CENTRAL REGION GRMP
SITE INSPECTION FORM

SITE NUMBER AND NAME: **C017 Truckstop Slide**	HIGHWAY & KM: 575:04, 26.040 to 26.650	PREVIOUS INSPECTION DATE: June 18, 2024	INSPECTION DATE: **June 10, 2025**
LEGAL DESCRIPTION: C017-1 04-26-29-21 W4M C017-2 01-27-29-21 W4M C017-3 01-27-29-21 W4M	NAD 83 COORDINATES: UTM Northing Easting 12 5707574 370869 12 5707733 370415 12 5707738 370340	RISK ASSESSMENT: **C017-1** PF: 1 CF: 4 TOTAL: 4 **C017-2** PF: 10 CF: 3 TOTAL: 30 **C017-3** PF: 2 CF: 4 TOTAL: 8	
HIGHWAY SERVICE CLASSIFICATION: 3		CONTRACT MAINTENANCE AREA (CMA): 517	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 930 (east) and 1000 (west) (Ref No. 105240 & 106230)			

SUMMARY OF SITE INSTRUMENTATION:	INSPECTED BY:
Operable: One slope inclinometer (SI) and two vibrating wire piezometers (VWPs) were installed in fall 2020 at the C017-3 subsite. LAST READING DATE: May 20, 2025	Chris Gräpel (KCB) James Lyons (KCB) Tony Penney (TEC) Chris Newman (TEC) Imram Mehmood (TEC)

PRIMARY SITE ISSUE: C017-1: a shallow embankment slope failure on the north side (westbound lane) of Hwy 575:04; C017-2: an erosion gully that has formed downslope of a culvert outlet on the north side of Hwy 575:04 and there is ditch erosion in the south (eastbound) ditch extending from C017-3 to just west of C017-1; and C017-3: a moderately deep-seated slide (5 m to 6 m deep based on an SI installed in 2020) on the north side of Hwy 575:04 where the highway crosses a creek and enters a cut section in the valley wall.

APPROXIMATE DIMENSIONS: The slides at C017-1 and -3 are approximately 20 m and 40 m wide, respectively. The ditch erosion along C017-2 is approximately 850 m long and the erosion gully on the north side of Hwy 575:04 (at the culvert outlet) is approximately 5 m wide, 3 m to 4 m deep, and 40 m long.

DATE OF ANY REMEDIAL ACTION: In late-2020 or early-2021, TEC's HMC used failed material from the nearby C018 site as backfill material for the erosion gully in the south (eastbound) ditch near the C017-3 site (approximately 50 m to 100 m long section). 2025 – C017-1 and -3 were repaired (slope grading, installing 3-4 rows of 14 m long soils, installing slope stabilization and erosion control products, and seeding). The work was performed by PME Inc. under Contract No. CON0022533, which also included repair of the Central Region C018 site.

ITEM	**CONDITION EXISTS**		**DESCRIPTION AND LOCATION**	**NOTICABLE CHANGE FROM LAST INSPECTION**	
	YES	NO		YES	NO
Pavement Distress	X		C017-1 and -3: Pavement cracking has been observed in both lanes of Hwy 575:04. Damage to the pavement was also observed at C017-3 due to 2025 construction activities.	X	
Slope Movement	X		C017-1 and -3: Slope grading and soil nail installation completed in 2025 to stabilize the slopes.	X	
Erosion	X		C017-2: There is ongoing ditch erosion in the south (eastbound) ditch.		X
Seepage		X	N/A – none observed during the 2025 inspection.		X
Culvert Distress	X		C017-2: During 2025 construction, the culvert inlet was plugged with foam and buried. The culvert outlet was	X	

			extended approximately 20 m and the erosion gully was backfilled.		

