Executive Summary Report

Access to SW 137th Avenue to and from SR 874

(Don Shula Expressway)

Southwest Miami-Dade County is one of the fastest growing areas in the County. SR 874 provides northeast-southwest flow in the area and connects the Homestead Extension of Florida's Turnpike (HEFT) and SR 826 (Palmetto Expressway), but does not currently provide direct connectivity to SW 137th Avenue. The rapid growth of Southwest Miami-Dade and lack of connectivity to SR 874 is creating a high degree of congestion and excessive delays.

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Background

In 1995, the Florida Department of Transportation (FDOT) partially completed a Project Development & Environment (PD&E) study, which resulted in five possible alternatives for the extension of SR 874 to the southwest. The PD&E study determined Alternative E to be the best alternative. Alternative E consists of a six-lane divided roadway extending to the southwest from SR 874 along the CSX railroad corridor, crossing over Coral Reef Drive (SW 152nd Street) with a grade-separated crossing, then connecting to SW 137th Avenue south of Coral Reef Drive. However, the extension of SR 874 has been removed from the Miami-Dade Transportation Improvement Plan (TIP), primarily because of socioeconomic and environmental impacts.

Kimley-Horn evaluated Alternative E of the FDOT PD&E study, along with recommendations from the SR 874 Master Plan, prepared by the Miami-Dade Expressway Authority (MDX), and the HEFT / SR 874 Turnpike Planning Concept Report. The PD&E alternative is the only alternative that proposes reasonable access to the SW 137th Avenue area. However, the PD&E alternative exhibited certain adverse socioeconomic and environmental impacts. Therefore, the Kimley-Horn study provides modifications to this alternative that are designed to minimize social impact, environmental issues, and construction cost, while providing connectivity to SW 137th Avenue.

Alternatives

Five new alternatives were developed during this study for connecting SR 874 to SW 137th Avenue. Several options for the interchange connections between the HEFT / SR 874 interchange and the five new alternatives under consideration are available. Figure 1 illustrates the alignment for the five alternatives considered in this study for providing connectivity to SW 137th Avenue. Figure 2 illustrates two possibilities for this connection. All five alternatives extend SR 874 south along the CSX railroad corridor from the HEFT / SR 874 interchange for various distances.

- Alternative 1 connects to SW 137th Avenue westward along SW 136th Street.
- Alternative 2 connects only to Coral Reef Drive by following the CSX railroad corridor to Coral Reef Drive.
- Alternative 3 connects to SW 137th Avenue along the CSX railroad spur that aligns with SW 144th Street.
- Alternative 4 connects to Coral Reef Drive along the CSX railroad corridor then turning south along SW 127th Avenue.
- Alternative 5 connects to Coral Reef Drive in a similar manner to Alternative 4 and Alternative 2, but utilizes a one-way pair concept with the CSX railroad corridor and SW 127th Avenue.

A comparison of the five alternatives was performed. The comparison included a capacity analysis, environmental impacts, right-of-way requirements, direct connectivity to SW 137th Avenue, and potential for future expansion. Based on the analysis presented in the report for this project and discussion by the project staff and the study advisory committee (SAC), Alternative 1 (the SW 136th Street alternative) was selected as the "preferred alternative."

Preferred Alternative Advantages

- Potential connection farther west beyond SW 137th Avenue to SW 157th Avenue.
- Allows the possibility for a grade-separated interchange at SW 137th Avenue. Space is available to the west of the intersection that could accommodate trumpet interchange ramps. A grade-separated interchange allows a higher capacity along SW 137th Avenue.
- Provides direct connectivity to SW 137th Avenue and network capacity enhancement while minimizing right-of-way requirements, neighborhood impacts, and environmental issues.

