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To:	Amy Driessen	From:	Leslie Cho and Lawrence Onwude
	Transportation and Economic Corridors		Stantec Consulting Ltd.
File:	123315222	Date:	October 31, 2025

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**Reference: North Central Region, Edson/Stony Plain, Site NC011 – Highway 40:30 5.5 km North of Highway 16 (Near Hinton), Fall 2025 Instrumentation Monitoring Report**

## 1.0 OBSERVATIONS

### 1.1 FIELD PROGRAM AND INSTRUMENTATION STATUS

The Fall 2025 reading cycle consisted of instrument readings of two slope inclinometers (SI2 and SI22-01). **Figure 1** attached provides a schematic of the site. The instrument readings were taken by Akintola Fakinlede, GIT and Adham Zahr, Geotechnical EIT on October 2, 2025.

SI22-02 was damaged during construction in 2024 and was not readable.

The slope inclinometers (SI) were measured using an RST MEMS digital inclinometer probe with 0.5 m increments and RST handheld PC.

GPS coordinates of the instruments were confirmed using a Garmin eTrex 10 handheld GPS unit.

## 2.0 INTERPRETATION

### 2.1 GENERAL

The SI plots are provided in the attachments and summarized in the following sections. Plots in both directions along with movement rates, total cumulative movement, maximum movement rates, and incremental movements are provided in **Table NC011-1** and the attachments.

### 2.2 ZONES OF MOVEMENT

No new zones of movement were observed in SI2 and SI22-01. Directions of movement are referenced to the azimuth of the “A+” groove in each SI casing in **Table NC011-1**.

### 2.3 INSTRUMENTATION READINGS

#### 2.3.1 Slope Inclinometers

SI22-01 was cut 2 m shorter due to construction for backslope flattening in April 2024. No discernible movement was observed in SI22-01. Some movement was observed in the upper 2 m of the casing and is likely due to ground frost effects and potentially due to ground disturbance from construction activities between 2021 and 2024. Movements observed at depths of about 2 m are likely not related to slope movement.

SI22-02 was damaged during backslope flattening during the Spring 2024 cycle.

October 31, 2025

Amy Driessen

Page 2 of 4

**Reference:** North Central Region, Edson/Stony Plain, Site NC011 – Highway 40:30 5.5 km North of Highway 16 (Near Hinton), Fall 2025 Instrumentation Monitoring Report

SI2 showed little incremental movement ( $< 1$  mm) since the last reading in May 2025. The current movement rate is less than 1 mm/yr.

### **3.0 RECOMMENDATIONS**

#### **3.1 FUTURE WORK**

SI22-01 may require reinitialization upon completion of construction. It is recommended that the next reading cycle take place in Spring 2026.

#### **3.2 INSTRUMENTATION REPAIRS**

Currently, no instruments require repair.

October 31, 2025

Amy Driessen

Page 3 of 4

Reference: North Central Region, Edson/Stony Plain, Site NC011 – Highway 40:30 5.5 km North of Highway 16 (Near Hinton), Fall 2025 Instrumentation Monitoring Report

**Table NC011-1: Fall 2025 Slope Inclinometer Reading Summary**

Instrument Name	Date Initialized	Coordinates <sup>(1)</sup> (UTM 11U, 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)	Current Rate of Movement (mm/yr)	Change in Rate of Movement Since Previous Reading (mm/yr) <sup>(2)</sup>
		Northing	Easting							
SI1	Oct 3, 1999	-	-	1 m over 11.4 m to 13.2 m depth in 342° direction (Fall 2015)	2.8 between May 2000 and Sept 2000	Non-operational	Oct. 1, 2015	Removed from reading cycle since Spring 2015.		
SI2	Oct 3, 1999	5914152	453047	20 mm over 4.5 m to 9.0 m depth in 17° direction	8.3 in October 2019	Operational	May 6, 2025	<-1	<1	<-1
SI4	Oct 3, 1999	-	-	No zone of movement observed since 2016		Non-operational	July 03, 2021	No zone of movement observed since 2016. Destroyed during construction in 2021/2022.		
SI22-01	Sept 8, 2022	5914413	453224	N/A		Operational	May 6, 2025	No discernible movement		
SI22-02	May 10, 2023	5914359	453246	N/A		Non-Operational	Sep 20, 2023	Damaged during construction in 2024		
<p>(1) Operational Instruments were updated October 2, 2025, with approximate accuracy of ± 3 m.</p> <p>(2) Negative (-) indicates decrease in rate of movement and/or change in direction of movement.</p>										

October 31, 2025

Amy Driessen

Page 4 of 4

**Reference:** North Central Region, Edson/Stony Plain, Site NC011 – Highway 40:30 5.5 km North of Highway 16 (Near Hinton), Fall 2025 Instrumentation Monitoring Report

