

SITE NUMBER AND NAME: NC081 – Evansburg Slide	HIGHWAY AND KM: 16A:08, km 8.230	PREVIOUS INSPECTION: May 25, 2020	CURRENT INSPECTION: July 14, 2021
LEGAL DESCRIPTION: SW 30-53-07-W5M	NAD83 COORDINATES: UTM11U 5941007N, 630586E		RISK ASSESSMENT: PF: 11 CF: 6 Total: 66
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 790 (2020)		CONTRACTOR MAINTENANCE AREA (CMA): 508	

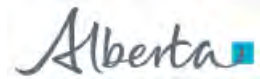
SUMMARY OF INSTRUMENTATION: Two slope inclinometers and four standpipe piezometers functional	INSPECTED BY: Stantec: Leslie Cho and Carrie Murray AT: Bernard Ching, Rishi Adhikari, Kathleen Davis, and Dave Farr
LAST READING DATE: July 4, 2021	
PRIMARY SITE ISSUE: Shallow slope failure on south side of highway.	
APPROXIMATE DIMENSIONS: 50 m wide by 9 m long x 2 m deep	
DATE OF ANY REMEDIAL ACTION: Berm constructed over culvert alignment in 2001. Highway resurfaced in 2009. Eastbound lane (EBL) patched in Fall 2014 and June 2017. An 8 – 10 tonne patch placed October 2020.	

ITEM	CONDITIONS EXIST		DESCRIPTION AND LOCATION	NOTICEABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Successive pavement drops within patched area.		X
Slope Movement	X		SI in BH20-01 shows 12 mm movement. Pavement cracks through highway patch. Bulging along south slope near creek.		X
Erosion	X		Upslope from exposed Telus cable at east group of trees on southside of highway.	X	
Seepage		X			
Bridge/Culvert Distress		X			

COMMENTS
<ul style="list-style-type: none"> Cracks were reported by the MCI to be about 100 mm wide in the Fall of 2020. An 8 to 10 tonne patch was placed in October to improve the road rideability. An approximately 100 mm dip in pavement was observed on the westbound lane (WBL). The SI installed in BH20-01 recorded about 12 mm of incremental movement at a depth of about 2 m since October 2020 suggesting the landslide is at the clay fill and native clay interface. The SI installed in BH20-02 also showed movement at a depth of about 2 m in the native clay. This movement appears to be localized to the observed toe bulge feature. The piezometers showed a decrease in water level ranging from 1.0 m to 2.0 m. Water levels range from 3.0 m to 4.3 m below ground surface. An exposed Telus cable was observed between the two groups of trees near the fence line. Previously, this cable was observed to be submerged below standing water. However, no water was observed during the current inspection. This may be related to the overall decrease in water level at the site. New erosion channels were observed upslope from the exposed cable.



NORTH CENTRAL REGION GRMP
EDSON / STONY PLAIN
SITE INSPECTION FORM



- The culvert (BF71355) is in good condition and does not appear to be affected by the landslide.
- The erosion channel near BH20-02 was mostly vegetated and appears unchanged.
- No apparent change to the toe bulge was observed.
- The south slope was very well vegetated at the time of inspection and may have obscured some landslide features.

RECOMMENDATIONS

- This site is currently scheduled for remedial construction. The tender closed in mid-July 2021. Remediation includes constructing a driven steel pile wall (HP 310x110) followed by reconstruction of the highway. No additional remediation/maintenance will be required.
- Site inspections should continue to be completed annually.
- Instrumentation monitoring should continue to be completed semi-annually.

PREPARED BY: Leslie Cho, M.Eng., P.Eng.

REVIEWED BY: Carrie Murray, M.Eng., P.Eng.

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2021 Site Inspection Photos at NC081

