

# SCOPING REPORT

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SR 5 / US 1 / BISCAYNE BOULEVARD  
FROM SOUTH OF NE 38<sup>TH</sup> STREET TO NE 61<sup>ST</sup> STREET  
(87030000 MP 13.588-15.048)  
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: Md S Hossain, MS, E.I.

Contract CA812, Task Work Order 25

FPID 250759-3-22-04

Revised

May 2023

## Engineer's Certification

I, hereby certify that I am a registered professional engineer in the State of Florida, practicing with HBC Engineering Company, 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, 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: Scoping Report for FM 447830-1, SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street (87030000 MP 13.588-15.048)

Location: Miami-Dade County, Florida

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

FDOT Project Manager: Md S Hossain, MS, E.I.

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Contract No. CA812, Task Work Order 25  
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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:

Name: \_\_\_\_\_, P.E.

License No.

Date: \_\_\_\_\_

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## 1 Introduction

### 1.1 Project Intent

HBC Engineering Company was retained by the Florida Department of Transportation (FDOT) District 6 (D6) Planning and Environmental Management Office (PLEMO) to prepare a Scoping Report for Project with FM No. 447830-1 along SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street (87030000 MP 13.588-15.048). This project qualifies under work mix 0012 Resurfacing Project. This Scoping Report is based on the requirements of the FDOT Design Manual (FDM) (January 2022). This project will be required to comply with the design criteria in the FDM. This report documents the existing physical, operational, and safety conditions through office and field reviews. The documentation includes a review of the existing site conditions and existing maintenance issues. The April 2023 Final RRR Safety Review (FPID 250650-5-32-01) was provided by FDOT and included in Appendix A. The Scoping Report documents the design criteria, deficiencies, and recommends improvements to be addressed by the RRR project programmed for construction in Fiscal Year (FY) 2026.

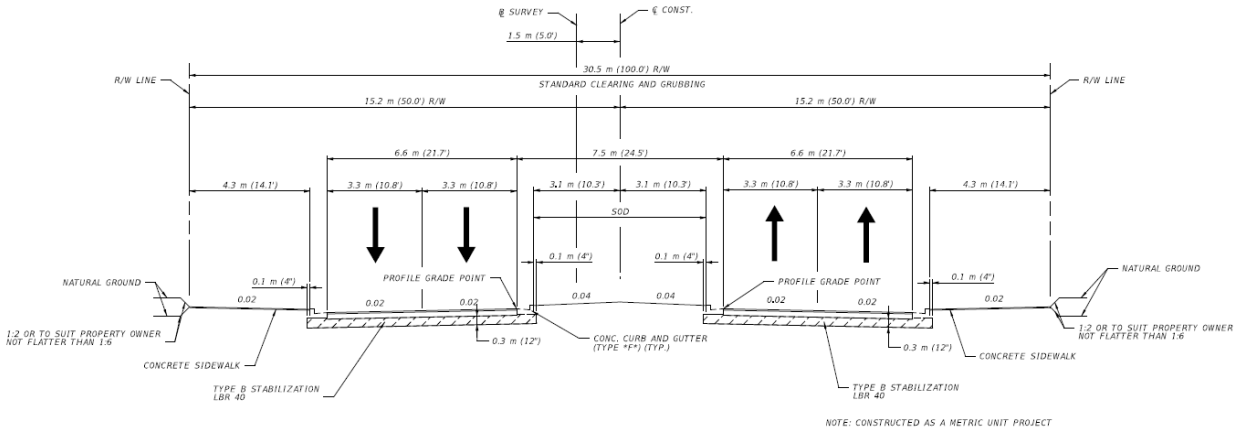
### 1.2 Project Description

SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street, is a four-lane Urban Principal Arterial – Other in the City of Miami, Miami-Dade County. The project location map is shown in Figure 1-5. The FDOT Planning Office conducted a Project-level Context Classification (PLCC) review for this SR 5 segment, and it was determined that the Context Classification is C5 (Urban Center) from south of NE 38th Street to NE 38th Street, and C4 (Urban General) from NE 38th Street to NE 61st Street (FM 447214-1-52-01). The access management classification is Class 7. The gross length of the project is approximately 1.46 miles. The facility is a north-south corridor with a design speed of 35 mph and posted speed of 35 mph. Adjacent properties along the corridor are commercial and residential type.

SR 5 / US 1 / Biscayne Boulevard within the project limits was reconstructed under FDOT project with FM No. 250224-1-52-01 FY 2005 and completed in 2008. Currently, this corridor is programmed to be milled and resurfaced as part of this Resurfacing Project. Based on the Pavement Evaluation Condition FDOT Forecast Plan 2022-2027 [pcscn87a.pdf \(windows.net\)](#) (Appendix D-1), the south limit of the project was completed under FPID 433059-2-52-01 (FY 2017, completed 2018) (Appendix E-2), and the north limit of the project was found at design stage at the time of production of this report, under FPID 445996-1 (FY 2024, letting date 10/2024) (Appendix E-3). There are four (4) signalized intersections and one (1) mid-block pedestrian crossing along the project. Vehicular and pedestrian movements are controlled at the signalized locations by traffic signal heads mounted horizontally on mast arms signal poles.

SR 5 / US 1 / Biscayne Boulevard is composed of three (3) typical sections within the project limits, as described and depicted in the images below:

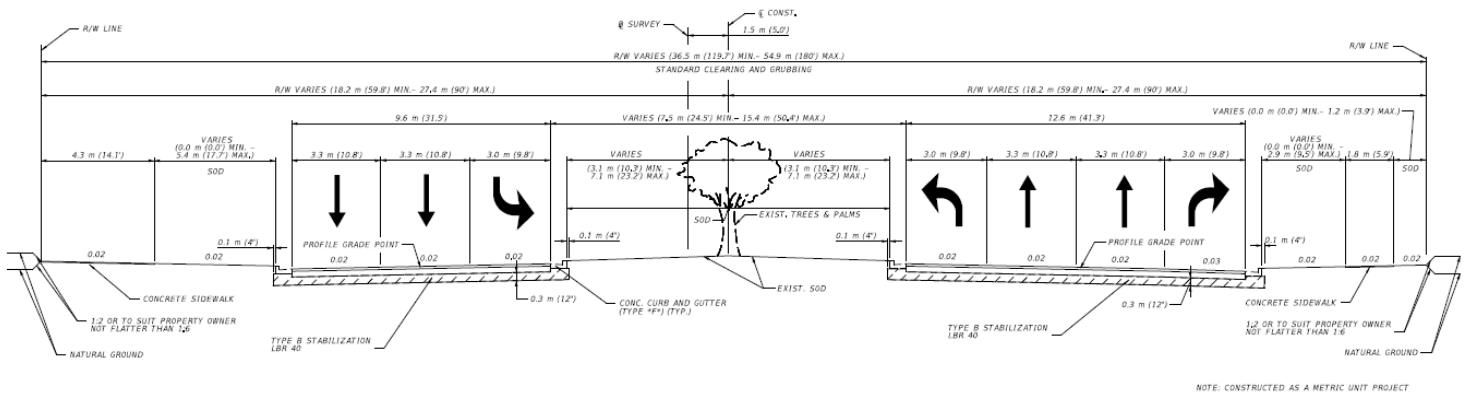
*Existing Typical Section 1 (NE 38<sup>th</sup> Street to north of NE 39<sup>th</sup> Street, NE 48<sup>th</sup> Terrace to NE 55<sup>th</sup> Terrace):* This segment is a four-lane divided road with two 11-foot northbound lanes, two 11-foot southbound lane, type 'F' curb and gutter on both sides of the roadway, 20 feet raised sodded median, and 14 feet concrete sidewalks on both sides of the roadway.



TYPICAL SECTION 1  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 103+18.44 TO STA. 110+20.00  
 STA. 131+04.00 TO STA. 156+00.00

FIGURE 1-1 EXISTING TYPICAL SECTION 1

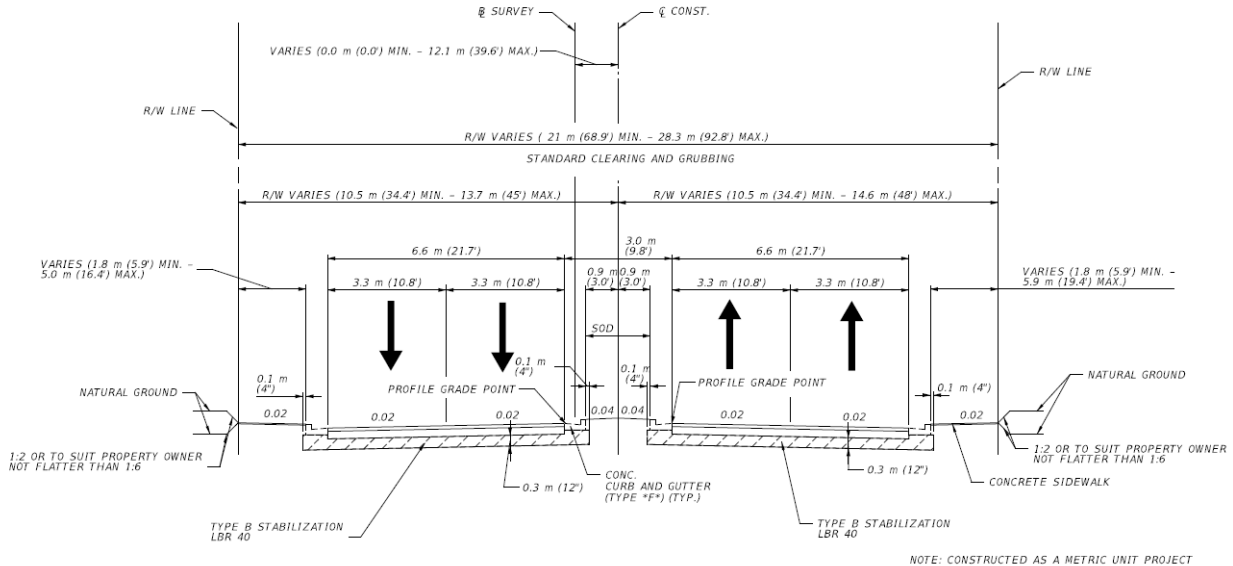
**Existing Typical Section 2 (north of NE 39<sup>th</sup> Street to NE 48<sup>th</sup> Terrace):** This segment is a four-lane divided roadway with two 11-foot Southbound through lanes and two 11-foot Northbound through lanes, a 10-foot turning lane Southbound, two 10-foot turning lanes Northbound, with a varying width landscaped median. On the west side of the roadway, it has a 14 feet concrete sidewalk adjacent to the Right-of-Way line and a varying width sod area. The east side of the roadway includes a 6 feet concrete sidewalk and varying width sod area . Type 'F' curb and gutter are found on both sides of the roadway.



TYPICAL SECTION 2  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 110+20.00 TO STA. 131+04.00

FIGURE 1-2 EXISTING TYPICAL SECTION 2

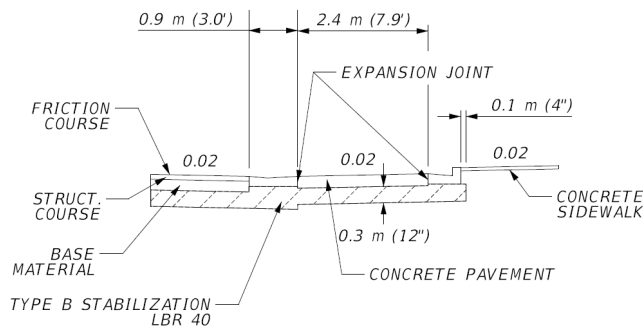
**Existing Typical Section 3 (NE 55<sup>th</sup> Terrace to NE 61<sup>st</sup> Street):** This segment is a four-lane divided roadway with two 11-foot Southbound lanes and two 11-foot Northbound lanes and a 6-foot sodded median. Both sides of the roadway have type 'F' curb and gutter, and varying width concrete sidewalk.



**TYPICAL SECTION 3**  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 156+00.00 TO 180+80.00 (Q CONST.)

**FIGURE 1-3 EXISTING TYPICAL SECTION 3**

Along the corridor, two bus bays are also part of the project. Built on Portland cement concrete.



**BUS BAY DETAIL**  
 N.T.S.

STA. 122+85.63 TO 124+27.00 (LT)  
 STA. 176+34.41 TO 177+35.00 (RT)

**FIGURE 1-4 EXISTING BUS BAY TYPICAL SECTION**



### 1.3 Project Type Determination

The segment of SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street, was identified as a candidate for resurfacing by the Department of Transportation, as part of the Resurfacing, Restoration and Rehabilitation (RRR) project with FM No. 447830-1. This report was created for the Department's planning strategies.

### 1.4 Adjacent Projects

#### Previous projects

Based on the data collected from the FDOT archives, the following previous projects were identified within or adjacent to the project limits. Refer to Appendix E.

- FPID 433059-2-52-01 (FY 2017), SR 5/Biscayne Blvd., from NE 32<sup>nd</sup> St. to NE 38<sup>th</sup> St. This is a Safety Project by FDOT.
- FPID 250224-1-52-01 (FY 2005, completed 2008), SR 5/Biscayne Blvd., from NE 37<sup>th</sup> St. to NE 67<sup>th</sup> St. This is a roadway reconstruction, metric units project by FDOT.
- FPID 445996-1-52-01 (FY 2024), SR 5/Biscayne Blvd., from NE 61<sup>st</sup> St. to NE 6<sup>th</sup> Ave. This is a Resurfacing (Ride Only) project by FDOT, under design at the time of the production of this report.
- FPID 440191-1-52-01 (FY 2020) SR 5/US-1 Signalized Intersection Lighting from NE 22nd Street to Sans Souci Boulevard.

#### Current Projects

- FPID 447214-1-52-01 (FY 2024) State Road No. 5 Us-1/Biscayne Blvd. At Various Intersections Upgrade Rapid Rectangular Flashing Beacon (RRFB) To Traffic Signal and Addition of Crosswalk (Under design during the preparation of this report)

#### Future Projects

Based on FDOT's Five Year Work Program (2022-2027), FPID 445996-1-52-01, SR 5/Biscayne Blvd., from NE 61<sup>st</sup> St. to NE 6<sup>th</sup> Ave. is programmed for FY 2024 by FDOT.

## 1.5 Project Location Map

The project is in the City of Miami, Miami-Dade County. The project limits are along SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street (MP 13.588-15.048). The Project Location Map is shown in Figure 1-6.



**FIGURE 1-5 PROJECT LOCATION MAP**

## 1.6 Field Review

Field reviews were conducted in June 2022 for this Scoping Report based on the District 6 Field Review Checklists. HBC Engineering formed a multi-disciplinary team to conduct a field scoping review. Team members familiarized themselves with existing site conditions while inspecting the facility for physical, operational and safety deficiencies. Potential improvements were discussed to resolve these deficiencies, which formed a preliminary scope for the project. Recommended improvements addressed topics such as pedestrian facilities, signing and pavement markings, and pedestrian control signals. Photos documenting these field reviews are included in each section where they are described.

## 1.7 Office Review

The office reviews included the review of documents provided by the D6 including the following:

- Existing traffic volumes
- Straight-Line Diagram (SLD) (APPENDIX B-1)
- Aerial Photography, dated 2021
- Right of Way Maps (APPENDIX C)
- Pavement Evaluation Condition Forecast Plan 2022-2027 (APPENDIX D-1)
- Ground Penetrating Radar (GPR) Survey (APPENDIX D-4)
- As-Built and Design Plans from adjacent projects (APPENDIX E)

## 2 Existing Conditions

The existing conditions were evaluated, and deficiencies were identified through office and field reviews performed as part of the study. Design elements were evaluated for compliance with FDOT requirements. SR 5 / US 1 / Biscayne Boulevard from South of NE 38th Street to NE 61st Street, is a four-lane Urban Principal Arterial – Other in the City of Miami, Miami-Dade County. This corridor, from South of NE 38th Street to South of NE 54th Street is designated as context classification C5 (Urban Center) and from South of NE 54th Street to NE 61st Street, C4 (Urban General). The access management classification is Class 7. The facility is a north-south corridor with a design speed of 35 mph and posted speed of 35 mph. Table 2-13 summarizes the evaluation of the corridor design elements for criteria compliance.

### 2.1 Design Criteria

#### 2.1.1 Existing Pavement

##### 2.1.1.1 Pavement History

The pavement design from the previous project is listed below. Original values are in metric units and the following are approximate values in imperial units.

FPID 250224-1-52-01 (FY 2005, completed 2008), SR 5/Biscayne Blvd., from NE 37th St. to NE 67th St.

##### NE 38<sup>th</sup> Street to north of NE 39<sup>th</sup> Street, NE 48<sup>th</sup> Terrace to NE 55<sup>th</sup> Terrace

- Mill Existing Pavement (2.0" avg. depth.) (1.75" below L.G.)
- Resurfacing
  - Type SP Structural Course TLC (0.75")
  - Friction Course FC-9.5 (1.25") (rubber)
- Reconstruction
  - OBG 9 with Type SP Structural Course TLC (2.5")
  - Friction Course FC-9.5 (1.25") (rubber)

##### North of NE 39<sup>th</sup> Street to NE 48<sup>th</sup> Terrace

- Reconstruction
  - OBG 9 with Type SP Structural Course TLC (2.5")
  - Friction Course FC-9.5 (1.25") (rubber)

##### NE 55<sup>th</sup> Terrace to NE 61<sup>st</sup> Street

- Reconstruction
  - OBG 9 with Type SP Structural Course TLC (2.5")
  - Friction Course FC-9.5 (1.25") (rubber)

### Bus Bays

- Reconstruction
  - OBG 9 with Type SP Structural Course TLC (2.5")
  - Friction Course FC-9.5 (1.25") (rubber)

Milling recommendation is to be provided by the FDOT State Materials Office.