## 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.**

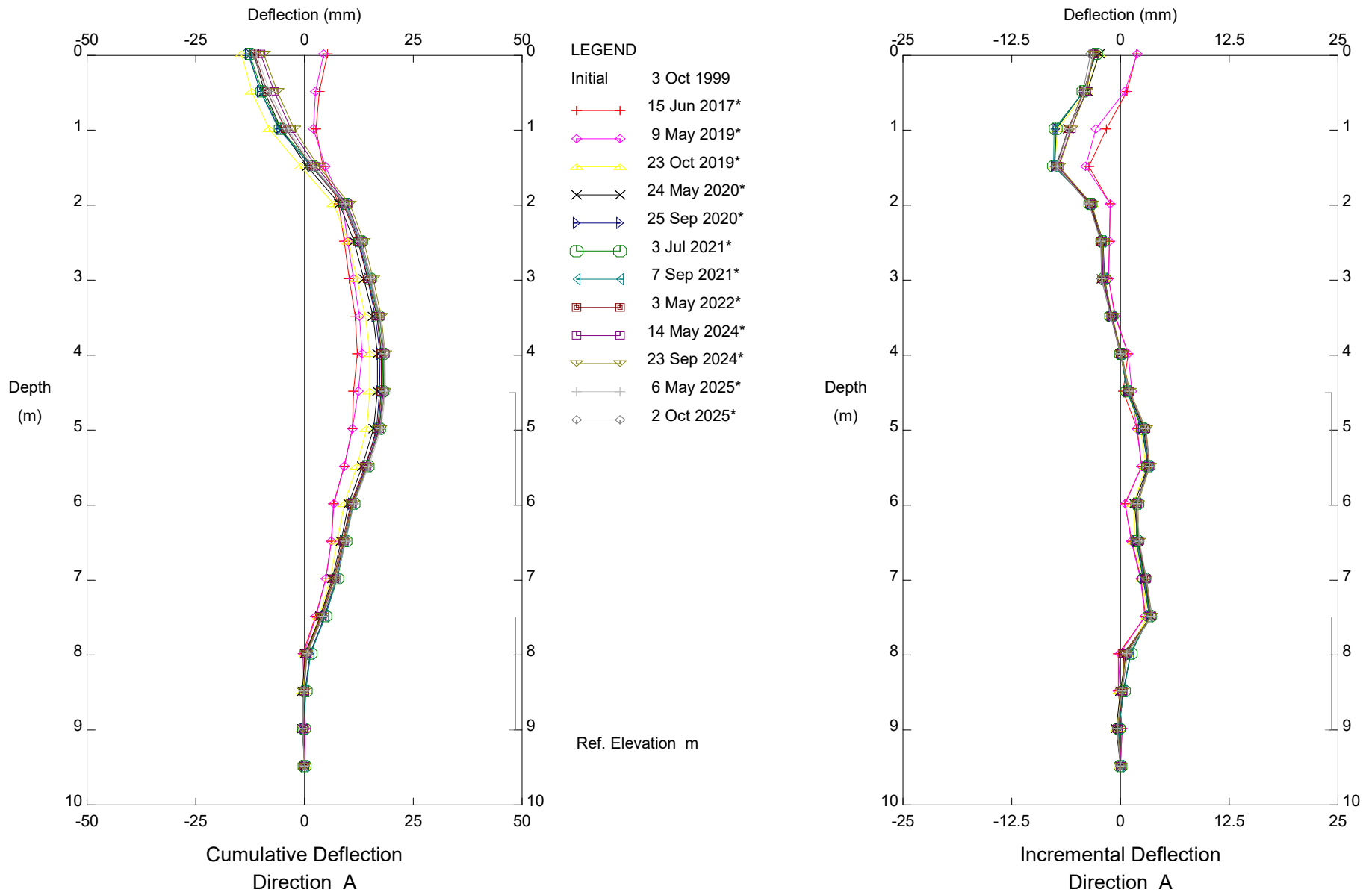
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Attachment: Figure 1 – Site Plan  
SI22-01 and SI2 Slope Inclinator Plots

