

7.0 PREFERRED MOBILITY ENHANCEMENT ALTERNATIVE

The development and evaluation of alternatives for the I-10 Master Plan utilized a tier screening process. This process permitted the alternatives to be successively screened and ranked, thereby eliminating alternatives that did not meet the study's objectives. The I-10 Master Plan utilized two tiers for the evaluation, each with an increasing level of detail.

The PMEAs synthesize the recommended Tier 1 CMEAs and the recommended Tier 2 Interchange Concepts.

7.1 MAINLINE PREFERRED MOBILITY ENHANCEMENT ALTERNATIVE

7.1.1 Segment 3 – Rural Section

The PMEA for the rural portion, from CR 125 to BFCR, of the I-10 mainline of Segment 3 is 6 GPL.

7.1.2 Segment 3 – Urban Section

The PMEA for the urban portion, from BFCR to I-295 in Duval County, of the I-10 mainline of Segment 3 is 6 GPL and 2 HOV. The HOV lanes provide I-10 with a multi-modal component that improves the mobility of the corridor.

7.2 INTERCHANGE PREFERRED MOBILITY ENHANCEMENT ALTERNATIVE

7.2.1 CR 125

The Interchange PMEA for CR 125 is the Level 1 Concept: lengthen all ramps and provide dual-lane exit ramps. The CR 125 Level 1 Concept meets the mobility needs of the corridor and corrects any geometric deficiencies.

7.2.2 SR 121

The Interchange PMEA for SR 121 is the Level 2A Concept: replace the parclo with diamond interchange. The SR 121 Level 2A Concept corrects all geometric and operational deficiencies, meets the mobility needs without any land use and environmental impacts, and has a lower cost than the other two alternatives.

7.2.3 SR 228

The Interchange PMEA for SR 228 is the Level 1 Concept: lengthen all ramps. The SR 228 Level 1 Concept corrects all geometric and operational deficiencies, meets the mobility needs without any land use and environmental impacts, and has a lower cost than the other alternative concept.

7.2.4 US 301

The Interchange PMEA for US 301 is the Level 2A Concept: reconstruct ramps in northwest quadrant, construct new slop ramp in southeast quadrant and separate bridge over railroad. The US 301 Level 2A Concept corrects all geometric and operational deficiencies, has moderate land use impacts and facilitates regional commerce at a moderate cost. With a regional intermodal facility located at this interchange, meeting the regional commerce goal of the corridor is vital at this interchange.

7.2.5 Branan Field – Chaffee Road

The Interchange PMEA for the BFCR interchange is the existing new interchange design that is scheduled for construction. Since the new interchange is already a work in process, there are no alternatives are under evaluation.

7.2.6 Chaffee Road

The Interchange PMEA for the Chaffee Road interchange is the Level 1A Concept: retain existing loop ramps and provide new slop ramps in northeast and southwest quadrants. The Chaffee Road Level 1A Concept corrects all geometric and operational deficiencies, has no land use impacts, and is estimated to have the lowest construction cost.

7.2.7 Marietta

There is a concurrent PD&E Study / Interchange Modification study for improvements and geometric modifications to Marietta interchange. This Master Plan will adopt the recommended concept from the PD&E / IMR. The recommended concept is a diamond or some variation of the diamond interchange design at Hammond Boulevard and referred to as Level 2 in this Master Plan.

7.2.8 I-295

The Interchange PMEA for the I-295 interchange is the Level 2 Concept. The I-295 Level 2 Concept corrects most of the geometric and operational deficiencies and significantly improves regional commerce by relocating and reconstructing lanes and ramps throughout the interchange. Freight traveling north to Georgia and the Eastern Seaboard, south to the rest of Florida, west to the continental United States, and east to Jacksonville, meet at the I-10/I-295 interchange. Providing significant truck access and taking significant actions to facilitate interaction at this interchange is vital to the movement of commerce in Northeast Florida and beyond.

7.3 OTHER ELEMENTS

7.3.1 ITS

A FON is currently in place just west of the I-10 and I-295 junction. This FON is part of the FMS that continues east to I-95. As the FMS expands, the FON communications will be optimal for communicating large volumes of data.

Additional ITS components are planned for the CR 125 to I-295 segment to improve the roadway efficiency. As the FON is extended, the implementation of an incident management program is anticipated. The incident management program along this portion of I-10 is expected to serve as an extension of the FMS between I-295 and I-95.

The CR 125 to I-295 segment of I-10 has been identified with functional gaps in the ITS program, as stated within the Interstate 10 Corridor Implementation Plan for Florida's Principal FIHS Limited-Access Corridors Report. The term functional gap represents a segment of the facility that lacks ITS coverage under current, programmed or planned projects.

Conceptual project implementations, as defined in the Interstate 10 Corridor Implementation Plan for Florida's Principal FIHS Limited-Access Corridors Report, include the installation of a FMS for the CR 125 to I-295 segment. The installation of Closed Circuit Television cameras, DMS and loop detectors would be employed to provide sufficient data on the traffic flows. Expansion of the Road Ranger Service Patrols, which are in place east of I-295, is also recommended. The Road Ranger Service Patrols are operated by FDOT through private contractors. The service provides roadside assistance and incident clearance.

7.3.2 Hurricane Evacuation

The FDOT's Analysis of Florida's One Way Operations for Hurricane Evacuation: I-10 Jacksonville to Tallahassee / Monticello (US 19) Report investigated the feasibility of reverse-laning I-10 from Jacksonville to Tallahassee in an effort to mitigate travel delays and the highway congestion that characterized the Hurricane Floyd evacuation in 1999.

This report cites the need to provide and/or maintain adequate communications infrastructure along I-10 in order to effectively execute these evacuation scenarios. Such infrastructure would primarily be needed to adequately accommodate the DMS network and other mechanisms to keep the public informed throughout the evacuation. In addition, some improvements related to signing and fixed object protection would be necessary to safely serve westbound traffic flow on the eastbound roadway.