



# South Dade Trail Corridor Connections Feasibility Study



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Prepared for:



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## Acronyms

<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>ATF</b>	Across-the-Fence
<b>CF</b>	Corridor Factor
<b>CITT</b>	Citizens' Independent Transportation Trust
<b>DTPW</b>	Department of Transportation and Public Works
<b>FDEP</b>	Florida Department of Environmental Protection
<b>FDM</b>	Florida Design Manual
<b>FDOT</b>	Florida Department of Transportation
<b>FGTS</b>	Florida Greenways and Trails System
<b>FHWA</b>	Federal Highway Association
<b>FMLM</b>	First Mile Last Mile
<b>FPL</b>	Florida Power & Light
<b>FRA</b>	Federal Rail Association
<b>LPI</b>	Leading Pedestrian Interval
<b>L RTP</b>	Long Range Transportation Plan
<b>MDC</b>	Miami-Dade Count
<b>MIA</b>	Miami International Airport
<b>MIC</b>	Miami Intermodal Center
<b>NACTO</b>	National Association of Transportation Officials
<b>NHTSA</b>	National Highway Traffic Safety Administration
<b>OGT</b>	Office of Greenways and Trails
<b>PROS</b>	Parks, Recreation, and Open Space
<b>PWG</b>	Project Working Group
<b>ROW</b>	Right-of-Way
<b>RTC</b>	Rails-to-Trails Conservancy
<b>SDT</b>	South Dade Transitway
<b>SFWMD</b>	South Florida Water Management District
<b>SMART</b>	Strategic Miami Area Rapid Transit Program
<b>SUN</b>	Shared Use Network
<b>TAP</b>	Transit Alternatives Program
<b>TIP</b>	Transportation Improvement Plan
<b>TOD</b>	Transit-Oriented Development
<b>TPO</b>	Transportation Planning Organization



# Section 1.0 | Introduction

## 1.0 Introduction

The integration of bicycle and pedestrian trails within Miami-Dade County provides opportunities to not only enhance transportation options, but to create a healthier and more sustainable community.

The South Dade Trails Corridor Connections Feasibility Study ('Study') focuses on the interconnectivity of bicycle and pedestrian trails within the South Dade Transportation Planning Area of Miami-Dade County to establish pathways that seamlessly intertwine with the vibrant fabric of the region.

Utilizing strategic planning methodologies, the Study assesses the viability, benefits, and challenges of future trail connections throughout the existing and planned bicycle and pedestrian network within South Dade. The results of the Study establish a foundation for an interconnected network that encourages active lifestyles, promotes equity, broadens transportation options, and enriches the quality of life for residents and visitors alike.

### 1.1 Study Purpose

The purpose of this study is to conduct a feasibility analysis on potential bicycle/pedestrian trail corridor connections in the South Dade area of Miami-Dade County.

### 1.2 Study Background

At the Miami-Dade Transportation Planning Organization (TPO) Governing Board meeting of October 4, 2022, the Board requested the TPO Executive Director, through Resolution #38-2022, to prepare a scope of services and budget to conduct a feasibility study on trail corridor connections in South Dade.

### 1.3 Study Area

The study area is concentrated on trails within the Florida Greenways and Trails System (FGTS)<sup>1</sup> inside the South Dade Transportation Planning Area, which encompasses 233 square miles and is home to an estimated 450,000 residents. The study area includes the following municipalities: Florida City, Homestead, Cutler Bay, Palmetto Bay, Pinecrest, and Coral Gables. A map series is provided at the end of **Section 1.0. Figure 1-1** displays the South Dade FGTS trails with municipal boundaries.



<sup>1</sup> The Office of Greenways and Trails (OGT) within the Florida Department of Environmental Protection (FDEP) maintains the Florida Greenways and Trails System (FGTS), which is a statewide interconnected trail system.

### 1.4 Study Trails

In the South Dade area, there are seven (7) greenway trails, all of which are in various phases of development between the proposed, programmed, and existing stages. The trails are listed below and are currently classified within the FGTS as either Land Trail Priorities<sup>2</sup> or Land Trail Opportunities<sup>3</sup>. The CSX trail is listed twice below as portions of the trail are classified in either category.

Land Trail Priorities	<ul style="list-style-type: none"> <li>• Biscayne-Everglades Greenway</li> <li>• Krome Path</li> <li>• South Dade Trail</li> <li>• Portions of the CSX Trail</li> </ul>
Land Trail Opportunities	<ul style="list-style-type: none"> <li>• Black Creek Trail</li> <li>• Mowry Trail</li> <li>• Princeton Trail</li> <li>• Portions of the CSX Trail</li> </ul>

The study trails are displayed in **Figure 1-2**. The study trails are displayed by development status in **Figure 1-3**.

### 1.5 Study Coordination

Input throughout the study process was received through key stakeholders including CSX, the City of Homestead, the Florida Department of Transportation (FDOT), Miami-Dade County, the Miami-Dade TPO, and the Rails-to-Trails Conservancy. A project working group (PWG) was formed at the beginning of the study comprised of representatives from the stakeholders listed above. Three PWG meetings were held throughout the study process on the dates listed below. The minutes for each of the PWG meetings are included in **Appendix A**. In addition to PWG meetings, the study team coordinated with stakeholders as needed throughout the study process.

- **PWG Meeting 1:** January 18, 2023
- **PWG Meeting 2:** April 3, 2023
- **PWG Meeting 3:** October 28, 2024

### 1.6 Document Organization

The document is organized into the following sections:

- **1.0 Introduction:** Provides an overview of the study including relevant background information.
- **2.0 Data Collection and Literature Review:** Summarizes and presents the findings of the data collection and literature review element of the study.
- **3.0 Corridor Evaluation:** Evaluates the trail corridors to identify key trail connections.
- **4.0 Recommendations:** Presents the recommended enhancements for key trail connections.

<sup>2</sup> *Land Trail Priorities* are defined as the most important corridors and connections within the FGTS. The Land Trail Priority classification is a prerequisite for a project to be considered for state funds such as FDOT’s Shared-Use Nonmotorized (SUN) Trail Program.

<sup>3</sup> *Land Trail Opportunities* are defined as corridors which represent existing, planned, and conceptual non-motorized multi-use trails.

Figure 1-1 Study Trails

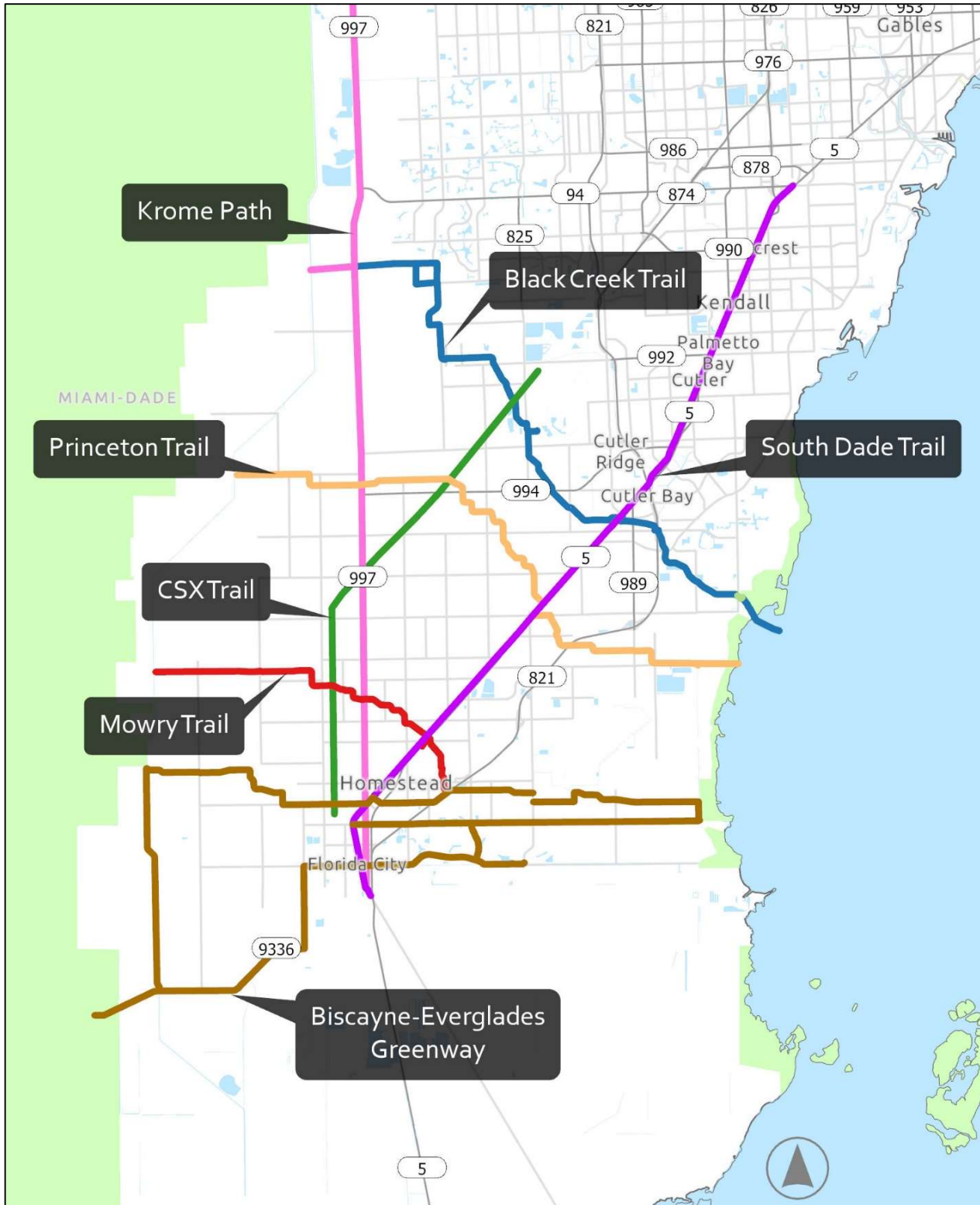


Figure 1-2 Study Trail Status

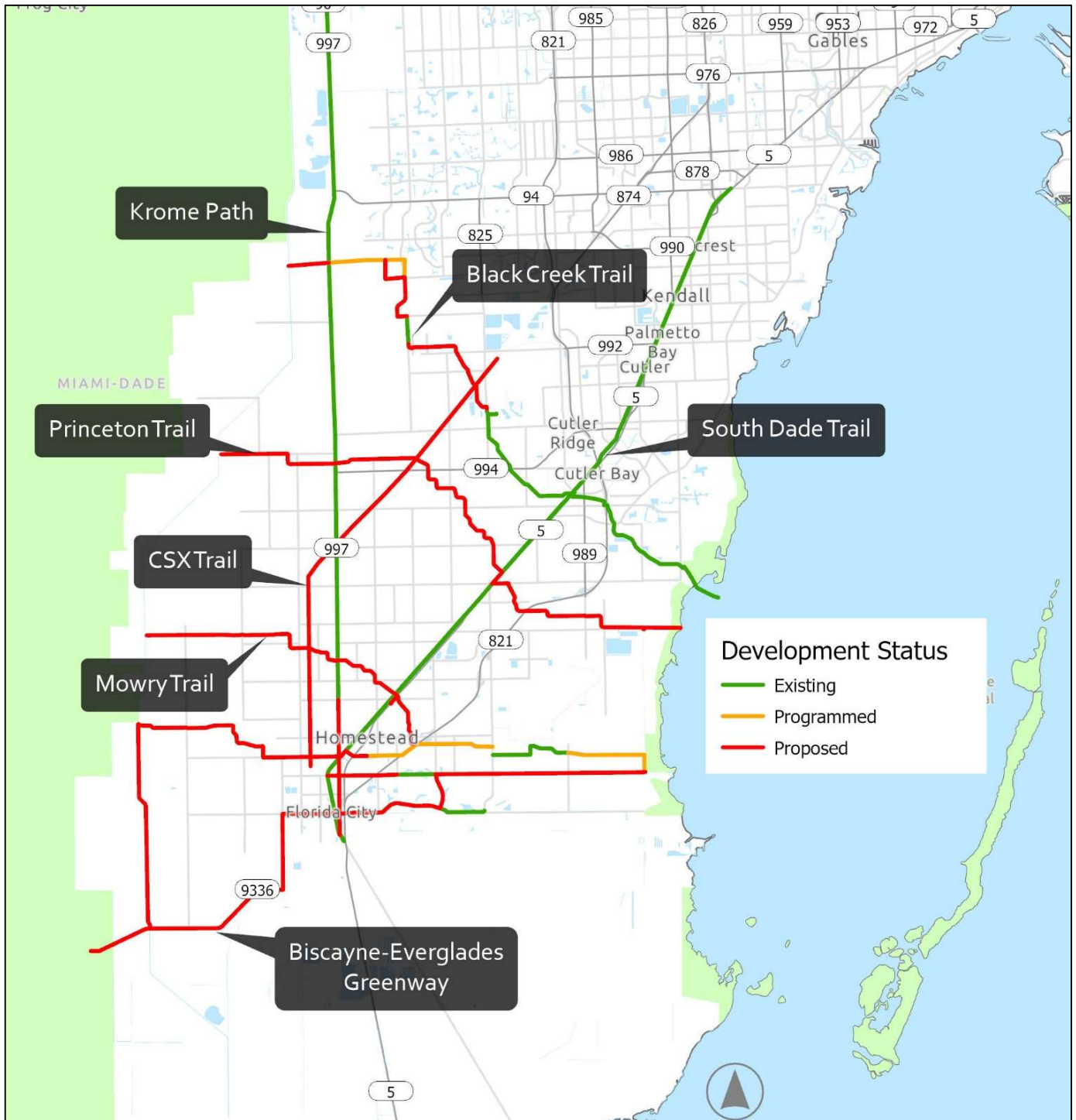
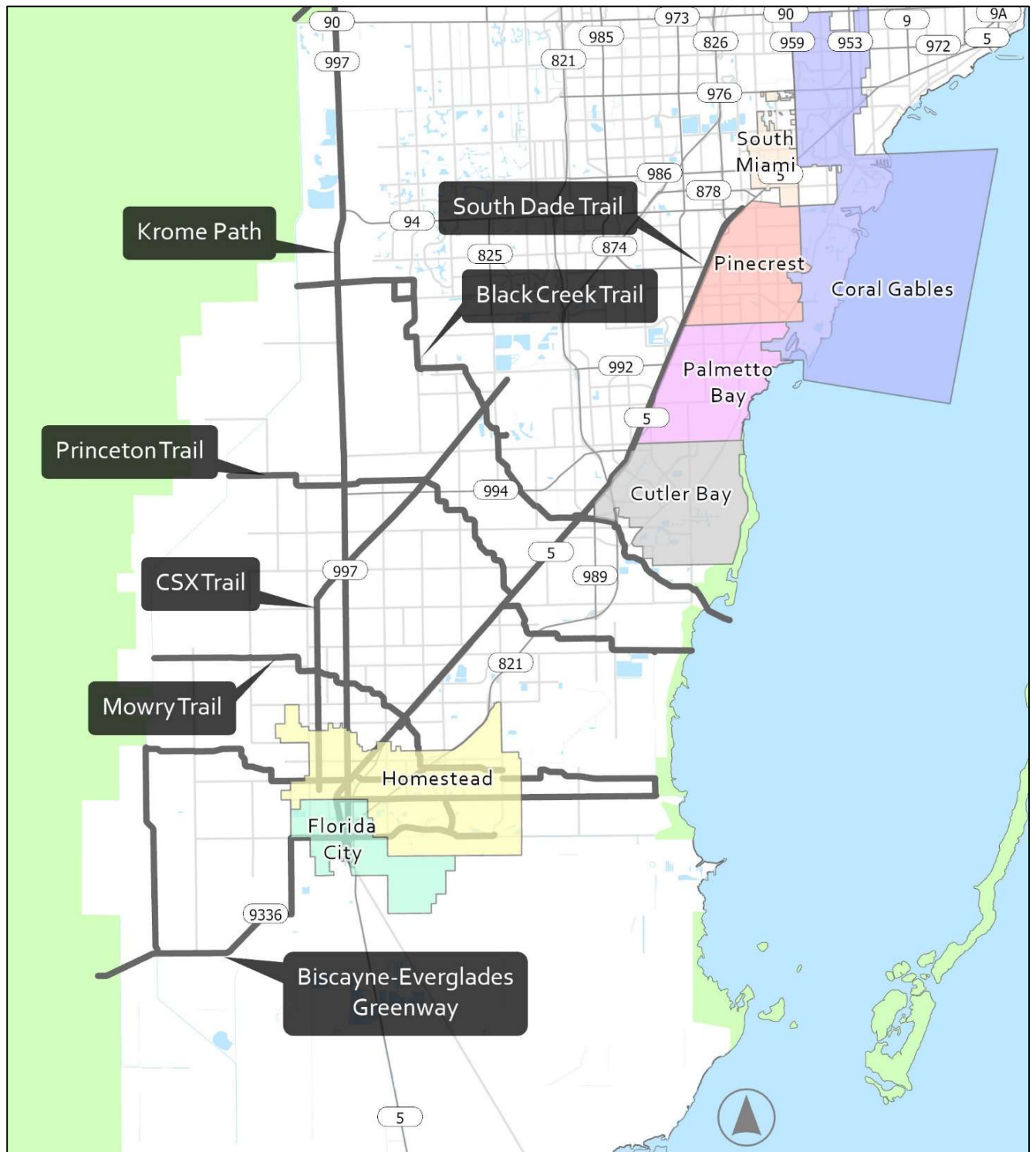




Figure 1-3 Study Trails with Municipal Boundaries





## Section 2.0 | Data Collection and Literature Review

## 2.0 Data Collection and Literature Review

The first step in the study process was to gather and review relevant data to be used during the study. This included compiling a library of GIS shapefiles and datasets relevant to trails development within the project area and reviewing recent planning documents and local programs. The results of the data collection and literature review are summarized in this section.

### 2.1 Data Collection

Data collected was utilized as background and supportive data throughout the study. Data sources include: Miami-Dade County Open Data Hub, Miami-Dade County Parks, Recreation, and Open Space (PROS) Department; Florida Department of Environmental Protection (FDEP), and interactive web applications.

#### Miami-Dade County Open Data Hub

The Miami-Dade County Open Data Hub served as a key source of data for this project. Several base datasets were retrieved for the project including:

- Bike Facilities
- Bike Comfort
- Bike Lane
- Bike Routes
- Bus Stop
- County Park Boundaries
- Zoning
- Land Use
- Metrorail Station
- Paved Path
- SMART Corridors
- Traffic Signals
- Municipalities
- National and State Park or Preserve

#### Other Data Sources

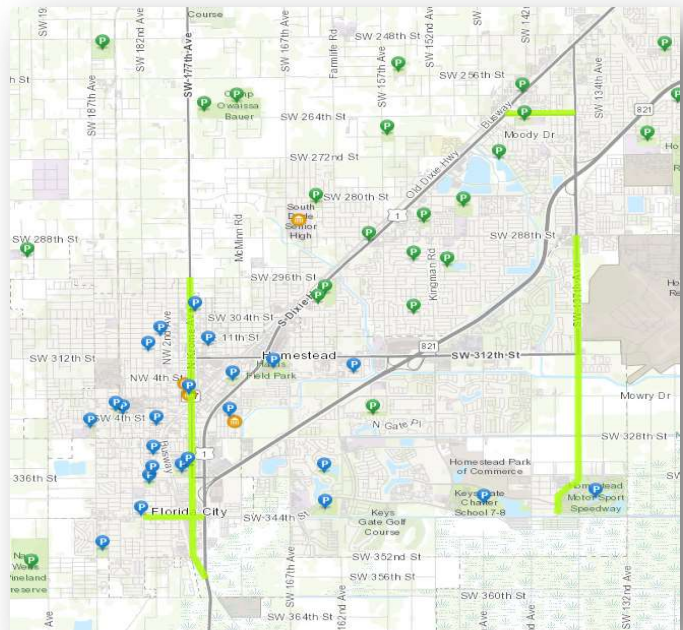
Additional datasets retrieved from other sources include:

- Greenway Development Status and Miami Loop from Miami-Dade County PROS
- Land Trail Priorities and Land Trail Opportunities from the FDEP

#### Interactive Web Applications

Furthermore, interactive web applications were used as reference including:

- [Park and Culture Webapp](#) and [Bike305](#) from Miami-Dade County
- FDOT D6 Bicycle Network interactive map ([BPTool](#))
- FDOT [ConnectPed Public](#)



Screen capture from the Park and Culture Webapp

## 2.2 Literature Review

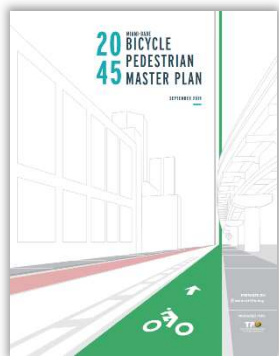
A literature review was conducted of previous TPO bicycle and pedestrian studies along with current state and local programs. Information gathered from these sources will be used to identify future programming of the seven identified trails. The documents reviewed are listed below in **Table 2-1**. The table also indicates which of the seven identified trails is mentioned in the document. One-page summary sheets are provided for each document on the following pages.

**Table 2-1 Literature Review Matrix**

Plan Title	Year	Biscayne-Everglades	Krome	South Dade	CSX	Black Creek	Mowry	Princeton
<b>TPO Documents and Studies</b>								
<b>2045 Bike/Ped Master Plan</b>	2019	X	X			X		
<b>2045 Long Range Transportation Plan</b>	2019	X	X	X	X	X		X
<b>Bicycle and Pedestrian Data Collection Report</b>	2018							
<b>CSX Southwest Railroad Corridor Assessment</b>	2023			X	X			
<b>Miami-Dade County Vision Zero Plan</b>	2018							
<b>Public Easement Bicycle/ Pedestrian Network Plan</b>	2018		X		X			
<b>SMART Trails Master Plan</b>	2019			X				X
<b>SW 127th Avenue Connector Study</b>	2017				X			
<b>SW 152nd Street Mobility</b>	2017					X		
<b>TIP (2023-2027)</b>	2022	X	X	X		X		
<b>Current Programs</b>								
<b>Bike Friendly Miami-Dade</b>	2017							
<b>DTPW First Mile/Last Mile</b>	2022			X		X		X
<b>DTPW Vision Zero Implementation</b>	2022							
<b>FDEP OGT</b>	2018	X	X	X	X	X	X	X
<b>FDM - Other Facilities Chapters 222-224</b>	2022							
<b>FDOT Non-Motorized Traffic Monitoring Program</b>	2018							
<b>FDOT SUN-Trail Program</b>	2022	X	X	X				
<b>Other Documents</b>								
<b>CSX Public Projects Manual</b>	2022							
<b>FDOT D6 Bike Network Assessment</b>	2022	X	X	X		X		
<b>Homestead Parks Master Plan</b>	2023	X			X			
<b>PROS Greenways and Trails Prioritization Plan</b>	2007	X						

## TPO Docs and Studies

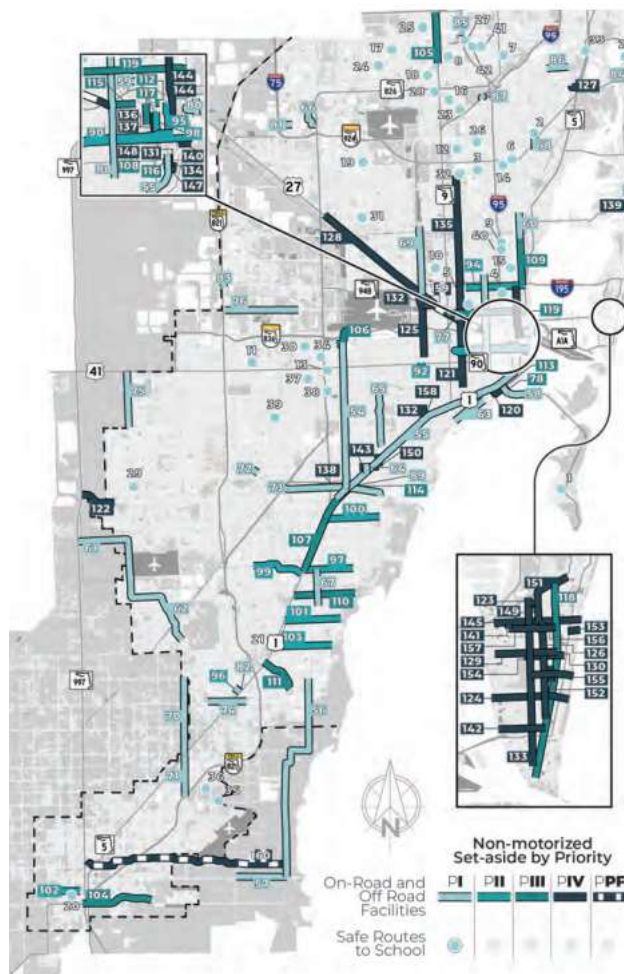
### 2045 Bicycle and Pedestrian Master Plan

<b>Document Title:</b> Miami-Dade 2045 Bicycle and Pedestrian Master Plan <sup>4</sup>	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2019	
<b>Study Trails:</b> Biscayne-Everglades, Krome, Black Creek	

**Document Summary:** Serves as the non-motorized element of the 2045 Long Range Transportation Plan (LRTP). The primary focus is on the daily commuter trip and aims to incentivize projects that safely connect the largest number of people, that need it the most, to the most places, on a daily basis.


#### Key Findings:

- ◆ Biscayne Trail Segment “D” from SW 328 St/SW 117 Avenue to Homestead Bayfront Park and Segment “D” Phase II from SW 117 Avenue to SW 137 Street are included in the Cost Feasible Plan (CFP) Plan Period 1 (Table 28)
- ◆ Krome Trail from SW 296 Street to SW 136 Street listed as an unfunded project
- ◆ Portions of the existing Black Creek Trail are classified as a stress level 3 of 4 due to no pedestrian refuge island at the crossing at SW 112<sup>th</sup> Avenue
- ◆ Black Creek Trail Segment “B” Phases I and II from Krome Path to SW 160 Street included in 2045 CFP Plan Period I
- ◆ This master plan is currently undergoing an update - the 2050 Bicycle and Pedestrian Master Plan



<sup>4</sup> The 2050 *Bicycle and Pedestrian Master Plan* was ongoing when this study was completed. Therefore, the updated document was not used for the purpose of this literature review.

## 2045 Long Range Transportation Plan (LRTP)

<b>Document Title:</b> Miami-Dade TPO LRTP <sup>5</sup>	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2019	
<b>Study Trails:</b> Biscayne-Everglades, Krome, South Dade, CSX, Black Creek, Princeton	

**Document Summary:** The LRTP for Miami-Dade County through the year 2045.

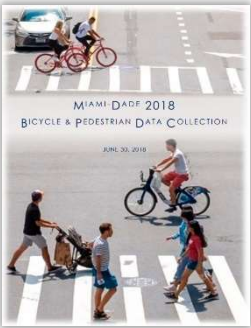
### Key Findings:

- ◆ SMART Plan Trails program connects shared-use paths and other non-motorized facilities to SMART Plan stations and associated Transit-Oriented Developments (TODs)
  - Includes Krome Trail which was officially opened and dedicated in December 2018. Part of MDTPO Greenways Master Plan
- ◆ AD-3 includes active transportation strategies including support for new trails
- ◆ 2020-2025 TIP Priority I:
  - Biscayne Trail Segment D Phases 1 and 2 programmed as priority 1
    - Segment D Phase 1: SW 328/SW 117 to Homestead Bayfront Park (\$1.85 million for construction and design build (con/db))
    - Segment D Phase 2: SW 117 Ave to SW 137 Street (\$150k pre-engineered (pre-eng); \$1.52 million for con/db)
  - Black Creek Trail Segment B Phases 1 and 2 from Krome Path to SW 160 Street: \$1.8 million for con/db
- ◆ Priority II: SMART Trails SW Side of SW 117 Ave from Roberta Hunter Park to SDT/Black Creek Junction: pre/eng + con/db Priority II 2026-2030
- ◆ Priority III: SMART Connector - SW 344 Street from South Transitway to SW 152<sup>nd</sup> : pre/eng + con/db
- ◆ Partially funded: Biscayne Everglades Greenway Seg 6 from South Transitway to Biscayne
- ◆ Unfunded: Biscayne Greenway Segs 4, 7, 8; Biscayne Canal; Krome Trail from SW 296 St to SW 136 St and from SW 8 St to US 27; Princeton Trail from Krome to Moody Terminus; CSX Trail from SW 328 St to Gold Coast railroad Museum Park; Biscayne Trail C and D
- ◆ The 2045 LRTP is currently undergoing an update to evolve into the 2050 LRTP



<sup>5</sup> The 2050 LRTP was ongoing when this study was completed. Therefore, the updated document was not used for the purpose of this literature review.