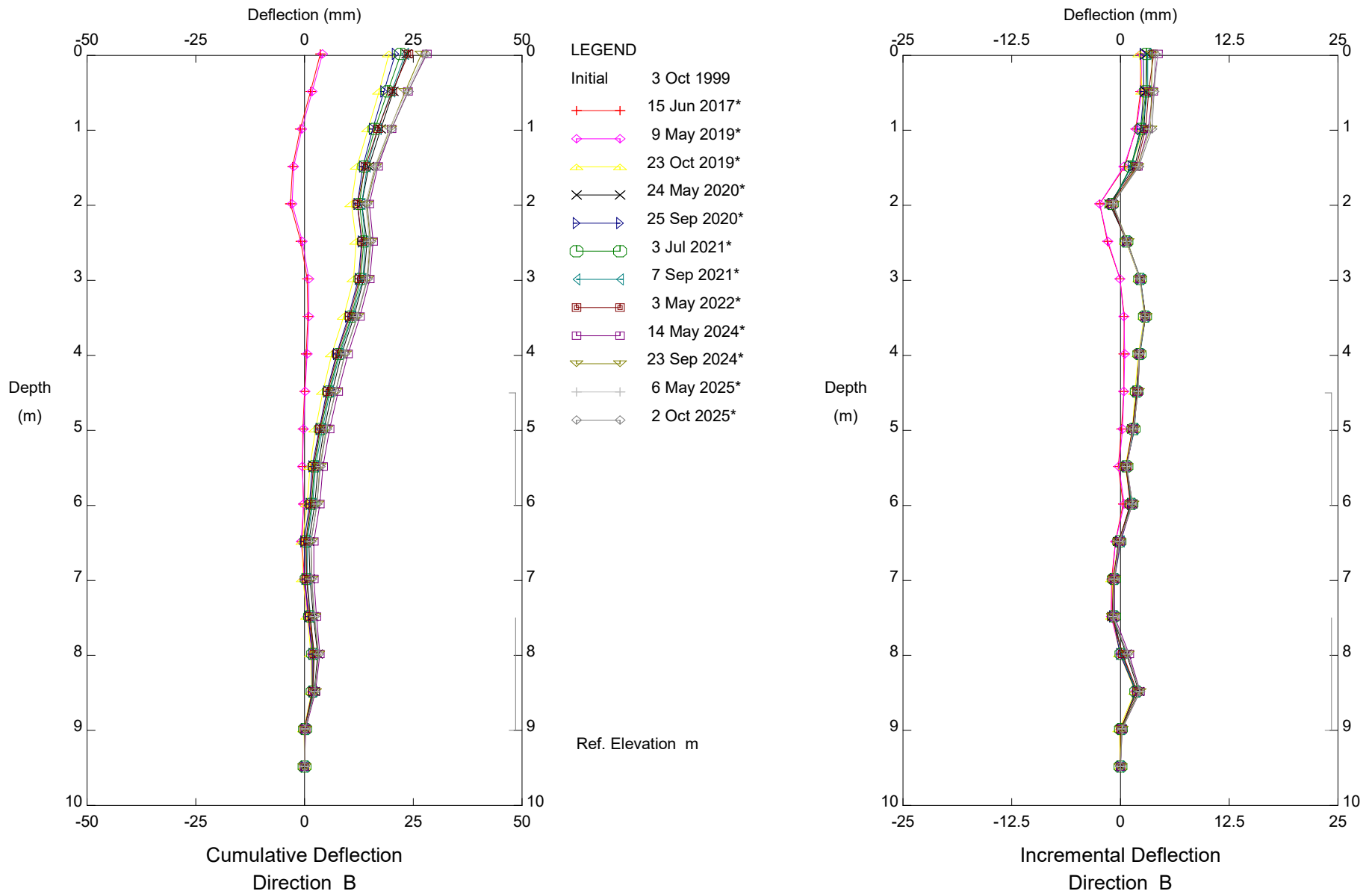


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Hwy 40:30, North of Hinton (NC11), Inclinometer SI2  
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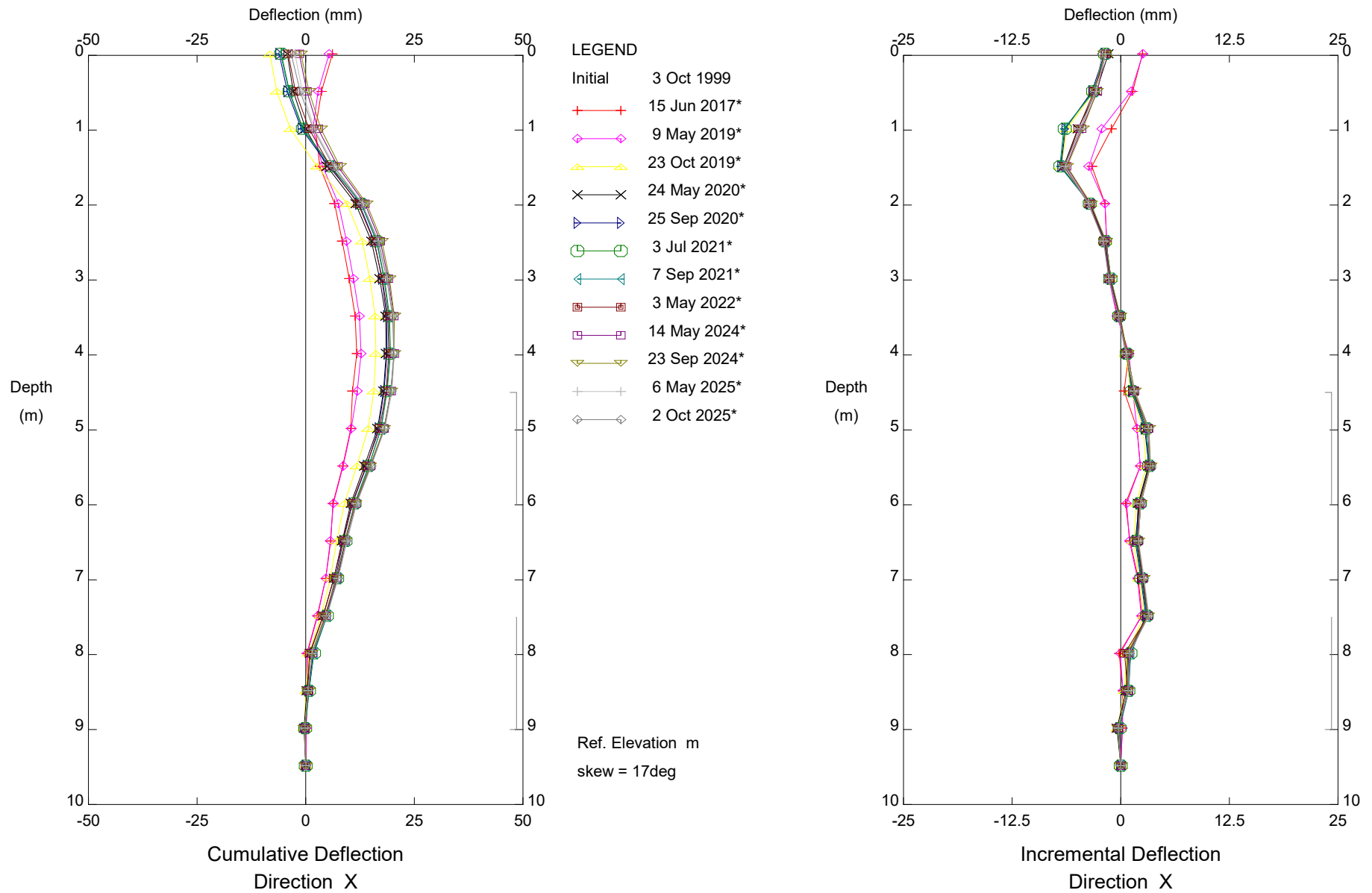
