

Site Number	Location	Name	Hwy	km
PH071	Hwy 986:01 C1 28.474	Daishowa West Hill	986:01	Km 28.5
Legal Description: 8-9-85-21 W5		UTM Co-ordinates		
		11U E 485023	N	6245526

Current Monitoring:	19-Sep-2024	Previous Monitoring	20-May-2024
Instruments Read By:	Mr. Niraj Regmi, G.I.T and Mr. Nixon Mationg, of Thurber		

Instruments Read During This Site Visit			
Slope Inclinometers (SIs): SI16-3	Pneumatic Piezometers (PN):	Vibrating Wire Piezometers (VW): VW16-1A, VW16-1B, VW16-1C, VW16-2A, VW16-2B, VW16-2C, VW16-3A, VW16-3B, VW16-4A, VW16-5A	Standpipe Piezometers (SP):
Load Cell (LC): VC1917, VC1918, VC1919, VC1920, VC1921, VC1922, VC1923, VC1924 VC1925	Strain Gauges: twenty-eight vibrating wire strain gauges	SAA: SAA-P060, SAA-P097	Others:

Readout Equipment Used			
Slope Inclinometers: RST Digital Inclinometer probe with a 2 ft wheelbase and a RST Pocket PC readout	Pneumatic Piezometers:	Vibrating Wire Piezometers: Campbell Scientific CR6 datalogger	Standpipe Piezometers:
Load Cell: Campbell Scientific CR6 datalogger	Strain Gauges: Campbell Scientific CR6 datalogger	SAA: Campbell Scientific CR6 datalogger	Others:
Note:			

Discussion	
Zones of New Movement:	None
Interpretation of Monitoring Results:	<p>Slope Indicators and SAAs</p> <p>SI16-3 showed no discernible movement over 0.1 m to 3.8 m depth and 14.1 m to 16.0 m depth, respectively, since the spring of 2024 readings. SI16-3 showed a rate of movement of 0.2 mm/yr over 9.3 m to 11.1 m depth.</p> <p>SAA-P060 showed a rate of movement of 1.6 mm/yr over 2.5 m to 29.5 m depth, and a rate of movement of 1.3 mm/yr over the full length of the pile and waler since the spring of 2024 readings. SAA-P060 has shown a cumulative pile head deflection of 18.5 mm to date in the downslope direction. SAA-P060 has shown an overall relatively steady rate of movement since the end of construction with a total incremental movement of about 6.5 mm in the downslope direction since completion of construction..</p> <p>SAA-P097 has shown no discernible movement since the spring of 2024 readings. SAA-P097 has shown a total pile head deflection of 17.5 mm in the downslope direction to date. SAA-P097 had shown an overall trend of steady</p>

	<p>downslope movement since the end of construction, with peaks of higher downhill movement rates during the winter months.</p> <p>Strain Gauges</p> <p>The strain gauge readings in Pile P066 are summarized in Table PH071-3. Overall, the strain gauges showed relatively small changes in microstrain value compared to the previous readings in the spring of 2023. The greatest change in microstrain was in strain gauge #17 at 2.6 m depth in the downslope face of the pile, which showed a decrease in positive (compressive) microstrain of 10.7 microstrain compared to the spring of 2024 readings.</p> <p>Piezometers</p> <p>Vibrating wire piezometer VW16-1A showed a groundwater elevation of 488.07 m and was dry during the spring 2024 readings. VW16-1B, and VW16-1C, located upslope of the wall, showed an increase in groundwater level of 0.41 m and 0.04 m respectively since the spring of 2024 readings. VW16-2C and VW16-2B, also located upslope of the wall, showed increases in groundwater levels of 0.76 m and 0.50 m, respectively since the spring of 2024 readings. The groundwater level of 482.13 m, measured in VW16-2C on September 5, 2024 was the highest measured in the instrument since it was initialized. However, the overall trend since end of construction had been a gradual increase in the groundwater table upslope of the wall to what now appears to be a relatively steady level with cyclical seasonal fluctuations.</p> <p>VW16-2A continued to be dry (this piezometer has only shown a groundwater level above the tip during a period between August 9, 2022, and September 21, 2022).</p> <p>Of the piezometers located downslope of the wall, VW16-3A showed a decrease in groundwater level of 0.21 m, and VW16-3B showed no change in groundwater level since the spring of 2024 readings.</p> <p>VW16-4A continued to be dry. VW16-5A was dry during the current readings. VW16-4A and VW16-5A tend to remain dry except for brief periods that correspond to either higher than normal rainfall or spring thaw.</p> <p>Load Cells</p> <p>The load cells generally showed small changes in measured load compared to the spring of 2024 readings, ranging from a decrease of 4.78 kN in VC1920 (anchor P060A) to an increase of 3.90 kN in VC1922 (anchor P060B).</p> <p>It should be noted that load cells VC1922, anchor P060B, and VC1918, anchor P097B, have each lost the function of one vibrating wire channel. The loads that are now reported for these three load cells are based on the average of the two functioning channels and projecting a reading for the now malfunctioning channel based on the last reading taken for that channel and the changes observed in the two functional channels since that time.</p> <p>Load cells VC1924 (anchor P022A) and VC1923 (anchor P022B) lost function of a second vibrating wire channel during July 2024, and the readings reported were the most recent available reading.</p> <p>Since the end of construction, the load cells have generally shown an overall trend of increasing load, with the highest seasonal loads measured towards the end of each winter. The current loads measured in the upper two anchor rows at all three piles, as well as the lower row at P022, are above the design loads. However, the recent readings for P060 and P097 appear to show that the anchor loads in the upper two anchor rows in P060 and P097 are starting to level off.</p>
Future Work:	<p>The instruments should be read again in the spring of 2025. It is recommended to continue monitoring the deflections in the pile wall and the load cell readings to see if there are further increases in deflection or loads compared to the</p>

	<p>warning threshold values. If the deflections and or load cell readings continue to increase, it may become necessary to add additional anchors to the pile wall.</p> <p>It is recommended to wait and see if load cells VC1924 (anchor P022A) and VC1923 (anchor P022B) regain functioning of one of their vibrating wire channels by the spring of 2025 readings. If only one vibrating wire channel is functioning going forwards, the readings should be reported based on only the working channel, and comparisons should be made based off this new estimated load. Alternatively, a projected load trend based on the historic data may need to be estimated for input into future wall performance assessments. The load cells at these anchors have not shown a clear trend of leveling off and projected loads are up to 50 kN above the design load level. With respect to these observations, a review of the current anchor load distribution could be undertaken to better assess the pile wall performance.</p>
Instrumentation Repairs:	No instrument repairs are required at this time.
Additional Comments:	

Attachments:	<ul style="list-style-type: none"> ▪ Table PH071-1: Fall 2024 – HWY 986:01, Daishowa West Hill Slope Inclinometer Instrumentation Reading Summary ▪ Table PH071-2: Fall 2024 – HWY 986:01, Daishowa West Hill Shape Accelerometer Array Instrumentation Reading Summary ▪ Table PH071-3 Fall 2024 – HWY 986:01, Daishowa West Hill Vibrating Wire Strain Gauge Instrumentation Reading Summary ▪ Table PH071-4: Fall 2024 – HWY 986:01, Daishowa West Hill Vibrating Wire Piezometer Instrumentation Reading Summary ▪ Table PH071-5: Fall 2024 – HWY 986:01, Daishowa West Hill Load Cell Instrumentation Reading Summary ▪ Statement of Limitations and Conditions ▪ APPENDIX A - PH071 FALL 2024 <ul style="list-style-type: none"> □ Field Inspector's report □ Site Plan Showing Approximate Instrument Locations (Drawings No. 32121 PH071 1 and 32121-PH071-2) □ SI Reading Plots □ SAA Reading Plots □ Figure PH071-1 (Upslope Piezometer Elevations) □ Figure PH071-2 (Downslope Piezometer Elevations) □ Figure PH071-3 (Load Cell Data Pile P22) □ Figure PH071-4 (Load Cell Data Pile P60) □ Figure PH071-5 (Load Cell Data Pile P97)
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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.
Roger Skirrow, M.Sc., P. Eng.
Senior Geotechnical Engineer

Lucas Green, P.Eng.
Geotechnical Engineer

Table PH071-1: Fall 2024 – HWY 986:01, Daishowa West Hill Slope Inclinometer Instrumentation Reading Summary

Date Monitored: September 19, 2024

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.)
SI16-3	December 2, 2017 (Re-initialized)	32.5 over 0.1 m to 3.8 m depth in 101° direction	9.9 in October 2020	Operational	May 20, 2024	No discernible movement	N/A	-5.1
		4.0 over 9.3 m to 11.1 m depth in 136° direction	1.8 in October 2020			<0.1	0.2	0.2
		2.8 over 14.1 m to 16.0 m depth in 101° direction	1.2 in October 2020			No discernible movement	N/A	-0.2
SI16-4	September 6, 2016	9.7 over 10.4 m to 12.4 m depth	171.6 on September 15, 2016	Sheared at 11.4 m depth	September 30, 2016	N/A	N/A	N/A
SI16-5	August 30, 2016	64.5 over 8.0 m to 9.5 m depth	2404.8 on September 9, 2016	Sheared at 8.5 m depth	September 9, 2017	N/A	N/A	N/A

Drawings 32121-PH071-1 and 32121-PH071-2 in Appendix A provide a sketch of the approximate location of the monitoring instrumentation for this site.

Table PH071-2: Fall 2024 – HWY 986:01, Daishowa West Hill Shape Accelerometer Array Instrumentation Reading Summary

Date Monitored: September 19, 2024

INSTRUMENT #	DATE INITIALIZED	TOTAL CUMULATIVE RESULTANT MOVEMENT AT NOTED DEPTH SINCE INITIAL READING (mm)	CURRENT STATUS	DATE OF PREVIOUS READING	INCREMENTAL MOVEMENT SINCE PREVIOUS READING (mm)	AVERAGE RATE OF MOVEMENT SINCE PREVIOUS READING ⁽¹⁾ (mm/yr.)	CHANGE IN AVERAGE RATE OF MOVEMENT SINCE PREVIOUS READING (mm/yr.)
SAA-P022	March 17, 2016	5.1 over 0 m to 29.5 m depth	Not functioning ⁽²⁾	September 9, 2016	N/A	N/A	N/A
		6.7 over 2.5 m to 29.5 m depth			N/A	N/A	N/A
SAA-P060	March 17, 2016	18.5 over 2.5 m to 29.5 m depth	Operational	May 20, 2024	0.5	1.6	1.0
		25.8 over 0.0 m to 29.5 m depth			0.4	1.3	0.1
SAA-P097	March 17, 2016	17.5 over 2.5 m to 29.5 m depth	Operational	May 20, 2024	No discernible movement	N/A	-1.8

Drawings: 32121-PH071-1 and 32121-PH071-2 in Appendix A provide a sketch of the approximate location of the monitoring instrumentation for this site.

