NORTH CENTRAL REGION GRMP
EDSON / STONY PLAIN
SITE INSPECTION FORM

SITE NUMBER AND NAME:	HIGHWAY AND KM:	PREVIOUS INSPECTION:	CURRENT INSPECTION:
NC081 – Evansburg Slide	16A:08, km 8.230	July 14, 2021	June 16, 2022
LEGAL DESCRIPTION:	**NAD83 COORDINATES:**		**RISK ASSESSMENT:**
SW 30-53-07-W5M	UTM11U 5941007N, 630586E		PF: 3 CF: 3 Total: 9
AVERAGE ANNUAL DAILY TRAFFIC (AADT):		**CONTRACTOR MAINTENANCE AREA (CMA):**	
850 (2021)		508	

SUMMARY OF INSTRUMENTATION:	INSPECTED BY:
Three slope inclinometers and four standpipe piezometers functional **LAST READING DATE:** May 4, 2022	Stantec: Leslie Cho, Sonja Pharand AT: Rocky Wang, Amy Driessen, Kathleen Davis

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. Remedial construction including installation of a driven steel pile wall and highway reconstruction was completed in 2021.

ITEM	CONDITIONS EXIST		DESCRIPTION AND LOCATION	NOTICEABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress		X	Pavement was recently repaired.		X
Slope Movement	X		SI21-01 and 02 show small movements at the pile top. Bulging on south slope near creek.		X
Erosion	X		Erosion noted at the inlet and outlet of the culvert across the south field access road.	X	
Seepage		X			X
Bridge/Culvert Distress		X			X

COMMENTS

- Construction of a driven steel pile wall (HP 310x110) followed by reconstruction of Highway 16A was completed in Fall 2021.
- Pavement cracks approximately 3 mm to 5 mm wide and 250 mm long were observed in the west bound lane's northern wheel path.
- SI21-01 and SI21-02 are installed within the pile wall. Small deflections were observed at the pile top which is likely due to loading and deflection of the pile wall. BH20-02 is installed in the bulging area on the south slope near the creek and indicates on-going movement. Piezometric levels range from about 2 m to 4 m below ground surface and are approximately at creek elevation.
- Saturated ground and erosion were noted at both ends of the culvert crossing the property access road at the southwest corner of the project extents (Photos 5 and 6).
- The ground around the flush mount installed for SI21-01 and SI21-02 has settled. This is likely due to less compaction around the inclinometers by the Contractors to avoid damage to the instrument.
- The north and south embankment slopes appear to be in good condition post-construction (Photos 4 and 7).

- The exposed Telus cable was not observed between the two groups of trees near the south fence line during this inspection. No erosion or standing water was observed at this location (Photo 8).
- The erosion matting is visible with little vegetation on the repaired portion of the south embankment. Silt fence remains in place along the fence on the south embankment.
- The culvert (BF71355) is in good condition and does not appear to have been affected by the landslide or construction.
- The erosion channel near BH20-02 was mostly vegetated and appears unchanged.
- The south slope beyond the tree line was very well vegetated at the time of inspection and may have obscured some landslide features.

RECOMMENDATIONS

- Pavement cracks should be monitored by the MCI and sealed to prevent water infiltration into the embankment and pavement structure.
- The following items should be addressed as part of construction warranty:
  - Reseeding the south embankment.
  - Regrading the ground around SI21-01 and SI21-02.
  - Removal of the silt fence along the south property's fence line.
- The MCI should continue to monitor the culverts on a regular basis to ensure they are free flowing, to reduce surface water penetration of the embankment and pavement structure.
- The site inspection frequency can be reduced given a pile wall was recently installed. An inspection frequency of once per contract cycle is recommended.
- Instrumentation monitoring should continue to be completed twice annually in the spring and fall.

PREPARED BY: Leslie Cho, M.Eng., P.Eng.	**REVIEWED BY:** Xiteng Liu, M.Sc., P.Eng., PMP	**PERMIT TO PRACTICE**
PROFESSIONAL ENGINEER ALBERTA LESLIE CHO 2022-10-14 ID# 139079		**PERMIT TO PRACTICE** **STANTEC CONSULTING LTD.** Signature ID 78675 Date 2022-10-14 **PERMIT NUMBER: P 0258** The Association of Professional Engineers and Geoscientists of Alberta