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Hwy 40:30, North of Hinton (NC11), Inclinometer SI2  
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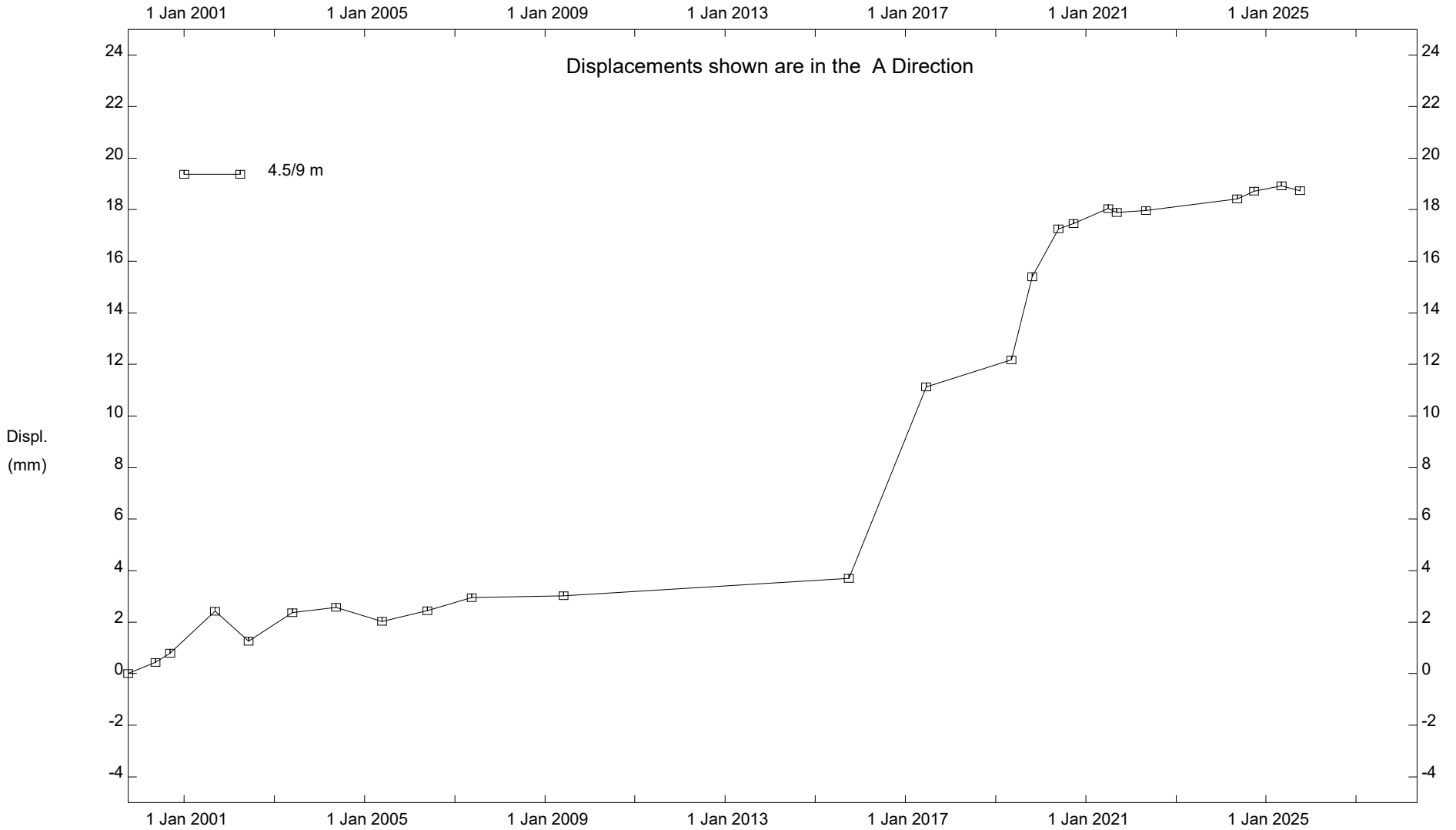


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Sets marked \* include zero shift and/or rotation corrections.