#### **2.1.1.2 Existing Pavement Condition**

After conducting a field review on the pavement condition (PC), surface deteriorations were encountered, such as cracking, and utility cuts. The pavement condition was reviewed in the Pavement Condition Survey (PCS) Ratings by State Materials Office (SMO) 2022. According to the PCS, the survey along the corridor resulted in a ride evaluation of 6.3 (northbound) and 6.5 (southbound) with a projection that this value will reduce to 6.2 and 6.0 in 2027, respectively. The cracking evaluation shows a 9.0 (northbound) and 8.5 (southbound) with a projection of 8.3 and 7.7 in 2027, respectively. Refer to Appendix D-1. The following images illustrate samples of the different type of surface deterioration encountered during the field review.



**1. CRACKS ON ASPHALT**



**2. UTILITY PATCH ON ASPHALT**





**3. SUNK MANHOLE**



**4. CRACKS ON PCC**

**FIGURE 2-1 EXISTING PAVEMENT CONDITION  
(CRACKING, UTILITY CUTS, PAVEMENT FAILURE AROUND VALVES)**

### **2.1.1.3 Ground-Penetrating Radar**

The Ground-Penetrating Radar (GPR) Test has been provided by the District. The report indicates that an HMA pavement average thickness of 3.58 in. and 3.71 in. on Lane 1 and Lane 2 Southbound, and of 3.70 in. and 3.81 in. on Lane 1 and Lane 2 Northbound were found. A copy of these results can be found in Appendix D-4.

### **2.1.1.4 Resilient Modulus Recommendation**

For the recommended value, the data was provided by the DOT's State Materials Office, in letter dated August 2, 2022 (See Appendix D-2). According to the aforementioned letter, for both the north and southbound lanes, the recommended Resilient Modulus is 32,000 psi.

## **2.1.2 Design Control**

### **2.1.2.1 Highway Functional Classification**

SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street is classified as an Urban Principal Arterial – Other and is part of the State Highway System (SHS).

### **2.1.2.2 Context Classification**

SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to South of NE 54<sup>th</sup> Street is designated as context classification C5 (Urban Center) and from South of NE 54<sup>th</sup> Street to NE 61<sup>st</sup> Street, C4 (Urban General) based on the FDOT Roadway Characteristic Inventory (RCI) and the FDOT Transportation Data Analytics ArcGIS Online Feature Layers as of July 2022. (<https://fdot.maps.arcgis.com>)

### **2.1.2.3 Design Speed, Posted Speed and Target Speed**

According to the Pavement Evaluation Condition FDOT Forecast Plan 2022-2027 Appendix D-1) and the FDOT Transportation Data Analytics ArcGIS Online Feature Layers (<https://fdot.maps.arcgis.com>), the design speed is 35 mph, and the existing posted speed is 35 mph.

HBC Engineering Company performed a Target Speed Study for this corridor to determine an appropriate target speed for design purposes. Considerations in this study include the geometric characteristics of the roadway, traffic operations, multi-modal considerations, and safety. According to the FDM, target speed is the highest speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multi-modal activity generated by adjacent land uses, to provide both mobility for motor vehicles and a supportive environment for pedestrians, bicyclists, and public transit users. Determining the appropriate Target Speed for all non-limited access projects is also required. The preliminary Target Speed Study recommends maintaining the design speed of 35 mph and using both target and posted speeds of 35 mph along the segment. Based on the FDM, the Target Speed must be established by a team that includes, but is not limited to, Design, Traffic Operations, Safety, Planning, and Program Management offices. The Target Speed Study is in Appendix D-5.

### **2.1.2.4 Traffic Volume and Design Year**

Traffic volumes were provided by the District through the 18 Kip ESAL Calculations Report, attached as Appendix D-3. Projections were calculated based on data from Portable Count Station No. 875060 (SR 5/US-1, 200 feet south of NE 53 Street) and No. 875065 (SR 5/US-1, 200 feet north of NE 71 Street). For Station No. 875060, a total of 4,971 (ESAL in 1000's) for the period of 2026 to 2046, and 7,187 for Station No. 875065 in the same period.

### **2.1.3 Lane Width**

Based on the field observation and review of the plans from the previous project FPID 250224-1-52-01 (FY 2005, completed 2008), the width of the existing through travel lanes is 3.3 meter (10.85 feet) in both directions. The width of the existing left and right turn lanes is 3.0 meter (9.85 feet). Based on the current and proposed lane configuration, lane widths meet the minimum 10 feet lane width criteria for the context classification and design speed on the through lanes. For the turning lanes, although the width is slightly less than the minimum criteria, according to the FDM, existing project features which were constructed to meet minimum metric design criteria but are mathematically slightly less than equivalent minimum English design criteria, do not require Design Exceptions or Design Variations to remain.

### **2.1.4 Median and Traffic Separators**

Based on a review of the plans from previous project 250224-1-52-01 (FY 2005, completed 2008), the width of the existing median along this portion of SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street varies from 7.48 meter (24.5 feet) to 15.364 meter (50.4 feet). The width of the existing median meets the minimum median

width criteria of 15.5 feet for the context classification and design speed. The width of the existing traffic separators is 3.0 meters (9.85 feet) which meets standards.

### 2.1.5 Channelization Islands

This project includes one (1) curved channelization island and six (6) triangular islands within the limits of this project. The table below summarizes the channelizing islands and indicates if they fall within FDOM criteria:

**TABLE 2-1 CHANNELIZATION ISLANDS**

Type	Location	Min. Dimensions	Meets Standards
Median (Curved)	Gate Lane (Median)	1,400 SF (area)	Yes
Triangular	NE 55 Terrace (RT)	13.5' (min. side)	Yes
Triangular	NE 56 Street (RT)	24.0' (min. side)	Yes
Triangular	NE 5 Avenue (RT)	65.0' (min. side)	Yes
Triangular	NE 59 Street (LT)	67.0' (min. side)	Yes
Triangular	NE 5 Court (LT)	20.0' (min. side)	Yes
Triangular	NE 6 Avenue (RT)	10.0' (min. side)	No

Based on a review of the plans from previous project FPID 250224-1-52-01 (FY 2005, completed 2008), the existing channelizing islands comply with the FDM criteria, except for the triangular island located at NE 6<sup>th</sup> Avenue (RT). It is recommended the use of tubular markers at island noses as channelizing devices in addition to delineation, per the FDM. Additionally, a design exception will be required for the non-compliant triangular island.

### 2.1.6 Refuge Islands

This project includes one (1) midblock refuge island and five (5) refuge islands located in the triangular channelizing islands listed below. The table below summarizes the refuge islands and indicates if they fall within FDM criteria:

**TABLE 2-2 REFUGE ISLANDS**

Type	Location	Min. Dimensions (path width)	Meets standards
Midblock	NE 48 Terrace (Median)	5.0'	Yes
Triangular Island	NE 55 Terrace (RT)	5.0'	Yes
Triangular Island	NE 56 Street (RT)	> 5.0'	Yes
Triangular Island	NE 59 Street (LT)	> 5.0'	Yes

Triangular Island	NE 5 Court (LT)	5.0'	Yes
Triangular Island	NE 6 Avenue (RT)	5.0'	Yes

The minimum distance from face of curb to face of curb is 5 feet and a minimum of 6 feet wide in the dimension between the traveled ways, as required per FDM. It is recommended the use of yellow tubular markers and yellow reflective paint of the curb adjacent and perpendicular to the refuge path, per the FDM.

**2.1.7 Shoulders – N/A**

**2.1.8 Curbed Roadways**

Existing Type F curb and gutter is located along the median and on the outside of the road.

**2.1.9 Roadside Slopes – N/A**

**2.1.10 Roadway Cross Slope**

The existing cross slopes will be documented by the Design Survey scheduled to be completed after the submittal of this Scoping Report. The previous reconstruction project FPID 250224-1-52-01 (FY 2005, completed 2008) indicates that the existing cross slopes are 0.02. 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 design survey and the most recent five-year crash data and coordinate with the District Traffic Operations Office to determine if there is a historical crash pattern directly attributed to the deficient cross slopes.

**2.1.11 Border Width**

The existing border width along both sides of SR 5 / US 1 / Biscayne Boulevard from South of NE 38<sup>th</sup> Street to NE 61<sup>st</sup> Street varies from 12 feet to 31 feet. According to FDOT RRR criteria, on existing roadways where R/W cannot be acquired or where the decision has been made to simply maintain and preserve the facility, the absolute minimum border under these conditions is 8 feet. Therefore, the Border Width Criteria falls within minimum requirements.

**2.1.12 Horizontal Alignment**

The existing horizontal alignment within the project limits includes two (2) PGL (Left and Right). The centerline of construction has four (4) deflections and five (5) horizontal curves.



This data is summarized in Tables 2-3 and 2-4. The alignment information is based on a review of the alignment from the previous project FPID 250224-1-52-01 (FY 2005, completed 2008). The maximum deflection along the corridor per FDM criteria shall be 1°00'00". 2 of the PI's do not meet this criterion. A Design Variation may be required during design. The horizontal curve radii in curves Curve 1, Curve 2, Curve 3, Curve 4 and Curve 7 are greater than FDM's minimum of 332' for RRR. No Design Variation for Curve Radius will be needed.

The length of horizontal Curve 1 and Curve 2 do not meet FDM's absolute minimum criteria of 400'. A Design Variation for Curve Length will be needed.

**TABLE 2-3 HORIZONTAL ALIGNMENT**

PI. #	Design Speed (mph)	Station (*)	Deflection	Meets Standards
PI 1	35	104+64.30	0°29'49" RT	Yes
PI 2	35	107+97.39	00°04'26" RT	Yes
PI 3	35	117+89.11	03°21'04" LT	No
PI 4	35	129+53.40	02°20'04" LT	No

Data was obtained from FPID 250224-1-52-01 (Appendix E). (\*) Stations shown from Exhibit 1.

**TABLE 2-4 HORIZONTAL CURVE DATA**

Curve ref. #	PGL	Station Limits	Design Speed	Radius (ft)	Length (ft)	Δ	D	Meet requirement
C1	RIGHT	PC 109+59.692 PI 110+69.170 PT 112+50.059	35	1312.34	<b>218.45</b>	09°32'15" (RT)	4°21'57.5"	Curve length does not meet requirement
C2	RIGHT	PC 139+42.31 PI 140+50.00 PT 141+58.26	35	5249.34	<b>216.12</b>	02°21'32" (RT)	1°05'29.3"	Curve length does not meet requirement
C3	LEFT	PC 144+55.11 PI 146+53.83 PT 148+50.75	35	1689.63	<b>395.61</b>	13°24'55" (LT)	3°23'27.6"	Yes
C4	RIGHT	PC 156+31.88 PI 158+36.08 PT 160+30.31	35	738.19	<b>398.43</b>	30°55'32" (RT)	7°45'42.1"	Yes
C7	LEFT	PC 176+47.50 PI 178+61.37 PRC 180+60.75	35	649.61	<b>413.25</b>	36°27'00" (LT)	8°49'12.3"	Yes

## 2.1.13 Superelevation

**TABLE 2-5 SUPERELEVATION DATA**

Curve ref. #	Design Speed (mph)	e (exist) (%)	e (required) (%)	Meets Standards
Curve 1	35	NC	NC	Yes
Curve 2	35	NC	NC	Yes
Curve 3	35	NC	NC	Yes
Curve 4	35	RC	RC	Yes
Curve 7	35	RC	RC	Yes

Superelevations for the horizontal curves 1,2,3,4 and 7 meet design criteria. It is the designer's responsibility to verify compliance of horizontal curves. A Design Variation for superelevations rate is not required.

## 2.1.14 Vertical Alignment

### 2.1.14.1 Vertical Curvature

Based on the plans of the previous project FPID 250224-1-52-01 (FY 2005, completed 2008), there are twenty-one (21) vertical points of intersection with no vertical curve that have been identified within the project limits. Topographic survey is not available at this time. The Designer is responsible for reviewing the Design Survey to evaluate the compliance of the existing vertical curves.

### 2.1.14.2 Vertical Grades

From project FPID 250224-1-52-01 (FY 2005, completed 2008) plans, the minimum longitudinal grade is 0.200% which does not comply with the minimum grade of 0.300% on curbed roadways per the FDM. A design variation will be required for the longitudinal grade to remain. The maximum existing grade is 0.6%, which complies with the maximum of 8% per FDM. The change in grade without vertical curve complies with the maximum of 1.00 per the FDM. Topographic survey is not available at this time. The Designer is responsible for reviewing the Design Survey to evaluate the compliance of the existing vertical grades.

### 2.1.14.3

### 2.1.14.3 Clearances

All the signalized intersections within the project limits have mast-arms installations. Existing overhead utility lines cross over the roadway at several locations within the project limits. The precise existing vertical clearances are unknown at this time and will be documented by the Design Survey. The Designer is responsible for reviewing the Design Survey to evaluate compliance of the existing vertical clearance.

#### 2.1.14.4 Stopping Sight Distance

At the time of this report survey data was not available. The FDM indicates that the Stopping Sight distance is applicable for all highways. The Designer is responsible for reviewing the Design Survey to evaluate compliance. Intersection Sight Distance is described in Section 2.1.18 of this report.

#### 2.1.15 Intersections

There are four (4) signalized intersections and sixteen (16) unsignalized intersections along the project. Some existing signals are recommended to be improved, along with pavement markings, cross ramps, and existing vegetation. Refer to Section 3.7.

#### 2.1.16 Lane Tapers and Deceleration Length

Sixteen (16) single left-turn lanes and two (2) single right-turn lanes are present within the project limits. Based on as-built plans, all left-turn lanes have a minimum of 15 meters (49.2 feet), slightly less than the 50-foot single lane minimum criteria for taper length. According to the FDM, since this was a project previously constructed with metric units, no Design Variations are required. Most of the left turn lanes comply with the minimum deceleration length of 145 feet for the design speed of 35 mph, except for two (2) left turns (NB and SB) south of NW 58<sup>th</sup> St., and two (2) left turns (NB and SB) south of NW 59<sup>th</sup> St. The Designer is responsible for reviewing the existing geometry once survey information is available to determine compliance of the existing taper lengths, deceleration lengths, and storage lengths. A Design Variation for Deceleration Length/Storage Length may be required.

#### 2.1.17 Lateral Offset and Control Zone

Existing roadside objects within the project limits include a rental bike rack and a trash bin. At the time of this submittal, the District Traffic Operations Office has not documented a significant crash history at specific roadside objects. The Designer shall evaluate crash data to determine whether any of the roadside objects with substandard lateral offset has any history of impacts. A Design Variation for Lateral Offset may be required. Existing substandard roadside objects within the project limits are shown in Table 2-6.

**TABLE 2-6 LATERAL OFFSET DEFICIENCIES**

Station	Hazard Element	Lateral Offset (inch)	Side	RRR Required Lateral Offset (inch)	Within Control Zone	Meets Control Zone Criteria of 48 inch	Meets Lateral Offset Criteria*
111+00	City Bike Rack	12	LT	18	Yes	No	No
165+28	Trash Bin	16	RT	18	Yes	No	No

*The Designer is responsible for reviewing the existing geometry once survey information is available.*

### 2.1.18 Intersection Sight Distance

Clear sight triangles were evaluated at signalized intersections and unsignalized intersections within the project limits. Based on field observations and an office review, obstructions to intersection sight distance were identified at multiple points within the project limits. Sight triangle obstructions that are present along the corridor include light poles, private furniture, buildings, and vegetation. At the time of this Scoping Report, the District Traffic Operations Office has not documented any specific locations where a significant crash history is directly related to the existing sight triangle obstructions. The Designer is responsible for reviewing intersection sight triangles. A Design Variation for Clear Sight Triangles is required for the existing obstructions to remain within sight triangles. Plan exhibits show the locations where clear sight triangles are substandard. Existing substandard sight triangles are summarized in Table 2-7 below.

**TABLE 2-7 SUMMARY OF INTERSECTION SIGHT TRIANGLE OBSTRUCTIONS**

Intersection	Turning Movements Obstructed	Location	Existing Obstruction within Limit of Clear Sight Window	Meet Standards
NW 38 St	WB to NB Right Turn	SE corner	R/W, Palms, parked vehicles	No
NW 39 St	WB to NB Right Turn	SE corner	Clear	Yes
	EB to SB Right Turn	NW corner	Clear	Yes
NW 50 St	WB to NB Right Turn	SE corner	R/W, Trees, private wall	No
	WB to SB Left Turn	NE corner	Clear	Yes
NW 51 St	WB to NB Right Turn	SE corner	Palms, trees, private wall	No
NW 52 St	WB to NB Right Turn	SE corner	Palms, trees	No
	WB to SB Left Turn	NE corner	Palms	No
NW 52 Ter	WB to NB Right Turn	SE corner	Trees	No
NW 53 St	WB to NB Right Turn	SE corner	Trees	No
NW 54 St	EB to SB Right Turn	NW corner	Clear	Yes
	EB to NB Left Turn	SW corner	Palms	No
NW 55 St	WB to NB Right Turn	SE corner	Clear	Yes
NW 55 Ter	WB to NB Right Turn	SE corner	Clear	Yes
NW 56 St	WB to NB Right Turn	SE corner	R/W, building wall, trees	No
NW 57 St	WB to NB Right Turn	SE corner	Clear	Yes
	WB to SB Left	NE corner	Clear	Yes

Intersection	Turning Movements Obstructed	Location	Existing Obstruction within Limit of Clear Sight Window	Meet Standards
	Turn			
NW 58 St	WB to NB Right Turn	SE corner	Trees	No
	EB to SB Right Turn	NW corner	Trees	No
	EB to NB Left Turn	SW corner	Clear	Yes
NW 5 Ave	WB to NB Right Turn	SE corner	Clear	Yes
NW 59 St	WB to NB Right Turn	SE corner	Clear	Yes
	WB to SB Left Turn	NE corner	Clear	Yes
NW 5 Ct	WB to SB Left Turn	NE corner	R/W, building wall, trees	No
NW 6 Ave	WB to NB Right Turn	SE corner	Clear	No
NW 60 St	WB to NB Right Turn	SE corner	Light pole	No

### 2.1.19 Driveways

Based on field observations, existing driveways are typically of urban flared turnouts across the sidewalk. Damaged and cracked driveways were identified. Cracks in the driveways are identified in Table 2-10. Inactive driveways and driveways under current permits were found within the project limits and are shown in Section 3.12 “Concept Plans.” At the time of this scoping report submittal, no ADA complaints have been received concerning the sidewalk and driveway deficiencies within the project limits. The inactive driveways shall be coordinated with the Department and property owner to determine if the driveway will remain or be removed.

