

## 2 Purpose and Need

The purpose of this project is to improve regional mobility and increase local accessibility to the transportation network by providing a new interchange with I-10 that supports the planned PJ Adams Parkway Extension, a westerly bypass around Crestview. A new interchange is needed to better-facilitate regional travel by providing an alternative to the heavily-traveled SR 85 corridor. Running between the Alabama state line to the north, and Fort Walton Beach to the south, SR 85 carries nearly twice the total daily traffic of I-10 and provides critical access to and from Eglin Air Force Base and the surrounding beach communities. At present, the interchange between I-10 and SR 85 is the only service interchange for the Crestview urban area. The alternate access to I-10 from the proposed new interchange provides improved regional network connectivity and holds potential to improve both safety and operations within the adjacent network. The need for the project is reinforced by the factors detailed within this section.

### 2.1 Roadway Capacity / Deficiencies

SR 85 currently operates at failing conditions, with 44,700 daily vehicles in the 4-lane section north and south of I-10. Current LOS conditions, as evaluated with 2017 traffic counts, experience failing level of service (LOS) conditions, F, along SR 85 throughout the entire 3.01-mile section from John King Road to US 90 within the urban area of Crestview. Pictures and existing travel time data are provided in Appendix C.

While the I-10 / SR 85 interchange ramp terminal intersections provided acceptable levels of service with LOS D operations or better in 2017, traffic has difficulty accessing the interchange area due to severe congestion along SR 85 both north and south of the interchange itself. In the afternoon peak, northbound queues along SR 85 approaching the I-10 interchange from the area were regularly observed to extend over 3 miles south to a point beyond Rattlesnake Bluff Road. Through this congested segment, travel times during the extended peak routinely exceed 20 minutes or more.

Along the existing PJ Adams / Antioch Road corridor, existing traffic volumes vary between 16,500 just west of SR 85 (LOS F) and 8,000 along Antioch Road just east of the Antioch Road and PJ Adams Parkway intersection (LOS C). The planned widening of PJ Adams Parkway to four lanes between I-10 and SR 85 is currently being advanced, with construction in the eastern segments due to begin in 2018.

In future year 2044, the segment of I-10 within the study area is anticipated to continue to provide LOS B operations in its existing 4-lane configuration. As expected, continued growth in traffic will exacerbate the failing conditions (LOS F) throughout the SR 85 corridor on a segment basis, with degradation at the ramp terminal intersections. Future year 2044 conditions at the SR 85 interchange indicate LOS F operations at the EB ramp terminal intersection during both peaks in the No-Build scenario with significant queueing reported along the SR 85 corridor.

### 2.2 System Linkage

The proposed new interchange will provide additional access to I-10 in conjunction with the planned Crestview Bypass officially known as the PJ Adams Parkway Extension. Approved in 2013 by a separate PD&E study, the southern limits of the proposed bypass are generally from SR 85 to SR 10 (US 90), and include the existing PJ Adams Parkway and the subject section of Antioch Road having an overpass with I-10. Once completed, the full bypass will also connect US 90 and SR 85 north of Crestview, supporting both local and regional travel to bypass the heavily-traveled and congested segment of SR 85 through downtown Crestview.

The proposed interchange provides improved connectivity for both local and regional trips requiring an interface with I-10. On a local level, this redistribution of trips will reduce pressure on the existing I-10 and SR 85 interchange and improve operations. The proposed interchange, in conjunction with the planned bypass, also enhances connectivity with regional destinations to the portions of SR 85 falling outside the bypass, such as the Alabama state line to the north, Eglin Air Force Base, and the beach communities of Destin and Fort Walton Beach to the south.

### 2.3 Social Demands or Economic Development

The University of Florida's Bureau of Economic and Business Research (BEBR) projects Okaloosa County's current population of 188,000 to grow to 223,500 by 2040 with medium population growth, which is an increase of 18%. As the population increases, roadway volumes are projected to increase as well, further exacerbating the need for improved mobility and accessibility in the study area.

There are no planned developments in the vicinity of the proposed I-10 and Antioch Road interchange driving the need for the interchange.

### 2.4 Safety

The average crash rate for this portion of I-10 is lower (0.567 *crashes per million vehicle-miles travelled*) than the statewide average for a similar type of roadway facility (0.850). The 2012 to 2017 crash data for SR 85, for which the proposed Crestview bypass and the I-10 at Antioch Road interchange is intended to relieve, is higher (4.179) than the statewide average for a similar type of roadway facility (3.124). A high occurrence of rear-end and other crash types associated with congestion along SR 85 further reinforce the need to provide an alternate north-south route with additional accessibility to I-10. Rear-end crashes account for 188 of 344 total crashes along SR 85 in the most-recent 5-year period, or 55% of all crashes. The planned widening and extension of the PJ Adams Parkway establishes a westerly bypass around Crestview, and an important secondary access to I-10 that will help the community achieve their local vision of safer transportation options for users.

### 2.5 Emergency Evacuation & Incident Management

Along with I-10 and SR 85, Antioch Road (CR 4) is also a designated hurricane evacuation route for Okaloosa County by the Florida Division of Emergency Management. There is an existing hurricane shelter at Antioch Elementary School adjacent to the proposed interchange. A new interchange would provide improved access to and from I-10 for traffic utilizing the Crestview Bypass and SR 85 for hurricane evacuation. In addition, the provision of a redundant access within this growing urban area can be leveraged to better support emergency access and incident management response plans. In the event of a shutdown on I-10 within this portion of Okaloosa County, detours from I-10 around the SR 85 interchange from either adjacent interchange is around 16 miles from either direction. Depending on the scenario, these diversion routes require travel along the severely congested section of SR 85 within Crestview. The new interchange would significantly reduce the length of these diversion routes, particularly to and from the west, allowing PJ Adams Parkway, Antioch Road, and US 90 to relieve I-10 while eliminating pressure on SR 85 as part of an incident management diversion of traffic from I-10.

### 2.6 Planning Context

The proposed interchange on I-10 at Antioch Road is identified as Current Transportation Planning Organization (TPO) Priority #5 in the 2040 Okaloosa-Walton TPO Long Range Transportation Plan (LRTP) Cost Feasible Plan, adopted in February 2017. Since the PD&E phase, the segment of PJ Adams Parkway

south of I-10 to SR 85 is being advanced in four phases. The four-lane widening between Villacrest / Ashley Drive and SR 85 will start construction in 2018, and the remaining segments up to I-10 are in various phases of Design or Right-of-Way acquisition at this time. Construction is shown in the Cost Feasible Plan with funding of \$21 million, outside the 5-year horizon for the Transportation Improvement Plan (TIP) and State Transportation Improvement Plan (STIP). The subject IJR and PD&E study will define the specifics of the proposed interchange location to be integrated within the overall PJ Adams Parkway improvement program prioritized by the TPO.