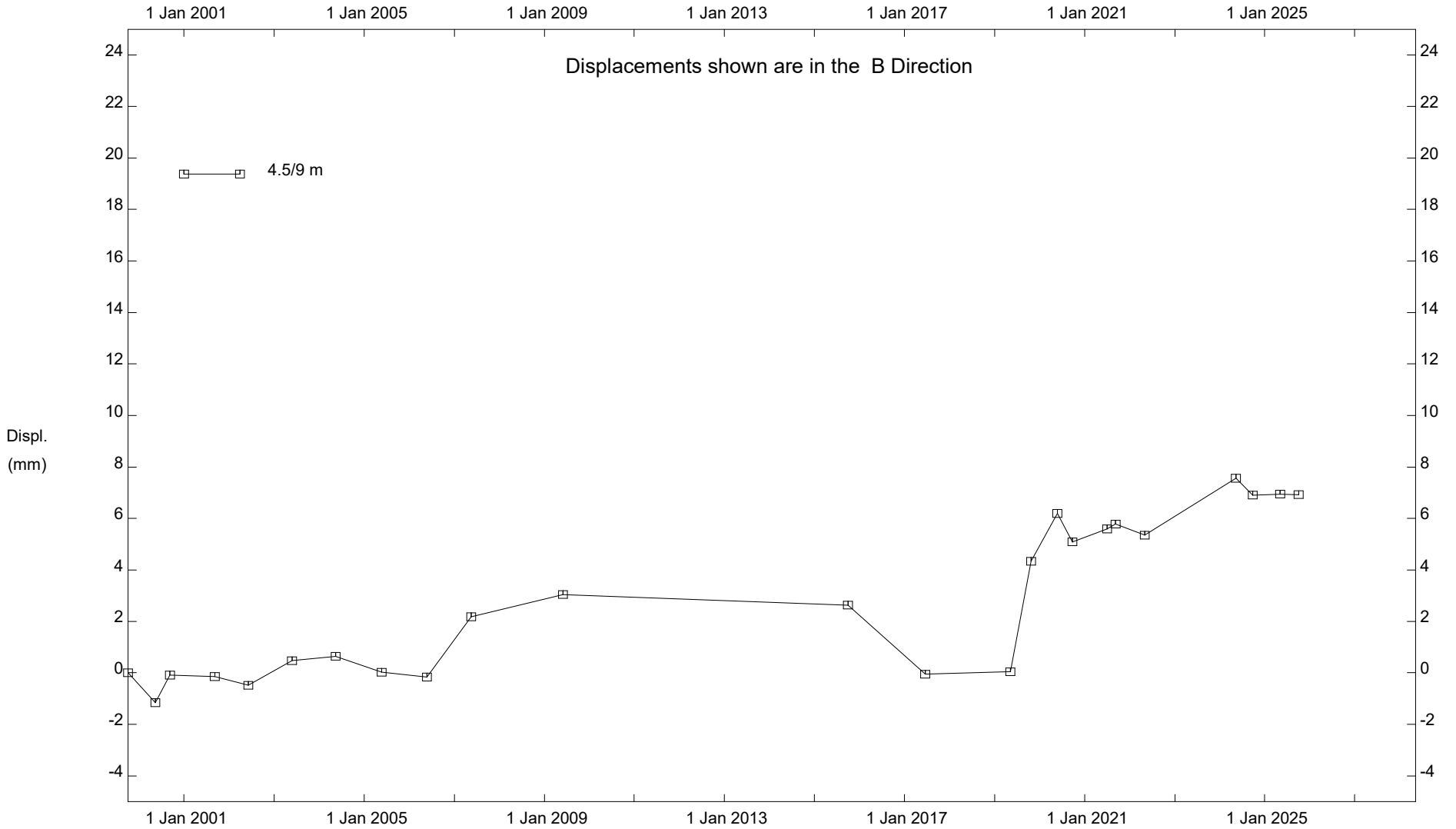
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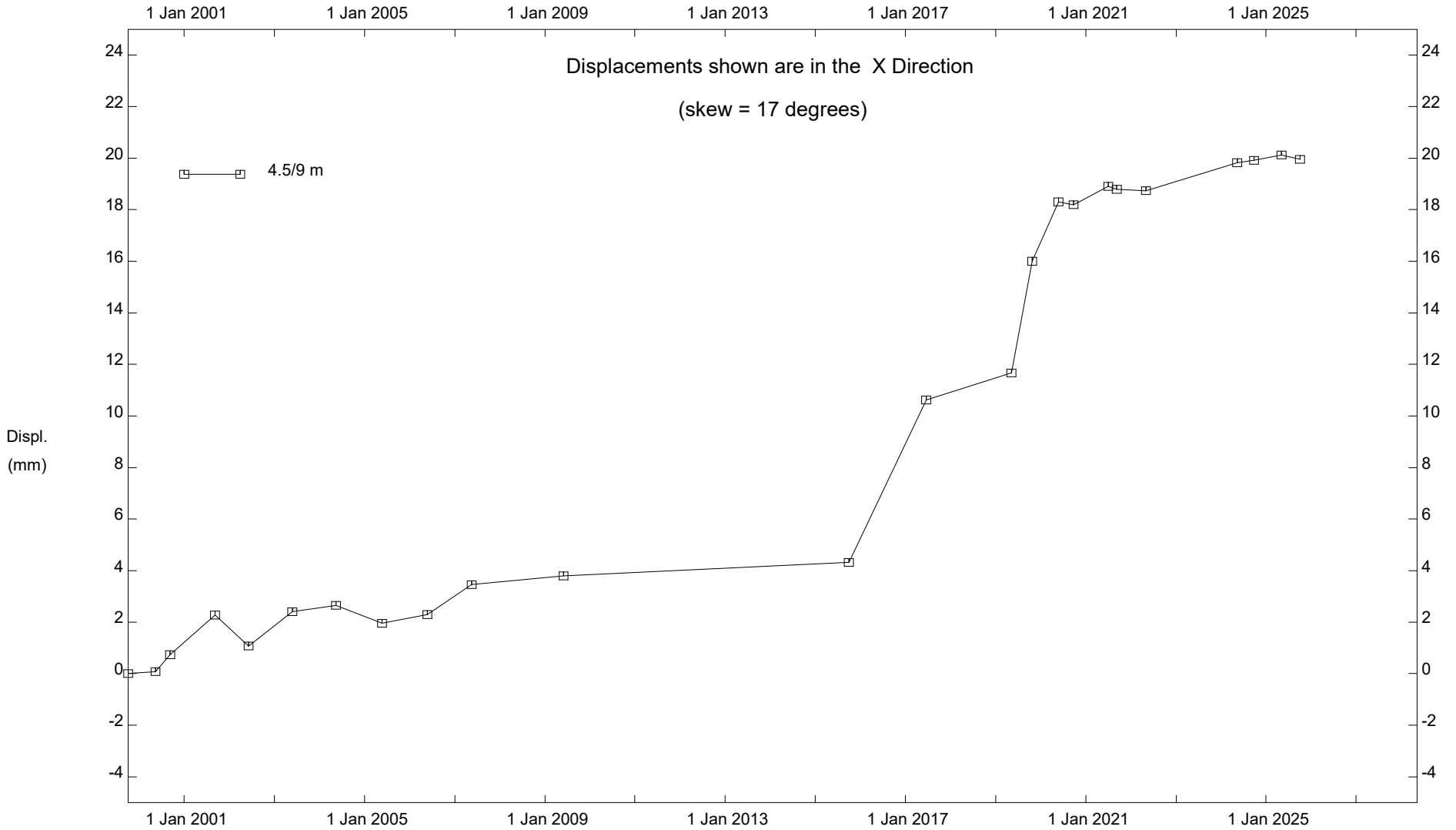
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