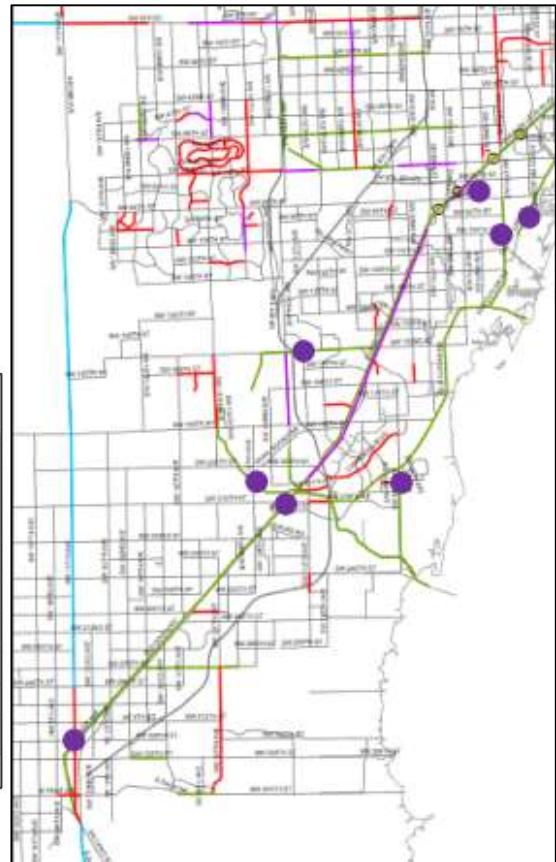
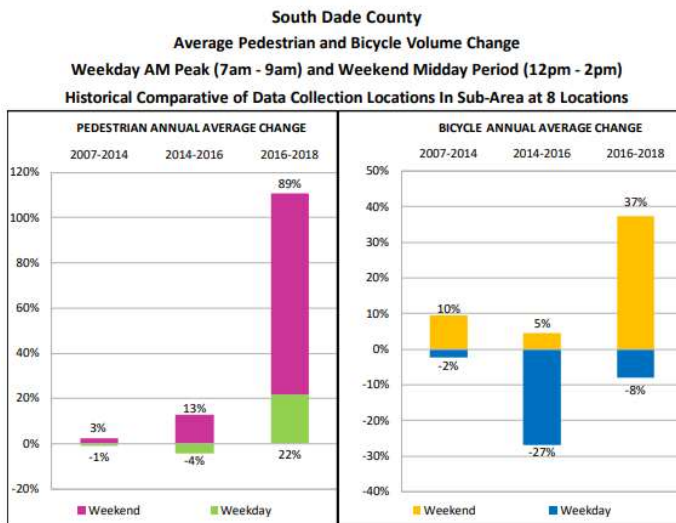
### Bicycle and Pedestrian Data Collection

<b>Document Title:</b> Miami-Dade 2018 Bicycle & Pedestrian Data Collection	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2018	
<b>Study Trails:</b> None	

**Document Summary:** Summarizes the current trends in bicycle and pedestrian travel with implications for increased non-motorized potential for unlinked trips and first-last mile trips to transit stations. Expanded previous data collections from 55 locations to 75 locations.

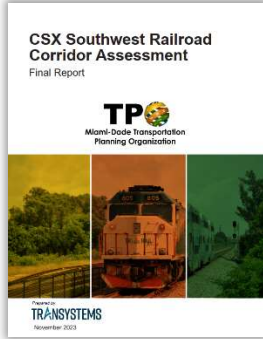
**Key Findings:**

- ◆ Pedestrian volumes increased by 5% annually from 2016 to 2018 (weekdays and weekends)
- ◆ Bicycle volumes from 2016 to 2018 increased by 16% on weekdays and 9% on weekends



*South Dade non-motorized count locations.*

## CSX Southwest Railroad Corridor Assessment

<p><b>Document Title:</b> CSX Southwest Railroad Corridor Assessment Final Report</p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> Miami-Dade TPO</p>	
<p><b>Geography:</b> CSX Railroad Corridor in Miami-Dade County</p>	
<p><b>Document Year:</b> 2023</p>	
<p><b>Study Trails:</b> CSX, South Dade</p>	


**Document Summary:** This study explored the possibility of establishing passenger rail service in the region. The primary study corridor runs southwestward from the Miami Intermodal Center (MIC), near the Miami International Airport (MIA), to the City of Homestead. Three alternatives were developed to evaluate for joint passenger and freight rail service that could aid Miami-Dade County (MDC) with resiliency, congestion, goods movement, and offer additional mobility options for residents and visitors.

### Key Findings:

- ◆ Joint freight and passenger rail services can be operated within the study corridor safely and efficiently, provided infrastructure improvements are made in accordance with the findings of this study
- ◆ Implementation of passenger service in the corridor will not significantly impact other corridor initiatives in the region including the South Dade TransitWay
- ◆ The CSX Southwest Railroad Corridor is recommended to be incorporated in the 2050 LRTP for future use as a shared freight/passenger rail corridor
- ◆ A corridor-wide land-use visioning initiative is recommended to evaluate transit supportive land-use policies that will provide increased mobility while expanding ridership and goods movement by freight service
- ◆ Initiatives to preserve and/or expand the corridor shall be identified and implemented as necessary
- ◆ Providing higher frequency passenger service than 30-minute peak-period and 60 minute off peak-period requires double tracking the full corridor and a significantly larger fleet of trains



## Miami-Dade County Vision Zero Plan

<b>Document Title:</b> Vision Zero Plan	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2018	
<b>Study Trails:</b> None	

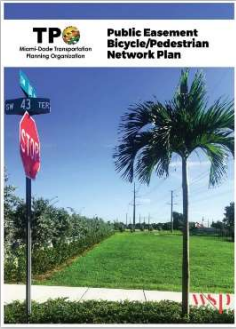
**Document Summary:** Provides a systematic approach to implementing safety countermeasures and policies to reduce and ultimately eliminate fatalities and serious injuries related to mobility in Miami-Dade County.

**Key Findings:**

- ◆ None of the specific trails for the South Dade Trail Study were called out in the Vision Zero Plan
- ◆ Recommends no-turn-on-red policies for trail and bike lane crossings
- ◆ Recommends using separate traffic signals for control of bicycle traffic
- ◆ Shared-use paths associated with an 88% decrease in injury risk for children and 86% decrease in injury risk for adults, when compared to bicycling in the street.



## Public Easement Bicycle/Pedestrian Network Plan

<b>Document Title:</b> Public Easement Bicycle/Pedestrian Network Plan	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2018	
<b>Study Trails:</b> Krome, CSX	

**Document Summary:** Studies the feasibility of integrating various public easements through the county to improve the bicycle lane network and enhance mobility options.

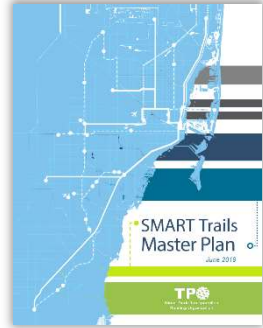
### Key Findings:

- ◆ Identifies public easements throughout the county for connecting the existing and planned bicycle network
- ◆ Primary public easements include: FPL, SFWMD, and Miami-Dade County
- ◆ The Study Advisory Committee for the study discussed early in the process that the southern portion of the county had an adequately planned system of multi-use facilities
- ◆ 11 potential opportunities were identified where public easements could be used
- ◆ Residential property lines extending to the SFWMD canal easements made many of these cost prohibitive and likely to meet public opposition during PD&E
- ◆ Many of FPL's transmission easements are located on private property
- ◆ The preferred corridor identified in this study is north of the South Dade project area
- ◆ A portion of the CSX Corridor was evaluated in this study (Option 8) from Miller Road and the Ludlum Trail/Merrick Trail



Option 8 screen capture.

### SMART Trails Master Plan

<b>Document Title:</b> SMART Trails Master Plan	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2019	
<b>Study Trails:</b> South Dade, Princeton	

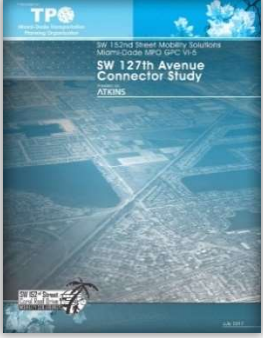
**Document Summary:** Identifies potential first mile/last mile connections between the Strategic Miami Area Rapid Transit (SMART) Plan corridors and the regional non-motorized trail system.

**Key Findings:** South Dade Trails included in this plan (project cost estimates are without ROW acquisition):

- ◆ Connection B: Ludlam Trail to Dadeland North Metrorail Station/Underline/Kendall Corridor routes A and B. Project Cost is \$1,633,000 (Route A, ranked 14) and \$588,000 (Route B, ranked 3)
- ◆ Connection D: Krome Trail to Kendall Corridor. Ranked 23, project cost \$584,000
- ◆ Connection Q: Briar Bay Linear Park to South Dade Transitway. Ranked 14, project cost \$856,000
- ◆ Connection R: Roberta Hunter Park Trail to South Dade Transitway. Ranked 14, project cost \$200,000
- ◆ Connection S: Princeton Trail to South Dade Transitway/South Dade Trail. Ranked 24, policy recommendation



## SW 127<sup>th</sup> Avenue Connector Study

<b>Document Title:</b> SW 127 <sup>th</sup> Avenue Connector Study	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> SW 127 <sup>th</sup> Avenue Corridor	
<b>Document Year:</b> 2017	
<b>Study Trails:</b> CSX	


**Document Summary:** Investigates options for the segments of SW 127<sup>th</sup> Avenue lying on either side of the CSX railroad corridor at a point approximately 0.70 miles north of SW 152<sup>nd</sup> Street be connected, potentially with an overpass structure.

**Key Findings:**

- ◆ The current bicycle and pedestrian facilities along this corridor include shared use lanes and bike lanes
- ◆ Study proposes narrowing the existing sidewalks and/or bike lanes in every alternative
- ◆ However, connections across the railroad would facilitate bicycle and pedestrian circulation, and provide a potential new corridor for transit services as well
- ◆ None of the South Dade Trail study trails are specifically referenced in this study, but the project area does cross the CSX trail.



## SW 152<sup>nd</sup> Street Mobility Solutions

<b>Document Title:</b> SW 152 <sup>nd</sup> Street Mobility Solutions Final Report	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade TPO	
<b>Geography:</b> SW 152 <sup>nd</sup> Corridor from SW 67 <sup>th</sup> Avenue (Ludlum Road) to SW 177 <sup>th</sup> Avenue (SR 997/Krome Avenue)	
<b>Document Year:</b> 2017	
<b>Study Trails:</b> Black Creek	

**Document Summary:** Identifies and recommends multimodal solutions that improve accessibility and mobility along SW 152<sup>nd</sup> Street/Coral Reef Drive. The proposed transportation improvements address both existing deficiencies and future demand.

**Key Findings:** There is a low amount of bicycle and pedestrian activity along the corridor. This may be due to the scale, density, and urban design of adjacent development.

- ◆ Generally, a 5' continuous sidewalk exists on both sides of the corridor. The access to these sidewalks is only from street intersections and there is currently no direct access from adjacent residential developments

- ◆ The Black Creek Trail Segment B and South Dade Greenway intersect the project corridor
  - Black Creek Trail Segment B from Thompson Park to Krome Trail is listed as a Priority 2 project in the 2040 LRTP

- Segment B is linked to Segment A that extends the Black Creek Trail 8.4 miles north of SW 184<sup>th</sup> Street



TIP (2023-2027)

<b>Document Title:</b> Transportation Improvement Program (TIP) Fiscal Years 2023-2027 <sup>6</sup>
<b>Agency:</b> Miami-Dade TPO
<b>Geography:</b> Miami-Dade County
<b>Document Year:</b> 2022
<b>Study Trails:</b> Biscayne-Everglades, Krome, South Dade, Black Creek

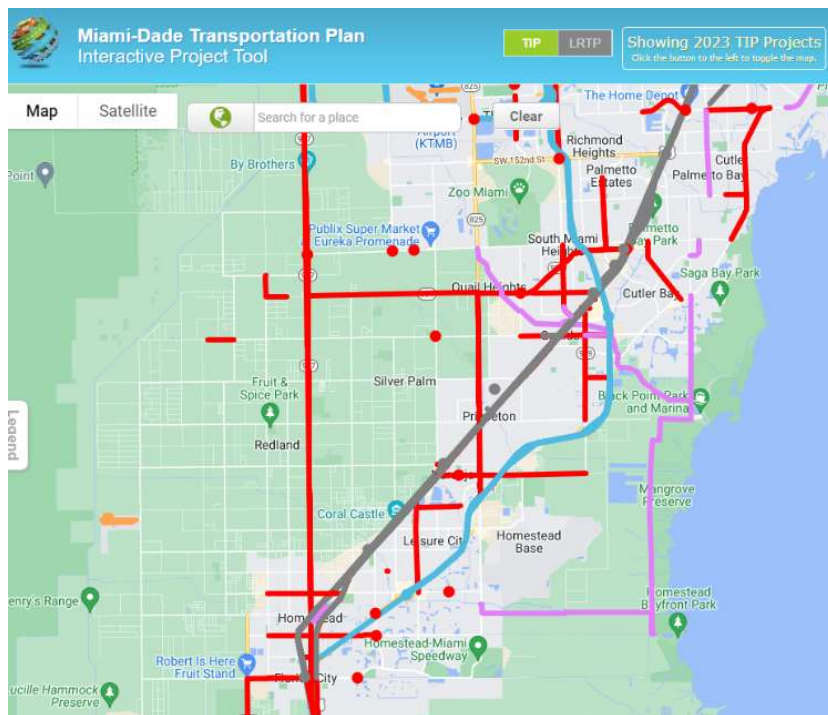
**Document Cover:**



**Document Summary:** Specifies proposed transportation improvements to be implemented in Miami-Dade County over the coming five years. The primary emphasis is on the first three years of the program.

**Key Findings:**

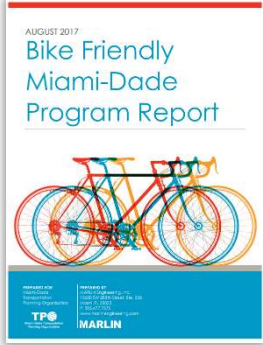
- ◆ Biscayne Trail/SW 87 Ave from Old Cutler Road to Black Point Park (DT2512652, unfunded, FDOT)
- ◆ Biscayne Trail Segment D Phase II from SW 117 Ave to SW 137 Ave (DT4398981, funded for construction 2024, FDOT)
- ◆ Black Creek Trail (A) from Black Point Park to Thompson Park (DT2512653, FDOT, unfunded)
- ◆ Black Creek Trail Segment B Phase I (DT4386671, funded 2023, FDOT)
- ◆ Black Creek Trail Segment B Phase II (DT4408421, construction funded 2023, FDOT)
- ◆ Black Creek Trail, Segment B - Thompson Park to Krome Trail; FDOT Transportation Alternatives Program (TAP) Grant match (PR0000003, construction funded 2023-2027, PROS)
- ◆ South Dade Trail - Hunter Park Connection (DT4416411, FDOT funded for construction 2024)
- ◆ South Dade Trail/Biscayne D & Roberta Hunter from SW 137 Street to Homestead Bayfront Park, FDOT TAP Grant match (PR0000002, construction funded 2022-2027, PROS)
- ◆ TIP pages are provided in the appendix



<sup>6</sup> The 2024-2026 and 2025-2029 TIPS were ongoing when this study was completed. Therefore, the updated document was not used for the purpose of this literature review.

## Current Programs

### Bike Friendly Miami-Dade

<b>Program Title:</b> Bike Friendly Miami-Dade Program Report	<b>Document Cover:</b>	
<b>Agency:</b> Miami-Dade TPO		
<b>Geography:</b> Miami-Dade County		
<b>Program Year:</b> 2017		
<b>Study Trails:</b> None		

**Program Overview:** The Miami-Dade TPO is pursuing the Bicycle Friendly Community designation from the League of American Bicyclists. This report summarizes the progress towards that designation.

#### Study-Related Details:

- ◆ Measures related to bicycling within the program include the 5 Es:
  - Engineering -existing bike infrastructure
  - Education - ability and willingness to educate constituents on bike laws and safety
  - Encouragement - ability to promote bicycling. Usually through special events or incentive programs
  - Enforcement - current police policy on how law enforcement engages and interacts with bicycles
  - Evaluation & Planning - short, medium, and long-term planning and data collection practices
  
- ◆ The Miami-Dade TPO initiative includes:
  - City and community outreach
  - A summary of community submittals
  - Business outreach and submittals
  - Miami-Dade Bike Friendly Summit

#### Snap-shot of Miami-Dade Bike-Friendly Designations

Current Miami-Dade Community Designations		
Name	Name	Name
Key Biscayne	Key Biscayne	Key Biscayne
Miami	Miami	Miami
Miami Beach	Miami Beach	Miami Beach
Miami Shores	Miami Shores	Miami Shores

Table 1: Current Miami-Dade Community Designations

Current Miami-Dade Business Designations		
Name	City	Level
Coral Gables Art Cinema	Coral Gables	Bronze
The Coral Gables Museum	Coral Gables	Silver
Arquitectonica International Inc.	Miami	Bronze
Dover, Kohl & Partners	Coral Gables	Silver
Mack Cycle and Fitness	South Miami	Platinum
West Kendall Baptist Hospital	Miami-Dade	Bronze
Dade Heritage Trust	Miami	Silver

Table 2: Current Miami-Dade Business Designations


Current Miami-Dade University Designations		
Name	City	Level
University of Miami	Coral Gables	Bronze

Table 3: Current Miami-Dade University Designations

Current Miami-Dade Applications In-Process		
Name	Jurisdiction	Level
Miami Dade County	County	TBA
Doral	Town/City/Municipality	TBA
Cutler Bay	Town/City/Municipality	TBA
Palmetto Bay	Town/City/Municipality	TBA
South Miami	Town/City/Municipality	TBA

Table 4: Current Miami-Dade Applications In-Process

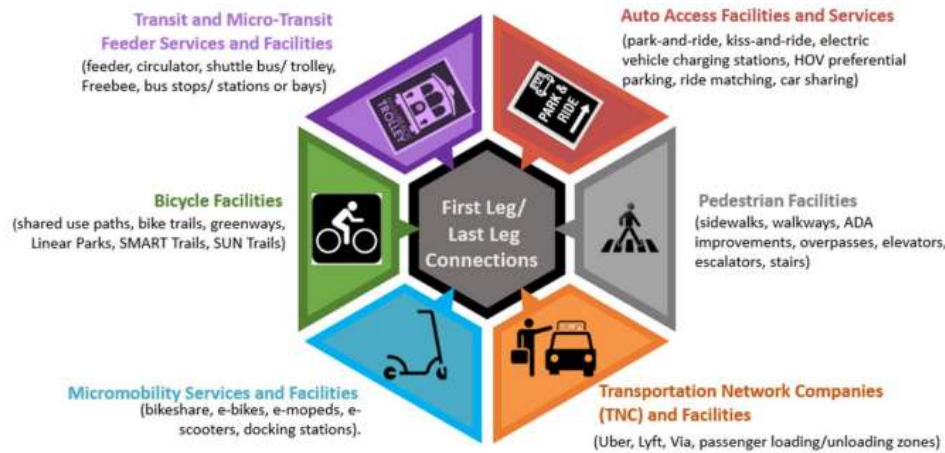
### DTPW First/Last Leg Connectivity

<p><b>Program Title:</b> First/Last Leg Connectivity and Shared Mobility Services</p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> Miami-Dade Department of Transportation and Public Works</p>	
<p><b>Geography:</b> Miami-Dade County</p>	
<p><b>Program Year:</b> 2022-2026</p>	
<p><b>Study Trails:</b> South Dade, Black Creek, Princeton</p>	


**Program Overview:** Included in the FY 2022-26 PTP Five-Year Implementation Plan, the purpose of this program is to implement various projects to improve first/last mile (FMLM) leg connectivity to transit while enhancing connectivity and non-motorized transportation.

**Study-Related Details:**

- ◆ County has adopted Complete Streets approach for FMLM
- ◆ Pedestrian Facilities within 0.5 mile of transit stop/stations terminals include sidewalks, walkways, ADA improvements, pedestrian overpasses, elevators/escalators, and stairs
- ◆ Bicycle facilities within 3 miles of a transit stop/station/terminal include shared use paths, greenways, trails (SUN, SMART, other), linear parks (underline), bicycle parking, bicycle repair, and stair tire channels
- ◆ SMART Trails connections include:
  - Briar Bay Linear Park to South Dade Transitway (SDT)
  - Roberta Hunter Park Trail to SDT
  - Princeton Trail to SDT
- ◆ Citizens’ Independent Transportation Trust (CITT) continues to promote the projects that improve FMLM connectivity (including Black Creek Trail and SDT)
- ◆ Other programs mentioned include Vision Zero, Micromobility Services and Facilities, Transit and Micro-Transit Feeder Service and Facilities, Auto Access Facilities and Services, Transportation Network company and Facilities, and Mobility-as-a-service (MaaS)



### DTPW Vision Zero Implementation Plan

<b>Program Title:</b> DTPW Safety Implementation Plan <sup>7</sup>	<b>Document Cover:</b> 
<b>Agency:</b> Miami-Dade DTPW	
<b>Geography:</b> Miami-Dade County	
<b>Program Year:</b> 2022-2040	
<b>Study Trails:</b> None	

**Program Overview:** Program committed to eliminating traffic deaths and serious injuries within the MDC transportation network by 2040.

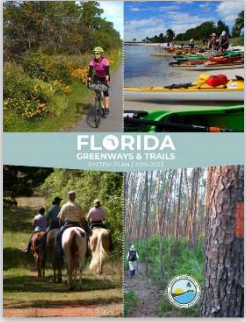

**Study-Related Details:**

- ◆ Uses the safe system approach (see graphic) which encourages a priority multimodal approach for all roadways within the county
- ◆ Identified safety and vision zero crash locations within all commission districts. Includes Vision Zero projects and 2022 safety projects, high-injury intersections, and high-injury segments
- ◆ Specific trail development and connections were not included in the implementation plan or the 2021 Framework Plan
- ◆ Part of the 18-Month Action Plan is to develop multi-modal priority for all roadways




<sup>7</sup> This plan was undergoing an updated when this study was completed (2024 Vision Zero Framework). Therefore, the updated document was not used for the purpose of this literature review.

FDEP Office of Greenways and Trails

<p><b>Program Title:</b> FDEP Office of Greenways and Trails</p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> Florida Department of Environmental Protection</p>	
<p><b>Geography:</b> State of Florida</p>	
<p><b>Program Year:</b> 2018-2023</p>	
<p><b>Study Trails:</b> All</p>	
<p><b>Program Overview:</b> Maintains the Florida Greenways and Trails System (FGTS) which classifies trails as Opportunity and Priority Trails, identifies trail corridors, and maintains the FGTS Trails Map.</p>	
<p><b>Study-Related Details:</b></p> <ul style="list-style-type: none"> <li>◆ Plan is undergoing a 2024-2028 update</li> <li>◆ Opportunities are corridors which represent existing, planned and conceptual non-motorized multi-use trails</li> <li>◆ Priorities defined as the most important corridors and connections within the FGTS Trails Map             <ul style="list-style-type: none"> <li>○ Priority Trails classification is prerequisite for a project to be considered for state funds, including FDOT’s Shared-Use Nonmotorized (SUN) Trail Program</li> </ul> </li> <li>◆ Identified Land Trail Priorities within the South Dade area:             <ul style="list-style-type: none"> <li>○ Biscayne-Everglades Greenway</li> <li>○ Krome Path</li> <li>○ South Dade Trail</li> <li>○ Portion of CSX Trail</li> </ul> </li> <li>◆ Identified Land Trail Opportunities within the South Dade area:             <ul style="list-style-type: none"> <li>○ Black Creek Trail</li> <li>○ Mowry Trail</li> <li>○ Princeton Trail</li> <li>○ Portion of CSX Trail</li> <li>○ Biscayne Trail</li> </ul> </li> </ul> <div style="text-align: center;">  </div>	

FDOT Design Manual - Other Facilities Chapters 222-224

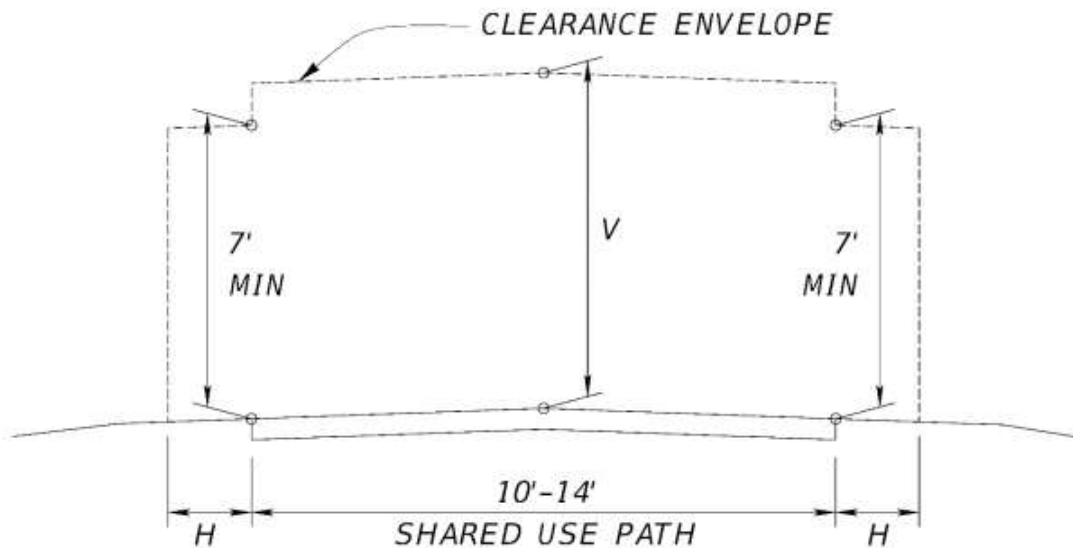
<b>Program Title:</b> FDOT Design Manual (FDM), Other Facilities <sup>8</sup>	<b>Document Cover:</b> 
<b>Agency:</b> FDOT	
<b>Geography:</b> State of Florida	
<b>Program Year:</b> 2023	
<b>Study Trails:</b> None	

**Program Overview:** The FDM provides developmental criteria for improvements on FDOT roadways. Chapters 222 - 224 are the Pedestrian Facilities, Bicycle Facilities, and Shared Use Path Facilities.

**Study-Related Details:**



- ◆ Provides specifics for pedestrian features or elements used to support pedestrian travel including ADA requirements.
- ◆ A shared use path may substitute for: sidewalk in locations where a sidewalk is required, or bike lanes on roads with a design speed of 35 mph or greater. Urban side paths are also included.
- ◆ A shared use path may not be the best solution for all conditions - based on context classification, non-motorist volumes, and potential vulnerable users.
- ◆ Enhance bicycle safety by maintaining a smooth, clean riding surface free of obstructions, responsive and appropriate traffic control devices, adequate lighting, and a bicycle facility plan.
- ◆ All South Dade Trail Study recommendations are to be consistent with the FDM.

**Figure 224.8.1 Shared Use Path Horizontal and Vertical Clearance Envelope**


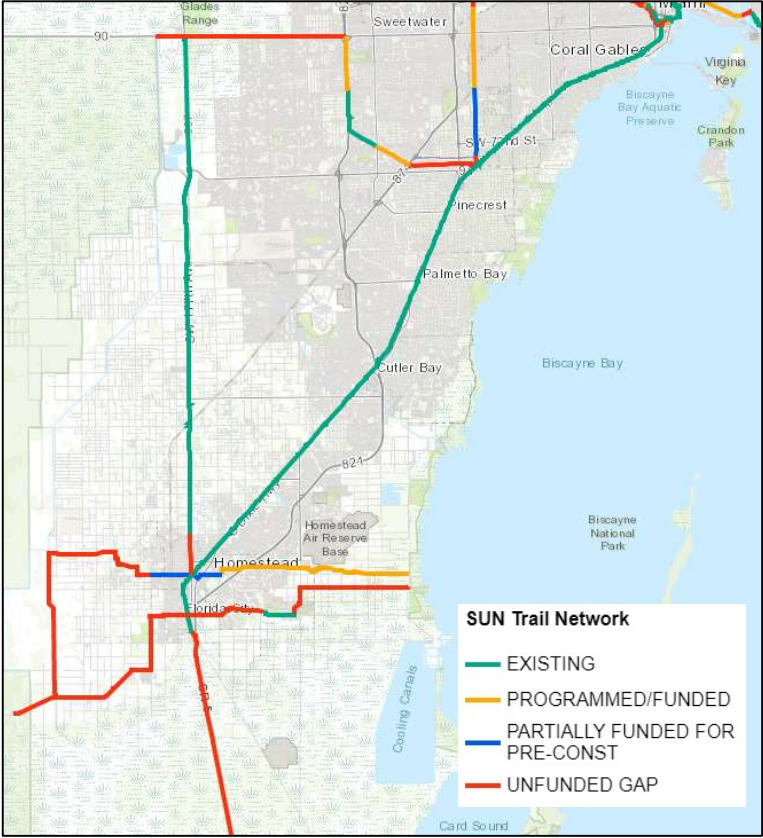


<sup>8</sup> FDM updates (FY24 and FY 25) were ongoing when this study was completed. Therefore, the updated documents was not used for the purpose of this literature review.