Notes:

1. SAA readings are recorded once per day by the on-site datalogger. Average movement rates are compared to the previous reading event.
2. SAA-P022 stopped functioning on September 13, 2016

Table PH071-3: Fall 2024 – HWY 986:01, Daishowa West Hill Vibrating Wire Strain Gauge Instrumentation Reading Summary

Date Monitored: September 19, 2024

DEPTH FROM TOP OF PILE P066 (m)	GAUGE #	TOTAL MICROSTRAIN (MAY 20, 2024) (µε)	CHANGE IN MICROSTRAIN SINCE PREVIOUS READING (OCT. 10, 2023) (µε)	MEASURED TEMPERATURE (°c)	GAUGE #	TOTAL MICROSTRAIN (SEP 20, 2024) (µε)	CHANGE IN MICROSTRAIN SINCE PREVIOUS READING (MAY 20, 2024) (µε)	MEASURED TEMPERATURE (°c)
	UPSLOPE PILE FACE				DOWNSLOPE PILE FACE			
0.575	11	-107.5	-5.3	20.0	16	N/A	N/A	N/A
2.575	12	-47.9	-0.4	18.5	17	146.9	-10.7	20.3
4.575	13	-52.2	5.3	13.3	18	450.1	-4.2	13.3
6.575	14	-40.3	1.9	9.5	19	437.5	2.2	9.5
8.575	15	-43.0	1.3	-95.1	20	N/A	N/A	N/A
11.075	1	-9.9	-9.3	7.3	6	N/A	N/A	N/A
13.075	2	29.0	0.0	7.2	7	-67.5	2.3	-144.6
15.075	3	32.1	-0.5	7.2	8	166.8	-0.1	7.3
17.075	4	37.7	0.1	5.1	9	165.9	0.1	7.3
19.075	5	-3.8	-0.3	7.3	10	N/A	N/A	N/A
21.075	21	24.3	0.1	-136.6	22	192.3	-0.4	7.2
23.075	23	-25.6	0.1	7.1	24	117.2	-0.4	7.2
25.075	25	13.4	0.1	7.1	26	N/A	N/A	7.1
27.075	27	N/A	N/A	N/A	28	583.8	-0.3	7.0

Drawings 32121-PH071-1 and 32121-PH071-2 in Appendix A provide a sketch of the approximate location of the monitoring instrumentation for this site.

Note: Strain gauges number 6, 10, 16, 20, 26 and 27 are not functioning

Table PH071-4: Fall 2024 – HWY 986:01, Daishowa West Hill Vibrating Wire Piezometer Instrumentation Reading Summary

Date Monitored: September 19, 2024

INSTRUMENT	DATE INITIALIZED	TIP ELEV. (m)	GROUND ELEV. (m)	CURRENT STATUS	HIGHEST RECORDED GROUNDWATER ELEVATION (m)	CURRENT GROUNDWATER ELEVATION (m)	PREVIOUS GROUNDWATER ELEVATION (m) (MAY 20, 2024)	CHANGE IN WATER LEVEL SINCE PREVIOUS READING (m)
VW16-1A	July 27, 2016	487.04	491.04	Active	488.65 on November 10, 2023	488.07	Below Tip Elevation (Dry)	N/A
VW16-1B	July 27, 2016	482.04	491.04	Active	485.47 on November 10, 2023	485.20	484.79	0.41
VW16-1C	July 27, 2016	473.04	491.04	Active	482.61 on November 10, 2023	481.44	481.40	0.04
VW16-2A	April 26, 2017	484.73	487.73	Active	484.82 on September 9, 2022	Below Tip Elevation (Dry)	Below Tip Elevation (Dry)	N/A
VW16-2B	April 26, 2017	478.73	487.73	Active	484.20 on September 9, 2022	483.85	483.09	0.76
VW16-2C	April 26, 2017	469.73	487.73	Active	482.13 on September 5, 2024	482.09	481.59	0.50
VW16-3A	September 7, 2016	477.49	482.99	Active	481.87 on July 4, 2024	481.11	481.32	-0.21
VW16-3B	September 7, 2016	464.99	482.99	Active	470.25 on September 7, 2016	465.88	465.88	0
VW16-4A	August 30, 2016	470.99	481.43	Active	475.30 on June 18, 2020	Below Tip Elevation (Dry)	Below Tip Elevation (Dry)	N/A
VW16-4B	August 30, 2016	457.24	481.43	Not functioning	Below Tip Elevation (Dry)	N/A	N/A	N/A
VW16-5A	August 30, 2016	468.02	471.02	Active	470.09 on March 22, 2019	Below Tip Elevation (Dry)	Below Tip Elevation (Dry)	N/A
VW16-5B	August 30, 2016	452.52	471.02	Not functioning	452.60 on September 12, 2016	N/A	N/A	N/A

Drawings 32121-PH071-1 and 32121-PH071-2 in Appendix A provide a sketch of the approximate location of the monitoring instrumentation for this site.

Table PH071-5: Fall 2024 – HWY 986:01, Daishowa West Hill Load Cell Instrumentation Reading Summary

Date Monitored: September 19, 2024

LOAD CELL SERIAL #	ANCHOR NUMBER	DESIGN LOAD / LOCK-OFF LOAD (kN)	MAXIMUM RECORDED LOAD (kN)	RECORDED LOAD ⁽¹⁾ (kN)	PREVIOUS RECORDED LOAD ⁽¹⁾ (MAY 20, 2024) (kN)	CHANGE IN LOAD SINCE PREVIOUS READING (kN)
VC1924	P022A	230/184	281.69 ⁽²⁾ on March 14, 2023	261.34 (July 25, 2024) ⁽²⁾	263.35 ⁽²⁾	-2.01
VC1923	P022B	230/184	286.32 ⁽³⁾ on March 23, 2023	278.12 (July 16, 2024) ⁽³⁾	274.31 ⁽³⁾	3.81
VC1925	P022C	230/184	239.89 on February 1, 2024	237.97 (September 19, 2024)	236.06	1.91
VC1920	P060A	230/184	288.90 on February 3, 2022	265.93 (September 19, 2024)	270.71	-4.78
VC1922	P060B	230/184	301.83 on January 28, 2022	288.01 (September 19, 2024) ⁽⁵⁾	284.11 ⁽⁵⁾	3.90
VC1921	P060C	230/184	236.85 on February 1, 2024	235.62 (September 19, 2024)	234.09	1.53
VC1917	P097A	230/184	303.66 on March 14, 2022	242.62 (September 19, 2024)	246.68	-4.06
VC1918	P097B	230/184	293.16 on March 9, 2022	254.97 (September 19, 2024) ⁽⁴⁾	253.20 ⁽⁴⁾	1.77
VC1919	P097C	230/184	227.06 on March 17, 2022	221.15 (September 19, 2024)	220.22	0.93

Drawings 32121-PH071-1 and 32121-PH071-2 in Appendix A provide a sketch of the approximate location of the monitoring instrumentation for this site.

Notes:

- 1) Load cell data is recorded daily with the datalogger on site. Dataloggers are downloaded twice annually during instrumentation readings. See figures PH071-3, PH071-4, and PH071-5 in Appendix A for combined historical instrument readings.

- 2) Load is based on reading from July 25, 2024. As of September 16, 2021, only two wire channels are functional on load cell VC1924. The reported loads after this date are based on the average of the two functional channels and a projected reading for the now malfunctional channel. After July 25, only one wire channel was functional, so July 25, 2024 reading was used for comparison.
- 3) Load is based on reading from July 16, 2024. As of October 4, 2021, only two wire channels are functional on load cell VC1923. The reported loads after this date are based on the average of the two functional channels and a projected reading for the now malfunctional channel. After July 25, only one wire channel was functional, so July 16, 2024 reading was used for comparison.
- 4) As of May 15, 2022, only two wire channels are functional on load cell VC1918. The reported loads after this date are based on the average of the two functional channels and a projected reading for the now malfunctional channel.
- 5) As of December 5, 2023, only two wire channels are functional on load cell VC1922. The reported loads after this date are based on the average of the two functional channels and a projected reading for the now malfunctional channel.



STATEMENT OF LIMITATIONS AND CONDITIONS

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This Report has been prepared in accordance with generally accepted engineering or environmental consulting practices in the applicable jurisdiction. No other warranty, expressed or implied, is intended or made.

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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.

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- 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 in order to confirm and document that the site conditions do not materially differ from those interpreted 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.

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THURBER ENGINEERING LTD.

**ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS GRMP (CON0022164)
PEACE REGION (PEACE RIVER DISTRICT)
INSTRUMENTATION MONITORING RESULTS**

FALL 2024

**APPENDIX A
DATA PRESENTATION**

SITE PH071: HWY 986:01, DAISHOWA WEST HILL

**ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS
PEACE REGION (PEACE RIVER DISTRICT)
INSTRUMENTATION MONITORING FIELD SUMMARY (PH071)
SPRING 2024**

Location: Daishowa West Hill (Hwy 986:01 C1 28.474) File Number: 32121 Probe: RST Set 8R Cable: RST Set 8R	Readout: Casing: 3.34 Temp: 20 Read by: NRM/NKR
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SLOPE INCLINOMETER (SI) READINGS

SI#	GPS Location (UTM 11)		Date	Stickup (m)	Depth from top of Casing (ft)	Magn. North A+ Groove	Current Bottom Depth Readings				Probe/ Reel #	Size (")	Remarks
	Easting (m)	Northing (m)					A+	A-	B+	B-			
SI16-3	485023	6245526	19-Sep-24	0.8	130 to 2	95	184	-174	27	-27	8R/8R	3.34	

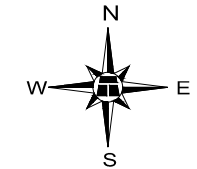
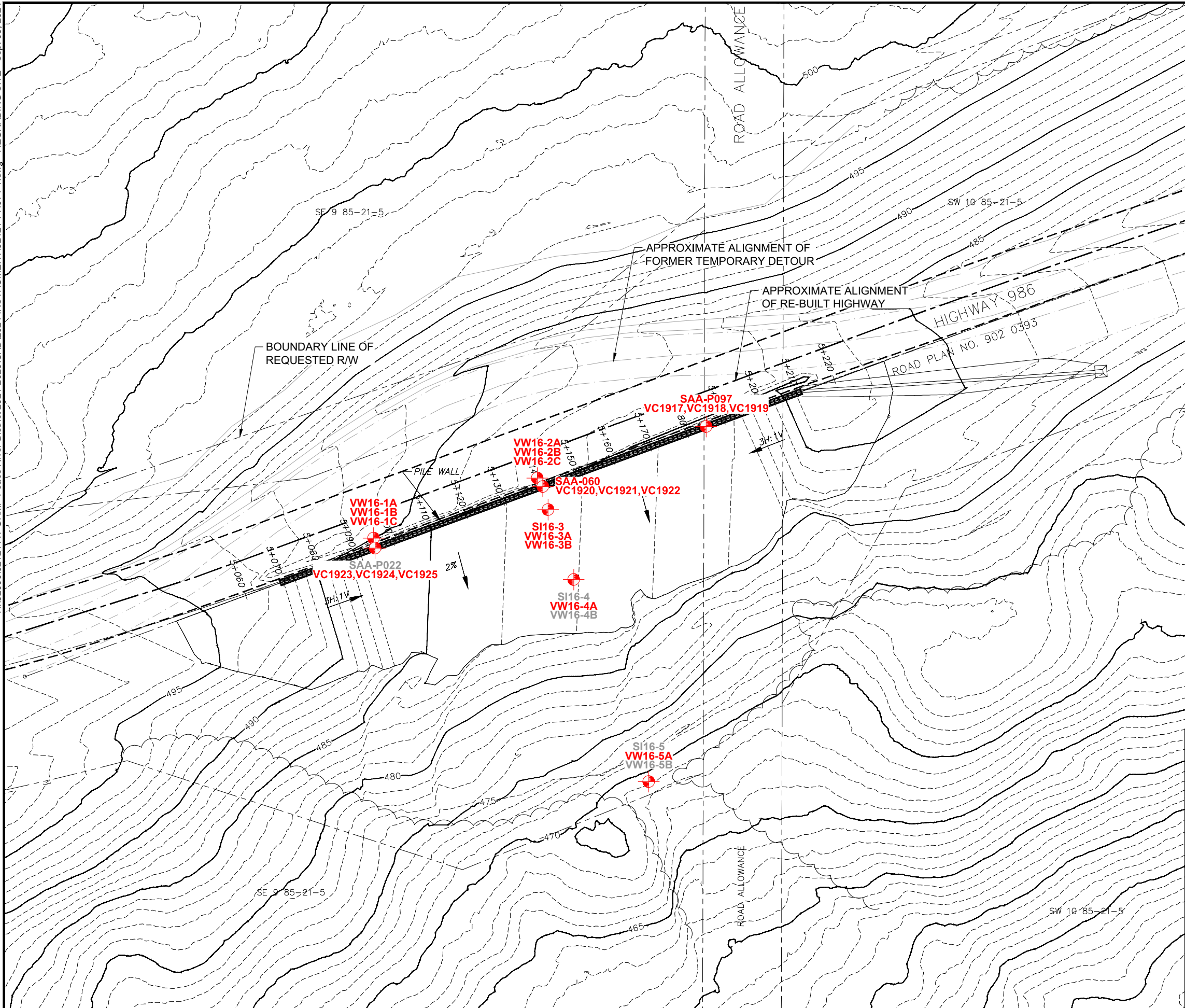
VIBRATING WIRE PIEZOMETER (VW) READINGS

