

Title: Hwy 627:02, Hwy. 770 to W of Hwy. 779, Pavement Width below 3R/4R Guidelines.

Memorandum (or Approval) Date: January 8, 2013
 Design Exception Request Date: December 5, 2012
 Region: North Central
 Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
627	02		34.660	48.882	2750 to 3690

Project Type (Mark all that apply with an X)			
Functional Planning:	New Construction:	Reconstruction:	Paving/Surfacing: X
Bridge:	Operations:	Geotechnical:	Environmental:
Other:	Illumination		

Summary

The design exception request is for the proposed surfacing strategy recommendation of cold milling 100 mm full width and placing 110 mm first stage ACP. The existing average pavement width is 8.9 m. Following the recommended rehabilitation, the average pavement width will be 8.8 m. For a Level 3 service class roadway, based on the existing project AADT of 2750 to 3690, the resultant pavement width will be below the AT HGDG 3R/4R Guidelines of 9.0 m, based on Figure G 1.1, Suggested Minimum Roadway Width, October 2008. Geometric improvements, including grade widening, intersection improvements and 3R/4R roadway and approach sideslope improvements cannot be undertaken at this time due to R/W constraints and acquisitions.

Rationale for Approval/Rejection

- The service life of the proposed pavement rehabilitation is expected between four to five years, Grade widening and final stage paving should be completed within this timeframe.
- There have been three fatal collisions for the five year period from 2006 to 2010 with no apparent trends.
- There have been ten non animal single vehicle off road right type collisions reported for the 5 year period from 2006 to 2010. 2 major, 1 minor and 7 PDO. There appears to be no apparent trends.
- According to the Consultant, the project's vertical alignment minimum sag and crest K values are 55 and 81 respectively. Sag and crest K values are above the 3R/4R suggested minimum K values of 31 and 50 respectively.
- According to the Consultant, the project's horizontal alignment minimum radius is R2500 m. For a design speed of 110 km/h, the minimum horizontal = R600 m

Additional Mitigation Required

- Contrary to Design Bulletin 18/2003 (revised April 2012), centreline rumble strips should be installed with the first stage paving.
- Transverse rumble strips at stop control intersections should be installed in accordance with AT Guidelines, Design Bulletin 18/2003 (Revised April 2012).

Key Words

3R/4R guidelines, service class, cross-section, suggested minimum roadway width, paving strategy.

Photograph/Diagram

2007.08.06 627:02:C1 DL:R1 km 38.034 JCT HWY 759:04 JCT HWY 779:02 53.453930 -114.170806 745.3



2007.08.06 627:02:C1 DL:R1 km 47.004 JCT HWY 759:04 JCT HWY 779:02 53.453904 -114.035821 722.8

