GEOHAZARD ASSESSMENT PROGRAM

PEACE REGION – PEACE RIVER/HIGH LEVEL



Government of Alberta ■ Transportation

2011 INSPECTION

THURBER ENGINEERING LTD.

Site Number	Location			Name				Hwy	km	
PH29 Grimms Cre			Site #4					682:02	13.54	
Legal Description				UTM Co-ordinates (NAD83)						
NW36-81-5-W6				11 N 6214740 E 397620						
								Tata		
Drovieve Increation:				PF		CF Total				
Previous inspection:		June 9, 2010		5		5	25			
Bood AADT:				5		J Veer	20			
				Droudfor	+ /7	Thurbor				
inspected By:		Ed Szmata, Ken Szmata, Neil Kjelland (AT)								
Report Attachments:		◄	Photographs Plans Daintenance						ems	
Primary Site Issue: Dimensions:			On-going movement of the downstream embankment overtop of the old (former) culvert location. Subsidence of the road requires patching. Former slide was about 60 m long by 100 m wide.							
Date of any remediation:										
Maintenance:			Semi-continuous milling, patching and crack sealing.							
Observations:			Description							
Pavement Distress			A 15m long crack, subsidence, and dips observed. New patching was required on the hwy overtop of both the old and new bridge culverts.						Y	
☑ Slope Movement			The downstream embankment over the old culvert continues to slowly move.							
✓ Erosion			New erosion gullies observed on upstream end of culvert inlet, and on downstream south embankment from east ditch drainage. Some slight surface erosion on downstream embankment.						Z	
Seepage										
✓ Bridge/Culvert Distress		SS	Culvert outlet about 1/3 full of sediment.						•	
Cother Contract Contr										

Instrumentation:

Last Read on Sept. 25, 2010

SI1: Sheared off at 14m depth in 2009 (Prev. move zones at 11.5 to 16m); SI2: 1.9mm/yr over 5.8m to 10.1m); SI3: No discernible movement; and SI4: No discernible movement (Prev. move zones at 0 to 8m). Water levels in PN-1 at 4.6m BGS; PN-1A at 4.3m BGS; PN-2 at 9.3m BGS; PN-2A at 5.0m BGS; PN-3 at 3.2m BGS; and PN-4 at 5.0m BGS.

Assessment:

Dips exist overtop of both the old and new culverts at this site. The dip overtop of the new culvert could be due to settlement of the fill since it's installation in 2009. Slow movements continue on the downstream embankment nearer the old culvert, and a crack has re-appeared through the fall, 2010 asphalt patching in the road surface overtop of the old culvert indicating on-going movement at depth. Some erosion was observed, most notably in the upstream channel, due to the large snowpack this last winter.

Recommendations:

MAINTENANCE: Seal/patch the pavement crack and dips as required.

Repair the small erosion gullies that have developed by: on the upstream end by grading/shaping the erosion, then adding geotextile with riprap placed overtop; the downstream ditch erosion, by grading/shaping, and backfilling with compacted clay using a sheepsfoot, and then seeding and covering it with TRM erosion matting.