

MDX SR 836/DOLPHIN EXPRESSWAY SOUTHWEST EXTENSION

Project Development and Environment

(PD&E) STUDY

Miami-Dade County, Florida

Preliminary Executive Summary
Alternative Corridor Evaluation
(ACE) Report

ETDM NUMBER:	11482
MDX WORK PROGRAM NO.:	83618
STANTEC PROJECT NO.:	215800115

Introduction

Miami-Dade Expressway Authority (MDX) is conducting a Project Development and Environment (PD&E) Study to evaluate the feasibility of creating a southwest extension of SR 836/Dolphin Expressway from its current terminus at NW 137th Avenue in the vicinity of NW 12th Street to SW 136th Street, or some point to the north of SW 136th Street, depending on the outcome of the evaluation. The proposed project is located in unincorporated Miami-Dade County (see **Figure 1**) and encompasses/touches several neighborhoods, such as Tamiami, Kendall West, The Hammocks, and Country Walk. During Phase II, opportunities to integrate multimodal solutions will be investigated and coordinated with the Miami-Dade Department of Transportation and Public Works (DTPW).

MDX has been in coordination with the Florida Department of Transportation (FDOT) since the study's inception. Through this regular coordination, FDOT advised MDX of proposed changes to Part 1, Chapter 10 of the PD&E Manual for State, Local, or Privately Funded Project Delivery. The proposed chapter includes a new process for local and privately funded projects to be constructed on FDOT right of way (ROW). This process is documented through the completion of a Project Environmental Impact Report (PEIR). The PEIR is prepared following the same procedures and requirements as the State Environmental Impact Report (SEIR); however, it is not an FDOT document.

In the early planning stages of the SR 836/Dolphin Expressway Southwest Extension, MDX considered advancing the project without precluding the future use of federal funds. As such, the PD&E Study began assuming a federal environmental document would be prepared by MDX with FDOT support as deemed appropriate through early project coordination. However, as the study evolved, and after careful consideration, MDX has decided not to pursue federal funding for any future phases of this project. All MDX PD&E studies as well as all design and construction works are funded with toll revenues. MDX will continue the project development process in close coordination with all local, state and federal permitting agencies, including the US Army Corps of Engineers (USACE). As a result, at the conclusion of the PD&E Study, MDX will complete and approve a PEIR.

The SR 836/Dolphin Expressway Southwest Extension PD&E Study is being conducted in two phases. Phase I includes a Corridor Analysis phase in accordance with FDOT's Alternative Corridor Evaluation (ACE) process. This phase includes a high level evaluation of the Alternative Corridors. Phase II involves the detailed Alternatives Analysis phase where the corridor(s) selected in Phase I are developed to a greater level of detail.



FIGURE 1 - PROJECT LOCATION MAP

Purpose of the Alternative Corridor Evaluation (ACE) Process

The ACE process is a consistent, coordinated, and documented method for corridor identification and evaluation. The ACE report summarizes the refinements made in considerations of the Environmental Technical Advisory Team (ETAT), public involvement commentary, project purpose and need, analytical methodology and evaluation criteria. The purpose of the ACE Process is to document the analysis performed to identify reasonable Alternative Corridors to carry forward into Phase II of the PD&E Study.

An ACE Methodology Memorandum (ACE MM) was prepared to document the methodology that would be used to conduct the analyses presented in the ACE report. The ACE MM was uploaded into the Environmental Screening Tool (EST) to allow the ETAT members to review and provide comments. Comments were addressed and the ACE MM was finalized and approved by MDX.

The Alternative Corridor Evaluation Report (ACER) presents the results of the ACE analysis and recommends the Alternative Corridors that should be carried forward into Phase II of the PD&E Study. Consequently, it also identifies eliminated Alternative Corridors not meeting the established criteria and thresholds.

Project Background

SR 836/Dolphin Expressway Southwest Extension planning efforts started during Fiscal Years 2007/2008 with a Concept Study that evaluated extending SR 836/Dolphin Expressway from its current terminus at NW 137th Avenue in the vicinity of NW 12th Street to SW 136th Street in Miami-Dade County. The proposed study area is located within unincorporated Miami-Dade County and is generally bounded by NW 12th Street to the north, SW 136th Street to the south, SW 152nd Avenue to the east, and SW 177th Avenue (Krome Avenue) to the west.

This corridor was envisioned as a multimodal limited access tolled facility. The key goal was to design a cross section that relieves traffic in the area and provides a long-term mobility option, while providing an opportunity to limit further western expansion of urban development.

The Concept Study identified three potential Concept Study Corridors. A fourth Concept Study Corridor was added as a result of input from stakeholders and coordination with the South Florida Water Management District (SFWMD). The project area and these corridors are graphically depicted in **Figure 2**. The Concept Study Corridors shown in **Figure 2** were general locations where corridors could be located. There was no geometric design of these corridors during the Concept Study phase.

