

<b>SITE NUMBER AND NAME:</b> C070 West and East Slides		<b>HIGHWAY &amp; KM:</b> 27:10, 18.932 & 33.102	<b>PREVIOUS INSPECTION DATE:</b> June 13, 2018	<b>INSPECTION DATE:</b> June 24, 2021
<b>LEGAL DESCRIPTION:</b> 02-18-31-21 W4M 15-07-31-21 W4M 02-16-31-20 W4M	<b>NAD 83 COORDINATES:</b> UTM    Northing    Easting 12     5723837    363877 12     5723487    377005		<b>RISK ASSESSMENT:</b> PF: 1    CF: 2    TOTAL: 2 PF: 1    CF: 2    TOTAL: 2	
<b>AVERAGE ANNUAL DAILY TRAFFIC (AADT):</b> 1310 (west) & 1410 (east) (Ref No. 108260 is between both sites)			<b>CONTRACT MAINTENANCE AREA (CMA):</b> 517	

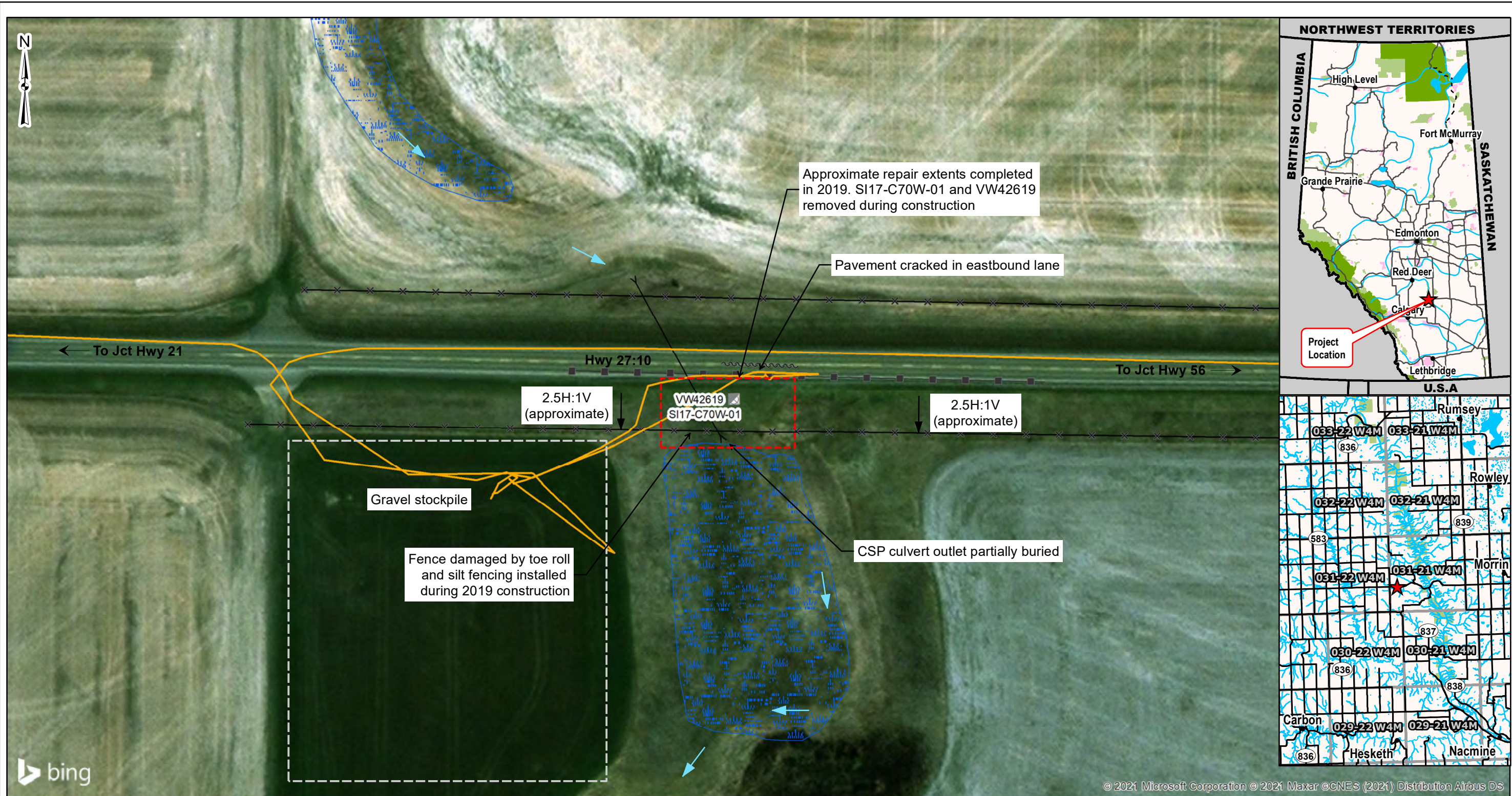
<b>SUMMARY OF SITE INSTRUMENTATION:</b>  Inoperable: Two vibrating wire piezometers (VWP) and two slope inclinometers (SI) installed at the C070E and C070W sites in March 2017.  LAST READING DATE: September 4, 2018	<b>INSPECTED BY:</b> Chris Gräpel (KCB) James Lyons (KCB) Roger Skirrow (AT) Tony Penney (AT) Darcy Newton (AT)
<b>PRIMARY SITE ISSUE:</b> Two shallow slope failures in the highway embankment fill that are triggered by surface water flowing onto the slide area during periods of heavy or prolonged rainfall, and a high groundwater table. The West Slide and East Slide are located on the south (eastbound lane) and north (westbound lane) side of Hwy 27, respectively. Both slides have reached the edge of pavement, and the west slide has undermined the guardrail.	
<b>APPROXIMATE DIMENSIONS:</b> West Slide: The slide is approximately 17 m wide at the crest, and the highway embankment is approximately 6.5 m high sloped at approximately 2.5H:1V. East Slide: The slide is approximately 85 m wide at the crest, and the highway embankment is approximately 5 m high sloped at approximately 3H:1V.	
<b>DATE OF ANY REMEDIAL ACTION:</b> 2003 – West Slide repaired; 2015 – West and East Slides repaired by pushing failed material back upslope, reshaping, and seeding. Slopes failed again after 2015 repair. 2019 – The East and West Slides were repaired with geogrid reinforced granular fill and shear key.	

