

SITE NUMBER AND NAME: NC079 – Wedgewood Ravine Slides	HIGHWAY AND KM: 216:06, km 12.849	PREVIOUS INSPECTION: June 20, 2024	CURRENT INSPECTION: May 21, 2025
LEGAL DESCRIPTION: SE 28-52-25-W4	NAD83 COORDINATES: UTM12U 5927932N, 324250E		RISK ASSESSMENT: PF: 7 CF: 10 Total: 70
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 86,620 (2024)		CONTRACTOR MAINTENANCE AREA (CMA): Anthony Henday Drive (AHD)	

SUMMARY OF INSTRUMENTATION: One slope inclinometer, installed during AHD Widening works, operational. LAST READING DATE: May 9, 2025	INSPECTED BY: Stantec: Leslie Cho, Sonja Pharand TEC: Kristen Tappenden, Sib Phulpoto
PRIMARY SITE ISSUE: Two slope failures south of the northwest approach of Anthony Henday Drive (AHD). Erosion above both outfalls north of AHD crossing over Wedgewood Creek. Slope failure below concrete pedestal for AHD northbound on east slope of Wedgewood Creek.	
APPROXIMATE DIMENSIONS: North slide: Approximately 12 m wide by 6 m high South Slide: Approximately 9.5 m wide by 4 m high with several successive scarps up to 3 m high.	
DATE OF ANY REMEDIAL ACTION: Riprap extended south under southbound lane (SBL) in Fall 2020 / Spring 2021. Summer/Fall 2022: two slope failures south of the northwest approach of AHD were repaired using soil nails. 2022/2023: Collector drain installed at toe of soil nailed slopes. 2023: The slope failure below the northernmost pedestal on the east bank was repaired by removing the slumped mass in a benched configuration and replacing with angular Class 1 riprap.	

ITEM	CONDITIONS EXIST		DESCRIPTION AND LOCATION	NOTICEABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress		X			X
Slope Movement	X		Slumping in between concrete pedestals on west slope.		X
Erosion	X		Erosion behind both outfalls and along footpath.	X	
Seepage	X		2 m from southeast edge of riprap and 10 m northeast from new riprap edge (previous observations)		X
Bridge/Culvert Distress	X		Both outfalls are separated with water flowing under/around pipe. Settlement at northeast corner of the northern most pedestal.		X

COMMENTS <ul style="list-style-type: none"> The repaired slopes near the northwest approach of AHD were well vegetated, and no significant erosion was observed. A steel half-culvert collector drain is present downslope to catch runoff and debris, and deposit the water into Wedgewood Creek (Photos 1 & 2). The crest of the regraded slope is approximately 2.8 m south from SI20-01 and 3.3 m south from SI20-02 (Figure 1). Garbage and sediment was observed within the half-culvert collector drain below the slope repair, similar to the previous inspection (Photos 1 & 2).

- Wedgewood Creek's water level was moderate at time of inspection likely due to spring runoff and recent wet weather.
- Erosion rills were observed on the slope near the southwest end of the footpath near the northwest abutment for the SBL. Ponded water was observed on the footpath (Photo 3).
- An erosion gully was observed across the trail, northwest of the previous erosion/slumping at the north corner of the riprap below the southbound lane. The gully is approximately 0.3 m wide, 1.2 m long and up to 30 mm deep, wider yet shallower from observations in 2023 and 2024 suggesting possible infilling with sand and sediment.
- Erosion was observed on the footpath on the west slope (Photo 4), between the southwest and northwest bridge abutments, below an erosion gully located on the slope above the footpath.
- Erosion rills were observed on a bare slope on the north corner below the northbound lane abutment down to the footpath. In 2023 and 2024, erosion gullies were present but have possibly been filled with sediment leading to the current state (Photo 5).
- Erosion was observed behind both outfalls located on the west and east sides of Wedgewood Creek north of AHD (Photos 6, 7 & 8). Erosion above west outfall appears to be similar to 2024. Due to the slippery conditions of the slope, Stantec was not able to observe the condition of the outfalls closely.
- It is surmised that water is flowing out of the separated pipe upslope from the west outfall and eroding the west creekbank. A small channel is still present from the outfall to the creek due to erosion, and appears similar to 2024.
- The condition of the east outfall looked similar to the previous inspection (Photo 8). The separation in the pipe behind the outfall could not be measured, but was previously 270 mm in 2024.
- The gap (fill settlement) at the northeast corner of the northernmost pedestal increased from 240 mm in 2024 to 250 mm.
- The two slumps on the west slope between the concrete piers appear relatively unchanged since 2022. The scarp of the north slump was measured to be 0.7 m away from the concrete pedestal (Photo 9).
- The erosion mat below the north pedestal on the west bank is exposed, but appears similar to previous inspections.
- The slope failure repair below the northernmost pedestal on the east bank appears to be in good condition. A portion of the repaired slope to the south of the riprap remains largely unvegetated (Photo 10).
- The vegetation on the east bank below the AHD southbound pedestal appears to be dead, similar to previous inspections (Photo 11).
- The slope inclinometer SI20-02 shows a current rate of movement of less than 1 mm/year at approximately 1.2 m and 4.2 m. SI20-01 was found blocked at 6 m during the Spring 2025 reading cycle.
- The Probability Factor for the site remains at 7 since two of the slope failures have been repaired while others (outfall area) appear relatively inactive at this time or active with perceptible movement rates. The primary concern at this site is now the erosion around the outfalls and distress to the outfall structures.