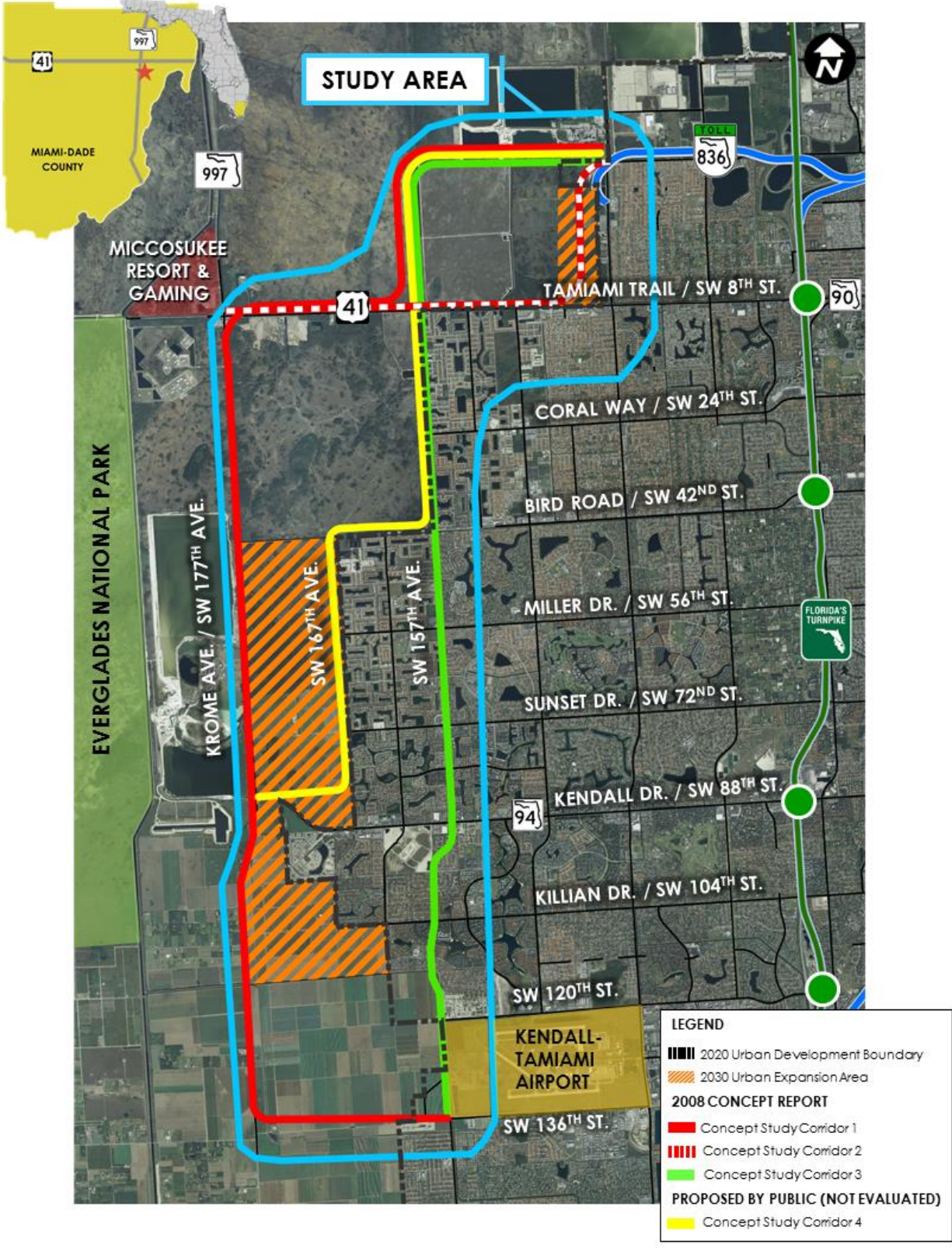


FIGURE 2 - CONCEPT STUDY CORRIDORS

Status Update / Key Milestones

As part of the process of evaluating potential corridors for the facility, several key milestones were identified. Key milestones of the PD&E Study include:

- September 2009 – ETDM Planning Screen Summary Report Published
- December 2010 – Advanced Notification (AN)
- April 2011 – ETDM Programming Screen Summary Report Published
- December 6, 2013 – Notice to Proceed (NTP)
- September 2014 – Agency and Public Kickoff Meeting
- November 20, 2014 – Citizens Advisory Committee (CAC) Meeting #1
- February 26, 2015 – Environmental Forum (EF) Meeting #1
- May 2015 – Approval of ACE MM by MDX (EST will be updated to reflect this)
- November 19, 2015 – Citizens Advisory Committee (CAC) Meeting #2
- March 17, 2016 - Environmental Forum (EF) Meeting #2
- June 2016 (anticipated) – Corridor Workshop
- August 2016 – Agency Review of Draft ACER via EST
- September 2016 – MDX Approval of Final ACER

Purpose and Need

Developing a purpose and need (P&N) for a transportation project is essential in establishing a basis for evaluating a range of reasonable alternatives capable of adequately solving the issues and ultimately assisting with the selection of a preferred alternative. MDX is planning to extend the SR 836/Dolphin Expressway in a southwest direction to address the increasing demand for additional surface transportation capacity resulting from the southwest area of Miami-Dade County. A P&N Statement was prepared for the SR 836 / Dolphin Expressway Southwest Extension as part of the ETDM process.

