
To:	Amy Driessen	From:	Leslie Cho and Xiteng Liu
	Transportation and Economic Corridors		Stantec Consulting Ltd.
File:	123315222	Date:	June 18, 2024

Reference: North Central Region, Stony Plain, Site NC086 - Highway 39:06 Poplar Creek Slide, Spring 2024 Instrumentation Monitoring Report

1.0 OBSERVATIONS

1.1 FIELD PROGRAM AND INSTRUMENTATION STATUS

One slope inclinometer (SI18-01) was read during the Spring 2024 reading cycle. Figure-1 attached provides a site plan of NC086. The instrument was read by Andres Padros, Technician and Olawale Odusi, Geotechnical Technologist on May 16, 2024.

The SI was measured using an RST MEMS digital inclinometer probe with 0.5 m increments and handheld PC. Readings were taken based on cable markings in relation to the top of SI casing.

GPS coordinates of the instrument was obtained using a Garmin eTrex 22x handheld GPS unit.

2.0 INSTRUMENTATION READINGS

2.1 GENERAL

The SI plots are provided in the attachments and summarized in the following sections. Displacement-time plots along with movement rates, total cumulative movement, maximum movement rates, and incremental movements since initializing the SI are provided in Table NC086-1 and the attachments.

2.2 ZONES OF MOVEMENT

A potential zone of movement from 11.2 m to 15.2 m below ground level was observed in SI18-01 near the sandy clay and clay shale interface. Given the relatively small amount of cumulative movement (less than 1 mm), additional readings will be required to confirm movement.

2.3 MONITORING RESULTS

2.3.2 Slope Inclinometer

SI18-01 has recorded less than 1 mm of cumulative movement since initialization in 2018.

3.0 RECOMMENDATIONS AND REPAIRS

It is recommended that the SI be read in the Spring 2025 reading cycle.

No repairs are required at this site.

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Table NC086-1: Spring 2024 Slope Inclinometer Reading Summary

Instrument Name	Date Initialized	Coordinates ⁽¹⁾ (UTM 12N, NAD1983) (m)		Total Cumulative Resultant Movement and Depth of Movement to Date (mm)	Maximum Rate of Movement (mm/yr)	Current Status	Date of Previous Reading	Incremental Movement Since Previous Reading (mm)	Rate of Movement (mm/yr)	Change in Rate of Movement Since Previous Reading (mm/yr)
		Northing	Easting							
SI18-01	Sep. 11, 2018	5897673	648164	Less than 1 mm from 11.2 m to 15.2 m.	< 1.0	Operational	May 19, 2023	-<1	<1	<1
SI18-02	Feb. 16, 2017	-	-	Inoperable in Spring 2019						
Note: (1) Updated May 16, 2023, with approximate accuracy of ± 3 m.										