VW #	Serial #	GPS Location (UTM 11)		Datalogger Serial #	Date	Comment
		Easting (m)	Northing (m)			
VW16-3A	VW36116	485022.21	6245527.86	RST 4885	19-Sep-24	Downloaded
VW16-3B	VW36119	485022.21	6245527.86			Downloaded
VW16-4A	VW36118	485028.75	6245510.02	RST 4915		Downloaded
<i>VW16-4B</i>	<i>VW36121</i>	<i>485028.75</i>	<i>6245510.02</i>			<i>Not Working</i>
VW16-5A	VW36117	485047.91	6245458.47	RST 4916		Downloaded
<i>VW16-5B</i>	<i>VW36120</i>	<i>485047.91</i>	<i>6245458.47</i>			<i>Not Working</i>

INSPECTOR REPORT

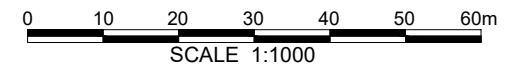
CR6 datalogger is connected to a modem and does not need to be downloaded. CR6 datalogger is used to read Shape Accelerometer Array SAA-P060, SAA-P097, Vibrating Wire Piezometers VW16-1A to VW16-2C, and Load Cells VC1917 to VC1925.
Note: Download data from RST loggers. Do not take manual readings from VW16-4A/B

H:\32000\32121 AT GRMP Peace River District 2021-2025\CAD\2021 INSTRUMENT\32121-PH071-1.dwg - REGRADING SITE - Sep. 08, 2021



- LEGEND**
- APPROXIMATE INSTRUMENT LOCATION
 - TREE LINE
 - 490 GROUND CONTOURS
 - SI SLOPE INCLINOMETER
 - VW VIBRATING WIRE PIEZOMETER
 - VC VIBRATING WIRE LOAD CELL
 - SAA SHAPE ACCELEROMETER ARRAY

- NOTES:**
1. TOPOGRAPHIC SURVEY AND COORDINATE GEOMETRY INFORMATION AS OF DECEMBER 2015 AS SUPPLIED BY WSP.
 2. CONTOUR LINES ARE AT 1 m INTERVALS, MAJOR CONTOURS ARE LABELED AT FIVE METRE INTERVAL UNLESS NOTED OTHERWISE.
 3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.



BASE PLAN PROVIDED BY WSP

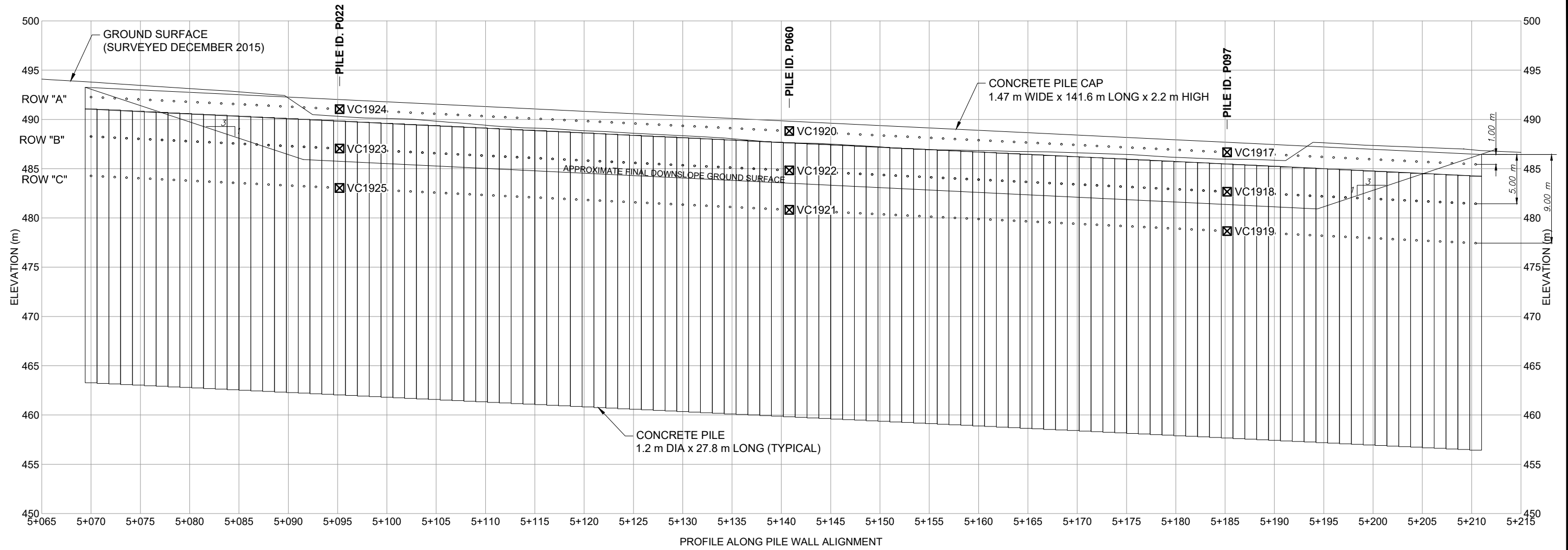
PEACE REGION (PEACE RIVER DISTRICT)

**PH071: PEACE RIVER DIASHOWA WEST HILL
INSTRUMENTATION READINGS**

DWG No. 32121-PH071-1

DRAWN BY	ML
DESIGNED BY	BWN
APPROVED BY	DWP
SCALE	1:1000
DATE	SEPTEMBER 2021
FILE No.	32121

THURBER ENGINEERING LTD.



LEGEND

☒ LOAD CELL LOCATION



PEACE REGION (PEACE RIVER DISTRICT)

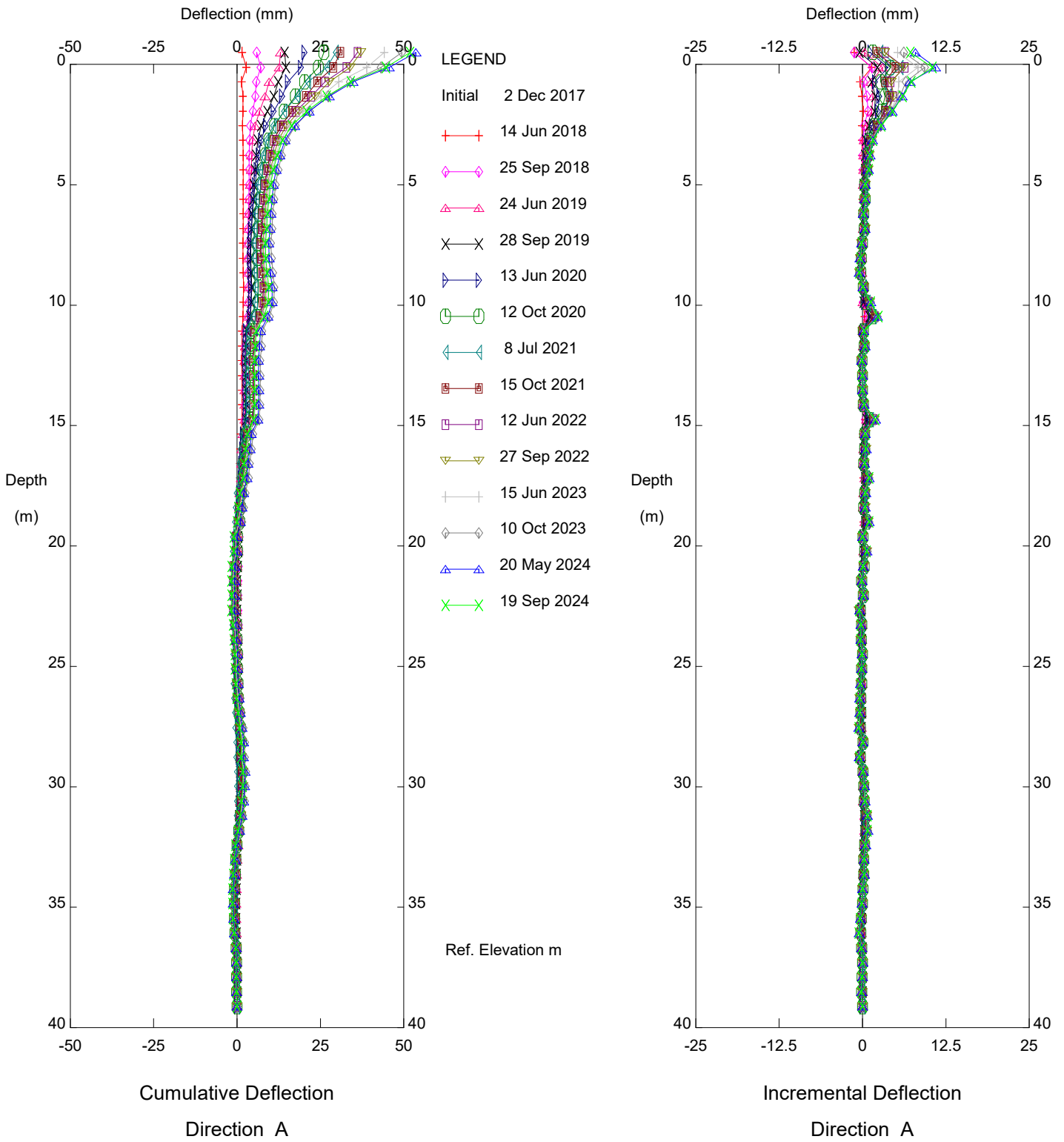
**PH071: PEACE RIVER DIASHOWA WEST HILL
INSTRUMENTATION READINGS**

DWG No. 32121-PH071-2

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APPROVED BY	DWP
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FILE No.	32121



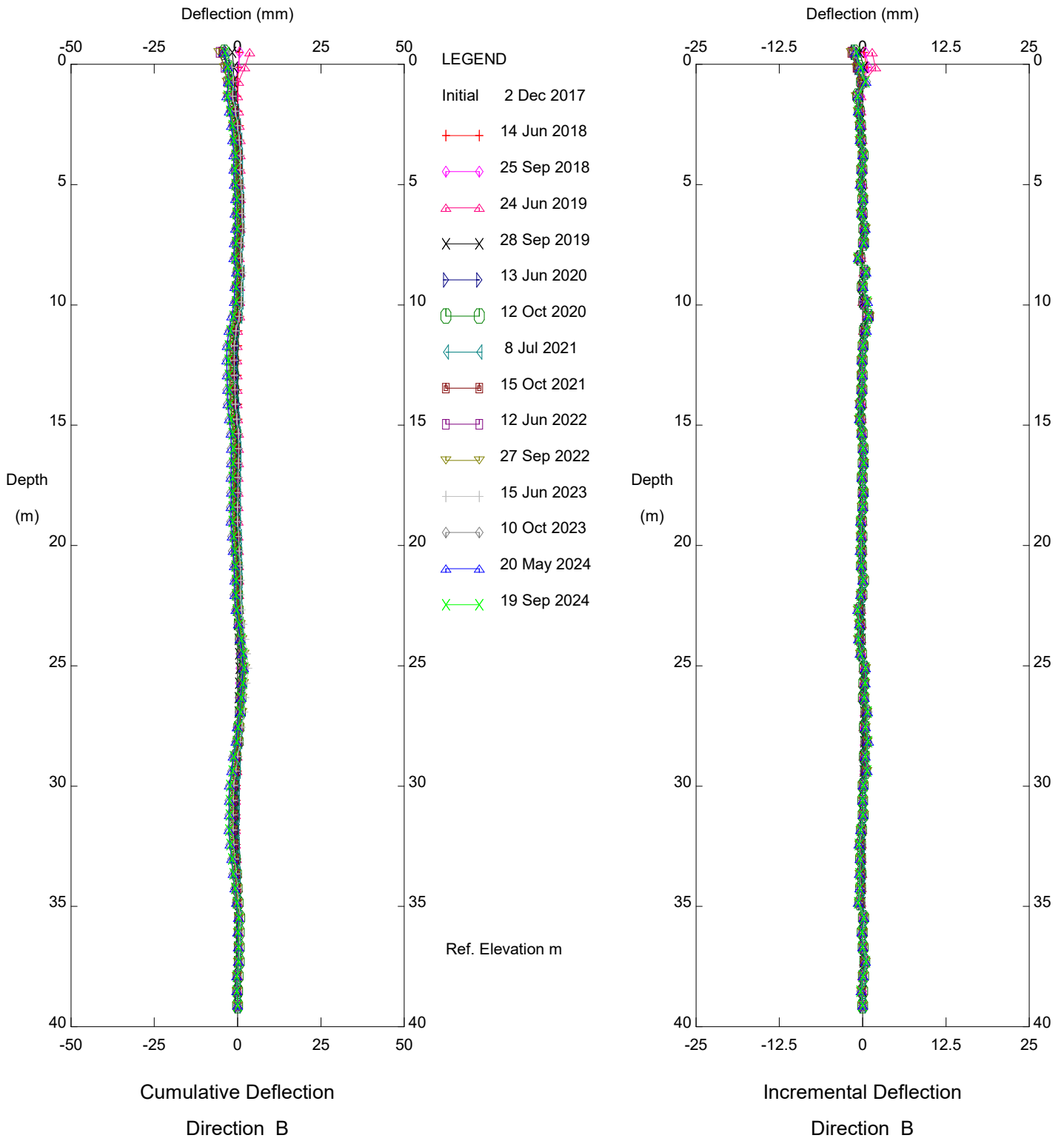
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PH071 Daishowa West, Inclinometer SI16-3

