

1.0 Introduction

The purpose of this Interchange Justification Report (IJR) is to document the potential benefits and impacts of a proposed interchange on Interstate 95 (I-95) at Pioneer Trail (CR 4118) near Milepost (MP) 19.032 located in Volusia County, Florida. The proposed interchange is located between two existing interchanges on I-95 with SR 421 at MP 23.300 to the north and with SR 44 at MP 16.287 to the south. The IJR is being developed on behalf of Volusia County and the City of Port Orange. The project location and the Area of Influence (AOI) are depicted in **Figure 1-1**.

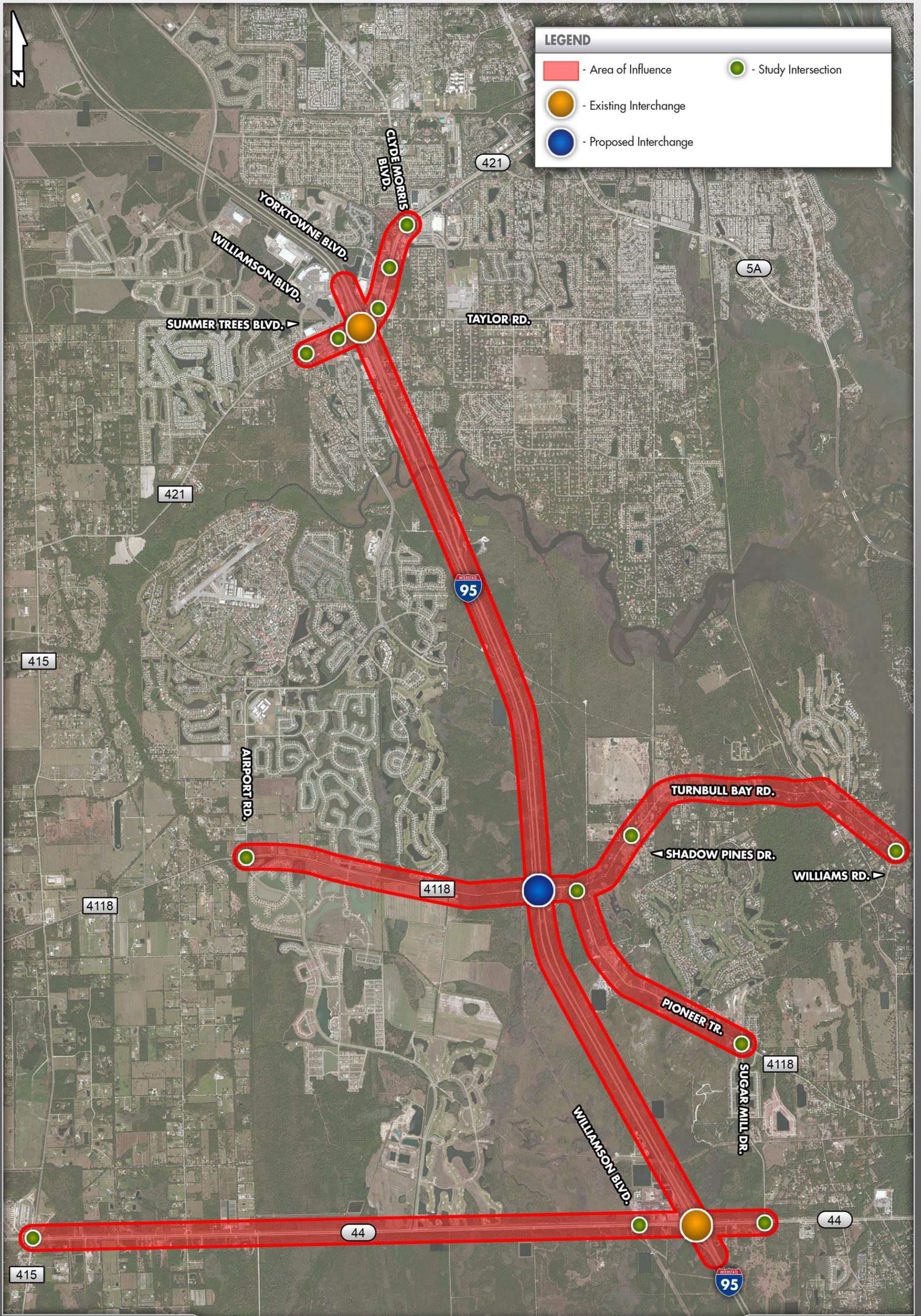
This IJR is developed in accordance with the Florida Department of Transportation (FDOT) Policy No. 000-525-015 Approval of New or Modified Access to Limited Access Highways on the SHS; New or Modified Interchanges, FDOT Procedure No. 525-030-160-K; and the FDOT Project Traffic Forecasting Procedure (Procedure No. 525-030-120).

