

Title: Climbing Lane, North of Highway 759 to South of Cremona

Memorandum Date: April 28, 2011

Design Exception Request Date: March 7, 2011

Region: Central

Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
22	16		49.304	51.285	3760

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

Summary
It was requested that the southbound climbing lane on Highway 22:16 from km 49.30 to km 51.29 use the existing vertical alignment. With a K value of 79, the existing alignment of the crest curve was below the K100 (design speed = 110 km/h) new construction standard, but met the 3R/4R K50 standard. To meet the new construction standard of K100, the existing gradeline would have to be lowered by approximately 1.9 m.
Rationale for Approval/Rejection
<ul style="list-style-type: none"> ▪ It would not be cost effective to improve the K value to new construction standards. The additional cost is estimated at \$435,000 and does not include the cost for additional right of way and the removal of an existing private residence and side buildings at km 50.128. ▪ 18 collisions were reported on the climbing lane section for the 5 year period from 2005 to 2009. Of these collisions, 13 were animal related and 5 were non-animal. Within the new construction section from km 49.7 to km 50.5 there were 5 reported collisions. All 5 collisions were animal related and PDO. ▪ The existing vertical crest K value of 79 exceeds the 3R/4R minimum K value of 50. ▪ The intersection sight distances at farm entrances located at km 49.950 Lt. and km 50.340 Lt. are based on a design speed of 110 km/h and are adequate for passenger and single unit design vehicles. Traffic volumes from farm entrances will be low.
Additional Mitigation Required
No mitigation is required.
Key Words
Design grade, maximum gradient, vertical alignment, climbing lane.

Photograph/Diagram (If Available)

DESIGN STANDARDS/PRACTICE
 EXCEPTION REQUEST SUMMARY