COMMENTS

General:

- Summer of 2020 – A test pit investigation was completed at the C017-1 subsite (monitored by KCB) to support design work.
- Fall of 2020 – A drilling and instrument installation program was completed at the C017-3 subsite (monitored by KCB) to support design work. An SI and two VWPs were installed in the slide mass to monitor movement and ground water conditions, respectively.
- Spring of 2022 – A second borehole was drilled at the C017-3 subsite in the north (westbound) lane upslope of the 2020 borehole, and one borehole was drilled at the C017-1 subsite, to support design work.
- October 2021 – KCB submitted a proposal for preliminary engineering, final design, tendering, contract administration, and post-construction services.
    - The design work was completed in 2022.
    - KCB issued an Environmental Evaluation (EE) report in March 2023.
    - In 2023, TEC requested KCB prepare a combined tender document for the C017-1 and -3 and C018-1 and -2 repairs (Tender No. TND0022533).
    - KCB issued C-estimates in June and August 2023.
    - April 2024 – Regulatory approvals including Water Act, Public Lands Act, Fisheries Act, and Navigable Waters Act. Historic Resources Act (HRA) were received.
- The final tender was issued to TEC in early-May 2024, advertised on May 22, 2024, a pre-tender meeting was held on May 31, 2024, and the tender closing date was July 5, 2024. The contract was awarded in early-September 2024 (Contract No. CON0022533) and work was completed at the C017 site between January and June 2025. The contract was awarded to PME Inc. and the contract was administered (including construction monitoring) by KCB.

C017-1:

- The slide was repaired in 2025 as part of CON0022533. The repair consisted of slope grading and installing soil nails (3 rows of 21 soil nails approximately 14 m long), slope stabilization product (wire mesh facing with built in geomat), rolled erosion control product, seeding, and replacing the guardrail (Photo 8).
- The pavement crack observed at the site appeared similar to previous inspections, indicating construction did not trigger additional movements at the site (Photo 8).
- The new guardrail and guardrail posts appeared to be in good condition (Photo 9).
- The crest and upper portion of the slope were graded as part of 2025 construction, but the erosion control product had not yet been installed (Photo 9 and 10). The erosion control product was scheduled to be installed within the week. Some vegetation (grass) regrowth was observed during the 2025 inspection.
- In general, the slope was even, but there were some undulations observed along the graded slope below the slope stabilization product (Photo 10). The slope stabilization product could be stapled in place to reduce the voids between it and ground surface.
- The base plates were generally flush with the slope (Photo 10). However, there were several base plates with small gaps between them and the slope stabilization product.

C017-2:

- In 2020, the erosion gully downstream of the corrugated-steel-pipe (CSP) culvert was partially backfilled to allow access for the excavator completing test pits at the C017-3 site (monitored by KCB). During 2025

construction, an additional 20 m (along the length of the erosion gully) was backfilled (Photo 4 and 6, see bullet below).

- During 2025 construction, the CSP culvert inlet on the south side of the highway was plugged with foam and buried. The CSP culvert outlet was also extended approximately 20 m downslope (north) and then buried with material salvaged during C017-1 and -3 grading work.
- The ongoing erosion in the south (eastbound) ditch does not appear to have changed significantly between the 2024 and 2025 inspections (Photo 5 and 7). The erosion gullies are 1.0 m to 1.5 m deep and 1 m to 2 m wide.
  - Near the midpoint of the site, the erosion is within approximately 2 m from the edge of pavement.
  - The fill placed between the 2020 and 2021 inspections (removed from the C018 geohazard site) continues to erode and is progressing uphill (west).
- There is a municipal water line running beneath the south (eastbound) ditch. Stakes were placed before the 2022 drilling program at the C017-3 site. The water line is approximately 6 m to 7 m below ground surface.

