

Title: Hwy 2:20, High Tension Cable Barrier (HTCB) in Depressed Median, Various Locations

Memorandum (or Approval) Date: October 24, 2012

Design Exception Request Date: October 17, 2012

Region: Central

Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
2	20	various locations SB & NB	20.25	34.60	26000

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

Summary
Design Bulletin 75/2012 (Revised April 2012) and Drawing RDG- B2.2 (dated Feb. 17, 2012) specifies HTCB installed in depressed medians with slopes steeper than 6H:1V but flatter than 4H:1V, the preferred location on the sideslope should be within 1200 mm off the shoulder breakpoint. The existing HTCB system was installed in June 2012 on Hwy 2:20. After the proposed pavement overlays of 70 mm southbound and 90 mm northbound, portions of the existing HTCB will be 1250 mm and 1290 mm from the shoulder breakpoint.

Rationale for Approval/Rejection
<ul style="list-style-type: none"> • According to the Manufacturer/Supplier's Installation Guide (Updated May 2009), a recommended cable height tolerance of +/- 25 mm is allowed. Based on slopes between 6H:1V to 4H:1V, an additional distance of 90 mm would result in a height differential of -15 to -23 mm. • The installation of milled shoulder rumble strips will be included with the proposed pavement overlay. ➤ Note: We understand that the cost estimate of \$1.4 Million for HTCB remove, salvage and reinstall was based the following assumption: New HTCB would be installed closer to the shoulder breakpoint to accommodate a future overlay. The existing HTCB would be maintained in place while the new HTCB was installed. Then the existing HTCB would be decommissioned and removed. ➤ If the existing HTCB had to be relocated and depending on site specific conditions, TSB agrees that consideration of installing new or existing HTCB should allow for at least one

future overlay. To reduce the overall cost of relocating existing HTCB, reusing the existing HTCB hardware (cable and post) should also be considered in the future.

Additional Mitigation Required

None.

Key Words

High Tension Cable Barrier, placement of sideslopes, Design Bulletin 75.

Photograph/Diagram

2010.07.14 002:20:L1 DL:L1 km 23.466 JCT Hwy 27 ACME ROAD 51.685624 -114.025549 1006.2



2010.07.14 002:20:R1 DL:R1 km 33.278 ACME ROAD JCT Hwy 27 51.773822 -114.025329 1000.6



2010.07.14 002:20:L1 DL:L1 km 20.503 JCT HWY 27 ACME ROAD 51.658998 -114.025562 1011.3

