

Title: Hwy 37:04, Existing Nelsen Road intersection

Memorandum (or Approval) Date: January 14, 2014
 Design Exception Request Date: December 12, 2013
 Region: North Central
 Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
37	4	5.6			7638

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

Summary
<p>According to AT HGDG – Chapter D, the ISD along with the applicable grade adjustment factors (HGDG Table D4.4) for a Single Unit (SU) and Passenger (P) design vehicle are not met due to the existing CNR overpass structure and/or Sturgeon River Bridge located west and east respectively of the Nelsen Road intersection.</p> <p>The available ISD was also determined based on the AASHTO - A Policy on Geometric Design of Highway and Streets 2011, ISD gap acceptance methodology. The available ISD for a SU and P design vehicles are not met to the west due to the CNR overpass structure.</p>

Rationale for Approval/Rejection
<ul style="list-style-type: none"> • Traffic volumes indicated on Nelsen Road are low. There are four and seven existing residences on the north and south legs respectively. There is no through traffic on both legs of Nelsen Road. • According to the consultant, for the 11 year period from 2000 to 2010, there have been three non-animal collisions at the Nelsen Road intersection. Overall, the safety performance is considered good and there appears to be no chronic collision pattern. • Based on draft preliminary realignment plans in the Hwy 37 Planning Study 1995, existing Highway 36 horizontal alignment may have to be relocated further south during the twinning of this highway. The ISD at Nelsen Road intersection shall be reviewed as part of the Hwy.37 future twinning. • The cost to replace and widen the existing CNR overpass at its current location is estimated at \$3M to \$4M. Refer to approved (July 5, 2013) Design Exception request Hwy 37:04 - Existing WB Truck Climbing Lane for further details. • The cost to widen the existing Sturgeon River Bridge is estimated at \$1.1M. The widening is not considered cost effective. Refer to approved (June 12, 2013) Design Exception request Hwy 37:04 - Sturgeon River Bridge (BF 676) for further details.

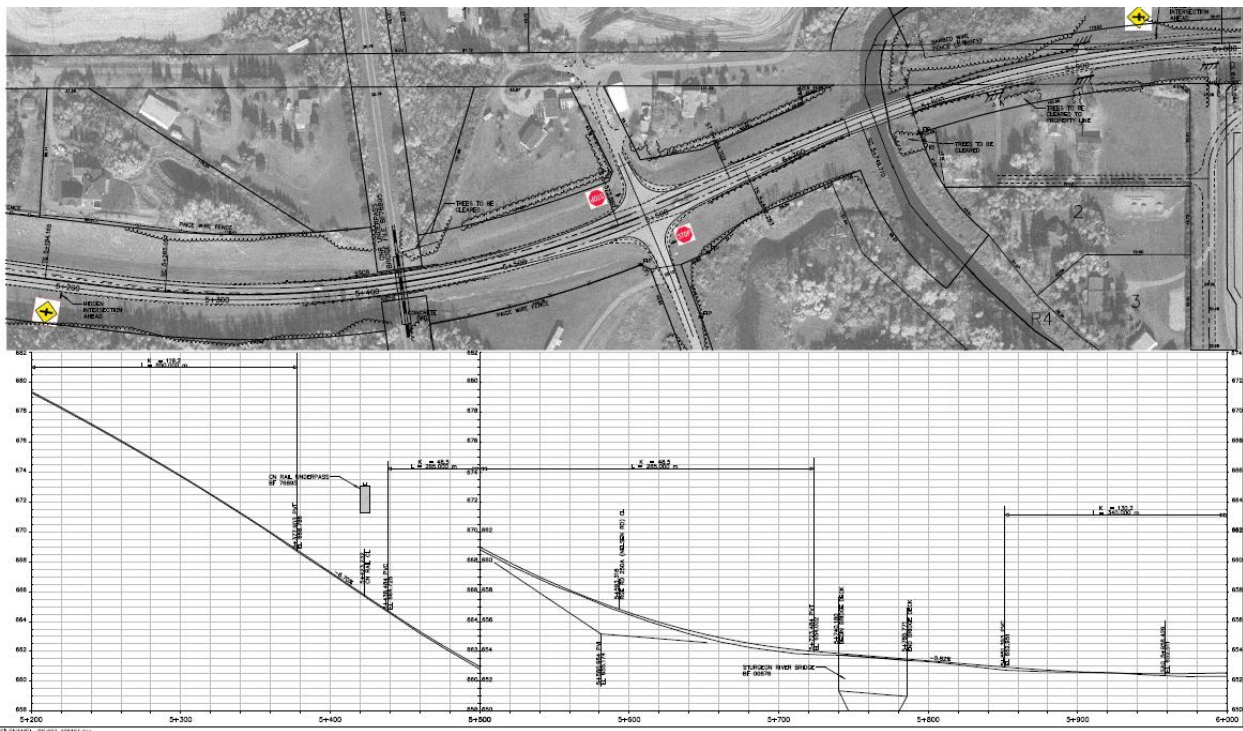
Additional Mitigation Required

1. Trees are to be cleared within the highway R/W.
2. "Hidden Intersection Ahead" signs to be installed east and west of the existing intersection.