### 2.1.20 Drainage

According to the District’s Maintenance office, and at the time of this report being produced, the FDOT has provided a list of drainage-related issues within the project limits. These have been verified during the field investigation and they appear to have been addressed. The aforementioned list of issues has been included in Appendix K.

The existing drainage pattern is recommended to remain. Its conditions within the project limits consist of closed systems with curb inlets, manholes and gravity pipes as collection points for storm water surface runoff. During the field visit, maintenance issues were found, as shown in Table 2-8. Additionally, an unknown source 3” drainpipe discharging directly onto the pavement was found at STA 109+96 (RT). Designer to research further existing drainpipe conditions and ownership.

**TABLE 2-8 DRAINAGE CONCERNS**

No.	Stations	DEFICIENCY
1	109+96 RT	Private drain outlet
2	137+30 RT	Curb inlet needs cleaning
3	143+83 RT	Curb inlet needs cleaning
4	146+14 RT	Curb inlet needs cleaning
5	146+45 RT	Curb inlet needs cleaning
6	164+90 RT	Curb inlet needs cleaning
7	167+42 LT	Overgrown vegetation

The Designer is responsible for determining if this project should address any outstanding drainage maintenance issues. This Scoping Report does not include an evaluation of the hydraulic, safety and physical adequacies of the existing drainage system.

**2.1.21 Pedestrian, Bicyclists, and Transit Facilities**

**2.1.21.1 Sidewalk**

Field review indicates that there are sidewalks on both sides of the road. The width of the existing sidewalk typically ranges from 5.9 feet to 14.1 feet. Some roadway elements were located within the 48-inch sidewalk clear, such as a trash bin. A Design Variation for Unobstructed Sidewalk Width is required. Additionally, multiple locations with cracks, uneven sidewalks, and tripping hazards were noted. Sidewalk deficiencies are summarized in Table 2-9. The location of damaged sidewalks can be found in the Concept Plans in Section 3.12.



Cracks on sidewalk. Sta 143+00 LT



Uneven sidewalk. Sta 125+39 RT





Tripping hazard. Typ.

**FIGURE 2-2 SIDEWALK DEFICIENCIES**

The following substandard clear width of sidewalk was identified:

**TABLE 2-9 SUBSTANDARD CLEAR WIDTH OF SIDEWALK**

No.	Station/Side	Clear Width of Sidewalk (inches)	Meet Standards	Features
1	111+05 RT	35	No	Light Pole
2	112+20 RT	37	No	Light Pole
3	113+43 RT	33	No	Light Pole
4	114+65 RT	37	No	Light Pole
5	116+15 RT	34	No	Light Pole
6	128+47 RT	34	No	Anchored Safety Cone
7	128+89 RT	37	No	Missing Light Pole
8	130+02 RT	44	No	Light Pole
9	131+10 RT	40	No	Light Pole
10	132+48 RT	46	No	Light Pole
11	133+75 RT	36	No	Light Pole
12	135+09 RT	35	No	Light Pole
13	136+50 RT	38	No	Light Pole
14	137+90 RT	38	No	Light Pole

15	139+31 RT	38	No	Light Pole
16	160+28 LT	41	No	Light Pole
17	178+14 LT	41	No	Light Pole
18	179+90 LT	44	No	Light Pole

### 2.1.21.2 Curb Ramps and Detectable Warnings

Pedestrian ramps are present at all intersections. The following deficiencies were observed during the field visit: pedestrian ramps not in line with the crosswalk, missing/faded detectable warnings, substandard slopes, and damaged concrete slabs. Appendix I comprises an inventory of the existing conditions of all the pedestrian ramps. Table 2-10 presents curb ramp deficiencies.

**TABLE 2-10 PEDESTRIAN RAMP DEFICIENCIES**

No.	Location	Meet Standard	Features
1	Biscayne Blvd & NE 38 <sup>th</sup> St, SW corner,	No	Cracks present
2	Biscayne Blvd & NE 38 <sup>th</sup> St, SE corner	No	Cracks present
3	Biscayne Blvd & NE 38 <sup>th</sup> St, NE corner, E Leg	No	Detectable warning surface and cracks present. Full curb height distance between ramps < 4'.
4	Biscayne Blvd & NE 38 <sup>th</sup> St, NE corner, N Leg	No	Detectable warning surface and cracks present. Full curb height distance between ramps < 4'.
5	Biscayne Blvd & NE 38 <sup>th</sup> St, NW corner, W Leg	No	Detectable warning surface and cracks present
6	Biscayne Blvd & NE 39 <sup>th</sup> St, SE corner	No	Ramp slope > 8.33%.
7	Biscayne Blvd & NE 39 <sup>th</sup> St, NE corner	No	Ramp slope > 8.33%. Transition length is not standard. Cracks on concrete. Detectable warning to be replaced. Ramp substandard.
8	Biscayne Blvd & NE 39 <sup>th</sup> St, NW corner	No	Ramp is substandard. Ramp flare slope > 8.33%. Ramp substandard.



No.	Location	Meet Standard	Features
9	Biscayne Blvd & NE 39 <sup>th</sup> St, SW corner	No	Transition length is not standard. Cracks present. Damaged detectable warning. Ramp substandard.
10	Biscayne Blvd & Gate Ln, NE corner	No	Detectable warning surface is damaged.
11	4800 Biscayne Blvd, Midblock crossing, E & W	No	Transition length is not standard. Detectable warning does not extend to full width of landing.
12	Biscayne Blvd & NE 50 <sup>th</sup> Ter, SE corner	No	Transition length is not standard.
13	Biscayne Blvd & NE 50 <sup>th</sup> Ter, NE corner, E Leg	No	Transition length is not standard. Full curb height distance between ramps < 4'. Damaged detectable warning.
14	Biscayne Blvd & NE 50 <sup>th</sup> Ter, NE corner, N Leg	No	Transition length is not standard. Full curb height distance between ramps < 4'. Damaged detectable warning. Detectable warning does not extend to full width of landing.
15	Biscayne Blvd & NE 50 <sup>th</sup> Ter, NW corner	No	Transition length is not standard. Detectable warning does not extend to full width of landing.
16	Biscayne Blvd & NE 51 <sup>st</sup> St, SE corner	No	Transition length is not standard. Damaged detectable warning.
17	Biscayne Blvd & NE 51 <sup>st</sup> St, NE corner	No	Damaged detectable warning. Ramp substandard.
18	Biscayne Blvd & NE 52 <sup>nd</sup> St, SE corner	No	Transition length is not standard. Damaged detectable warning. Standing water present. Ramp substandard.
19	Biscayne Blvd & NE 52 <sup>nd</sup> St, NE corner	No	Transition length is not standard. Damaged detectable warning.
20	Biscayne Blvd & NE 52 <sup>nd</sup> Ter, SE corner	No	Damaged detectable warning. Ramp substandard.
21	Biscayne Blvd & NE 52 <sup>nd</sup> Ter, NE corner	No	Damaged detectable warning. Cracks present. Ramp substandard.
22	Biscayne Blvd & NE 53 <sup>rd</sup> St, SE corner	No	Damaged detectable warning. Cracks present. Ramp substandard.

No.	Location	Meet Standard	Features
23	Biscayne Blvd & NE 53 <sup>rd</sup> St, NE corner	No	Damaged detectable warning. Cracks present. Ramp substandard.
24	Biscayne Blvd & NE 54 <sup>th</sup> St, SE corner	No	Transition length is not standard.
25	Biscayne Blvd & NE 54 <sup>th</sup> St, NW corner	No	Cracks present.
26	Biscayne Blvd & NE 54 <sup>th</sup> St, SW corner	No	Transition length is not standard.
27	Biscayne Blvd & NE 55 <sup>th</sup> St, SE corner	No	Transition length is not standard. Ramp substandard.
28	Biscayne Blvd & NE 55 <sup>th</sup> St, NE corner	No	Transition length is not standard. Ramp substandard.
29	Biscayne Blvd & NE 55 <sup>th</sup> Ter, SE corner	No	Transition length & ramp substandard. Damaged detectable warning.
30	Biscayne Blvd & NE 55 <sup>th</sup> Ter, NE corner	No	Transition length is not standard. Damaged detectable warning. Ramp substandard.
31	Biscayne Blvd & NE 56 <sup>th</sup> St, SE corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
32	Biscayne Blvd & NE 56 <sup>th</sup> St, NE corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
33	Biscayne Blvd & NE 56 <sup>th</sup> St, Midblock North ramp	No	Ramp slope > 8.33%. Ramp substandard.
34	Biscayne Blvd & NE 57 <sup>th</sup> St, SE corner	No	Transition length is not standard. Standing water present. Ramp substandard.
35	Biscayne Blvd & NE 57 <sup>th</sup> St, NE corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
36	Biscayne Blvd & NE 58 <sup>th</sup> St, SE corner	No	Ramp slope > 8.33%. Damaged detectable warning. Cracks present. Ramp substandard.

No.	Location	Meet Standard	Features
37	Biscayne Blvd & NE 58 <sup>th</sup> St, NW corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
38	Biscayne Blvd & NE 58 <sup>th</sup> St, SW corner	No	Realign ramp with crosswalk.
39	Biscayne Blvd & NE 5 <sup>th</sup> Ave, SE corner	No	Transition length is not standard. Damaged detectable warning. Ramp substandard.
40	Biscayne Blvd & NE 5 <sup>th</sup> Ave, NE corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
41	Biscayne Blvd & NE 59 <sup>th</sup> St West Median Crossing, South corner	No	Transition length is not standard. Damaged detectable warning. Cracks present. Ramp substandard.
42	Biscayne Blvd & NE 59 <sup>th</sup> St West Median Crossing, North corner	No	Transition slope > 8.33%. Damaged detectable warning. Cracks present.
43	Biscayne Blvd & NE 59 <sup>th</sup> St SW corner	No	Transition length is not standard. Damaged detectable warning. Cracks present.
44	Biscayne Blvd & NE 59 <sup>th</sup> St East Median Crossing, North corner	No	Ramp substandard.
45	Biscayne Blvd & NE 59 <sup>th</sup> St East Median Crossing, South corner	No	Ramp substandard.
46	Biscayne Blvd & NE 59 <sup>th</sup> St SE corner	No	Ramp slope > 8.33%. Damaged detectable warning.

No.	Location	Meet Standard	Features
47	Biscayne Blvd & NE 59 <sup>th</sup> St NW corners	No	Transition slope > 8.33%. Damaged detectable warning. Cracks present.
48	Biscayne Blvd & NE 59 <sup>th</sup> St NE corner	No	Transition length is not standard. Damaged detectable warning.
49	Biscayne Blvd & NE 5 <sup>th</sup> Ct, SW corner	No	Damaged detectable warning on ramp and median crossing.
50	Biscayne Blvd & NE 5 <sup>th</sup> Ct, NW corner	No	Signpost in ramp. Transition length is not standard.
51	Biscayne Blvd & NE 6 <sup>th</sup> Ave, SE corner	No	Ramp slope > 8.33%. Transition length is not standard. Damaged detectable warning.
52	Biscayne Blvd & NE 6 <sup>th</sup> Ave, Median crossing, South corner	No	Damaged detectable warning at median crossing.
53	Biscayne Blvd & NE 6 <sup>th</sup> Ave, NE corner	No	Ramp slope > 8.33%. Transition length is not standard. Damaged detectable warning.
54	Biscayne Blvd & NE 6 <sup>th</sup> Ave, Median crossing, North corner	No	Damaged detectable warning at median crossing.
55	Biscayne Blvd & NE 60 <sup>th</sup> St, SE corner	No	Transition length is not standard. Damaged detectable warning.
56	Biscayne Blvd & NE 60 <sup>th</sup> St, NE corner	No	Transition length is not standard. Damaged detectable warning.

No.	Location	Meet Standard	Features
57	Biscayne Blvd & NE 60 <sup>th</sup> St, NW corner	No	Damaged detectable warning. Ramp substandard.
58	Biscayne Blvd & NE 60 <sup>th</sup> St, SW corner	No	Damaged detectable warning. Ramp substandard.

### 2.1.21.3 Crosswalks

Existing marked crosswalks are present at all signalized and un-signalized crossings. Special emphasis crosswalk markings are present at the signalized intersections and at the mid-block crossing near NE 48 Terrace. Standard Crosswalk pavement markings are found at the unsignalized intersection along the project. No crosswalk is provided to cross the south leg of the intersection of NE 38 St., NE 50 Terr., and the north leg of NE 54 St.

### 2.1.22 Pedestrian Control Signals

Based on our field observation, multiple signalized intersections were found with deficiencies related to countdown pedestrian control signals and standard pedestrian detector assemblies. Additionally, existing pedestrian detectors and detector signs were found missing or not located parallel to the crossing direction according to FDOT Standard Plans. Also, pedestrian detectors and detector signs are not present at the crossings of the minor streets. Deficiencies are summarized in Table 2-11.

**TABLE 2-11 PEDESTRIAN SIGNAL ASSEMBLY DEFICIENCIES**

Cross Street	Intersection Leg	Countdown Pedestrian Control Signal Type	Standard Pedestrian Detectors	Standard Detector Sign	Meet Standard
Biscayne Blvd & NE 38 <sup>th</sup> St	East	Yes	No (Missing detector in NE and SE corner)	No (Missing sign in NE and SE corner. North leg sign not parallel to crosswalk. Graffiti present)	No
	North	Yes	No (not parallel to crossing and farther than 10ft from the edge of	No (not parallel to crossing)	No

Cross Street	Intersection Leg	Countdown Pedestrian Control Signal Type	Standard Pedestrian Detectors	Standard Detector Sign	Meet Standard
			curb)		
	West	None	None	None	No
*4802 Biscayne Blvd.	Midblock	No	No (not accessible from level surface for east end and not accessible within 10" max reach from level surface for west end)	Yes	No
Biscayne Blvd & NE 50 <sup>th</sup> Ter	East	No	No (Missing)	No (Missing)	No
	North	Yes	No (Push button > 10' from curb)	No	No
*Biscayne Blvd & NE 54 <sup>th</sup> St	West	Yes	No (Post >10' from face of curb, Missing push button in NW and SW corner)	No (Missing sign in NW and SW corner)	No
	South	Yes	No (Non-standard orientation)	No (Non-standard orientation)	No

\* At the time of production of this report, the District 6 Traffic Operations Office indicated that project CTP 2019-04-0004 is associated with Pedestrian Signalization improvements along SR 5 / Biscayne Boulevard and under design, and construction will be completed through FM 447214-1, at these intersections.

### 2.1.23 Bicycle Facilities

No existing designated bicycle facilities are present along the corridor. Based on coordination with Shereen Yee Fong, FDOT District 6 Transportation Planner, a project located between NE 6<sup>th</sup> St. and NE 87<sup>th</sup> St. is sourced from and in alignment with the 2021/2022 City of Miami Bicycle Master Plan Update, where the City of Miami Master Plan proposes a Shared-Use Path. According to the Network’s prioritization criteria, it is considered a high priority project. [ArcGIS - FDOT DRAFT Bike Network Proposed Connections](#). In Concurrent with the data-driven Bike & Pedestrian Implementation Tool, this corridor has a high scoring. [FDOT District Six Data-driven Bicycle & Pedestrian Facility Needs Prioritization Tool \(BPTool\) \(pedbike-dashboard.herokuapp.com\)](#)

### 2.1.24 Transit Facilities

There are a total of seventeen (17) bus stops serving Miami-Dade County Metrobus Routes 3, 16, 54, and 93. The existing bus stops shall provide the required minimum clear width of 5 feet (measured parallel to the roadway) and the minimum clear length of 8 feet (measured perpendicular to the curb or roadway edge) for boarding and alighting areas. Bus stop features and boarding/alighting areas should be coordinated with Miami-Dade Transit for improvements as deemed feasible. The deficiencies are summarized in Table 2-12.

**TABLE 2-12 TRANSIT DEFICIENCIES**

No.	Location	Shelter Present	Bus landing Pad	Bus Route Sign	Rigid Pavement Bus Bay
1	106+67 LT	No	No	Yes	N/A
2	110+28 RT	No	No	Yes	N/A
3	111+38 LT	No	No	No	N/A
4	118+10 RT	Yes	Yes	Yes	N/A
5	118+89 LT	Yes	No	Yes	N/A
6	123+53 LT	Yes	Yes	No	Moderate Transverse Cracks on 3 slabs
7	124+96 RT	Yes	No	No	N/A

No.	Location	Shelter Present	Bus landing Pad	Bus Route Sign	Rigid Pavement Bus Bay
8	131+05 RT	No	No	Yes	N/A
9	134+20 LT	Yes	No	Yes	N/A
10	138+38 LT	No	No	Yes	N/A
11	139+95 RT	No	No	No	N/A
12	151+30 LT	Yes	Yes	Yes	N/A
13	155+50 LT	Yes	No	Yes	N/A
14	156+08 RT	Yes	No	Yes	N/A
15	161+91 RT	No	No	No	N/A
16	175+50 LT	Yes	No	Yes	N/A
17	177+09 RT	Yes	Yes	Yes	Light to Moderate Transverse Cracks on 5 slabs. Moderate spalling on wheel path on 3 slabs

### 2.1.25 Signing and Pavement Markings

The existing signs include a cantilever sign at NE 38<sup>th</sup> Street, multi-post ground signs, single post ground signs, solar powered speed sign with feedback message signs, and rectangular rapid flashing beacon within the project limits. Based on field observations, existing signs seem to be in fair condition. An existing sign inventory is not included in this Scoping Report. The designer is responsible for conducting a sign inventory and reviewing compliance of existing signage. The existing pavement markings are in fair to poor condition. The existing RPMs displayed typical signs of aging, partially faded, and some are missing.