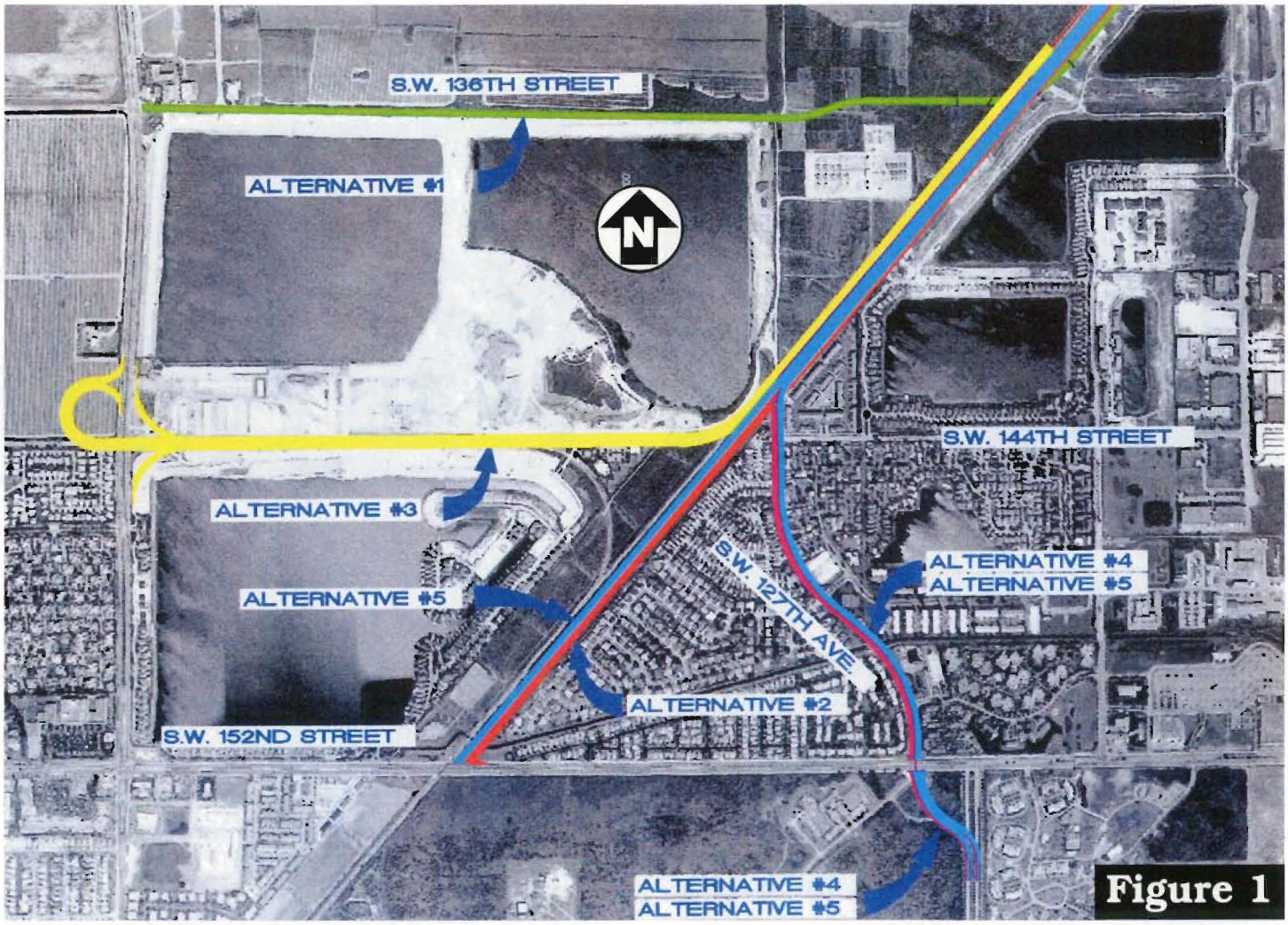

Figure 1

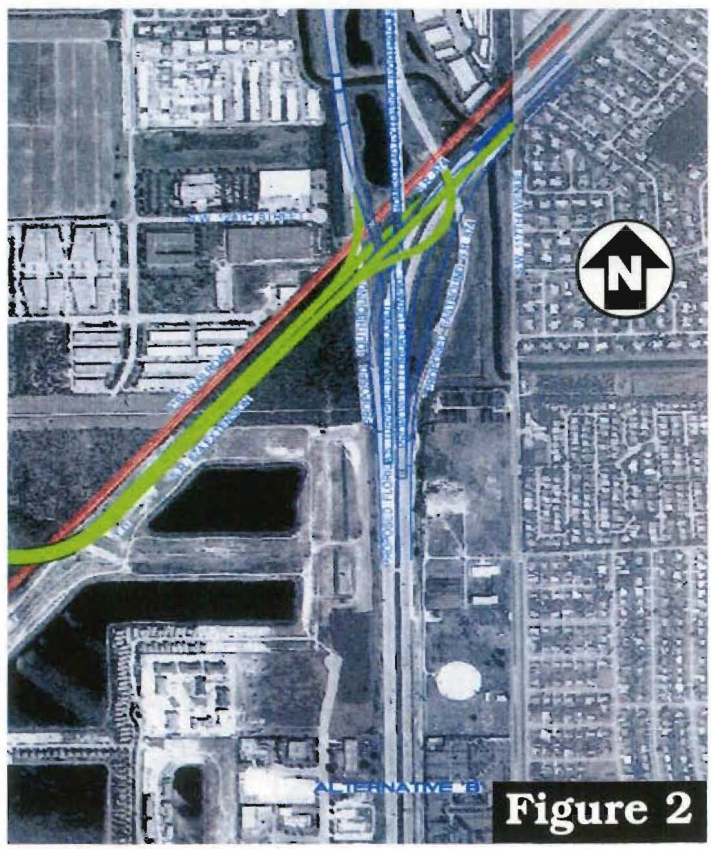

Figure 2

The following photograph shows the areas developed along SW 136th Street as of March, 2001. These homes are separated by a frontage road from the alignment of the "preferred alternative" and therefore no impact to the internal access of the residential community is expected.

Traffic Forecasting

Traffic demand forecasting was performed to get a general idea of future traffic demand for the "preferred alternative." The FSUTMS model for Miami-Dade County was used to obtain future traffic volumes in the vicinity of the project. Alternative 1 was modeled as both a four-lane and a six-lane facility in the year 2020 to gauge the future demand on the facility. The modeling results indicate there is latent demand for the SR 874 Connector that would not be accommodated by a four-lane facility. Alternative 1 was also modeled both with and without a ramp connection to the southbound HEFT. However, the traffic volume projected to utilize the southbound connection to the HEFT was minimal.

Recommendations

- This study recommends that Alternative 1 as the "preferred alternative" be taken to the PD&E process for a more detailed study.
- It is recommended that right-of-way be reserved for a six-lane Alternative. However, more factors should be considered in determining whether to construct four or six lanes.
- A more detailed capacity analysis should be performed during the PD&E process.
- Community support for a four- or six-lane SR 874 Connector should be measured and included in the typical section decision.