Alberta Transportation

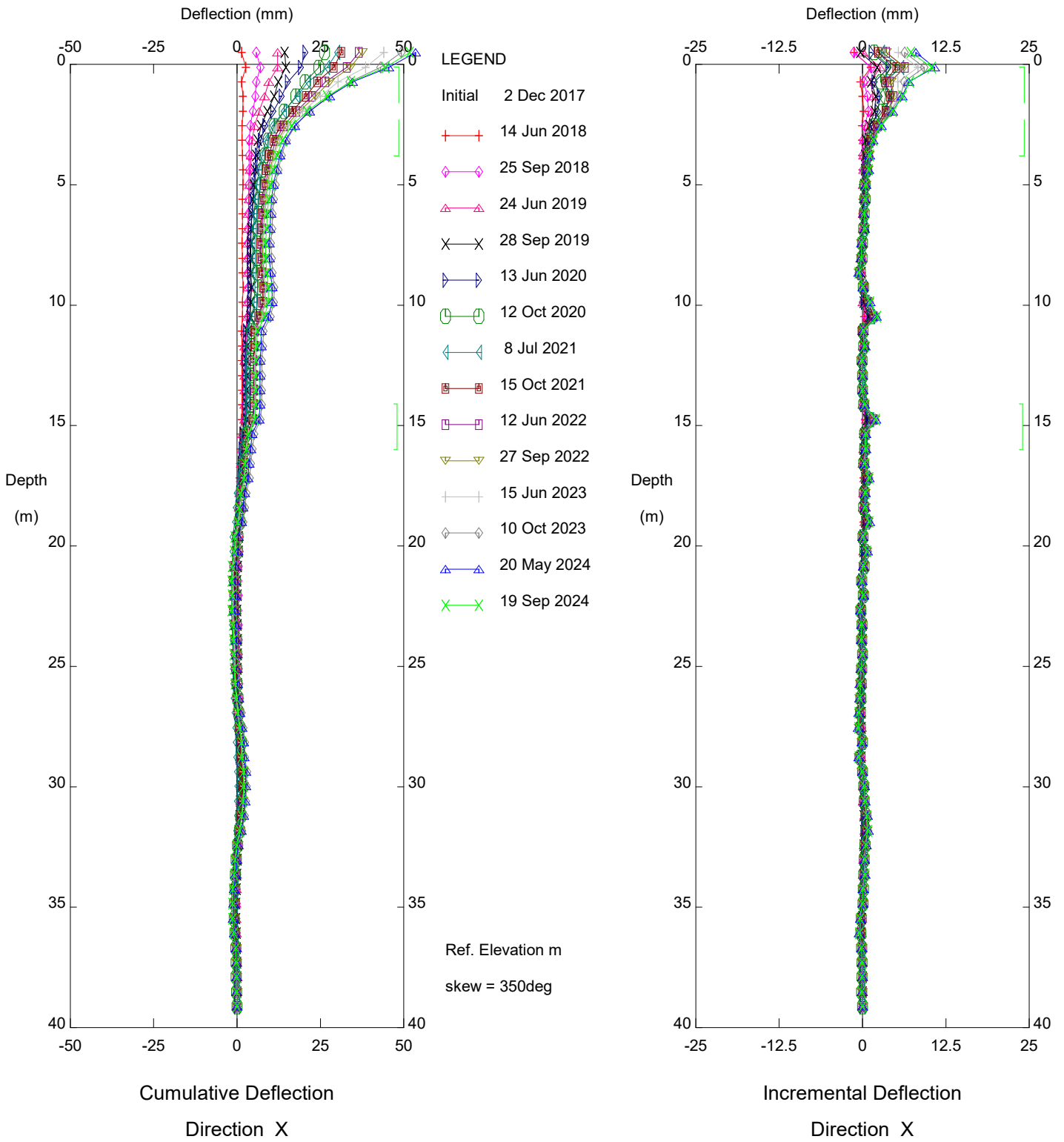
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PH071 Daishowa West, Inclinometer SI16-3

Alberta Transportation

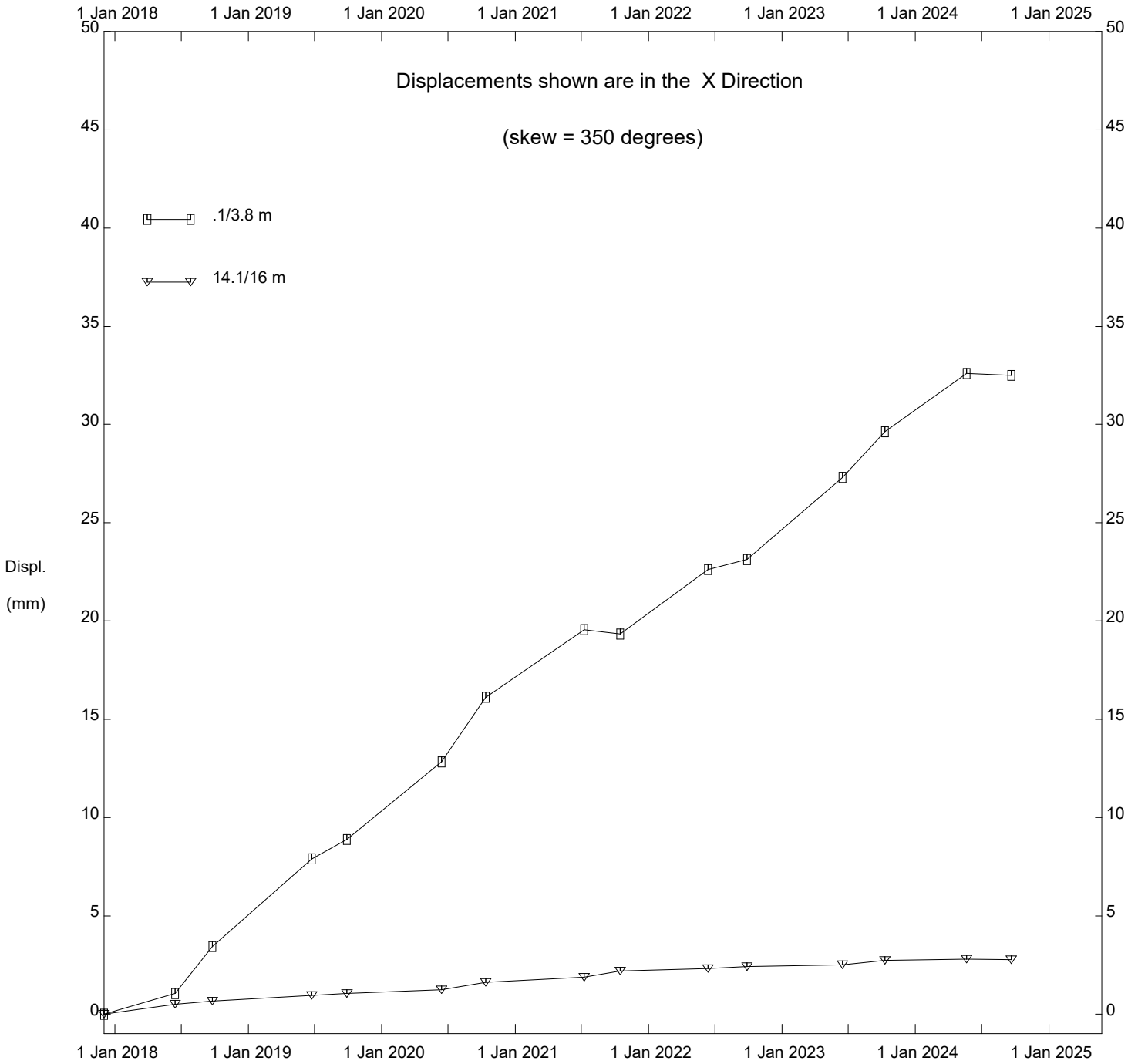
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Alberta Transportation

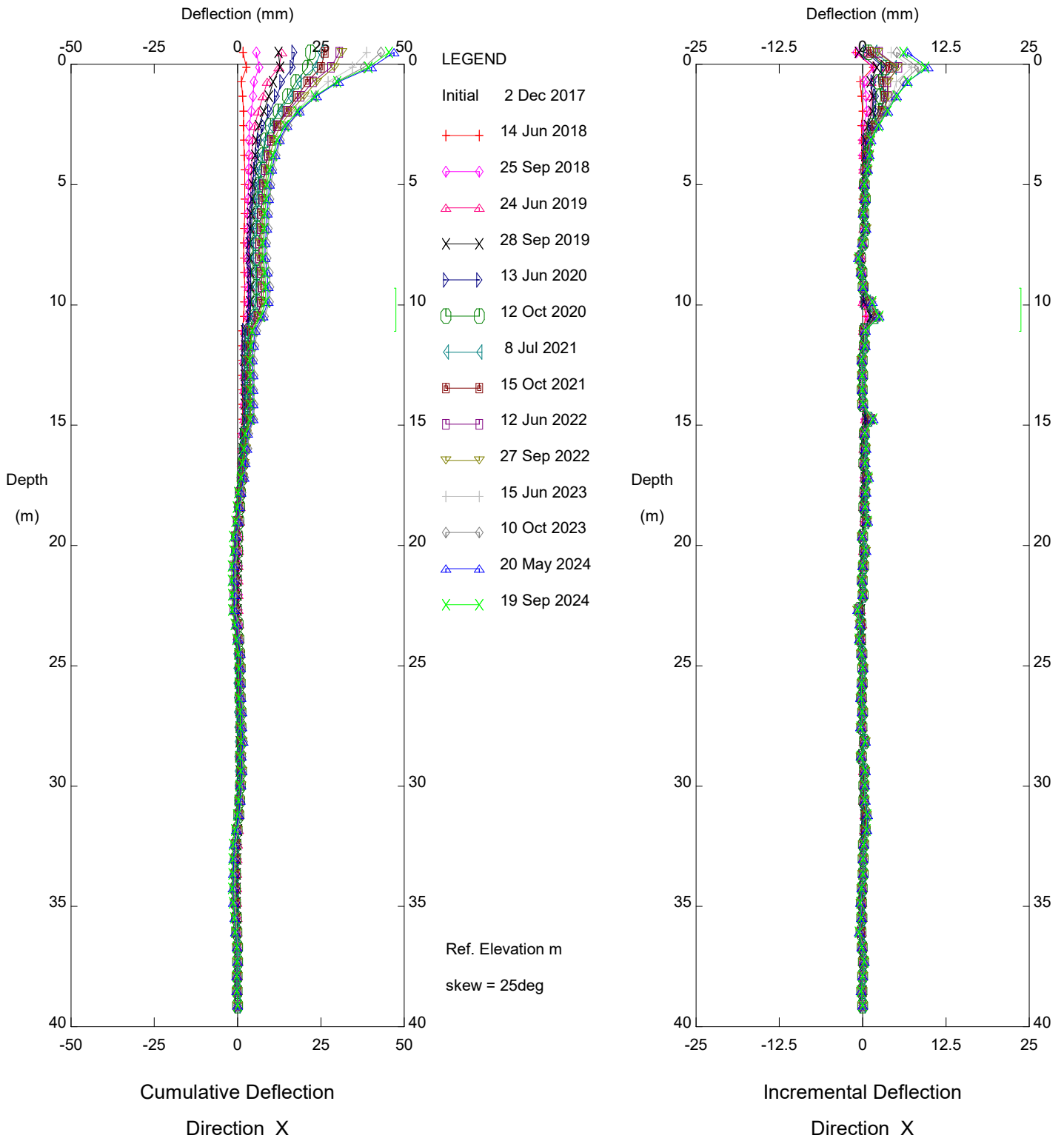
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PH071 Daishowa West, Inclinator SI16-3

