKEN FROM BACK OF CURB



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4.0 PRELIMINARY COST ESTIMATE

A preliminary construction cost estimate was developed for the recommended improvements listed in this Scoping Report using the FDOT Long Range Estimates (LRE) Program. The costs listed do not represent the estimated construction cost for FY 2025 or the project Work Program Budget. **Table 4-1** summarizes the cost of improvements recommended to be included in the scope of work for this RRR Project and funded by the Resurfacing Program. The detailed Long-Range Cost Estimate is included in **Appendix G**.

| Table 4-1 Preliminary Construction Cost Estimate | |
|--|-----------------------|
| Cost Component | Cost Estimate |
| Earthwork | \$478,813.26 |
| Roadway | \$966,144.75 |
| Shoulder | \$260,774.46 |
| Drainage | \$331,602.52 |
| Signing & Pavement Markings | \$16,307.24 |
| Lighting | \$122,520.69 |
| Signalizations | \$127,952.80 |
| Sub-Total | \$2,304,115.72 |
| Maintenance Of Traffic | \$230,411.57 |
| Mobilization | \$253,452.73 |
| Initial Contingency | \$50,000.00 |
| Total | \$2,837,980.02 |

List of Appendices

- A. Project Correspondence**
- B. Environmental Resources Desktop Analysis**
- C. Mid-Block Crossing Study**
- D. Corridor Files**
 - D-1. Straight Line Diagram
 - D-2. Project Data Sheet and Pavement Forecast
 - D-3. Utility Owners List
- E. Pavement Design Documents**
 - E-1. 18-kip ESAL Report
 - E-2. Ground Penetration Radar (GPR)
- F. Plans from Adjacent Projects**
 - F-1. FPID 430821-3-52-01
 - F-2. FPID 435760-1-52-01
- G. Long Range Estimates (LRE)**