## FDOT Non-Motorized Traffic Monitoring Program

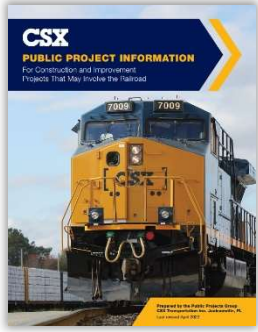
<p><b>Program Title:</b> Statewide Non-Motorized Traffic Monitoring Program (NMTMP)</p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> FDOT</p>	
<p><b>Geography:</b> State of Florida</p>	
<p><b>Program Year:</b> Began in 2018</p>	
<p><b>Study Trails:</b> None</p>	
<p><b>Program Overview:</b> Program started to address the need to provide bicycle and pedestrian (non-motorized) volume counts, supporting statistics, and information to new and existing data customers. The data can be used for analyses such as safety studies, planning and programming of FDOT facilities, road and trail maintenance and enhancements, etc.</p>	
<p><b>Study-Related Details:</b></p> <ul style="list-style-type: none"> <li>◆ Purpose of the program is to collect statistically valid bicycle and pedestrian (non-motorized) volume data so that statistics can be calculated and published annually</li> <li>◆ Program structure includes four pillars:             <ul style="list-style-type: none"> <li>○ Statewide repository: includes count data for certain data points (see map below)</li> <li>○ Statewide short-term count program: began collecting in 2019 during on-peak and off-peak hours with FDOT and partnering agencies. Includes an equipment loaner program</li> <li>○ Statewide outreach for program participation</li> <li>○ Statewide continuous count program: Includes 20 non-motorized continuous counters (red stars on repository map)</li> </ul> </li> </ul> <div style="text-align: right; margin-top: 20px;">  </div> <p style="text-align: center; margin-top: 10px;"><i>Statewide repository map showing Miami-Dade County data points.</i></p>	

## FDOT SUN Trail Program

<p><b>Program Title:</b> Shared-Use Nonmotorized (SUN) Trail Program</p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> FDOT</p>	
<p><b>Geography:</b> State of Florida</p>	
<p><b>Program Year:</b> 2023</p>	
<p><b>Study Trails:</b> Biscayne-Everglades, Krome, South Dade</p>	
<p><b>Program Overview:</b> The SUN Trail network is the statewide system of high-priority, strategic paved trail corridors for bicyclists and pedestrians. The system currently consists of existing, planned, and conceptual multi-use trails.</p>	
<p><b>Study-Related Details:</b></p> <ul style="list-style-type: none"> <li>◆ The SUN Trail system is a refined version of the FGTS Plan’s Land Trails Priority Network.</li> <li>◆ Implementing projects in the SUN Trail network increases the reliability of Florida’s transportation system</li> <li>◆ Not all multi-use trails are in the SUN Trail system</li> <li>◆ Krome Path, Biscayne-Everglades Greenway, and South Dade Trail, ARE included in the SUN Trail network</li> <li>◆ Biscayne Trail, CSX Trail, Mowry Trail, and Princeton Trail are NOT included on SUN Trail network</li> </ul> <div style="text-align: right; margin-top: 20px;">  </div> <p style="text-align: center; margin-top: 10px;"><i>Screen capture from FDOT’s SUN Trail Network map showing south Miami-Dade County.</i></p>	

## Other Documents

### CSX Public Project Information

<b>Document Title:</b> CSX Public Project Information for Construction Projects That May Involve the Railroad	<b>Document Cover:</b> 
<b>Agency:</b> CSX	
<b>Geography:</b> CSX Property Across the US	
<b>Document Year:</b> 2022	
<b>Study Trails:</b> None	

**Document Summary:** Provides information to assist communities and other project sponsors to plan and implement construction and improvement projects that may involve the CSX rail property.

**Key Findings:** Examples of project include:


- ◆ Highway-rail grade crossings
- ◆ Bridges over CSX
- ◆ Bridges carrying CSX
- ◆ Parallel roads/facilities
- ◆ US Army Corps of Engineers projects
- ◆ Entry onto CSX property
- ◆ Other projects involving CSX rail corridors

**Bicycle Pedestrian Pathways and Multi-Use Trails:**

- ◆ Private or public bike/ped paths and trails parallel to the tracks are not permitted on CSX property
- ◆ CSX prefers grade-separated bike/ped paths and multi-use trails
- ◆ Paths and trails cannot cross at grade outside of existing highway easements
- ◆ CSX will oppose condemnation proceedings aimed at recreational use of trackside property
- ◆ CSX objects to publicly accessible parks, pathways, and trails constructed within 50 feet of existing and proposed tracks (safety and liability concerns)
- ◆ Protective fencing shall be installed, maintained, and repaired where property is opposite CSX's
- ◆ Paths and trails crossing at-grade within a highway easement must have appropriate signs and warning systems. Placing sidewalks outside of the area occupied by grade crossing traffic control devices for vehicular traffic is important



### Homestead Parks Master Plan

<b>Document Title:</b> Parks Master Plan	<b>Document Cover:</b> 
<b>Agency:</b> Parks & Recreation Department, City of Homestead	
<b>Geography:</b> City of Homestead	
<b>Document Year:</b> 2023	
<b>Study Trails:</b> CSX, Biscayne-Everglades Trail	

**Document Summary:** The document is a comprehensive citywide parks and recreation master plan addressing community park and recreation needs and provides a professional framework to improve public recreation and leisure facilities throughout Homestead.


**Key Findings:**

- ◆ The Biscayne-Everglades Greenway is proposed as part of the efforts of Homestead and Miami-Dade County to create a 42-mile paved loop linking natural, cultural, and historical resources of South Florida
  - The first five-mile phase from SW 137<sup>th</sup> Avenue paralleling the C-103 canal to Mowry Drive was inaugurated in March 2023
- ◆ A survey was conducted during the development of this master plan; 85% of the respondents were either very supportive or supportive of new trails and pedestrian paths
- ◆ CSX Rails to Trails Linear Park: proposed as a future concept to connect the full length (north to south) across the city.
  - The proposed concept features a retrofit of the CSX ROW to a fully programmed linear park to include a bike/ped network connection of paths with lighting and other bike amenities (see rendering below)
  - Exercise stations and other shade/pavilion shelters are proposed to fully accommodate the surrounding residents and park patrons



FIGURE B9 – PROPOSED MASTER PLAN FOR RAILS TO TRAILS LINEAR PARK (TYPICAL 1)

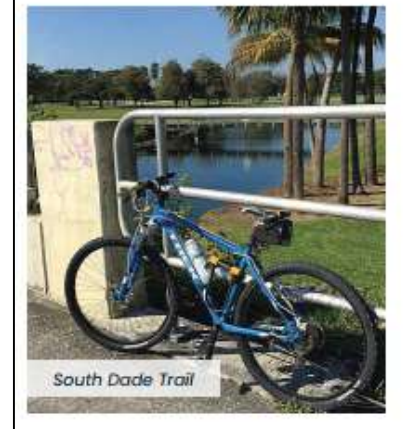
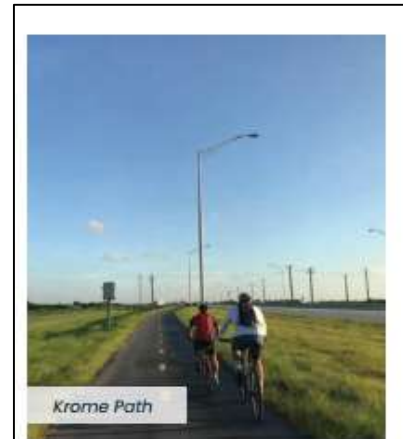
## Miami-Dade Bicycle Network Connectivity Assessment

<b>Document Title:</b> Miami-Dade Bicycle Network Connectivity Assessment	<b>Document Cover:</b> 
<b>Agency:</b> FDOT District 6 (D6)	
<b>Geography:</b> Miami-Dade County	
<b>Document Year:</b> 2022	
<b>Study Trails:</b> Biscayne-Everglades, Krome, South Dade, Black Creek	

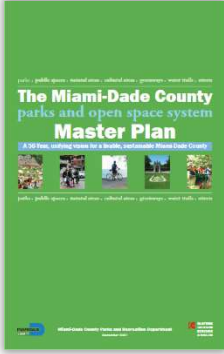
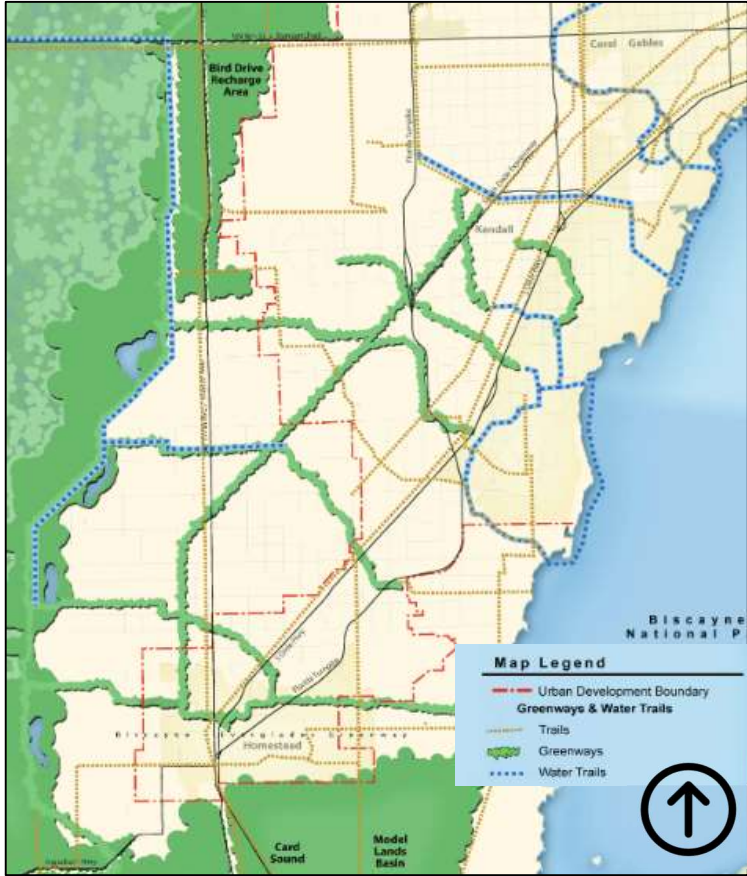
**Document Summary:** The document is intended to act as a foundational bicycle network to foster a collaborative, on-going conversation with all involved agencies in Miami-Dade County to expand its existing and upcoming (funded) active transportation network. Includes a prioritized bicycle network along with an implementation plan.

### Key Findings:

- ◆ 21 Greenways/Trails were selected to act as Countywide Connectors in this assessment including the following trails in the South Dade Trail Feasibility Study:
  - Black Creek Trail
  - Krome Path
  - South Dade Trail
  - Biscayne-Everglades Greenway
- ◆ Biscayne-Everglades Greenway listed as Point of Interest Connection Type, Subgroup A, Connection Number 269, is included in the High Priority Proposed Project in the Project Bank, and listed under the transit project group
- ◆ Biscayne-Everglades Greenway - Mowry Drive (NW 2<sup>nd</sup> Avenue to South Dade Trail) in the City of Homestead included as Subgroup F, Connection Number 517. Listed as a County Connector, High Priority Proposed Project in the Project Bank.
- ◆ Biscayne-Everglades Greenway, Project 287 from SW 152 to SW 312 listed as Medium Priority Proposed Project
- ◆ Krome Path: Connection Number 517, 18.6 miles existing/funded from Miccosukee Link (US 41) to SW 248 Street.
- ◆ South Dade Trail: Connection Number 510, 19.42 miles existing/funded from South Dadeland Station to W Davis Parkway
- ◆ Black Creek Trail: Connection Number 519, 7.07 miles proposed from Krome Path to SW 137 Avenue. Medium Priority Project; in Kendall Corridor Transit Project Group
- ◆ Black Creek Trail: Connection Number 519, 3.65 miles proposed from SW 137 Avenue to South Dade Trail



## PROS Greenways and Trails Prioritization

<p><b>Program Title:</b> Miami-Dade County Parks and Open Space System Master Plan<sup>9</sup></p>	<p><b>Document Cover:</b></p> 
<p><b>Agency:</b> Miami-Dade County PROS</p>	
<p><b>Geography:</b> Miami-Dade County</p>	
<p><b>Program Year:</b> 2007</p>	
<p><b>Study Trails:</b> Biscayne-Everglades</p>	
<p><b>Program Overview:</b> Provides a 50-year, unifying vision for a livable, sustainable Miami-Dade County.</p>	
<p><b>Study-Related Details:</b> The Greenways, Trails, and Water Trails Vision (Chapter 4) is for an interconnected system that provides transportation alternatives and reduces traffic congestion, creates recreational opportunities, increases property values, protects natural resources, and encourages tourism and business development. Key elements include:</p> <ul style="list-style-type: none"> <li>◆ Consistent, upgraded trail footings throughout the system</li> <li>◆ A signage/graphics/marker system that establishes an identity for the system</li> <li>◆ A continuous canopy of large trees</li> <li>◆ Safe, well-marked roadway crossings</li> </ul> <p>Study Trails included:</p> <ul style="list-style-type: none"> <li>◆ Biscayne-Everglades Trail: The only trail in the US connecting two National Parks. Also travels through the community creating opportunities for tourism and greater park visitation</li> </ul> <p>This plan is undergoing an update that has not been finalized yet.</p> <div style="display: flex; align-items: center;">  </div> <p style="text-align: center;"><i>Screen capture of the trails vision for South Miami-Dade.</i></p>	

<sup>9</sup> An update to this plan was ongoing when this study was completed. Therefore, the updated document was not used for the purpose of this literature review.



## Section 3.0 | Corridor Evaluation

### 3.0 Corridor Evaluation

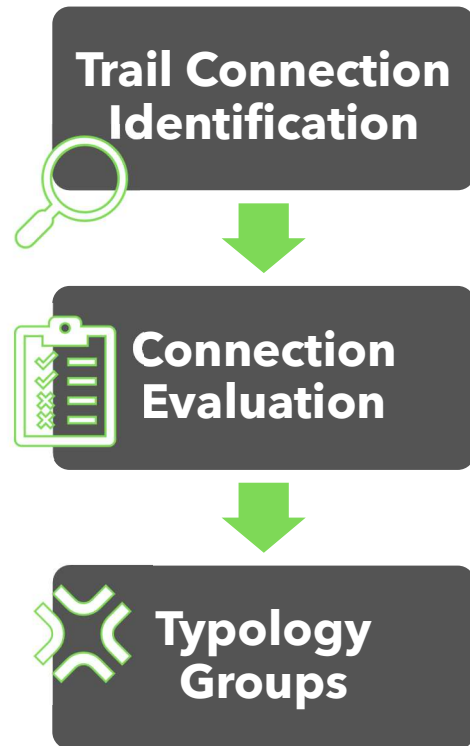
The second step in the study process was to conduct a corridor evaluation on the study trails. The corridor evaluation focused on areas in which the existing or planned trails intersected, forming trail connection opportunities. During this process, 18 trail connections were identified representing a variety of typologies across the study area.

These connections were then evaluated based on their capacity to improve the network as well as serve as pilot locations for future trail connection improvements that will improve the overall safety, visibility, and accessibility of the trail network.

The result of this process yielded four groups of trail emphasis areas and typologies to move forward into the next phase of the study, which develops recommendations that will enhance the non-motorized connectivity and safety for those emphasis areas.

The four emphasis areas and typologies including their locations listed are below. Each of the groups include two to four of the initial 18 connections. The groups are numbered from south to north and not by priority.

Further details about the trail emphasis areas/typology groups are included in **Section 3.2**.



**Group 1 - Florida City**  
 The intersections of the South Dade Trail, Biscayne-Everglades Greenway, and the Krome Path along West Palm Drive.

**Group 2 - Homestead Trail Confluence**  
 The intersections of the South Dade Trail, Biscayne-Everglades Greenway, and the Krome Path along Mowry Drive.

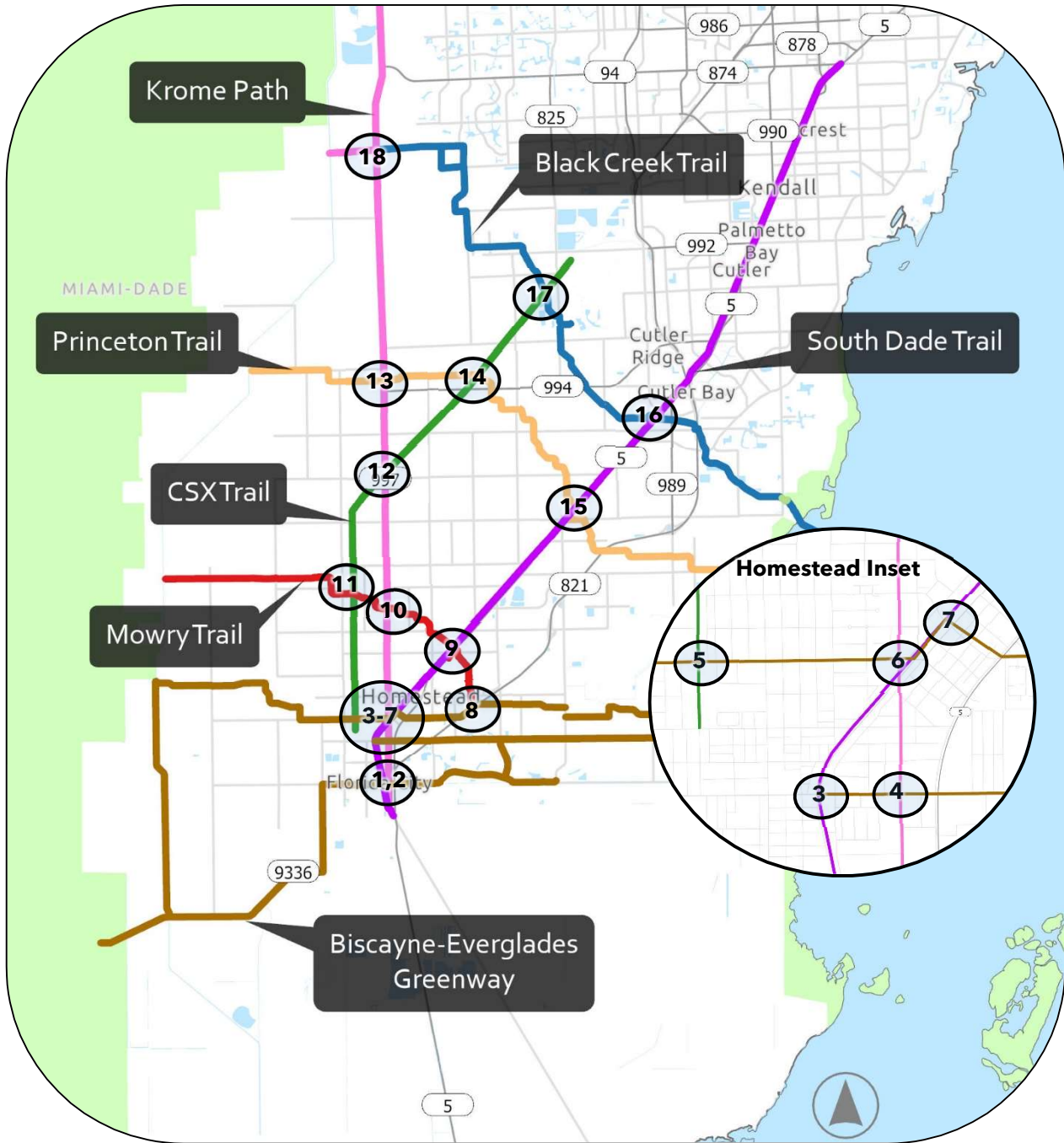
**Group 3 - Canal Crossings**  
 The intersections of the Krome Path with the Mowry, Princeton, and Black Creek canals and trails.

**Group 4 - US 1 Commercial**  
 The intersections of the South Dade Trail with Princeton and Black Creek trails along US 1.

### 3.1 Connection Identification

A total of 18 trail connections were identified across the South Dade Trail network. These connections are positioned where the South Dade Trail network trails intersect. These trail connections are numbered 1-18 and are listed in **Table 3-1** and displayed in the map in **Figure 3-1**.

**Figure 3-1 Trail Connections**



**Table 3-1 Trail Connection Locations**

#	Trail Intersection	Location	Trail Status
1	Biscayne-Everglades Greenway/ South Dade Trail	Busway at W Palm Drive	South Dade Trail built
2	Biscayne-Everglades Greenway/ Krome Path	Krome Avenue at W Palm Drive	Unbuilt
3	Biscayne-Everglades Greenway/ South Dade Trail	SW 328th Street at Busway	South Dade Trail built
4	Biscayne-Everglades Greenway/ Krome Path	SW 328th Street at SW 177th Avenue	Unbuilt
5	Biscayne-Everglades Greenway/ CSX Trail	W Mowry Drive at CSX tracks	Unbuilt
6	Biscayne-Everglades Greenway/ Krome Path, South Dade Trail	Krome Avenue at Busway	South Dade Trail built
7	Biscayne-Everglades Greenway/ South Dade Trail	E Mowry Drive at Busway	South Dade Trail built
8	Mowry Trail/ Biscayne-Everglades Greenway	Mowry Canal at Ronald Reagan Turnpike	Biscayne-Everglades Greenway programmed
9	Mowry Trail/ South Dade Trail	Busway at Mowry Canal	South Dade Trail built
10	Mowry Trail/ Krome Path	Krome Avenue at Mowry Canal	Krome Path built
11	Mowry Trail/ CSX Trail	Mowry Canal at CSX tracks	Unbuilt
12	Krome Path/ CSX Trail	Krome Path at CSX tracks	Krome Path built
13	Krome Path/ Princeton Trail	Krome Avenue at Princeton Canal	Krome Path built
14	Princeton Trail/ CSX Trail	Princeton Canal at CSX tracks	Unbuilt
15	South Dade Trail/ Princeton Trail	South Dade Trail at Princeton Canal	South Dade Trail built
16	Black Creek Trail/ South Dade Trail	Busway at SW 117th Avenue	Both built
17	Black Creek Trail/ CSX Trail	Black Creek Trail at CSX tracks	Unbuilt
18	Black Creek Trail/ Krome Path	Krome Path at Black Creek Canal	Black Creek Trail programmed/Krome built

### 3.2 Connection Evaluation

Once the 18 connections were identified and mapped, a spatial analysis was conducted to determine ideal connections for improvements based on a variety of attributes including: trail status, intersection type, existing land use, transit access, trail access, connection type, and recent and concurrent planning efforts. Based on the results of the spatial analysis, ten of the connections were then grouped into four emphasis areas based on similar typologies and improvement types. Further details regarding the final groups are included in this section.

<b>Trail Status</b>	}	• Is the trail existing, proposed, or planned?
<b>Intersection Type</b>	}	• Is the intersection signalized, unsignalized, midblock, etc.
<b>Existing Land Use</b>	}	• What is the existing land use of the surrounding area?
<b>Transit Access</b>	}	• Are there transit routes or stops near the connection?
<b>Trail Access</b>	}	• What kind of trail access does the connection provide?
<b>Connection Type</b>	}	• What type of trail connection would this provide? Gateway, trailhead, canal crossing, etc.
<b>Recent Planning Efforts</b>	}	• Have there been recent planning efforts for this connection? Would this be duplicating efforts?

The results of the analysis are summarized in this section. Details regarding the spatial analysis including maps and photos of each of the 18 connections are included in **Appendix B**.

## Spatial Analysis Summary

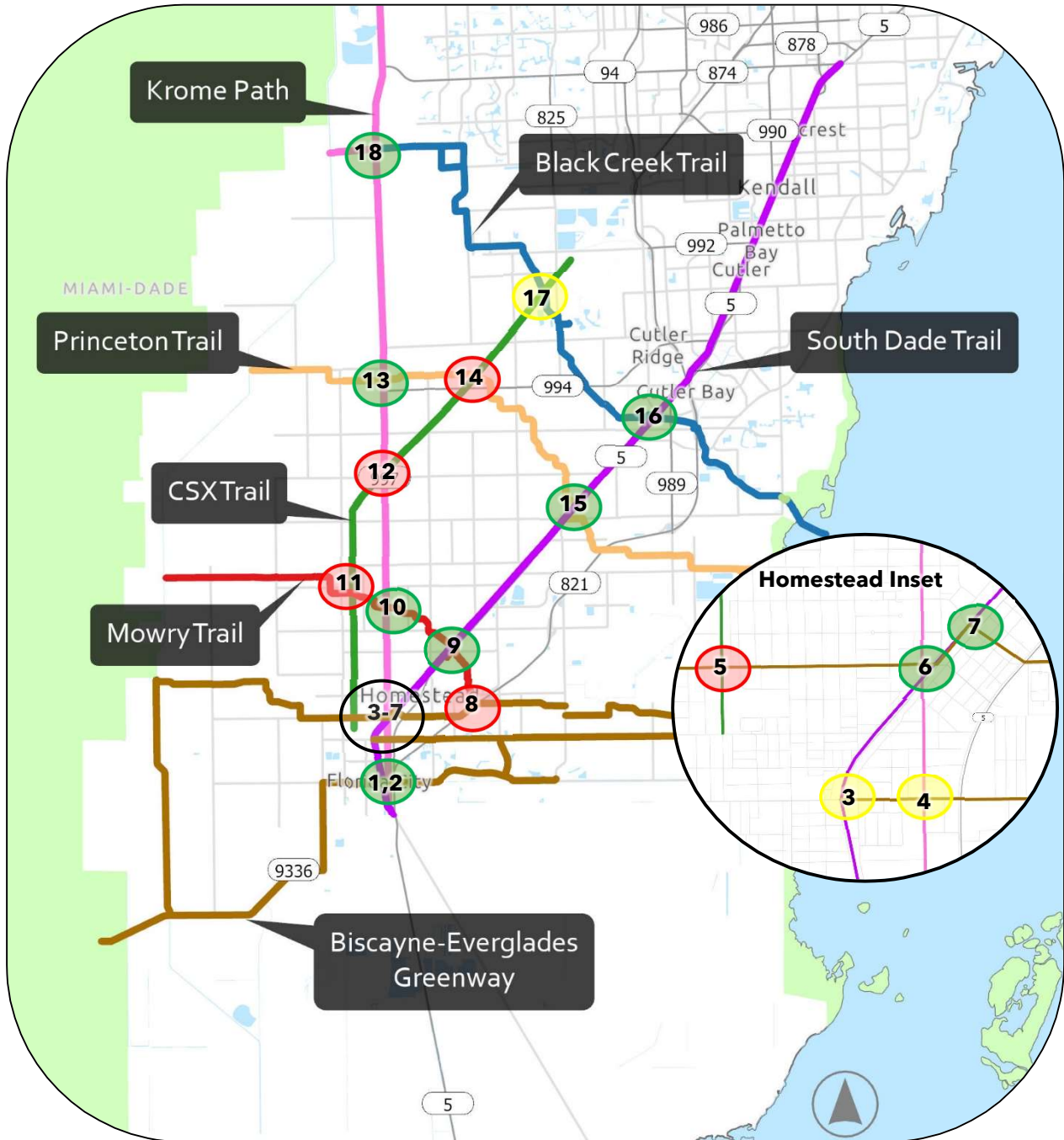
During the spatial analysis process, each connection was examined based on existing characteristics of the trail intersection, the surrounding area, and the recent and concurrent planning efforts. The results of the spatial analysis are summarized in the map in **Figure 3-2** and in **Table 3-2**. The map and the table categorize the connections based on their connection enhancement potential as either Tier 1 candidates (**green**), Tier 2 candidates (**yellow**), or Tier 3 candidates (**red**).

The **TIER 1** candidates were categorized as such due to their location, presence of existing or programmed trails, proximity to other trails, and opportunity for enhancement and further study. For example, Connection 6 was identified as a **TIER 1** candidate because it has one existing trail (South Dade Trail), provides access to a commercial center, and a connection to the Homestead Station Transit Center. There are also three similar intersections at this connection which can be enhanced with similar improvements. Ten of the 18 connections were classified as **TIER 1** candidates. Each of these were included in the final four groups.

The **TIER 2** candidates offered similar opportunities as the good candidates. These candidates are decent options for improvements, but were not chosen as good candidates due to site-specific reasons such as a unique intersection type when compared to the other connections, no existing trails, or limited other connections. For example, Connection 17 was categorized as potential because it had no existing trail to enhance a connection with and provides limited other points of interest to connect to. Three of the connections were classified as potential candidates.