The primary purposes of the SR 836/Dolphin Expressway Southwest Extension are:

- Improve system connectivity
- Improve access to and from the area to major employment, education and commercial centers
- Improve mobility for people and goods by providing north-south expressway access to serve existing and future travel demand

Secondary purposes include:

- Improve hurricane/emergency evacuation routes and travel times
- Evaluate multimodal transportation opportunities to improve connectivity to the fast growing southwest area of Miami-Dade County.

Due to the existing congested roadway network, travel in, and through the project area is inefficient with increased travel times, emissions, and unreliable travel conditions. The existing roadway network cannot accommodate the existing captive demand. Congestion in the project area limits accessibility to and from the residential communities located to the southwest and major activity and employment centers to the northwest, central and eastern sections of the county. Additionally, planned improvements to the roadways and transit service in the project area are limited and cannot accommodate future demands within the 2020 UDB to fully optimize local and regional connectivity. Preliminary traffic analysis performed for this study indicates that most of the major east-west corridors will be operating at a Level of Service (LOS) D-F in 2050.

Population growth, and thus traffic, in the southwest Miami-Dade area has experienced a significant increase in recent years due to newly developed residential communities, commercial developments, and light industrial uses. The Miami-Dade 2040 LRTP projects population growth of 12.5% and 49.6% for west and south Miami-Dade, respectively. Most of these areas' projected growth includes low to medium density housing developments with supporting commercial uses such as neighborhood shopping centers, schools, and services. While the southwest area of Miami-Dade County is expected to grow in terms of population, the greatest employment growth is predicted to be in the northwest and central areas of the County. These areas of growth indicate a need for additional mobility and connectivity options. The limited capacity of the existing expressway and arterial roadway network in the area to serve the needs of the traffic generated by this growth does not support those options. The SR 836/Dolphin Expressway Southwest Extension project would help satisfy this need.

Alternative Corridor Development

The four Concept Study Corridors developed as part of the 2007/2008 Concept Study Report represent three general north-south alignments within the study area. The western alignment generally follows SW 177th Avenue (Krome Avenue). The eastern alignment generally follows SW 157th Avenue. The center alignment generally follows or parallels the 2020 UDB. During the ACE process, the study area was segmented and a link analysis was performed in each segment. The layout of the links is based on geometric design and stakeholder input received to date. Sixteen interchangeable links were developed, making up a total of 46 possible Alternative Corridors that generally follow the three north-south alignments identified in the Concept Study Report.

This pool of corridors was evaluated using project specific qualitative and quantitative criteria based on the following:

- P&N evaluation
- Avoidance and minimization of potential impacts to environmental resources
- Engineering considerations
- A qualitative assessment of unique issues
- Agency and public input

Identification of Corridor Segments and Links

The study area encompasses a large and diverse geographic area. As such, it was divided into three north-south segments to facilitate the analysis. The three north-south segments reflect predominant land uses, natural resources, as well as major arterial roads (see **Figures 3** and **Figure 4**). The following is a brief characterization of each segment.

- **Segment I:** North of SW 8th Street (Tamiami Trail). Key features within this segment include: the Pennsuco Wetlands, the Trail Glades Shooting Range, the Miccosukee Resort & Gaming Casino, the C-4 Impoundment Area, the Dade-Broward Levee, the proposed Miami-Dade County Waste Water Treatment Plant, two previously recorded archeological sites and the Lehigh Archeological zones, the C-4/Tamiami Canal, Lake Belt Area, wetlands, and tree Islands.
- **Segment II:** South of SW 8th Street (Tamiami Trail) to SW 88th Street (Kendall Drive). Key Features within this segment include: the Bird Drive Recharge Area, two previously recorded archeological sites, tree islands, developed areas, farmlands, wetlands and the Miami-Dade County West Wellfield.
- **Segment III:** South of SW 88th Street (Kendall Drive). Key features within this segment include: farmlands, the Kendall-Tamiami Executive Airport, and developed areas and West Kendall Baptist Hospital.