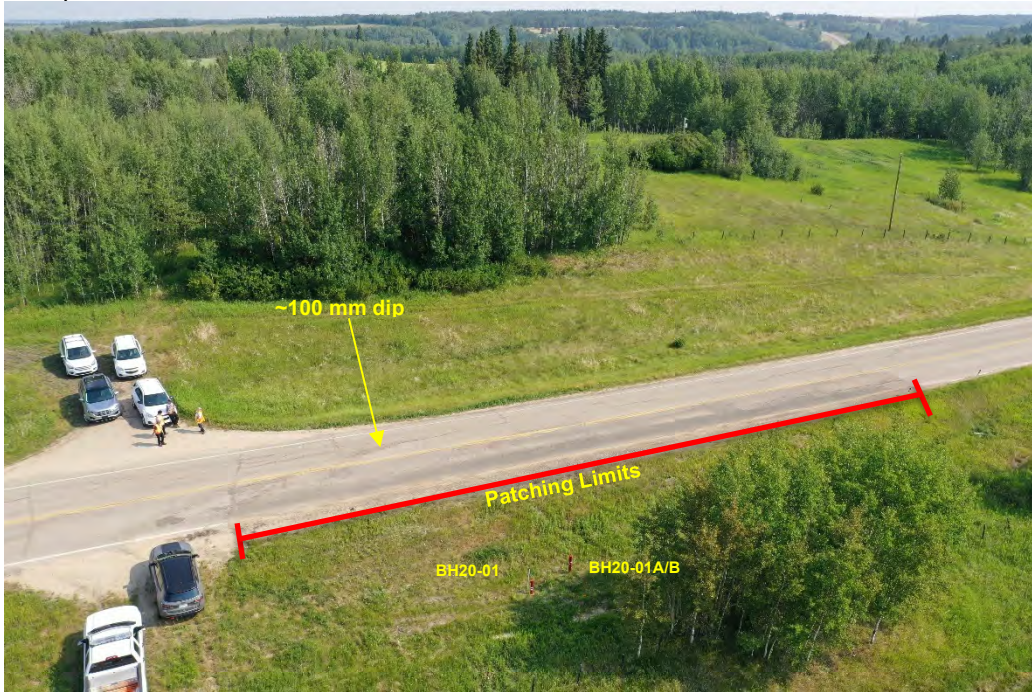


Photo 1: Pavement cracking along Highway 16A. Looking north.



Photo 2: Pavement cracking along Highway 16A. Patch placed on eastbound lane. Looking north.

2021 Site Inspection Photos at NC081



Photo 3: Pavement cracks at east limits of patch. Looking east.



Photo 4: Pavement cracks at east limits of patch. Looking west.

2021 Site Inspection Photos at NC081



Photo 5: Erosion upslope from exposed Telus cable. Looking south.