### 2.1.26 Signalization

There are eighteen (18) intersections on SR 5/Biscayne Boulevard within the project limits from South of NE 38th Street (MP 13.588) to NE 61st Street (MP 15.048), four (4) signalized, fourteen (14) unsignalized intersections as follows:

1. Biscayne Boulevard at NE 38th Street (Signalized)



2. Biscayne Boulevard at NE 39th Street (Unsignalized)
3. Biscayne Boulevard at Gate Lane (Stopped controlled)
4. Biscayne Boulevard at NE 50th Terrace (Signalized)
5. Biscayne at NE 51st Street (Unsignalized)
6. Biscayne at NE 52nd Street (Unsignalized)
7. Biscayne at NE 52nd Terrace (Unsignalized)
8. Biscayne at NE 53rd Street (Unsignalized)
9. Biscayne at NE 54th Street (Signalized)
10. Biscayne at NE 55th Street (Unsignalized)
11. Biscayne at NE 55th Terrace (Unsignalized)
12. Biscayne at NE 5th Avenue (Unsignalized)
13. Biscayne at NE 58th Street (Unsignalized)
14. Biscayne at NE 59th Street (Unsignalized)
15. Biscayne at NE 60th Street (Unsignalized)
16. Biscayne at NE 5th Court (Unsignalized)
17. Biscayne at NE 6th avenue (Unsignalized)
18. Biscayne at NE 61st Street (Signalized)

The overall typical section configuration of the corridor consists of four-lane divided with curb and gutter and raised median with curb and gutter. The geometric characteristics of the four signalized intersections located within the project limit are as follows:

Biscayne Boulevard at NE 38th Street is a four-legged signalized intersection equipped with inductive loop detection for westbound left-through and exclusive left lanes, and video detection for the northbound and the southbound approaches.

Biscayne Boulevard at NE 50th Terrace is a signalized three-legged (T) intersection with a southbound dedicated left turn, equipped with inductive loop detection for the westbound approach and video detection for the northbound and the southbound approaches.

Biscayne at NE 54th Street is a signalized three-legged (T) intersection equipped with video detection for the northbound and the southbound approaches. A pedestrian signal pedestal with a countdown signal head is located on the Northwest corner of the intersection, push buttons and pedestrian signal heads are located on the signal poles on the southeast and southwest corners of the intersection. The eastbound and northbound approaches include dedicated left turns and high-emphasis crosswalks.

Biscayne at NE 61st Street is a four-legged signalized intersection equipped with inductive loop detection for eastbound and westbound approaches, and video detection for the northbound and southbound approaches. Pedestrian signal pedestals and push buttons are located on all four corners of the intersection. The southbound and the westbound approaches include dedicated left turns, and all four approaches include high emphasis crosswalks.

At the time of production of this report, the District 6 Traffic Operations Office indicated that project CTP 2019-04-0004 is associated with Pedestrian Signalization improvements along SR 5 / Biscayne Boulevard and under design, and construction will be completed through FM 447214-1, at the following intersections:

- NE 48 Street
- NE 54 Street
- NE 72 Street
- NE 74 Street
- NE 83 Terrace
- NE 85 Street

## **2.1.27 Lighting**

### **Roadway Lighting**

SR 5/Biscayne Blvd. from South of NE 38th Street to NE 61st Street has consistent 38 feet high decorative light poles and 12 feet high decorative post top all along the project limits in both sides of the road with high-pressure sodium (HPS) luminaires per As Built 250224-1 and light-emitting diode (LED) per 440191-1. Examples of the existing lighting pole types on the corridor are included in Appendix H.

### **Signalized Lighting evaluation:**

There are four (4) existing signalized intersections and one (1) Mid-block crossing along SR 5/Biscayne Blvd. from South of NE 38th St. to NE 61st Street (see list below):

- SR 5/Biscayne Blvd. at NE 38th St.
- Mid-block crossing at NE 48th Ter.
- SR 5/Biscayne Blvd. at NE 50th Ter.
- SR 5/Biscayne Blvd. at NE 54th St.
- SR 5/Biscayne Blvd. at NE 61st St.

Lighting at signalized intersections has been recently improvement to comply with the minimum illumination levels required per FDM Chapter 231 under FDOT financial project ID 440191-1 and construction contract number T6458. Based on lighting assessment and readings obtained in the field using Lutron LM-81LX Light Meter illumination levels at signalized intersections meet the minimum illumination levels required per FDM 231. At the Mid-block crossing there is a tear drop luminaire is missing whatsoever the illumination levels do not meet the levels required. Measurements are unique to the field conditions on the date of the readings (06/09/2022) and may differ from those obtained another day.

Lighting pictures at each signalized intersection within the project area are included in Appendix H.

### **2.1.28 Landscape**

Based on our field observation, landscape was found within the project limits, consisting of sod, palms and trees in the median along the corridor, as well as trees and other vegetation in planters within the sidewalk on both sides of the road. Locations where intersection sight distance is obstructed by landscaping are listed in Table 2-8. The Designer is responsible for analyzing the crash data and verifying if a significant crash history is related to the existing trees and landscaping within the clear sight triangles and pursue any necessary design variation for existing landscape to remain in place when possible. The designer is responsible for determining if any landscaping issues within the project limits will be addressed or should be included in the scope of work for this project.

### **2.1.29 Bridges Structures**

N/A

### **2.1.30 Ancillary Structures**

Existing ancillary structures within the project limits include existing mast-arm signal poles, and light poles. Additional loading is not anticipated on the existing mast arms as part of the RRR improvements.

Installation of flexible retroreflective backplates to all signal heads and additional signs are recommended. If retroreflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted. At the time of this report submittal, the District Maintenance Office or Structural Office have not provided a structural assessment or evaluation for any existing ancillary structures within the project limits.

### **2.1.31 Operating Conditions**

#### **2.1.31.1 Access Management**

The access classification of the segment is 7. Access Class 7 roadways are controlled access facilities where adjacent land is generally developed to the maximum feasible intensity and roadway widening potential is limited. This classification shall be assigned only to roadway segments where there is little intent or opportunity to provide high speed travel. Exceptions to access management standards in this access class may be allowed if the landowner substantially reduces the number of connections compared to existing conditions. These roadways can have either restrictive or non-restrictive medians.

#### **2.1.31.2 Maintenance Concerns**

At the time of this Scoping Report, in addition to the issues found during our field verification listed under Section 2.1.20 Drainage, the District Maintenance Office provided a list of issues included in Appendix K. The Designer is responsible for determining if any maintenance issues within the project limits will be addressed or should be included in the scope of work for this project.

### **2.1.32 Safety Conditions**

There are two High Crash List locations for segments and six High Crash List for spots within the project limits. Four intersections along the project limits, Biscayne Boulevard at NE 39th Street, Biscayne Boulevard at NE 53rd Street, Biscayne Boulevard at NE 54th Street, and Biscayne Boulevard at NE 55th Street are identified on the High Crash List (HCL) for spots. Two locations, south of NE 34th Street to north of NE 38th Street (MP 13.289 - MP 13.605), south of NE 51st Street to north of NE 54th Street (MP 14.305 - MP 14.505) are considered High Crash List (HCL) segments. The Crash Analysis Reporting System (CARS) data between 2017 and 2019 revealed that 371 crashes occurred during this three-year interval, with the most predominant type of crashes being rear-end crashes, accounting for 42.9% of the crashes reported. Angle and sideswipes crashes are the other most reported types, which account for 16.2% and 15.6% of the crashes along the project segment. 273 (73.6%) of the crashes reported occurred during daylight, 336 (90.6%) occurred under dry surface conditions, 70 (18.9%) of the crashes resulted in injury, 5 (1.3%) pedestrian crashes, and 2 (05%) bicycle crashes.

To fully capture the most recent crash occurrences along the corridor, a desktop review of Signal Four Analytics data was also conducted for the years 2016 to 2021. This review revealed there were five (5) fatalities that occurred between the portion of the segment south of NE 38th Street (MP 13.588) to NE 61st street (MP 15.048). Two of these five fatalities involved collisions with pedestrians. Based on the review of the crashes and the field review conducted during the morning peak hour, the high percentage of rear-end crashes along the segment appears to be connected to the traffic congestion along the corridor, distracted driving, and following too closely.

For Biscayne Boulevard at NE 38th Street, based on CARS data, rear-end and sideswipe crashes are the predominant crash types at the intersection. Based on field observation, the northbound, southbound, and westbound approaches experience long queue formation. The westbound vehicular queue cleared within one signal cycle. The intersection experiences delay due to northbound and southbound queues not being entirely cleared within one signal cycle. We also observed that the queue formation from NE 36th street's southbound approach extends to NE 38th street, which also caused delays to NE 38th Street's Southbound approach. The queue from NE 38th Street's northbound approach also extends to NE 36th Street.

For Biscayne Boulevard at NE 50th Terrace, rear-end and angle crashes are the most predominant crash types at the intersection. The southbound approach experienced long queue formation that extended to NE 54th Street. The northbound and westbound vehicular queues cleared within one signal cycle.

For Biscayne at NE 54th Street, rear-end, sideswipe, and left turn crashes are the most predominant crash types at the intersection. All approaches experienced queue formation; the southbound approach experienced long queue formation, and the southbound left turn movement experienced significant delays due to most of its traffic waiting for the left turn phase toward southbound on Federal Highway/NE 4th Court. Queue spill-back from NE 50th terrace appeared to be one of the causes of delay for the southbound approach. The northbound and eastbound vehicular queues cleared within one signal cycle.

For Biscayne at NE 61st Street, rear-end, left turn, and angle crashes are the most predominant crash types at the intersection. The southbound approach experienced long queue formation, and the vehicular queues for all the other three approaches were cleared within one signal cycle.

At the time of production of this report, the Department has not provided the Final Safety Report.

### 2.1.33 Summary of Findings

Table 2-13 summarizes the evaluation of the corridor design elements for compliance with standards.

**TABLE 2-13 SUMMARY OF FINDINGS**

Design Element	Meets Standards		
	Yes	No	N/A
Design Speed	X		
Lane Width	X		
Shoulder Width			X
Median Width	X		
*Roadway Cross Slope			
Superelevation	X		
Shoulder Treatment			X
Islands		X	
Roadside Slopes			X
Vertical Curvature	X		
Grades		X	
Horizontal Alignment (Curve Length)		X	
*Stopping Sight Distance			
Deceleration Length of Auxiliary Lanes		X	
*Vertical Clearance			
Lateral Offset		X	
Control Zones	X		
Border	X		

Design Element	Meets Standards		
	Yes	No	N/A
Intersections (Sight Distance)		X	
Drainage	X		
Driveways		X	
Pedestrian Needs		X	
Bicyclist Needs			X
Transit Needs		X	
*Utilities			
At-grade Railroad Crossing			X
Aesthetics and Landscaping			X
Signalization		X	
Lighting	X		
Bridges			X
Bridge Loading			X
Bridge Width			X
Bridge Railing			X
Bridge Vertical Clearance			X
Roadside Safety Hardware			X
Longitudinal Barriers, Guardrails, Median Barriers			X
Guardrail to Bridge Rail Transitions			X
Guardrail Terminals			X
Crash Cushions and Attenuators			X

*\*The data is 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.*

## 2.2 References

The design criteria and standards used in the preparation of this report include the following:

Florida Design Manual (FDM) (January 2023)

FDOT Standard Plans for Road Construction (FY 2023-24)  
FDOT Traffic Engineering Manual (January 2023)  
FDOT Standard Specifications for Road and Bridge Construction (FY 2023-24)  
FDOT District 6 Design Handbook (May 2021)  
FDOT Drainage Manual (January 2023)  
FDOT Flexible Pavement Design Manual (January 2023)  
Manual of Uniform Traffic Control Devices (2009)  
FAC Rules 14-20.003 and 14-20.0032 (2016)  
ADA Accessibility Guidelines (ADAAG) (2010)  
Public Right of Way Accessibility Guideline (PROWAG) (2011)  
Work Program Instructions (September 9, 2022)  
FDOT [ArcGIS](#) (May 2022)  
FDOT [pcscn87a.pdf \(windows.net\)](#) (June 2022)  
FDOT [ArcGIS - FDOT DRAFT Bike Network Proposed Connections](#) (June 2022)  
[FDOT District Six Data-driven Bicycle & Pedestrian Facility Needs Prioritization Tool \(BPTool\) \(pedbike-dashboard.herokuapp.com\)](#)

### 3 Improvement Recommendations

The recommended improvements are based on the field scoping and office reviews.

#### 3.1 Roadway

- Mill and resurface the existing roadway pavement.
- Correct failure of pavement around utility valves and manholes.
- Upgrade deficient pedestrian curb ramps and detectable warning surfaces.
- Replace damaged sidewalks.
- Evaluate sight distance.
- Adjust utility valves within the limits of construction.
- Evaluate inactive and under-permit driveways with District and owner for proper closure or status.
- Evaluate the replacement of damaged drainage structure tops.
- Evaluate shelter, boarding and alighting areas, signs, and benches with Miami-Dade Transit Authority.
- Repair damaged rigid pavement at existing bus bays

#### 3.2 Signing and Pavement Markings

- Update all substandard ground mounted signs to meet the current FDOT Standards, FDOT TEM, and MUTCD (including legend size, reflectivity, or breakaway supports). Exclude any existing sign slated for repair by FDOT Maintenance Office.
- Replace and upgrade vandalized signs
- Replace and upgrade all pavement markings to meet the current FDOT standards.
- Install additional posted static speed signs of 35 mph at strategic locations. The recommended locations are as follows:
  - Southbound, north of Gate Lane at MP 14.071
  - Northbound, south of NE 50th Terrace at MP 14.208
  - Southbound, south of NE 52nd street at MP 14.373
  - Northbound, south of NE 52nd Terrace at the vicinity of MP 14.420
  - Southbound North of 57th Street between MP 14.730 and MP 14.751
  - Northbound and southbound, south of 58th Street at MP 14.772
  - Northbound facing NE 5th Court between MP 14.899 and MP 14.913



### 3.3 Signalization

#### Safety and Operations Recommended Improvements:

The following improvements are being proposed:

#### Segment wide

- Upon approval of the target speed study, install additional posted static speed signs of 35 mph at strategic locations. The recommended locations are as follows:
  - Southbound, north of Gate Lane at MP 14.071
  - Northbound, south of NE 50<sup>th</sup> Terrace at MP 14.208
  - Southbound, south of NE 52<sup>nd</sup> street at MP 14.373
  - Northbound, south of NE 52<sup>nd</sup> Terrace at the vicinity of MP 14.420
  - Southbound, North of 57<sup>th</sup> Street between MP 14.730 and MP 14.751
  - Northbound and southbound, south of 58<sup>th</sup> Street at MP 14.772
  - Northbound facing NE 5<sup>th</sup> Court between MP 14.899 and MP 14.913
- Upon approval of the target speed study, install additional electronic speed feedback signs with speed limit signs of 35 mph along the segment. The recommended locations are as follows:
  - Southbound, south of Gate Lane between MP 13.823 and MP 13.862
  - Northbound, north of NE 51<sup>st</sup> street at MP 14.339
- Provide metered electrical power service.
- In the case that retroreflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted.

#### Biscayne Boulevard at NE 38<sup>th</sup> Street (Signalized)

- Install fluorescent yellow-green Pedestrian Crossing Signs (W11-2) and fluorescent yellow-green arrow Plaques (W16-7P) at all corners with a crosswalk at the intersection.

#### Biscayne Boulevard at SR 5/US 1/Biscayne Boulevard at NE 39<sup>th</sup> Street (Unsignalized)

- Replace the detectable warning surface at the southwest corner of the intersection.
- Add "Only" pavement marking message on the eastbound and westbound approaches.

#### Biscayne Boulevard at Median Opening south of Gate Lane (Unsignalized)

- Supplement the stop signs with "Left Turn Only" signs (R3-5) for northbound and southbound left/U-turns to Biscayne Boulevard.

#### Biscayne Boulevard at SR 5/US 1/Biscayne Boulevard at Gate Lane (Unsignalized)

- Supplement the stop sign with "Left Turn Only" signs (R3-5) for westbound left and southbound Left/U-turn to Biscayne Boulevard.

### Biscayne Boulevard at Median Opening north of Gate Lane (Unsignalized)

- Supplement the stop signs with "Left Turn Only" signs (R3-5) for northbound and southbound left/U-turns to Biscayne Boulevard.

### Biscayne Boulevard at NE 50<sup>th</sup> Terrace (Signalized)

- Replace the substandard existing pedestrian push button and the plaque (R10-3i) on the signal pole at the northwest corner of the intersection per standard specification.
- Replace the push button and pedestrian signal head on the signal pole at the northeast corner of the intersection with a new pedestrian pedestal with a signal head and push button to standard and ADA requirements.
- Install fluorescent yellow-green Pedestrian Crossing Signs (W11-2) and fluorescent yellow-green arrow Plaques (W16-7P) at the northeast, northwest, and southeast corners of the intersection.
- Install detectable warning surfaces (DWS) at the northeast corner of the intersection.

### Biscayne Boulevard at NE 52nd Street (Unsignalized)

- Install a "No U-Turn" sign on the median facing northbound and southbound to emphasize that U-Turn is restricted.
- Install fluorescent yellow-green Pedestrian Crossing Signs (W11-2) and fluorescent yellow-green arrow Plaques (W16-7P) on the northeast and southeast corners of the intersection.

