ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS GRMP
PEACE REGION
(GRANDE PRAIRIE DISTRICT - NORTH)
INSTRUMENTATION MONITORING - SPRING 2025

Site Number	Location	Name	Hwy	km
GP029	HWY 2:70 km 11.88	Church Camp Slide	2:70	Km 11.9
Legal Description:		**UTM Co-ordinates**		
16-4-77-5 W6		11U E 393096	N 6168377	

Current Monitoring:	17-Jun-2025	**Previous Monitoring**	25-Sep-2024
Instruments Read By:	Mr. Niraj Regmi, G.I.T. and Mr. Godfred Etiendem, of Thurber		

Instruments Read During This Site Visit			
Slope Inclinometers (SIs): SI-2, SI-3, and SI17-5	**Pneumatic Piezometers (PN):** PN-02, PN17-2A, PN17-2B, PN17-2C*, PN17-3B, PN17-3C, PN17-4A, PN17-5A and PN17-5B	**Vibration Wire Piezometers (VW):** N/A	**Standpipe Piezometers (SP):** N/A
Load Cell (LC): N/A	**Strain Gauges:** N/A	**SAAs:** N/A	**Others:** N/A

Readout Equipment Used			
Slope Inclinometers: RST Digital Inclinometer probe with a 2 ft. wheelbase and a RST Pocket PC readout	**Pneumatic Piezometers:** RST C108 pneumatic piezometer readout	**Vibration Wire Piezometers:** N/A	**Standpipe Piezometers:** N/A
Load Cell: N/A	**Strain Gauges:** N/A	**SAAs:** N/A	**Others:**N/A
Notes: *Pneumatic Piezometer PN17-2C malfunctioned two reading cycles in a row. PN17-4B and PN17-4C were found to be damaged and will need to be repaired to continue reading.			

Discussion	
Zones of New Movement:	None
Interpretation of Monitoring Results:	Slope inclinometer SI-2 showed a rate of movement of 0.9 mm/yr over 7.0 m to 8.8 m depth, and a rate of movement of 0.6 mm/yr over 33.8 m to 35.1 m depth since the fall of 2024 readings. Both zones of movement are very distinct and showed an increase in rate of movement since the previous readings. Of interest is the upper zone which has a movement vector skew angle of 36 degrees and the lower zone has a skew angle of 3 degrees. SI-3 has four known zones of movement. From top to bottom the movement rates since the fall of 2024 readings are: 0.9 mm/yr over 5.2 m to 7.0 m depth; no discernible movement over 9.4 m to 10.6 m depth; no discernible movement over 13.1 m to 14.3 m depth, and; less than 0.1 mm/yr over 18.0 m to 19.2 m depth. The cumulative movements are: 43.9 mm over 5.2 m to 7.0 m depth; 12.6 mm over 9.4 m to 10.6 m depth; 3.1 mm over 13.1 m to 14.3 m depth, and; 4.8 mm over 18.0 m to 19.2 m depth. The multitude of movement zones is indicative of the complexity of the slide at this site.

	SI17-5 has shown no discernible movement since initialization as it is located on the opposite side of the highway just outside of the landslide influence zone. Pneumatic piezometers PN-02, PN17-2A, PN17-3B, PN17-3C, and PN17-4A showed increases in groundwater level of 0.49 m, 0.07 m, 0.28 m, 0.50 m, and 0.42 m, respectively, since the fall of 2024 readings. PN17-3C is currently showing significant above-ground (artesian) groundwater levels of 9.32 m. PN17-2B, PN17-5A, and PN17-5B showed decreases in groundwater level of 0.14 m, 0.35 m, and 0.35 m, respectively, since the fall of 2024 readings. Overall, the piezometers are generally showing groundwater levels in line with historic groundwater level readings at the site.
Future Work:	The road realignment work to bypass the landslide impacted area was completed this summer; therefore, there is no need to read these instruments anymore. However, the site inspection should still proceed for next year, when a decision should be made if further site inspection will still be needed. If TEC decide to read the instruments still, the following remarks should be noted. PN17-2C has malfunctioned for two reading cycles in a row and should be removed from future readings.
Instrumentation Repairs:	An attempt should be made to repair PN17-4B and PN17-4C by hand during the fall 2025 readings so readings can resume.
Additional Comments:	

Attachments:	• Table GP029-1 Spring 2025 – HWY 2:70 Church Slide, Slope Inclinometer Instrumentation Reading Summary
	• Table GP029-2 Spring 2025 – HWY 2:70 Church Slide, Pneumatic Piezometer Instrumentation Reading Summary
	• Table GP029-3 Spring 2025 – HWY 2:70 Church Slide, Standpipe Piezometer Instrumentation Reading Summary
	• Statement for Use and Interpretation of Report
	• APPENDIX A – GP029-1 SPRING 2025
	  o Field Inspector's report
	  o Site Plan Showing Approximate Instrument Locations (Drawing No. 32123-GP029)
	  o SI Reading Plots
	  o Figure GP029-1 (Piezometric Elevations)
	  o Figure GP029-2 (Piezometric Depths)

We trust this report meets your requirements at present. If you have any questions, please contact the undersigned at your convenience.

Yours very truly,
Thurber Engineering Ltd.
Renato Clementino, Ph.D., P. Eng.
Principal | Senior Geotechnical Engineer

July 13, 2025

PERMIT TO PRACTICE
THURBER ENGINEERING LTD.
RM SIGNATURE:
RM APEGA ID #: 72376
DATE: July 14, 2025
PERMIT NUMBER: P005186
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Lucas Green, P.Eng.
Geotechnical Engineer

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Table GP029-1: Spring 2025 – Hwy 2:70 Church Camp Slide Slope Inclinometer Instrumentation Reading Summary

Date Monitored: June 17, 2025

INSTRUMENT #	DATE INITIALIZED	TOTAL CUMULATIVE RESULTANT MOVEMENT AT NOTED DEPTH SINCE INITIAL READING (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)
SI-2	October 18, 2007	34.2 over 7.0 m to 8.8 m depth in 112° direction	8.1 in October 2016	Operational	September 25, 2024	0.6	0.9	1.0
		20.6 over 33.8 m to 35.1 m depth in 79° direction	6.9 in October 2020			0.5	0.6	1.1
SI-3	October 18, 2007	43.9 over 5.2 m to 7.0 m depth in 113° direction	7.6 in July 2021	Operational	September 25, 2024	0.6	0.9	-2.6
		12.6 over 9.4 m to 10.6 m depth in 81° direction	6.7 in October 2016			No Discernible Movement	N/A	-1.1
		3.1 over 13.1 m to 14.3 m depth in 81° direction	2.0 in October 2021			No Discernible Movement	N/A	-0.5
		4.8 over 18.0 m to 19.2 m depth in 91° direction	2.3 in October 2018			<0.1	<0.1	-0.4
SI17-1	*September 15, 2017*	*7.0 over 24.4 m to 26.3 m depth in 85° direction*	*8.1 in October 2018*	*Sheared at 33.2 m*	*June 26, 2023*	*N/A*	*N/A*	*N/A*
		22.4 over 31.8 m to 33.0 m depth in 120° direction	*22.6 in October 2018*			*N/A*	*N/A*	*N/A*

Table GP029-1 – Continued…Spring 2025 – Hwy 2:70 Church Camp Slide Slope Inclinometer Instrumentation Reading Summary

Date Monitored: June 17, 2025

INSTRUMENT #	DATE INITIALIZED	TOTAL CUMULATIVE RESULTANT MOVEMENT AT NOTED DEPTH SINCE INITIAL READING (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)
SI17-2	*September 15, 2017*	*25.7 m over 17.2 m to 19.7 m depth in 110° direction*	*42.7 in October 2017*	*Sheared at 50.6 m*	*October 7, 2019*	*N/A*	*N/A*	*N/A*
		6.9 m over 21.5 m to 23.3 m depth in 110° direction	*10.4 in October 2018*			*N/A*	*N/A*	*N/A*
		38.0 over 47.1 m to 50.8 m depth in 110° direction	*31.9 in October 2018*			*N/A*	*N/A*	*N/A*
SI17-3	*September 15, 2017*	*No discernible movement*	*N/A*	*Sheared at 43.6 m*	*October 5, 2018*	*N/A*	*N/A*	*N/A*
SI17-4	*September 15, 2017*	*11.8 over 37.4 m to 39.2 m depth in 118° direction*	*17.5 in July 2018*	*Sheared at 45.1 m*	*October 5, 2018*	*N/A*	*N/A*	*N/A*
SI17-5	September 16, 2017	No discernible movement	N/A	Operational	September 25, 2024	N/A	N/A	N/A

Drawing 32123-GP029 in Appendix A provides a sketch of the approximate location of the monitoring instrumentation for this site.

Table GP029-2: Spring 2025 – Hwy 2:70 Church Camp Slide Pneumatic Piezometer Instrumentation Reading Summary

Date Monitored: June 17, 2025

INSTRUMENT #	DATE INITIALIZED	TIP ELEV. (m)	GROUND ELEV. (m)	CURRENT STATUS	HIGHEST MEASURED WATER ELEVATION (m)	MEASURED PORE PRESSURE (kPa)	CURRENT WATER ELEVATION (m)	PREVIOUS WATER ELEVATION (m)	CHANGE IN WATER LEVEL SINCE PREVIOUS READING (m)
PN-02	My 9, 2008	629.66	635.76	Operational	635.82 in October 2016	53.8	635.14	634.65	0.49
PN-03	*May 9, 2008*	*614.57*	*631.33*	*Damaged*	*628.23 in May 2014*	*N/A*	*N/A*	*628.13 (June 15, 2017)*	*N/A*
PN17-1A	*September 15, 2017*	*633.85*	*645.58*	*Malfunctioning*	*645.45 in July 2018*	*N/A*	*N/A*	*636.87 (July 5, 2019)*	*N/A*
PN17-1B	*September 15, 2017*	*610.53*	*645.58*	*Malfunctioning*	*645.75 in June 2020*	*N/A*	*N/A*	*645.75* (June 22, 2020)*	*N/A*
PN17-2A	September 15, 2017	628.41	638.65	Operational	638.46 in June 2020	91.7	637.76	637.69	0.07
PN17-2B	September 15, 2017	598.54	638.65	Operational	637.77 in June 2022	382.0	637.49	637.63	-0.14
PN17-2C	*September 15, 2017*	*587.88*	*638.65*	*Malfunctioning*	*637.79 in October 2018*	*N/A*	*N/A*	*637.16 (May 29, 2024)*	*N/A*
PN17-3A	*September 15, 2017*	*603.80*	*629.50*	*Malfunctioning*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*

Drawing 32123-GP029 in Appendix A provides a sketch of the approximate location of the monitoring instrumentation for this site.