2022 Site Inspection Photos at NC081

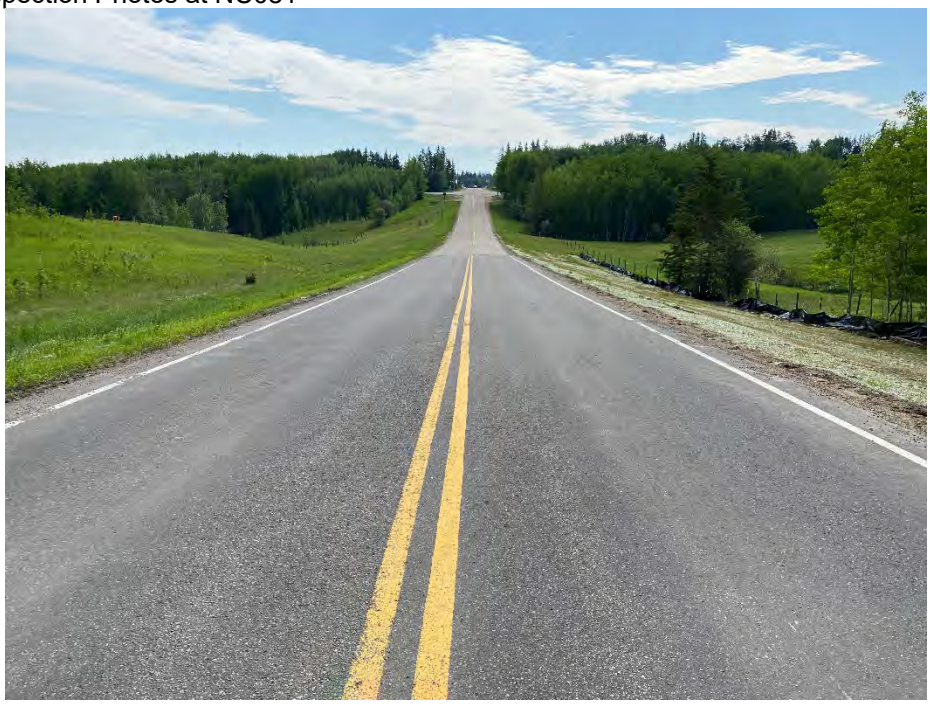


Photo 1: Pavement and embankment repair along Highway 16A. Looking east.

Photo 2: Pavement repair along Highway 16A. Looking west.

2022 Site Inspection Photos at NC081

Photo 3: Pavement cracking in westbound lane. Looking west.

Photo 4: South embankment. Looking west.

2022 Site Inspection Photos at NC081

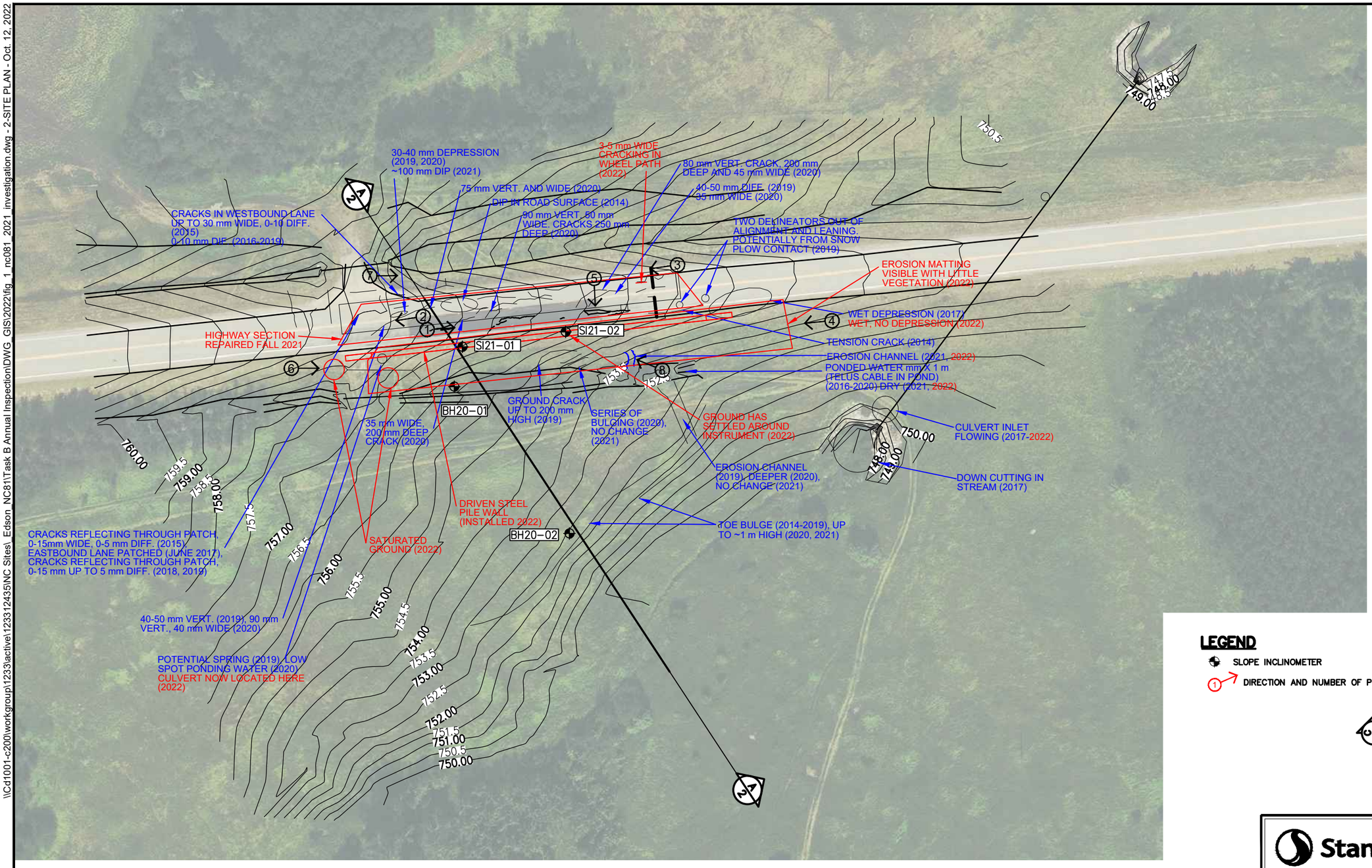
Photo 5: Wet ground and erosion at east end of culvert across property access road. Looking southwest.