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4.0 CLOSING

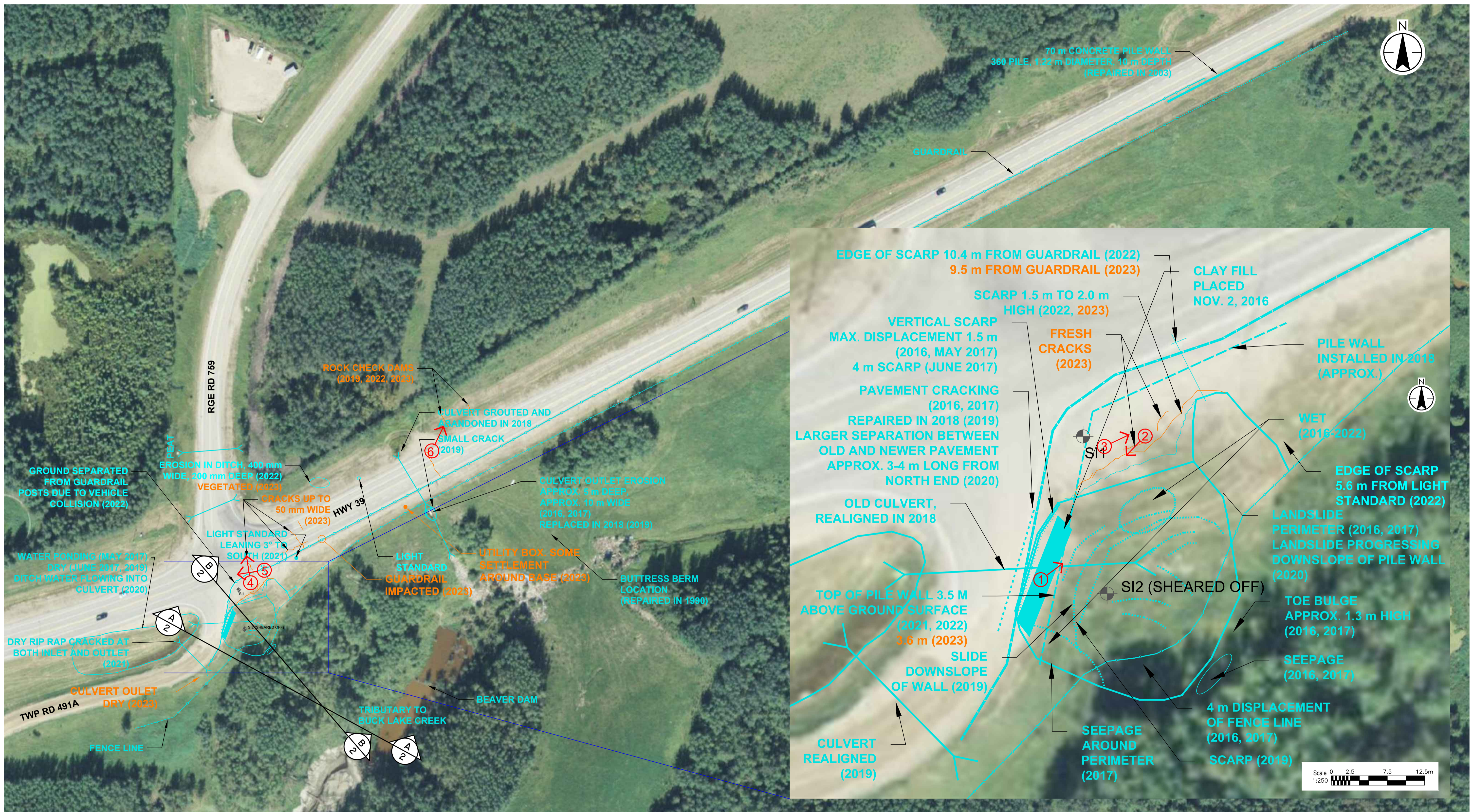
We trust this instrumentation report meets your requirements. If you have any questions, please do not hesitate to contact the undersigned.

Stantec Consulting Ltd.

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Attachment: Figure 1 – Site Plan
S118-01 Slope Inclinator Plots