* Indicates artesian groundwater level

Table GP029-2 – Continued…Spring 2025 – Hwy 2:70 Church Camp Slide Pneumatic Piezometer Instrumentation Reading Summary

Date Monitored: June 17, 2025

INSTRUMENT #	DATE INITIALIZED	TIP ELEV. (m)	GROUND ELEV. (m)	CURRENT STATUS	HIGHEST MEASURED WATER ELEVATION (m)	MEASURED PORE PRESSURE (kPa)	CURRENT WATER ELEVATION (m)	PREVIOUS WATER ELEVATION (m)	CHANGE IN WATER LEVEL SINCE PREVIOUS READING (m)
PN17-3B	September 15, 2017	591.30	629.50	Operational	635.87 in September 2017	366.1	628.63	628.35	0.28
PN17-3C	September 15, 2017	581.45	629.50	Operational	641.20* in May 2024	562.6	638.81*	639.31*	-0.50
PN17-4A	September 15, 2017	606.31	631.19	Operational	634.57* in September 2017	224.8	629.23	628.81	0.42
PN17-4B	*September 15, 2017*	*590.92*	*631.19*	*Damaged*	*636.27*in September 2017*	*383.3*	*N/A*	*630.01*	*N/A*
PN17-4C	*September 15, 2017*	*582.69*	*631.19*	*Damaged*	*641.12* in June 2020*	*561.9*	*N/A*	*639.99**	*N/A*
PN17-5A	September 15, 2017	633.17	647.40	Operational	649.97 in September 2017	117.2	645.12	645.47	-0.35
PN17-5B	September 15, 2018	611.99	647.40	Operational	653.19 in September 2017	281.3	640.67	641.02	-0.35

Drawing 32123-GP029 in Appendix A provides a sketch of the approximate location of the monitoring instrumentation for this site.

* Indicates artesian groundwater level

Table GP029-3: Spring 2025 – Hwy 2:70 Church Camp Slide Standpipe Piezometer Instrumentation Reading Summary

Date Monitored: Not Monitored

INSTRUMENT #	DATE INITIALIZED	TIP ELEV. (m)	GROUND ELEV. (m)	CURRENT STATUS	MAXIMUM MEASURED WATER ELEVATION (m)	MEASURED WATER ELEVATION (m)	PREVIOUS WATER ELEVATION (m)	CHANGE IN WATER LEVEL SINCE PREVIOUS READING (m)
SP17-6	*September 15, 2017*	*640.26*	*647.81*	*Destroyed*	*646.00 in October 2023*	*N/A*	*644.71 (May 29, 2024)*	*N/A*
SP17-7	September 15, 2017	*635.44*	*646.54*	*Destroyed*	*645.36 in January 2018*	*N/A*	*N/A*	*N/A*
SP17-8	September 15, 2017	*639.46*	*646.06*	*Destroyed*	*642.54 in January 2018*	*N/A*	*N/A*	*N/A*
SP17-9	September 15, 2017	*637.84*	*644.44*	*Destroyed*	*639.69 in January 2018*	*N/A*	*N/A*	*N/A*

Drawing 32123-GP029 in Appendix A provides a sketch of the approximate location of the monitoring instrumentation for this site.

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STATEMENT FOR USE AND INTERPRETATION OF REPORT

1. STANDARD OF CARE

This Report has been prepared in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances at the same time and in the same or similar locality and in compliance with all applicable laws.

2. COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment, including this Statement For Use and Interpretation of Report, are a part of the Report, which is of a summary nature and is not intended to stand alone without reference to the instructions given to Thurber by the Client, communications between Thurber and the Client, and any other reports, proposals or documents prepared by Thurber for the Client relative to the specific site described herein, all of which together constitute the Report.

IN ORDER TO PROPERLY UNDERSTAND THE SUGGESTIONS, RECOMMENDATIONS AND OPINIONS EXPRESSED HEREIN, REFERENCE MUST BE MADE TO THE WHOLE OF THE REPORT, AS DESCRIBED ABOVE. THURBER IS NOT RESPONSIBLE FOR USE BY ANY PARTY OF PORTIONS OF THE REPORT WITHOUT REFERENCE TOTHE WHOLE OF THE REPORT.

3. BASIS OF REPORT

The Report has been prepared for the specific site, development, design objectives, and purposes that were described to Thurber by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the Report, subject to the limitations provided herein, are only valid to the extent that the Report expressly addresses proposed development, design objectives and purposes, and then only to the extent that there has been no material alteration to or variation from any of the said descriptions provided to Thurber, unless Thurber is specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4. USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client for the development, design objectives, and/or purposes described to Thurber by the Client. **NO OTHER PARTY MAY USE OR RELY ON THE REPORT OR ANY PORTION THEREOF FOR OTHER THAN THE CLIENT'S BENEFIT IN CONNECTION WITH THE PURPOSES DESCRIBED IN THE REPORT**. Any use which a third party makes of the Report is the sole responsibility of such third party and is always subject to this Statement for Use and Interpretation of Report. Thurber accepts no liability or responsibility for damages suffered by any third party resulting from use of the Report for purposes outside the reasonable contemplation of Thurber at the time it was prepared or in any manner unintended by Thurber.

5. INTERPRETATION OF THE REPORT

a) **Nature and Exactness of Soil and Contaminant Description:** Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors is inherently judgement-based. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other parties making use of such documents or records with or without our express written consent need to be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other parties. Some conditions are subject to change over time and those making use of the Report need to be aware of this possibility and understand that the Report only presents the interpreted conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client must disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

b) **Reliance on Provided Information:** The evaluation and conclusions contained in the Report have been prepared based on conditions in evidence at the time of site inspections and based on information provided to Thurber. Thurber has relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, Thurber does not accept responsibility for any deficiency, misstatement or inaccuracy contained in the Report resulting from misstatements, omissions, misrepresentations, or fraudulent acts of the Client or other parties providing information relied on by Thurber. Thurber is entitled to rely on such representations, information and instructions and is not required to carry out investigations to determine the truth or accuracy of such representations, information and instructions.

c) **Design Services:** The Report may form part of design and construction documents for information purposes even though it may have been issued prior to final design being completed. Thurber is recommended to be retained to review final design, project plans and related documents prior to construction to confirm that they are consistent with the intent of the Report. Any differences that may exist between the Report's recommendations and the final design need to be reported to Thurber immediately so that Thurber can address potential conflicts.

d) **Construction Services:** During construction Thurber should be retained to provide field reviews. Field reviews consist of performing sufficient and timely observations of encountered conditions to confirm and document that the site conditions do not materially differ from those conditions considered in the preparation of the report. Adequate field reviews are necessary for Thurber to provide letters of assurance, in accordance with the requirements of many regulatory authorities.

6. INDEPENDENT JUDGEMENTS OF CLIENT

The information, interpretations and conclusions in the Report are based on Thurber's interpretation of conditions revealed through limited investigation conducted within a defined scope of services. Thurber does not accept responsibility for independent conclusions, interpretations, interpolations and/or decisions of the Client, or other parties who may come into possession of the Report, or any part thereof, which may be based on information contained in the Report. This restriction of liability includes, but is not limited to, decisions made to develop, purchase, or sell land, unless such decisions expressly form part of the stated purpose of the Report as described in Paragraph 3.

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ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS GRMP (CON0022165)
PEACE REGION (GRANDE PRAIRIE DISTRICT – NORTH)
INSTRUMENTATION MONITORING RESULTS

SPRING 2025

APPENDIX A
DATA PRESENTATION

SITE GP029: HWY 2:70, CHURCH CAMP SLIDE

ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS
PEACE REGION (GRANDE PRAIRIE - NORTH DISTRICT)
INSTRUMENTATION MONITORING FIELD SUMMARY (GP029)
SPRING 2025

Location:	Church Camp Slide (HWY 2:70 C1 11.881)	**Readout:**	RST PN C108 Unit 8
File Number:	32123	**Extension:**	
Probe:	RST SET 8R	**Temp:**	23
Cable:	RST SET 8R	**Read by:**	NKR/GE

SLOPE INCLINOMETER (SI) READINGS

SI#	GPS Location (UTM 11)		Date	Stickup (m)	Depth from top of casing (ft)	Azimuth of A+ Groove	Current Bottom Depth Readings				Probe/ Reel #	Size (")	Remarks
	Easting (m)	Northing (m)					A+	A-	B+	B-			
SI-2	393096	6168377	17-Jun-25	0.6	118 to 4	60	177	-168	28	-27	8R/8R	3.34	
SI-3	393155	6168341	17-Jun-25	0.64	108 to 4	120	64	-50	-91	91	8R/8R	3.34	
SI17-5	393014	6168383	17-Jun-25	0.72	128 to 2	70	10	-12	-4376	4376	8R/8R	2.75	

PNEUMATIC PIEZOMETER (PN) READINGS

PN#	GPS Location (UTM 11)		Date	Reading (Psi)	Identification Number
	Easting (m)	Northing (m)			
PN-02	393096	6168377	17-Jun-25	7.8	60675
PN17-2A	393112	6168505	17-Jun-25	13.3	37657
PN17-2B	393112	6168505	17-Jun-25	55.4	37651
PN17-2C	393112	6168505	17-Jun-25	*	37650
PN17-3B	393192	6168472	17-Jun-25	53.1	37652
PN17-3C	393192	6168472	17-Jun-25	81.6	37649
PN17-4A	393157	6168374	17-Jun-25	32.6	37655
PN17-4B	393157	6168374	17-Jun-25	**	37679
PN17-4C	393157	6168374	17-Jun-25	**	37678
PN17-5A	393014	6168383	17-Jun-25	17	37656
PN17-5B	393014	6168383	17-Jun-25	40.8	37654

INSPECTOR REPORT

- Call private landowner before reading SP17-6
*PN17-2C was malfunctioning since Fall 2024. Pressure keeps climbing when bypass open, Pressure up to 210 Psi and climbing, DAMAGED
** PN 17 4B and 4C . Need repair,

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LEGEND

- APPROXIMATE INSTRUMENT LOCATION
- CRACK
- ACP PATCH
- SI SLOPE INCLINOMETER
- PN PNEUMATIC PIEZOMETER
- SP STANDPIPE PIEZOMETER

0 25 50 75 100 125 150m
SCALE 1:2500

Alberta Transportation

PEACE REGION
(GRANDE PRAIRIE DISTRICT - NORTH)

