

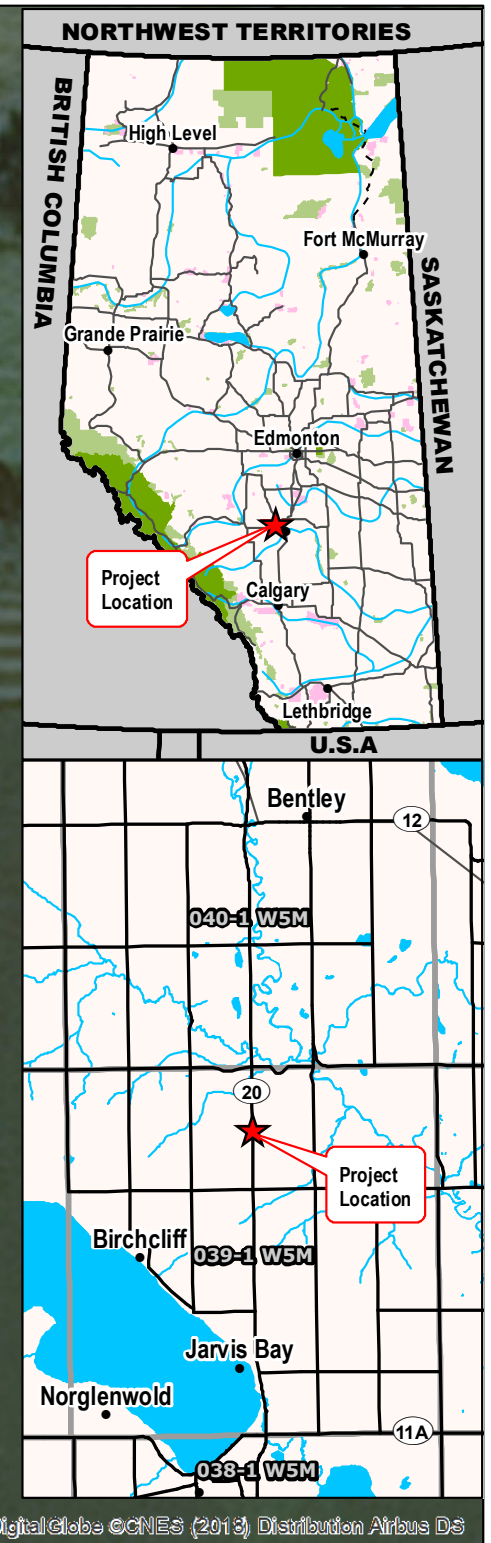
SITE NUMBER AND NAME C061 Frost Heave		HIGHWAY & KM H20:02; km 12.212	PREVIOUS INSPECTION DATE March 2, 2017	INSPECTION DATE Feb 28, 2018
LEGAL DESCRIPTION SE 33-39-1-W5	NAD 83 COORDINATES Northing Easting 52°23.564' 114°4.592'		RISK ASSESSMENT PF: 8 CF: 3 TOTAL: 24	
2017 Average Annual Daily Traffic (Ref. 997219) (AADT): 5930 (northbound) 6260 (southbound)		Contract Maintenance Area (CMA): 19		

SUMMARY OF SITE INSTRUMENTATION: 1 vibrating wire piezometer 1 ground temperature cable LAST READING DATE: May 11, 2017	INSPECTED BY: Chris Gräpel (KCB) Hanh Hong (KCB) Rocky Wang (AT) Tony Penney (AT) Dewayne Wlad (AT)
PRIMARY SITE ISSUE: Frost heave of road due to frost susceptible embankment fill.	
APPROXIMATE DIMENSIONS: Approximately 400 m along highway.	
DATE OF ANY REMEDIAL ACTION: Drainage redirected to southbound ditch	

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Three patches on northbound lane in center of heaving area. Transverse pavement cracks were noted.		X
Slope Movement		X			X
Erosion		X			X
Seepage	X		A spring was observed in the southbound ditch at the south end of the site during the March 2, 2017 inspection		X
Culvert Distress		X			X

COMMENTS
Traffic does not seem to be slowing down despite hazard signs warning drivers of uneven pavement and a 65 km/hr speed limit.
Northbound lane observed to be heaving more than the southbound lane.
Transverse pavement cracks observed at the three patched areas. Pavement cracks extend the entire width of the highway.
The maintenance contractor usually fills in the depressions with asphalt patch at the heaved locations in the winter and then mills the asphalt in the spring when the heaves subside.
The MCI reported that the heaving conditions are slightly worse this winter as compared to the previous winters.
A Preliminary Engineering Report was issued by KCB on September 19, 2017 providing KCB's recommendations for repair work.
Discussed with AT on site that the west ditch should be cleaned out and/or graded to establish positive drainage towards the north culvert and creek.
KCB will arrange to have a winter pavement-LiDAR survey of the site (both lanes).

Time: 14:53:43 PM
 Date: March 06, 2018
 File: Z:\A\EDM\A05115A02\ABT_Central Region GRNIP\A00 Drawings\2018\2_Section B11_2018 Frost Heave Tour\MXD\C61_180306.mxd



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- Legend**
- ① Photo Location
 - ➔ Photo Direction
 - GPS Track (February 28, 2018)
 - ~~~~~ Transverse Pavement Crack
 - > Culvert



NOTES: 1. HORIZONTAL DATUM: NAD83 2. GRID ZONE: UTM Zone 11N 3. IMAGE SOURCE: Bing Maps 2018, Microsoft Corporation. Image dated September 2013 4. Site visit photos dated February 28, 2018	CLIENT 	PROJECT CENTRAL REGION GEOHAZARD RISK MANAGEMENT PROGRAM
		TITLE C061 Site Inspection Hwy 20:02 km 12.212
SCALE 1:1,000	PROJECT No. A05115A02	FIG No. 1

Photo 1 **Drainage ditch off the northbound lane of the highway. Photo taken February 28, 2018 looking south.**



Photo 2 **Patched area (1 of 3) at heaved location on northbound lane bounded by transverse cracks (about 7 m apart). Photo taken February 28, 2018 looking south-west.**



Photo 3 Patched area (2 of 3) at heaved location on northbound lane. Photo taken on February 28, 2018 looking south.



Photo 4 Location of KCB 2016 borehole and instrumentation (shown in red circle) at patch area (1 of 3). Photo taken on February 28, 2018 looking north-west.



Photo 5 Transverse crack at patched area (3 of 3). Photo taken on February 28, 2018 looking west.



Photo 6 Patched area (3 of 3) at heaved location. Photo taken February 28, 2018 looking north-west.