The **TIER 3** candidates were those connections determined to not be ideal enhancement candidates for the purposes of this study. For example, Connection 5 was classified as an unlikely candidate because this connection was recently studied in the Homestead Parks Master Plan. The Homestead Parks Master Plan produced a concept plan including renderings for several trail connections included in this study area. The concept plans for the overlapping trail connections included in the Homestead Parks Master Plan as well as this study will be provided in later sections of this report for reference.

Figure 3-2 Trail Connection Evaluation



**Table 3-2 Trail Connection Evaluation**

#	Category	Trail Status	Connection Type	Notes
1	TIER 1	Partially built	Signalized 3-way intersection with busway and 4 separated lanes.	Park&Ride Lot at NW corner. Krome Path is about 650 feet east at the next intersection. Commercial area.
2	TIER 1	Unbuilt	Signalized 4-way intersection with 4 separated lanes E/W and 2 lanes N/S.	South Dade Trail is about 650 west at the next intersection. Commercial area. Gateway/trailhead potential.
3	TIER 2	Partially built	4-way 2-lane separated intersection	Potential for enhanced Biscayne-Everglades connection. Nearby school, transit, and commercial.
4	TIER 2	Unbuilt	4-way 2-lane separated intersection with left turn lanes	Potential for enhanced trail Biscayne-Everglades connection. Commercial area.
5	TIER 3	Unbuilt	Unsignalized 3-way 2-lane intersection	Park connection; Conceptualized/ rendered in Homestead study.
6	TIER 1	Partially built	3 signalized intersections 4-way 2-lanes with left turn lanes; 2 on busway.	Forms a unique triangle in commercial district. Confluence of several trails and intersections.
7	TIER 1	Partially built	Signalized 4-way 2-lane intersection	Homestead's City Hall at southwest corner of the intersection. Good candidate for enhanced connections.
8	TIER 3	Partially programmed	Canal/turnpike crossing	Trail connection here unlikely due to a canal crossing/Florida's Turnpike Homestead Extension.
9	TIER 1	Partially built	Midblock, existing bridge/canal crossing	Provides access to commercial, SW 296 <sup>th</sup> Street SMART Plan station, residential, commercial, Seminole Wayside Park.
10	TIER 1	Partially built	Midblock; 4 travel lanes divided, bike lane, SB right turn lane.	Connections to school, low density residential.
11	TIER 3	Unbuilt	Canal/RR tracks.	Undeveloped; limited access and connection potential.
12	TIER 3	Partially built	Midblock; 4 travels divided; separated path and bike lanes around RR tracks.	Unique crossing with separated bike lanes from RR tracks; rural area with some commercial.
13	TIER 1	Partially built	Canal/midblock; 4 travel lanes divided with bike lanes	Aligns with Krome over bridge. Princeton Trail crosses sides of canal here. Residential, some commercial.
14	TIER 3	Unbuilt	Canal/RR tracks	Undeveloped; limited access and connection potential.
15	TIER 1	Partially built	Signalized 5-point intersection + busway.	Commercial intersection; opportunity for enhanced crossing.
16	TIER 1	Both built	Signalized 4-point intersection + busway.	Commercial intersection with Walmart; opportunity for enhanced crossing.
17	TIER 2	Unbuilt	Canal/RR tracks	Close to residential. No roadway.
18	TIER 1	Programmed /built	Midblock crossing with 4 separated travel lanes.	Identical crossing enhancements on north and south sides. Rural.

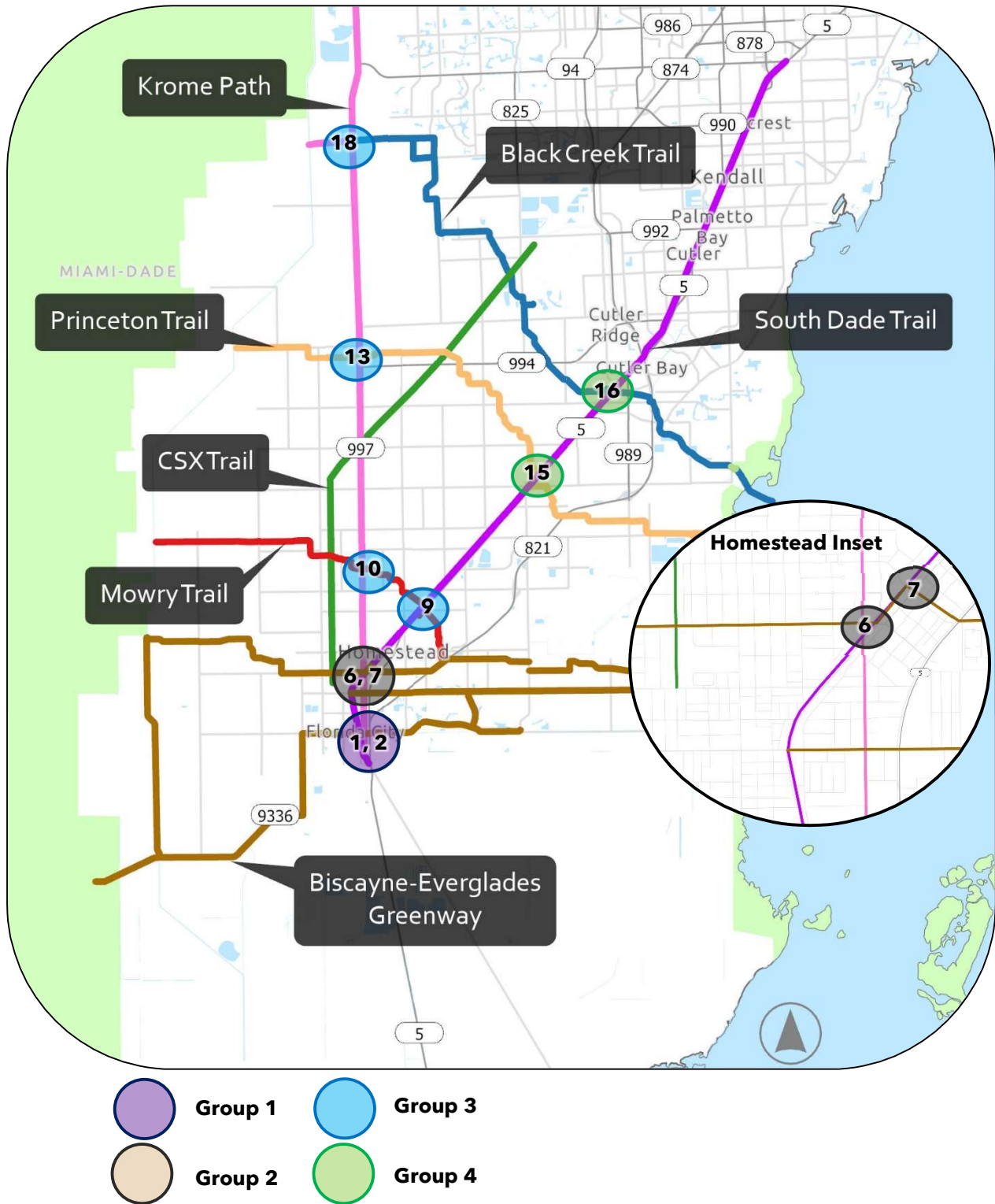
### Typology Groups

As a result of the spatial analysis, similar trail connections and typologies were grouped together to form the final four trail emphasis areas. These areas will be the focus of the next phase of the study, which develops recommendations and renderings for trail connection improvements. The final groups are provided in **Table 3-3** below and displayed in **Figure 3-3**. The groups are numbered from south to north and not by priority. They are color coded as follows: **Group 1 (purple)**, **Group 2 (brown)**, **Group 3 (blue)**, and **Group 4 (green)**.

**Table 3-3 Final Typology Groups**

Group	Name	Connections	Location	Municipality	Trails	Notes
1	Florida City/Southern Terminus	1	W Palm Drive/Busway	Florida City	South Dade Trail, Biscayne-Everglades Greenway, Krome Path	Trails are about 650 feet apart providing an opportunity for a trailhead. Similar intersection improvements. Additionally, the southern terminus of the two trails just south of this intersection could be considered as part of the connection/enhancement.
		2	W Palm Drive/Krome Avenue			
2	Homestead Confluence	6	W Mowry Drive/SR 997 (Krome Ave)/Busway	Homestead	South Dade Trail, Biscayne-Everglades Greenway, Krome Path	Connection 6 is the trail triangle and Connection 7 provides access to City Hall and the transit center.
		7	E Mowry Drive/Busway			
3	Canal Crossings	9	Busway/Mowry Canal	Miami-Dade County	South Dade Trail, Mowry Trail	Similar midblock creek crossings with 4 travel lanes. Variety of other connections including residential, commercial, and transit locations.
		10	Krome Avenue/Mowry Canal		Krome Path, Mowry Trail	
		13	Krome Avenue/Princeton Trail		Krome Path, Princeton Trail	
		18	Krome Avenue/Black Creek Canal		Krome Path, Black Creek Trail	
4	US 1 Commercial	15	US 1/Coconut Palm Drive	Miami-Dade County	South Dade Trail, Princeton Trail	Similar intersections across Busway/US 1 providing access to commercial, residential, and schools.
		16	US 1/SW 117th Avenue		South Dade Trail, Black Creek Trail	

Figure 3-3 Final Groups



### 3.3 CSX Linear Park

In addition to the typology groups identified in **Sections 3.1** and **3.2**, the potential CSX Linear Park through the City of Homestead was included as a focus area in this study. This focus area was included as a result of the findings of documents that were published after the start of this study, including the *CSX Railroad Corridor Assessment Final Report* published in November 2023 and the *City of Homestead Parks Master Plan*, in combination with meetings from CSX in 2024 regarding the feasibility of a linear park within their right-of-way.

- ◆ **CSX Railroad Corridor Assessment Final Report:** stated that CSX intends to maintain the option to implement passenger rail service within the corridor at some point in the future.
- ◆ **Homestead Parks Master Plan:** Conceptualized obtaining CSX right-of-way to implement a linear park throughout the CSX corridor (see **Figure 3-4**).

This linear trail would serve the South Dade region as a whole by providing a quality regional trail facility while linking currently disconnected neighborhoods and communities within the City of Homestead across the existing CSX right-of-way.

Moving forward, the study team will merged the ideas conceptualized amongst the stakeholders in Summer 2024 to explore the feasibility of a rail-with-trail concept that would preserve the future passenger rail along the corridor *and* the linear park through the City of Homestead within the same right-of-way, or an interim use agreement for the corridor that would facilitate a linear park within the right-of-way until a passenger rail is implemented.

**Figure 3-4 Proposed Linear Park Concept, City of Homestead**



Source: Homestead Parks Master Plan, Figure 89



## Section 4.0 | Recommendations

## 4.0 Recommendations

The final phase of the study process was to develop recommendations for each of the final groups and for the future of the CSX linear park. To accomplish this, a set of enhancements was developed for each group with the premise that the same type of enhancements could be applied to all of the trail connections within the group.

The recommendations were developed using best practice reference documents for bicycle, pedestrian, and trail infrastructure connection enhancements including:

- **AASHTO's** *Guide for Development of Bicycle Facilities* and *Guide for the Planning, Design, and Operation of Pedestrian Facilities*
- **FDOT's** *Florida Greenbook, Complete Streets Implementation Plan, and FDOT Design Manual (FDM)*
- **FHWA's** *Improving Intersections for Bicycles and Pedestrians Fact Sheets*
- **ITE's** *Designing Walkable Urban Thoroughfares: A Context-Sensitive Approach*
- **National Association of City Transportation Officials (NACTO)** *Urban Bikeway Design Guide and Urban Street Design Guide*
- **Rails-to-Trails Conservancy's (RTC)** *Trail Building Toolbox*.

Overall, the customized recommendations for each group were designed with scalability in mind, ensuring that the enhancements could be consistently implemented across trail connections within the group. By focusing on adaptable solutions, the Study aims to create a cohesive and sustainable vision for the future, fostering connectivity, and accessibility while promoting the trail system's long-term development as a vital community resource.

This section is organized as follows:

- ◆ **4.1 Recommended Trail Connection Enhancements**
- ◆ **4.2 Group 1: Florida City/Southern Terminus Recommendations**
- ◆ **4.3 Group 2: Homestead Confluence Recommendations**
- ◆ **4.4 Group 3: Canal Crossings Recommendations**
- ◆ **4.5 Group 4: US 1 Commercial Recommendations**
- ◆ **4.6 CSX Linear Park Recommendations**
- ◆ **4.7 Conclusion**



## 4.1 Recommended Trail Connection Enhancements

A list of recommended trail connection enhancements was developed to guide the improvement of trail connections across the four distinct typology groups. Each enhancement is accompanied by a brief description and visual examples, showcasing how it can enhance the safety, accessibility, and functionality of critical trail linkages. These measures focus specifically on improving the points where trails intersect with roads, canals, railways, and other obstacles, ensuring that trail users—whether people walking, biking, or other—can move safely and efficiently between destinations.

While not every enhancement applies to all typology groups, the list provides a versatile toolkit for enhancing trail connections in various contexts. Planners, engineers, and stakeholders can use this resource to identify solutions that address the specific challenges of each group, whether it's improving crossings, integrating safe access points, developing community features and landmarks, or upgrading infrastructure. By focusing on strengthening these trail connections, communities can create a more integrated, accessible, and connected trail network that better serves both recreational and commuter need

### Protected Intersection Design

A protected intersection is a safety-focused design that provides physical separation between motor vehicles and non-motorized trail users. Protected intersections can dramatically reduce the likelihood of crashes, as they manage vehicle movements more effectively and give priority to non-motorized users. Key features include:

#### Corner Refuge Islands, Curb Extensions, and Bulb-Outs

These islands provide a safe waiting area for cyclists and pedestrians, reducing the crossing distance and giving them a physical buffer from turning vehicles. They also reduce the crossing distance for pedestrians and make them more visible to drivers.

#### Setback Crossings

Crosswalks and bike crossings are set back several feet from the motor vehicle lanes, giving drivers more time to react and providing better sightlines.

#### Route Path Markings Through Intersection

The bike route path should be highlighted and painted through the intersection with clear markings to reduce conflicts between motorized and non-motorized users and to draw attention to the bike facility.

#### Raised Intersections or Crossings

Slightly raised crossings to increase visibility of trail users and encourage vehicles to slow down.

#### Pedestrian Refuge Islands

Provide a safe halfway point for crossing, particularly where longer wait times between traffic signals may occur.

#### Bike Lane/Shared Use Path Transition/Protected Bike Lanes

The transition between a bike lane and a shared-use path is designed to ensure smooth, safe movement for bicycles and pedestrians while maintaining clear separation from vehicular traffic. These transitions include gentle curb ramps allow for easy transition between the two. Protected bike lanes are defined as physically-separated bike lanes that are either at street-level or sidewalk-level.



*Corner of a protected intersection example, Looplink, Chicago, IL (Source: Flickr - John Greenfield.)*

Figure 4-1 FHWA Protected Intersection Example



FHWA rendering of protected intersection example improvements for a traditional signalized intersection. Source: [Improving Intersections for Bicycles and Pedestrians Fact Sheet](#).

### Traffic Signal Enhancements

Implementation of traffic signal enhancements would need to be coordinated with TS&S and Miami-Dade DTPW.

#### Leading Pedestrian Intervals (LPI)

Gives pedestrians and bicycles a head start by a 2-3 seconds before vehicles can move, increasing visibility and reducing conflicts with turning traffic.

#### Bicycle-Specific Traffic Signals

Bike traffic signals that separate bike movement phases from vehicle traffic.



### Intersection Markings and Signage

#### High Visibility Crosswalks and Bike Lanes

Bright, durable markings to delineate pedestrian and cyclist zones at crossings, helping to alert drivers. These can also include painted and decorative crosswalks.

#### Green Painted Bike Lanes

Provide clear guidance to both cyclists and motorists, reducing the likelihood of conflicts, particularly at intersections.

#### Advance Yield or Stop Markings

Placing stop lines further back from the crosswalk allows drivers more time to see pedestrians and cyclists, reducing the chances of accidents.



*Decorative crosswalk in Coral Gables. Image Credit: Project Team.*

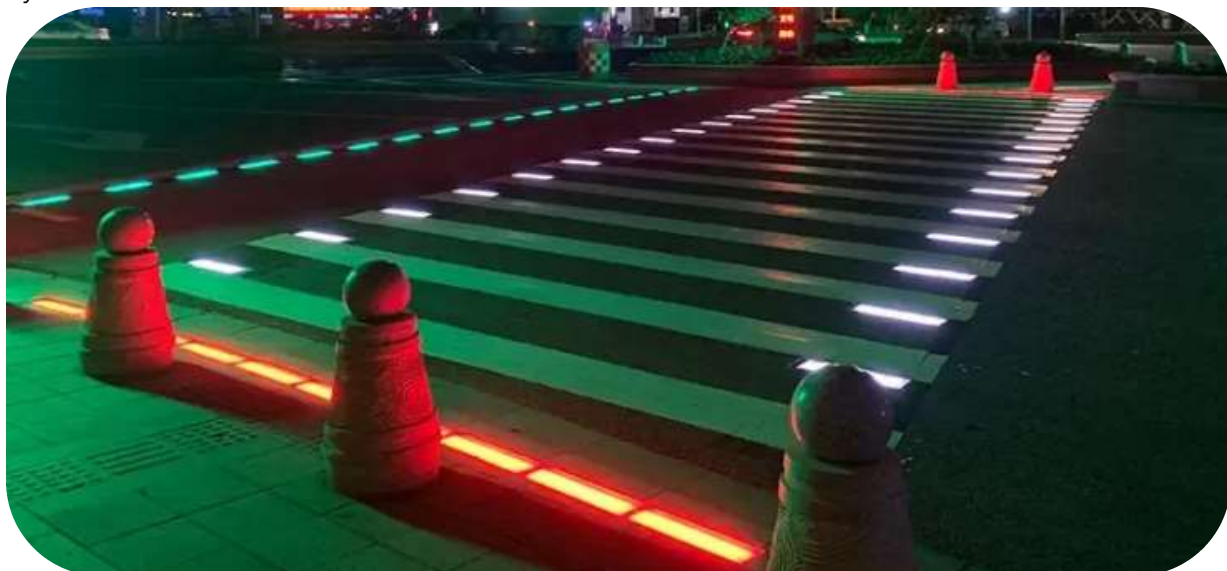
### Lighting and Visibility Improvements

#### Enhanced Lighting

Additional lighting at intersections can significantly improve nighttime visibility for both drivers and pedestrians.

#### In-Pavement Lighting Systems

Lights embedded in the pavement can alert drivers to crossing pedestrians or bicycles when activated by sensors.



*In-pavement lighting example using LED brick lights. Image Credit: [Sinowatcher](#).*

## Wayfinding

A comprehensive wayfinding system is crucial to ensure trail users can easily and confidently navigate trails, connect to key destinations, and access necessary amenities. The system should be designed to meet the needs of all users, including people walking, biking, and people with disabilities. A well-executed wayfinding system promotes not only navigation but also a sense of community, engagement, and safety. By combining clear, visible signage with educational and interactive elements, trail users are provided with an enriching and informed experience that enhances their connection to the natural and built environments around them. Implementation of a wayfinding system would need to be coordinated with Miami-Dade PROS as they will likely be the maintaining agency. Key elements of an effective wayfinding system include:

### Trailhead Signage

At the beginning of each trail or major access point, large, easy-to-read trailhead signs should provide critical information. This may include:

- ◆ A detailed trail map
- ◆ Mileage and estimated travel times to key destinations
- ◆ Safety tips and rules of the trail
- ◆ Emergency contact information
- ◆ Nearby facilities such as restrooms, water stations, and parking areas
- ◆ Consistency and branding
- ◆ Feature lighting to enhance visibility at night or low-light conditions

### Directional Signage Along the Trail

Clear, consistent directional signs should be installed at regular intervals and at decision points, such as intersections or trail junctions. These signs should:

- ◆ Indicate distance and direction to major destinations
- ◆ Highlight connections to other trails, parks, public spaces and other points of interest
- ◆ Use universal symbols where possible for accessibility

### Digital Integration

Incorporating digital wayfinding tools, such as QR codes that link to interactive maps or apps, can enhance the user experience. These tools can provide real-time information about trail conditions, events, or nearby services like bike repair stations and cafes.



Example wayfinding system showing trailhead and directional signs. Image Credit: [Discover Northeast Michigan](#).

## Trailhead Design

A trailhead serves as the starting and finishing point for trail users, providing essential amenities, safety features, and information. Ensuring adequate lighting is crucial for early morning or evening use.

Functional design elements include:

### Parking Area

A well-organized parking lot with clear access points is essential for visitors arriving by car. The parking area may include: sufficient parking spaces, including designated spots for people with disabilities; bike racks; electric vehicle charging stations to support sustainable travel; spaces for buses or large vehicles, if the trailhead is expected to draw groups or events. Provide benches, picnic tables, or pavilion shelters where users can rest, socialize, or prepare for their trail activities. Shade structures or shelters can also offer respite from sun or rain.

### Restroom Facilities

Installing clean, well-maintained restroom facilities is critical. Options include: Permanent restroom structures with plumbing or environmentally friendly composting toilets; handwashing stations; and water fountains or hydration stations.

### Recreational and Fitness Amenities

These features can make the trailhead a destination in its own right, encouraging broader community use:

- ◆ **Exercise Equipment:** Outdoor fitness stations can add value for users who want to work out before or after their trail use.
- ◆ **Playground and Family-Friendly Features:** To attract families, consider adding a small playground or nature play area.
- ◆ **Bike Repair Stations:** Self-service facilities equipped with tools and a bike stand, allowing bicyclists to perform basic maintenance or repairs on the go.



*Example trailhead restroom facilities with sustainability features, lighting and landscaping for Zilker Park in Austin, Texas. Image Source: [Method Architecture](#).*

### Environmental and Aesthetic Enhancements

Thoughtfully designed environmental and aesthetic enhancements can create a welcoming atmosphere.

- **Landscaping Considerations:** Use native plants and trees to enhance the natural beauty of the area, provide shade, and support local biodiversity. Low-maintenance, drought-tolerant plants are recommended for sustainability. Incorporate green infrastructure, such as permeable pavements
- **Sustainable Design Features:** Incorporate green infrastructure, such as permeable pavements for parking areas, rain gardens, and bioswales to manage stormwater runoff. These features help protect the environment and can be educational as part of the trailhead's design.
- **Public Art and Cultural Features:** Consider incorporating public art, sculptures, or murals that reflect the local culture, history, or natural beauty of the region. These features can make the trailhead a point of pride for the community and serve as landmarks for trail users.

### Summary Recommendations by Typology Group

In conclusion, the recommended enhancements for trail connections across the four typology groups provide a range of solutions to improve safety, accessibility, connectivity, and sense of community amongst South Dade. By addressing site-specific challenges, from canal crossings to busy commercial intersections, these recommendations offer practical approaches for enhancing South Florida’s trail network. Each solution aims to strengthen the region's trail infrastructure by highlighting the focus areas where trails connect, while promoting active transportation and sense of community. **Table 4-1** provides a summary matrix of the recommended countermeasures by typology group, serving as a guide to apply the most relevant solutions to each unique context.

**Table 4-1 Summary Recommendations by Typology Group**

Enhancement Group	Enhancement	Group 1: Southern Terminus	Group 2: Homestead Confluence	Group 3: Canal Crossings	Group 4: US 1 Commercial
Protected Intersection Designs	Corner Refuge Islands	✓	✓		✓
	Setback Crossings	✓	✓		✓
	High Visibility Crosswalks	✓	✓	✓	✓
	Path Markings Through Intersection	✓	✓	✓	✓
	Green Painted Bike Lanes	✓	✓	✓	✓
	Pedestrian Refuge Islands	✓	✓	✓	✓
	Protected Bike Lanes	✓			
	Bike Lane/Path Transition	✓	✓	✓	✓
	Raised Intersections or Crossings	✓	✓	✓	✓
Traffic Signal Enhancements	Leading Pedestrian Intervals (LPIs)	✓	✓		✓
	Bicycle-Specific Traffic Signals	✓	✓	✓	✓
Lighting and Visibility	Enhanced Lighting	✓	✓	✓	✓
	In-Pavement Lighting Systems	✓	✓	✓	✓
Wayfinding	Trailhead Signage	✓	✓	✓	✓
	Directional Signage Along Trail	✓	✓	✓	✓
	Digital Integration	✓	✓	✓	✓
Trailhead Design	Parking Area	✓	✓		
	Restroom Facilities	✓	✓		
	Recreational Amenities	✓	✓		
	Environmental and Aesthetic	✓	✓		
Canal Crossings	New Bike/Ped Bridge			✓	
	Trail Underpass			✓	

## 4.2 Group 1: Florida City/Southern Terminus Recommendations

### Group Description

Group 1 consists of Trail Connections 1 and 2 within Florida City along West Palm Drive (SR 9336), which is a 4-lane divided state highway with bike lanes. These connections are approximately 650 feet apart located at the Busway and Krome Avenue intersections of West Palm Drive. Not only would these two intersections be outfit with similar enhancements, this group would also be an ideal candidate to feature a trailhead as it is near the southern terminus of two trails.

### Featured Trails

South Dade Trail, Biscayne-Everglades Greenway, Krome Path

### Recommendations Summary

Key recommendations for this group include protected intersections, painted and protected bike lanes, and trailhead at the southern terminus of the two trails.

### Protected Intersections

As further detailed in the enhancement types, a protected intersection would provide a safety-focused emphasis area at the major trail crossing intersections along a major state highway (SR 9336). By enhancing the intersections with protected intersection design features including corner and median refuge islands, setback crossings, painted bike lanes and trail paths, and raised crossings, the safety and visibility of three trails connecting in this group would improve the functionality of the trail system.

### Trailhead

There is ample opportunity to develop a trailhead destination near Krome Avenue and SW 177<sup>th</sup> Court, which is the southern terminus of the Krome Path. This location offers a prime opportunity to create a welcoming, accessible, and functional hub that encourages community engagement and enhances the trail network. By implementing the trailhead design recommendations listed in **Section 4.1**, the southern terminus trailhead can become an attractive, functional, and safe hub that enhances the trail experience for a wide variety of users and would serve as the gateway to the Miami-Dade trail systems.

### Other Recommendations

It is also important to consider other enhancements to this group, such as a uniform and unique wayfinding system to allow users to navigate the three intersecting trails, and for enhanced lighting and in-pavement lighting systems focused near the trail connections.

**Figure 4-2** displays the existing conditions of the Florida City connections, and **Figure 4-3** displays concept rendering as to how a protected intersection could look within this typology group.



South Dade Trail and Palm Drive. Image Source: [Google Street View, 2021](#).