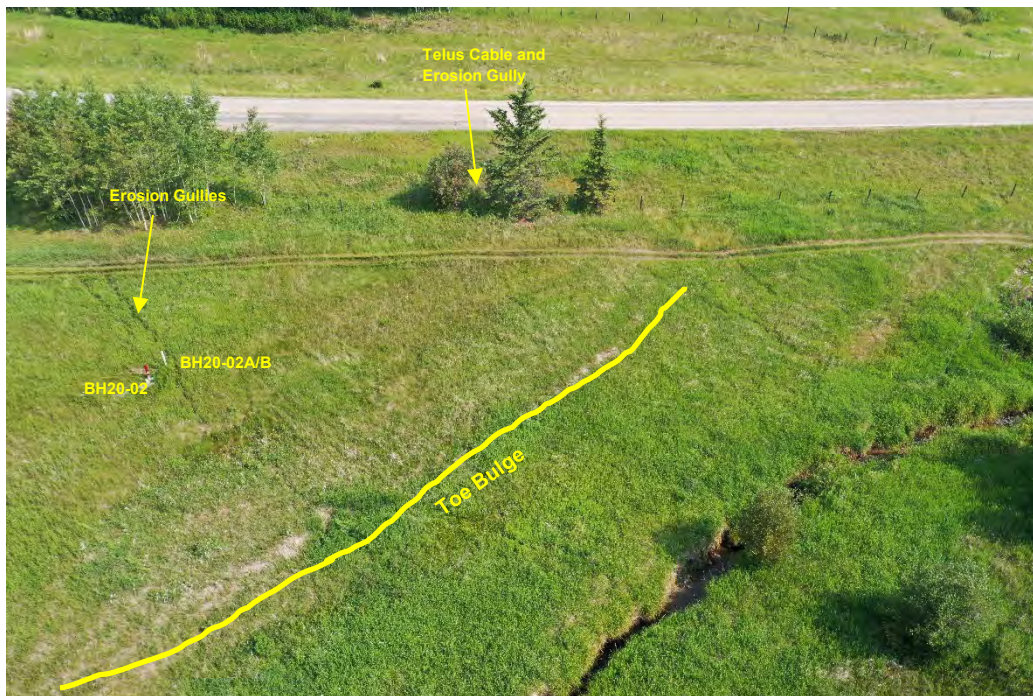
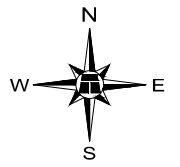
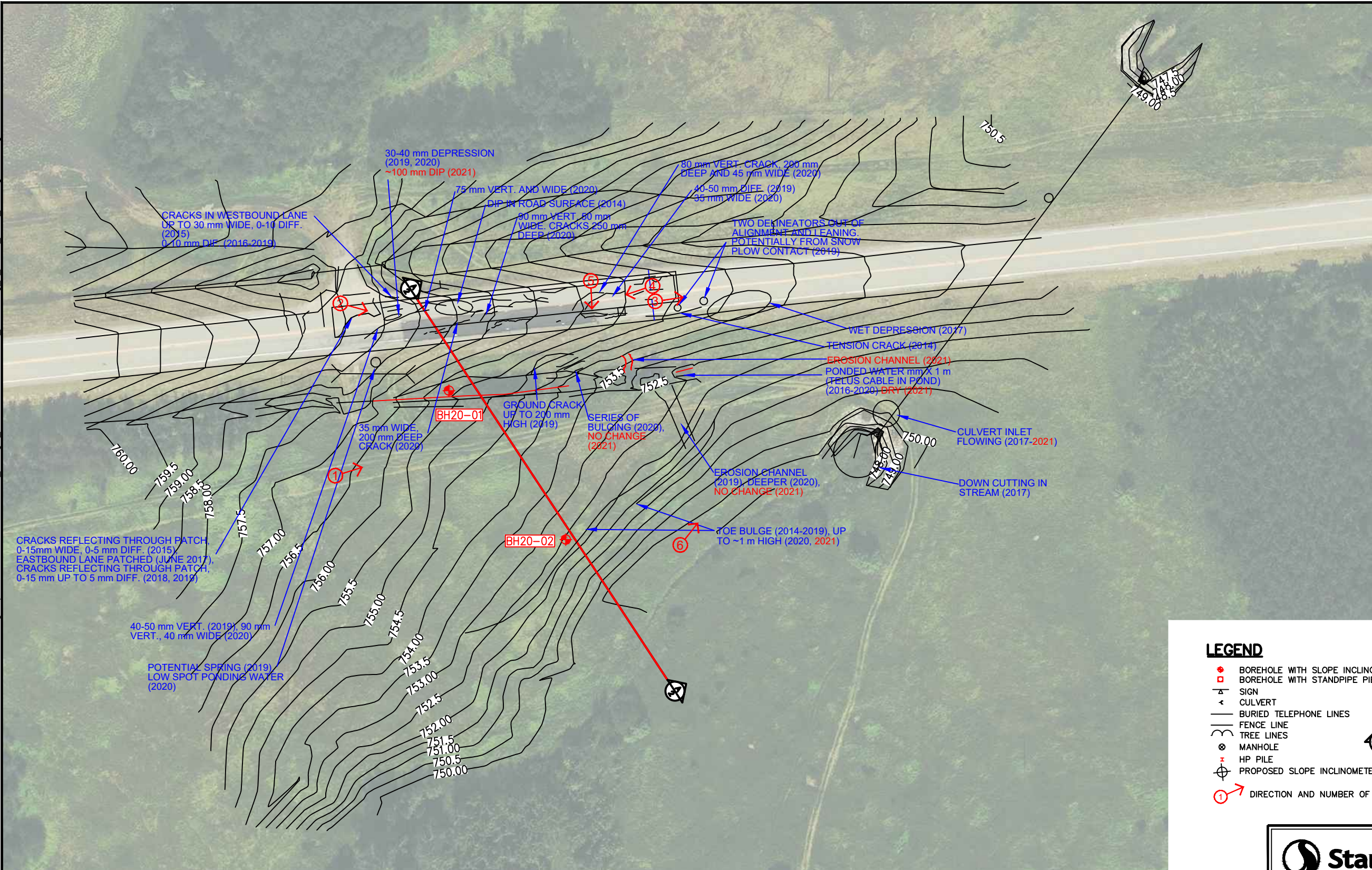


Photo 6: Toe bulge. Looking northeast.