C017-3:

- The slide was repaired in 2025 as part of CON0022533. The repair consisted of slope grading and installing soil nails (4 rows of 26 or 27 soil nails approximately 14 m long), slope stabilization product, rolled erosion control product, seeding, and replacing the guardrail (Photo 1 and 2).
- The repair was substantially completed during the 2025 inspection. The erosion control product and guardrail were to be installed the week of June 9, 2025. During the inspection, the contractor was installing non-woven geotextile instead of the rolled erosion control product specified by KCB (Photo 1 and 2). Upon discussion with TEC and the KCB Project Manager, this was corrected and the correct material was installed after the inspection.
- The steel headbox installed to protect instrumentation (SI and two VWPs) in BH20-C017-01, located downslope (north) of the C017-3 slide, was protected from damage during 2025 construction (Photos 1 through 3). The instruments were read in May 2025 and no increased rate of movement or porewater pressure increase in response to construction were recorded.
- The previous erosion gully, located at the west extent of the slide, was backfilled with material salvaged from the slope as part of 2025 construction (Photo 1). However, the slope was not armoured and is susceptible to erosion from surface water flow from the north (westbound) ditch (Photo 1).
- During 2025 construction, an approximate 0.2 m high earthfill berm was constructed in the north (westbound) ditch upstream of the C017-3 site to divert ditch flow further north and away from the repaired slope (Photo 1). The berm was constructed from material salvaged during slope grading and was not armoured. The berm was constructed (low height, relatively flat slopes) to still allow mowing of the north ditch as part of ongoing maintenance operations.

Maintenance/Repair/Monitoring Recommendations:

General:

- The site should continue to be regularly inspected by TEC's Maintenance Contract Inspector (MCI).
- The site should continue to be inspected annually as part of the Central Region GRMP Section B Inspections.

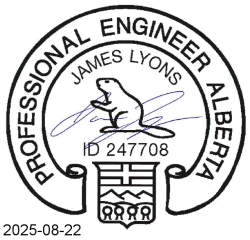
C017-2:

- In 2022, KCB proposed backfilling the ditch erosion and armouring the ditch with Class 1 and 2 riprap (overlying bedding material and non-woven geotextile, with regular check trenches). However, the repair was not approved due to the high cost of armouring the ditch with riprap.
- During the 2025 site inspection, an alternative approach was discussed of backfilling the erosion gullies with granular fill via a conveyor belt truck (a "stone slinger") to reduce disturbance to the existing

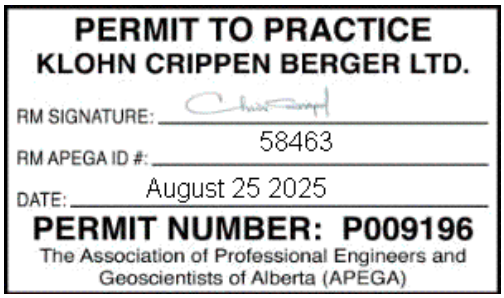
vegetation already established in the ditch. This option would not be as robust as armouring the ditch with riprap, but it could act as a temporary repair that could be maintained by TEC's HMC by adding more granular fill on an as-needed basis.