Figure 4-2 Florida City Existing Conditions

Existing Conditions

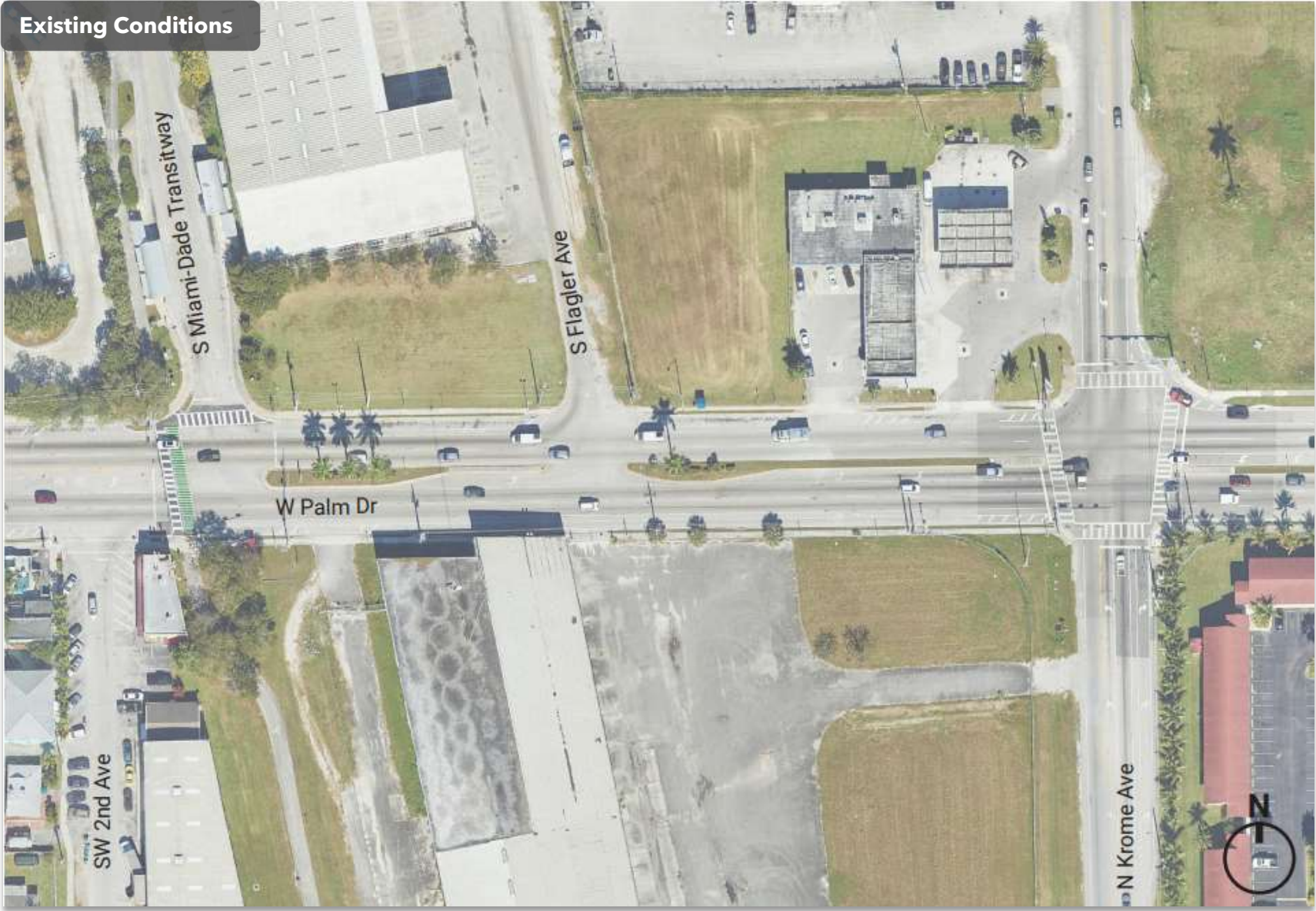
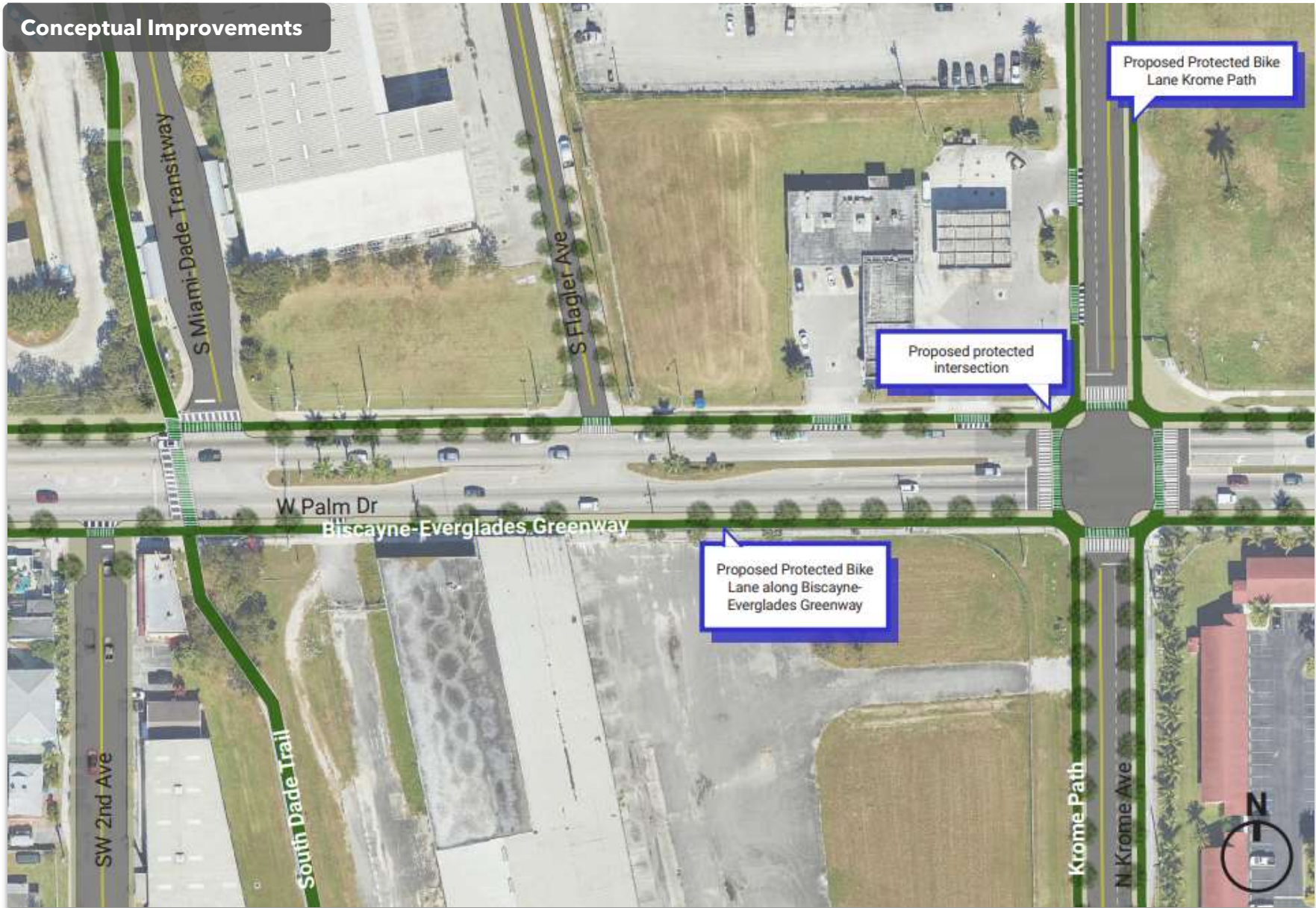


Figure 4-3 Florida City Example Improvements



## 4.3 Group 2: Homestead Confluence Recommendations

### Group Description

The confluence of the South Dade Trail, Biscayne-Everglades Greenway, and the Krome Path in the City of Homestead, near Krome Avenue and Mowry Drive, presents a critical opportunity to enhance multimodal connectivity in the South Dade area. This connection of three major trails serves as a vital hub for both recreational and commuter use, linking residents and visitors to key community assets, including Homestead City Hall, the Homestead Station Transit Center, Historic Main Street, and Losner Park. By improving the safety and accessibility of these trail connections, the city can foster a stronger sense of community, encourage outdoor activity, and create safer, more efficient routes for people walking and biking.

### Featured Trails

South Dade Trail, Biscayne-Everglades Greenway, Krome Path

### Recommendations Summary

Key recommendations for this group include a protected intersections, protected bike lanes, and trailhead with vehicle parking locations.

#### Protected Intersections

A protected intersection at the Biscayne-Everglades Greenway and Krome Path connection at Krome Avenue and Mowry Drive would likely include improvements such as painted crosswalks, corner refuge islands, and curb extensions to offer safer, and more visible crossings for trail users.

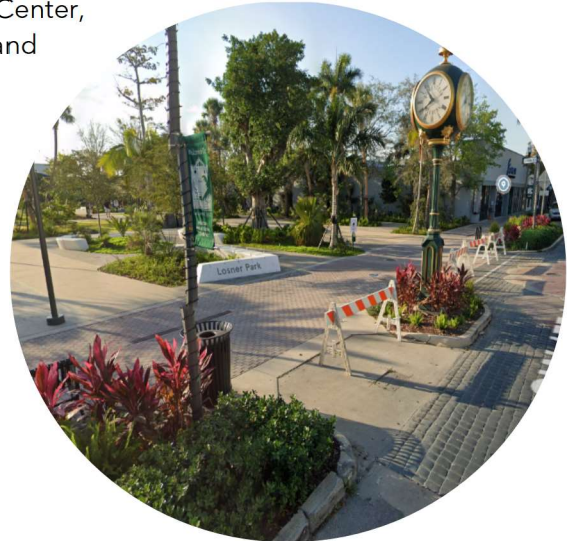
#### Protected Bike Lanes

Protected bike lanes along Mowry Drive for the Biscayne-Everglades Greenway would offer enhanced trail visibility and user safety within the area.

#### Trailhead

A trailhead location with parking was identified between Flagler Avenue, the Busway, and Mowry Drive. A trailhead would provide a gateway feature to the trail system in the heart of Homestead as well as provide users more access to the trail by serving as a parking area.

**Figure 4-4** displays the existing conditions of the Homestead Confluence area, and **Figure 4-3** displays concept rendering as to how example improvements could look within this typology group.



*Krome Path adjacent to Losner Park. Image Source: [Google Street View, 2023](#).*



Figure 4-4 Homestead Confluence - Existing Conditions

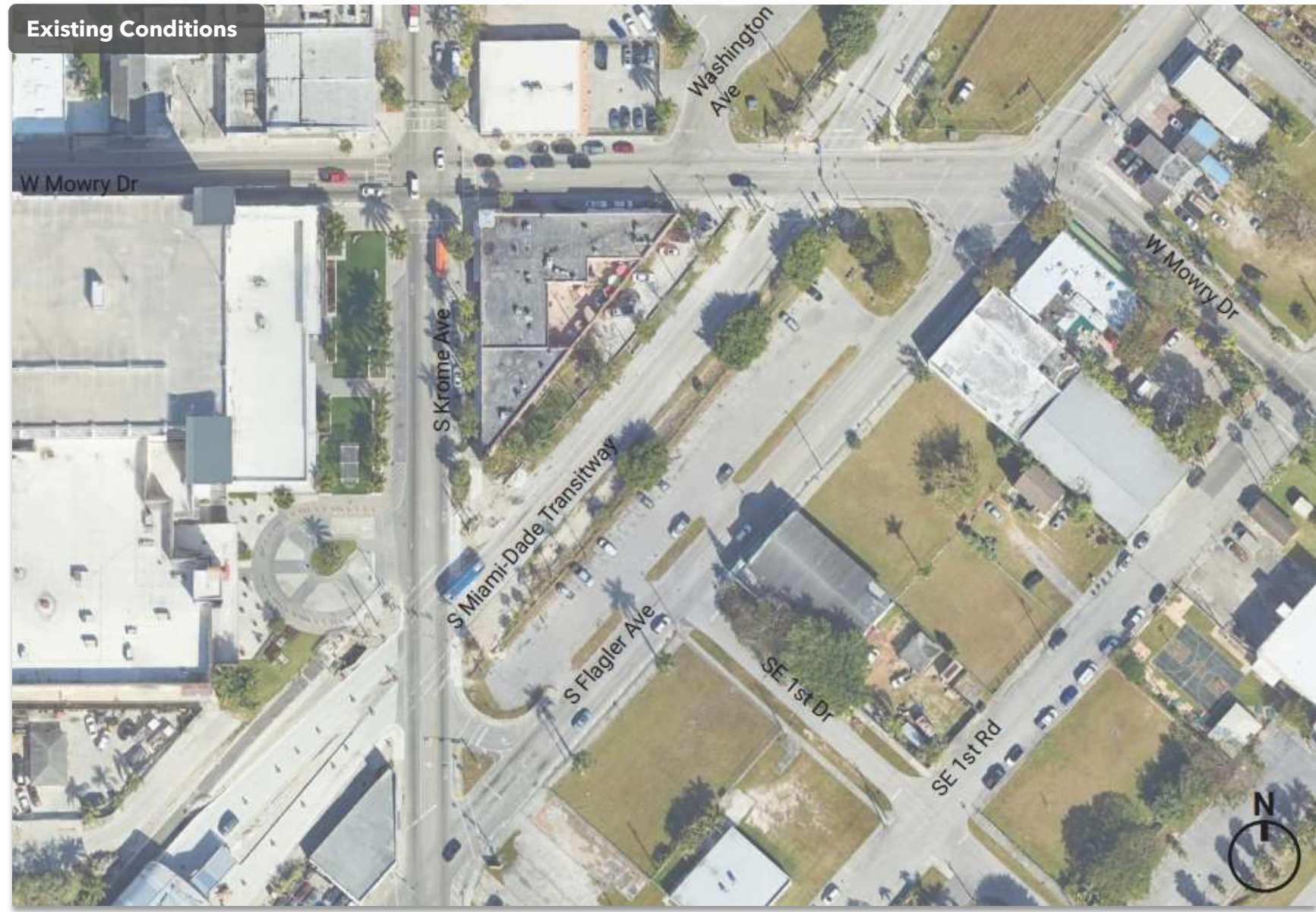
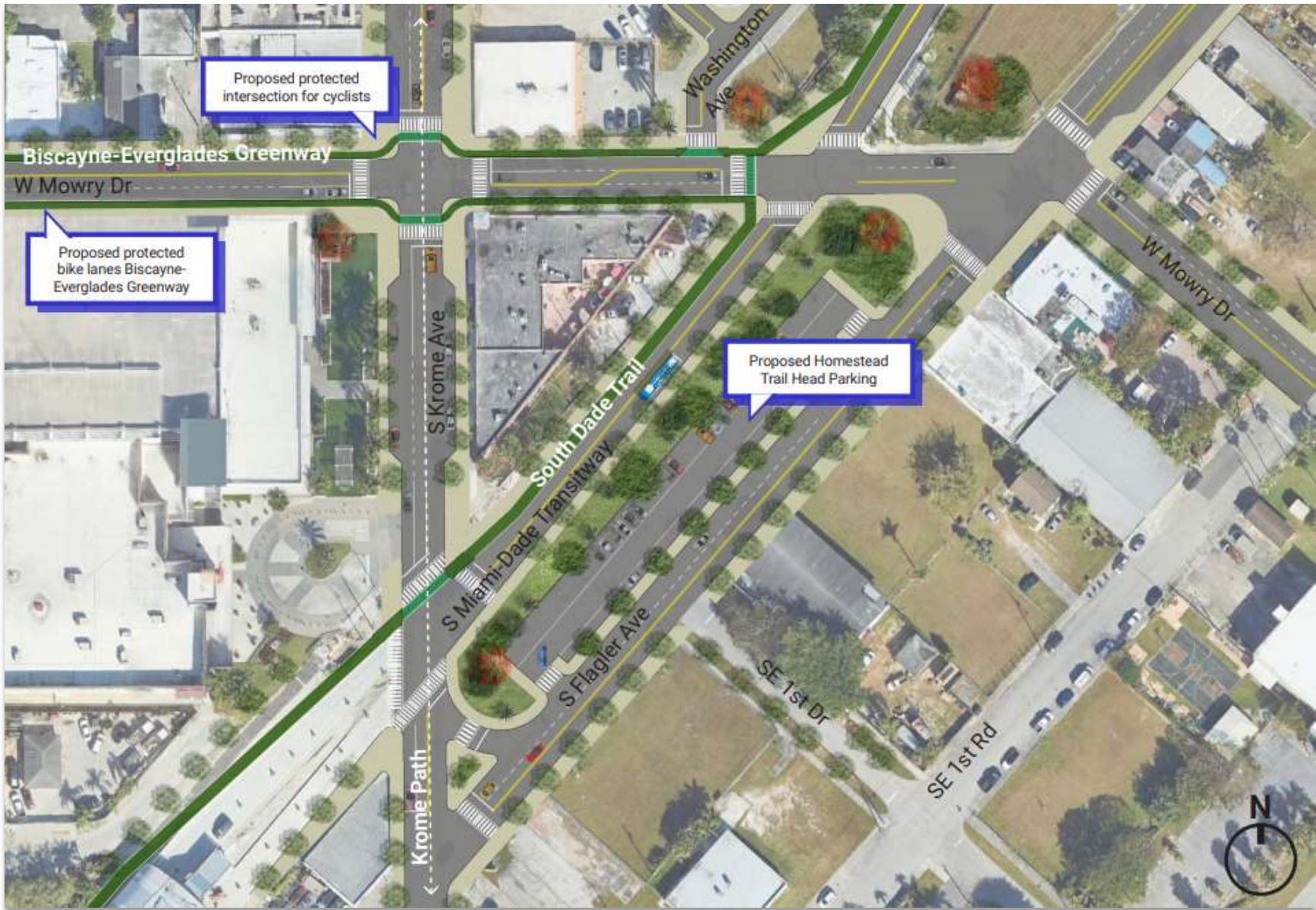


Figure 4-5 Homestead Confluence - Example Improvements



## 4.4 Group 3: Canal Crossings Recommendations

### Group Description

Trail connections over canals in South Dade represent a unique typology, where each crossing must address the specific characteristics of the site—such as canal width, water flow, existing roadways and infrastructure, surrounding land use, and other environmental factors. However, a set of general recommendations has been developed to guide the design and implementation of trail connections in these areas.

These guidelines aim to ensure safety, durability, and accessibility for trail users, while minimizing environmental impact and accommodating the existing canal maintenance activities. By providing standardized yet adaptable solutions, these recommendations can help create consistent and reliable connections across the region, enhancing the overall trail network and promoting active transportation within South Dade.



*Bike/ped crossing to be utilized for the Black Creek Trail across canal C-1W on SW 155<sup>th</sup> Avenue. Image Source: [Google Street View, 2022](#).*

### Featured Trails

Black Creek Trail, Krome Path, South Dade Trail, Mowry Trail, Princeton Trail

### Canal Crossing Types

Canal crossing types summarized in this section include a new bike/ped bridge, a trail underpass, and a re-routed trail to an at-grade crossing.

#### New Bike/Ped Bridge

A dedicated pedestrian and bicycle bridge parallel to an existing vehicle bridge. It separates trail users from vehicular traffic, enhancing safety and accessibility. In South Florida, this option is ideal for crossing wide canals where adding a separated trail to an existing bridge may not be feasible, and space allows for a new structure.

#### Pros

- **Increased Safety:** Separates pedestrians and cyclists from vehicular traffic, reducing potential conflicts.
- **Dedicated Space:** Provides a trail-specific crossing, enhancing user comfort and accessibility.
- **Scenic Experience:** Offers a unique vantage point over the canal, adding recreational value to the trail.


#### Cons

- **High Cost:** Constructing a new bridge can be expensive, both in terms of materials and labor.
- **Space Requirements:** Requires sufficient space adjacent to the existing bridge for construction, which may not always be available.
- **Environmental Impacts:** Can have a greater impact on the surrounding environment, particularly near sensitive ecosystems like canals in South Florida.


## Trail Underpass

A trail underpass, or a path under the existing bridge, takes advantage of the space below to create a safe crossing for trail users. This option minimizes conflicts with traffic and preserves the scenic, natural environment of the canal area. This crossing type is especially applicable to South Florida’s low-lying terrain, where bridges often span canals with sufficient clearance for trail users underneath.

Figures 4-6 through 4-9 display concept renderings for example canal crossing underpasses.

**Pros** 

- **Minimized Traffic Interaction:** Keeps trail users completely separated from vehicle traffic, offering a safer, uninterrupted path.
- **Cost-Effective:** Often cheaper than building a new bridge since it uses existing infrastructure.
- **Less Visual Disruption:** Preserves the scenic view of both the bridge and the surrounding environment.

**Cons** 

- **Flooding Risk:** In South Florida’s low-lying areas, paths under bridges may be prone to flooding during heavy rains or storm surges.
- **Limited Clearance:** Some bridges may not have enough vertical clearance to safely accommodate a path underneath.
- **Security Concerns:** Paths under bridges can sometimes be poorly lit or less visible, which may raise safety concerns for users.

To enhance safety and comfort surrounding underpass trail crossings, several key strategies were gathered in the list below. Together, these strategies can collectively enhance the safety, visibility, and comfort of underpass trail crossings, making them more inviting and secure for trail users.

**Enhanced Lighting**

- Install bright, energy-efficient lighting throughout the underpass.
- Use motion-activated lights for added visibility and energy savings.
- Ensure lighting is evenly distributed to eliminate dark spots.

**Clear Signage and Wayfinding**

- Add visible signage indicating the entrance, exit, and directions.
- Use symbols and colors to indicate trail information and landmarks.
- Include signs warning of potential hazards, like low clearance or slippery surfaces.

**Open Sightlines and Visibility**

- Design the underpass with open sightlines, minimizing blind corners.
- Clear vegetation and obstacles around entrances and exits.
- Use transparent or grated walls where possible to provide visibility from outside.

**Path Markings and Separation**

- Use different textures or colors for distinct zones, aiding visually impaired users.
- Add warning indicators for approaching the underpass, like rumble strips or signage.

**Maintenance and Cleanliness**

- Regularly clean the underpass to remove litter, graffiti, and debris.
- Implement drainage systems to prevent water accumulation.
- Fix cracks or uneven surfaces promptly to avoid tripping hazards.

**Security Features**

- Install emergency call stations or panic buttons at regular intervals.
- Consider CCTV cameras for monitoring and security.
- Engage community or police patrols to increase security presence

**Aesthetic Improvements**

- Incorporate murals, greenery, or artwork to make the space welcoming.
- Use natural elements, like skylights or plantings, to reduce the sense of confinement.
- Add benches or seating areas at entrances for users to pause and feel more comfortable.

**Community Engagement**

- Gather feedback from users about specific safety concerns or desired improvements.
- Involve local artists or community groups in decorating and maintaining the space.
- Host events or activities to increase positive usage of the area and discourage loitering.



Figure 4-6 Canal Underpass Crossing, View 1

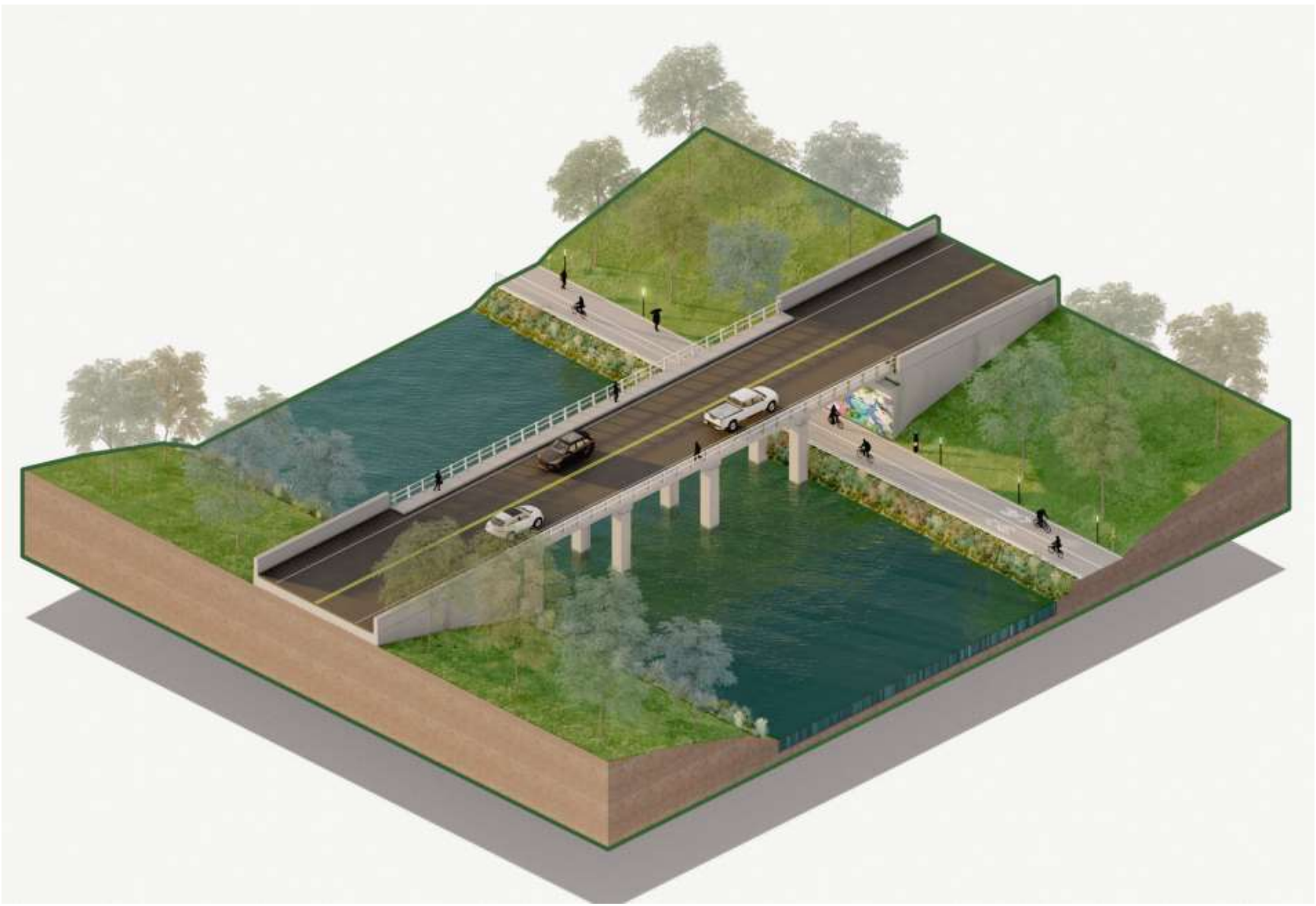




Figure 4-7 Canal Underpass Crossing, View 2

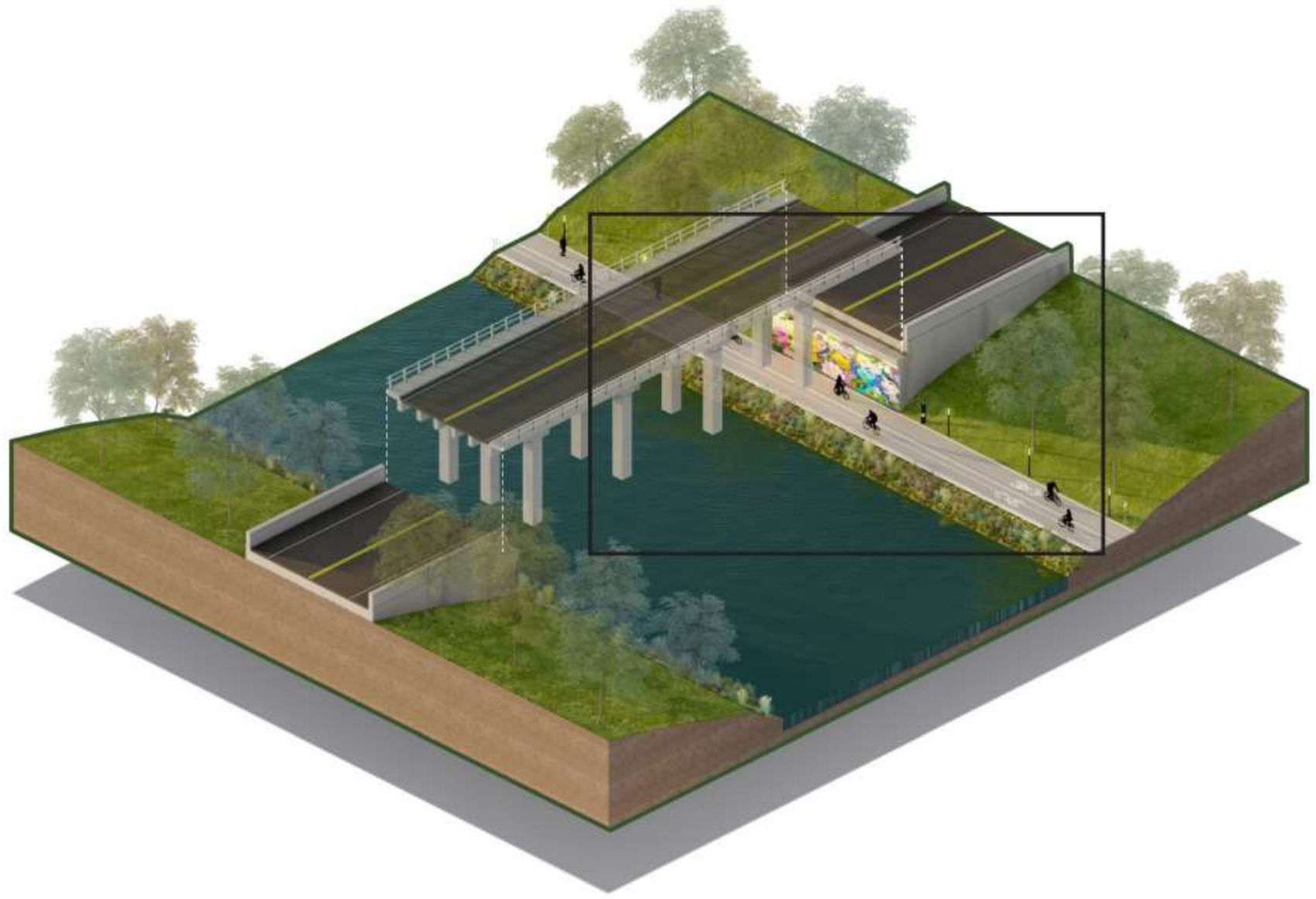




Figure 4-8 Canal Underpass Crossing, View 3

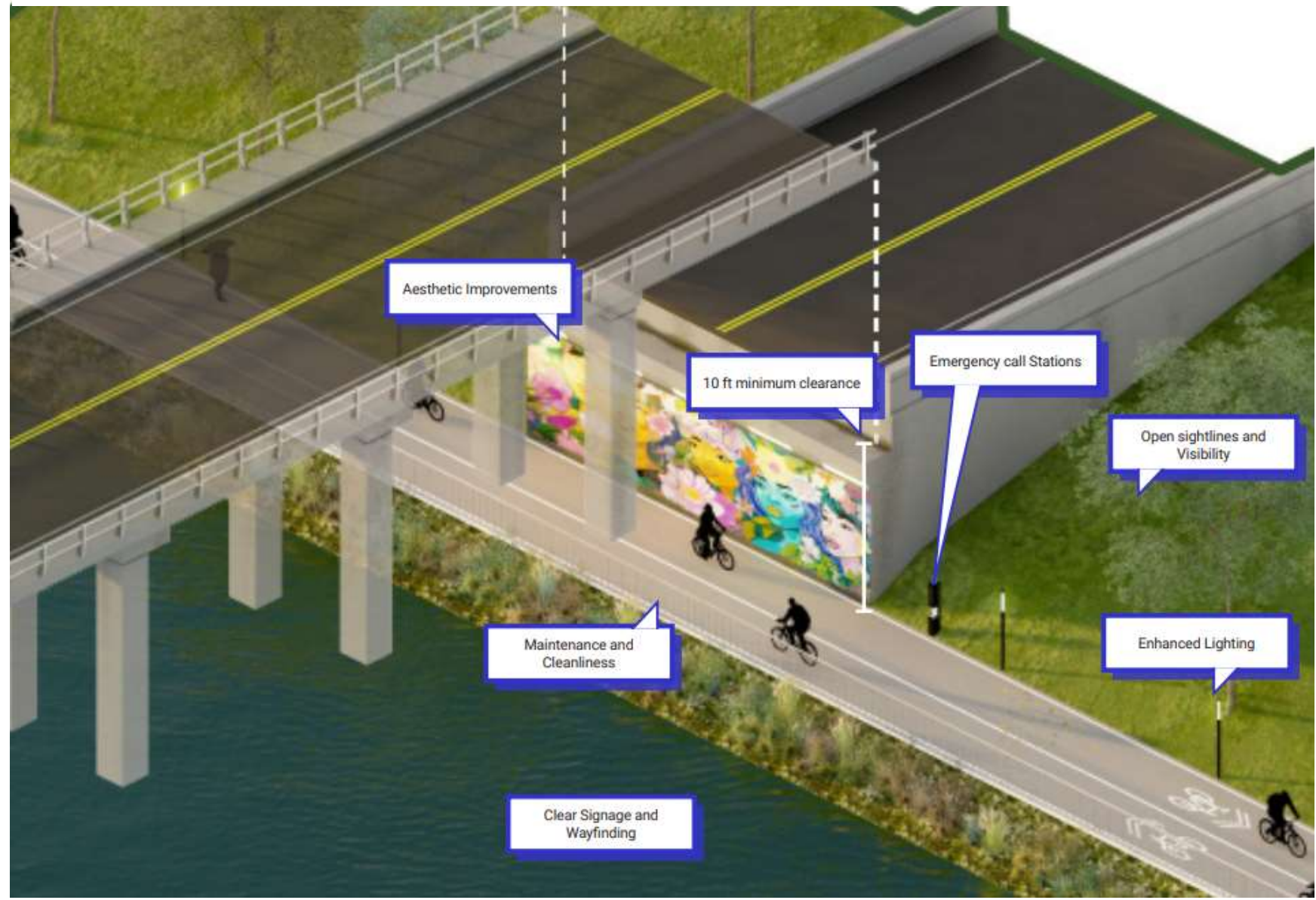




Figure 4-9 Canal Underpass Crossing, View 4



## 4.5 Group 4 Recommendations

### Group Description

Enhancing trail connections along the US 1 and Busway commercial areas are essential for improving the safety and accessibility of the South Dade trail network. The intersections in this group are characterized by a higher volume of traffic, multiple lanes, and a more commercialized surrounding land use compared to the trail crossings in Group 1. By improving these major trail connections, South Dade can promote safer and more efficient access to local amenities while balancing the needs of the busy roadway with those of active transportation users.