SEGMENT I

SEGMENT II

SEGMENT III

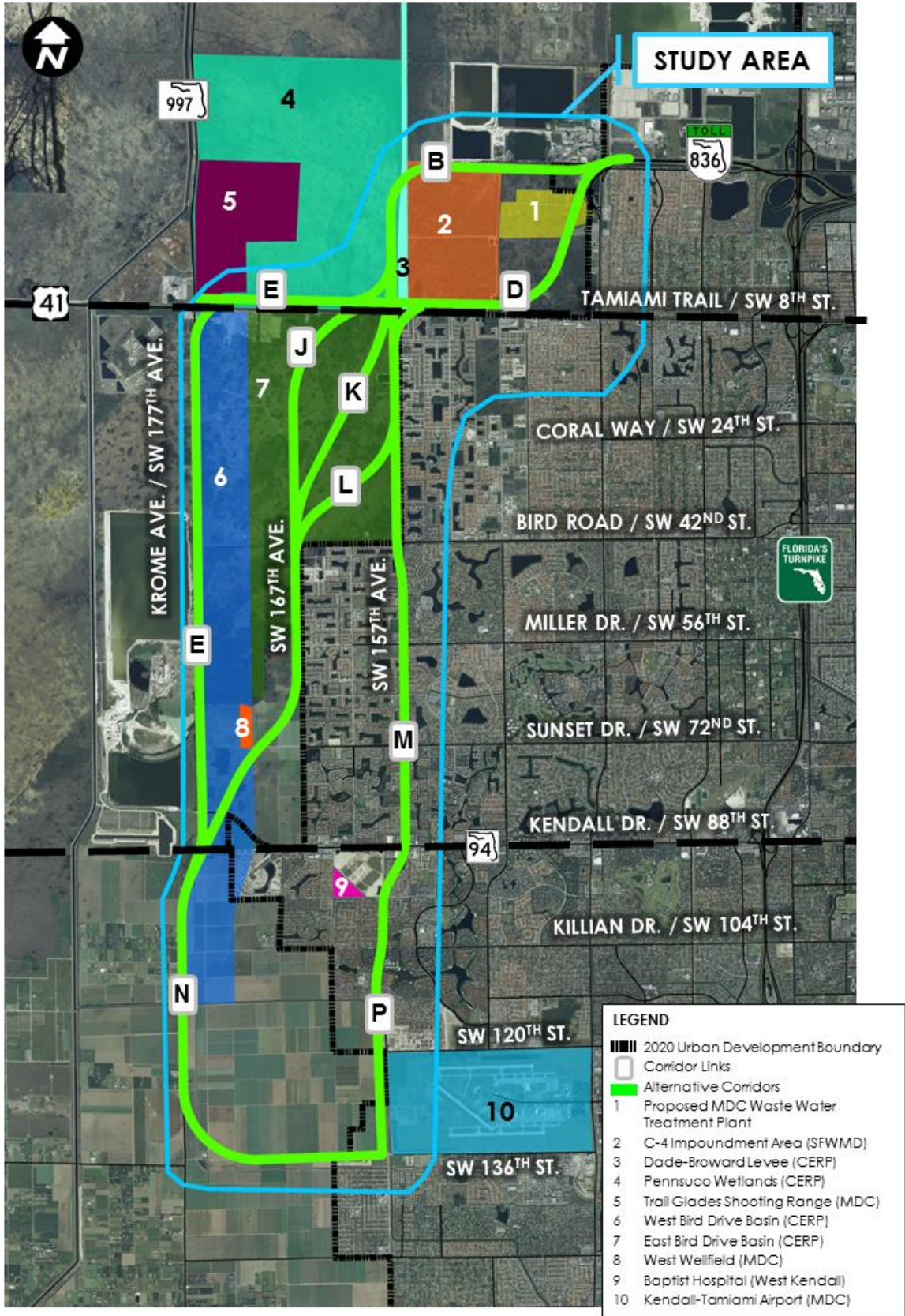


FIGURE 3 - NATURAL AND PHYSICAL IMPACTS

SEGMENT I

SEGMENT II

SEGMENT III

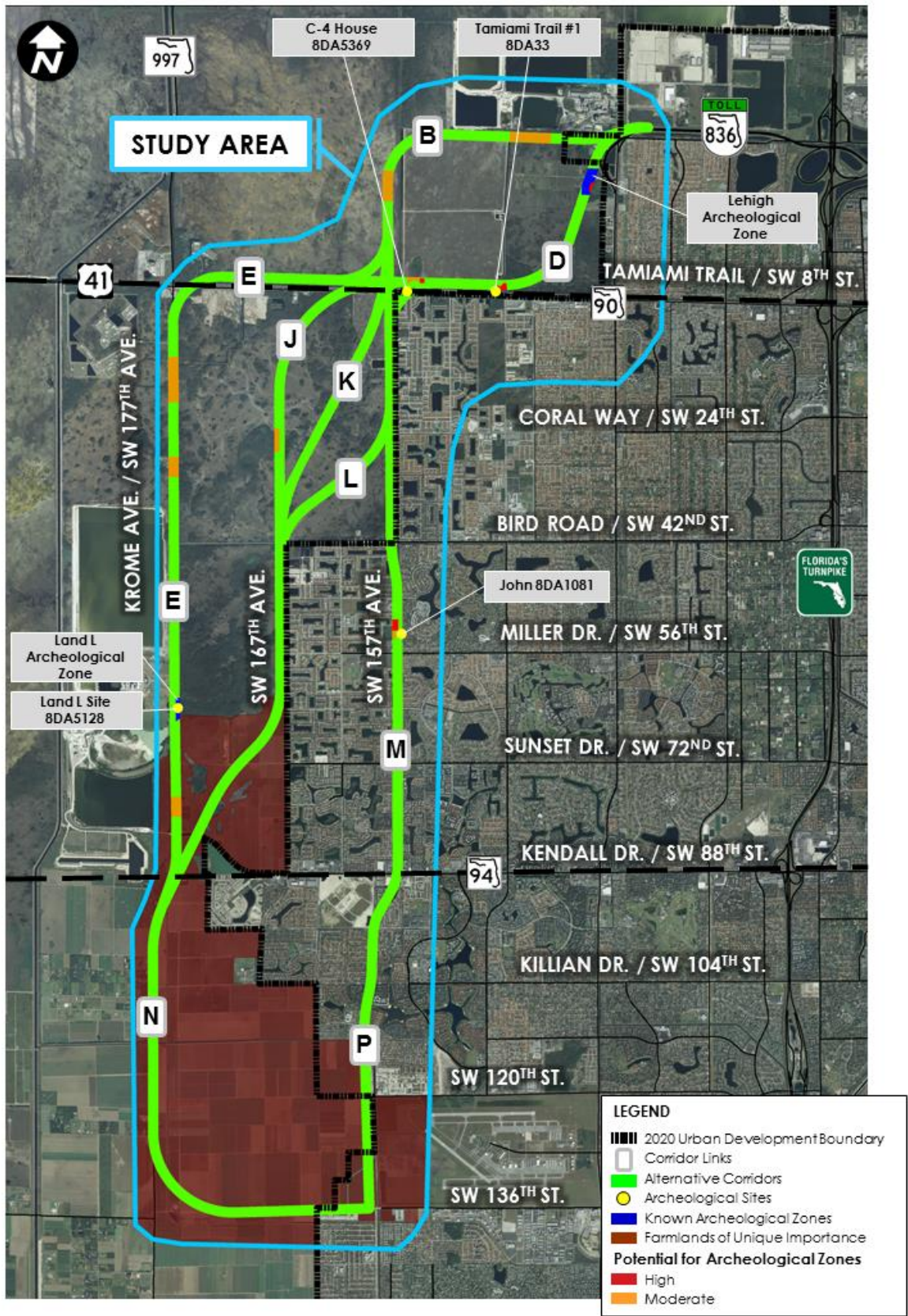


FIGURE 4 - CULTURAL IMPACTS

The four corridors identified in the Concept Study Report represent three general north-south corridor alignments within the study area. The western alignment generally follows SW 177th Avenue (Krome Avenue). The eastern alignment generally follows SW 157th Avenue. The center alignment generally follows or parallels the 2020 UDB.

Sixteen interchangeable links were designed that when combined into Alternative Corridors, generally follow the three north-south alignments identified in the Concept Study Report. The layout of the links is based on geometric design and stakeholder input received to date. For purposes of the analysis, nodes were defined as areas where three or more links converge, or merge. Segmenting the corridor alignments into links allowed the study team to quantify potential impacts per segment and refine and modify the Alternative Corridors accordingly. It also allowed the study team to avoid and minimize negative impacts to the built and natural environments to the greatest extent possible. Based on this analysis approach, links with significant environmental impacts could be eliminated without having to eliminate the entire corridor. From the 16 interchangeable links, a total of 46 possible Alternative Corridors were developed (see **Figure 5**).