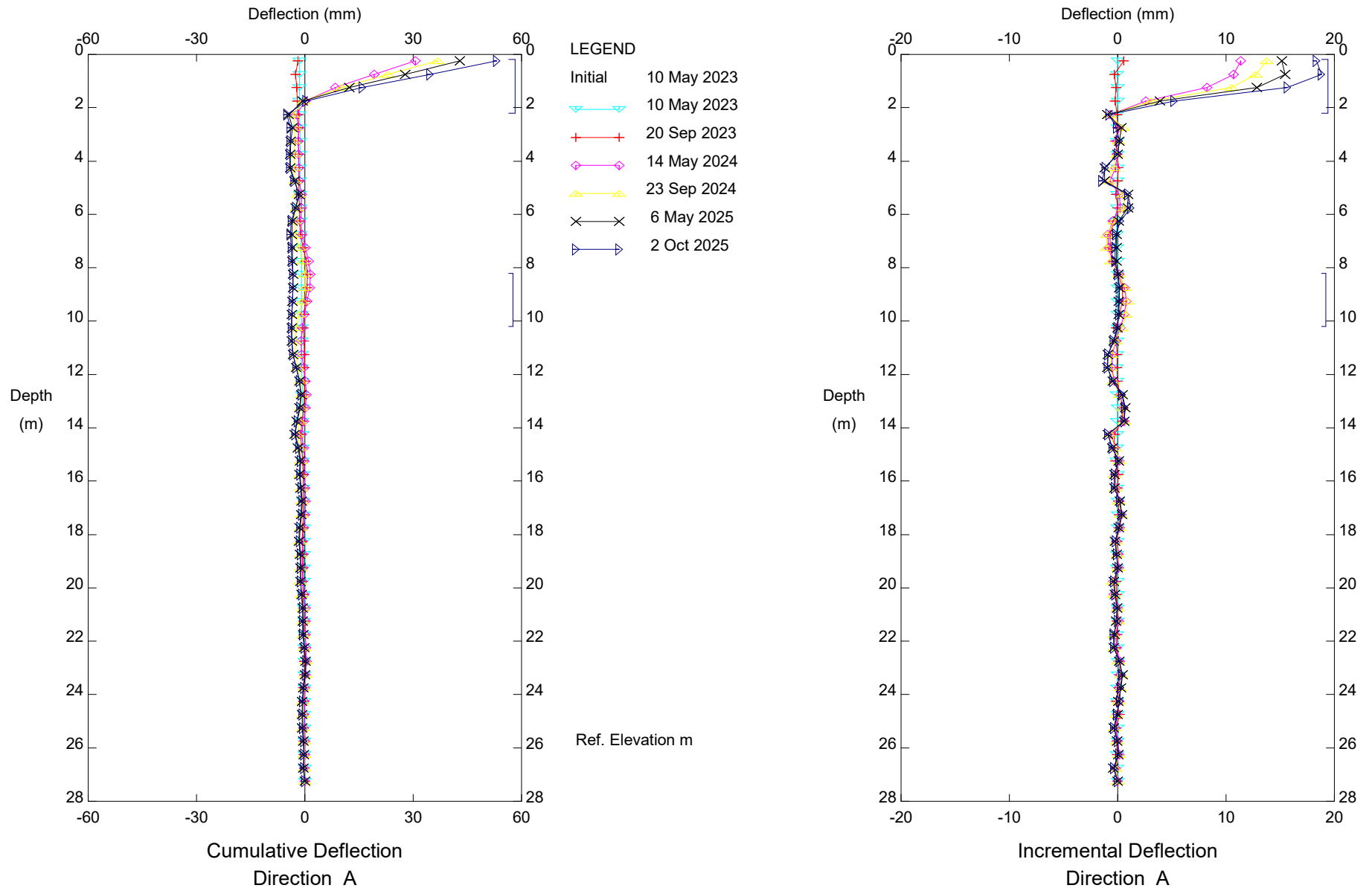
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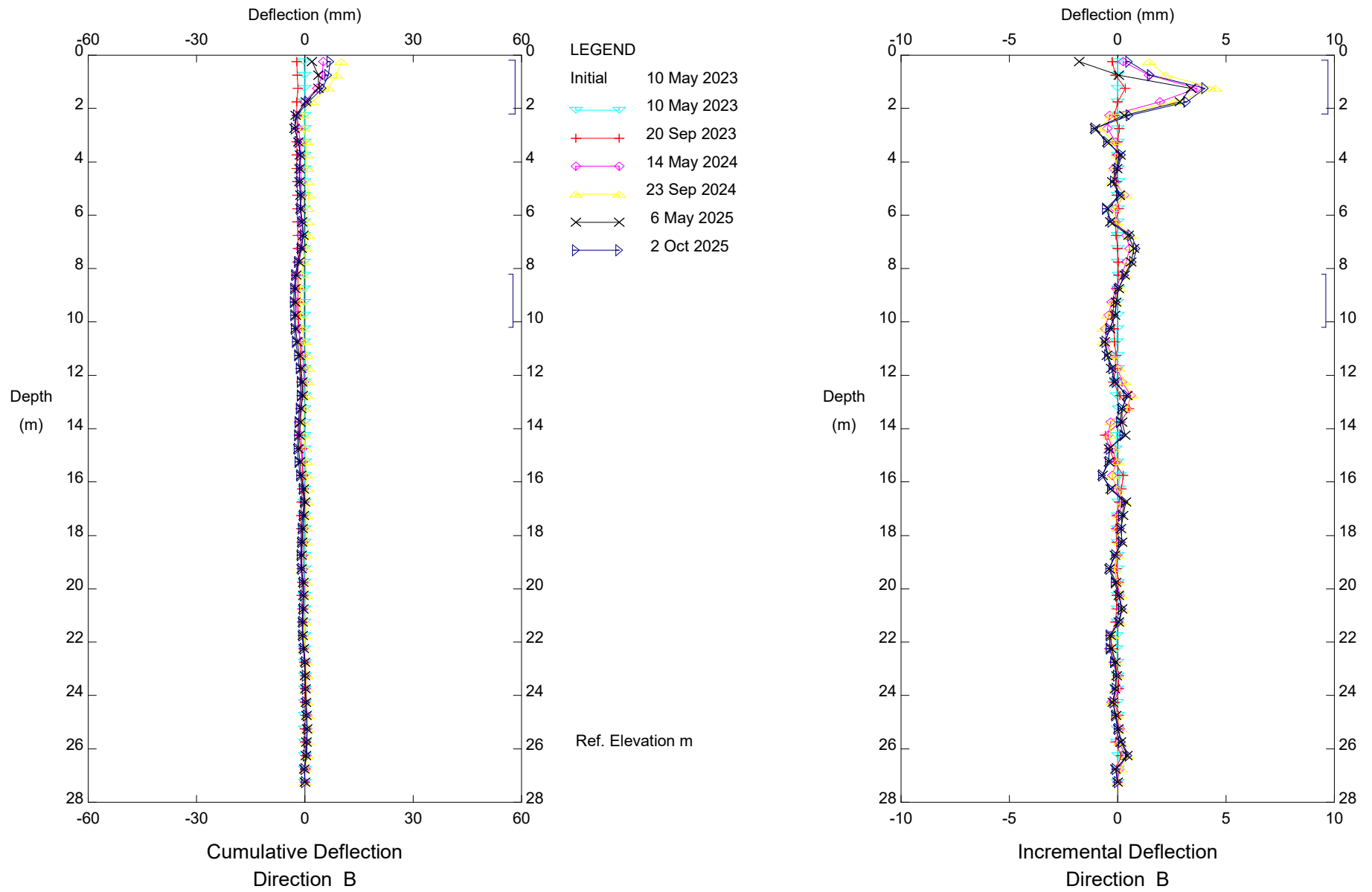