Alberta Transportation

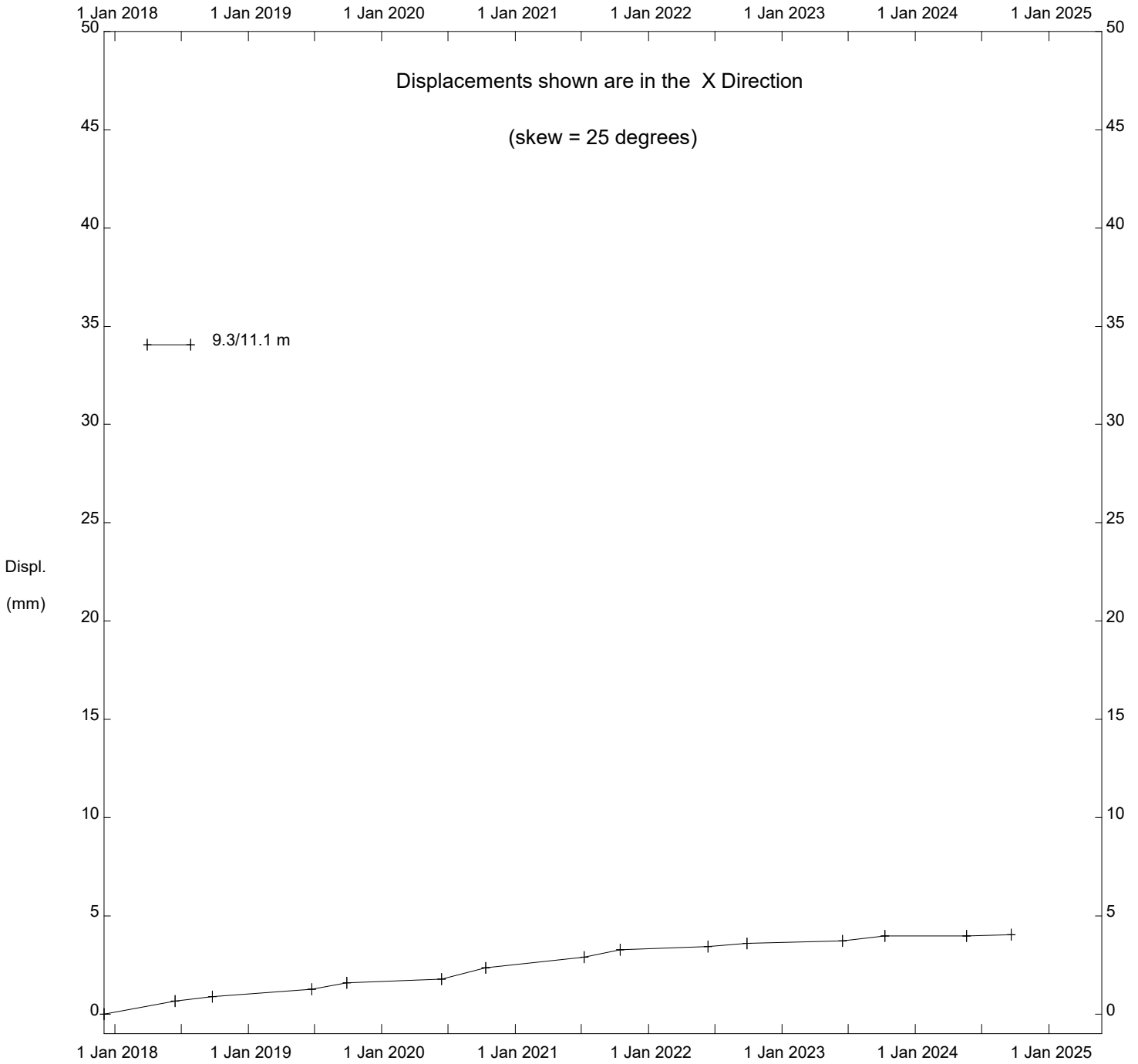
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PH071 Daishowa West, Inclinometer SI16-3

Alberta Transportation

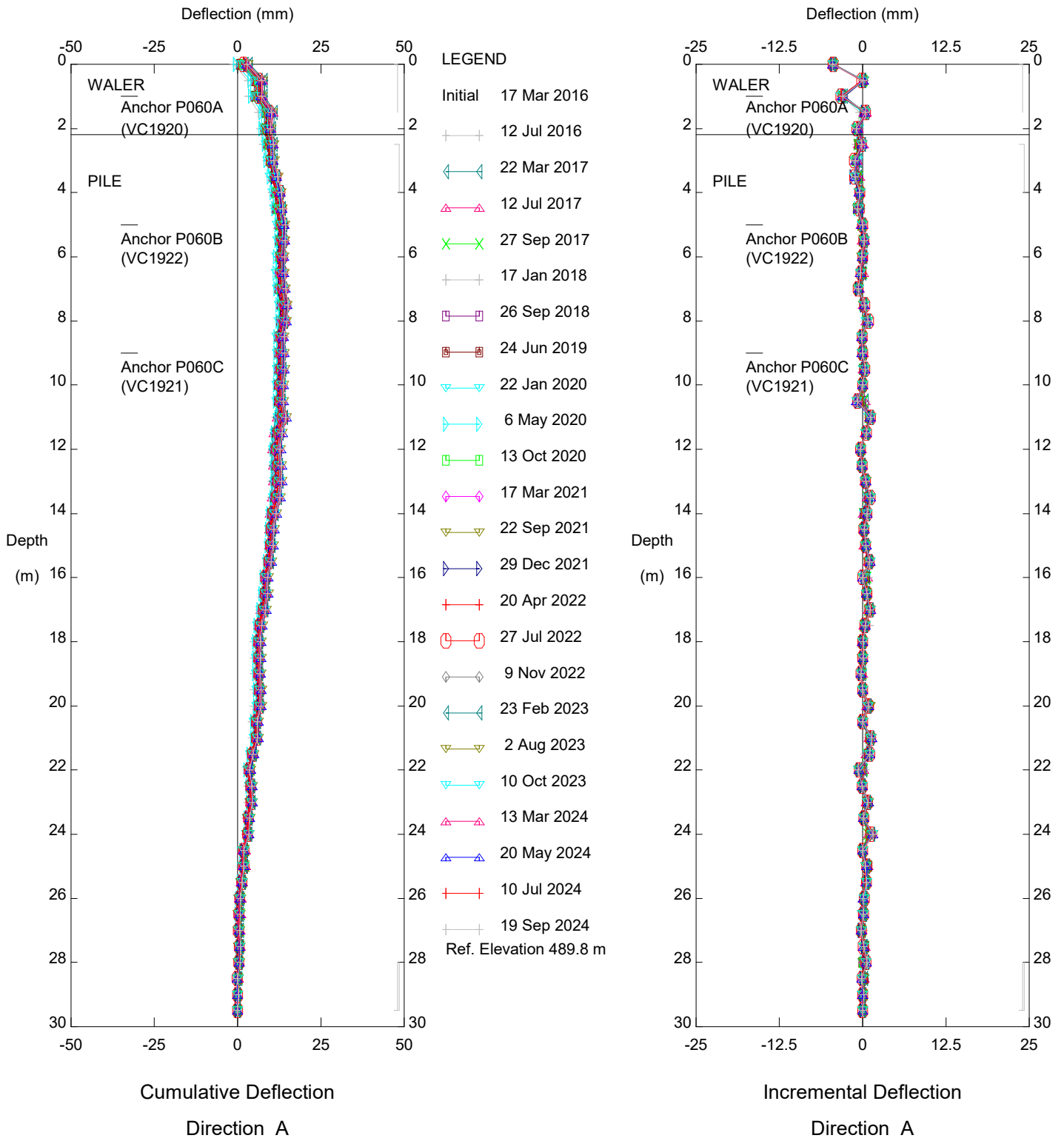
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PH071 Daishowa West, Inclinometer SI16-3

Alberta Transportation

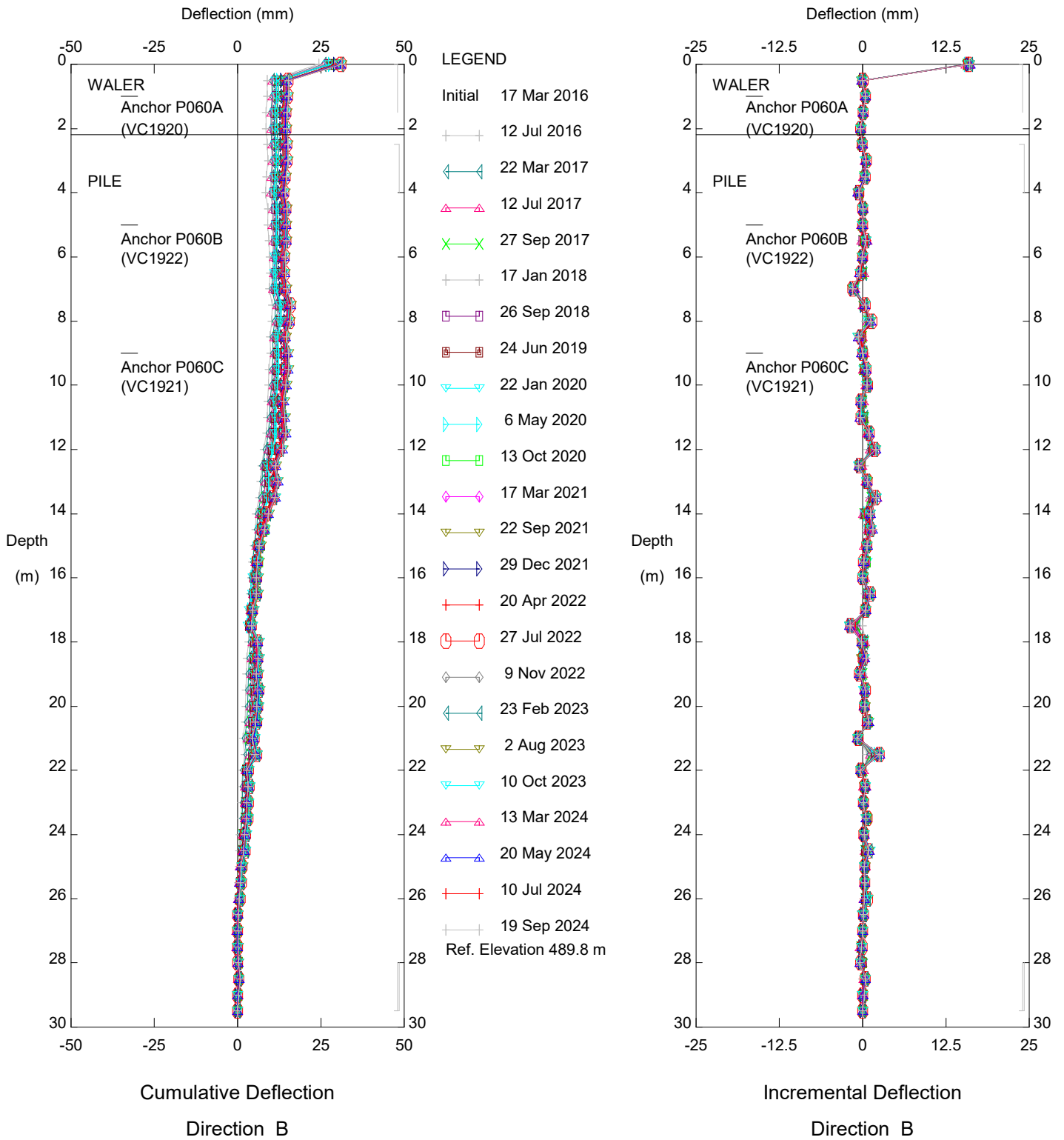
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Hwy 986:01 Daishowa West, Inclinometer SAA-P060