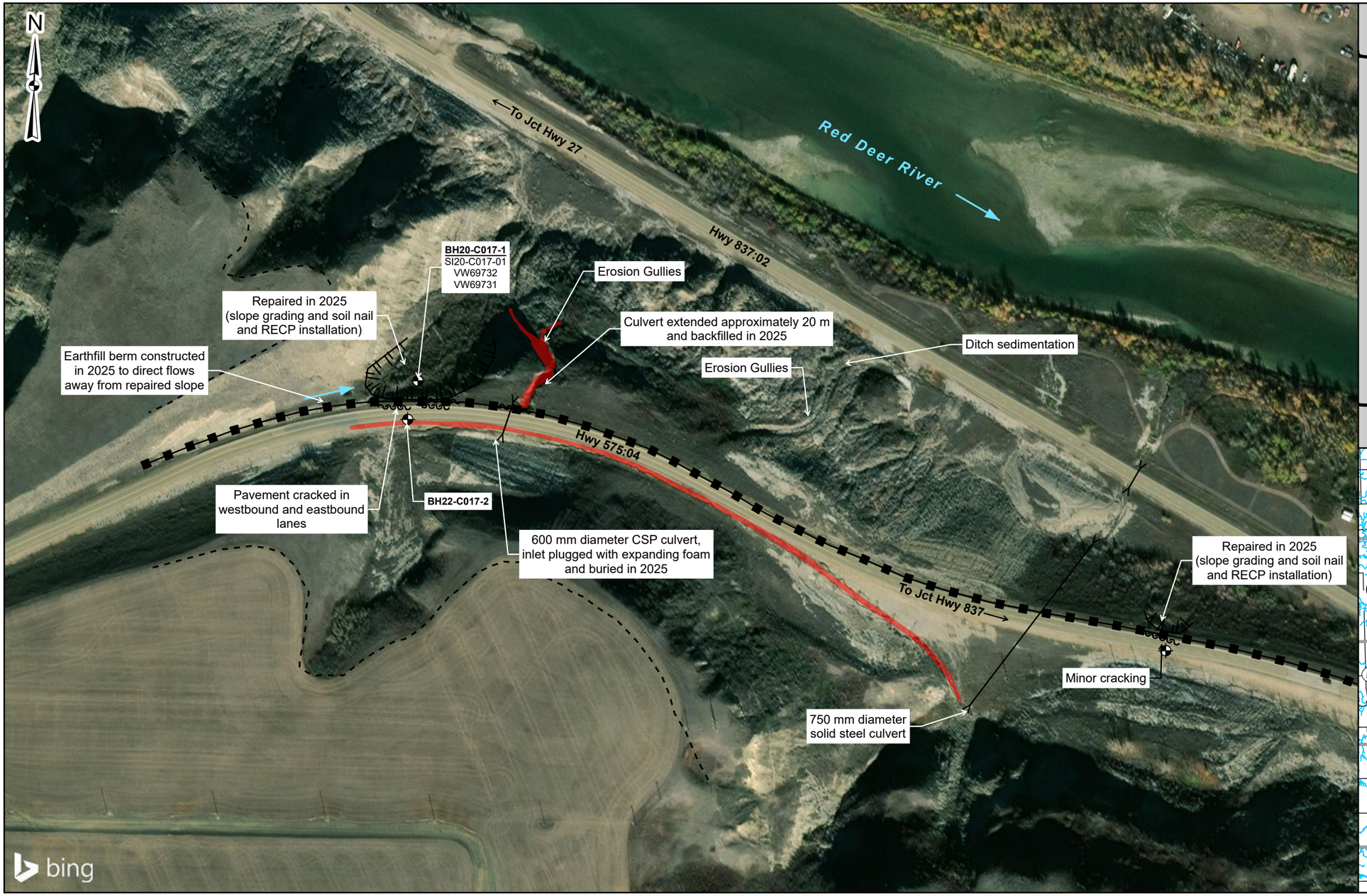
C017-3:

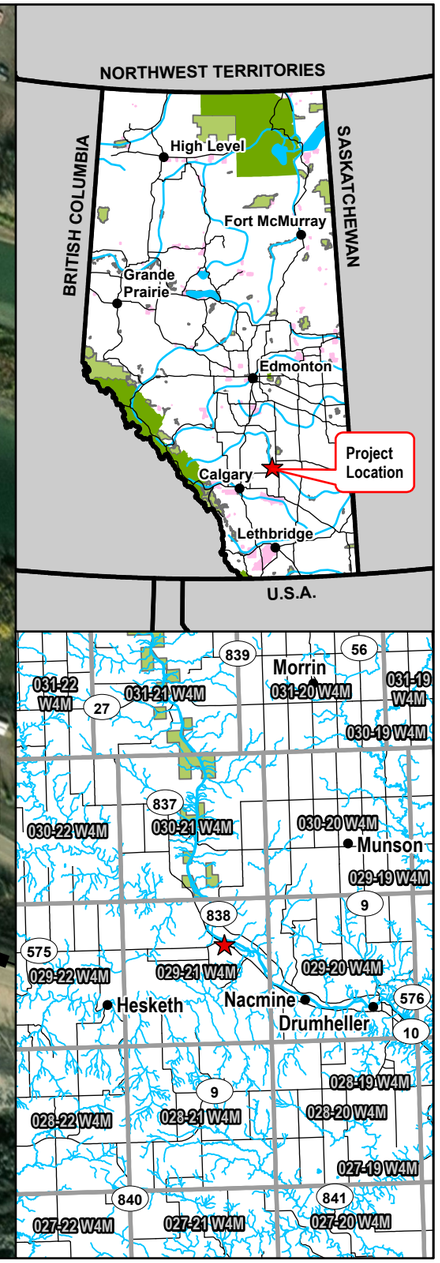
- The west (upslope) extent of the repair and the earthfill berm in the ditch should be monitored to assess the performance of the berm. If surface water flows are overtopping or bypassing the berm, or if erosion begins at the west extent of the repaired slope, KCB and TEC should discuss alternative drainage improvement measures.