### Biscayne Boulevard at NE 54<sup>th</sup> Street (Signalized)

- Install retroreflective signal backplates for all signal section heads facing northbound and southbound. If retroreflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted. Backplates are not included in the 100% plans of FM 447214-1.
- Replace the pedestrian crossing signs (W11-2) and Downward Diagonal Arrow Plaques (W16-7P) at the southwest corner of the intersection facing NE 54<sup>th</sup> Street with the fluorescent yellow-green sign.
- Install a "No U-turn" sign on the mast arm facing eastbound. If the structural analysis fails, install the sign as a single column ground sign.
- Install a turning right stop for pedestrian sign (R10-15a) on the north leg of the intersection facing southbound traffic.  
Install "Do Not Block Intersection" sign (R10-7) on the mast arm facing all legs

The following improvements are proposed by the 100% FM 447214-1:

- Adjust the push button and the plaque (R10-3i) on the signal pole at the southeast corner of the intersection so the face of the push button can be parallel with its assigned crosswalk.

- FM 447214-1 is to provide an overhead metered electrical power service.

#### Biscayne Boulevard at NE 5<sup>th</sup> Court (Unsignalized)

- Install a "Right Turn Only" sign on the stop sign at the southwest corner of the intersection. Add pavement marking signs and "Only" message on the eastbound approach.
- Install high-emphasis pavement marking to the existing crosswalk on the east leg.

#### Biscayne at NE 61<sup>st</sup> Street (Signalized)

- Install fluorescent yellow-green School Crossing Signs (S1-1) and fluorescent yellow-green arrows (W16-7P) on the southeast corner of the intersection facing the northbound approach.
- Install a turning right stop for pedestrian sign (R10-15a) on all four corners of the intersection.
- Add "Only" pavement marking message on the southbound outer through lane and northbound inner through lane approaches

The following improvements are proposed by 100% FM 445996-1:

- Install retroreflective signal backplates for all signal section heads. If retroreflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted.
- Adjust the push buttons and the plaques (R10-3i) on the signal pole at the northwest and southeast corners of the intersection.
- Install one-way signs (R6-1L) on the "Do Not Enter" signs facing the westbound approach.
- Install the 12-in solid pedestrian crosswalk line markings at all four crossings.

### **3.4 Lighting**

Miami Dade County (MDC) Design Build contract will be converting all MDC High Pressure sodium fixtures to LED. The main goal of MDC is to get the project started and begin the first and longest phase which is the maintenance. This will improve the current lighting conditions on the roadway. At this point LED luminaire to be used on the different corridors is not defined and the schedule of when the work will be begun or completed.

The existing lighting system within the project limits shall remain. The Designer is responsible for evaluating the lighting improvements and tree trimmings required with the District Landscape Engineer and the District Maintenance Office.

Lighting pull boxes shall be replaced within the limits of sidewalk reconstruction, as necessary. Evaluate the non-functional lighting fixtures. Provide Lighting Plan and Lighting Design Analysis Report as required thru FDOT coordination for the necessary lighting improvements to ensure all lighting systems including load centers are functional, eliminate corridor issues, provide missing light poles, arm, and luminaires, eliminate dark spot, and

enhance safety for ped/bike activity. 48 inches must be provided at light poles located within sidewalks or a Design Variation shall be coordinated and provided when the clear sidewalk width at a point location is at least 32 inches or greater to meet ADA.

### **3.5 Landscape**

- Consultant to determine any proposed vegetation/trees trimming/removal within the project limits.

### **3.6 Environmental**

The Environmental Resource Desktop Analysis (ERDA) has been provided by the District and is included in Appendix F.

### **3.7 Safety Improvements**

The District Traffic Operations Office recommends the following safety and non-safety improvements are outlined in the Final RRR Safety Review of April 2023 (FPID 250650-5-32-01) for FM 447830-1 SR 5/US1/Biscayne Boulevard from S of NE 38 Street to NE 61 Street. The FDOT Traffic Operations Office could possibly conduct studies for improvements that require further study. Refer to Appendix A for additional information.

The proposed safety and non-safety improvements are as follows:

#### **SR 5/US 1/BISCAYNE BOULEVARD AT NE 38TH STREET**

Safety Improvements:

- Consider installing flexible retroreflective backplates facing all approaches.

#### **SR 5/US 1/BISCAYNE BOULEVARD AT GATE LANE**

Non-safety Improvements:

- Consider trimming the vegetation in the median to improve sight distance between turning vehicles and through vehicles.

#### **SR 5/US 1/BISCAYNE BOULEVARD AT NE 4800 BLOCK MIDBLOCK CROSSWALK**

Non-safety Improvements:

- Consider installing pedestrian detector pushbuttons in the median area.

### SR 5/US 1/BISCAYNE BOULEVARD AT NE 50TH TERRACE

#### Non-safety Improvements:

- Consider installing flexible retroreflective backplates facing all approaches.
- Consider providing pedestrian signal heads for the east leg crosswalk.
- Trim vegetation obstructing the mast-arm-mounted street name sign.

### SR 5/US 1/BISCAYNE BOULEVARD AT SR 944/NE 54TH STREET

#### Safety Improvements:

- Consider installing flexible retroreflective backplates facing all approaches. This improvement will be implemented under FDOT project FM # 447214-1-52-01.

#### Non-safety Improvements:

- Consider installing a crosswalk on the north leg. This improvement will be implemented under FDOT project FM # 447214-1-52-01.

### **3.8 Design Exceptions and Variations**

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

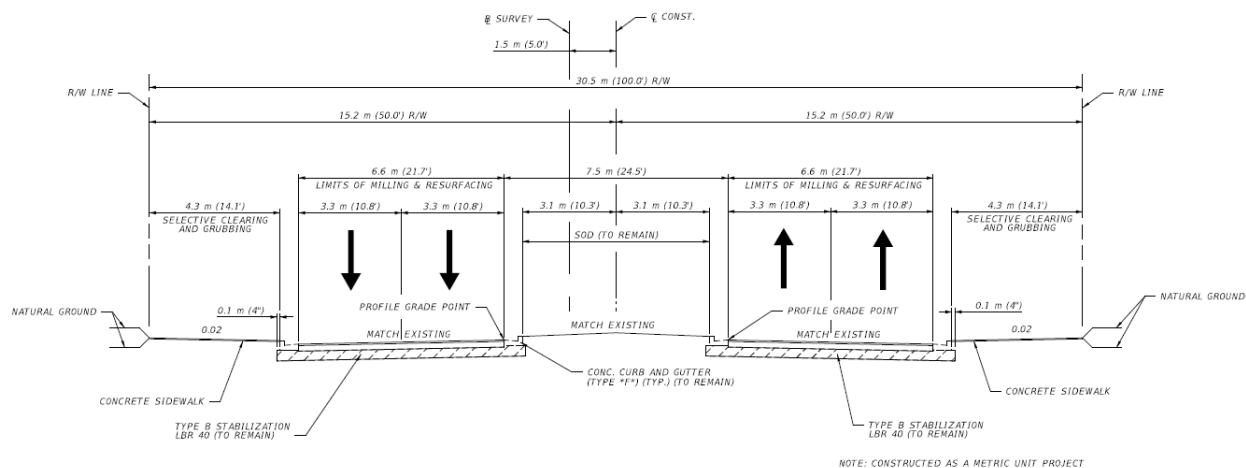
#### Design Variations

- Design Variation for Triangular and Refuge Islands
- Design Variation for Curve Length
- Design Variation for Vertical Curve Longitudinal Grade
- Design Variation for Deceleration Length/Storage Length
- Design Variation for Lateral Offset
- Design Variation for Clear Sight Triangle

### 3.9 Typical Section

SR 5 / US 1 / Biscayne Boulevard is composed of three (3) typical sections within the project limits, as described and depicted in the images below:

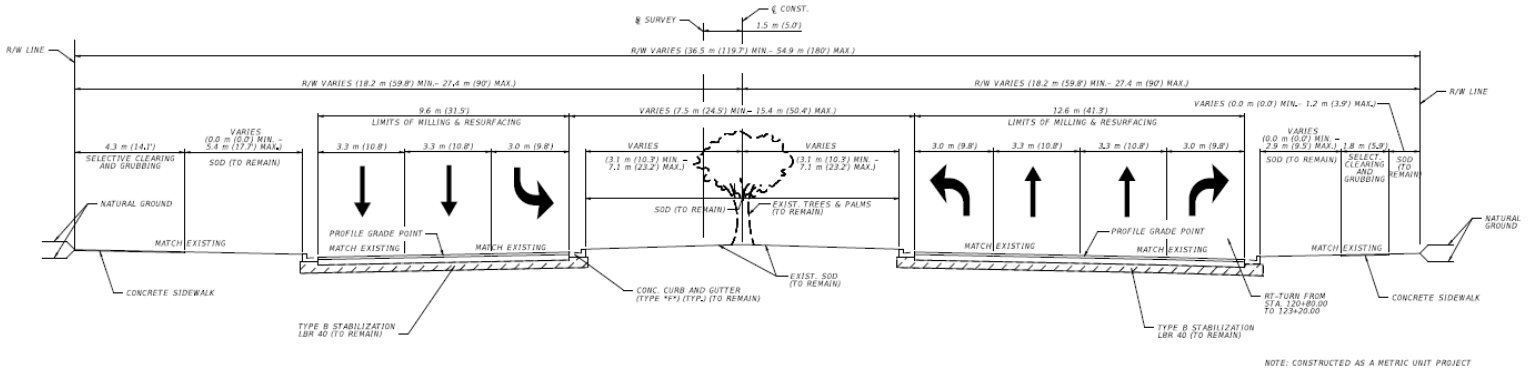
**Recommended Typical Section 1 (NE 38<sup>th</sup> Street to north of NE 39<sup>th</sup> Street, NE 48<sup>th</sup> Terrace to NE 55<sup>th</sup> Terrace):** This segment is a four-lane divided road with two 11-foot northbound lanes, two 11-foot southbound lane, type 'F' curb and gutter on both sides of the roadway, 20 feet raised sodded median, and 14 feet concrete sidewalks on both sides of the roadway.



**TYPICAL SECTION 1**  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 103+18.44 TO STA. 110+20.00  
 STA. 131+04.00 TO STA. 156+00.00

**FIGURE 3-1 RECOMMENDED TYPICAL SECTION 1**

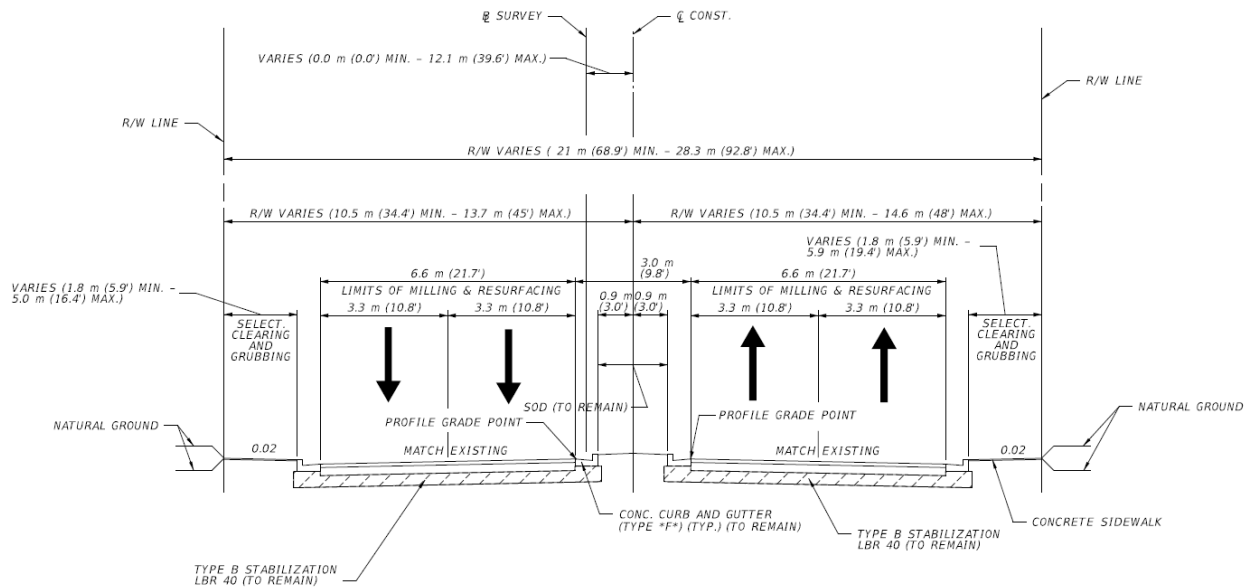
**Recommended Typical Section 2 (north of NE 39<sup>th</sup> Street to NE 48<sup>th</sup> Terrace):** This segment is a four-lane divided roadway with two 11-foot Southbound through lanes and two 11-foot Northbound through lanes, a 10-foot turning lane Southbound, two 10-foot turning lanes Northbound, with a varying width landscaped median. On the west side of the roadway, it has a 14 feet concrete sidewalk adjacent to the Right-of-Way line and a varying width sod area. The east side of the roadway includes a 6 feet concrete sidewalk and varying width sod area. Type 'F' curb and gutter are found on both sides of the roadway.



TYPICAL SECTION 2  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 110+20.00 TO STA. 131+04.00

**FIGURE 3-2 RECOMMENDED TYPICAL SECTION 2**

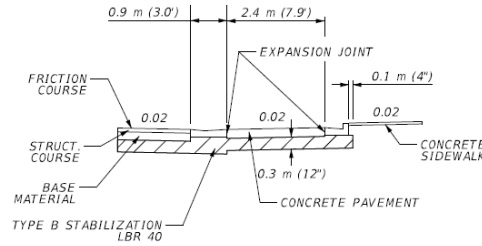
**Recommended Typical Section 3 (NE 55<sup>th</sup> Terrace to NE 61<sup>st</sup> Street):** This segment is a four-lane divided roadway with two 11-foot Southbound lanes and two 11-foot Northbound lanes and 6 feet sodded median. Both sides of the roadway have type 'F' curb and gutter, and varying width concrete sidewalk.



TYPICAL SECTION 3  
 S.R.5/U.S.1 (BISCAYNE BOULEVARD)  
 STA. 156+00.00 TO 180+80.00 (Q CONST.)

**FIGURE 3-3 RECOMMENDED TYPICAL SECTION 3**

Along the corridor, two bus bays are also part of the project. Built on Portland cement concrete. Repair cracks and replace slabs per Rigid Pavement Design Manual and Design Standards. Refer to Table 2-13 for pavement deficiencies.



NOTE: CONSTRUCTED AS A METRIC UNIT PROJECT

**BUS BAY DETAIL**  
 N.T.S.

STA. 122+85.63 TO 124+27.00 (LT)  
 STA. 176+34.41 TO 177+35.00 (RT)

**FIGURE 3-4 RECOMMENDED BUS BAY DETAIL**

**3.10 Preliminary Cost Estimate**

A preliminary construction cost estimate was developed based on estimated quantities for the recommended improvements listed in this report. The unit prices are from the FDOT Pay Item Average Unit Cost, 12-Month Moving Average from Area 13 (Miami-Dade County), or Statewide Averages for the period 2022/02/01 to 2023/01/31. The costs listed do not represent the estimated construction cost for FY 2026 or the project Work Program Budget. FDOT District 6’s preference is to divide the cost of RRR elements into RRR Funding Categories A, B, C. The table below summarizes the cost of improvements recommended to be included in the scope of work for this project.

**TABLE 3-1 PRELIMINARY CONSTRUCTION COST ESTIMATE**

RRR Funding Category	Description	Preliminary Construction Cost Estimate
A	RRR Safety Enhancements, including elements listed in the RRR Safety Report and recommended improvements	\$25,524.97
B	Pavement Restoration Elements; including pavement restoration, ADA curb ramps, signals, signing, and pavement marking	\$ \$4,289,278.66
C	Other Improvements	N/A
Total		\$ 4,314,803.63

Based on the Preliminary Construction Cost Estimate, the estimated Preliminary Engineering (Phase 32, FY 2026) is \$819,812.69.



### **3.10.1 Funding Category A – Safety and Traffic Operations**

Funding Category A is reserved for specific safety enhancements identified by the District Traffic Operations Office. Refer to Appendix G (Preliminary Cost Estimate) for the list of pay items, quantities, and unit costs associated with the improvements as described under Section 3.7.

### **3.10.2 Funding Category B – Pavement Restoration and ADA Compliance**

Funding Category B is reserved for the pavement restoration elements, ADA compliance and related components to address RRR criteria. Refer to Appendix G (Preliminary Cost Estimate) for the list of pay items, quantities, and unit costs associated with the improvements as described under Sections 3.1 to 3.5.

### **3.10.3 Funding Category C – Pavement Restoration and ADA Compliance**

Funding Category C is reserved for all other operational, capacity, and optional improvements requested by the Department. No safety enhancements are recommended.