1.1 Purpose and Need for the project

The purpose and need for the proposed interchange on I-95 at Pioneer Trail in Volusia County, Florida is to support the economic viability and job creation associated with planned and approved future development in the vicinity of the study area, to reduce congestion at the adjacent I-95 interchanges, and to better serve regional trips originating in and destined to the study area. Additionally, Volusia County and the cities of Port Orange and New Smyrna Beach have identified potential benefits to emergency evacuation conditions that would be realized by an interchange on I-95 at Pioneer Trail.

Support the Economic Viability and Job Creation Associated with Planned and Approved Future Development

The long-term planning and commitment to development in the study area is shown in the future land use and roadway network plans of Volusia County, the City of Port Orange and New Smyrna Beach. Significant growth from base year 2010 through the design year of 2042 has been approved and planned for. The City of New Smyrna Beach has annexed all of the land west of I-95 to Airport Road into the city limits. The City also expanded the commercial nodes around the SR 44 interchange for future development ventures.



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A specific economic impact analysis of the proposed I-95/Pioneer Trail interchange was conducted to support the interchange justification (see **Appendix A**). The economic analysis utilized the IMPLAN (Impact Analysis for PLANning) model, development assumptions, and local knowledge of the area. The key conclusions of the analysis were by year 2042 construction of the interchange would:

- Add \$2.5 billion of economic impacts to the local economy due to construction;
- Employ nearly 700 construction and construction related workers during the development horizon;
- Support 13,410 permanent jobs; and
- Reach an addition of \$775 million per year of permanent, ongoing impacts from spending associated with new household operations and additional office/retail/hotel employment.

An increased economic efficiency value of \$1,779,687 due to savings in travel time and reductions in pollution during the year 2042 was also identified in the economic analysis.

In addition to planning the future land use, the future roadway network to accommodate increased trips has been planned. The I-95/Pioneer Trail interchange was included in the Cost Feasible Roadway Projects identified in the 2025 Long Range Transportation Plan (LRTP) and is included in the River to Sea TPO 2035 LRTP Needs Plan. The following roadway changes are in the LRTP:

- The widening of I-95 to a 6-lane interstate facility from SR 406 to SR 44 and from SR 44 north to US 92;
- The widening of Pioneer Trail from two lanes to four lanes between Williamson Boulevard and Turnbull Bay Road;
- The extension of Williamson Boulevard as a four-lane divided arterial from Airport Road to Pioneer Trail, the extension of Williamson Boulevard as a two-lane road from Pioneer Trail to SR 44, and the extension of Williamson Boulevard as a two-lane road from SR 44 to SR 442; and
- The widening of Airport Road from two lanes to four lanes between Sabal Creek Boulevard and Pioneer Trail.

Reduce Congestion at Adjacent Interchanges

The I-95/SR 421 interchange area is forecast to operate at or near capacity with extended queues during the peak hours. The FDOT, Volusia County, and the City of Port Orange have made a series of improvements in this area from 2006 to 2016 to accommodate increasing traffic volumes. The

ability to add capacity in the SR 421 interchange area is constrained due to limited right-of-way and the impact of closely spaced signalized intersections to the west (at Williamson Boulevard) and east (at Taylor Road). Previous studies in the area have identified the need to provide alternative connections to reduce the number of vehicles using the I-95/SR 421 interchange area.

Serve Regional Trips

Pioneer Trail contributes to the regional network and provides direct and in-direct connections to all the major arterials in the surrounding area: SR 421 to the north; US 1 to the east; SR 44 to the south; Tomoka Farms Road to the west; and I-4 via SR 44 to the west. The need exists to provide access to the regional network that does not involve utilizing the already congested I-95/SR 421 interchange and the I-95/SR 44 interchange.

Evacuation Conditions

Pioneer Trail is a designated statewide emergency evacuation corridor. Volusia County and the cities of Port Orange and New Smyrna Beach have stated that the proposed I-95 interchange at Pioneer Trail would serve emergency evacuation during hurricanes and wild fires. Volusia County is considered at medium to high risk for wild fires. For example, in 1998 Volusia and Flagler counties experienced wildfires that burned approximately 137,000 acres, with approximately 29,000 homes threatened and more than 300 homes and business damaged or destroyed in various areas around Volusia County. In 2006 wild fires occurred in the vicinity of Pioneer Trail that resulted in 1,000 homeowners, including those residents along Pioneer Trail and the Sugar Mill subdivision, being ordered to evacuate.

1.2 Methodology

A Methodology Letter of Understanding (MLOU) between FHWA, FDOT, Volusia County, and the City of Port Orange was approved in August of 2014. The analysis procedures and techniques utilized in the preparation of this IJR are documented in the MLOU. All required traffic data for the study was obtained from Florida Traffic Information (FTI 2013) and field collected data between May and June of 2014. This IJR study has been conducted in accordance with FDOT and FHWA's recommended format and has addressed the eight federal requirements, summarized from the Federal Register dated August 27, 2009. The approved MLOU is included in **Appendix B**.

The following years were identified for analysis: