CENTRAL REGION GRMP
SITE INSPECTION FORM

SITE NUMBER AND NAME: **C072 Chicken Creek Slide**	HIGHWAY & KM: 22:24, 9.8	PREVIOUS INSPECTION DATE: July 9, 2019	INSPECTION DATE: **June 27, 2023**
LEGAL DESCRIPTION: 09-33-040-07 W5M 12-34-040-07 W5M	NAD 83 COORDINATES: UTM 11 Northing 5817436 Easting 640058	RISK ASSESSMENT: PF: 1 CF: 4 TOTAL: 4	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 2,320(north) & 3,020 (south) (Ref No. 990020)		CONTRACT MAINTENANCE AREA (CMA): 514	

SUMMARY OF SITE INSTRUMENTATION:	INSPECTED BY:
Three slope inclinometers (SIs) installed on the east slope in 1990 – status unknown. LAST READING DATE: N/A	Chris Gräpel (KCB) James Lyons (KCB) Tony Penney (KCB) Rishi Adhikari (TEC) Pramaya Kannel (TEC)

PRIMARY SITE ISSUE: An upper highway embankment slope failure along the west (southbound) slope. At the location of the slide, Hwy 22 crosses a tributary creek (Chicken Creek) of Canyon Creek, which is a tributary of the North Saskatchewan River. The original slide on the east embankment slope was repaired in 1990.

APPROXIMATE DIMENSIONS: The upper west highway embankment slope is approximately 6 m high sloped at approximately 3H:1V. The east highway embankment slope is approximately 13 m high sloped at approximately 4H:1V.

DATE OF ANY REMEDIAL ACTION: 1990 – a site investigation and repair work were completed at the location of the original slide on the east (northbound) slope. October 2016 – a pavement patch was completed in the west (southbound lane). 2017 – a pavement patch was completed in the west (southbound lane). November 2021 – the slide on the west (southbound) highway embankment was repaired with buried drains at the base of the embankment and geogrid-reinforced granular fill.

ITEM	**CONDITION EXISTS**		**DESCRIPTION AND LOCATION**	**NOTICABLE CHANGE FROM LAST INSPECTION**	
	YES	NO		YES	NO
Pavement Distress	X		Minor pavement cracking was observed in the west (southbound) pavement patch.		X
Slope Movement		X	The west (southbound) slope was repaired in November 2021 and appears to be performing well.		X
Erosion		X	N/A – none observed during the 2023 inspection.		X
Seepage		X	N/A – none observed during the 2023 inspection.		X
Culvert Distress		X	N/A – none observed during the 2023 inspection.		X

COMMENTS
The west (southbound) highway embankment slide was repaired in November 2021 with geogrid-reinforced granular fill. Four perforated pipe drains (wrapped in filter fabric) were installed at the base of the excavation and outlet at the toe of the slope. The drain outlets were dry during the 2023 inspection.
The west (southbound) lane was patched during 2021 construction (Photos 1, 2, and 3). A thin pavement crack (less than 10 mm wide) was observed in the patch upslope of the 2021 repair (Photo 5).
The 2021 repaired slope is well vegetated (grass and weeds) and appears to be performing well (Photo 6). The west highway embankment slope appears drier than inspections before the 2021 repair, indicating the drains are performing well.
The fence at the toe of the west (southbound) highway embankment is deflected but does not appear to have changed since the 2019 inspection.
The 1800-mm-diameter multi-plate corrugated-steel-pipe (CSP) culvert (Bridge File #13457) was sleeved with a 1300-mm-diameter CSP culvert (date unknown). The culvert is underlying Hwy 22 (oriented east-west) south of the repaired slide (Photo 2). During the 2017 inspection, debris was observed at or just above the crown of the culvert inlet, indicating the culvert may have insufficient capacity to handle flow volumes during spring freshet or significant precipitation events. The culvert was not inspected during the 2023 inspection.
Maintenance/Repair/Monitoring Recommendations: • The site should continue to be regularly inspected by TEC's Maintenance Contract Inspector (MCI). • The site should be inspected once per contract as part of the Central Region GRMP Section B Inspections.

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 and Economic Corridors (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.

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(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.

(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.

(iii) The report is based on information provided to KCB by the Client or by other parties on behalf of the client (Client-supplied information). KCB has not verified the correctness or accuracy of such information and makes no representations regarding its correctness or accuracy. KCB shall not be responsible to the Client for the consequences of any error or omission contained in Client-supplied information.

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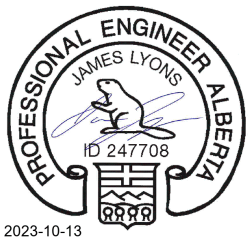
(v) This report is electronically signed and sealed and its electronic form is considered the original. A printed version of the original can be relied upon as a true copy when supplied by the author or when printed from its original electronic file.



James Lyons, P.Eng.
Civil Engineer

PERMIT TO PRACTICE
KLOHN CRIPPEN BERGER LTD.

RM SIGNATURE: _____

RM APEGA ID #: 187607

DATE: 13 Oct. 2023

PERMIT NUMBER: P009196
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Inspection Photographs

Photo 1 **An aerial photo of the C072 site, highlighting the location of the recent pavement patch, slide repair extent, and buried drain outlets. Photo taken June 27, 2023, facing southeast.**

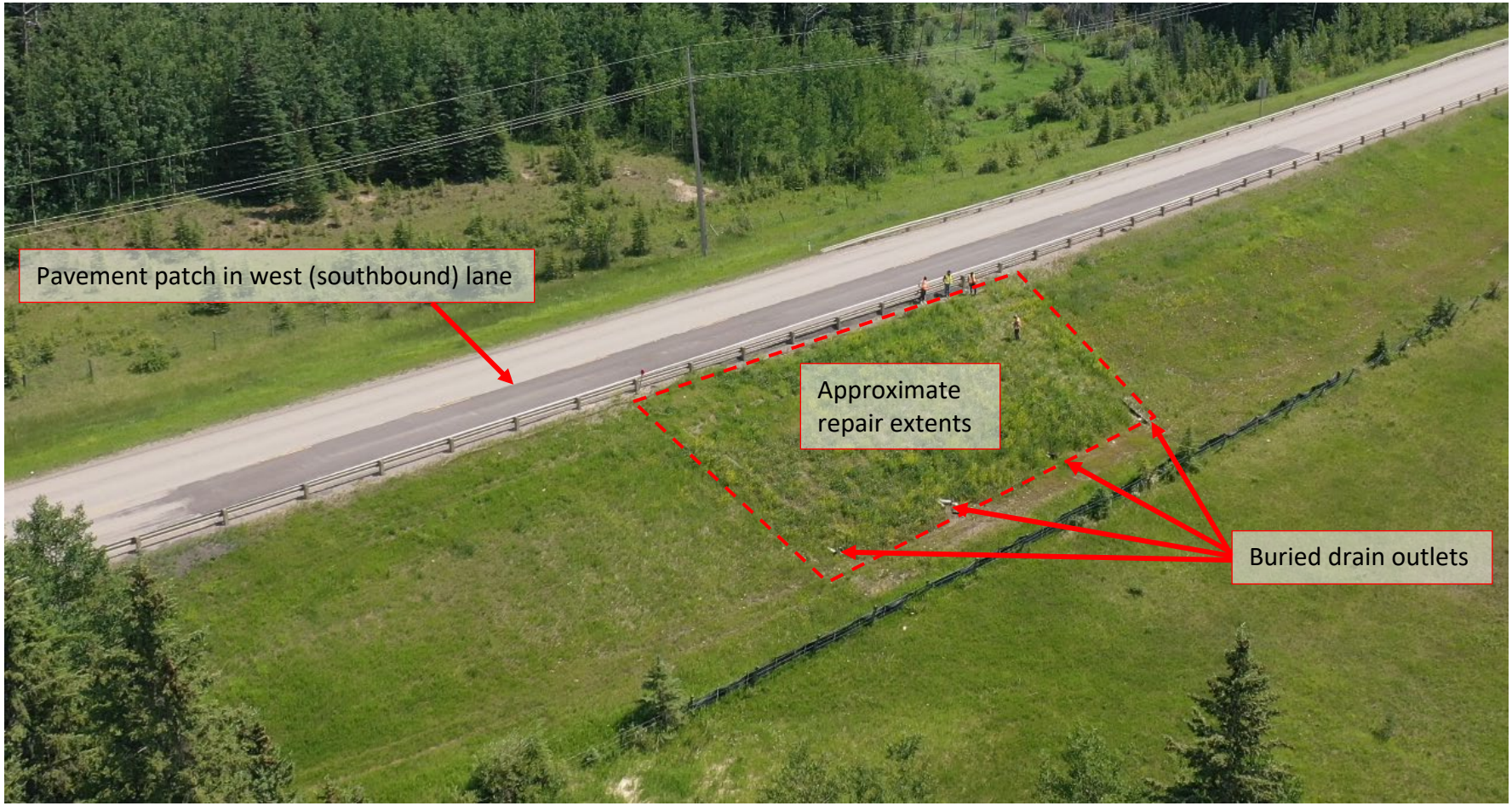


Photo 2 **An aerial view of the C072 site, highlighting the slide repair, pavement patch, buried drain outlet locations, and Chicken Creek. Photo taken June 27, 2023, facing north-northeast.**

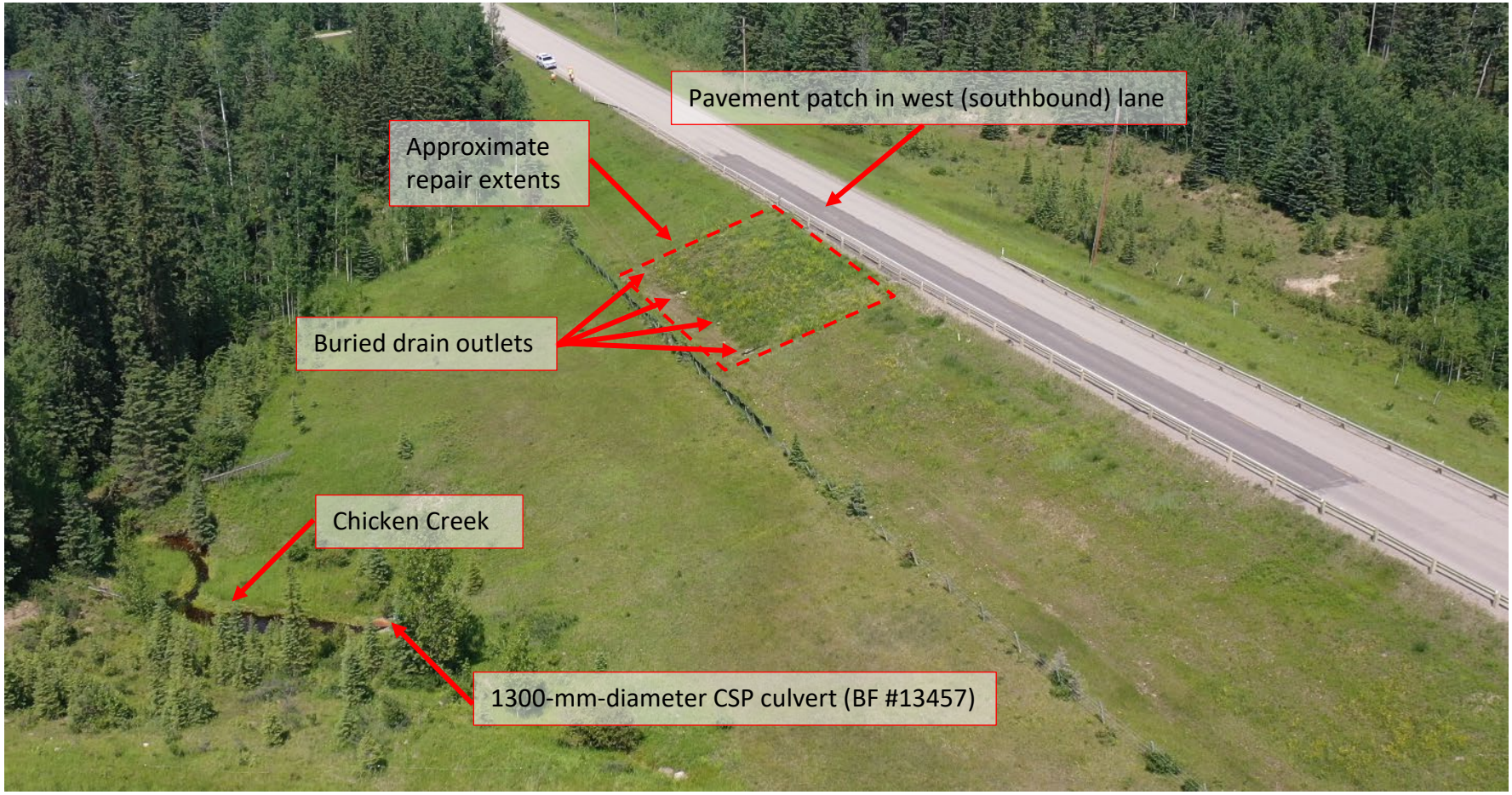
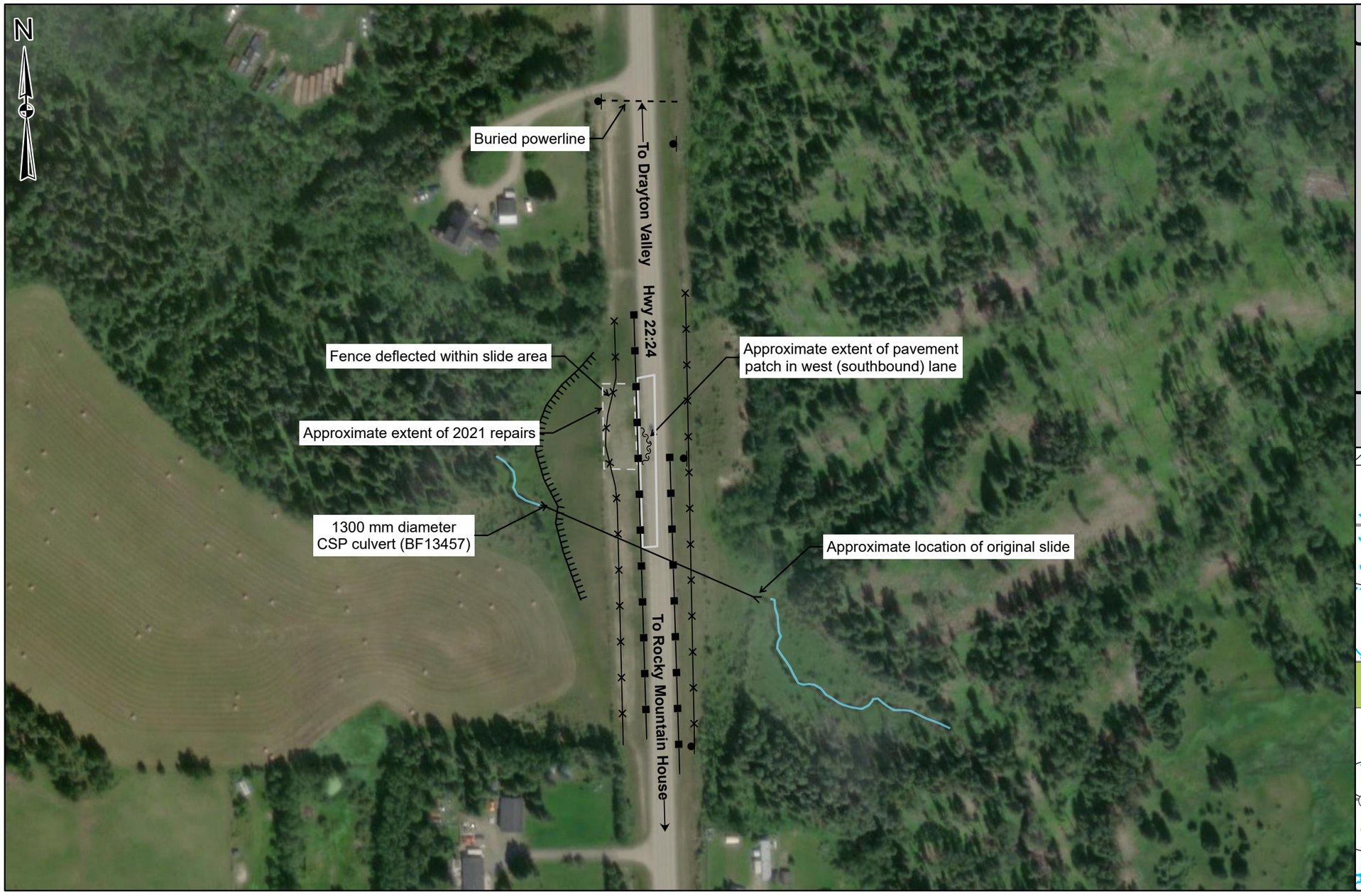