GP029: HWY 2:70 CHURCH CAMP SLIDE
INSTRUMENT LOCATIONS

DWG No. 32123-GP029

DRAWN BY	ML
DESIGNED BY	BWN
APPROVED BY	RVC
SCALE	1:2500
DATE	JULY 2025
FILE No.	32123

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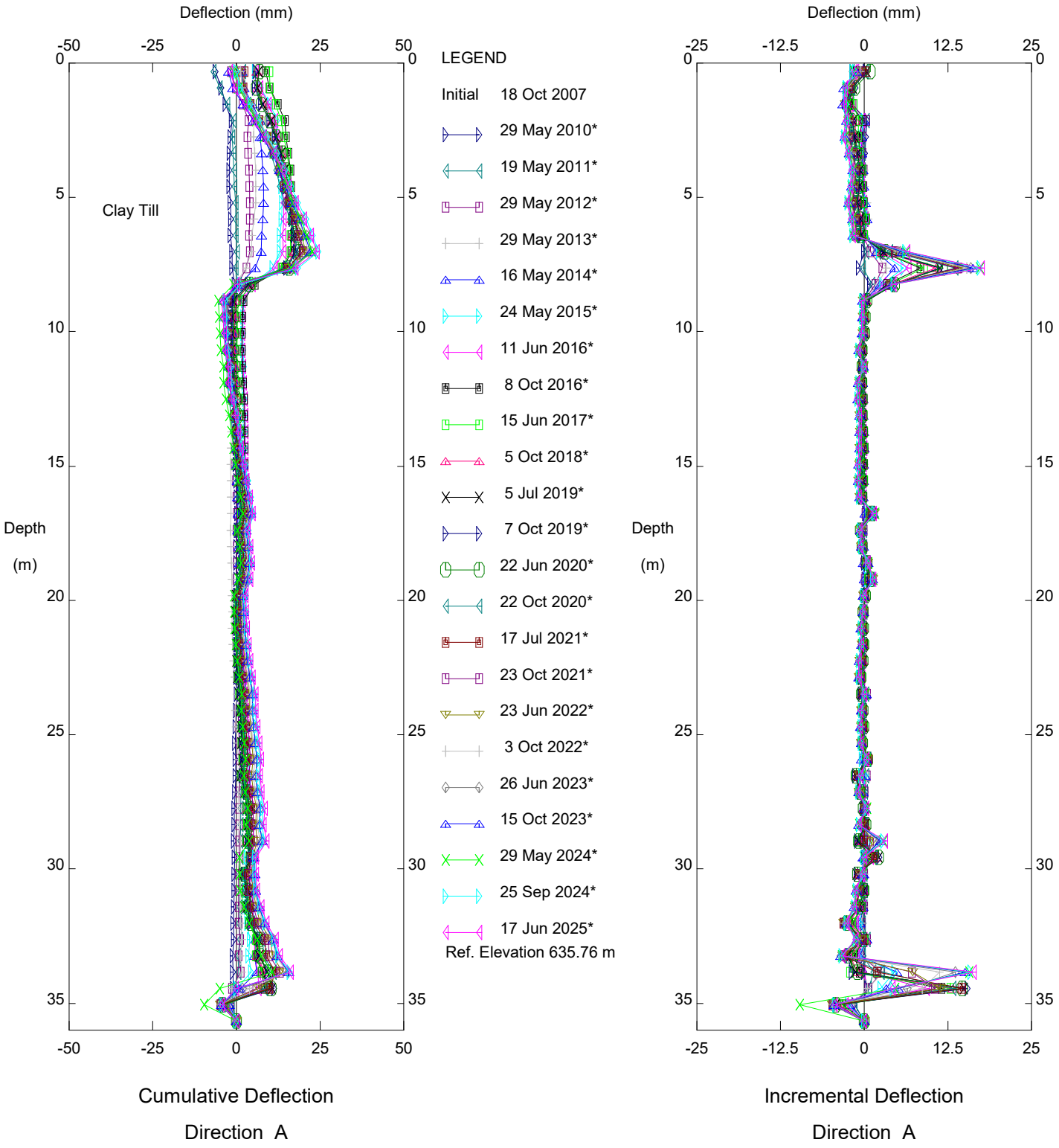

Cumulative Deflection

Direction A

Incremental Deflection

Direction A

GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

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

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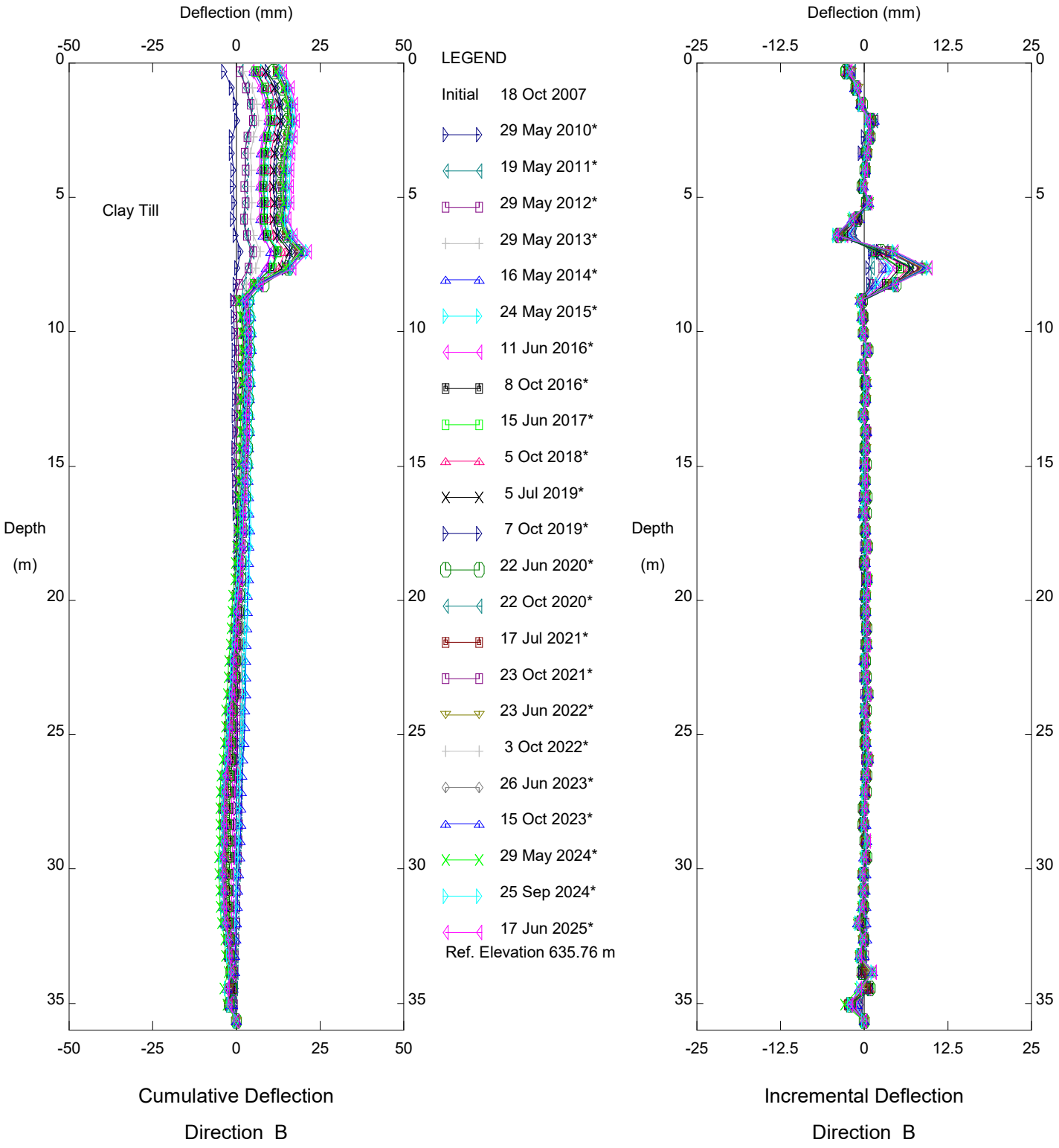

Cumulative Deflection

Direction B

Incremental Deflection

Direction B

GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

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

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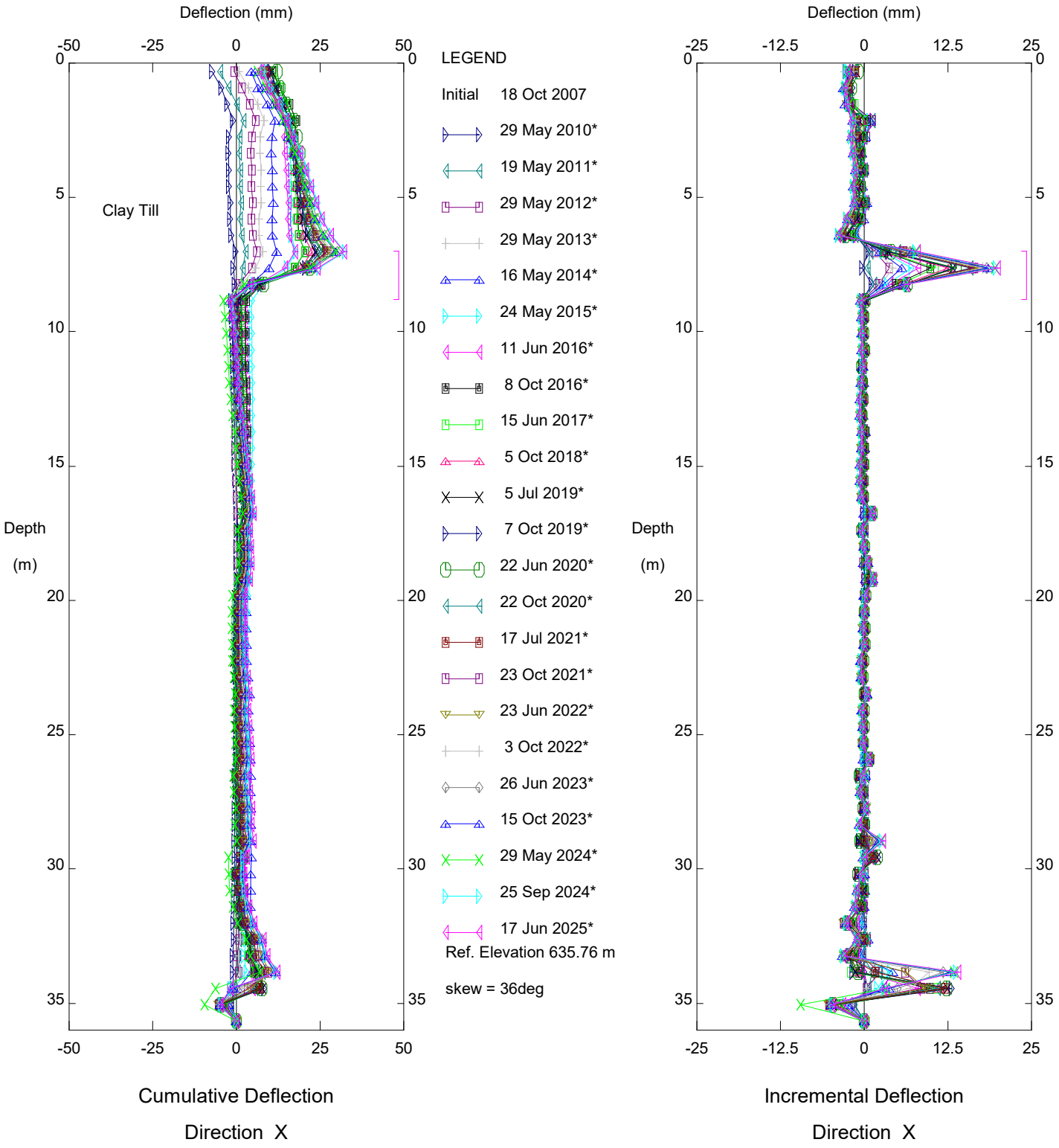

