



The interchange is currently included in the FDOT District One Southwest Connect™ Interstate Program's I-4 Corridor Master Plan. The I-4 and SR 559 interchange operations were evaluated in the Phase 1 Feasibility Study entitled *I-4 Project Development & Environment (PD&E) Study, I-4 from west of SR 570 (Polk Parkway) to west of US 27 (January 2022, FPN 442512-1 & 442512-2)*. Both of the I-4 ramp terminal intersections with SR 559 are operating at LOS E or F under existing unsignalized conditions. Signal warrant studies were completed showing that both ramp terminal intersections meet the warrant criteria for two of the nine Manual on Uniform Traffic Control Devices (MUTCD) signal warrants (August 2022, FPID 420112-2-32-01).

1.3 Purpose and Need

FDOT District One has identified operational and safety deficiencies associated with the current interchange traffic control. Operational review of the I-4 Westbound at SR 559 ramp terminal intersection has shown conflicts between northbound left and southbound right turning vehicles entering the I-4 westbound on-ramp and between I-4 westbound off-ramp left and SR 559 north/south through vehicles. The westbound off ramp left turn queues have been observed to extend beyond the existing turn lane, blocking right turn vehicles from entering the right turn lane. The westbound left turn delay is excessive with an average delay >140 seconds during the peak hours and instances of queued vehicles extending back toward the I-4 mainline have been observed. The eastbound off ramp volumes are similar to the westbound, however the majority of turning movements are right turns. Although right turns are made with less interference than left turns, the eastbound exit ramp is a single lane ramp that flares at SR 559 to provide approximately 30 feet of storage each for left and right turns and a queue of two left turn vehicles blocks right turn access. Additionally, sight distance for eastbound exit ramp vehicles looking north is limited due to the existing concrete barrier wall on the SR 559 bridge. Signalization at both locations has been proposed to alleviate the identified traffic operations and safety deficiencies. The purpose of this IOAR is to evaluate the impact on future traffic operations under signalization at both ramp terminal intersections.