



1. PROJECT OVERVIEW

1.1 Introduction

This Interchange Operational Analysis Report (IOAR) has been prepared to evaluate the impacts of signaling the Interstate 10 (I-10) eastbound and westbound ramp terminal intersections at S.R. 87. The Florida Department of Transportation (FDOT) District 3 is the Requestor seeking approval of this IOAR that presents the necessary documentation for such improvements.

The State of Florida established the Strategic Intermodal System (SIS), which consists of high priority transportation facilities and services of statewide and interregional significance. These SIS facilities are critical to the movement of people and goods in Florida, and their function is vital to Florida's economic competitiveness.

I-10, which is a designated SIS facility, is an east-west roadway that begins at the border of Alabama, traverses through Pensacola, Tallahassee and ends in Jacksonville, Florida. It is a vital thoroughfare that links multi-modal hubs to facilitate the safe and efficient movement of goods and people. The I-10 interchange at S.R. 87 is significant for passenger movements.

This IOAR stems from a recently completed Project Traffic Analysis Report (PTAR), dated May 2020. The PTAR was part of the Project Development and Environment (PD&E) Study performed to evaluate the need for widening I-10 from four to six lanes in Santa Rosa County. The PD&E study is intended to enhance the efficiency of I-10 and provide the connecting link to the adjacent widening project to the east of the I-10 study segment (West of S.R. 281 (Avalon Boulevard) to Okaloosa County Line). The PTAR is provided in **Appendix A**.

The IOAR is evaluating the proposed improvements to the I-10 eastbound and westbound ramp terminal intersections at S.R. 87 in Santa Rosa County. This IOAR has been developed in accordance with the FDOT Policy No. 000-525-015: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160:



New or Modified Interchanges, FDOT Procedure No. 525-030-120: Project Traffic Forecasting, IARUG, and the FDOT Project Traffic Forecasting Handbook.

1.2 Purpose and Need for Project

The main purpose of this IOAR is to document the safety, operational and engineering (SO&E) acceptability of signaling the I-10 eastbound and westbound ramp terminal intersections at S.R. 87. In this report, both ramp terminal intersections have been analyzed to evaluate the traffic operations at the I-10/S.R. 87 interchange.

As part of this study, I-10 eastbound and westbound ramp terminal intersections were studied for operational and safety improvements. The results from the existing analysis at the ramp terminal intersections revealed that the left-turn and right-turn traffic from the I-10 eastbound and westbound off-ramps operates at level of service (LOS) E or worse in the AM and PM peak hours. By signaling the ramp terminal intersections, the eastbound and westbound exit traffic volumes from the off-ramps will be metered, which will mitigate the simultaneous release of traffic volumes onto S.R. 87 by creating a platooning effect through the ramp terminal signal controls.

The need for this project derives from the PTAR. As part of this study, the existing and future traffic volumes along S.R. 87 were studied and utilized in the analysis of existing and future traffic conditions. Recent traffic projections completed in the region identified increased traffic congestion and potential deficiencies in the vicinity of the interchange. Currently, the daily traffic volumes on S.R. 87 range between 12,800 and 13,000 vehicles per day, with 11.5 percent daily truck traffic in the vicinity of the interchange. By the year 2045, the daily traffic volume is expected to increase to a range between 16,600 to 16,800 vehicles per day. With this increase in traffic along S.R. 87, the operating conditions at the intersections are expected to deteriorate.

A review of the crash data provided in **Section 3.8** shows a total of 47 crashes for the five-year period (2013-2017), of which 36 were injury crashes. No fatal crashes occurred during the five-year period. The crash rates at the ramp terminal intersections were calculated and both were