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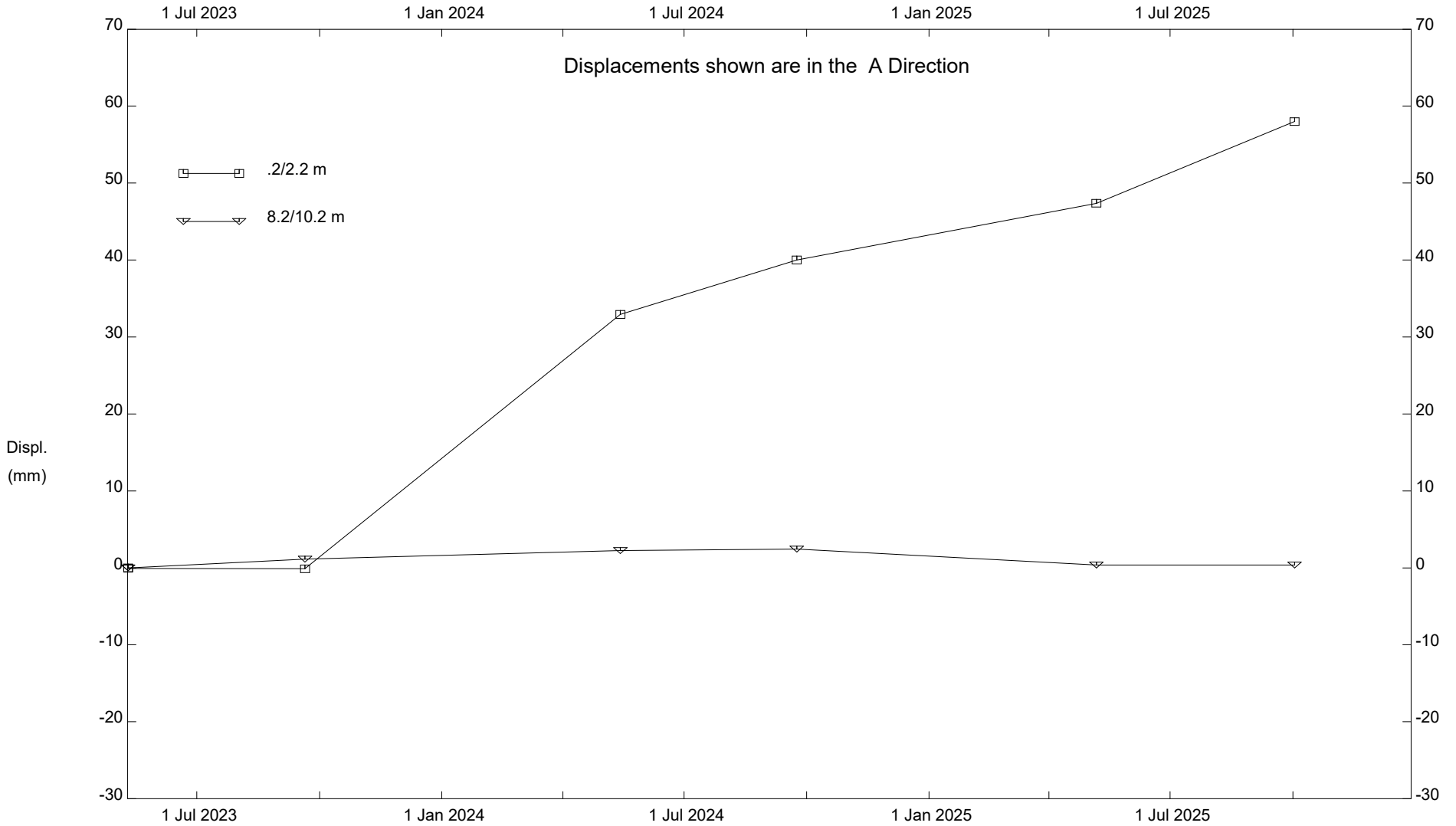


