

Florida's Turnpike Enterprise (FTE) conducted a Project Development and Environment (PD&E) Study (FPID: 446164-1-22-01) to evaluate the widening of the Western Beltway (SR 429) and improving the interchanges within the study limits. The project is located within Osceola and Orange Counties in Central Florida. The study limits are from north of Interstate 4 (I-4) to Seidel Road, approximately 10 miles. **Figure 1.1** shows the project location and study limits.

State Road (SR) 429 is a north-south limited-access tolled facility that forms a portion of the beltway around the Orlando metropolitan area. SR 429 extends nearly 23 miles from U.S. Highway 441 in Apopka south to I-4 in Osceola County, providing West Orange and Osceola counties with an alternate north-south route to heavily traveled I-4. The segment from I-4 to Seidel Road is owned and operated by FTE and the remainder is owned by the Central Florida Expressway Authority (CFX).

The PD&E study involves widening of the SR 429 mainline from two to four lanes per direction from north of I-4 to Seidel Road, incorporating interchange improvements or modifications, providing safety improvements along SR 429, and adding a potential new interchange location.

This Systems Interchange Justification Report (SIJR) has been developed in accordance with FDOT Policy Topic No. 000-525-015-h, Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS); the 2022 FDOT Interchange Access Request User's Guide (IARUG); FDOT Procedure No. 525-030-160-I, New or Modified Interchanges; and FDOT Procedure No. 525-030-120-K, Project Traffic Forecasting. The Methodology Letter of Understanding (MLOU) for the SIJR was approved by FTE, the Requestor, FDOT District Five, and FDOT Systems Implementation Office in October 2021. A copy of the signed MLOU is provided in **Appendix A**. Per the MLOU, analysis years for the SIJR are 2020 (existing), 2030 (opening) and 2050 (design).

1.1 PURPOSE AND NEED

The purpose of the project is to increase capacity on the SR 429 mainline and at the interchanges within the study limits to accommodate existing and future traffic demand, enhance safety, improve travel time reliability, and enhance emergency evacuation. SR 429 serves north-south trips on the west side of the Orlando metropolitan area and provides access to Disney World attractions around the study area. Currently, traffic backs up on SR 429 in the southbound direction towards I-4 during the evening commute. While these backups are primarily caused by congestion on I-4, additional capacity will be needed on SR 429. The US 192 interchange also has capacity deficiencies. Long queues have been observed occasionally at the southbound off-ramp during the evening commute. The queues sporadically extend to the SR 429 expressway mainline, impacting traffic flow and creating a safety concern on the high-speed facility.

Traffic on SR 429 has been increasing by more than 10 percent per year within the study limits. This can be attributed to the high increase in population and employment opportunities in the area, as well as recreational activities. Travel forecasts show that traffic on SR 429 is expected to increase at an average yearly rate of about 6 percent from 2020 to 2030 and 4 percent from 2030 to 2050. As a result, the existing four-lane capacity on SR 429 will be exceeded, triggering a need for additional capacity.