

Title: Hwy 2/ 498th Avenue Interchange, High River, Bridge Width and Delineation.

Memorandum (or Approval) Date: January 9, 2013
 Design Exception Request Date: December 13, 2012
 Region: Southern
 Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
2	12	~3.5			14485

Project Type (Mark all that apply with an X)				
Functional Planning:	New Construction:	<input checked="" type="checkbox"/>	Reconstruction:	Paving/Surfacing:
Bridge:	Operations:	<input checked="" type="checkbox"/>	Geotechnical:	Environmental:
Other:	Illumination			

Summary

The design exception request is for a 14.9 m wide bridge deck for the 498th Avenue structure. For the 498th Avenue project, a new bridge deck having a raised median and design speed of 70 km/h would typically be 16.8 m wide. This would include the following: 1.7 m shoulders, 3.7 m through lanes, 3.5 m left turn auxiliary lane and a 2.5 m wide median adjacent to the auxiliary lane. The 2.5 m median would typically have a 1.5 m raised median measured from curb face to curb face and a typical 0.5 m width gutter pan.

Rationale for Approval/Rejection

- The bridge deck shoulder width of 1.7m (posted speed 60 km/h, typical design speed 70 km/h) meets the TAC's suggested shy line offset values Table 3.1.6.4 of the TAC 1999 Geometric Design Guide for Canadian Roads. AT Roadside Design Guide, November 2007, follows the TAC suggested shy line values for urban and urban fringe projects.
- The 3.7 m and 3.5 m through and auxiliary wide lanes respectively are in accordance with AT's typical lane widths. The 0.6 m painted median adjacent to the left turn auxiliary lane on the bridge is acceptable.
- The median painted pavement markings are required to accommodate local farm equipment vehicles across the 14.9 m wide bridge structure.
- The east and west interchange ramp terminals are signalized and illuminated.

Additional Mitigation Required

- Durable pavement markings have been installed for improved visibility on the bridge deck and on the east and west intersection approaches.

Key Words

Bridge width, shy line offset, lane width.

Photograph/Diagram