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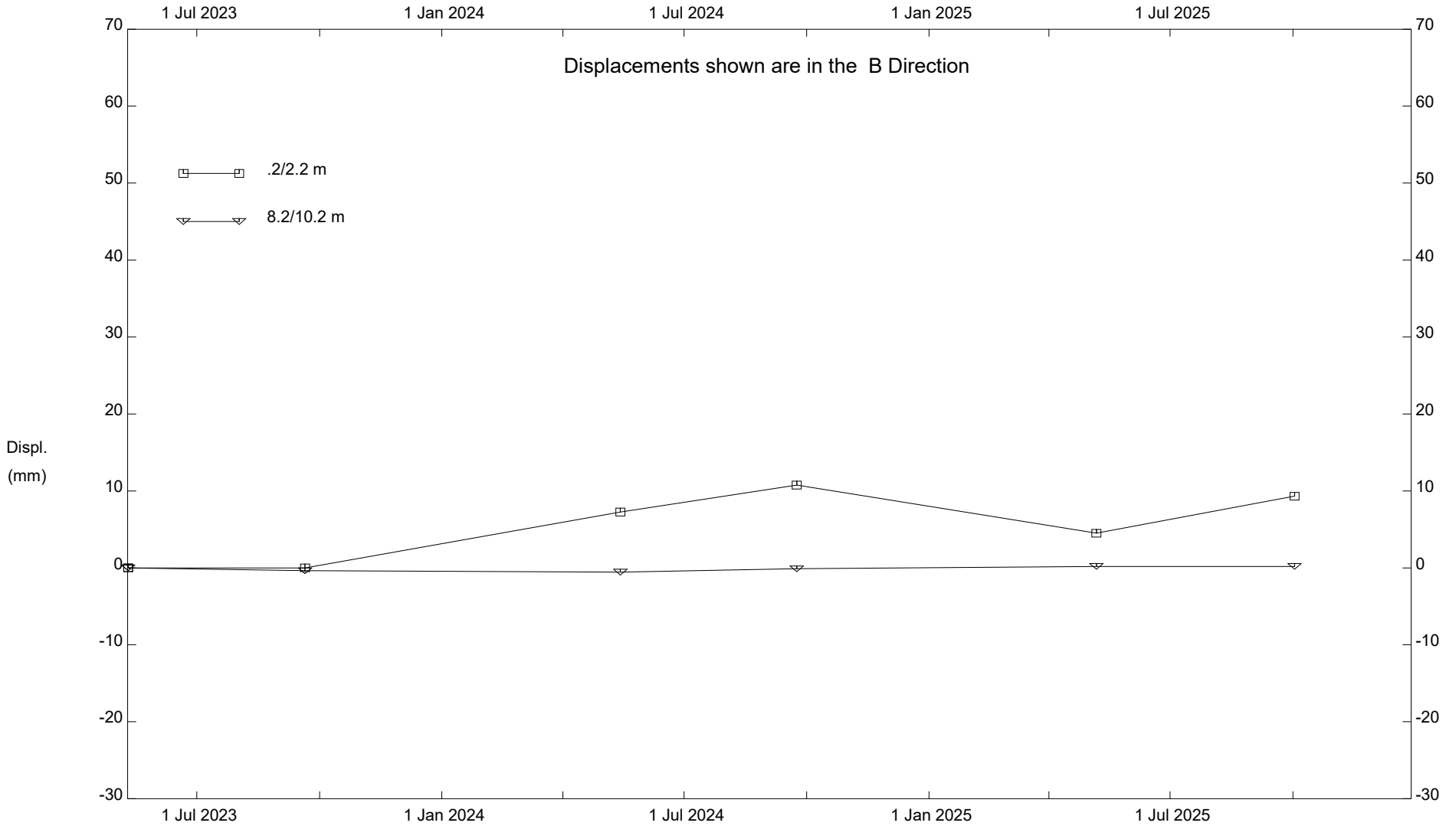
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