SEGMENT I

SEGMENT II

SEGMENT III

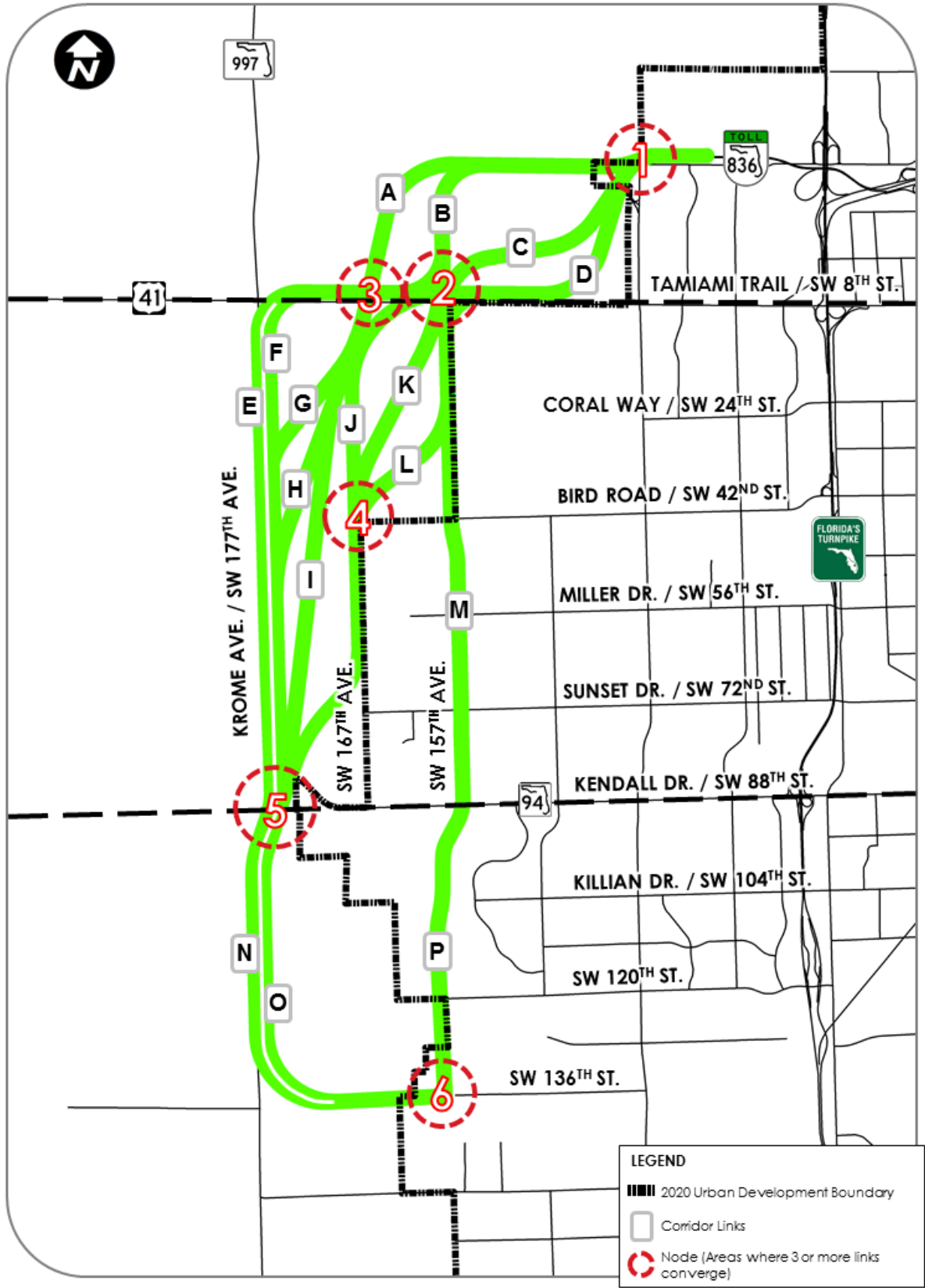


FIGURE 5 - CORRIDOR SEGMENTS AND LINKS

High Level Qualitative Analysis

All 16 links were screened using the data collected and/or input received from government agencies, the public and environmental organizations. This high level qualitative analysis identified links with disproportional impacts to environmentally sensitive lands, projects such as CERP, wetland mitigation lands, and habitat fragmentation. The result of this high level analysis eliminated seven links due to unavoidable impacts. There are other similar links with significantly lower impacts to the features as compared to the seven eliminated links. A description of the reason why the seven links were eliminated is included in the following table. The removal of these links did not eliminate any of the original three north-south general alignments.

LINKS ELIMINATED DUE TO DISPROPORTINATE/LARGE IMPACTS

Links Eliminated Due to Disproportionate/Large Impacts		
SEGMENT I		
Link	Recommendation	Comment
A	Eliminate	Link A bisects the Pennsuco Wetlands, a high quality wetland that has been used as mitigation. Because the corridor bisects a portion of the Pennsuco Wetlands this alignment would result in the isolation of significant wetlands and significant habitat fragmentation. Link B has significantly lower impacts to the Pennsuco Wetlands in comparison with Link A.
C	Eliminate	This link will affect the future Miami-Dade County Waste Water Treatment Plant. Additionally, this link bisects the southern cell of the C-4 Impoundment area resulting in impacts to high quality wetlands as well as significant habitat fragmentation. Link D has lower impacts and less habitat fragmentation in comparison to Link C.
SEGMENT II		
Link	Recommendation	Comment
F, G, H, I	Eliminate	Links F, G, H, and I are directly over an area identified by the U.S. Department of Interior (USDOL) as being critical for a future CERP project that is currently being considered as a substitute for the Bird Drive Basin CERP project. Link J has lower impacts in comparison to Links F, G, H, and I.
SEGMENT III		
Link	Recommendation	Comment
O	Eliminate	This corridor is located directly over the footprint of an area identified by the USDOL as being critical for a future CERP project that is currently being considered as a substitute for the Bird Drive Basin CERP project.

