



EXECUTIVE SUMMARY

The FDOT District Four has conducted an IMR as part of the Project Development and Environment Study (PD&E) for the interchange of I-95/SR 9 and Woolbright Road, dated June 2021. The study evaluated three (3) build alternatives to improve traffic operations and safety at this critical interchange in Palm Beach County: Build Alternative 1, Tight Diamond Interchange (TDI); Build Alternative 2, Diverging Diamond Interchange (DDI); and Build Alternative 3, Single-Point Urban Interchange (SPUI). Based on the comprehensive evaluation presented in the *June 2021 I-95/SR 9 at Woolbright Road IMR*, Build Alternative 1 with a TDI configuration was selected as the Preferred Alternative due to the traffic operational and safety benefits it provides compared to the other Alternatives. Build Alternative 1 also satisfies the purpose and need of this project and provides the highest benefit-cost ratio making it the most cost-effective alternative. This Alternative was the basis for comparison as the Approved Interchange Access Request (IAR) Alternative.

The project is currently in the final design phase, and a modified concept is proposed as an improvement over the Approved IAR Alternative. The improvements were presented at the September 2021 District Four Interchange Review Coordination Meeting. The modified concept maintains the TDI design concept at the interchange, but seeks to achieve the following project objectives:

1. Maintain or improve traffic operations and safety of the Approved IAR Alternative;
2. Reduce pedestrian/vehicular, vehicular merging and vehicular weaving conflicts due to off-ramp free-flow right-turning movements at the I-95/SR 9 ramp terminal intersections; and
3. Reduce major utility conflicts along the northwest quadrant at the intersection of Woolbright Road and SW 8th Street/Corporate Drive.

The Build Alternative reduces pedestrian/vehicular, vehicular merging and vehicular weaving conflicts due to off-ramp free-flow right-turning movements at the I-95/SR 9 ramp terminal intersections; reduces major utility conflicts along the northwest quadrant at the intersection of Woolbright Road and SW 8th Street/Corporate Drive; maintains or improves traffic operations LOS and safety; and meets FHWA interchange access policy. Therefore, the Build Alternative configuration is recommended for implementation including the following improvements:

1. Eliminate the proposed 4th WB through lane along Woolbright Road at SW 8th Street;
2. Introduce a 3rd SB left-turn lane along SW 8th Street at Woolbright Road;
3. Extend EB and WB left-turn lanes along Woolbright Road at SW 8th Street;
4. Extend the WB right-turn lane along Woolbright Road at SW 8th Street to the I-95/SR 9 SB Off-Ramp;
5. Introduce signalized double right-turn lanes at the I-95 SB and NB Off-Ramp Terminals;
6. Provide an acceleration lane for the EB right-turn lane to the I-95/SR 9 SB On-Ramp;
7. Provide a shared use path between SW 8th Street and SW 3rd Street; and
8. Provide Rectangular Rapid-Flashing Beacons (RRFB) at the I-95/SR 9 Free-Flow On-Ramp Right-Turn Lanes.

It is in the national interest to preserve and enhance the Interstate System to meet the needs of the 21st Century by assuring that it provides the highest level of service in terms of safety and mobility. Full control of access along the Interstate mainline and ramps, along with control of access on the crossroad at interchanges, is critical to providing such service. Therefore, the Federal Highway Administration's (FHWA) decision to approve new or revised access points to the Interstate System under Title 23, United States Code (U.S.C.), Section 111, must be supported by substantiated information justifying and documenting that decision. The FHWA's decision to approve a request is dependent on the proposal satisfying and documenting the following requirements:



Policy Point 1

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (Title 23, Code of Federal Regulations (CFR), paragraphs 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

The operational analysis conducted for this IMR Re-evaluation confirmed that the proposed interchange modifications are not expected to have any significant adverse impacts on safety and operations on the interstate facility, I-95/SR 9. When compared with the Approved IAR Alternative, the Build Alternative improves or maintains safety and operations along Woolbright Road and has no impacts along I-95/SR 9.

It should also be noted that the signalization control of the right-turn movements at the I-95/SR 9 Ramp Terminals will reduce pedestrian/vehicular conflicts. In addition, the signalization control of the SB right-turn movements at the I-95/SR 9 SB Ramp Terminal will reduce uncontrolled weaving movements and related vehicular merging and vehicular weaving conflicts. The safety analysis indicates that the Build Alternative will improve safety conditions. Based on the results of the Highway Safety Manual (HSM) analysis, the proposed condition would reduce the predicted total project life cycle crashes by a total of 87.47 crashes in comparison to the Approved IAR Alternative. Of the total 87.47 reduced crashes, 39.32 are predicted to be fatal/injury crashes.

Policy Point 2

The proposed access connects to a public road only and will provide for all traffic movements. Less than “full interchanges” may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

This IMR Re-evaluation does not propose any new interchanges along I-95/SR 9. The existing interchange provides access to public roads only. The proposed improvements at the interchange will maintain full access to the existing cross street of Woolbright Road and accommodates all movements.