

Memo

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Phone:	210.321.2019	Date:	Nov 25, 2014
Ref:	cc: Kim Warren, Doug Reed, PE		
Subject:	SR 60 Grade Separation over CSX Railroad Traffic Technical Memorandum		

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study to evaluate costs and impacts of constructing a new overpass to carry State Road (SR) 60 over the CSX Railroad (milepost 25.544, crossing #625419N) approximately 11 miles east of Bartow and four miles west of Lake Wales in Polk County, Florida. The project location map (**Figure 1**) illustrates the location and limits of the Study.

The purpose of the project is to replace the SR 60 at-grade railroad crossing with a grade separation to improve safety and reduce delay. The purpose of this traffic technical memorandum is to document the existing and future traffic conditions along SR 60.

SR 60 is an existing four-lane divided rural arterial which is part of the National Highway System and the Strategic Intermodal System (SIS). SR 60 is designated as an evacuation route by the Florida State Emergency Response Team. SR 60 is classified by FDOT as a rural principal arterial – other. Existing land uses in the study area include industrial, agricultural, infrastructure, and residential. The Access Classification is Access Class 3. There are no connecting roads within the project area, but access to SR 60 from adjacent properties is provided by driveway connections.

Existing Traffic Data

The 2013 existing traffic data along SR 60 was obtained from the FDOT Florida Traffic Online database. Specifically, from portable monitoring site # 16110000, SR 60 east of CR 655, Rifle Range Road serves 23,000 annual average daily trips (AADT). The table below lists the other available existing traffic factors.

2013 Existing Traffic Data	
AADT	23,000
Observed K Factor	9%
Observed D Factor	55.9%
T ₂₄ Factor	20.72%
DHT Factor	10.55%

Based on review of the 2013 Polk County Roadway Network Database and 2013 FDOT Quality / Level of Service Handbook, the Level of Service (LOS) Standard for this section of SR 60 is LOS C. The Roadway Network Database also states that the existing peak hour-peak season level of service for this four-lane section of SR 60 is LOS B. The projected peak hour LOS for a four-lane SR 60 in five years is also LOS B.

Figure 1: Project Location Map

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Future Traffic Data

The design year (2035) traffic forecast data for SR 60 was obtained from the *Final Traffic Report* dated March 2011 that was prepared as part of the Central Polk Parkway PD&E Study from SR 60 to Polk Parkway (SR 570) and from SR 60 to I-4. The specifics of the forecasting process and the methodology are documented in detail in Section 4 of the *Final Traffic Report*.

The opening year (2015) AADT forecast presented in Figure 4-10a of the *Final Traffic Report* (**Attachment 1**) along SR 60 adjacent to CSX railroad crossing is 29,800 vehicles. The design year (2035) AADT forecast illustrated in Figure 4-5a of the *Final Traffic Report* (**Attachment 2**) is 43,800 vehicles.

Future Operating Conditions

Since the study analyzes an overpass at CSX railroad crossing, the build and the no-build conditions would include the same number of travel lanes. Therefore the analysis of future conditions is common to both with and without the overpass crossing.

For the opening year (2015), daily traffic forecast that was developed along SR 60 was compared with the FDOT Q/LOS generalized LOS table (**Table 2**). Based on this comparison, SR 60 with four lanes would operate at LOS B operating condition.

The design year (2035) operating condition of this SR 60 segment is presented in Section 5 of the *Final Traffic Report*. This document states that under design year (2035) four-lane No-Build conditions, SR 60 would operate at LOS D conditions, lower than the acceptable LOS standard. Figure 5-1 of the *Final Traffic Report* (**Attachment 3**) illustrates the design year (2035) No-Build LOS.

Therefore *Final Traffic Report* recommended widening SR 60 from a four-lane facility to a six-lane facility in order to accommodate the design year (2035) traffic demand. The roadway segment operational analysis was conducted using FDOT *LOSPlan 2009* software. Figure 5-5 of the *Final Traffic Report* (**Attachment 4**) illustrates that the segment of SR 60 adjacent to the CSX railroad crossing would operate at LOS C condition under design year (2035) as a six-lane facility.

The proposed bridge striped to accommodate a four-lane SR 60 would operate at an acceptable LOS B conditions under opening year (2015) conditions and when SR 60 is widened to a six-lane facility in the future, the restriped six-lane overpass would operate at an acceptable LOS C operating conditions.

Conclusion

Based on the review of existing traffic data along SR 60, it was found that existing traffic operating condition along SR 60 is LOS B or better. The traffic forecast for SR 60 adjacent to the CSX Railroad crossing was obtained from the previously submitted *Final Traffic Report* that was prepared as part of the Central Polk Parkway Project Development and Environment (PD&E) Study. Based on the operational analysis conducted with *LOSPlan 2009*, by using the forecasted traffic demand data, and with the recommended six-lane widening of SR 60, the segment of SR 60 is proposed to operate at an acceptable LOS C condition under design year (2035) traffic conditions.

Attachment 2: Figure 4-5a of CPP SEIR Final Traffic Report