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		West Slide: minor longitudinal pavement cracking		X
Slope Movement		X	None observed		X
Erosion		X	None observed		X
Seepage		X	None observed		X
Culvert Distress	X		Culvert outlets partially buried at both sites		X

<b>COMMENTS</b>
The East Slide (C70E) was not visited during the 2021 inspection.
The West Slide was repaired in 2019 (geogrid reinforced granular fill) under tender no. TND0019153. <ul style="list-style-type: none"> <li>The repair is in good condition and no pavement settlement was observed. There was minor cracking between the new asphalt shoulder and the existing highway surface (approximately 5 mm).</li> <li>Vegetation has taken after the site was re-seeded by the contractor in 2020, although it may be primarily weeds or self-volunteered species.</li> </ul>
The C070E and C070W sites should be removed from the Central Region GRMP.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
<p>This report is an instrument of service of Klohn Crippen Berger Ltd. (KCB). The report has been prepared for the exclusive use of Alberta Transportation (Client) for the specific application to the Central Region Geohazard Risk Management Program (Contract No. CON0022160) and it may not be relied upon by any other party without KCB's written consent.</p> <p>KCB has prepared this report in a manner consistent with the level of care, skill, and diligence ordinarily provided by members of the same profession for projects of a similar nature at the time and place the services were rendered. KCB makes no warranty, express or implied.</p> <p>Use of or reliance upon this instrument of service by the Client is subject to the following conditions:</p> <ul style="list-style-type: none"> <li>(i) The report is to be read in full, with sections or parts of the report relied upon in the context of the whole report.</li> <li>(ii) The observations, findings, and conclusions in this report are based on observed factual data and conditions that existed at the time of the work and should not be relied upon to precisely represent conditions at any other time.</li> <li>(iii) KCB should be consulted regarding the interpretation or application of the findings and recommendations in the report.</li> </ul>					
<p>Chris Gräpel, M.Eng., P.Eng. Civil Engineer, Associate</p>					

File: Z:\AED\MA05116A02\ABT\_Central Region GRMP\400 Drawings\GIS\MXD\2021\Section B\C070W\_B\_211109.mxd Date: November 09, 2021 Time: 13:47:43 PM Creator: AHarrison



**Legend**

- ⊗ Vibrating Wire Piezometer (VW Inoperable)
- ⊠ Slope Inclinator (SI Inoperable)
- GPS Track (June 24, 2021)
- Flow Direction
- Culvert
- Fence
- Guardrail
- ~ Crack
- Wet Area

NOTES:  
 1. HORIZONTAL DATUM: NAD83  
 2. GRID ZONE: UTM Zone 12N  
 3. IMAGE SOURCE: Microsoft BING Maps  
 4. Location of instruments is approximate (not surveyed)

CLIENT

**Alberta**  
Government

**Klohn Crippen Berger**

PROJECT CENTRAL REGION GEOHAZARD RISK MANAGEMENT PROGRAM	
TITLE Site Plan C070 - West Slide Hwy 27:10, km 18.932	
SCALE	FIG No. 1
PROJECT No. A05116A02	



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## Inspection Photographs

**Photo 1** An overview of the C070W slide area, before and after repairs were completed. Photo taken June 13, 2018 and June 24, 2021 looking northeast.



**Photo 2** Longitudinal cracking in the eastbound lane before and after repairs were completed. Photos taken June 13, 2018 and June 24, 2021 looking northeast and southwest, respectively.