Alternative Corridors Considered

The links that were not eliminated during the high level qualitative analyses were further refined based on how they connect to the other links. For example, Link B connects to four links in Segment II which follow one of the three main corridor alignments eastern (M), central (K, L), and western (E); therefore, there are three slightly different footprints for link B. B-1 connects to links M and L, B-2 connects to link K, and B-3 connects to link E. The table below provides a summary of link connections. The refinement of the link connections resulted in 10 Alternative Corridors which will be evaluated in further detail (see **Figure 6**).

SUMMARY OF ALTERNATIVE CORRIDORS DEVELOPMENT

Summary of Alternative Corridor Development			
SEGMENT I	SEGMENT II	SEGMENT III	Alternative Corridors
Link	Link	Link	
B-1	L-1	N	1
B-1	M-1	P	2
B-2	K-1	N	3
B-3	E-1	N	4
D-1	E-2	N	5A
D-1	*	*	5B
D-1	J	N	6
D-2	M-2	P	7
D-2	L-2	N	8
D-3	K-2	N	9

Note: Corridor 5B ties into existing SW 177th Avenue (Krome Avenue); impacts along SW 177th Avenue (Krome Avenue) are included in the analysis.

FIGURE 6 – ALTERNATIVE CORRIDORS CONSIDERED

These 10 Alternative Corridors were further evaluated based on the following parameters: purpose and need evaluation, avoidance and minimization of potential impacts to environmental resources, engineering considerations and consistency with Miami-Dade County's Comprehensive Development Master Plan (CDMP). Based on the preliminary results of the ACE process, the following Alternative Corridors are recommended for further study in Phase II:

RECOMMENDED ALTERNATIVE CORRIDORS

Recommended Alternative Corridors	
Alternative Corridor	Recommend for further Consideration
1	No
2	No
3	No
4	No
5A	No
5B	No
6	Yes
7	No
8	No
9	Yes

Public, agency and ETAT members input received during the screening process and throughout the ACE process were used to evaluate the Alternative Corridors. Two meetings with the CAC and the EF have been held and a Corridor Workshop is anticipated to be held in the Summer of 2016. The results from these meetings, the Corridor Workshop and all public and agency input received throughout the ACE process will be taken into consideration to finalize the recommendations in this ACER. The final results documented in the ACER will be made available to the stakeholders through the EST for a 30 calendar day period.

The preliminary recommended Alternative Corridors represent the best opportunities for the SR 836/Dolphin Expressway Southwest Extension to meet the purpose and need, avoid and minimize environmental impacts, minimize costs, maximize User Benefits while taking into consideration the goals, objectives and policies of the CDMP. The preliminary recommended Alternative Corridors are shown on **Figure 7**.