Alberta Transportation

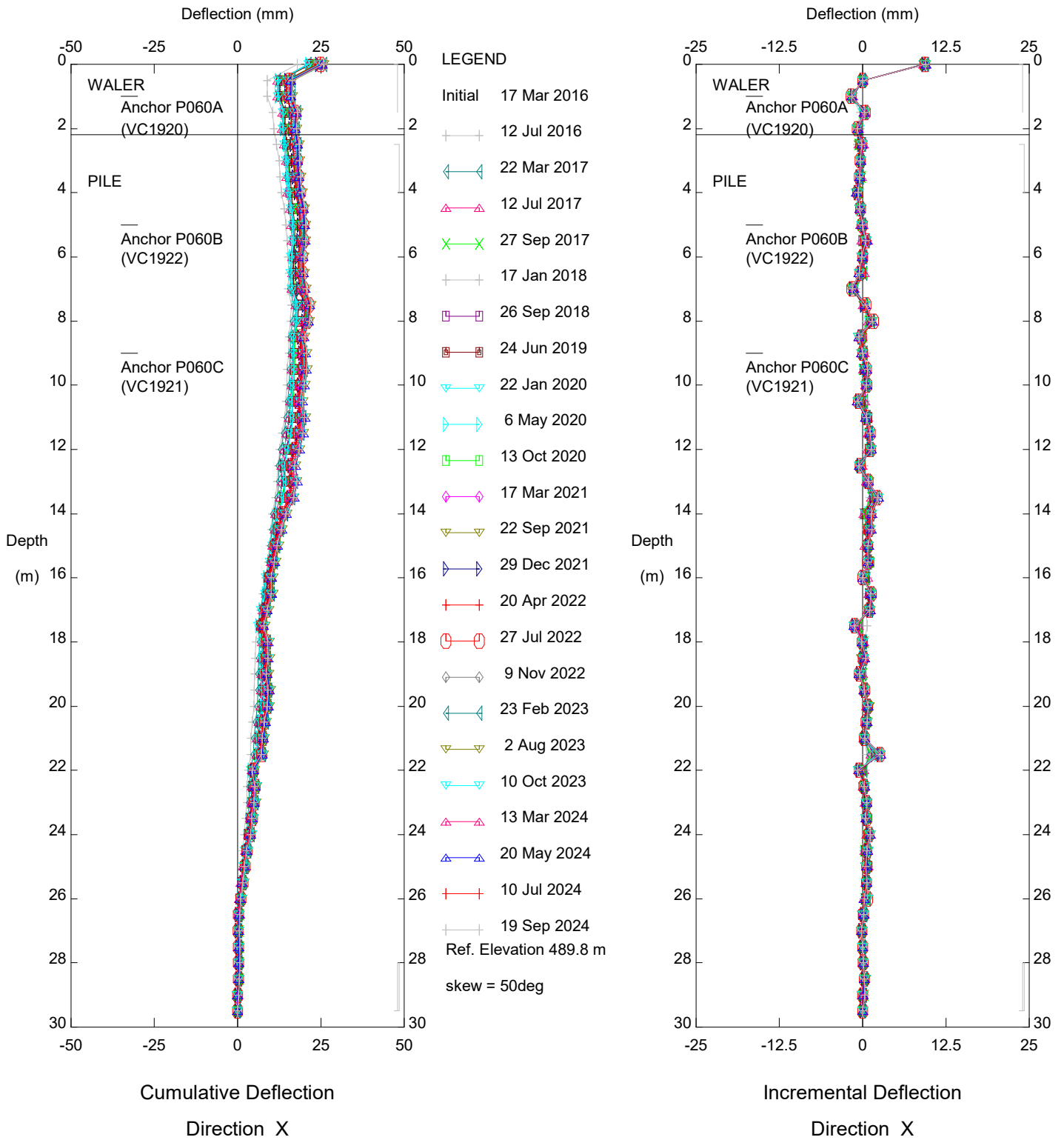
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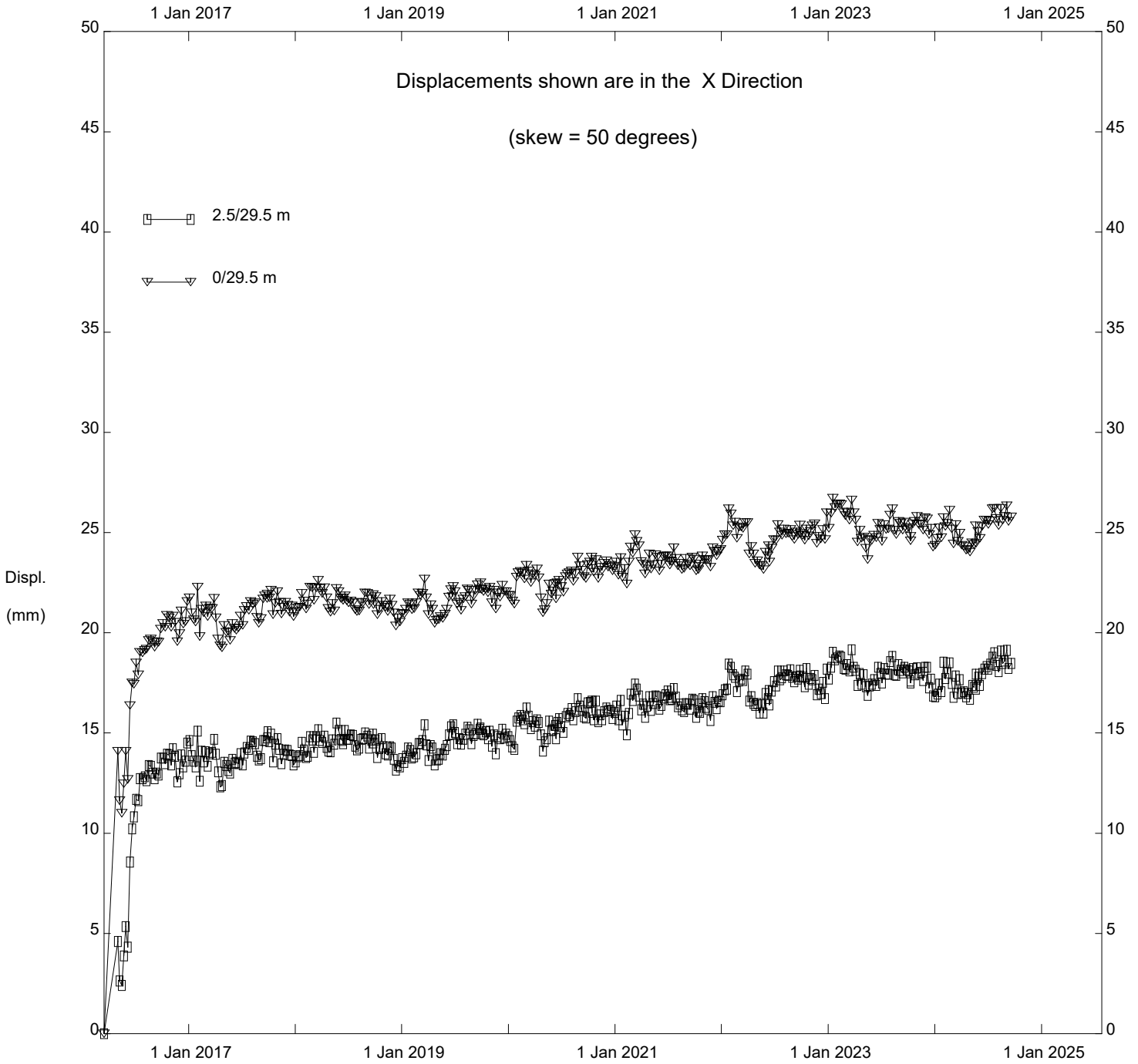
Alberta Transportation

Thurber Engineering Ltd.