## **3.11 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 – FM 447830-1

Description:	SR 5 / US 1 / Biscayne Boulevard from South of NE 38th Street to NE 61st Street (87030000 MP 13.588-15.048)
County:	Miami-Dade
Project Type:	Resurfacing (Work Mix 0012)
Project Limits:	87030000 MP 13.588-15.048
Highway Systems:	SHS
Functional Classification:	Urban Principal Arterial - Other
Context Classification:	C5 Urban Center (S. of NE 38 <sup>th</sup> St. to NE 38 <sup>th</sup> St.) C4 Urban General (NE 38 <sup>th</sup> St. to NE 61 <sup>st</sup> St.)
Bridges:	N/A
Railroad Crossing:	N/A
Design Speed:	35 mph
Posted Speed:	35 mph
Target Speed:	35 mph

## 1. PURPOSE

- Major work mix includes: 0012, Resurfacing
- Major work groups include: 3.1 Minor Highway Design
- Minor work groups include: 7.1 Signing, Pavement Marking, & Channelization, 7.2 Lighting; 7.3 Signalization
- 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 may be expected to attend a Public Information Meeting.
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 (11 sheets)
Typical Section:	3 Typical Sections
Pavement Design:	2 Pavement Design (flexible and rigid)
Rigid Pavement:	Rigid Pavement Rehabilitation
Pavement Type Selection Report(s):	N/A
Cross Slope:	N/A
Access Management Classification:	Class 7
Transit Route Features:	Miami-Dade Metrobus Routes 3, 16, 54, and 93
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:	Variations
	<ul style="list-style-type: none"><li>• Design Variation for Triangular and Refuge Islands</li><li>• Design Variation for Curve Length</li><li>• Design Variation for Vertical Curve Longitudinal Grade</li><li>• Design Variation for Deceleration Length/Storage Length</li><li>• Design Variation for Lateral Offset</li><li>• Design Variation for Clear Sight Triangle</li></ul>
Back of Sidewalk Profile:	N/A

## 2.2 Drainage (Activity 6)

The existing drainage pattern is recommended to remain. The Designer is responsible for determining if any outstanding drainage maintenance issues or concerns should be addressed by this project. Clean out curb inlets.

## 2.3 Utilities Coordination (Activity 7)

The project utility coordination is to be completed by the District D6 Utilities Office and the Project Utility Coordinator consultant; utility coordination tasks include processing of any JPA, Utility Work Schedules (UWS), and Utility Clear Letters. Sixteen (16) Utility Agencies/Owners (UAOs) are identified within the project limits. No significant utility impacts are anticipated for this RRR Project. Existing water valves and manholes within the limits of milling and resurfacing should be adjusted. 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)

No significant environmental impacts are anticipated for this RRR Project. The Designer is responsible for preparing the Permit Involvement Form (PIF).

## 2.5 Structures (Activities 9 – 18) N/A

## 2.6 Signing and Pavement Markings (Activities 19 & 20)

Signing and Pavement Marking Plans are required. Signing improvements include the upgrade of all sub-standard ground-mounted signs to meet the 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.

Per District 6 Traffic Operations Office, replace/upgrade the existing guide sign for I-595 West, located southbound near Sta. 117+75. Refer to Section 3.2 Signing and Pavement Markings for a list of improvements.

## 2.7 Signalization (Activities 21 & 22)

The project requires installation/upgrade of pedestrian control signals, pedestrian detector assemblies/pedestrian detector signs, installation of backplates (If retroreflective backplates cannot be installed without replacing the signal heads, then the recommendation can be omitted), replacement of signal loop detectors and inductive, overhead metered electrical power service.

## 2.8 Lighting (Activities 23 & 24)

The existing lighting system within the project limits shall remain. Existing lighting pull boxes can be impacted by sidewalk reconstruction. Review the condition of the lighting equipment for replacement (damaged/condition of load center, damaged light poles, missing due to vehicle knockdown, overhead light poles power conductors). Lighting field review and inspection was performed within the project limits and no issue was identified. Refer to the Lighting Section 2.1.27. The designer is responsible for evaluating lighting needs and repairs within the project limits.

## 2.9 Landscape Architecture (Activities 25 & 26)

Based on our field observation, landscaping is present throughout the corridor, especially on the median. Vegetation within sight triangles was observed at several locations. The designer is responsible for evaluating landscaping needs and repairs within the project limits.

## 2.10 Survey (Activity 27) N/A

The survey is to be provided by the District, including right of way, baseline, topography, digital terrain model, drainage survey, and vertical clearance at overhead utility wires and mast arms. Additional special purpose survey could be required for sub-surface utility exploration. The Designer is responsible for including the Project Network Control sheets in the Roadway Plans component set.

## 2.10 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 investigation to be provided by the District.

2.18 3D Modeling (Activity 36) N/A

Project Schedule (as of March 2023)

- Preliminary Engineering 03/10/2023
- Notice to Proceed 10/24/2023
- Begin Roadway Plans 10/24/2023
- Project Kick-Off Meeting 11/27/2023
- Production Date 06/23/2025
- Transmit PS&E Package 09/15/2025
- Letting Date 12/03/2025

Submittal Schedule (as of March 2023)

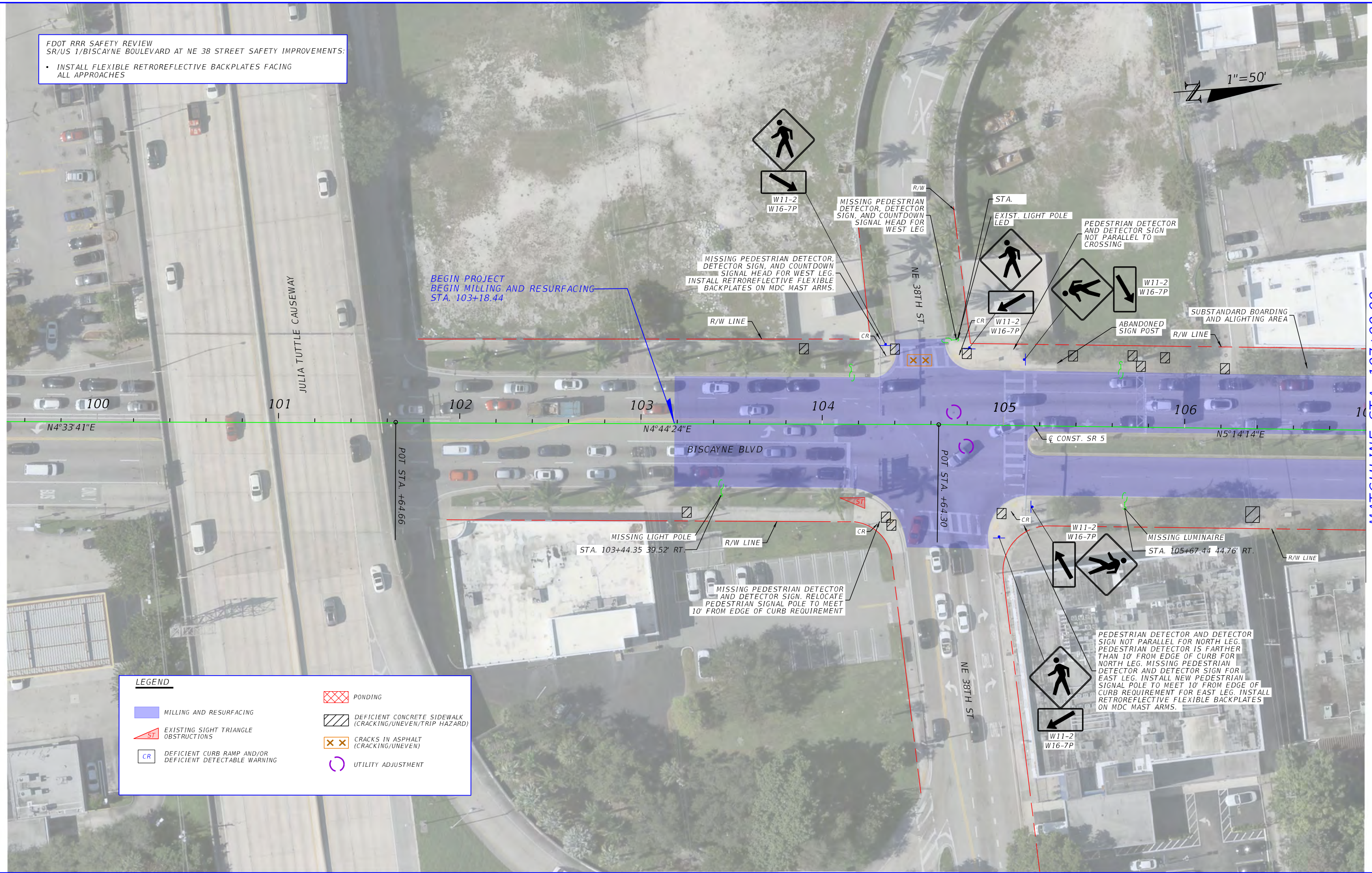
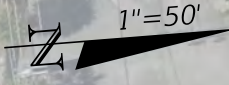
- Design Documents Submittal 04/12/2024
- 60% Plans Submittal 04/22/2024
- 90% Plans Submittal 09/17/2024
- 100% Plans Submittal 01/17/2025
- Plans Completed 03/19/2025
- PS&E Submittal 08/18/2025

**3.12 Concept Plans**

Concept Plan Exhibits are attached in Exhibit 1 to summarize the deficiencies and improvement recommendations.



FDOT RRR SAFETY REVIEW  
 SR/US 1/BISCAYNE BOULEVARD AT NE 38 STREET SAFETY IMPROVEMENTS:  
 • INSTALL FLEXIBLE RETROREFLECTIVE BACKPLATES FACING ALL APPROACHES

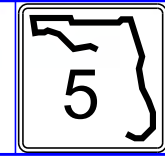


**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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 1000 NW 111TH AVENUE  
 MIAMI, FLORIDA 33172



SCOPING REPORT  
 SR 5/ US-1/ BISCAYNE BOULEVARD  
 FROM S OF NE 38TH ST TO NE 61ST ST  
 (ROADWAY ID 87030000, MP 13.588 TO MP 15.048)

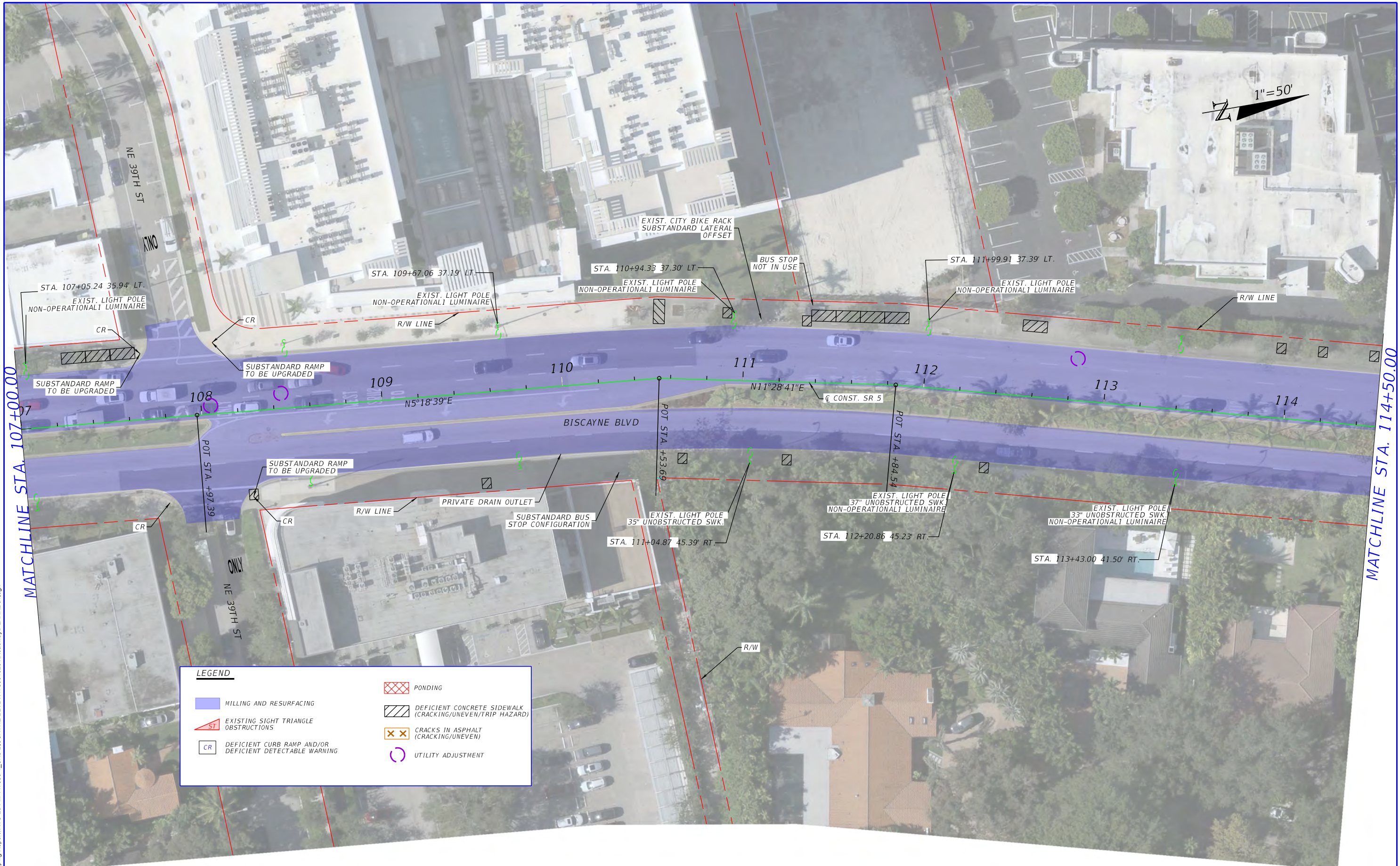
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES AND RECOMMENDATIONS**

SHEET NO.  
 1

MATCHLINE STA. 107+00.00





**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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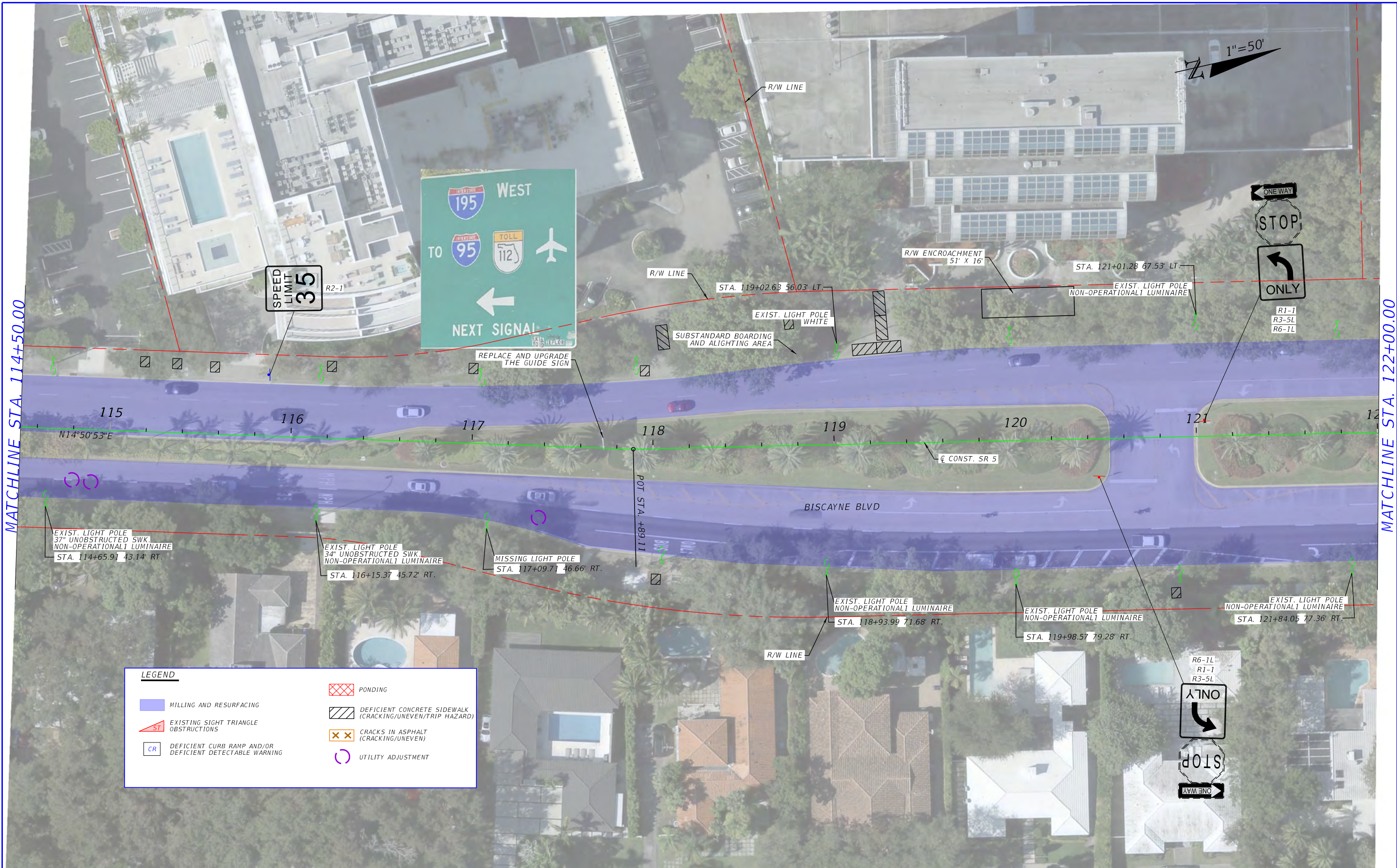
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

SHEET NO.
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**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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SCOPING REPORT  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
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**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