Photo 6: Wet ground and erosion at west end of culvert across property access road. Looking east.

2022 Site Inspection Photos at NC081

Photo 7: Ditch on north side of Highway 16A. Looking east.

Photo 8: Upslope from previous location of exposed Telus cable. Looking northwest.



LEGEND

- SLOPE INCLINOMETER
- DIRECTION AND NUMBER OF PHOTO
- CROSS SECTION LOCATION

NOTES :

1. FEATURE LOCATIONS ARE APPROXIMATE.
2. PREVIOUS OBSERVATIONS SHOWN IN BLUE
3. *2022 OBSERVATIONS SHOWN IN RED*

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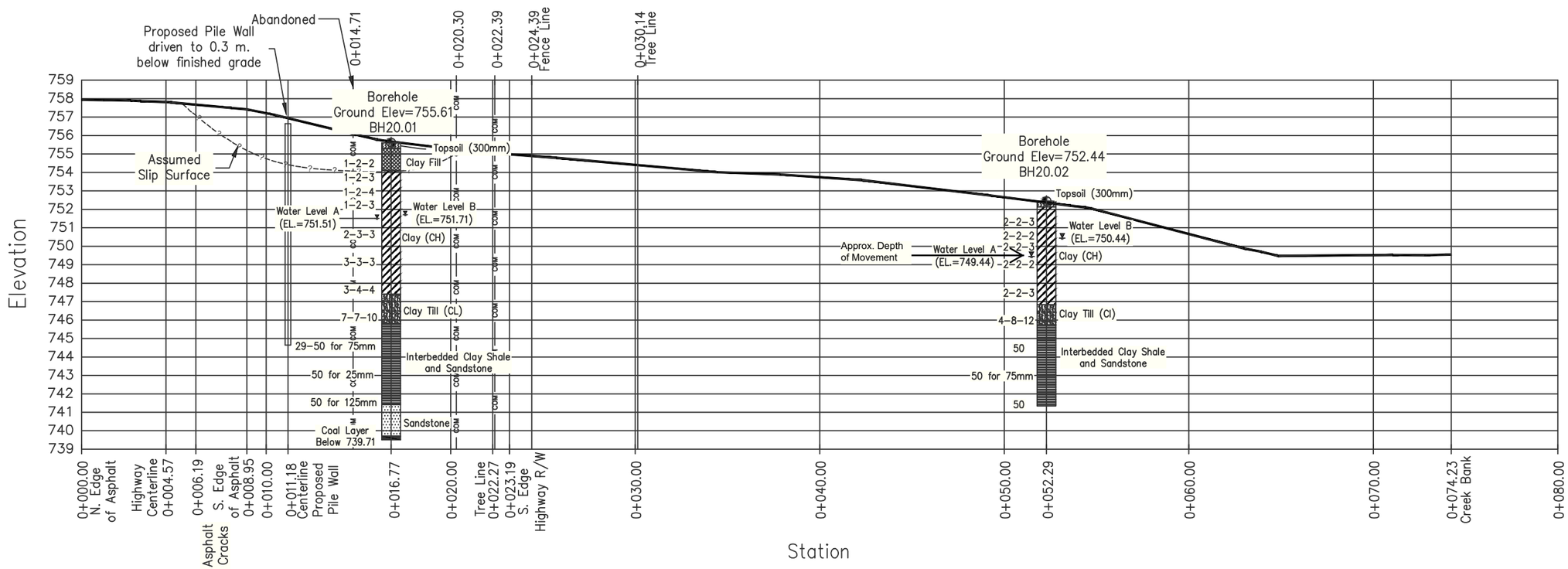
ALBERTA TRANSPORTATION
GEOHAZARD MONITORING PROGRAM
NC81 EVANSBURG SLIDE
SITE PLAN

DRAWN KE	CHECK XL	APPROVE LC
DATE 04 OCT 2022	SCALE AS SHOWN	PROJECT # 123315222

FIGURE - 1 -



CROSS–SECTION A

1: 250

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ALBERTA TRANSPORTATION
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CROSS SECTION

DRAWN ML	CHECK XL	APPROVE LC
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FIGURE - 2 -