Hwy 986:01 Daishowa West, Inclinometer SAA-P060

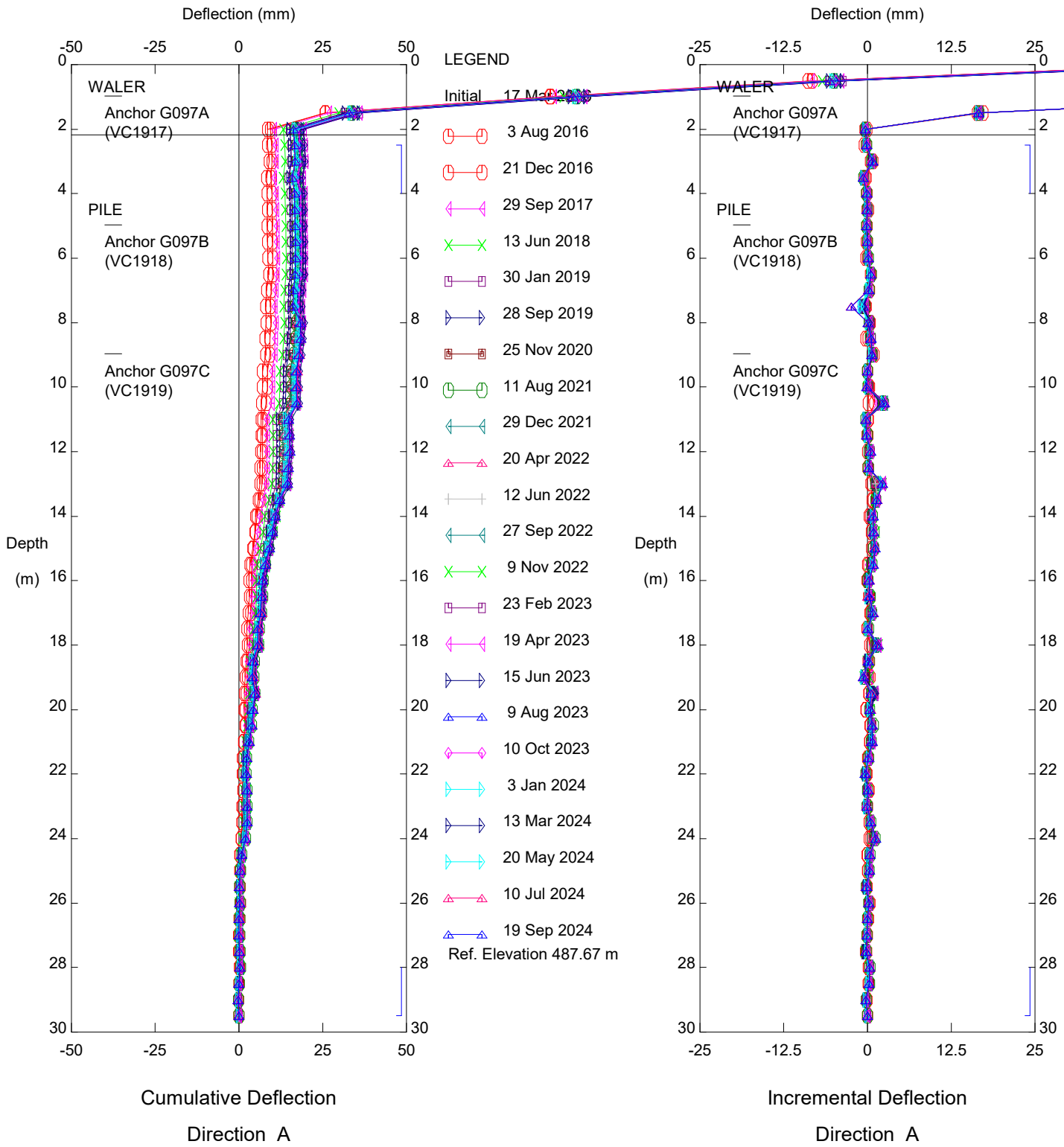
Alberta Transportation



Hwy 986:01 Daishowa West, Inclinator SAA-P060

Alberta Transportation

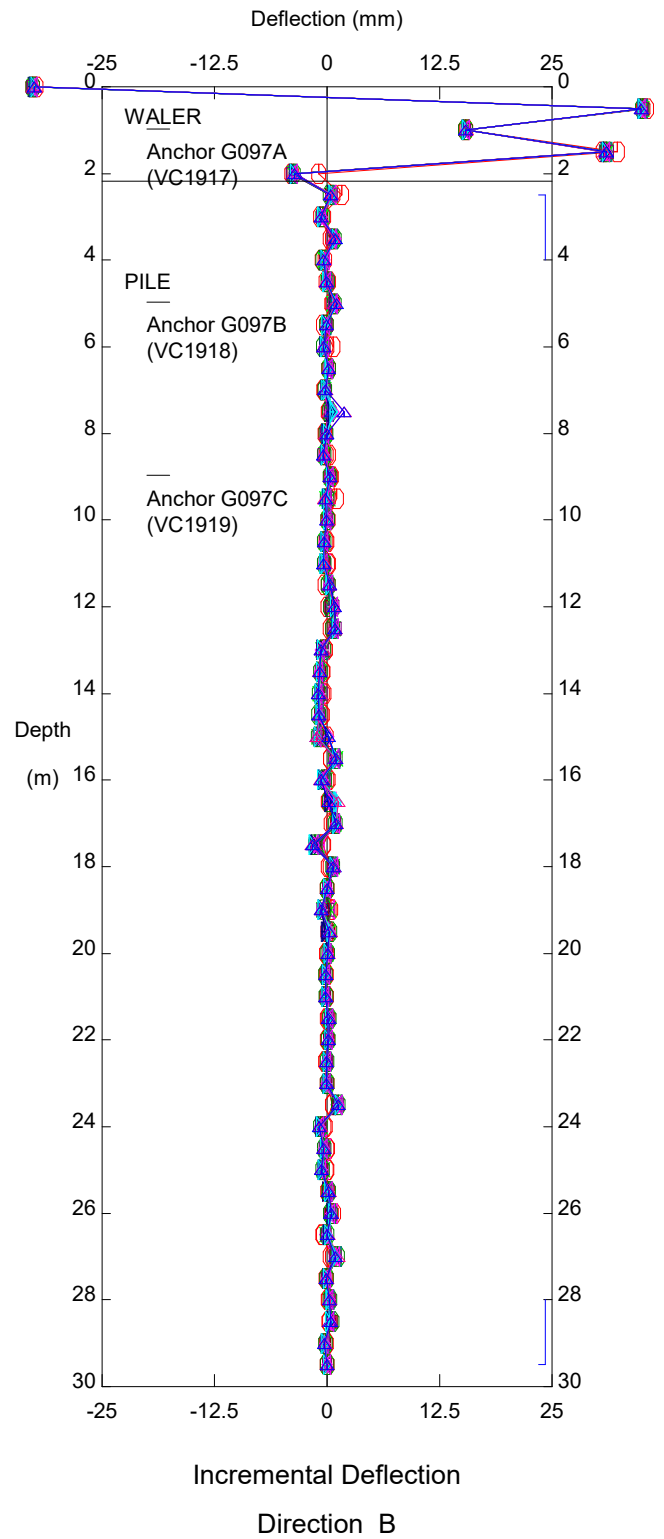
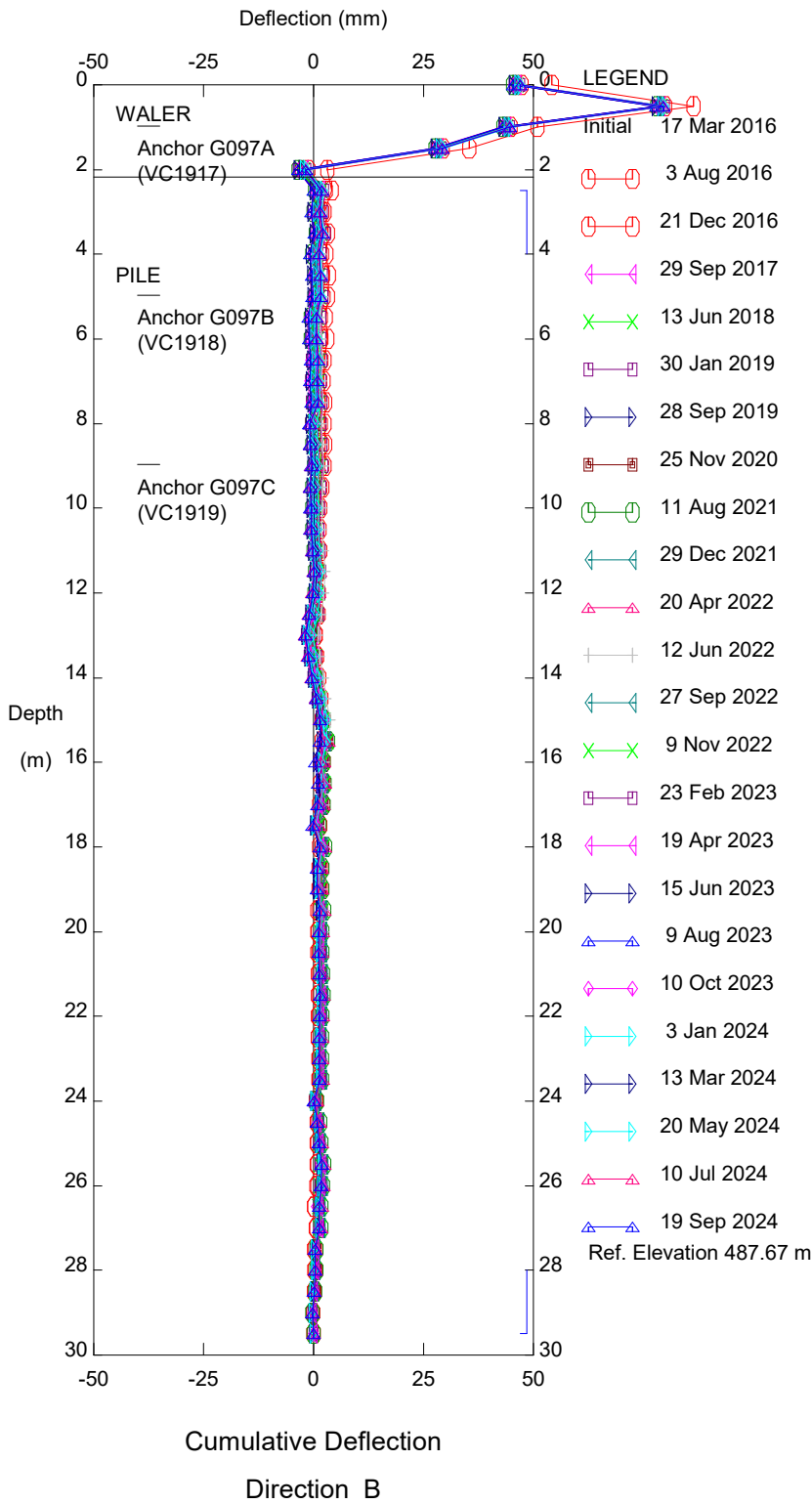
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Hwy 986:01 Daishowa West, Inclinator SAA-P097

Alberta Transportation

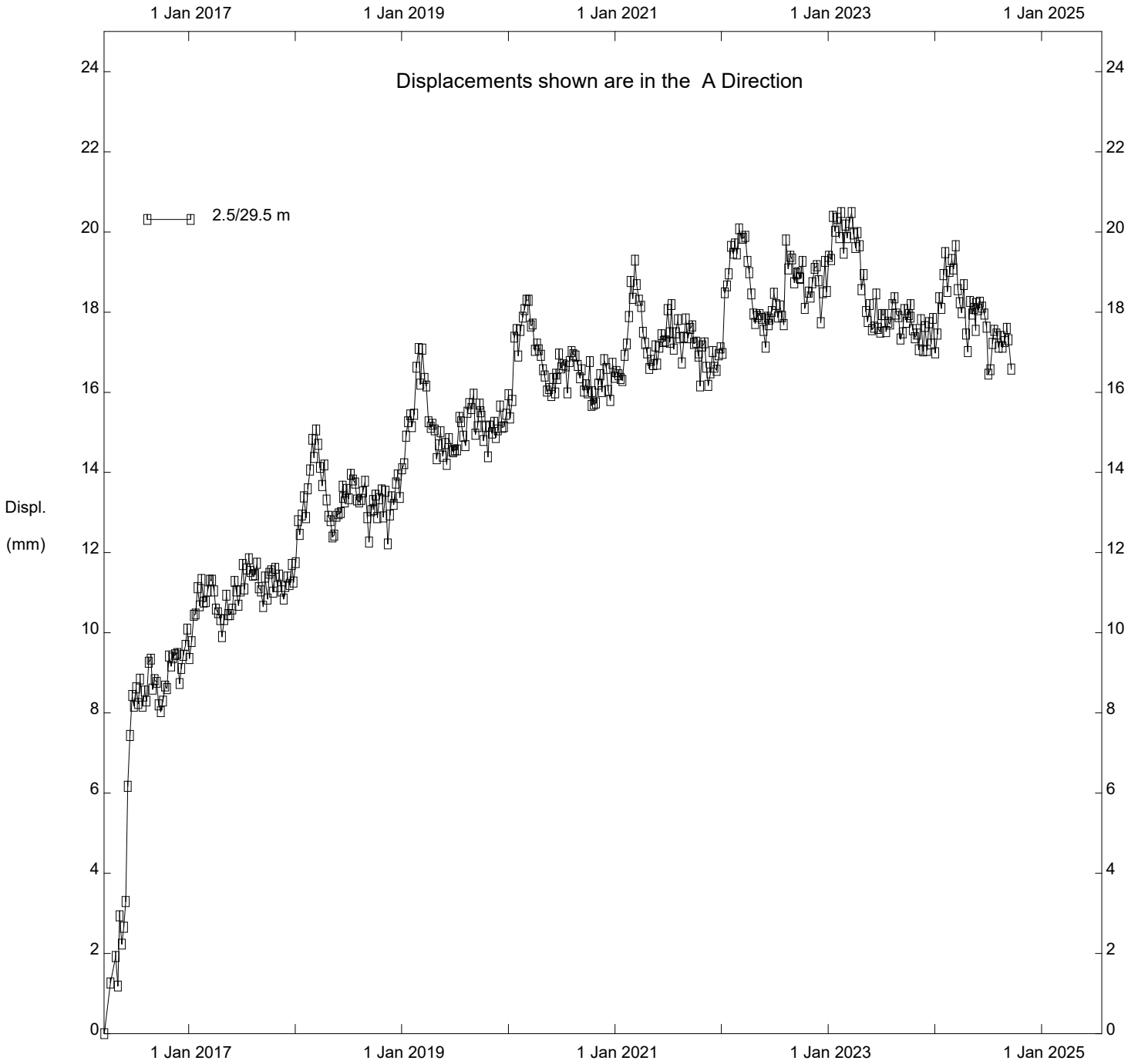
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Alberta Transportation