RECOMMENDATIONS

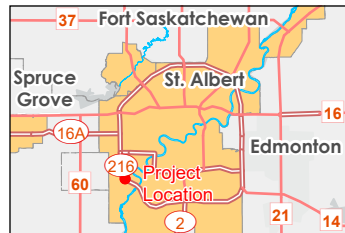
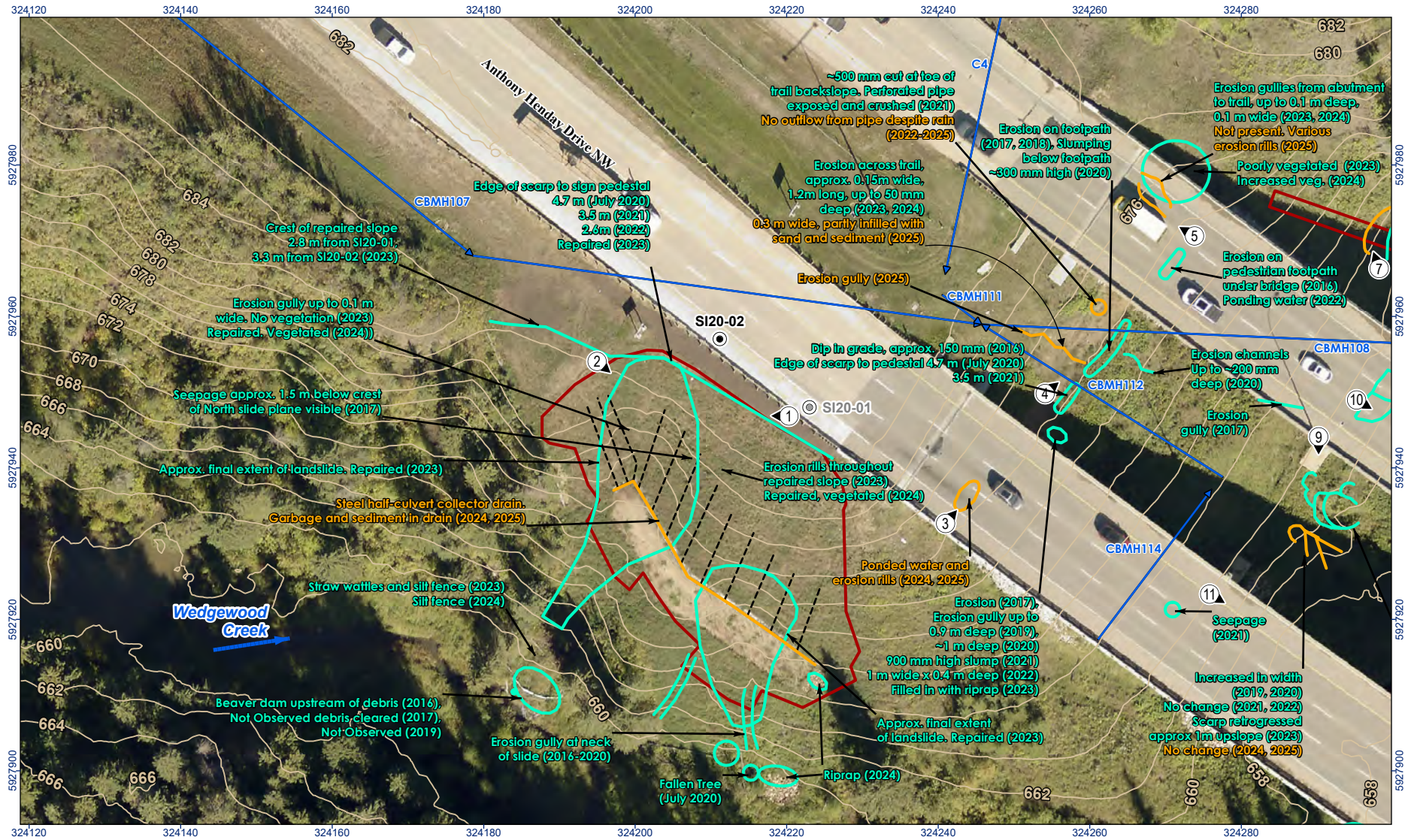
- The site should be regularly monitored by the MCI until remediation can be undertaken.
- A concrete trough may be considered upslope of the footpath to direct surface water towards the riprap instead of into existing erosion channels.
- Stantec submitted a tender package for outfall remediation consisting of replacing the disjointed and broken pipe segments with new pipe and regrading the surrounding slopes. The existing outfalls will be removed and replaced with an energy dissipater consisting of Class 2 riprap. Construction is understood to be scheduled for 2026. Given the time between design and construction, the design and tender package should be reviewed for feasibility and applicability against newer TEC specifications. The estimated cost for construction is approximately \$1,000,000 excluding engineering costs.
- Slope inclinometer readings should continue in the Spring and Fall.
- Site inspections should continue annually.