NOTE
FEATURE LOCATIONS ARE APPROXIMATE

REFERENCE
2012 IMAGERY © 2016 VALTUS IMAGERY SERVICES

LEGEND

- CULVERT
- PREVIOUS OBSERVATION
- 2021 OBSERVATIONS
- INSTRUMENT LOCATION
- PHOTO NUMBER AND DIRECTION

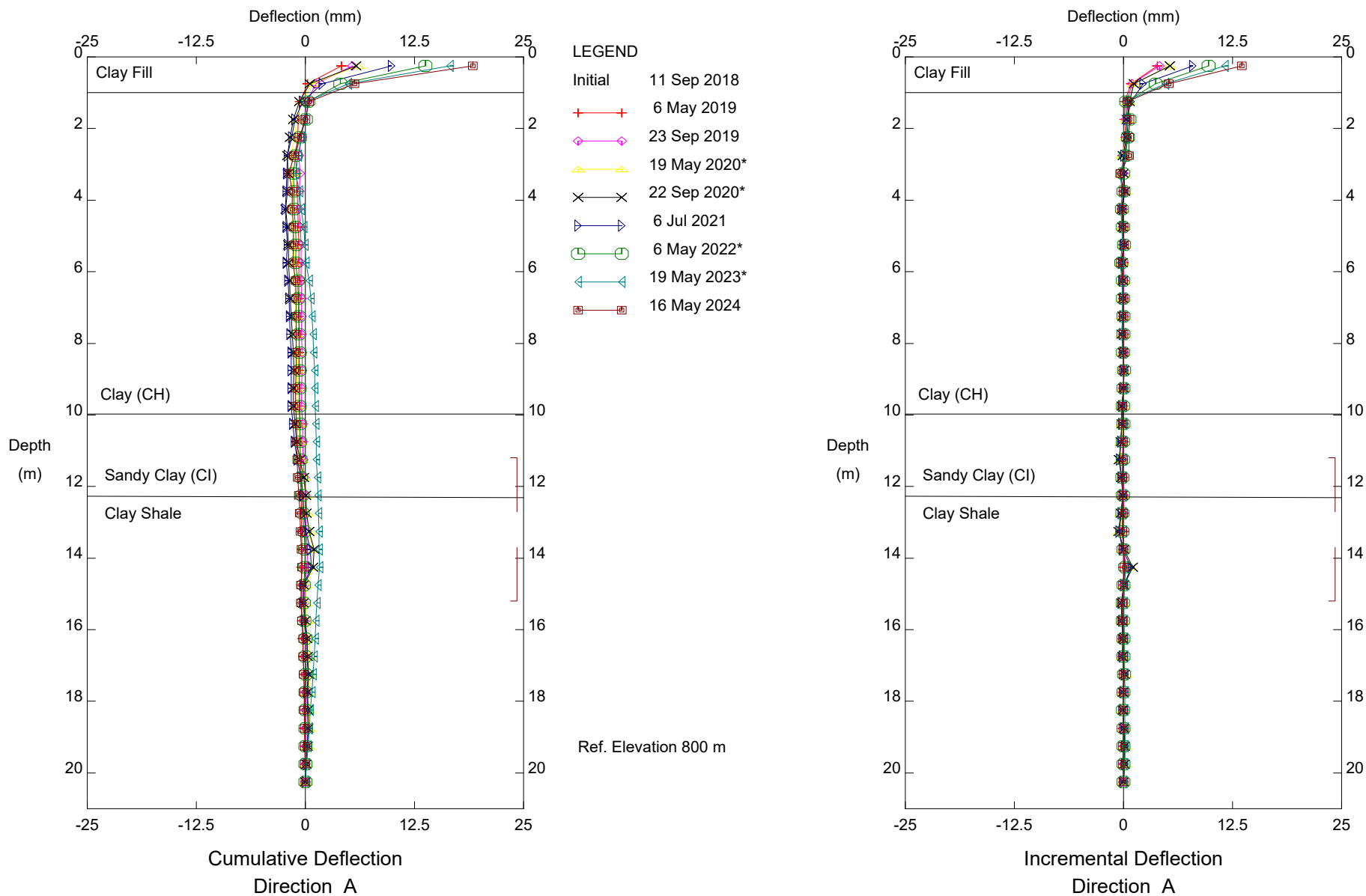


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TRANSPORTATION AND ECONOMIC CORRIDORS
GEOHAZARD MONITORING PROGRAM
NC86 HWY 39 AND TWP RD 491A - NEAR DRAYTON VALLEY
SITE PLAN

