

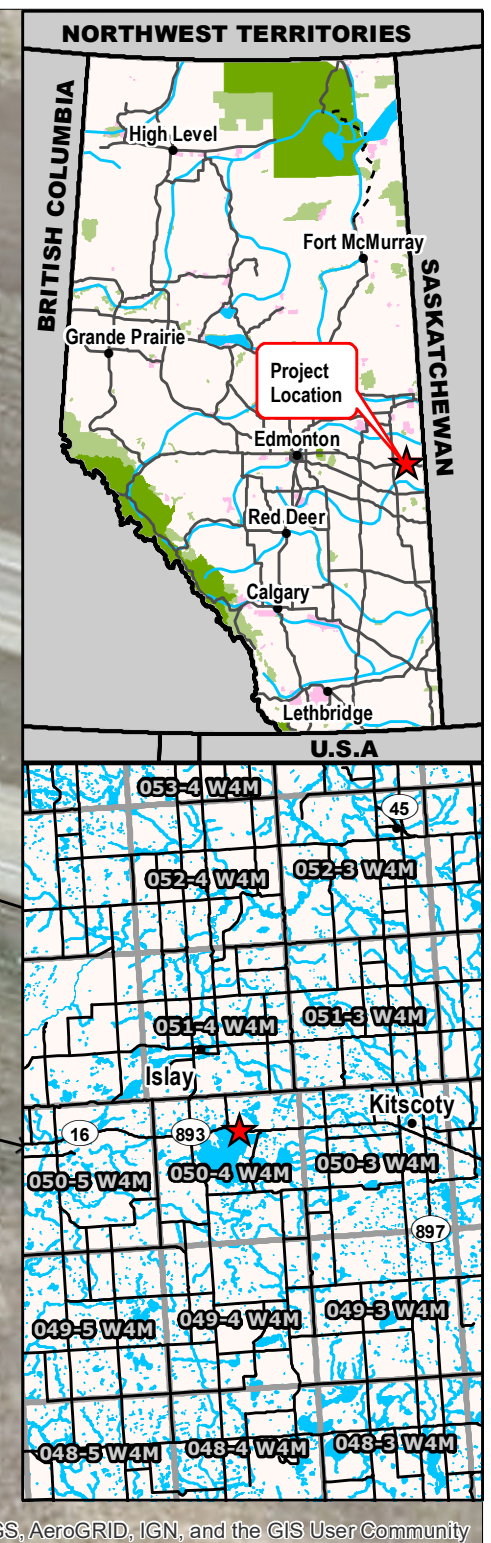
SITE NUMBER AND NAME: C007 Kenilworth Lake		HIGHWAY & KM: 16:30, 23.89	PREVIOUS INSPECTION DATE: July 12, 2019	INSPECTION DATE: June 24, 2020
LEGAL DESCRIPTION: 11-27-050-04 W4M	NAD 83 COORDINATES: UTM Northing Easting 12 5910761 532907		RISK ASSESSMENT: PF: 3 CF: 2 TOTAL: 6	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 7,710 (west) & 7,460 (east) (Ref No. 137470 & 134470)			CONTRACT MAINTENANCE AREA (CMA): 512	

SUMMARY OF SITE INSTRUMENTATION: Operational: Two slope inclinometers installed along the H-pile wall. Inoperable: Two slope inclinometers and two standpipe piezometers. LAST READING DATE: May 7, 2020		INSPECTED BY: Chris Gräpel (KCB) James Lyons (KCB) Rishi Adhikari (AT) Tom Sommerville (AT)
PRIMARY SITE ISSUE: Slope failure on south side slope of eastbound lanes, and settlement of eastbound lanes. Pavement cracking has continued after pile wall was installed.		
APPROXIMATE DIMENSIONS: Approximately 60 m long. Slope is approximately 20 m high sloped at 6H:1V.		
DATE OF ANY REMEDIAL ACTION: 2001 – berm and shear key constructed at toe of failing slope, changing the effective slope angle to 6V:1H. 2015 – H-pile wall constructed at top of failing slope and asphalt overlay constructed on eastbound lanes.		

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Tension cracks observed on the south shoulder of the eastbound lanes extend towards the eastbound passing lane	X	
Slope Movement		X			X
Erosion	X		Settlement of surface materials into voids between the flanges of the H-pile wall are creating sinkholes along the top of the H-pile wall.		X
Seepage		X			X
Culvert Distress		X	Not applicable		

COMMENTS
Instrumentation data indicates that deflection of the pile wall is slowly attenuating. Asphalt cracking has extended past the pile wall to the east and west. The pavement cracks are beginning to settle and expand, likely due to surface water infiltration. Recent asphalt cracking approximately 25 mm to 50 mm wide was observed near the west end of the existing pile wall.
The MCI mentioned that the sinkholes along the top of the H-pile wall have been filled repeatedly with sand but sinkholes continue to form at the pile locations as the fill near the top of the piles continues to settle. The sinkholes present a tripping and falling hazard to the public. W-beam guardrail was installed adjacent to pile wall in 2018 or early 2019.
Discussed remedial actions: <ul style="list-style-type: none"> Continue to add sand and gravel to sinkholes to reduce potential for someone stepping in a void and getting injured;

- Extend pile wall to the east and west to encompass area where pavement cracks have extended past the ends of the H-pile wall. KCB's initial proposal for design of pile-wall extension was submitted to AT on September 12, 2019 and re-issued on April 27, 2020. The proposal included pile wall design for four central region sites (C007, C043, C048, and C065).
- A tender for multiple pile walls on four sites will be released in the fall of 2020 that will include the C007 site.
- After the pile wall is constructed the Highway Maintenance Contractor will replace the asphalt in the work area (approximately 130 m in length).



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- ▣ Slope Inclinator (SI)
- ▣ Slope Inclinator (SI) (inoperable)
- ⊕ Standpipe Piezometer (SP) (inoperable)
- ══ H-Pile Wall
- Guardrail
- ×× Fence
- ~~~~ Crack



NOTES: 1. HORIZONTAL DATUM: NAD83 2. GRID ZONE: UTM Zone 12N 3. IMAGE SOURCE: World Imagery from ESRI ArcGIS Online. Image dated May 21, 2015 4. Location of instruments is approximate (not surveyed)	CLIENT 	PROJECT CENTRAL REGION GEOHAZARD RISK MANAGEMENT PROGRAM
		TITLE Site Plan C007 - Kenilworth Lake Slide Hwy 16:30, km 23.890
	SCALE 1:1,000	PROJECT No. A05115A02
		FIG No. 1

Time: 11:57:58 AM
 Date: July 30, 2020
 File: Z:\A\EDM\A05115A02\ABT Central Region GRM\PI\00 Drawings\2020\2. Section BIMXD\C007_200730.mxd

Photo 1 Asphalt cracking observed west of the guardrail on the south side of Hwy 16. Photo taken June 24, 2020 facing east.



Photo 2 Asphalt cracking and settlement area observed in the eastbound lane. Photo taken June 22, 2020 facing west.



Photo 3 Settlement continuing to develop in the eastbound lane along the length of the H-pile wall. Photo taken June 22, 2020 facing northwest.



Photo 4 Asphalt cracking in the shoulder of the eastbound lane, east of the existing H-pile wall. Photo taken June 24, 2020 facing west.