Existing trail crossings for the Black Creek Trail and South Dade Trail at SW 117<sup>th</sup> Avenue/SW 211<sup>th</sup> Street and the Busway. Image Source: [Google Street View, 2023](#).

### Featured Trails

Black Creek Trail, Princeton Trail, South Dade Trail

### Recommendations Summary

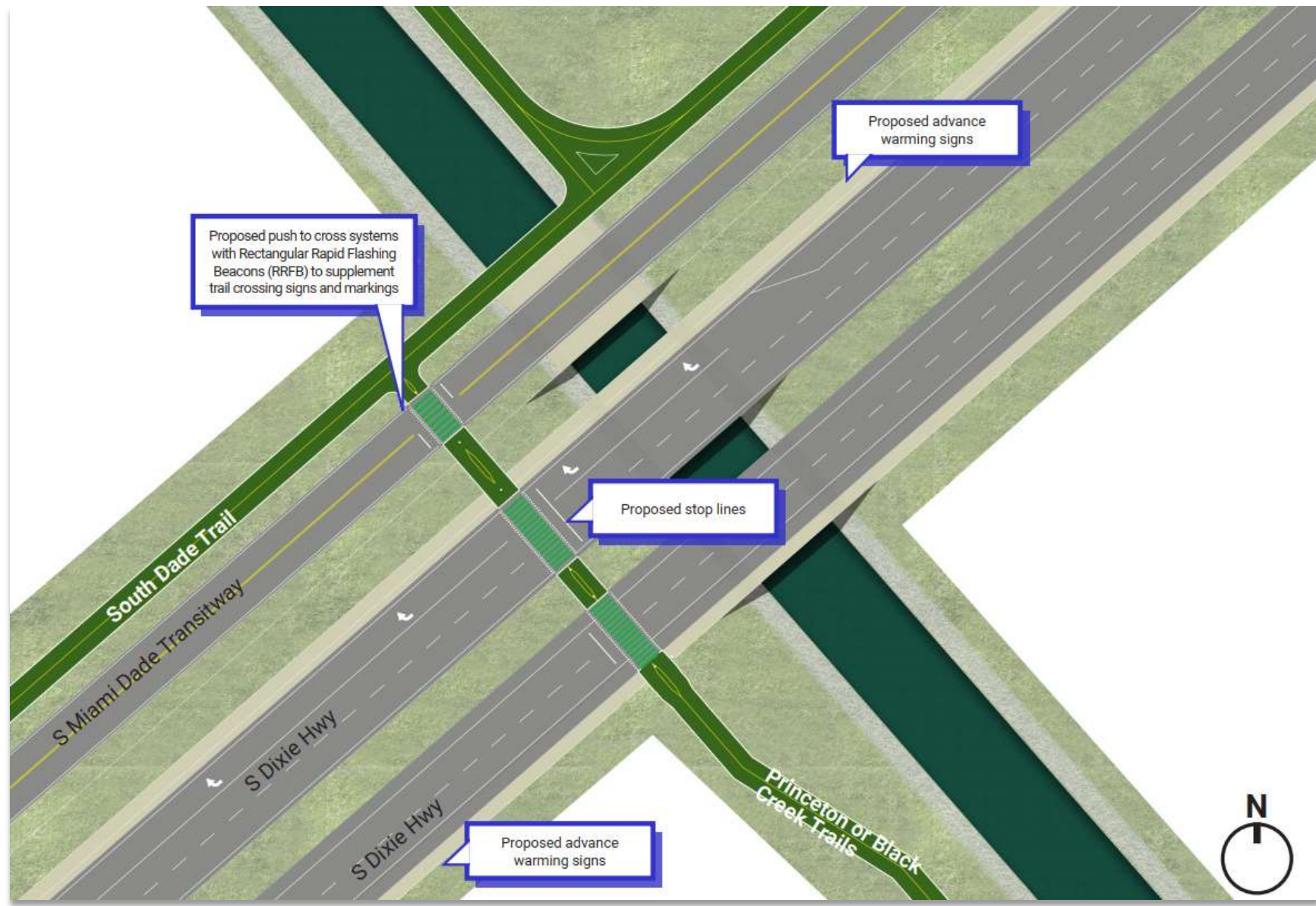
To ensure that the connections between these trails along US 1 remain safe, accessible, and integrated with the surrounding infrastructure, the following enhancements are recommended: protected intersections with signalized, high visibility crosswalks, pedestrian refuge islands, signal priority and timing adjustments, physical barriers between the trails and the roadway, green painted crossings, in-pavement lighting systems, and enhanced wayfinding with clear, visible signage for trail users approaching these intersections will improve navigation and awareness, especially at these busy commercial nodes.

Note: Some of these recommendations will need to be vetted and further studies with TS&S and Miami-Dade DTPW, particularly those recommendations involving signalization improvements.

**Figure 4-10** displays a concept rendering for an example US 1 crossing.



Figure 4-10 US 1/Busway Concept Rendering



## 4.6 CSX Linear Trail Recommendations

The proposed alternatives for the CSX rail line through the City of Homestead focus on revitalizing the corridor while balancing transportation needs and community benefits. The proposed alternatives include: Rail-with-Trail, a linear park concept, trail relocation, improved sidewalk connections, and an enhanced maintenance agreement.

### Rail-with-Trail

One key alternative is the rail-with-trail concept, which envisions a multi-use path running alongside the rail line, preserving the corridor for potential future passenger rail service. This approach would enhance mobility by providing safe, accessible spaces for pedestrians and bicycles without compromising the rail infrastructure. The rail-with-trail option would require careful planning to ensure safety and separation between the rail and trail users but could offer the most integrated solution for the community.

Key guidelines provided by the [Rails with Trails: Best Practices and Lessons Learned](#) document created by USDOT, Federal Rail Association (FRA), and the FHWA include the following:

- **Safety:** Establish minimum setbacks between trails and active rail lines to prevent trespassing and accidents, typically recommended between 10 and 30 feet.
- **Fencing and Barriers:** Install fencing, vegetation, or other barriers to separate trails from rail lines.
- **Crossings:** Ensure safe rail crossings with appropriate signage and infrastructure.
- **Collaborative Planning:** Work closely with CSX to address liability concerns and secure legal agreements.



*Frisco Trail in Arkansas with fencing, lighting, and narrow setbacks. Image Source: [Rails with Trails: Best Practices and Lessons Learned](#).*

### Linear Park Concept

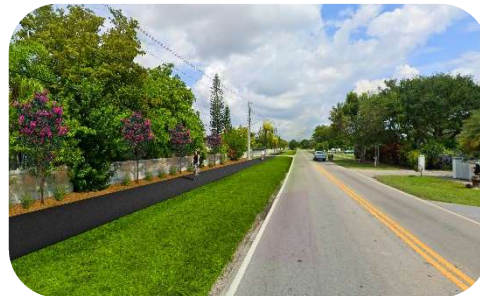
Another alternative is a linear park concept detailed in the *Homestead Parks Master Plan*. This concept could be executed through either an interim agreement between CSX and the City of Homestead, or through an outright purchase of the corridor. This option would focus on transforming the existing rail line into a public green space, potentially with trails, landscaping, and recreational amenities. An interim agreement might allow for phased development, starting with short-term trail improvements while retaining the possibility of rail service in the future. An outright purchase, on the other hand, would give the City full control of the land and the flexibility to design a long-term community park that serves local needs.



*Linear Park Example. Image Source: Homestead Parks Master Plan, 2023.*

## Trail Relocation

A third alternative under consideration is relocating the trail to a parallel road, such as SW 187<sup>th</sup>/14<sup>th</sup> Avenue, instead of using the CSX rail corridor. This option would place the trail in an area that may be easier to develop and maintain, while still providing connections across the CSX corridor. By moving the trail away from the active rail line, the city could avoid the complexities of working directly alongside the tracks and would reduce the direct interaction with the rail corridor itself.



Rendering of trail along SW 187<sup>th</sup>/14<sup>th</sup> Avenue  
Image Source; Project Team

## Improved Sidewalk Connections

A fourth and potential short-term alternative involves improving existing sidewalk and desire path connections across the currently underutilized CSX tracks. This option would focus on creating safer, more formalized pedestrian and bicycle crossings by upgrading informal pathways that have already emerged through community use. By enhancing these connections with paved sidewalks, clear markings, and maintained landscaping, the city can address immediate safety concerns and provide practical improvements to the area. This approach would still likely require an interim agreement between the City of Homestead and CSX, but it represents a more achievable, middle-ground solution that can enhance community mobility in the short term without the complexity of a full trail or park development.



Example existing connection that could be improved at SW 4<sup>th</sup> Street/10<sup>th</sup> Avenue. Image Source: [Google Streetview, 2022.](#)

## Enhanced Maintenance Agreement

A final alternatives to negotiate an enhanced maintenance agreement with CSX to ensure better upkeep of the area surrounding the tracks. Currently, the corridor is often seen as blighted and poorly maintained, contributing to negative perceptions of the area. A formal agreement for CSX to regularly maintain the vegetation, remove litter, and address safety hazards would significantly improve the aesthetic and safety of the corridor, even without additional infrastructure. While this option may not provide the visionary changes desired by the community, it would still represent a positive step in making the area cleaner, safer, and more welcoming to those living nearby.



Example existing undermaintained CSX track connection in a school zone. Image Source: [Google Streetview, 2022.](#)

All of these alternatives aim to enhance community connections across the CSX corridor, transforming a blighted and underutilized space into a valuable public asset. Each option offers distinct benefits, from preserving future rail service to creating immediate recreational opportunities, ensuring the revitalization of the corridor meets both transportation and community goals.

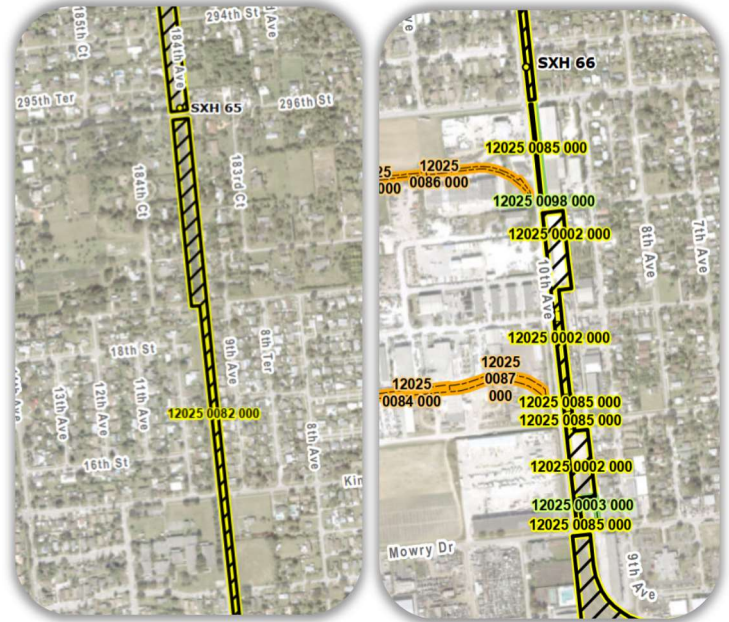
## CSX Implementation and Renderings

Based on meetings with the project working group/stakeholders, a rail-with-trail concept may be a viable option to implement and would provide a keystone trail facility for the region. However, in order to implement a rail-with-trail facility, the following details would need to be considered:

### CSX Corridor Right-of-Way

The right-of-way of the CSX corridor ranges from approximately 100 feet in northern segments, between 65 and 35 feet between 19<sup>th</sup> and 15<sup>th</sup> Street, and narrowing further to 30 feet adjacent to NW 10<sup>th</sup> Avenue. There are also several segment with around 70 feet of right-of-way available.

- Single track rail requires 15 feet minimum widths
- Double track rail requires 30 feet
- Edge of trail would need to be at least 5 feet from rail
- A rail-with-trail may be possible with a single track with narrow trail (10 feet) within a 30-foot right-of-way



CSX Corridor right-of-way examples..

### Environmental Considerations

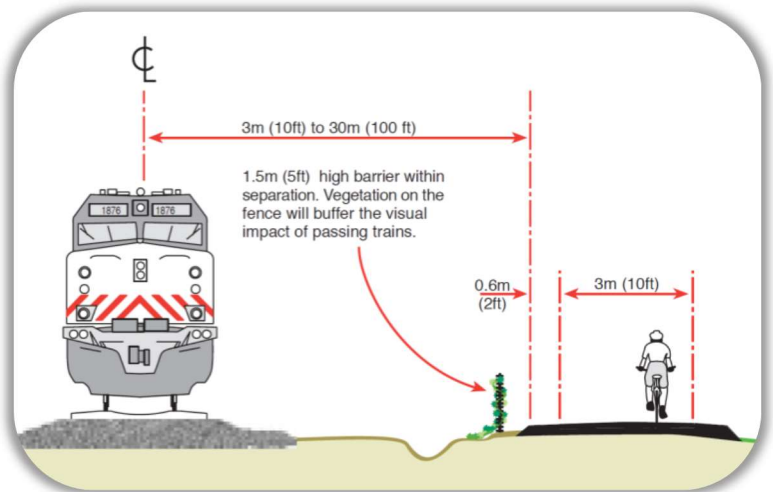
Converting the rail right-of-way with meandering trail and amenities may require environmental remediation. Rail lines are industrial in nature and repurposing them to an environmental and recreational use may require additional coordination.

### Interagency Coordination

Coordination amongst all stakeholders, including land purchasing, maintenance, and/or interim use agreements would need to be properly vetted.

### Future Use of the Rail

The future of the rail line would need to be considered, providing CSX and all stakeholders ample options for redevelopment and rail use for either light rail, passenger rail, and/or heavy rail. The future of the CSX rail line for rail use is yet to be determined, but the potential interim and/or future use of trail with recreation facilities is an option to explore.



**Figures 4-11** and **4-12** on the following page provide rail-with-trail concept renderings of the corridor.

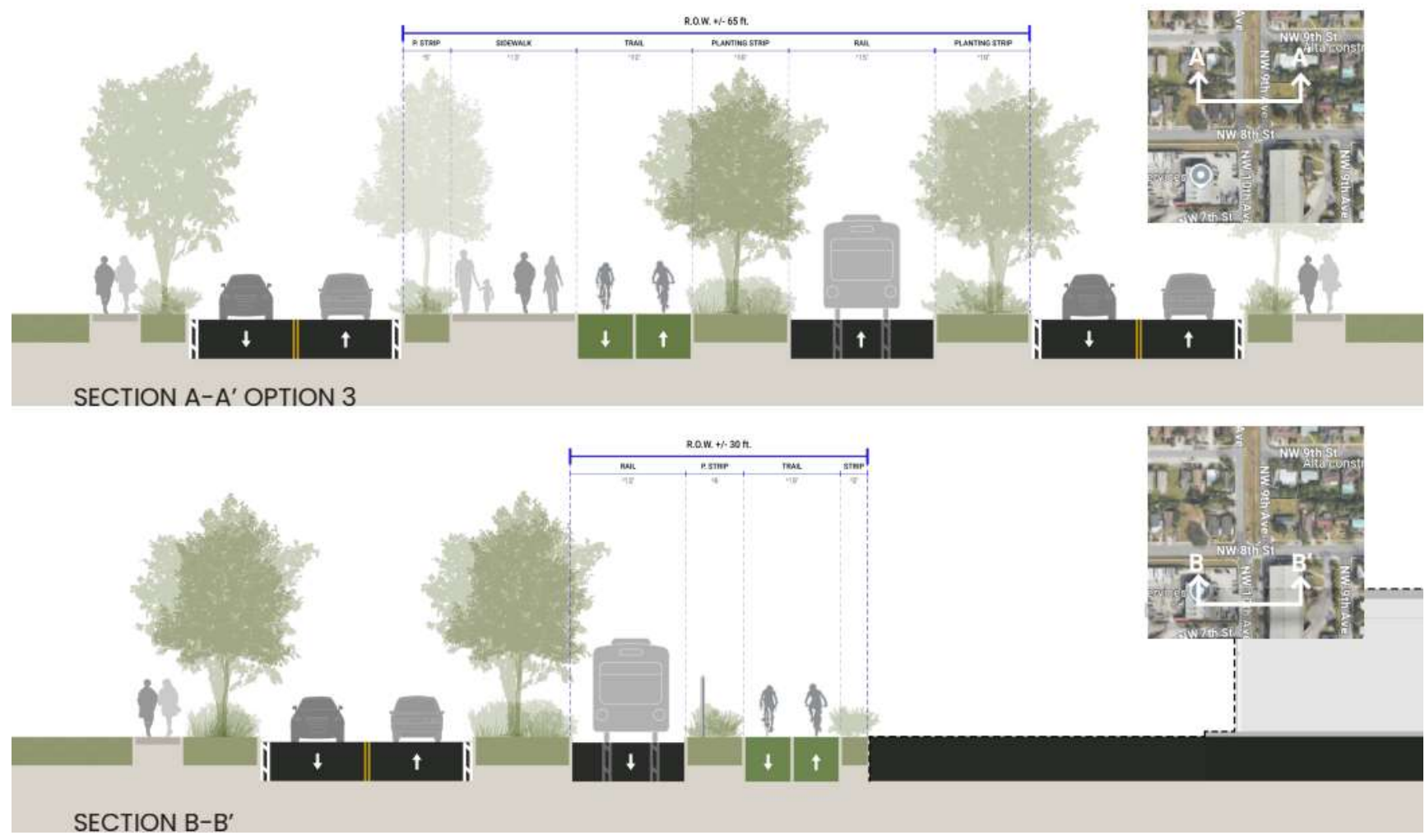
**Figure 4-13** provides examples of the [Dequindre Cut](#) trail in Detroit which implemented a rail-with-trail and linear park concept.

Figure 4-11 Rail-With-Trail Options 1 and 2





Figure 4-12 Rail-With-Trail Options 3 and 4





**Figure 4-13 Dequindre Cut Trail Photos**



*Dedicated future rail right-of-way on the left, with trail facilities on the right. Photo Source: Project team.*

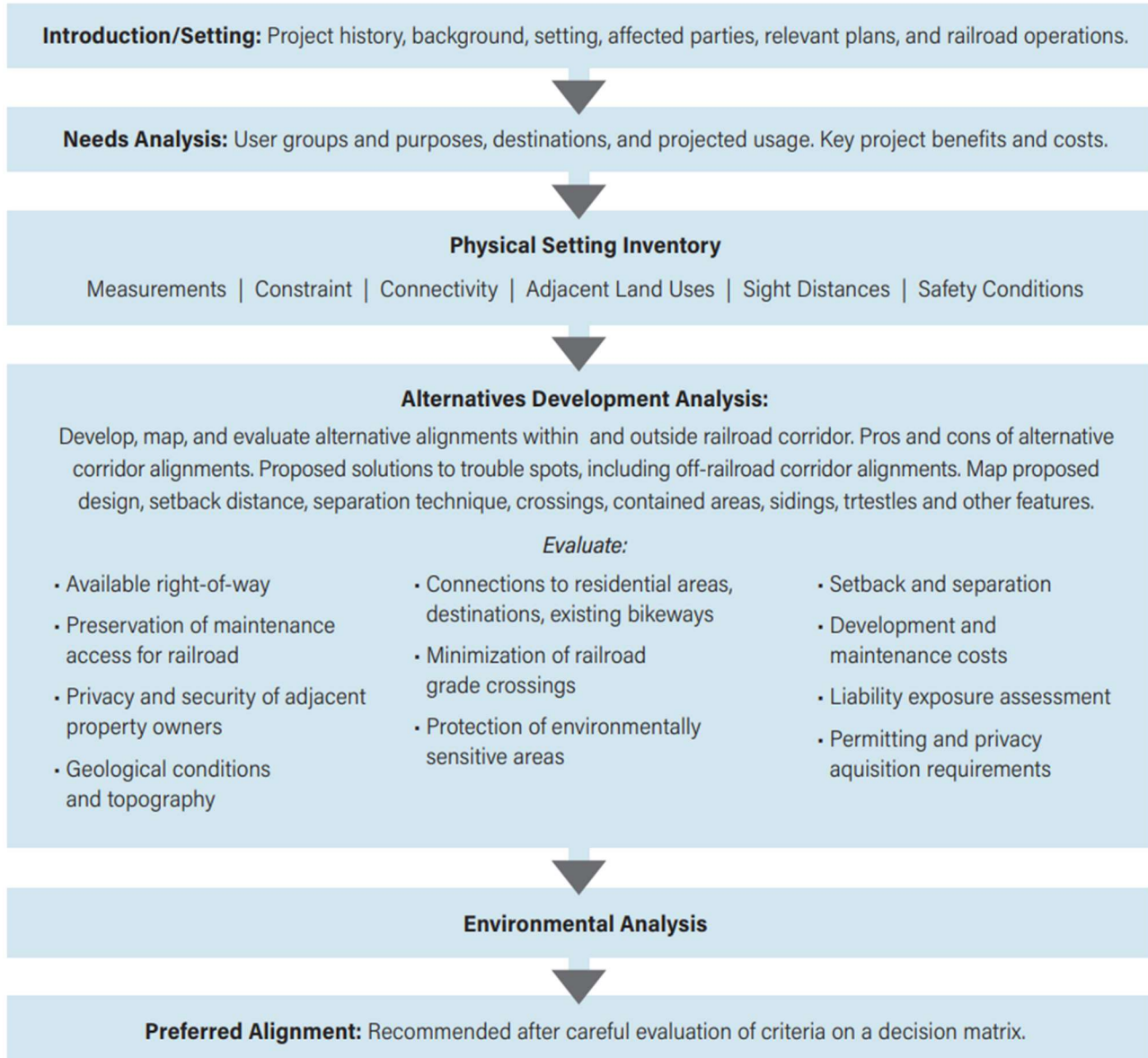


*Dedicated future rail right-of-way on the left with recreational/playground equipment. The right shows trail facilities with designated pedestrian and bicycle areas.. Photo Source: Project team.*

### Next Steps for Implementation

According to the [Rails with Trails: Best Practices and Lessons Learned](#) guidance from the FRA, who will likely serve as the federal leading agency on this project, the next steps to implement a rail-with-trail concept along the CSX corridor would be to further determine the feasibility of the trail and develop a plan. The trail feasibility analyses would take a more comprehensive look at the corridor, including the existing physical conditions and community impacts, and propose trail routings with development recommendations. **Figure 4-14** below provides the steps in conducting a feasibility study from the FRA guidance.

**Figure 4-14 Steps in a Rail-with-Trail Feasibility Study**



Source: [Rails with Trails: Best Practices and Lessons Learned](#), Figure 6.

## 4.7 CSX ROW Valuation

A valuation report was received from CSX in late November, 2024 (see **Appendix C**). This report featured the market value estimate of the Homestead Subdivision corridor from MP SXH 54.5 to MP SXH 67.0 (CSX Site ID: FL-025-1086639). The purpose and intended use of the appraisal report was to estimate the market value of the subject corridor to assist in negotiations for the possible sale of the subject corridor. The date of valuation was November 1, 2024. The valuation does not include the valuation of any rail or building improvements that may remain on and along the corridor, and does not consider the valuation of any retained rights. The estimated market value of the corridor was **\$88,306,000**.

### Land Size

The land size of the subject property is approximately 12.50± miles long, with a width of 105.76± feet, and a land area of 160.25± acres.

### Highest and Best Use

The highest and best use of the subject property is for continued corridor use as a recreational trail, potential future passenger rail service use, as well as for utility and communication occupancies.

### Across-the-Fence Value

The Across the Fence (ATF) value refers to the market value of the land adjacent to the rail corridor. The assumption is that the land in the corridor would hold similar value to the land “across the fence,” meaning the nearby or adjoining land<sup>10</sup>. The ATF valuation for the subject corridor was **\$70,997,840**.

### Corridor Factor

The Corridor Factor (CF) “reflects the premium associated with the fact that the corridor is already established and could be difficult or costly to recreate. Essentially, the CF recognizes the added value of the land as a continuous strip, which can be used for specific purposes (such as a trail or utility line) that may not be achievable through simply assembling disconnected parcels of land”<sup>11</sup>. The CF was determined to be **1.25** for the corridor and **1.00** for industrial leads.

### Market Value

Based on the ATF and CF values, the rounded market value was determined to be **\$88,306,000**.

<sup>10</sup> [Corridor Valuation](#), Rails to Trails Conservancy *Trail Building Toolbox*.

<sup>11</sup> [Corridor Factor](#), Rails to Trails Conservancy *Trail Building Toolbox*.

## 4.8 Planning Cost Estimates

When considering different types of infrastructure improvements, having generalized cost estimates is essential for preliminary planning and budgeting. As such, a list of generalized cost estimates for the enhancement groups are provided in **Table 4-2** below.

Note that these estimates are not precise figures, but instead provide a foundational starting point to help prioritize projects and allocate resources effectively. Cost ranges are based on averages across similar projects and may vary due to site-specific factors such as local labor rates, materials, land acquisition needs, and engineering complexities. In future project stages, these figures can be more refined using applicable inflation rates and Miami-based costs.