Cumulative Deflection

Direction X

Incremental Deflection

Direction X

GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

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

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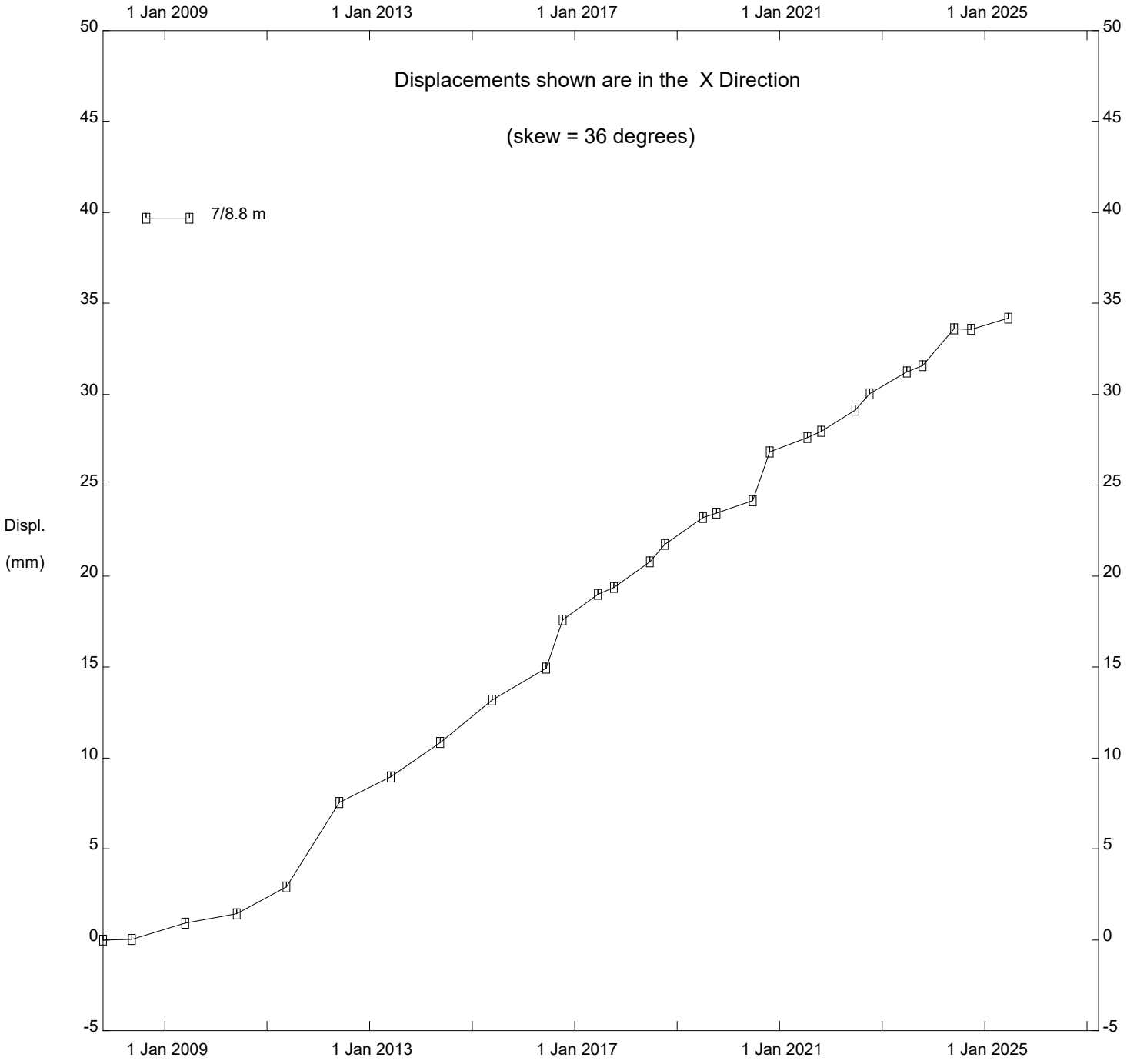
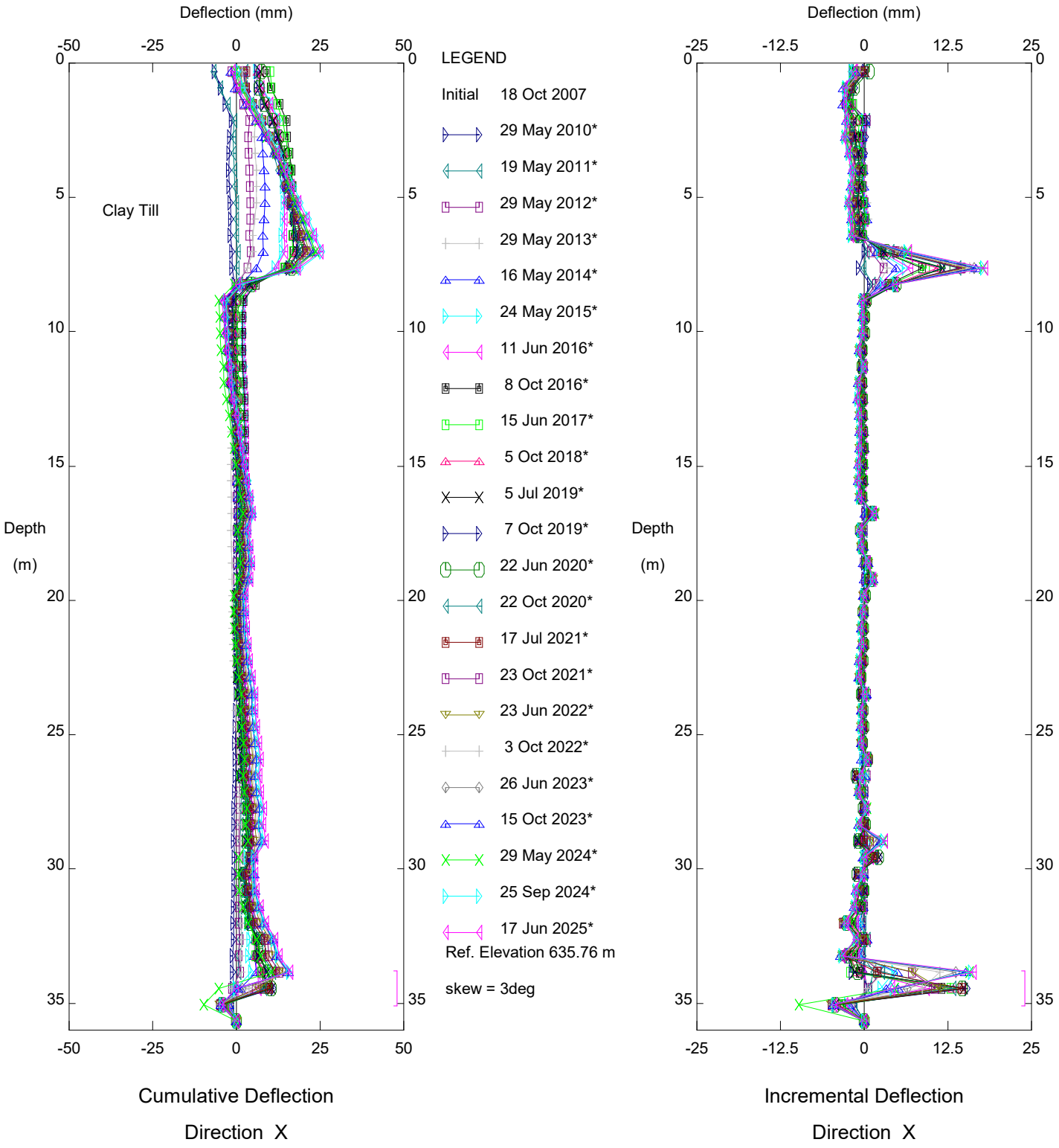


GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

Thurber Engineering Ltd.



Cumulative Deflection

Direction X

Incremental Deflection

Direction X

GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

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

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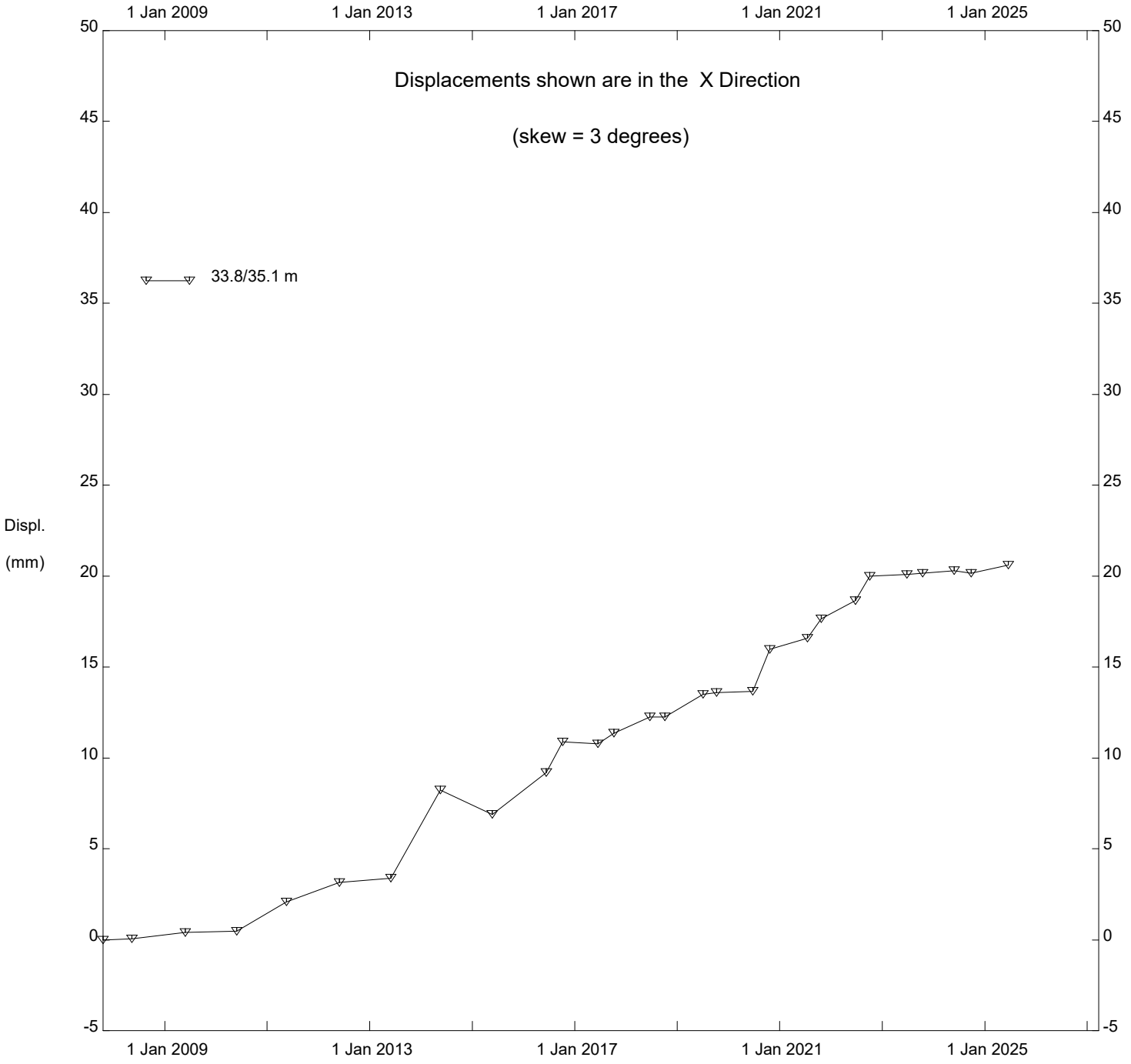