DRAWN KE	CHECK XL	APPROVE LC
DATE 25 JULY 2023	SCALE AS SHOWN	PROJECT # 123315222

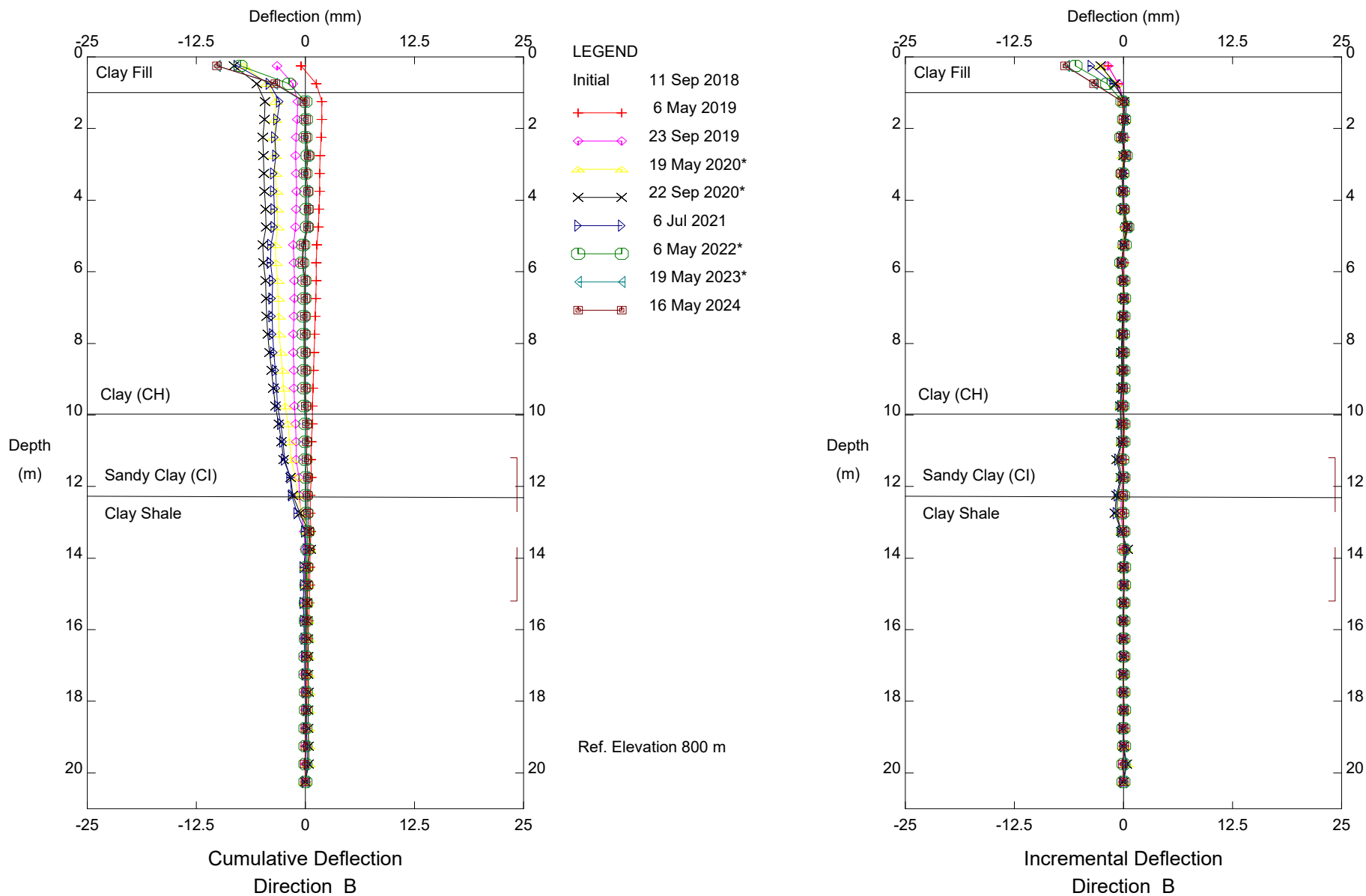
FIGURE -1



NC86, Inclinator SI18-01

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Sets marked * include zero shift and/or rotation corrections.