**Table 4-2 General Cost Estimates**

Enhancement Group	Enhancement	Planning Cost Estimate
Protected Intersection Designs	Corner Refuge Islands/Curb Extensions	\$3,600-\$4,400 per intersection <sup>12</sup>
	Setback Crossings	\$100-\$3,000 each <sup>13</sup>
	High Visibility Crosswalks (thermoplastic)	\$6,000-\$11,000 per crossing <sup>4</sup>
	Path Markings Through Intersection	\$500-\$2,000 per crossing <sup>14</sup>
	Pedestrian Refuge Islands/Median Islands	\$2,260 for a 10'x40' median <sup>4</sup>
	Raised Intersections or Crossings	\$5,000-\$15,000 per crossing <sup>4</sup>
Traffic Signal Enhancements	Leading Pedestrian Intervals (LPIs)	\$2,800 per intersection+ <sup>4</sup>
	Bicycle-Specific Traffic Signals	\$2,500 per intersection+ <sup>4</sup>
Lighting and Visibility	Enhanced Lighting	\$3,600-\$4,900 per street light <sup>4</sup>
	In-Pavement Lighting Systems	\$10,000-\$42,000 per crosswalk <sup>4</sup>
Wayfinding	Trailhead Signage	\$6,660 per sign+ <sup>15</sup>
	Directional Signage Along Trail	\$260-\$900 per sign
Trailhead Design	Parking Area (gravel lot)	\$20,000 for 30 spaces <sup>16</sup>
	Recreational Amenities	\$500-\$50,000 <sup>17</sup>
Canal Crossings	New Bike/Ped Bridge	\$500,000-\$4 million
	Trail Underpass with Lighting	

<sup>12</sup> [Pedestrian Safety Countermeasures](#), National Highway Traffic Safety Administration (NHTSA)

<sup>13</sup> [Countermeasures: Marked Crosswalks and Enhancements](#), FHWA

<sup>14</sup> [Don't Give Up at the Intersection](#), NACTO

<sup>15</sup> [General Cost Estimates for Production of Wayfinding Signage](#), NE Michigan Council of Government

<sup>16</sup> [Developing Trail Systems](#), American Trails

<sup>17</sup> [Construction and Maintenance Costs for Trails](#), American Trails

### 4.9 Conclusion

In conclusion, the final recommendations build upon the Study's core goal of creating an interconnected network of bicycle and pedestrian trails that enhances transportation options while encouraging a healthier, more sustainable community.

By developing adaptable enhancements for each group (see **Table 4-3**), the Study lays the groundwork for enhanced trail connections that promote active living, equity, and improved quality of life throughout the South Dade region. This integrated approach ensures that future trail developments will not only address transportation needs, but also enrich the broader community for residents and visitors alike.



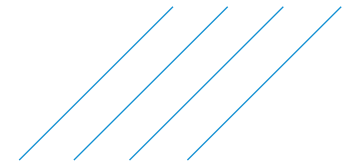
**Table 4-3 Recommendations by Typology Group**

Enhancement Group	Enhancement	Group 1: Southern Terminus	Group 2: Homestead Confluence	Group 3: Canal Crossings	Group 4: US 1 Commercial
Protected Intersection Designs	Corner Refuge Islands	✓	✓		✓
	Setback Crossings	✓	✓		✓
	High Visibility Crosswalks	✓	✓	✓	✓
	Path Markings Through Intersection	✓	✓	✓	✓
	Green Painted Bike Lanes	✓	✓	✓	✓
	Pedestrian Refuge Islands	✓	✓	✓	✓
	Protected Bike Lanes	✓			
	Bike Lane/Path Transition	✓	✓	✓	✓
	Raised Intersections or Crossings	✓	✓	✓	✓
Traffic Signal Enhancements	Leading Pedestrian Intervals (LPIs)	✓	✓		✓
	Bicycle-Specific Traffic Signals	✓	✓	✓	✓
Lighting and Visibility	Enhanced Lighting	✓	✓	✓	✓
	In-Pavement Lighting Systems	✓	✓	✓	✓
Wayfinding	Trailhead Signage	✓	✓	✓	✓
	Directional Signage Along Trail	✓	✓	✓	✓
	Digital Integration	✓	✓	✓	✓
Trailhead Design	Parking Area	✓	✓		
	Restroom Facilities	✓	✓		
	Recreational Amenities	✓	✓		
	Environmental and Aesthetic	✓	✓		
Canal Crossings	New Bike/Ped Bridge			✓	
	Trail Underpass			✓	





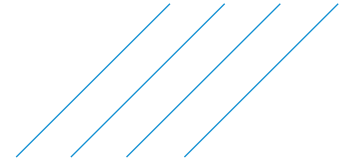
# Appendix A | Project Working Group Meeting Minutes



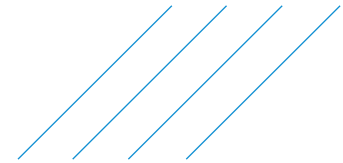
## Meeting Notes

<b>Project:</b>	South-Dade Trail Study		
<b>Subject:</b>	Planning Working Group Meeting #1		
<b>Meeting place:</b>	Teams	<b>Meeting no:</b>	1
<b>Date and time:</b>	19 January 2023 at 11:07	<b>Minutes by:</b>	Chris Schoenig
<b>Present:</b>	Kevin Walford Ryan Benton Pedro Reynaldos Robert Barto Shereen Yee Fong Rebecca Dennis Chris Schoenig Wiatt Bowers	<b>Representing:</b>	Miami-Dade TPO Miami-Dade Parks City of Homestead East Coast Greenway FDOT District 6 Atkins Atkins Atkins

1. Meeting Introductions
  - a. Everyone on the call provided a brief introduction.
  - b. Atkins staff noted that a few agencies have not responded to outreach (Water Management District, Florida Power and Light (FP&L), and CSX).
2. Study Background and Purpose
  - a. Project involves the feasibility analysis for possible trail connections in the South-Dade area
  - b. Inclusion of the Biscayne Trail? Primary focus is on the CSX trail and should not include the Biscayne Trail in the scope.
3. Study Coordination
  - a. List of groups included within the Planning Working Group
  - b. Three PWG meetings will occur, and results/recommendations will be presented to the TPO board.
  - c. Suggestions of members from CSX and FP&L
  - d. Study will be completed about August 2023.
4. Literature Review and Data Collection
  - a. Biscayne-Everglades, Krome, and South-Dade are identified within the SUN Trail network.
  - b. East Coast Greenway is on the SUN Trails priority list.
5. Corridor Evaluation



- a. Evaluation criteria for ranking will include land use/ public vs private easements, potential for bike parking, funding, potential treatments, and benefit/cost.
  - b. City of Homestead- interest in the CSX trail.
  - c. City of Homestead has visualizations of before and potential after for the CSX trail.
  - d. City of Homestead- existing issues with maintenance and blight for CSX trail
  - e. Areas of focus and analyze the confluence of the trails to best connect all of them without overlap.
  - f. FDOT will provide information on the State Road shared-use path project, Palm Drive multi-modal study, and the Ingram Highway resurfacing project with paved shoulder.
6. Next Steps
- a. "Together We Cycle" event held on February 1<sup>st</sup>
  - b. Next project working group meeting will be between March and mid-April.



## Meeting Notes

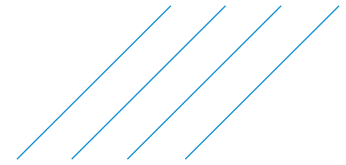
<b>Project:</b>	South Dade Trails Study		
<b>Subject:</b>	Project Working Group Meeting #2		
<b>Meeting place:</b>	Teams	<b>Meeting no:</b>	2
<b>Date and time:</b>	03 April 2023 at 2:30 PM	<b>Minutes by:</b>	Rebecca Dennis
<b>Present:</b>	Pedro Reynaldos Megan Echols Ken Bryan Ryan Benton Maria Debye Saxinger Kevin Walford Jesus Fuentes Wiatt Bowers Rebecca Dennis Maria Bendfelt	<b>Representing:</b>	City of Homestead FDOT D6 Rails to Trails Miami-Dade PROS Miami-Dade PROS Miami-Dade TPO EXP Atkins Atkins Plusurbia

- Meeting introductions
- A powerpoint was presented provided an overview of the project, the results of the literature review and data collection task, the results of the corridor evaluation, and discussed next steps
- Discussed how project staff has reached out to FDEP for their 2023 updated trail priority, opportunity, and existing conditions data
- Input from PWG:
  - The PWG supports the emphasis area groups and group methodology – noted that the process was a good approach that made sense by highlighting similar issues in different areas
  - Ensure that connections are provided at the park near the Mowry/Krome connection, if possible

<b>Next meeting:</b>	TBD		
<b>Distribution:</b>			
<b>Date issued:</b>	04 April 2023	<b>File Ref:</b>	

**NOTE TO RECIPIENTS:**

These meeting notes record Atkins understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.



- Think about trailheads more – specifically about making the suburban/bus connections
- Include access to parks and other points of interest for the emphasis areas

# MEETING NOTES

## South Dade Trails Feasibility Study

SUBJECT	MEETING PLACE	DATE AND TIME	MINUTES BY
Project Working Group (PWG) Meeting #3	Virtual - Microsoft Teams	28 October 2024 at 3 PM	Rebecca Dennis
	MEETING NO	PRESENT	REPRESENTING
	3	Kevin Walford Jesus Fuentes Pedro Reynaldos Ryan Benton Maria Debye-Saxinger Rory Feinberg Luis Vazquez (CSX) Rebecca Dennis Wiatt Bowers	Miami-Dade TPO Miami-Dade TPO City of Homestead Miami-Dade County Miami-Dade County FDOT CSX AtkinsRéalais AtkinsRéalais

### Purpose of Meeting

Third meeting of the PWG to discuss project updates and next steps. A presentation was delivered by AtkinsRéalais followed by general discussion amongst the PWG.

### Discussion:

Jesus Fuentes – include lighting for underpass and signage for when the water level is too high (e.g. lights flashing if trail is flooded) and the trail is impassable

- El Rio in Boca for underpass – El Matero Road – underpass is well lit
- Look in other locations in tri-county area with ones for good lighting
- 441 trail underpass
- Cross I-95 and tri-rail
- Sky Lake underpass has an encampment of homeless people
- For at-grade crossings – look at AADT of corridor and look at crash rate; create overpass instead of at-grade
- Provide some kind of traffic control? Stop line and stop signs for the trails so that the bikes know they don't have a priority over the road.

Rory Feinberg – preferred crossing for Black Creek was determined to be an at-grade crossing

CSX – leaning more towards an interim agreement that would benefit both parties. Rail-with-trail a possibility, but its not the direction they normally go.

### General Discussion:

- The purpose of this study is to lay out the opportunities and constraints

### NOTE TO RECIPIENTS:

These meeting notes record AtkinsRéalais understanding of the meeting and intended actions arising therefrom. Your agreement that the notes form a true record of the discussion will be assumed unless adverse comments are received in writing within five days of receipt.

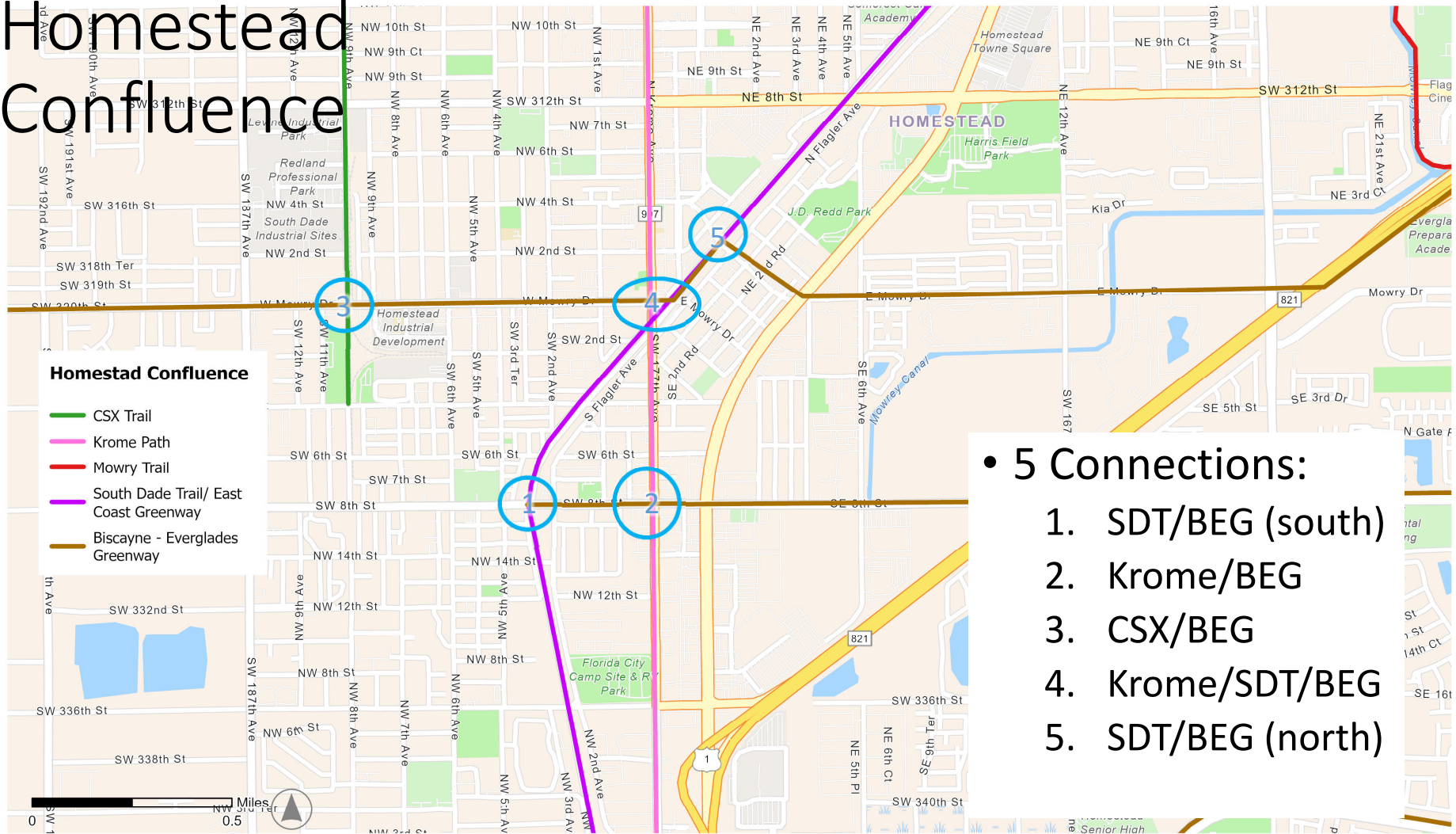
- What would City of Homestead like to see from this corridor?
  - Concerned with overall maintenance and safety of tracks; City has been granted the green light to pave over where the tracks cross over the streets
  - Trail would be great – especially near 4<sup>th</sup> Street that is divided by the tracks. Currently divides two parks
  - Looking for safety and overall improvement of the area
- What should we draw for the CSX corridor?
  - Rail with trail
  - Neighborhood access to the trail – connecting neighborhoods with trails
  - Identifying where the sidewalk connections are across the trail and enhancing
    - Birds Eye looking down – plan view
- Rendering of trailhead location
  - Canal underpass with lighting
  - Neighborhood connectivity across trail



# Appendix B | Trail Connection Maps and Photos

# South Dade Trail Connections

# Homestead Confluence



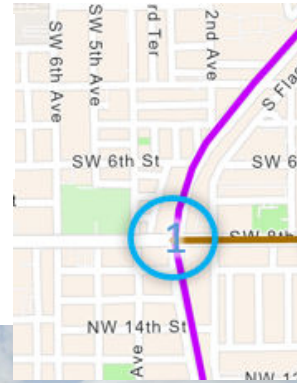
## • 5 Connections:

1. SDT/BEG (south)
2. Krome/BEG
3. CSX/BEG
4. Krome/SDT/BEG
5. SDT/BEG (north)

# Homestead Confluence

1. SDT/BEG  
Busway/SW 328<sup>th</sup> Street

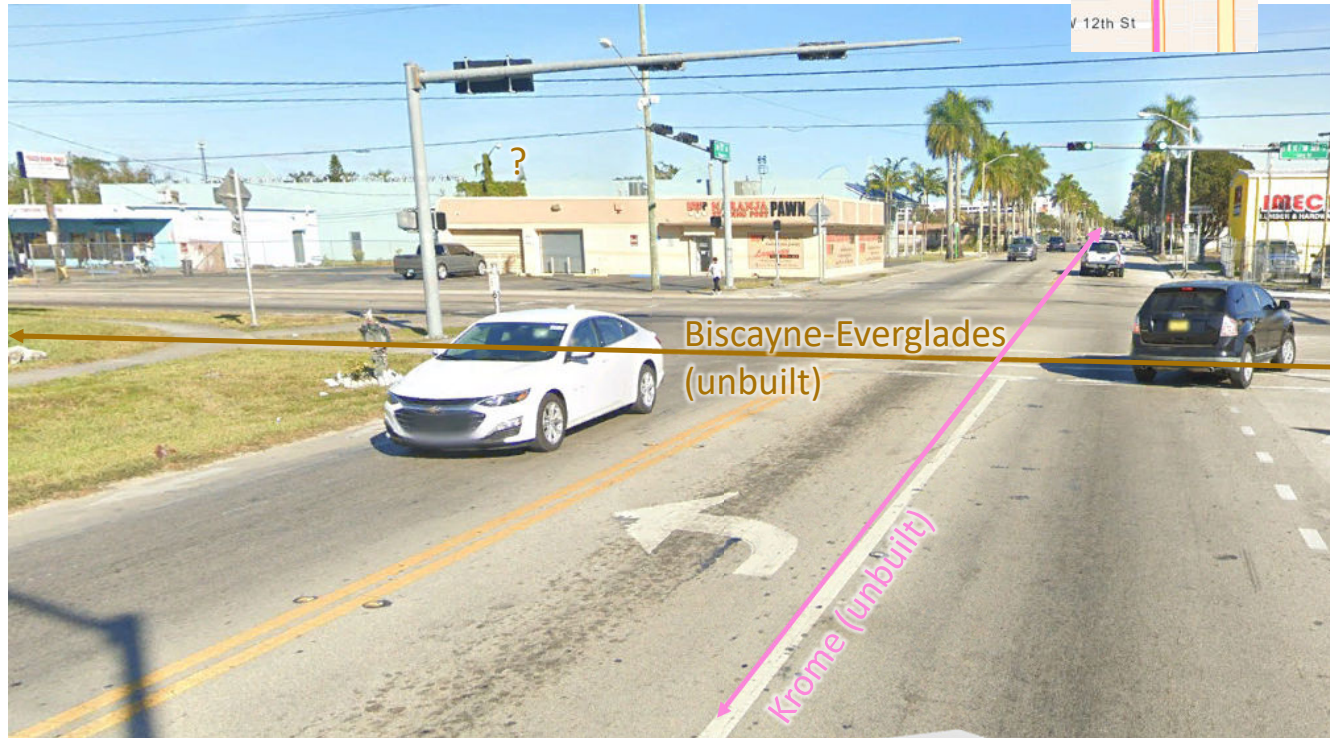
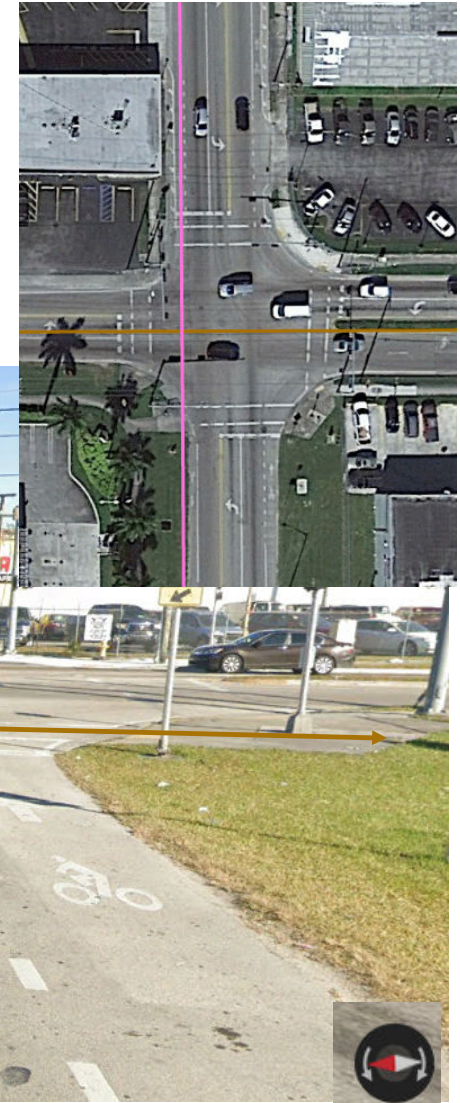
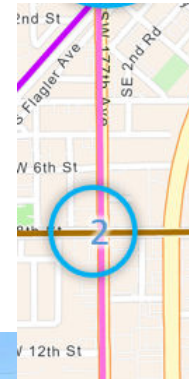
Notes: Signalized 4-way 2-lane separated intersection.



# Homestead Confluence

2. Krome/BEG  
SW 328<sup>th</sup> Street/SW 177<sup>th</sup>  
Avenue

Notes: Signalized 4-way  
2-lane separated  
intersection with left turn  
lanes.

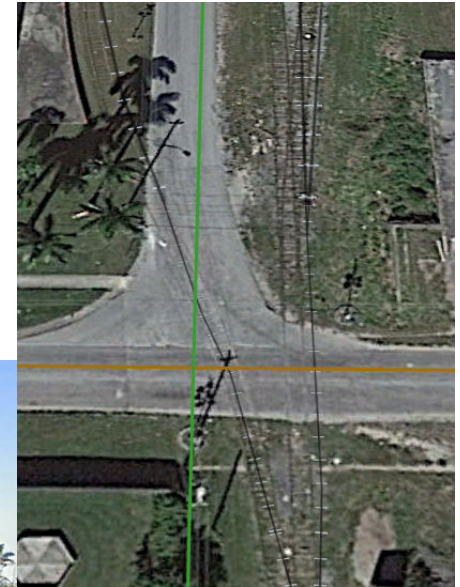
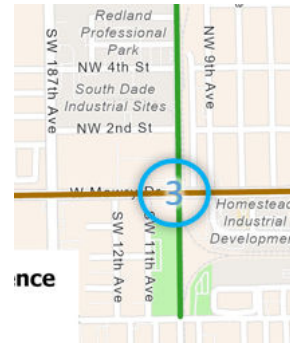


# Homestead Confluence

## 3. CSX/BEG

### CSX Tracks/W Mowry Drive

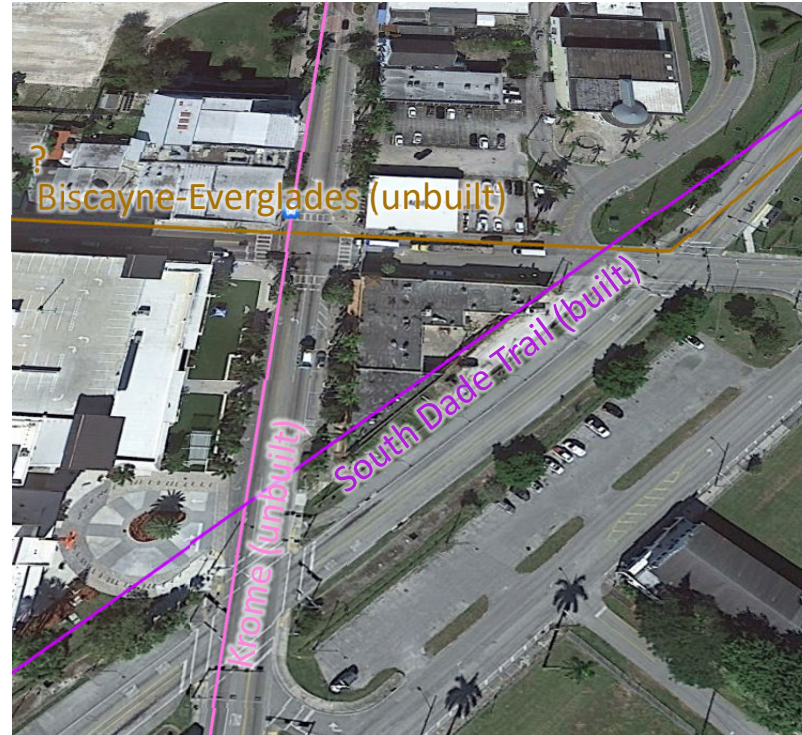
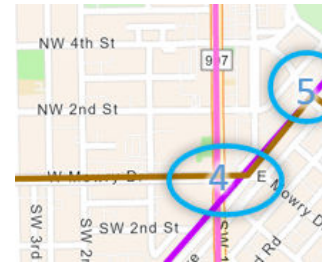
Notes: Unsignalized 3-way 2-lane intersection. Park connection to the south. Potentially rendered in Homestead study – likely rule this one out.



# Homestead Confluence

4. Krome/SDT/BEG  
W Mowry/SR 997 (Krome  
Ave)/Busway

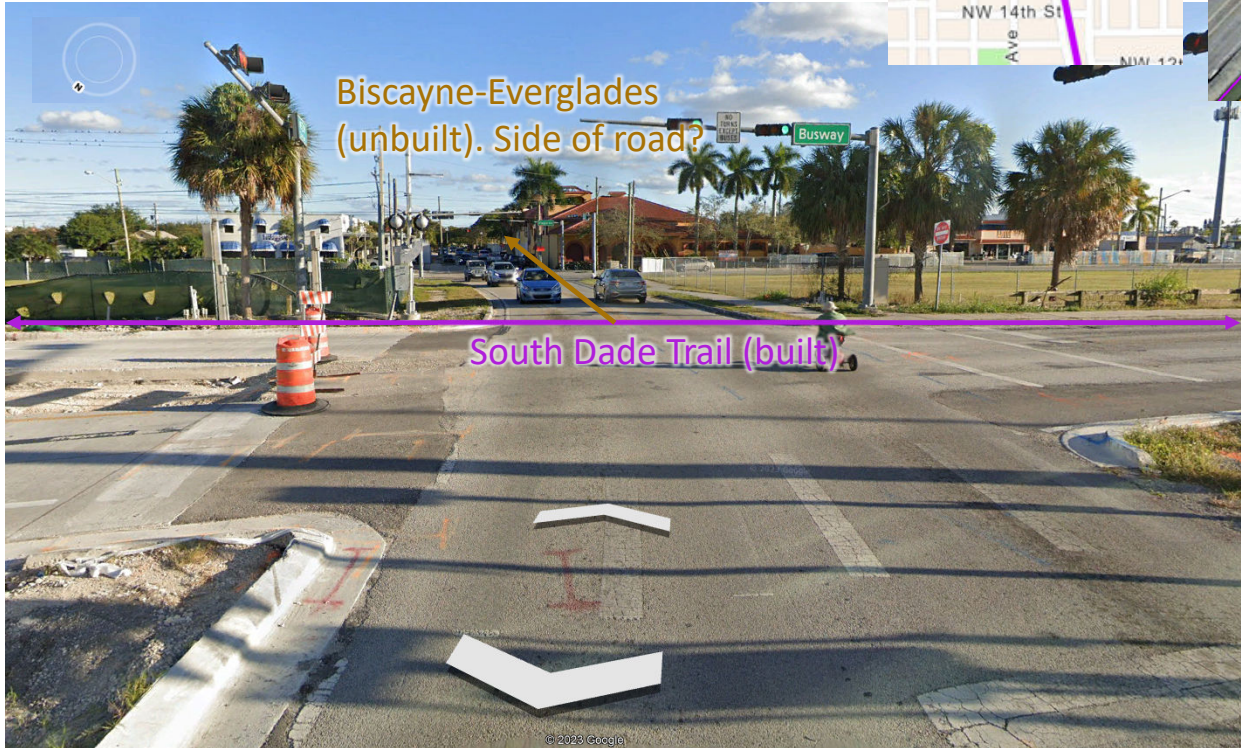
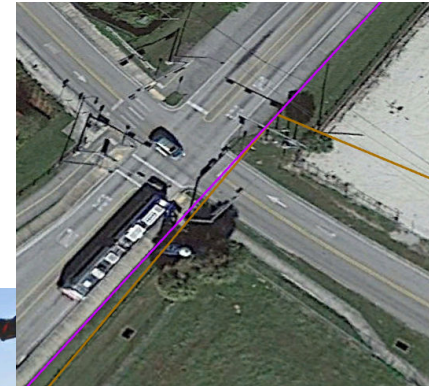
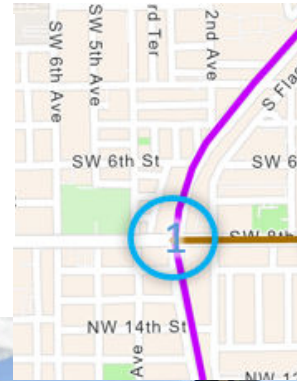
Notes: 3 signalized intersections 4-way 2-lanes with left turn lanes; 2 on busway. Forms a triangle. Krome has on-street parking.