GP029 HWY 2:70 (Church Camp), Inclinometer SI-2

Alberta Transportation

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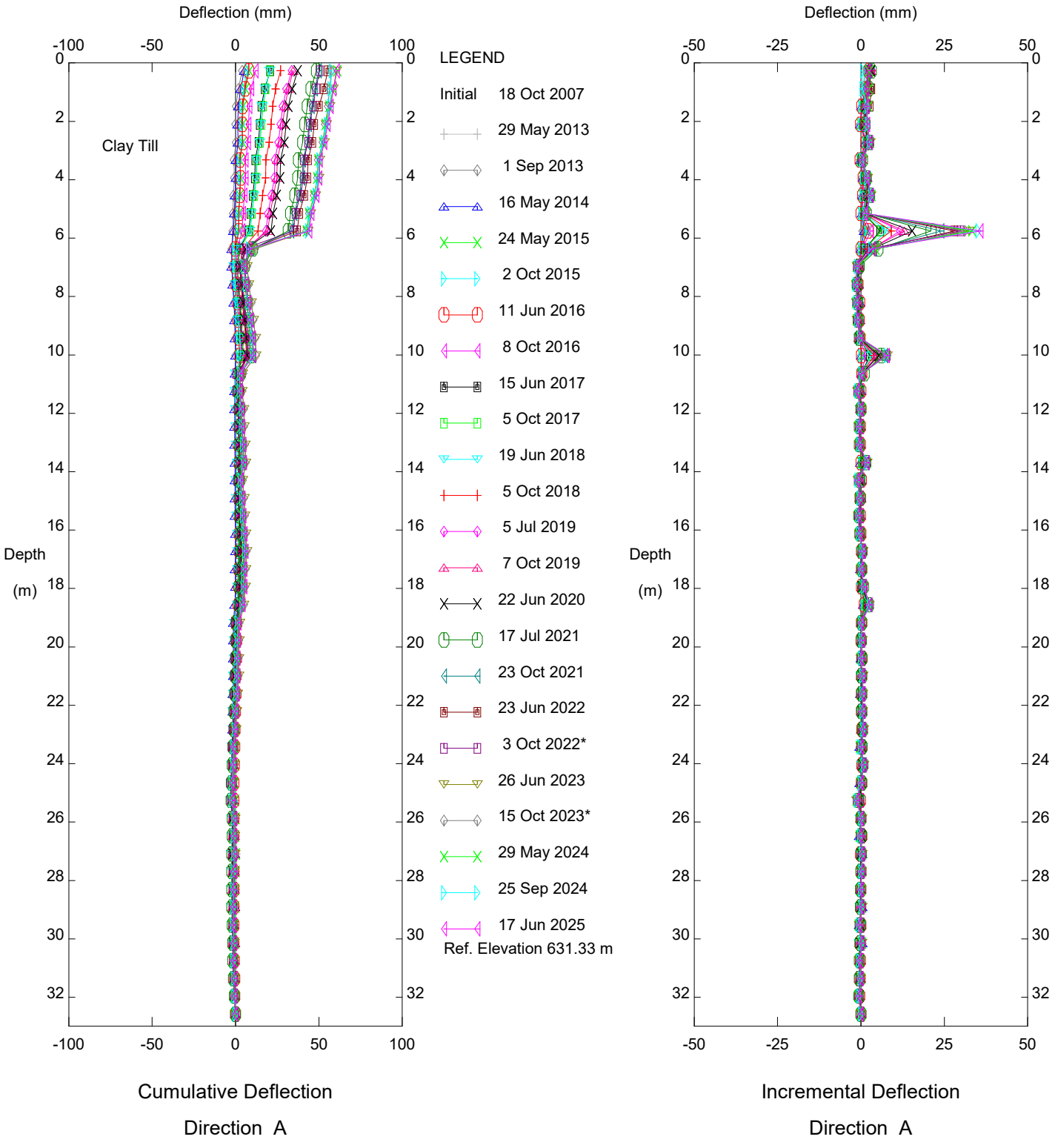

Cumulative Deflection

Direction A

Incremental Deflection

Direction A

GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

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

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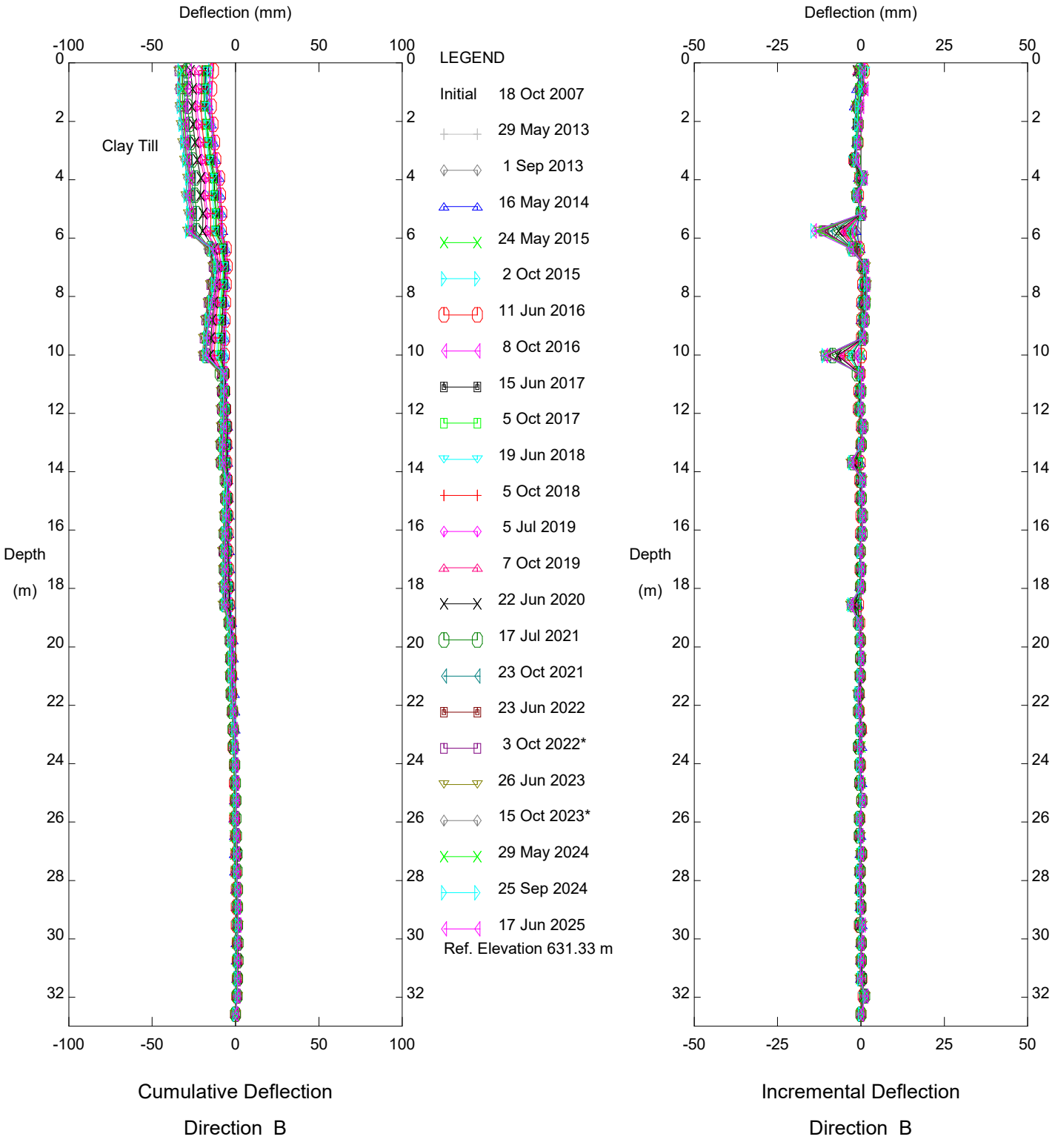
Thurber Engineering Ltd.



Cumulative Deflection

Direction B

Incremental Deflection

Direction B

GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

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

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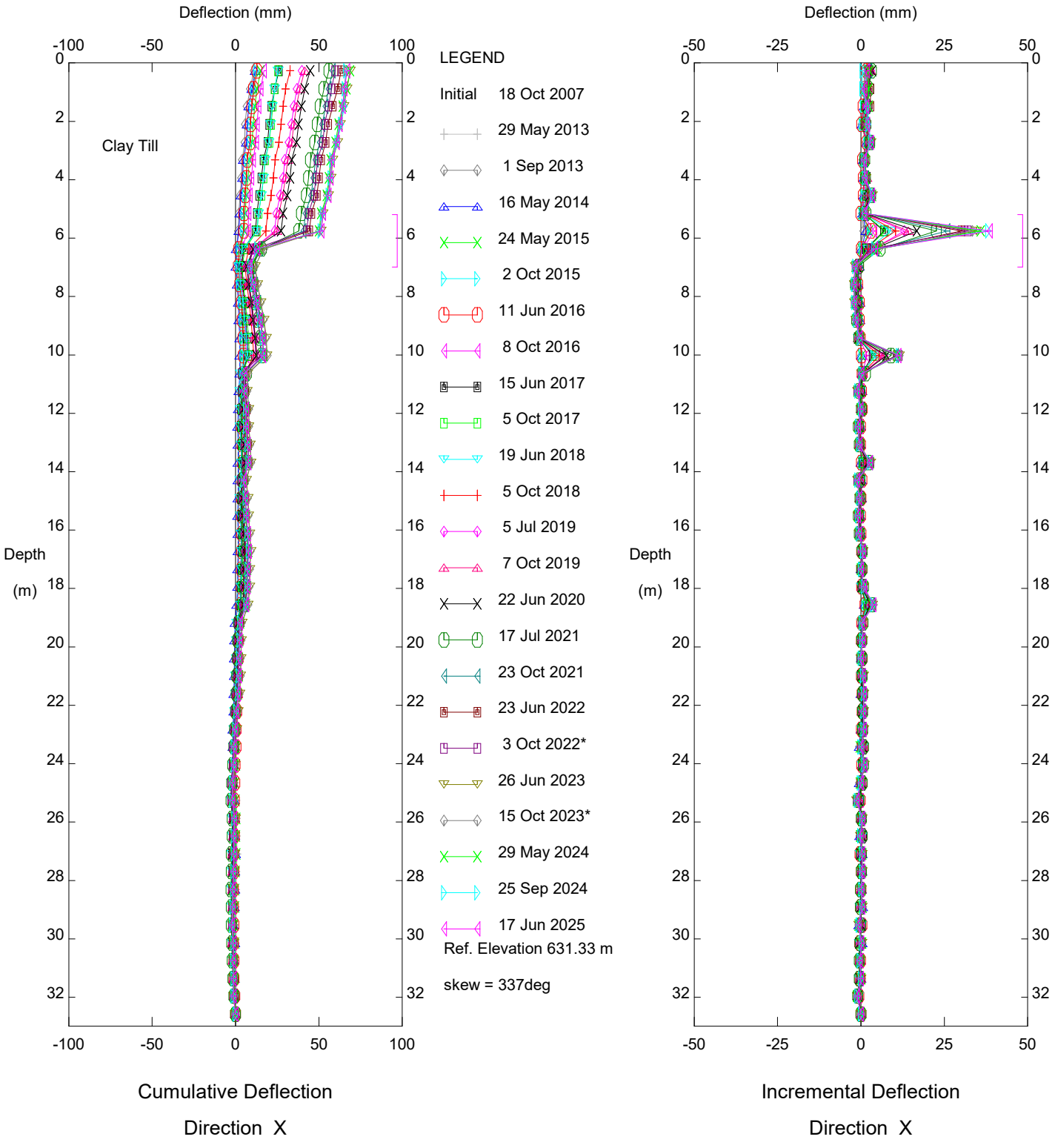
Thurber Engineering Ltd.



