

**Title: New Construction, Proposed Vertical Alignment at Existing Bridge File (BF) Location**

Memorandum (or Approval) Date: September 7, 2012  
 Design Exception Request Date: August 29, 2012  
 Region: Peace  
 Approval Status: Approved

Project Location					
Highway	Control Section	At km	From km	To km	Existing AADT
88	12	46.3			180

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

**Summary**

The following design exception request is for the following:  
 Proposed existing sag curve K value of 47.4 is located at BF2321. Based the ATHGDG, Chapter B – .4.4 Vertical Curves, the minimum sag K value is 60 for headlight control.

**Rationale for Approval/Rejection**

- Existing BF2321 is an 5250mm SPCSP. The proposed sag curve would be improved to new construction as part of the BF replacement. The BF would need to be replaced in approximately 14 years.
- Improving the K sag curve to minimum K 60 would include removal of the existing collar on both ends and extending the existing BF approximately 27m in total is not considered economical due to the estimated cost and service life remaining.
- Collision history for the five year period from 2006 to 2010: No reported collisions within 1 km of Km 46.3.
- Existing and 20 year projected AADT are low, 180 and 288 vpd respectively.

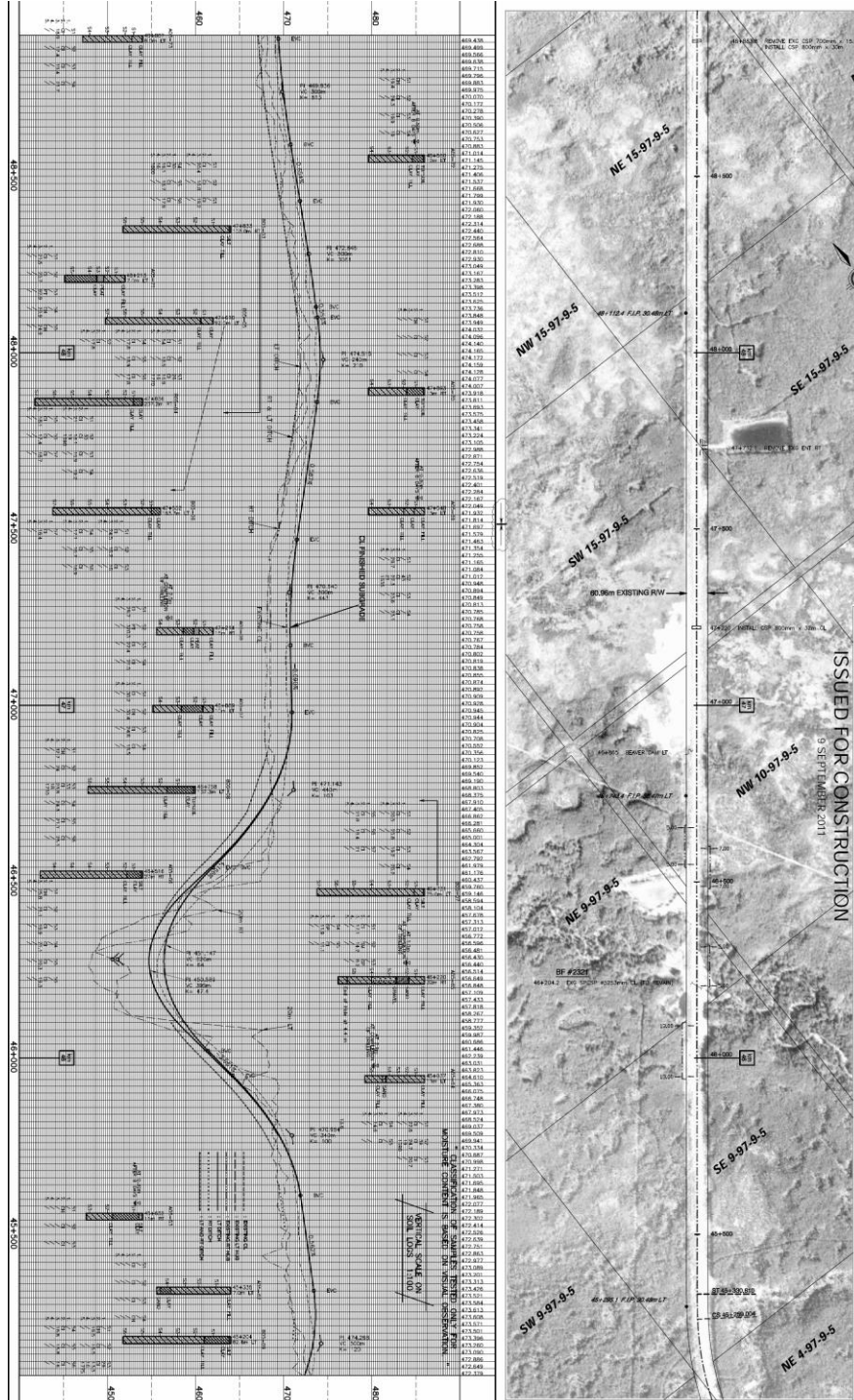
**Additional Mitigation Required**

Embankment protected with longitudinal barrier with crashworthy end treatments.

**Key Words**

Vertical curve, minimum K value, sag curve

Photograph/Diagram







Viewing Downstream (Facing North-East)



Viewing Culvert Outlet