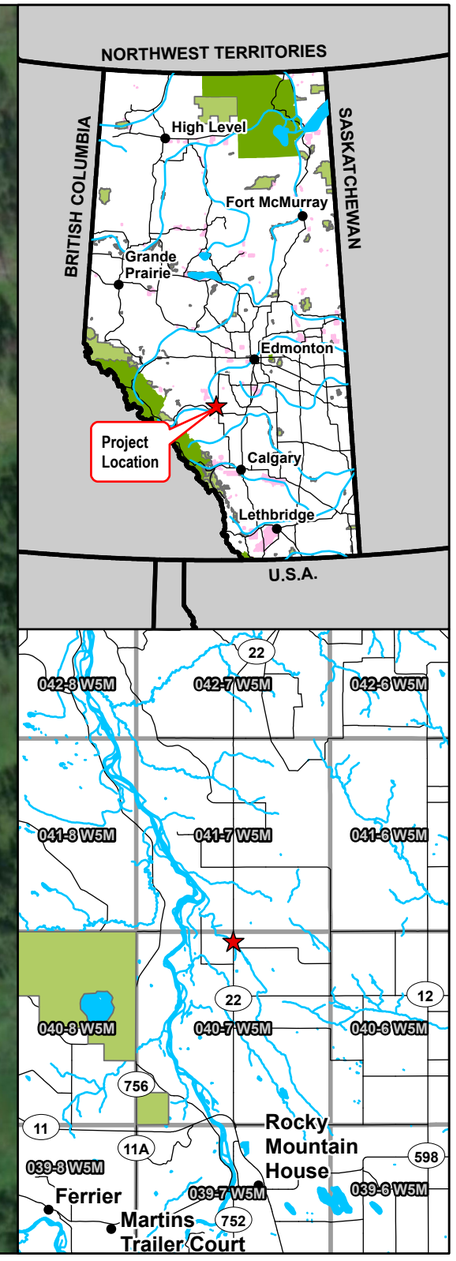
Photo 3 **Guardrail and pavement patch in west (southbound) lane. Photo taken June 27, 2023, facing north.**

Photo 4 **The repair of the highway embankment slope is well vegetated and appears to be performing well. Photo taken June 27, 2023, facing south.**

Photo 5 **Thin (less than 10 mm) pavement crack in the west (southbound) pavement patch. The pavement crack may be attributed to construction and not additional slide movements. Photo taken June 27, 2023, facing south.**

Photo 6 **The repair of the west highway embankment slope is well vegetated and appears to be performing well. Photo taken June 27, 2023, facing north.**





Legend

- Power Pole
- Culvert
- Guardrail
- Creek
- Berm Downslope Crest
- Buried Powerline
- Fence
- Crack

0 100 Metres

NOTES:
1. HORIZONTAL DATUM: NAD83
2. GRID ZONE: UTM ZONE 11N
3. IMAGE SOURCE: ESRI, MAXAR, EARTHSTAR GEOGRAPHICS AND THE GIS USER COMMUNITY

CLIENT: Alberta

Klohn Crippen Berger

PROJECT: CENTRAL REGION GEOHAZARD RISK MANAGEMENT PROGRAM

TITLE: Site Plan
C072 - Chicken Creek Slide
Hwy 22:24, km 9.8

SCALE	PROJECT No.	FIG No.
1:2,000	A05116A02	1

File: Z:\AEDM\A05116A02 ABT Central Region GRMP400 Drawings\GIS\02_ProFiles\2023\Section B\ABT_Central_SectionB_230724\ABT_Central_SectionB_230724.aprx Date: Time: Creator:: aharrison