Cumulative Deflection

Direction X

Incremental Deflection

Direction X

GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

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

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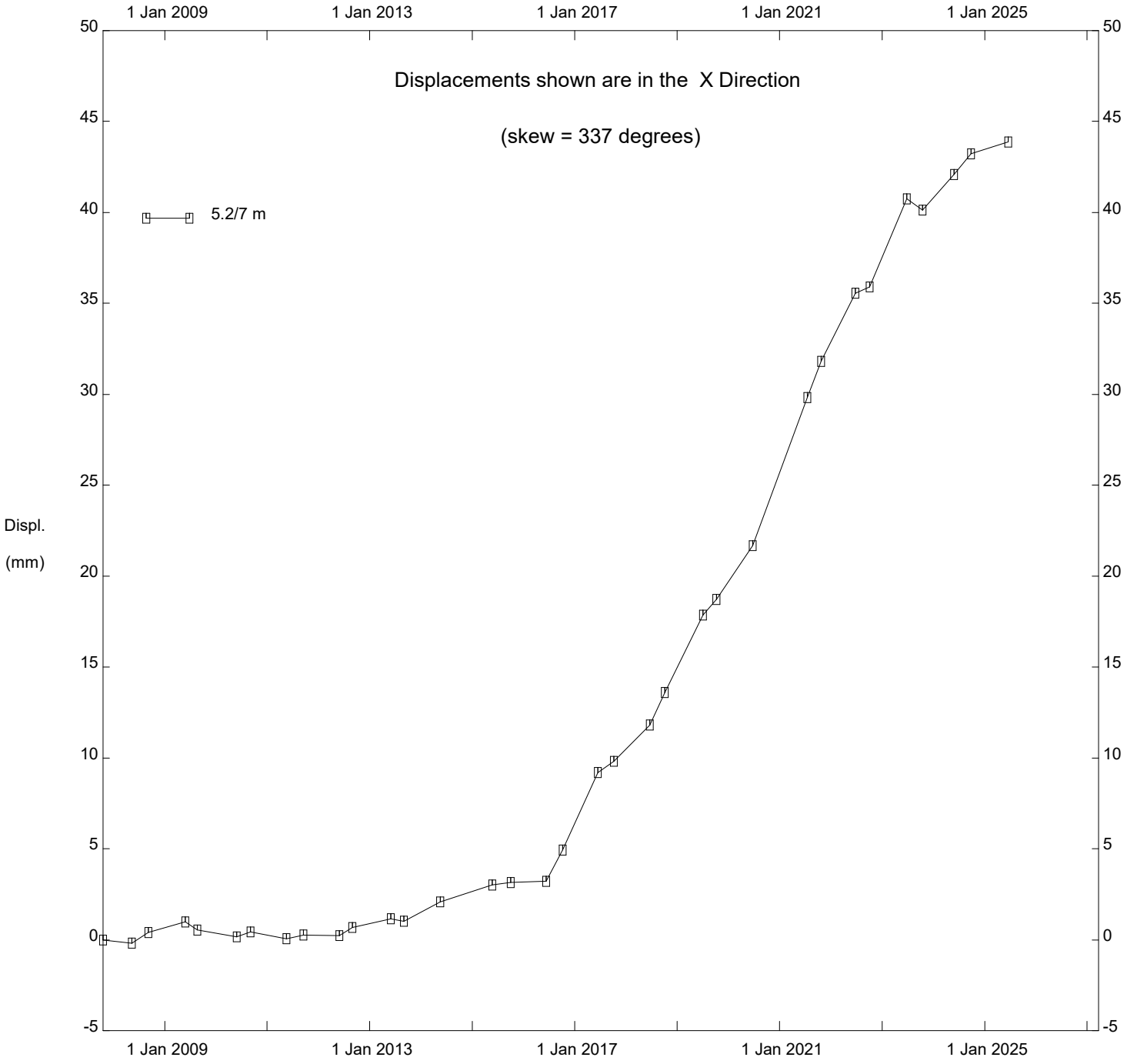
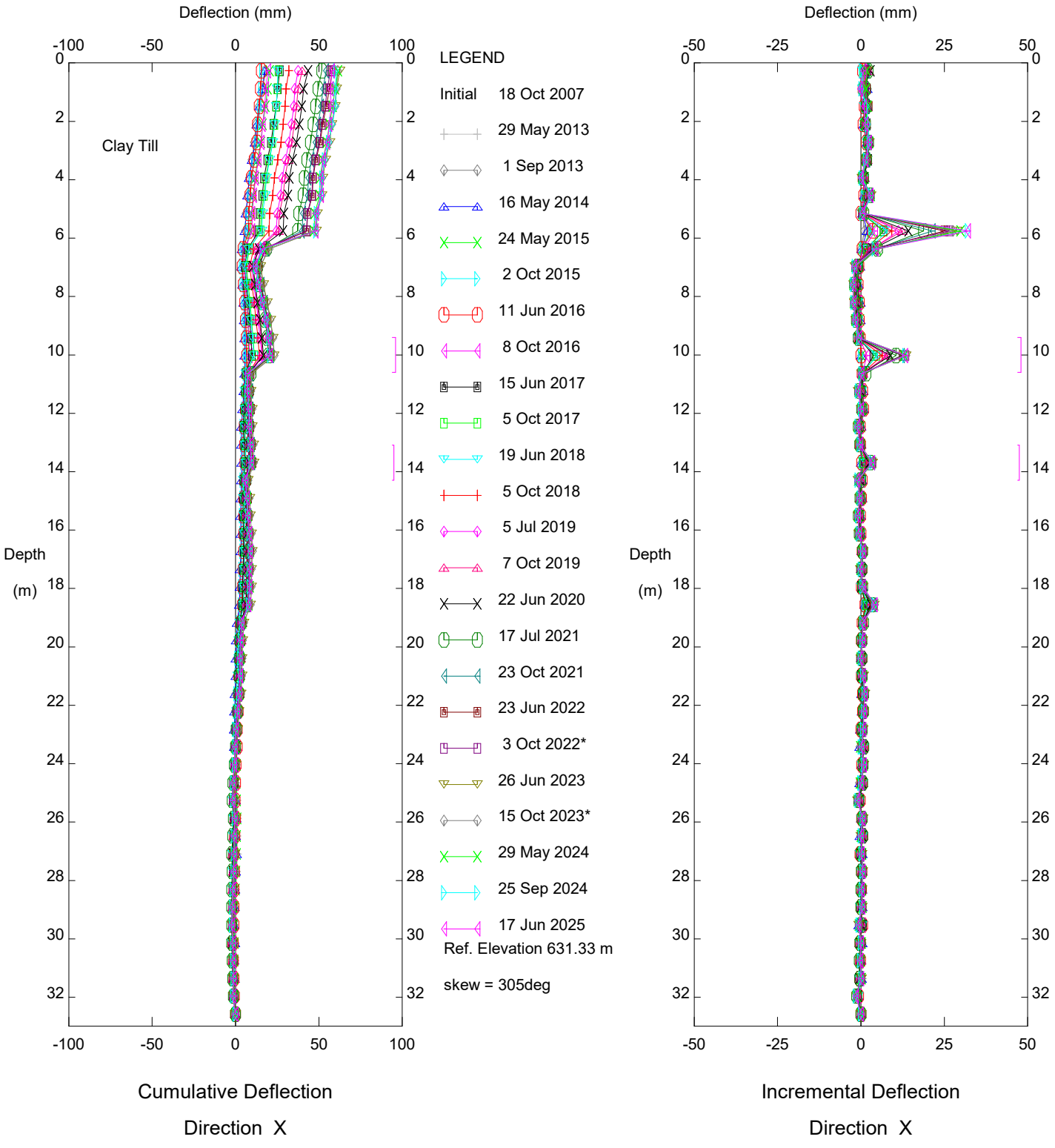
Thurber Engineering Ltd.



GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

Thurber Engineering Ltd.