Key Words

Intersection sight distance, design vehicle, adjustment factors

Photograph/Diagram



2012.09.23 037:04:C1 DL:R1 km 5.456 JCT Hwy 2 JCT Hwy 15 53.714920 -113.557593 663.7

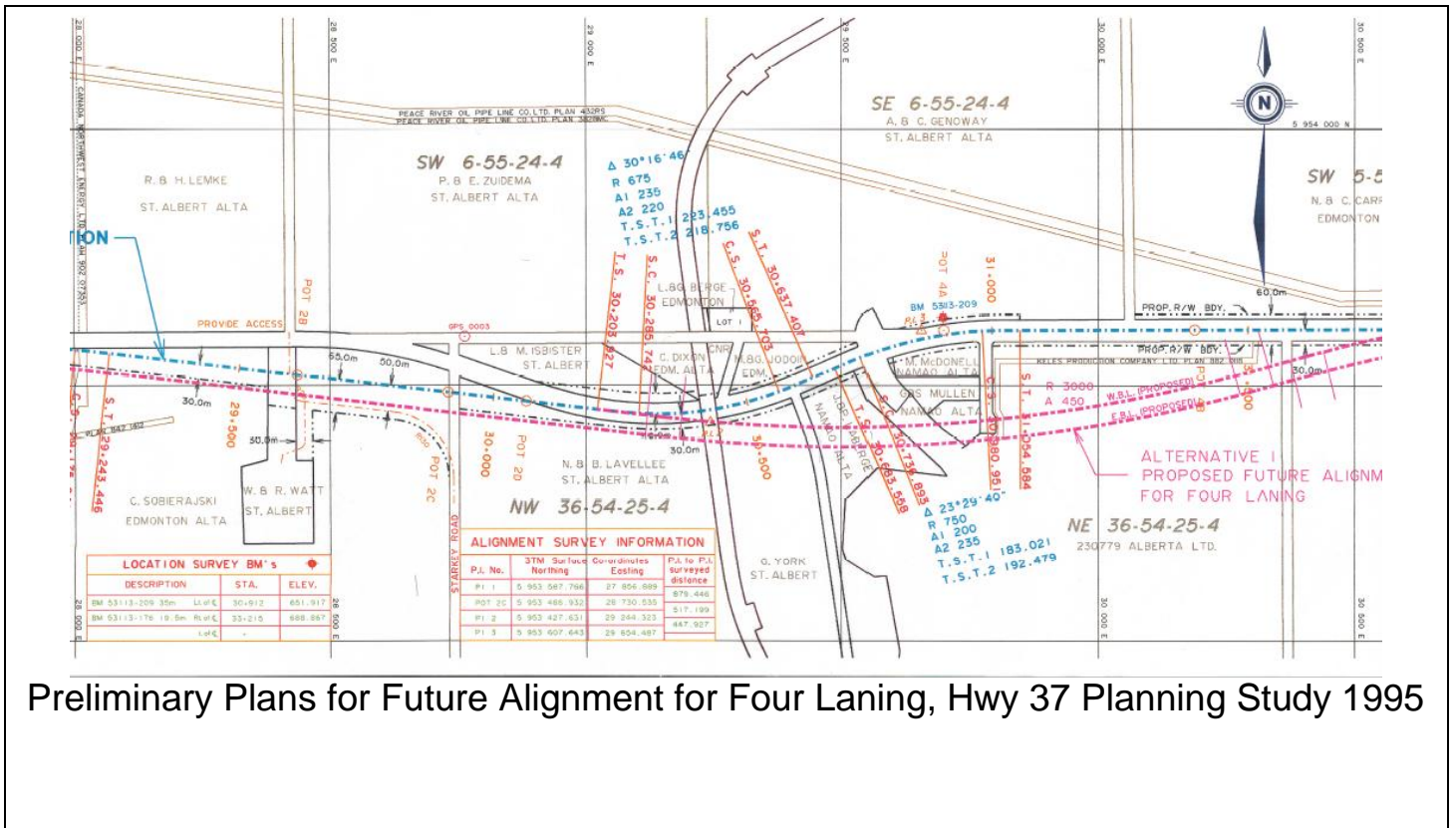


Hwy 37:04 – Nelson Road Intersection, Looking East

2012.09.23 037:04:c1 DL:L1 km 5.672 JCT HWY 15 JCT HWY 2 53.715562 -113.554552 654.6



Highway 37:04 – Nelsen Road Intersection, Looking West



Preliminary Plans for Future Alignment for Four Laning, Hwy 37 Planning Study 1995