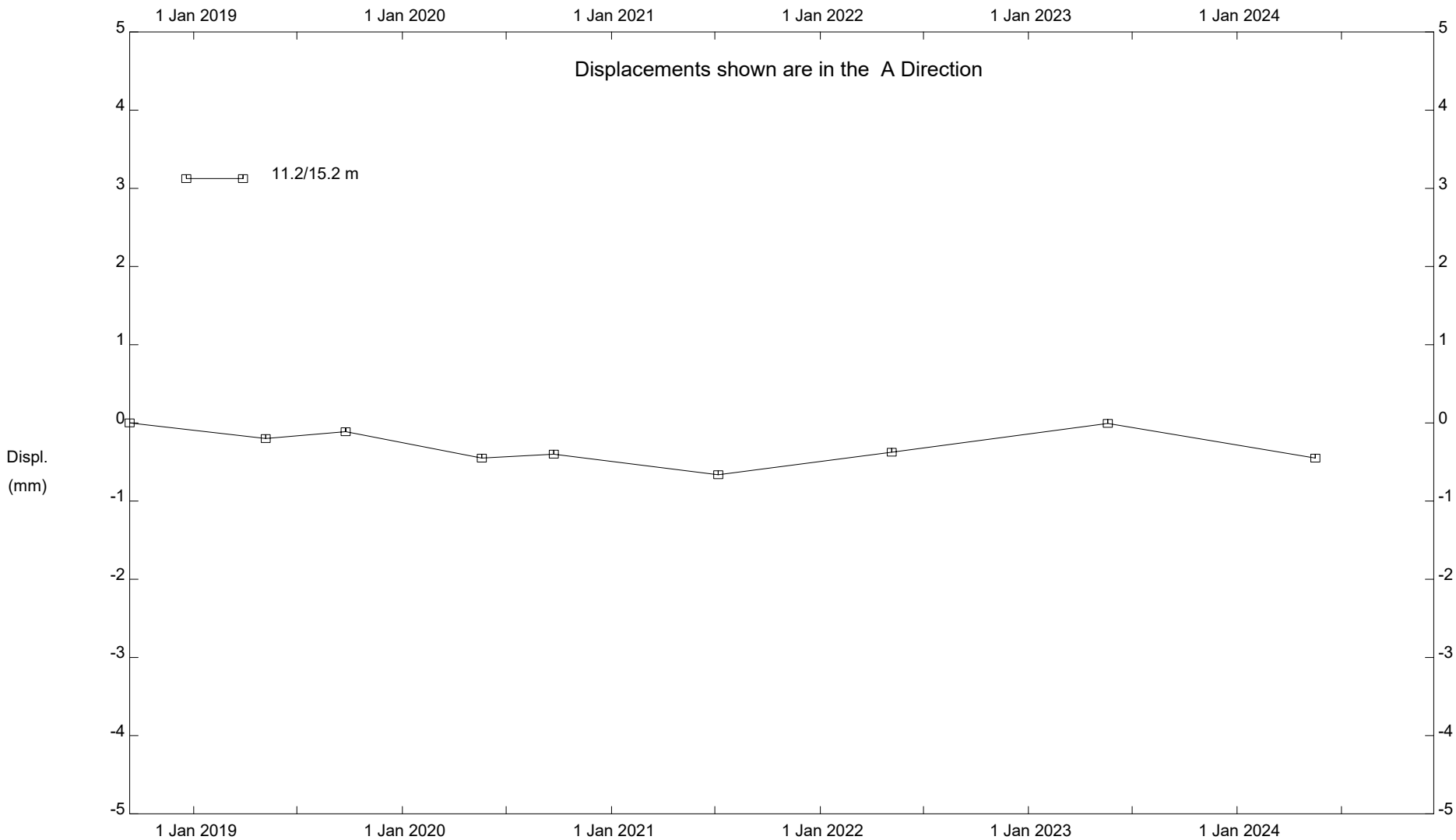


NC86, Inclinator SI18-01

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Sets marked * include zero shift and/or rotation corrections.