# Homestead Confluence

5. SDT/BEG (north)  
Busway/E Mowry Drive

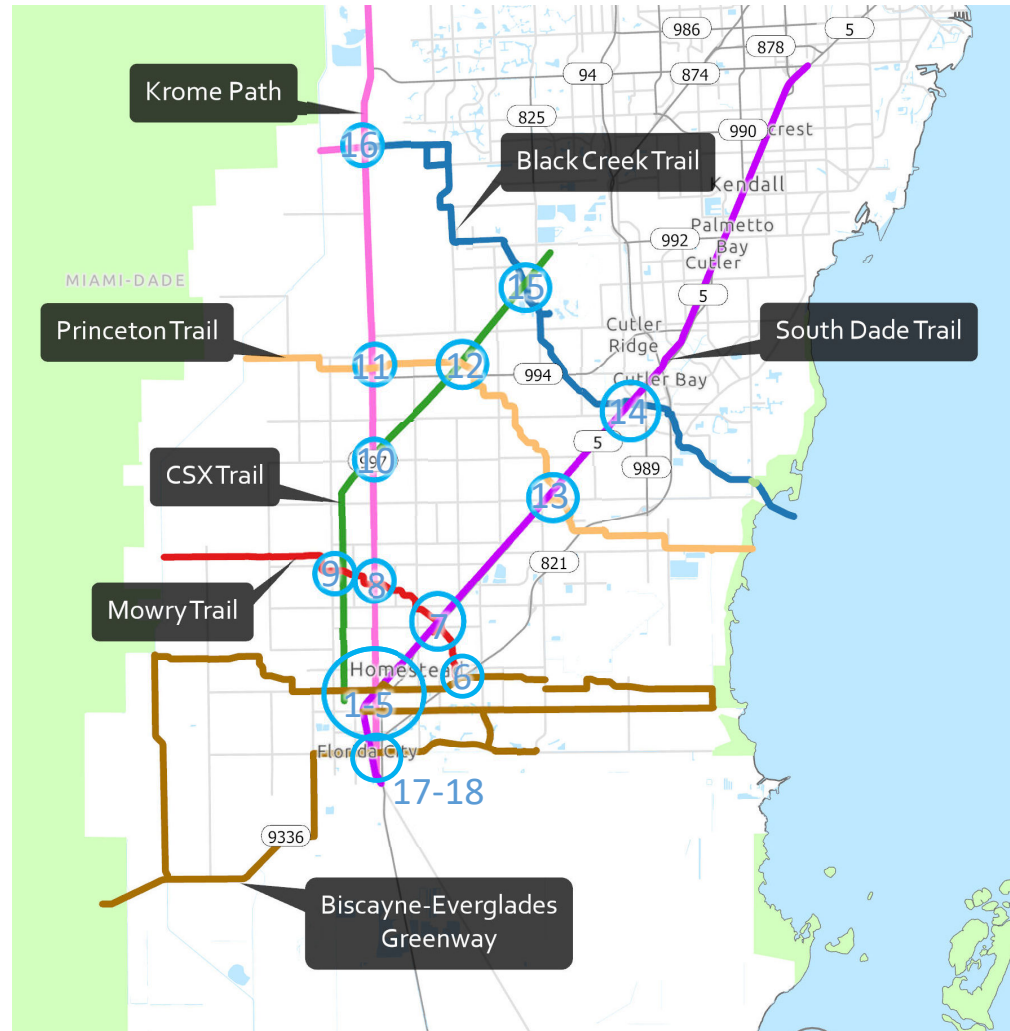
Notes: Signalized 4-way 2-lane intersection. City hall at southwest corner of the intersection. Good candidate for enhanced connections.



City Hall

# Other Connections

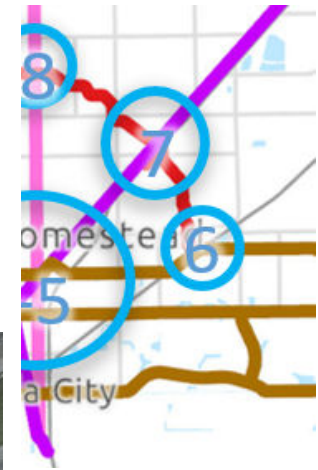
- South to north
- 6-16
- Florida City: 17-18



# Connection 6

6. Mowry/BEG  
Mowry Canal/Turnpike

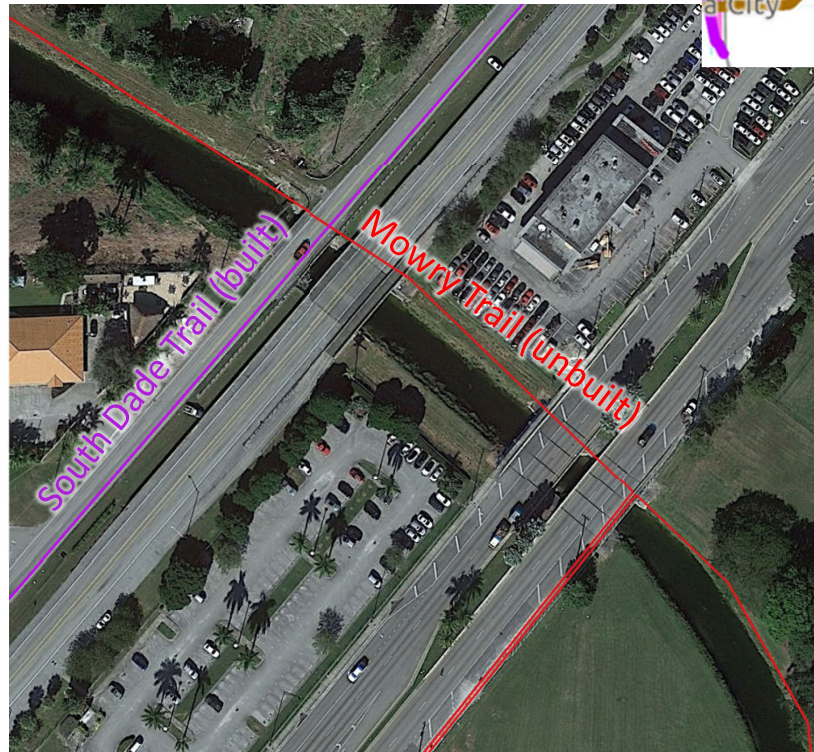
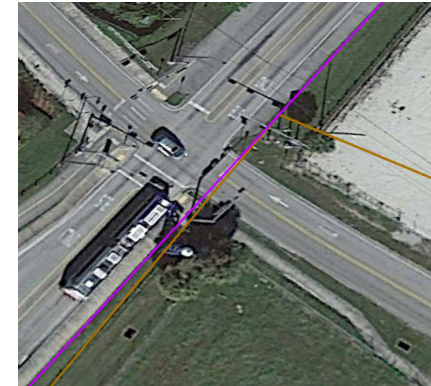
Notes: Would require canal crossing. Maybe a trailhead at this southern end for Mowry?



# Connection 7

7. SDT/Mowry  
Busway/US 1/Mowry Canal

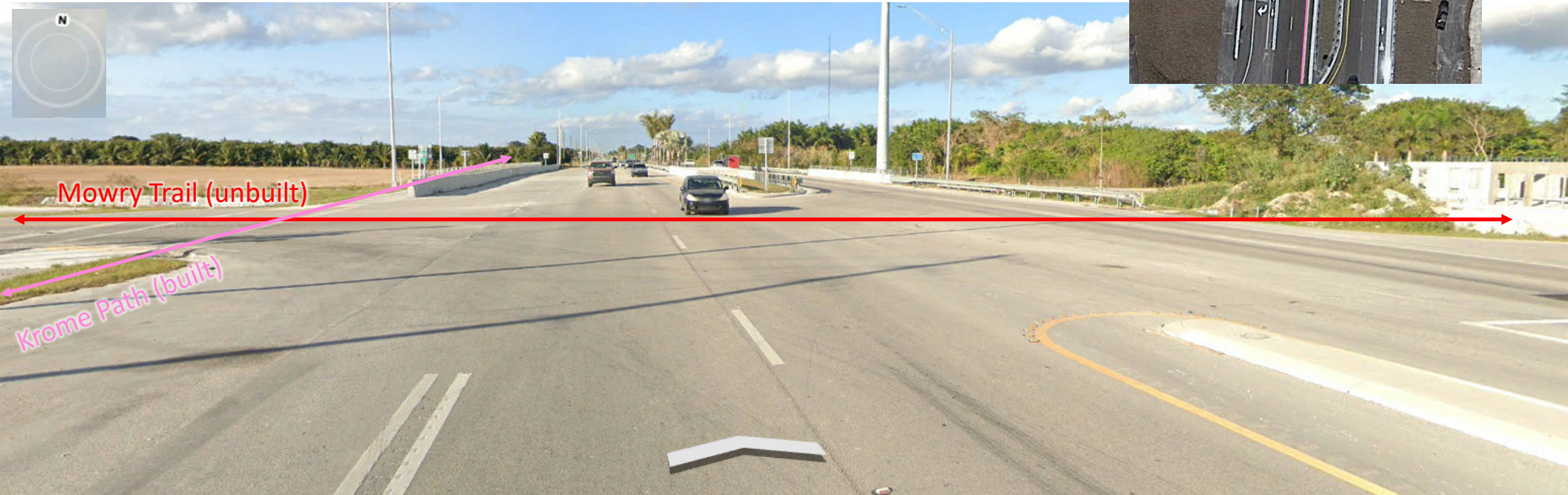
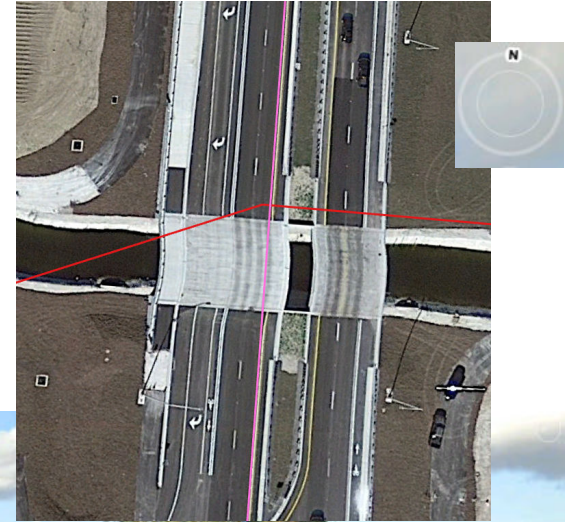
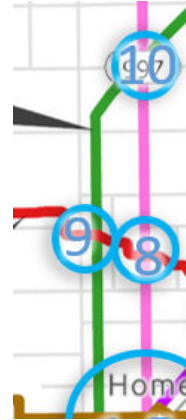
Notes: What are the plans to connect Mowry Trail across these bridges?



# Connection 8

8. SDT/Mowry  
Busway/US 1/Mowry Canal

Notes: What are the plans to connect Mowry Trail across these bridges?

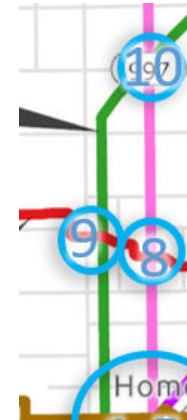


# Connection 9

Notes: Are there renders from the other study?

9. Mowry/CSX

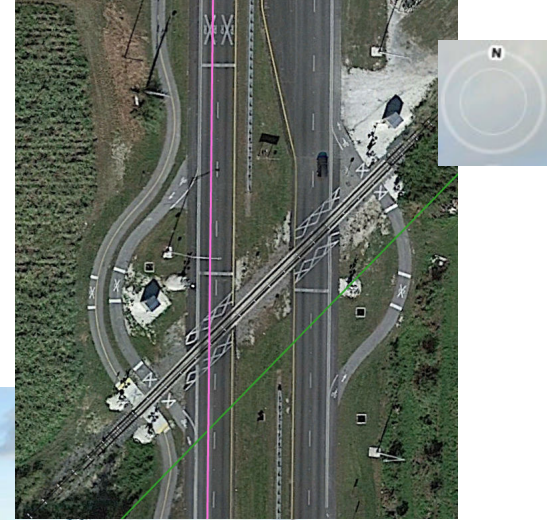
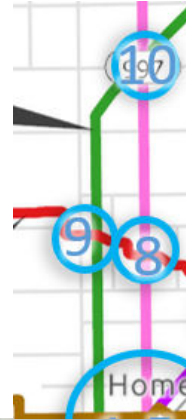
Mowry Canal at CSX tracks



# Connection 10

10. Krome/CSX  
Krome Path/CSX Tracks

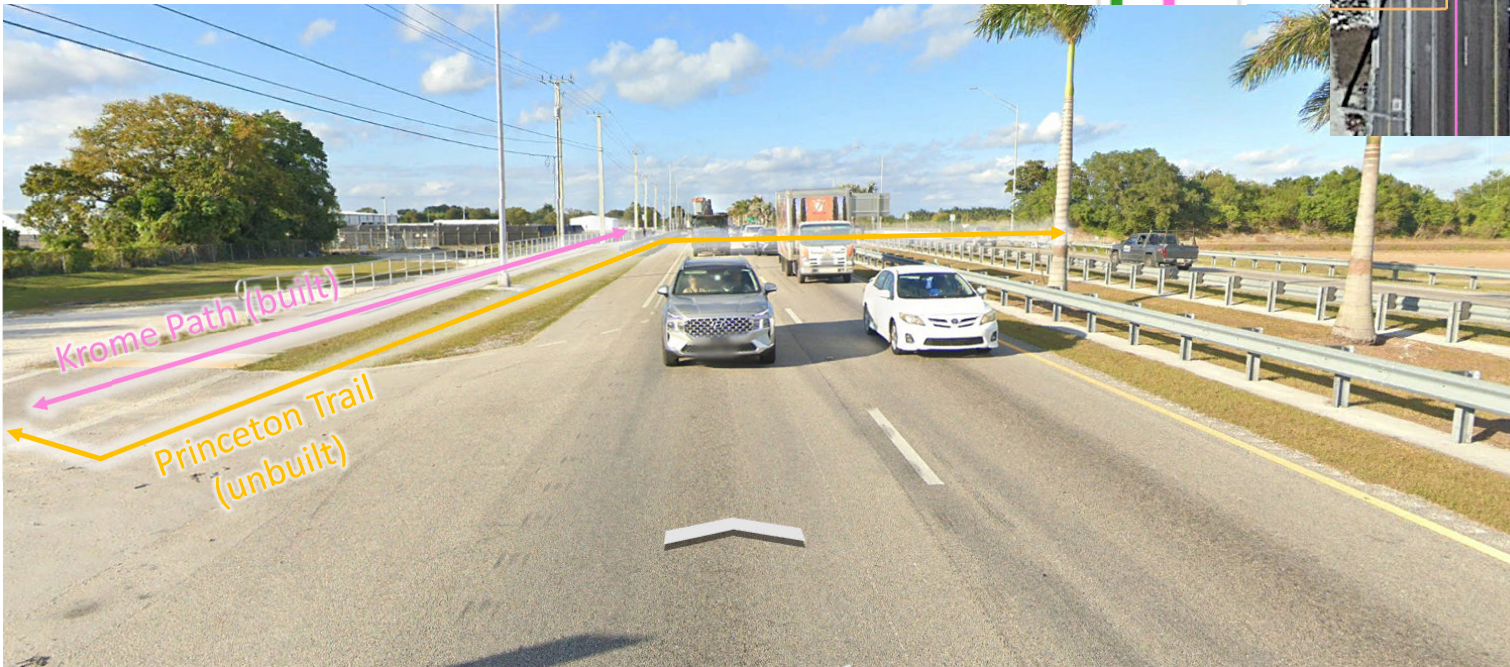
Notes: Midblock;  
renders from other  
study?



# Connection 11

11. Krome/Princeton  
Krome Path/Princeton Canal

Notes: Midblock;  
canal crossing;  
switching sides of  
canal



# Connection 12

12. Princeton/CSX  
Princeton Trail at CSX crossing

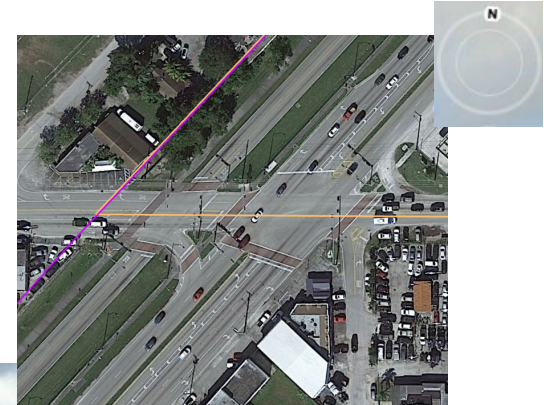
Notes: Canal/RR  
crossing; rural and  
undeveloped.



# Connection 13

13. South Dade/Princeton  
Busway at Coconut Palm Dive

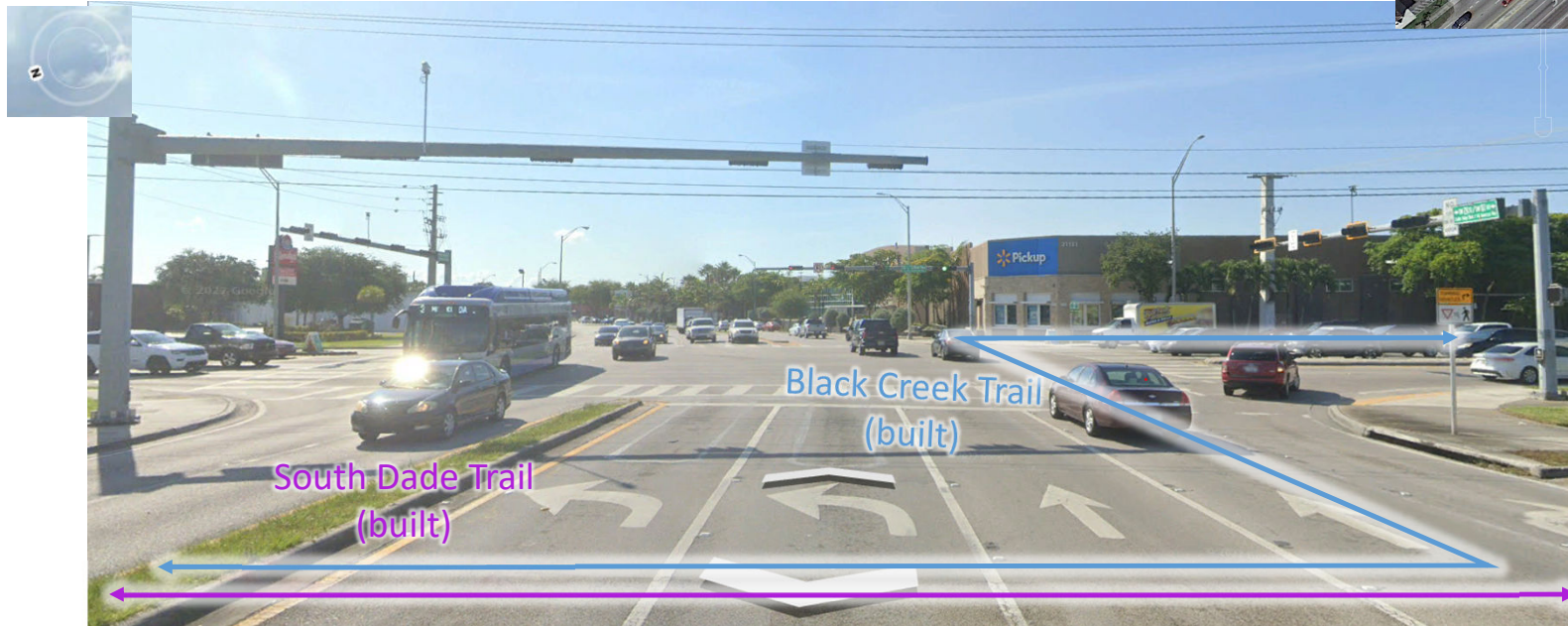
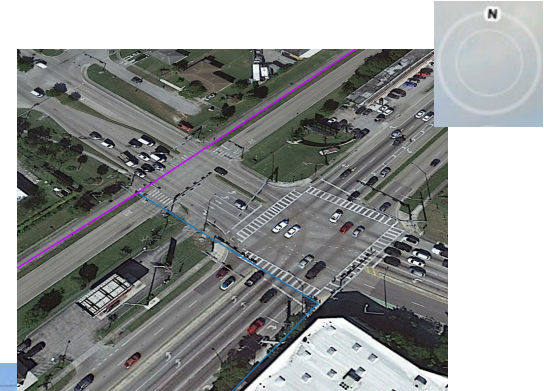
Notes: Signalized 5-point intersection + busway.  
Commercial intersection;  
opportunity for enhanced  
crossing.



# Connection 14

14. South Dade/Black Creek Busway at SW 117<sup>th</sup> Avenue

Notes: Signalized 4-way intersection + busway. Commercial intersection; opportunity for enhanced crossing.



# Connection 15

15. Black Creek/CSX  
Black Creek Trail at CSX tracks

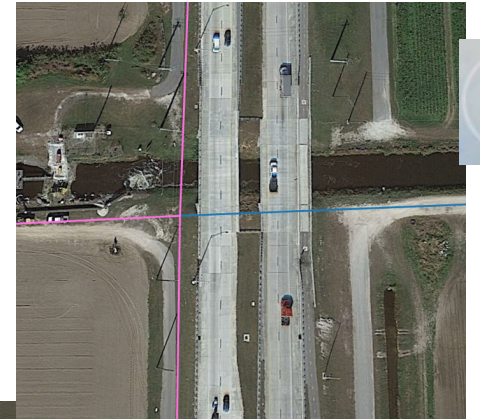
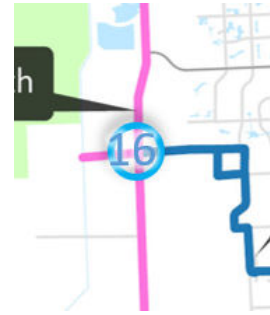
Notes: Undeveloped canal/RR crossing.  
Close to residential.



# Connection 16

16. Krome/Black Creek  
Krome Trail at Black Creek  
canal

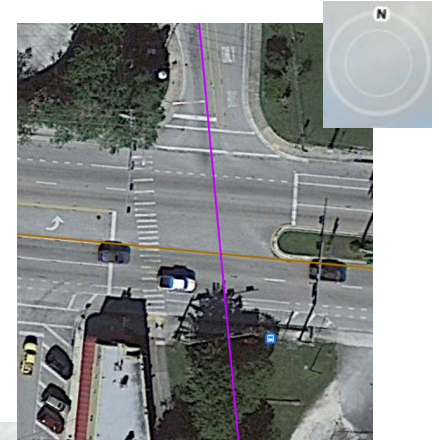
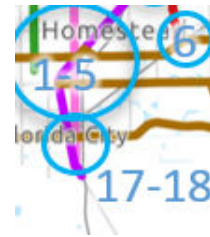
Notes: Midblock crossing with 4 separated travel lanes. Potential identical crossing enhancements on north and south sides.



# Connection 17

17. SDT/BEG  
Busway/W Palm Drive

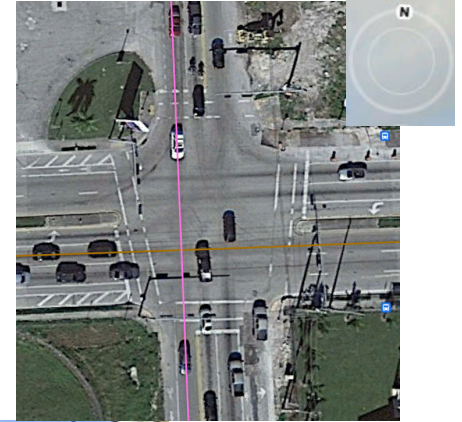
Notes: Signalized 3-way intersection with busway and 4 separated lanes. Park n Ride Lot at NW corner.



# Connection 18

18. Krome/BEG  
Krome/W Palm Drive

Notes: Signalized 4-way intersection with 4 separated lanes E/W and 2 lanes N/S.





# Appendix C | CSX Valuation Report Summary



CAMERON R. REX, MAI, GISP  
CHARLES W. (SANDY) REX III, MAI  
CHARLES W. REX IV, MAI, AI-GRS

**VALUATION OF**

*CSX TRANSPORTATION, INC.  
HOMESTEAD SUBDIVISION  
FROM MP SXH 54.5 TO MP SXH 67.0  
IN MIAMI-DADE COUNTY, FLORIDA  
(CSX SITE ID: FL-025-1086639)*

**PREPARED FOR**

*BRAD BECKWORTH  
SENIOR REAL ESTATE SUPERVISOR  
VALUATION & SURVEY, REAL ESTATE  
CSX TRANSPORTATION, INC.  
500 WATER STREET, SC-J180  
JACKSONVILLE, FLORIDA 32202*

**DATE OF VALUATION: NOVEMBER 1, 2024**

**DATE OF REPORT: NOVEMBER 25, 2024**

**PREPARED BY**

*RMI VALUATION, LLC  
NORTHBROOK, ILLINOIS*



November 25, 2024

Brad Beckworth  
Senior Real Estate Supervisor:  
Valuation & Survey, Real Estate  
CSX Transportation, Inc.  
500 Water Street, SC-J180  
Jacksonville, Florida 32202

RE: Market value estimate of the Homestead Subdivision corridor from MP SXH 54.5 to MP SXH 67.0, in Miami-Dade County, Florida (CSX Site ID: FL-025-1086639)

Dear Mr. Beckworth:

At your request, we have prepared an estimate of the market value of the Homestead Subdivision corridor (MP SXH 54.5 to MP SXH 67.0) in Miami-Dade County, Florida. The subject corridor is appraised assuming title is sufficient for railroad and ancillary uses, free and clear of liens and encumbrances and will not include any consideration of title defects, encroachments, easements, license agreements, or rights of occupancy, if any.

The documentation of this valuation is communicated in the following 104-page appraisal report. The date of valuation is November 1, 2024.

This appraisal report is intended to comply with the reporting requirements set forth under Standards Rule 2-2(a) of the *Uniform Standards of Professional Appraisal Practice* (USPAP). As such, it presents a summary of the data, reasoning, and analysis that were used in the appraisal process to develop our opinion of value.

The purpose and intended use of this appraisal is to estimate the market value of the subject corridor as of the effective date of value to assist in negotiations for the possible sale of the subject corridor. The intended users are CSX Transportation, Inc., personnel and their representatives.

This appraisal report is predicated on a hypothetical condition as discussed in the *Hypothetical Condition* section of this report on page 25. Any changes to this condition may affect the assignment results and the estimate of market value.

This appraisal does *not* include the valuation of any rail or building improvements that may remain on and along the corridor and does *not* consider the valuation of any retained rights.



Brad Beckworth  
November 25, 2024  
Page 3


Based upon the conditions, contingencies, and the hypothetical condition discussed in this report, and subject to the signed certification, it is our opinion and conclusion that the estimated market value of the subject property, as of November 1, 2024, is

**\$88,306,000**

Respectfully,  
RMI VALUATION, LLC



Charles W. (Sandy) Rex III, MAI  
State of Florida, Certified General Appraiser  
License No. RZ143



Charles W. Rex IV, MAI, AI-GRS  
State of Florida, Certified General Appraiser  
License No. RZ4318

## SUMMARY OF IMPORTANT CONCLUSIONS

LOCATION	<p>The subject property consists of a portion of the Homestead Subdivision corridor from Milepost SXH 54.5 extending in a southwesterly and southerly direction to Milepost SXH 67.0, within Miami-Dade County, Florida.</p> <p>The <i>Subject Overview Map</i> is on page 8 and the <i>Subject Detailed Segment Maps</i> begin on page 51 in the <i>Addendum</i> of this report.</p>
OWNER	<p>CSX Transportation, Inc. 500 Water Street – 12<sup>th</sup> Floor Jacksonville, Florida 32202</p>
DATE OF VALUATION	<p>November 1, 2024</p>
PROPERTY RIGHTS APPRAISED	<p>The subject property is appraised in fee simple, free and clear of liens and encumbrances, and does not include any consideration of title defects, encroachments, leases, easements, or license agreements or rights of occupancy, if any.</p>
LAND SIZE	<p>Length: 12.50± miles Width (avg): 105.76± feet Area: 160.25± acres</p>
HIGHEST AND BEST USE	<p>The highest and best use of the subject property is for continued corridor use as a recreational trail, potential future passenger rail service use, as well as for utility and communication occupancies.</p>
ACROSS-THE-FENCE VALUE	<p>\$70,997,840</p>
CORRIDOR FACTOR	
CORRIDOR	<p>1.25</p>
INDUSTRIAL LEADS	<p>1.00</p>
MARKET VALUE (ROUNDED)	<p><b>\$88,306,000</b></p>