**NORTH CENTRAL REGION GRMP
EDSON / STONY PLAIN
SITE INSPECTION FORM**



PREPARED BY: Sonja Pharand, P.Eng.	REVIEWED BY: Leslie Cho, M.Eng., P.Eng.	PERMIT TO PRACTICE



- Approx. Construction / Remediation Limit
- Instrument Location
- Non-operational Instrument Location
- Photo and Direction
- Buried Pipe
- Perforated Drains
- Previous Observation
- 2025 Observation
- Ground Elevation Contours (m AMSL, LiDAR April-May 2018)



0 10 20 metres
(At original document size of 8.5x11)
1:750

- Notes**
1. Coordinate System: NAD 1983 CSRS UTM Zone 12N
 2. Base features: Geogatis, ©Department of Natural Resources Canada, All rights reserved.
 3. Imagery: City of Edmonton 2024.

Project Location
Edmonton,
Alberta

Client/Project
Transportation and Economic Corridors
Geohazard Monitoring Program
NC79 Wedgewood Ravine Slides

Figure No.
1

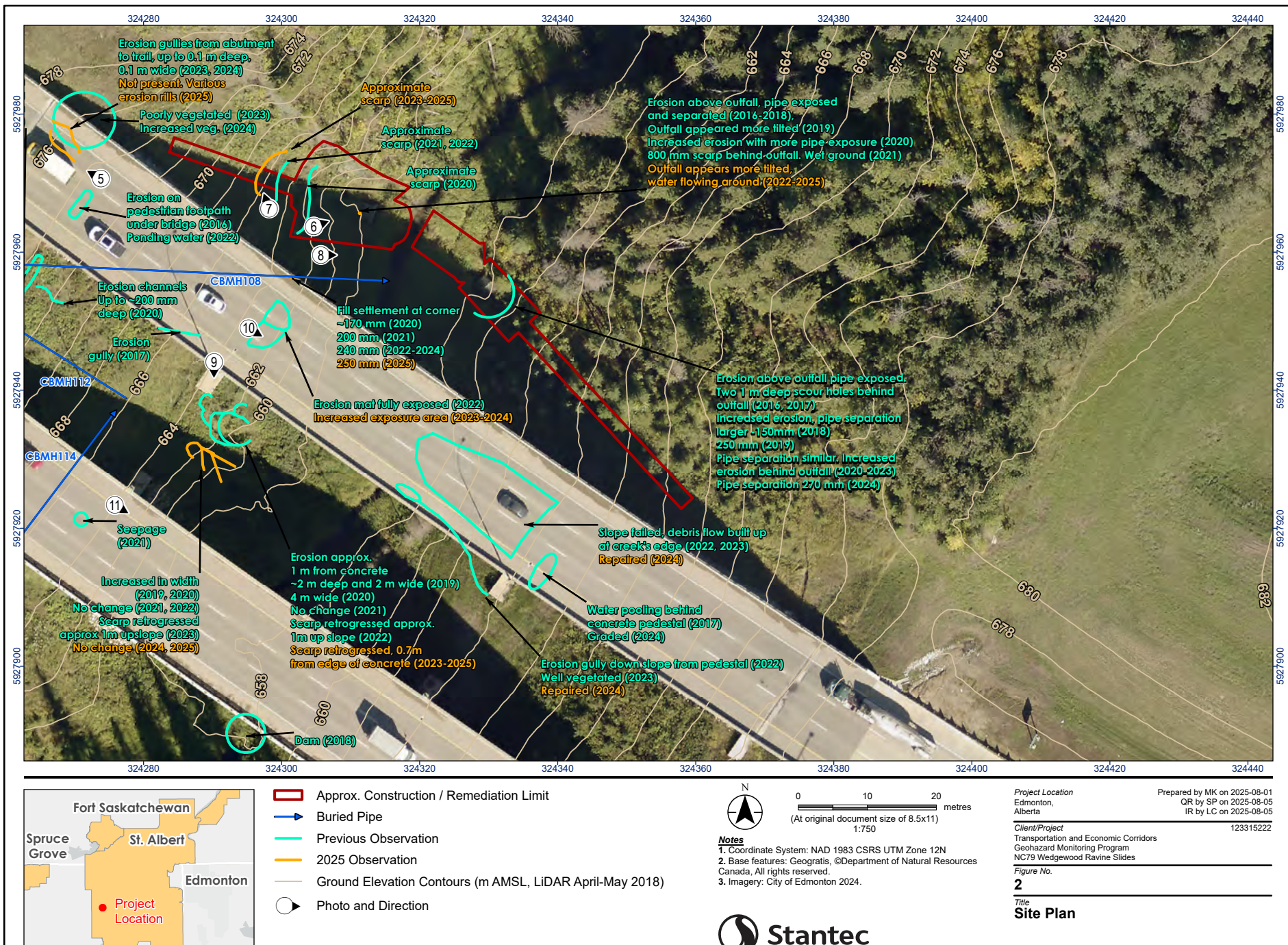
Title
Site Plan

Prepared by MK on 2025-08-01
QR by SP on 2025-08-05
IR by LC on 2025-08-05

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2025 Site Inspection Photos at NC079



Photo 1: Soil nailed slope at north and south slides. Looking west.



Photo 2: Soil nailed slope at north and south slide area, collector drain installed at toe of repaired slope. Looking southeast.

2025 Site Inspection Photos at NC079



Photo 3: Erosion and ponded water on footpath near NW abutment for SBL. Looking northeast.



Photo 4: Erosion gully on the footpath between the NW and SW abutments, partially infilled with sand and sediment. Looking northeast.

2025 Site Inspection Photos at NC079



Photo 5: Erosion at the north corner of NW abutment. Looking northwest.



Photo 6: Looking downslope on west slope, east of NBL towards west outfall. Facing northeast.

2025 Site Inspection Photos at NC079



Photo 7: Slide above west outfall. Looking northwest.



Photo 8: East outfall. Looking east.

2025 Site Inspection Photos at NC079



Photo 9: Eastern slump in middle of the west slope, between pedestals. Looking south.



Photo 10: Repaired slope failure on east bank below AHD northbound pedestal. Looking southeast.

2025 Site Inspection Photos at NC079



Photo 11: Dead vegetation on east bank below the AHD southbound pedestal. Looking southeast.