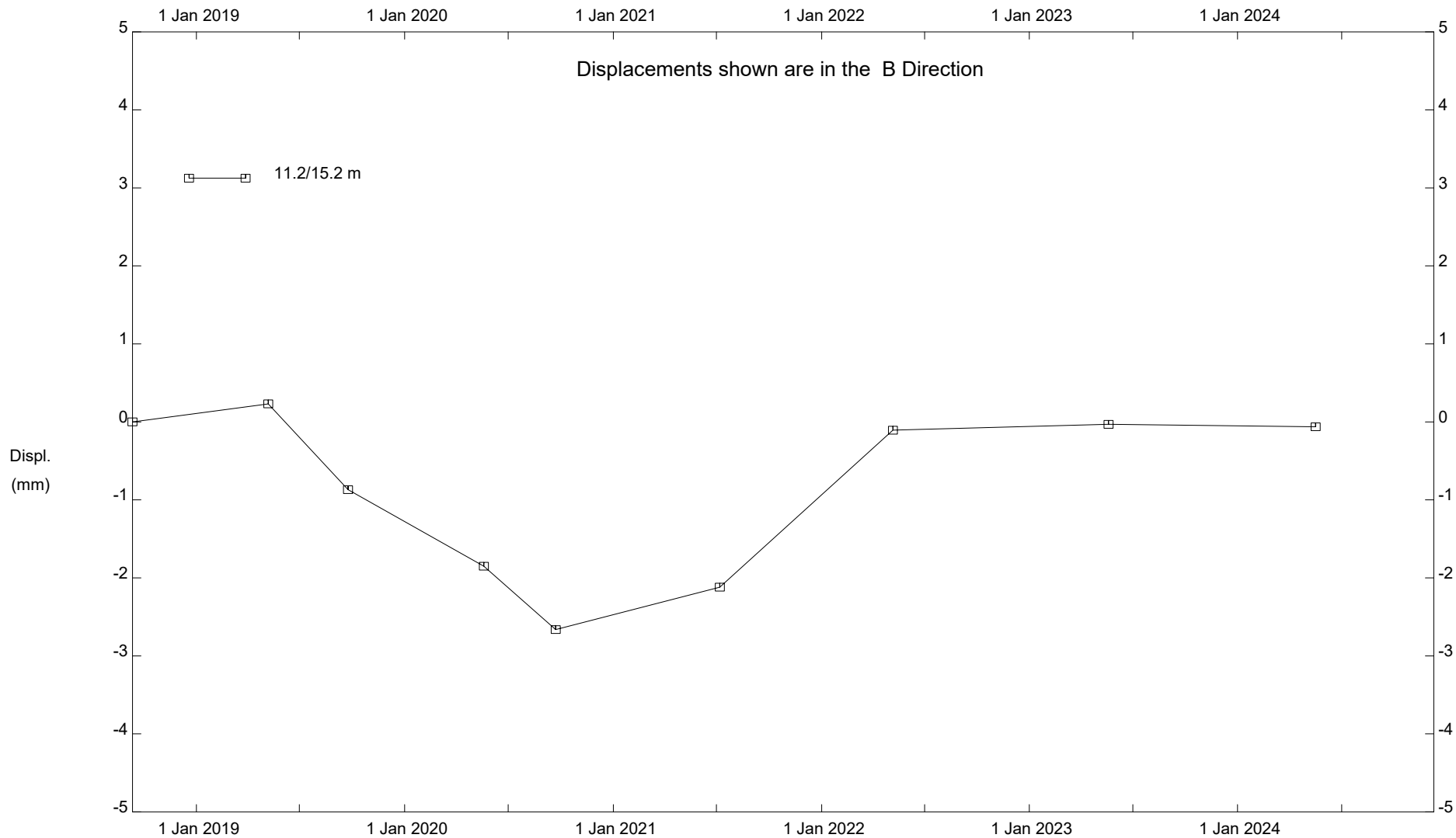
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