James Lyons, P.Eng.
Civil Engineer







Legend

- Borehole
- Flow Direction
- Top of Bank
- Scarp
- Guardrail
- Culvert
- Crack
- Erosion

0 125 Metres

NOTES:
1. HORIZONTAL DATUM: NAD83
2. GRID ZONE: UTM ZONE 12N
3. IMAGE SOURCE: 2024 MICROSOFT CORPORATION, MAXAR, CNES DISTRIBUTION AIRBUS DS.

CLIENT: Alberta

Klohn Crippen Berger

PROJECT: CENTRAL REGION GEOHAZARD RISK MANAGEMENT PROGRAM

TITLE: Site Plan
C017-1, -2, and -3 Truckstop Slide
Hwy 575:04, km 26.631

SCALE	PROJECT No.	FIG No.
1:3,000	A05116A02	1

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Inspection Photographs

Photo 1 **Aerial photo of the C017-3 site showing the 2025 graded slope, soil nails, base plates, slope stabilization product, and 2020 instrumentation headbox downslope of the repair (indicated by red circle). An earthfill berm was also constructed in the north ditch upslope of the repair to divert surface water flows further north (indicated by red arrow). Non-woven geotextile had been erroneously installed by the contractor at the crest of the slope. The non-woven geotextile was removed and replaced with the correct material after the inspection. Photo taken June 10, 2025 facing southwest.**

Photo 2 **Regraded slope, soil nails, base plates, and slope stabilization product at C017-3. Non-woven geotextile being installed during the inspection was replaced with the correct rolled erosion control product after the inspection. Photo taken June 10, 2025 facing west.**

Photo 3 **Protective headbox located downslope of the 2025 repair (indicated by red circle). Photo taken June 10, 2025 facing northwest.**

Photo 4 **Aerial oblique photo of the C017-2 site. Approximately 20 m of the erosion gully north of the highway backfilled during 2025 construction after extending CSP culvert (outlet indicated by red arrow). Photo taken June 10, 2025 facing west.**

Photo 5 **Aerial photo showing the lower (east) extent of the C017-2 site where the ditch grade increases to between approximately 15% and 20%. Inlet of culvert underlying Hwy 575:04 indicated by red arrow. Photo taken June 10, 2025 facing northwest.**

Photo 6 **Erosion gully north of Hwy 575:04 at C017-2 partially backfilled during 2025 construction after extending CSP culvert approximately 20 m (outlet not shown). Photo taken June 10, 2025 facing north.**

Photo 7 **Ditch erosion in south (eastbound) ditch does not appear to have worsened between the 2024 and 2025 inspections. Photo taken June 10, 2025 facing east.**

Photo 8 Aerial photo of the C017-1 site. Photo taken June 10, 2025 facing southwest.

Photo 9 **Crest of slope and new guardrail along C017-1. Photo taken June 10, 2025 facing east.**

Photo 10 **Soil nails, base plates, and slope stabilization product installed in 2025 at C017-1. Photo taken June 10, 2025 facing east.**