Cumulative Deflection

Direction X

Incremental Deflection

Direction X

GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

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

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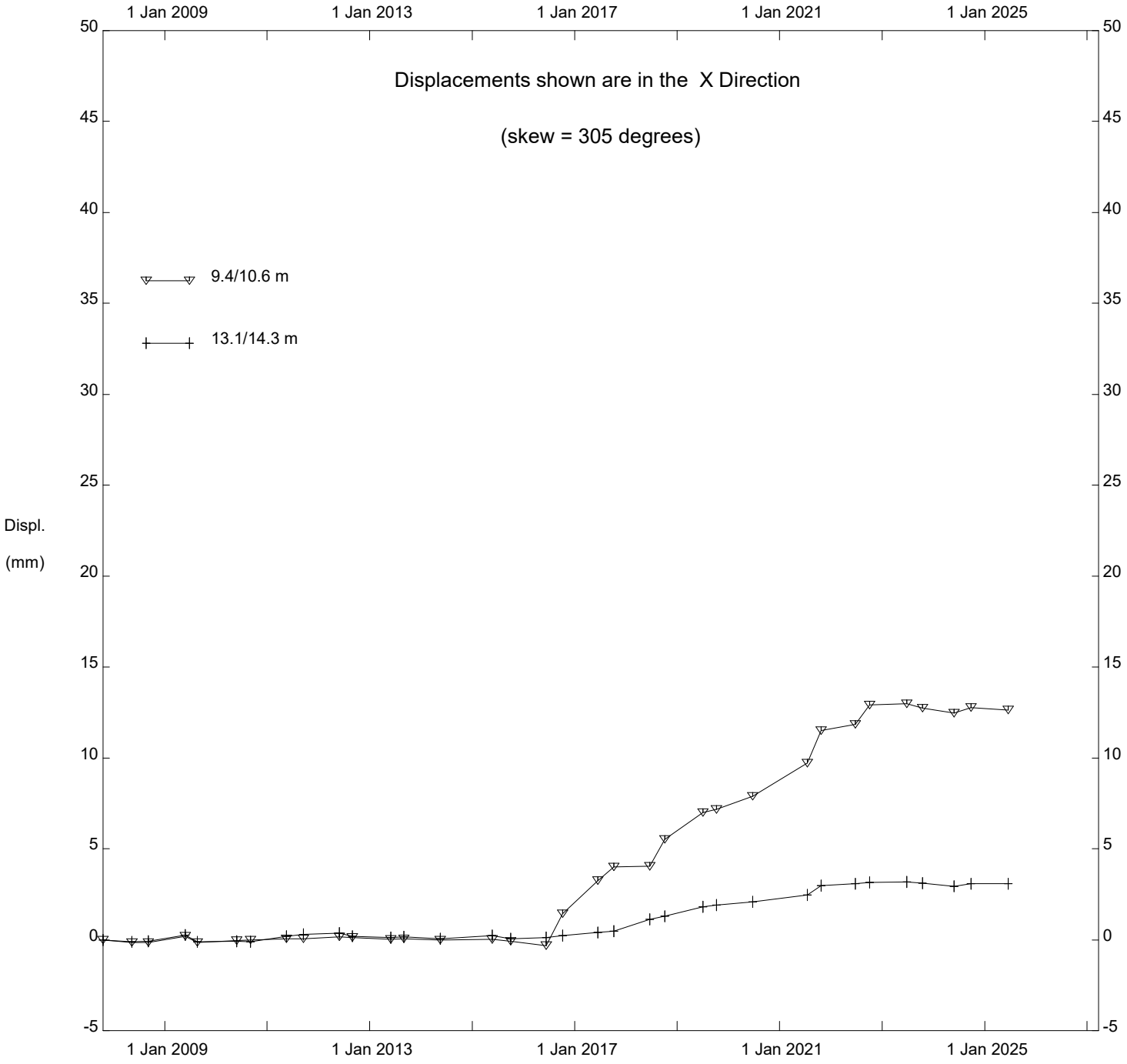
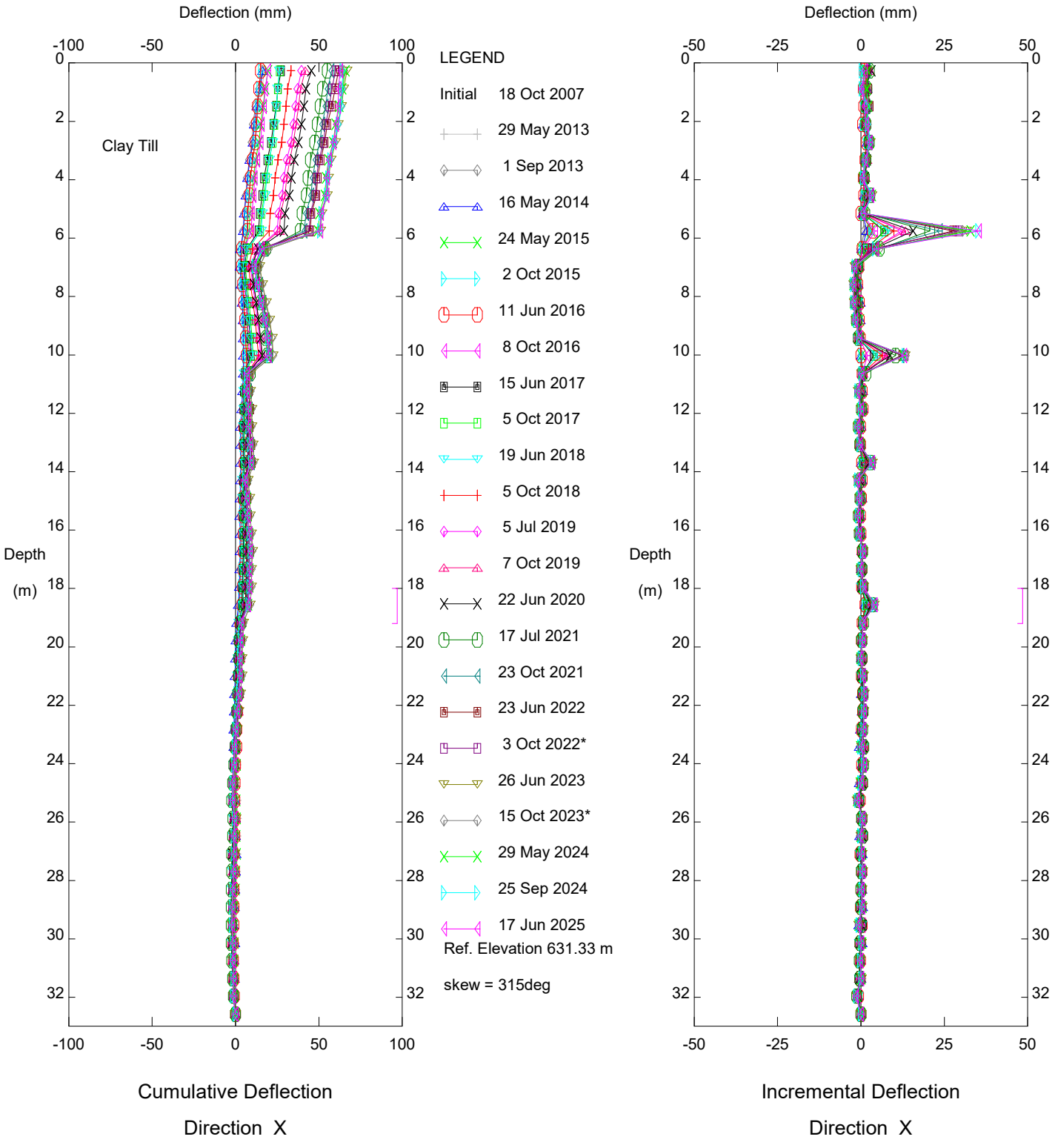


GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

Thurber Engineering Ltd.



Cumulative Deflection

Direction X

Incremental Deflection

Direction X

GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

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

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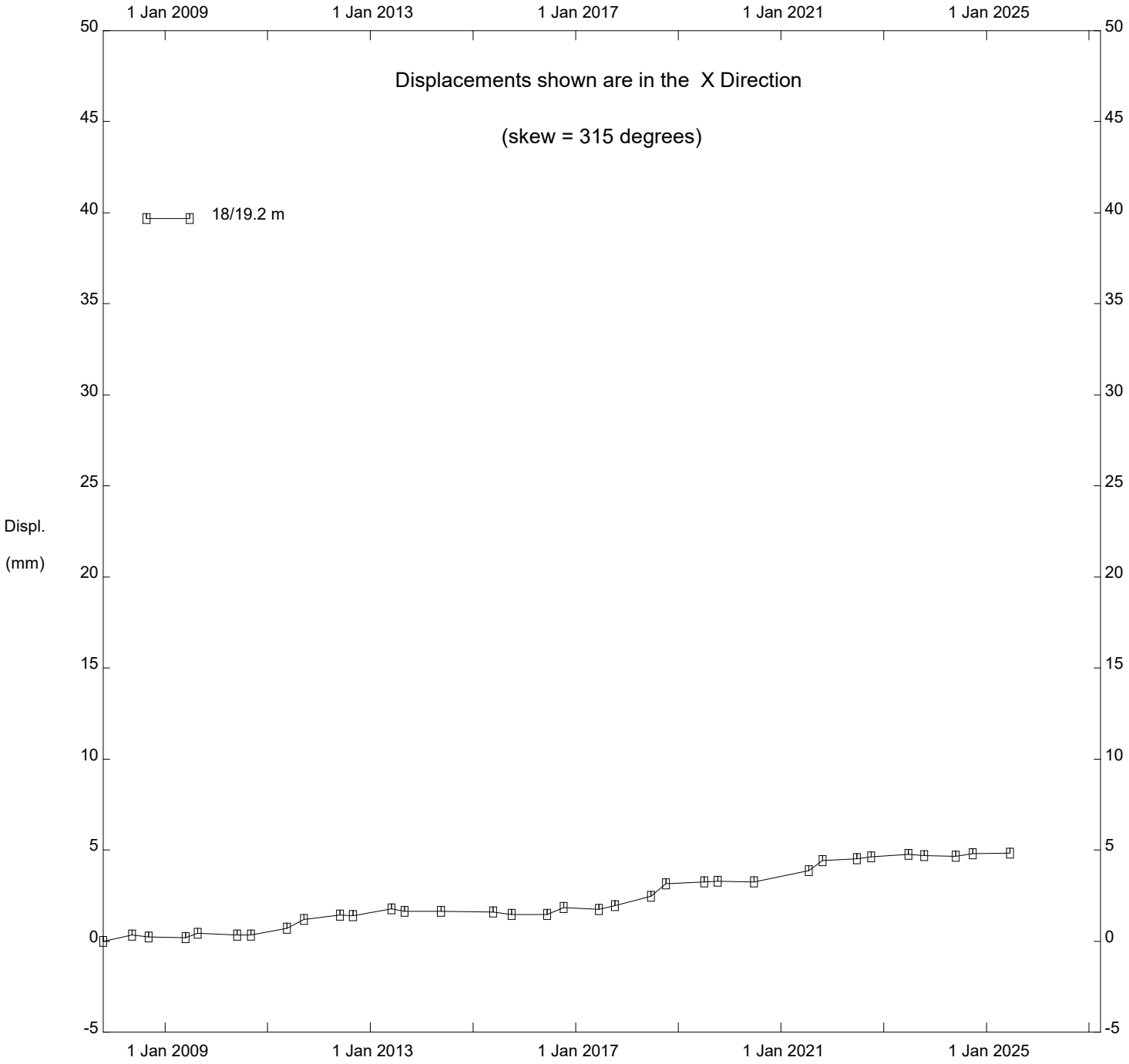
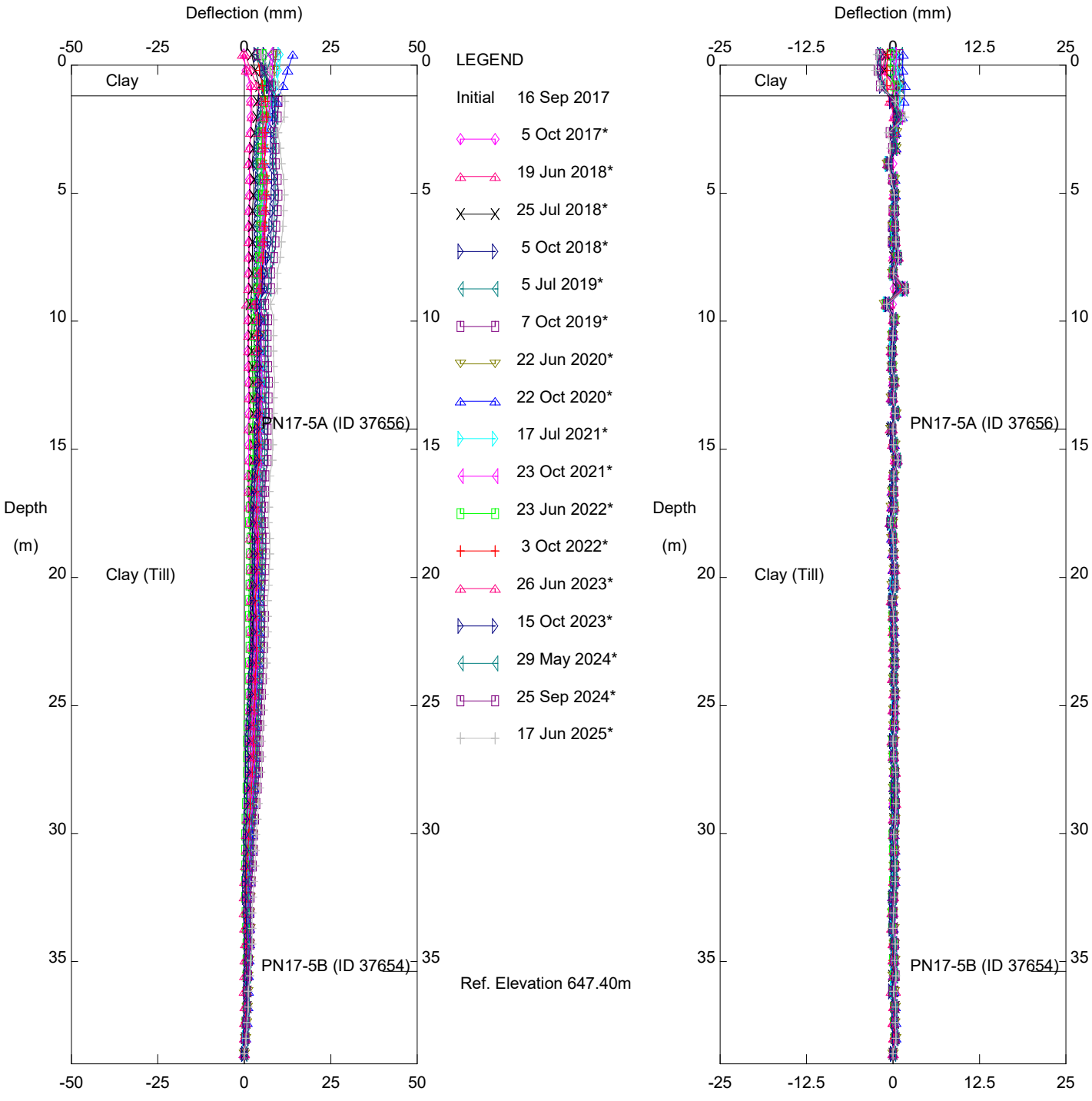