SHEET NO.  
3

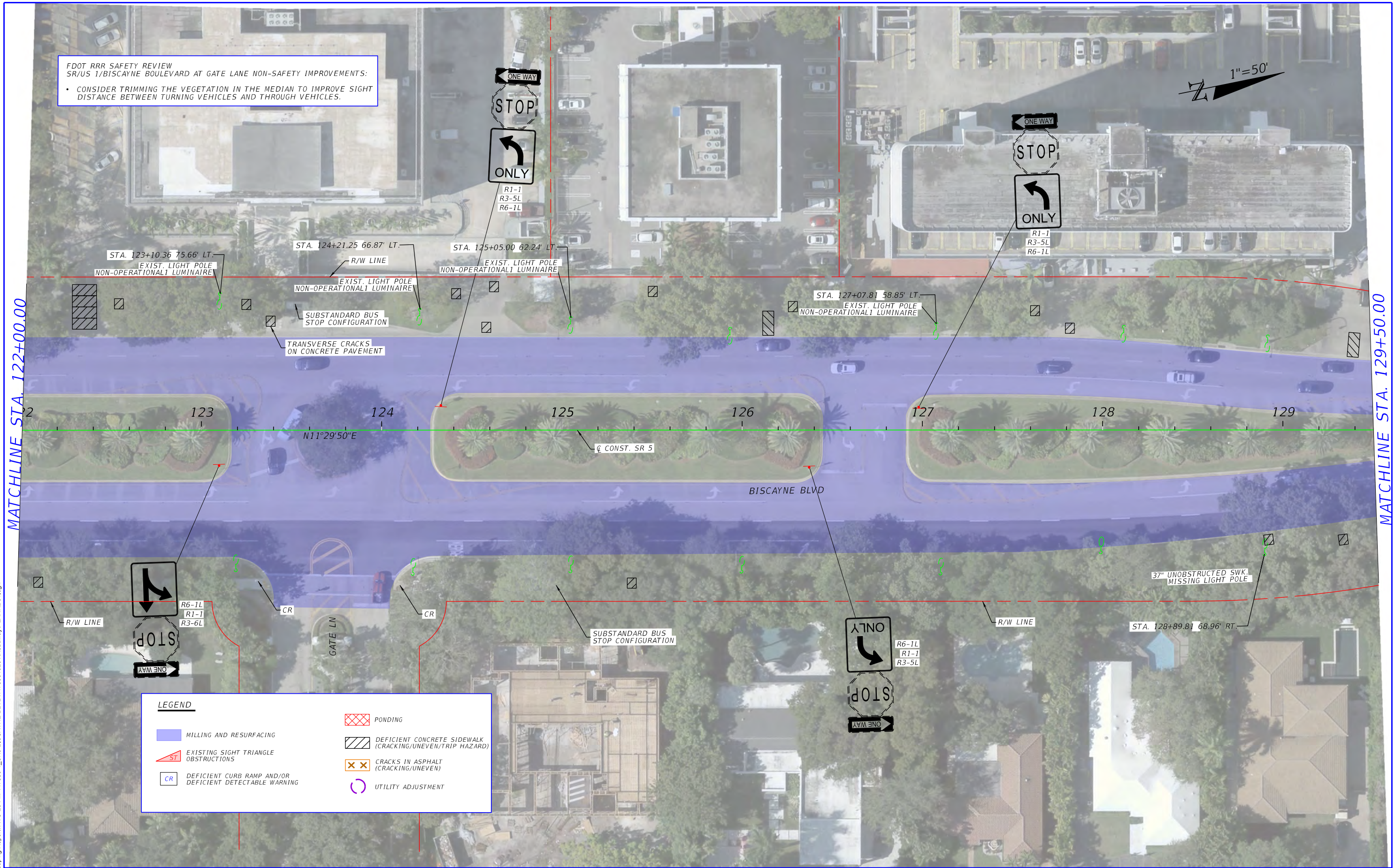


FDOT RRR SAFETY REVIEW  
 SR/US 1/BISCAYNE BOULEVARD AT GATE LANE NON-SAFETY IMPROVEMENTS:  
 • CONSIDER TRIMMING THE VEGETATION IN THE MEDIAN TO IMPROVE SIGHT DISTANCE BETWEEN TURNING VEHICLES AND THROUGH VEHICLES.

1"=50'

MATCHLINE STA. 122+00.00

MATCHLINE STA. 129+50.00

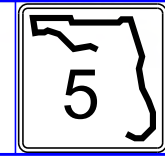


**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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SCOPING REPORT  
 SR 5/ US-1/ BISCAYNE BOULEVARD  
 FROM S OF NE 38TH ST TO NE 61ST ST  
 (ROADWAY ID 87030000, MP 13.588 TO MP 15.048)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

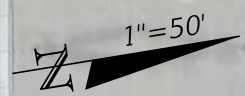
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AND RECOMMENDATIONS**

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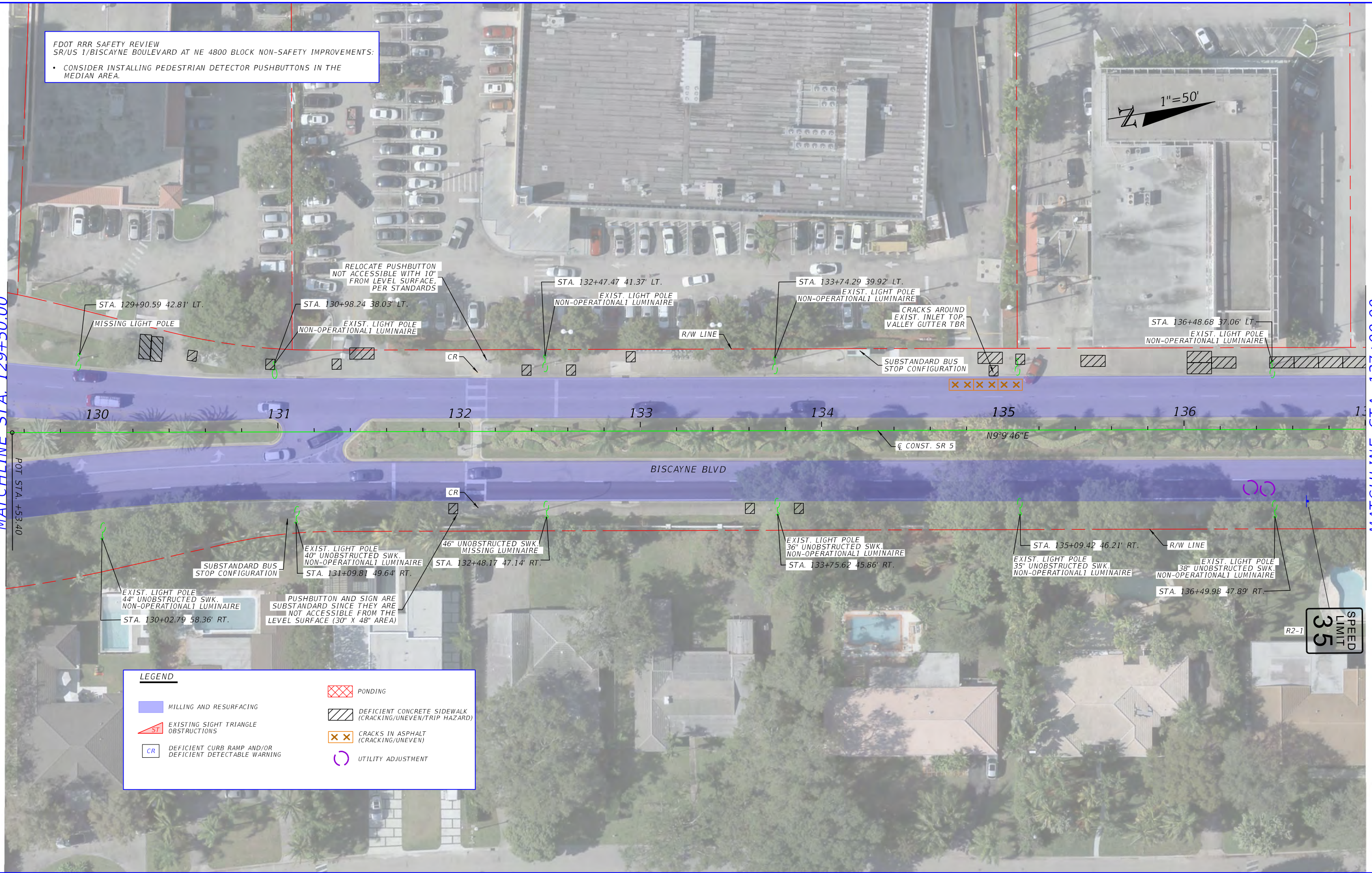
**FDOT RRR SAFETY REVIEW**  
 SR/US 1/BISCAYNE BOULEVARD AT NE 4800 BLOCK NON-SAFETY IMPROVEMENTS:

- CONSIDER INSTALLING PEDESTRIAN DETECTOR PUSHBUTTONS IN THE MEDIAN AREA.



MATCHLINE STA. 129+50.00

MATCHLINE STA. 137+00.00

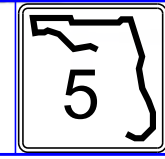


**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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SCOPING REPORT  
 SR 5/ US-1/ BISCAYNE BOULEVARD  
 FROM S OF NE 38TH ST TO NE 61ST ST  
 (ROADWAY ID 87030000, MP 13.588 TO MP 15.048)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

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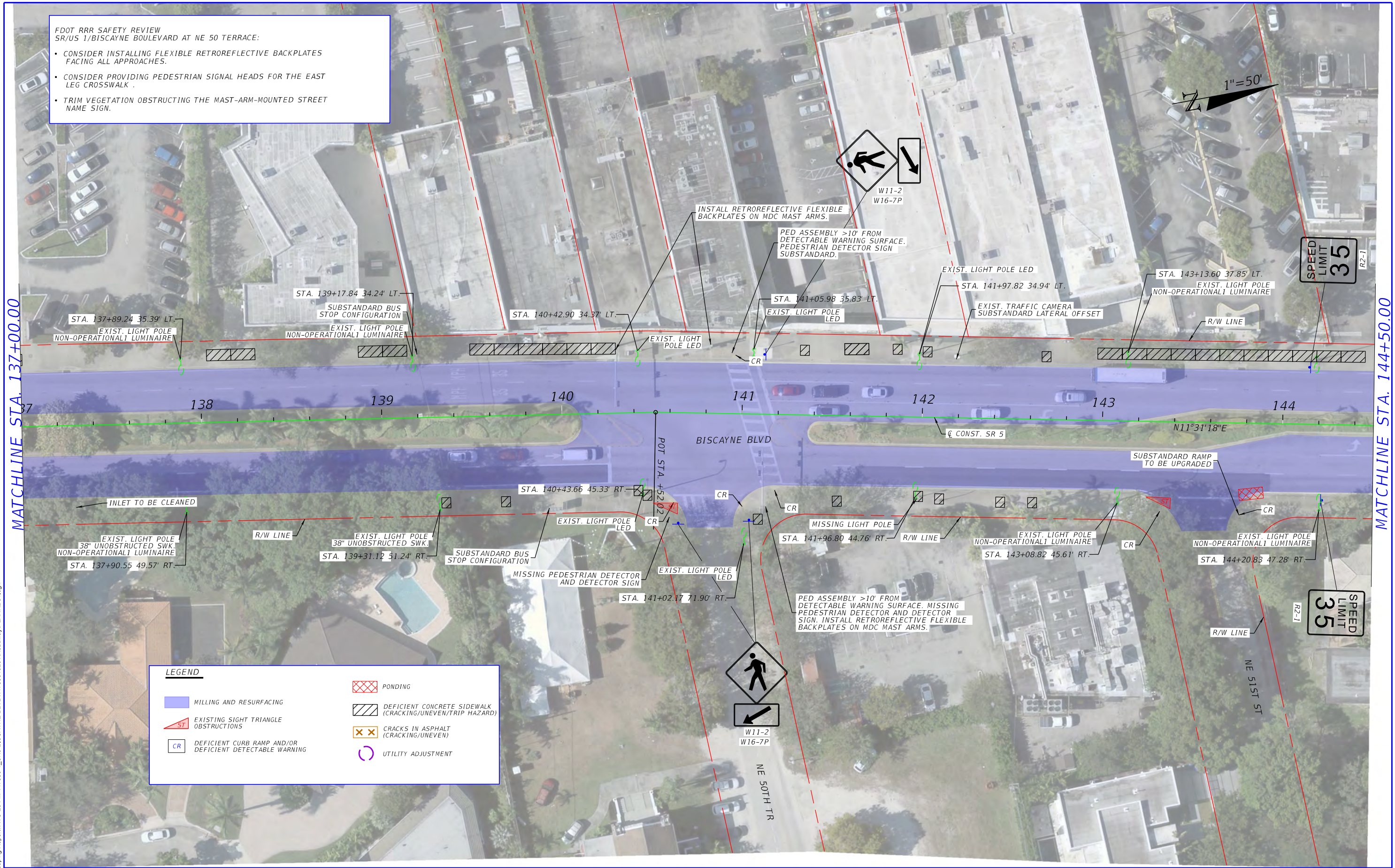
**FDOT RRR SAFETY REVIEW**  
 SR/US 1/BISCAYNE BOULEVARD AT NE 50 TERRACE:

- CONSIDER INSTALLING FLEXIBLE RETROREFLECTIVE BACKPLATES FACING ALL APPROACHES.
- CONSIDER PROVIDING PEDESTRIAN SIGNAL HEADS FOR THE EAST LEG CROSSWALK.
- TRIM VEGETATION OBSTRUCTING THE MAST-ARM-MOUNTED STREET NAME SIGN.

1"=50'

MATCHLINE STA. 137+00.00

MATCHLINE STA. 144+50.00

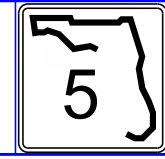


**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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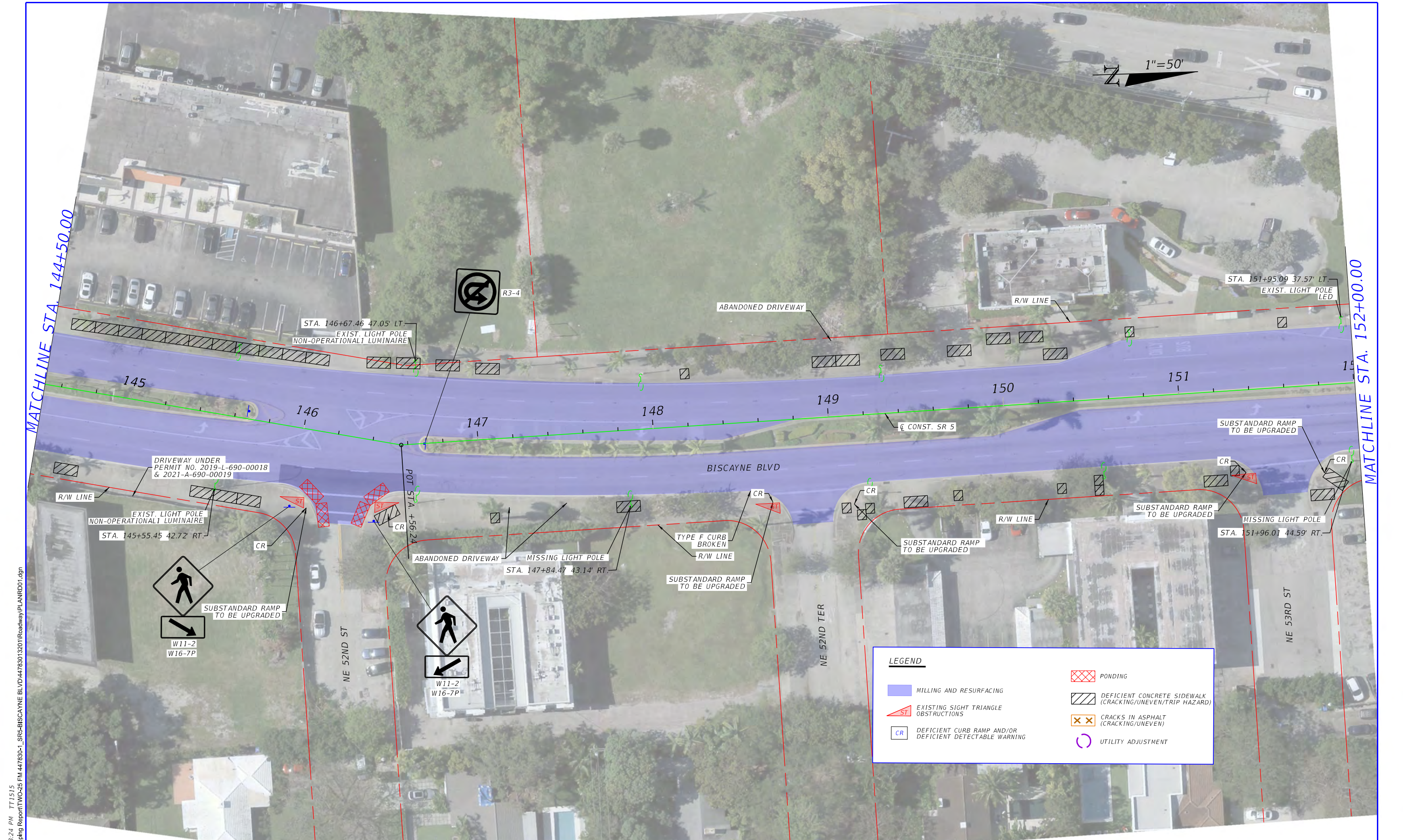
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 FROM S OF NE 38TH ST TO NE 61ST ST  
 (ROADWAY ID 87030000, MP 13.588 TO MP 15.048)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

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6

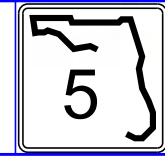




LEGEND	
	MILLING AND RESURFACING
	EXISTING SIGHT TRIANGLE OBSTRUCTIONS
	DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING
	PONDING
	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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SCOPING REPORT  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
 AND RECOMMENDATIONS**