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LEGEND

- ◆ BOREHOLE WITH SLOPE INCLINOMETER
- BOREHOLE WITH STANDPIPE PIEZOMETER
- ▲ SIGN
- ◀ CULVERT
- BURIED TELEPHONE LINES
- FENCE LINE
- TREE LINES
- ⊗ MANHOLE
- ⊕ HP PILE
- ⊕ PROPOSED SLOPE INCLINOMETER (SI) IN PILE
- ① DIRECTION AND NUMBER OF PHOTO
- CROSS SECTION LOCATION

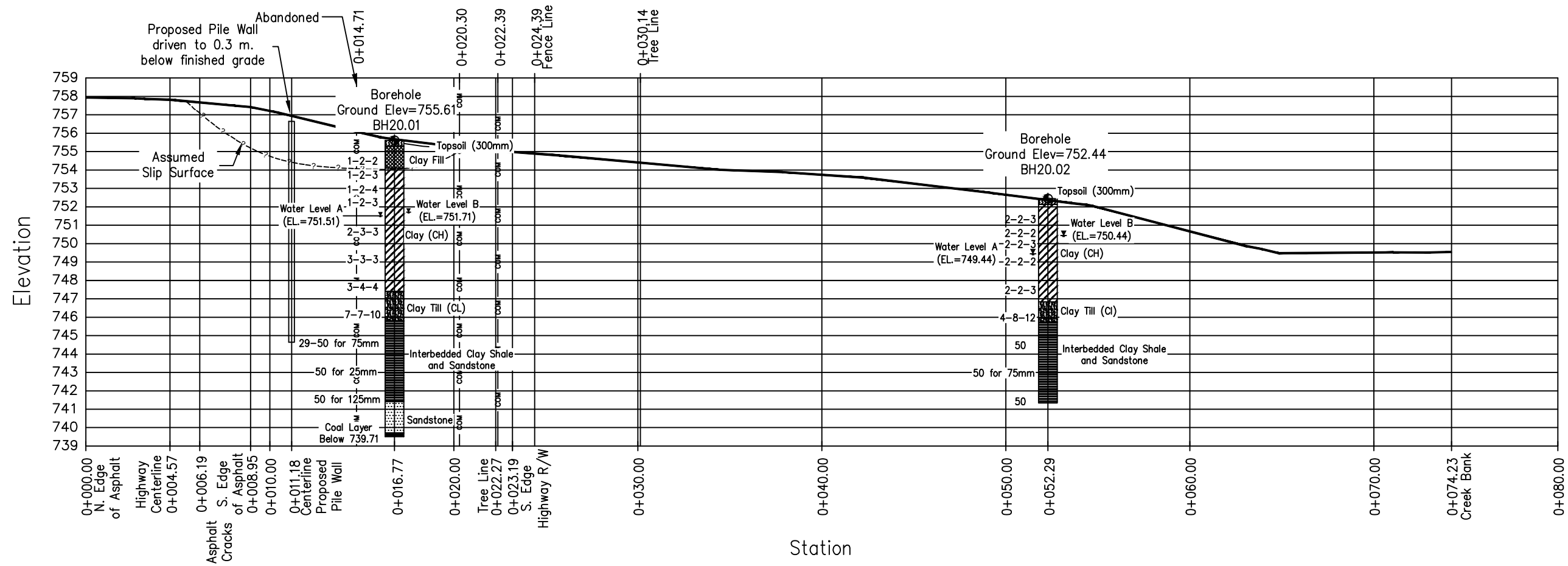
NOTES:

1. FEATURE LOCATIONS ARE APPROXIMATE.
2. PREVIOUS OBSERVATIONS SHOWN IN BLUE
3. 2021 OBSERVATIONS SHOWN IN RED

Stantec
 STANTEC CONSULTING
 400-10220 103 AVENUE NW
 EDMONTON, ALBERTA, CANADA
 T5J 0K4

ALBERTA TRANSPORTATION
 GEOHAZARD MONITORING PROGRAM
 NC81 EVANSBURG SLIDE
 SITE PLAN

DRAWN	ML	CHECK	CM	APPROVE	LC
DATE	02 SEPT 2021	SCALE	AS SHOWN	PROJECT #	123315222



CROSS-SECTION A

1:250

Stantec		STANTEC CONSULTING 400-10220 103 AVENUE NW EDMONTON, ALBERTA, CANADA T5J 0K4			
		ALBERTA TRANSPORTATION GEOHAZARD MONITORING PROGRAM NC81 EVANSBURG SLIDE CROSS SECTION			
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FIGURE - 2					-