GP029 HWY 2:70 (Church Camp), Inclinometer SI-3

Alberta Transportation

Thurber Engineering Ltd.



Cumulative Deflection

Direction A

Incremental Deflection

Direction A

GP029 - Church Camp Slide, Inclinometer SI17-5

Alberta Transportation

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

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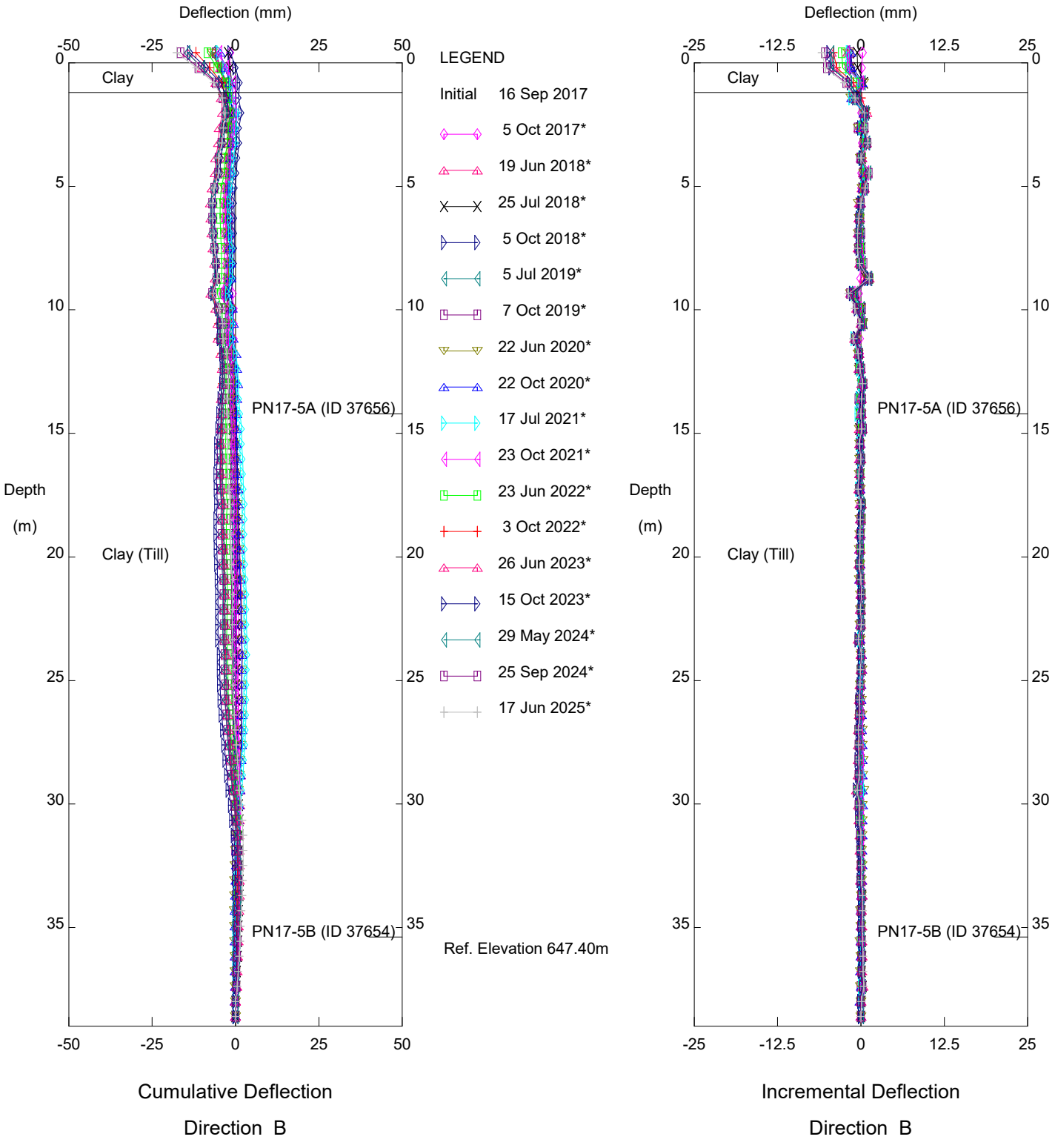
Thurber Engineering Ltd.



Cumulative Deflection

Direction B

Incremental Deflection

Direction B

GP029 - Church Camp Slide, Inclinometer SI17-5

Alberta Transportation

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

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FIGURE GP029-1
PIEZOMETRIC ELEVATIONS FOR HWY 2:70 CHURCH CAMP SLIDE

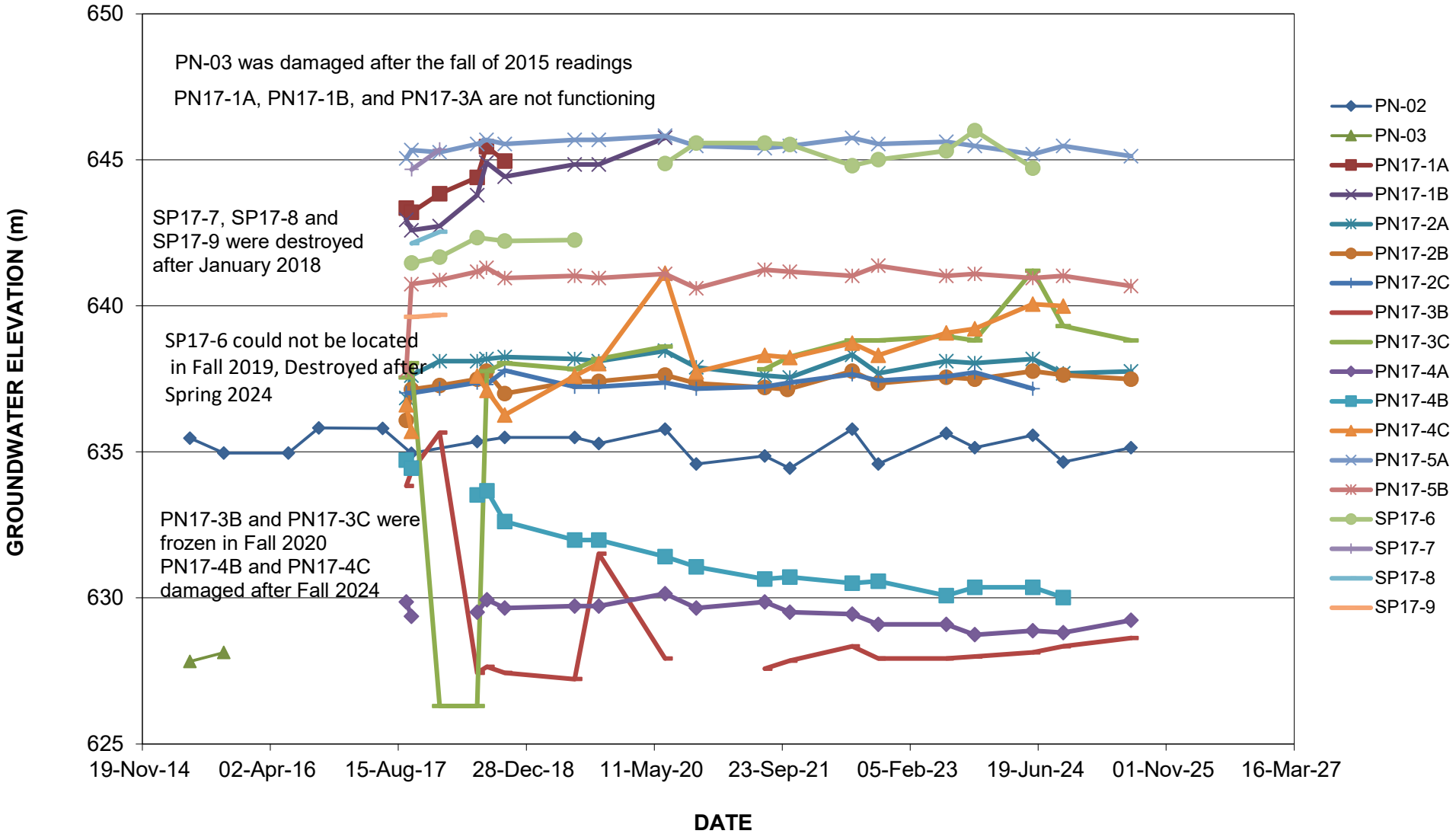

FIGURE GP029-2
PIEZOMETRIC DEPTHS FOR HWY 2:70 CHURCH CAMP SLIDE