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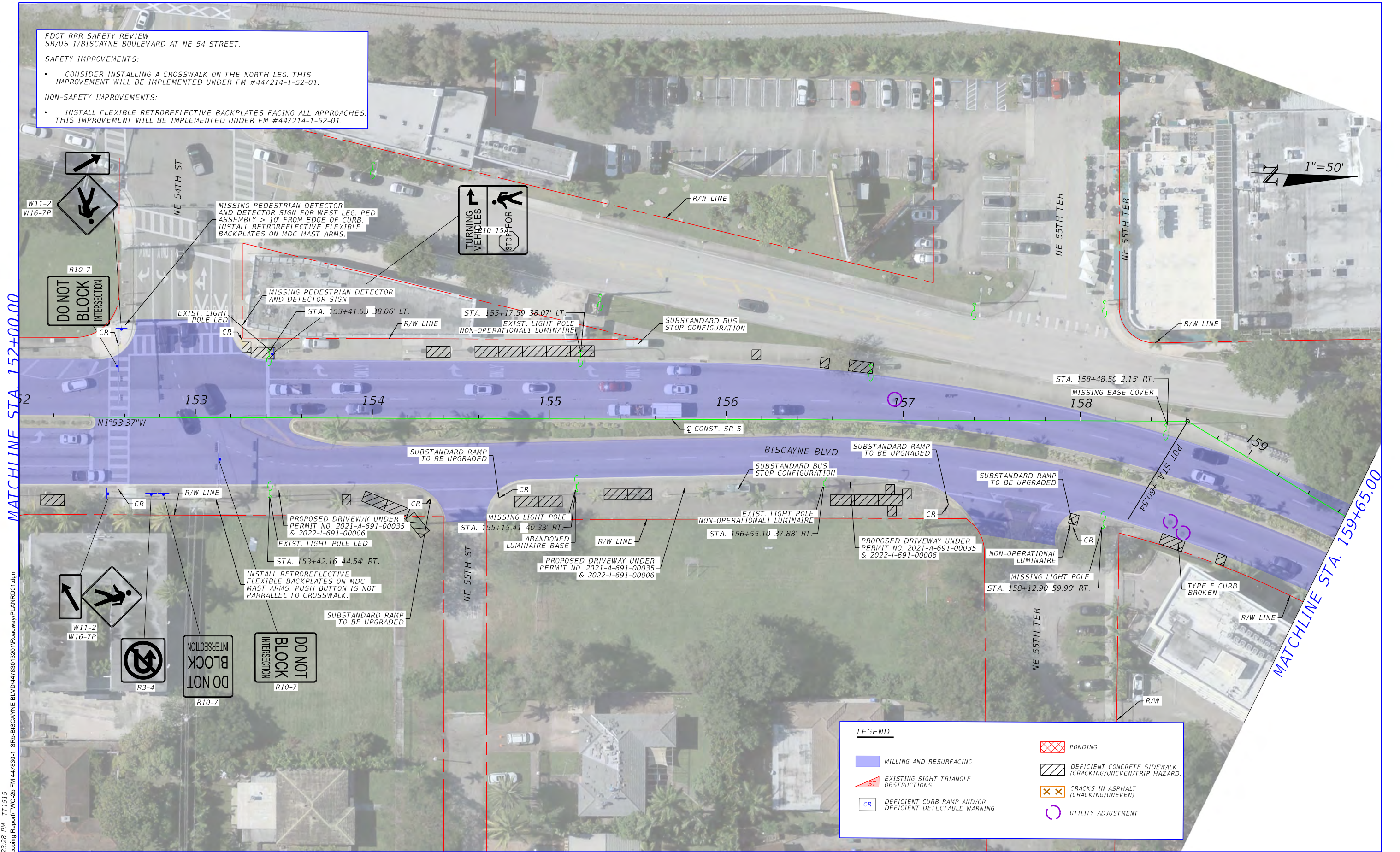
**FDOT RRR SAFETY REVIEW**  
 SR/US 1/BISCAYNE BOULEVARD AT NE 54 STREET.

**SAFETY IMPROVEMENTS:**

- CONSIDER INSTALLING A CROSSWALK ON THE NORTH LEG. THIS IMPROVEMENT WILL BE IMPLEMENTED UNDER FM #447214-1-52-01.

**NON-SAFETY IMPROVEMENTS:**

- INSTALL FLEXIBLE RETROREFLECTIVE BACKPLATES FACING ALL APPROACHES. THIS IMPROVEMENT WILL BE IMPLEMENTED UNDER FM #447214-1-52-01.



1"=50'

MATCHLINE STA. 152+00.00

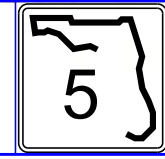
MATCHLINE STA. 159+65.00

**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

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SCOPING REPORT  
 SR 5/ US-1/ BISCAYNE BOULEVARD  
 FROM S OF NE 38TH ST TO NE 61ST ST  
 (ROADWAY ID 87030000, MP 13.588 TO MP 15.048)

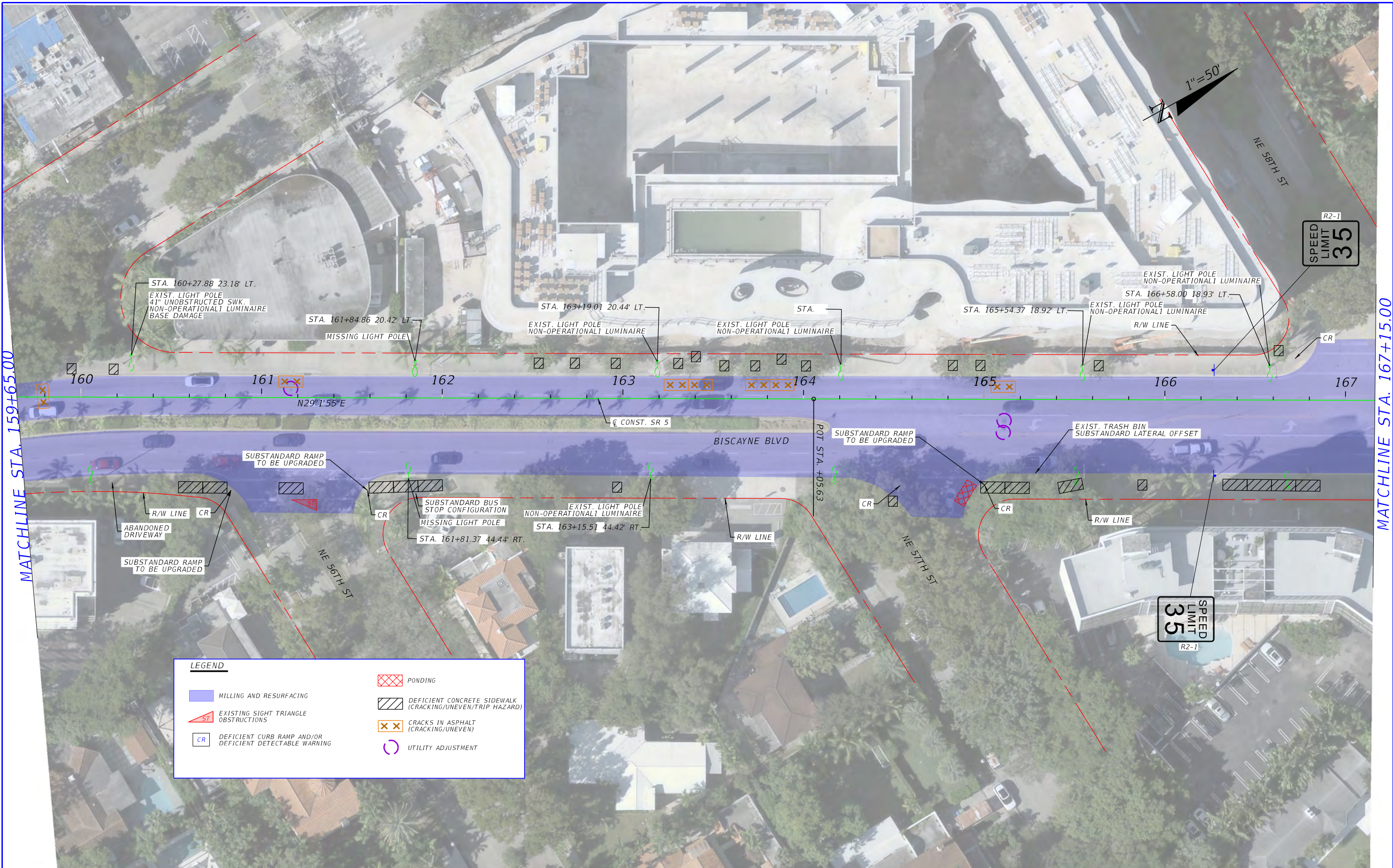
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

SHEET NO.  
8



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**LEGEND**

MILLING AND RESURFACING	PONDING
EXISTING SIGHT TRIANGLE OBSTRUCTIONS	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT

MATCHLINE STA. 159+65.00

MATCHLINE STA. 167+15.00

**FDOT**  
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SCOPING REPORT  
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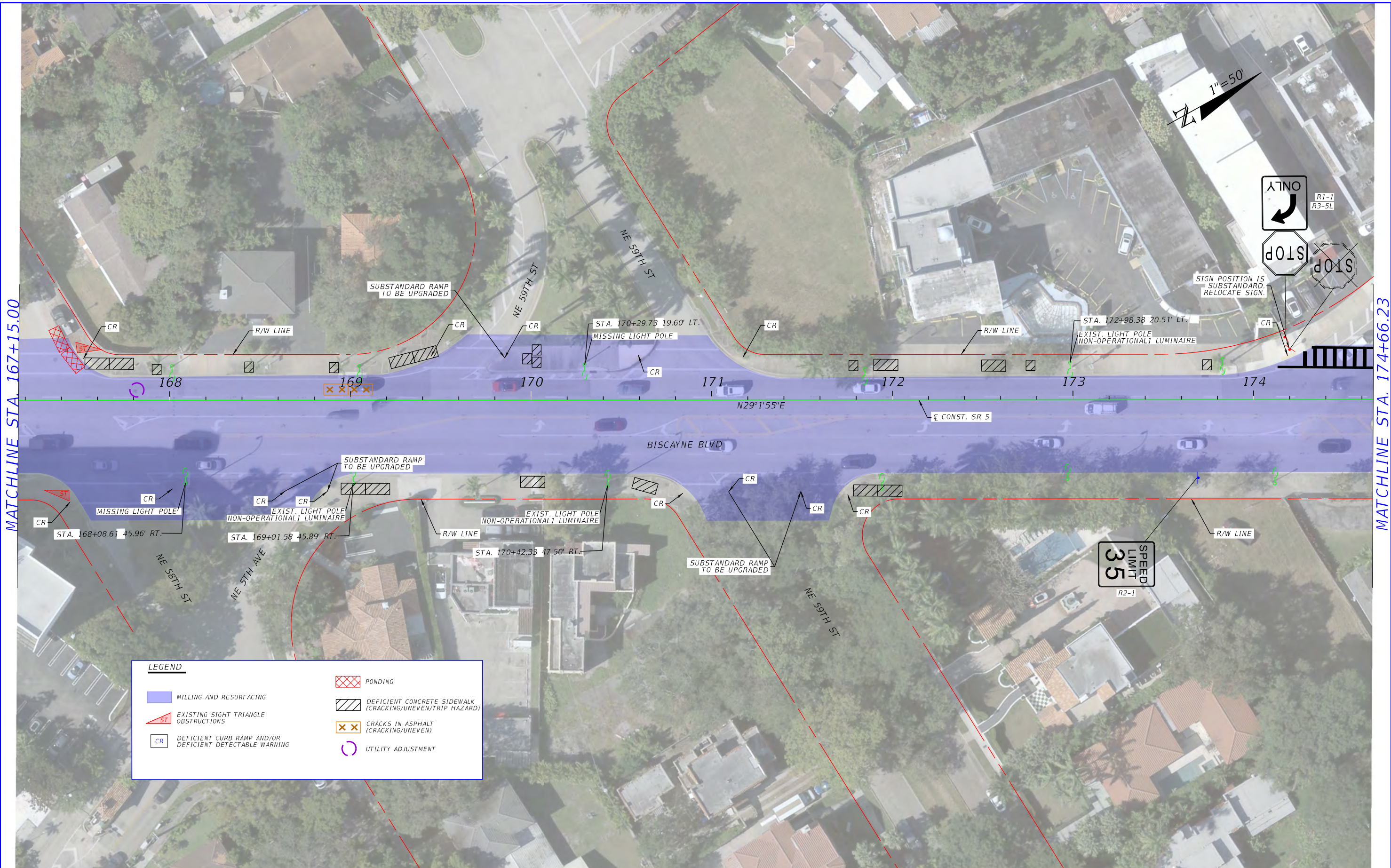
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

SHEET NO.  
9



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LEGEND	
	MILLING AND RESURFACING
	EXISTING SIGHT TRIANGLE OBSTRUCTIONS
	DEFICIENT CURB RAMP AND/OR DEFICIENT DETECTABLE WARNING
	PONDING
	DEFICIENT CONCRETE SIDEWALK (CRACKING/UNEVEN/TRIP HAZARD)
	CRACKS IN ASPHALT (CRACKING/UNEVEN)
	UTILITY ADJUSTMENT



FDOT DISTRICT 6  
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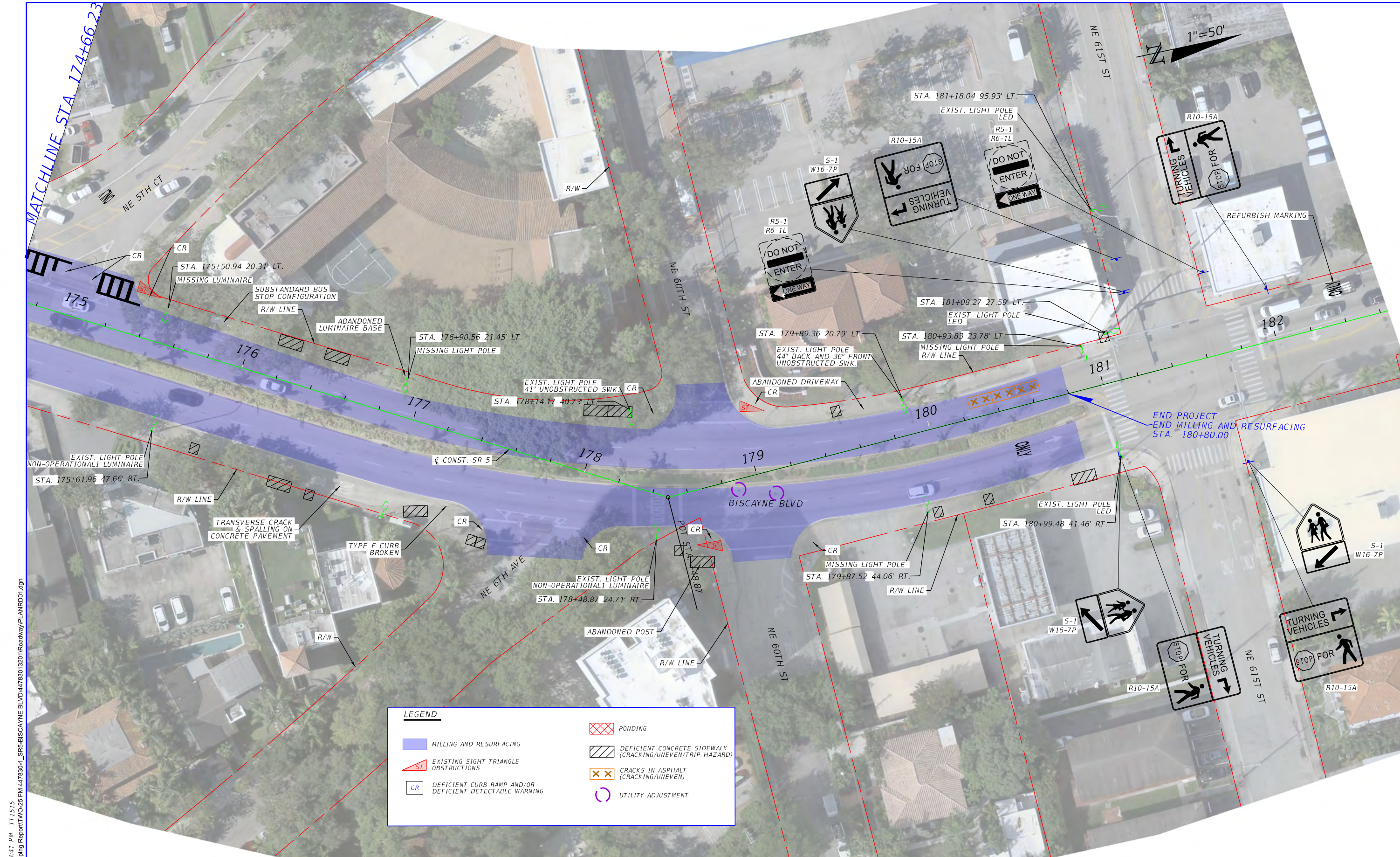
SCOPING REPORT  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**

SHEET NO.  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 5	MIAMI-DADE	447830-1-32-01

**EXHIBIT 1 DEFICIENCIES  
AND RECOMMENDATIONS**



## LIST OF APPENDICES

- A. FDOT Final Safety Review Report
  
- B. Corridor Files
  - B-1. Straight Line Diagram
  - B-2. Utility Owners List
  
- C. Right of Way Maps
  
- D. Pavement Design Documents
  - D-1. Pavement Evaluation Condition Forecast Plan 2022-2027
  - D-2. Resilient Modulus Recommendation
  - D-3. 18-kip ESAL Calculations
  - D-4. Ground Penetrating Radar (GPR) Survey
  - D-5. Target Speed Study
  
- E. Plans from Previous and Programmed Projects
  - E-1. FPID 250224-1-52-01 (FY 2005, completed 2008)
  - E-2. FPID 433059-2-52-01 (FY 2017)
  - E-3. FPID 445996-1-52-01 (FY 2024)
  - E-4. FPID 447214-1-52-01 (FY 2024)
  
- F. Environmental Resources Desktop Analysis (ERDA)
  
- G. Preliminary Cost Estimate
  
- H. Lighting Existing Conditions
  
- I. Inventory of Existing Pedestrian Ramps
  
- J. Correspondence
  
- K. Maintenance Issues