SEGMENT I

SEGMENT II

SEGMENT III

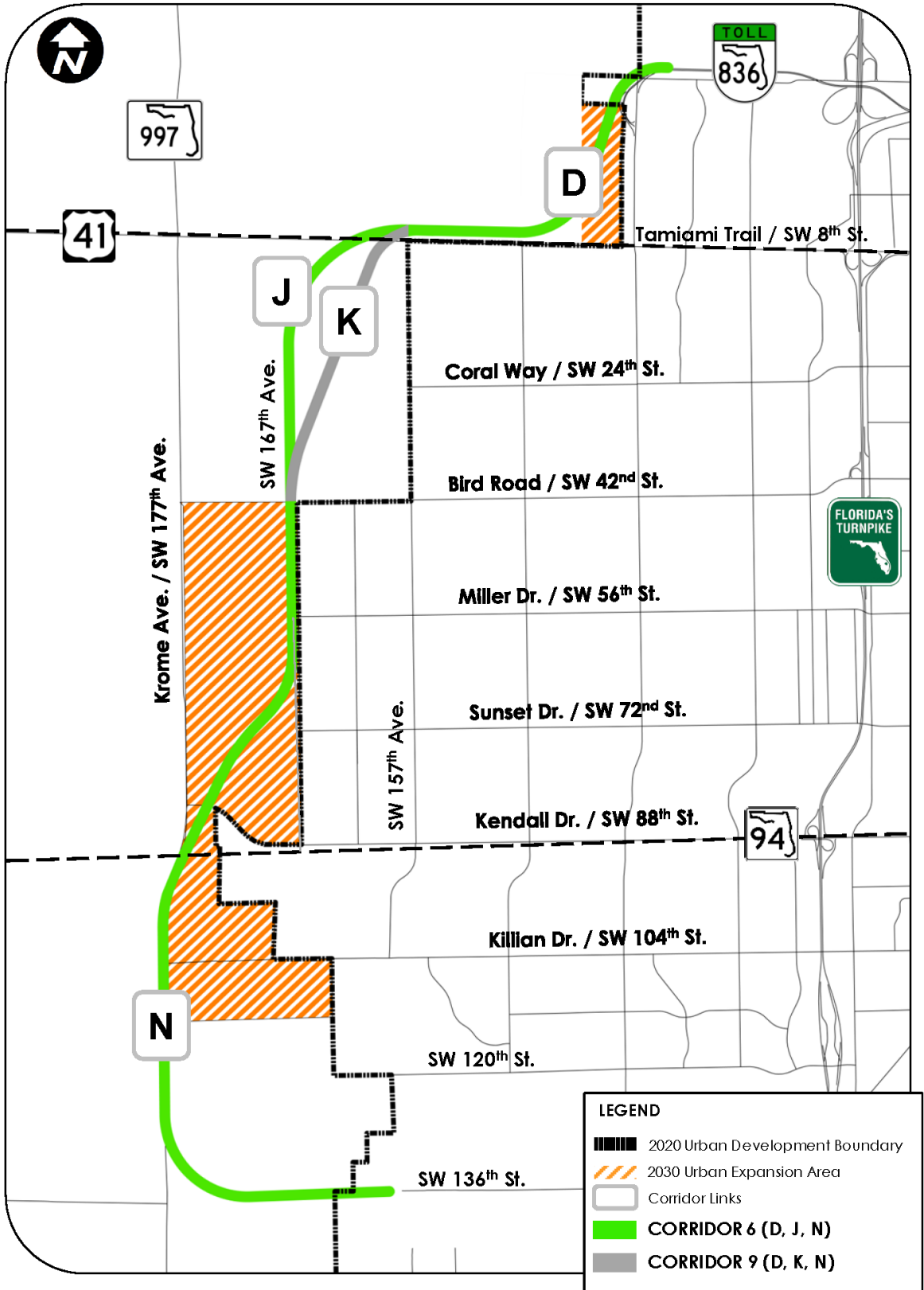


FIGURE 7 – PRELIMINARY RECOMMENDED ALTERNATIVE CORRIDORS

Public and Agency Coordination

Public and Agency coordination has been an integral part of the ACE process. Early coordination efforts started with the submission of the Planning Corridor Report to ETAT members via the EST. A number of concerns were identified including potential conflicts with special designation areas, wildlife and habitat issues, and potential impacts to known (recorded) historical/archeological resources. These concerns were taken into account as the GIS layers were compiled to produce the environmental analysis. A Public and Agency/Elected Officials Kick-off Meeting was held on September 4, 2014. Agency representatives in attendance included staff from the United States Fish and Wildlife Service (USFWS), USDO, Miami-Dade County Planning and Zoning Department (MDCP&Z), FDOT, FHWA and SFWMD. Subsequent meetings were held with local, state and federal agencies to discuss each agency's concerns and recommendations for the study. These meetings included staff from the USDO, USFWS, SFWMD as well as the Miami-Dade County Department of Regulatory and Economic Resources (DRER), the National Park Service (NPS) and the USACE. MDX will continue to solicit input and coordinate with agencies throughout the process.

The following table summarizes the dates of the coordination meetings as well as agencies in attendance.

AGENCY COORDINATION

Agency Coordination	
Meeting Date	External Agencies Represented
January 21, 2014	USACE
August 12, 2014	DRER
August 26, 2014	USDO, USFWS, MDCP&Z, FDOT, FHWA, SFWMD
September 19, 2014	SFWMD
October 22, 2014	MDWASD
December 4, 2014	USACE
January 29, 2015	Florida Power and Light (FPL)
February 2, 2015	Miami-Dade DTPW
February 17, 2015	USACE
May 1, 2015	USDO, NPS, USFWS
May 27, 2015	USACE
September 14, 2015	USACE
November 3, 2015	USDO
January 13, 2016	USACE
March 14, 2016	SFWMD, USDO, USACE, FDEP, FFWCC, NPS

Two Citizens Advisory Committee (CAC) meetings and two Environmental Forum (EF) meetings were established to share study information and solicit input throughout the study.

The first meeting with the CAC was held on November 20, 2014 and with the EF on February 26, 2015 to share study information and solicit input. The second CAC was held on November 19, 2015 and with the EF on March 17, 2016 to present the 10 Alternative Corridors under consideration.

The Corridor Workshop is scheduled for June 30, 2016. The workshop will have an open house format where the public can attend at any time between 6:00 PM and 9:00 PM. Information will include the background, history, the Alternatives Corridor Evaluation Process, the corridors that were identified and evaluated, and preliminary recommendations to move forward to Phase II, the PD&E Study. The final recommendations in the final ACER will take into consideration all the agency and stakeholder input received throughout Phase I. MDX will continue to pro-actively engage agencies and stakeholders throughout Phase II, the PD&E study.

The ACER will be uploaded into the Environmental Screening Tool (EST) for review by the Environmental Technical Advisory Team (ETAT) which consists of representatives from participating agencies and Native American Tribes. The recommendations in the final ACER will take into consideration the agency and stakeholder input received throughout Phase I, including input provided during the corridor workshop and subsequent agency review.