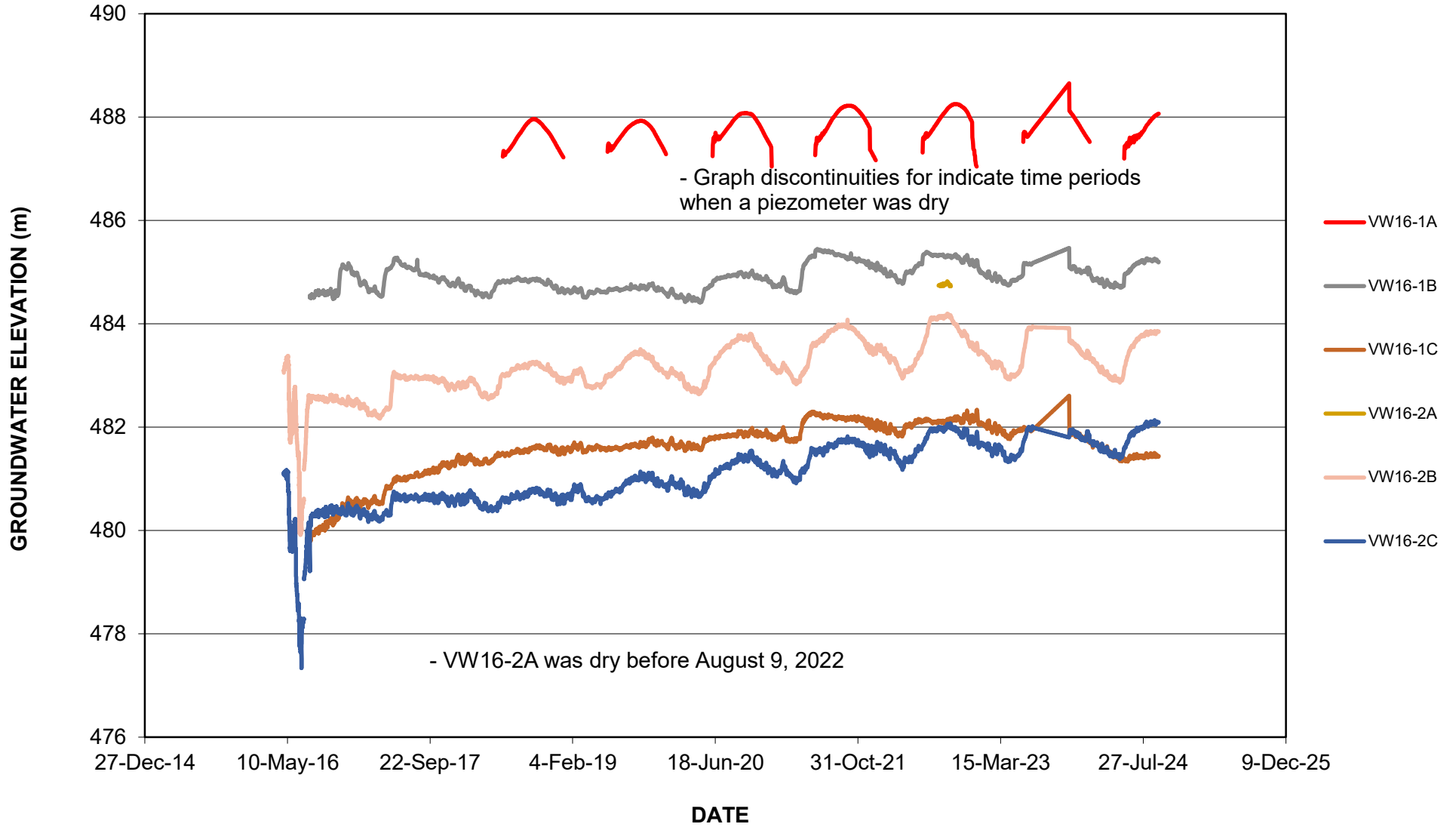
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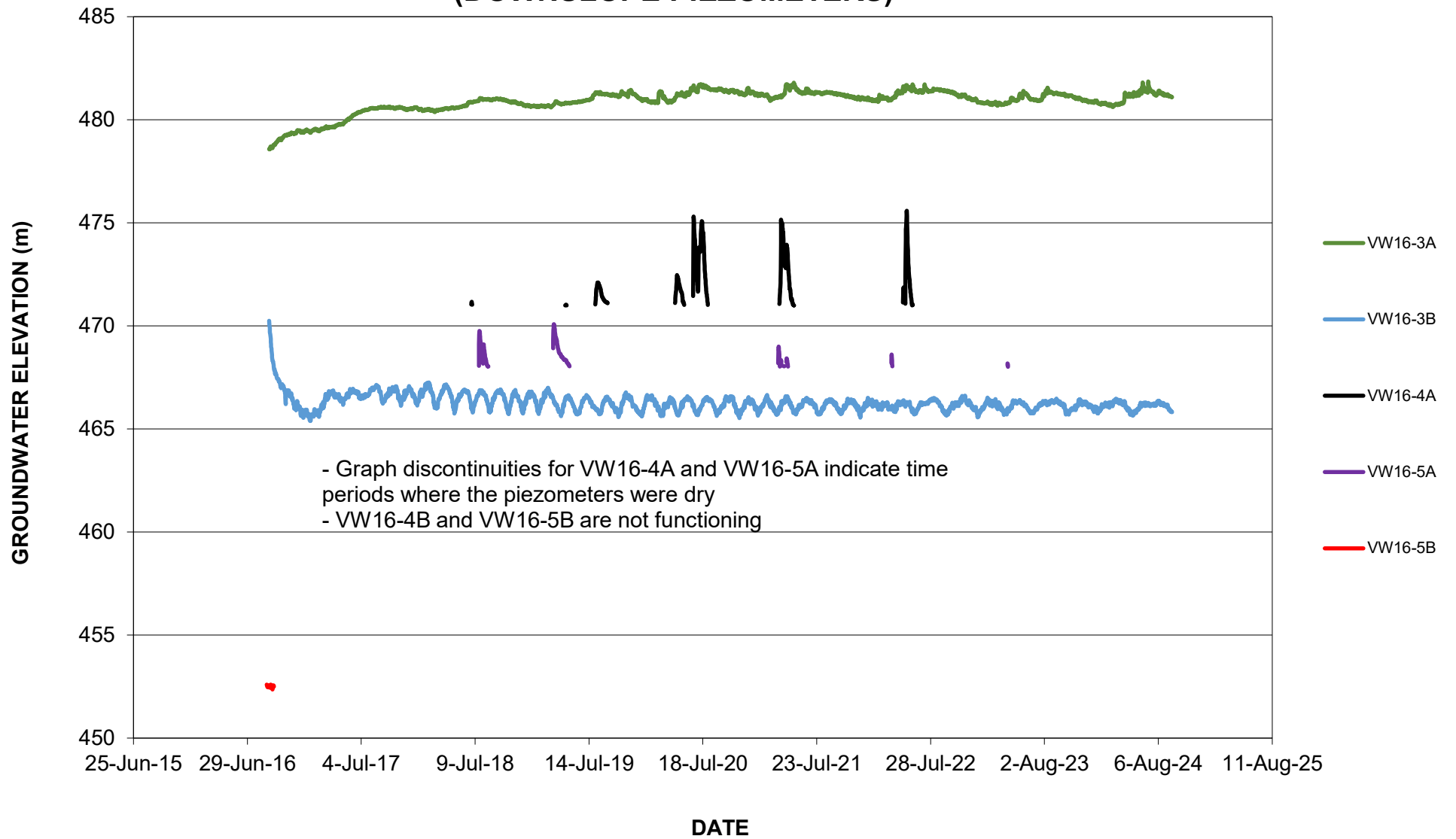
Hwy 986:01 Daishowa West, Inclinator SAA-P097

Alberta Transportation

FIGURE PH071-1
PIEZOMETRIC ELEVATION FOR HWY 986:01, DAISHOWA WEST HILL
(UPSLOPE PIEZOMETERS)



**FIGURE PH071-2
PIEZOMETRIC ELEVATIONS FOR HWY 986:01, DAISHOWA WEST HILL
(DOWNSLOPE PIEZOMETERS)**



**FIGURE PH071-3
LOAD CELL DATA FOR HWY 986:01, DAISHOWA WEST (PILE P022)**

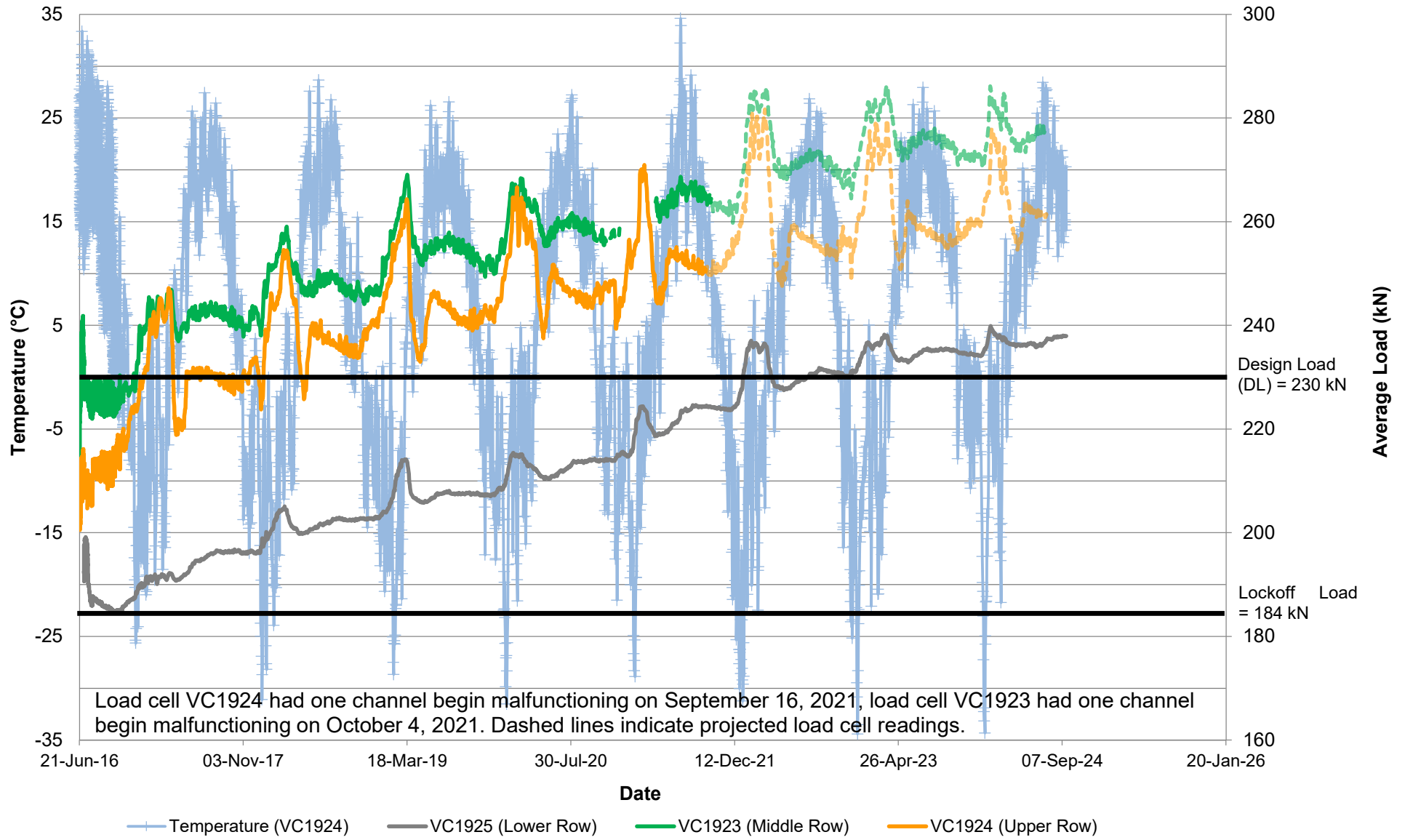
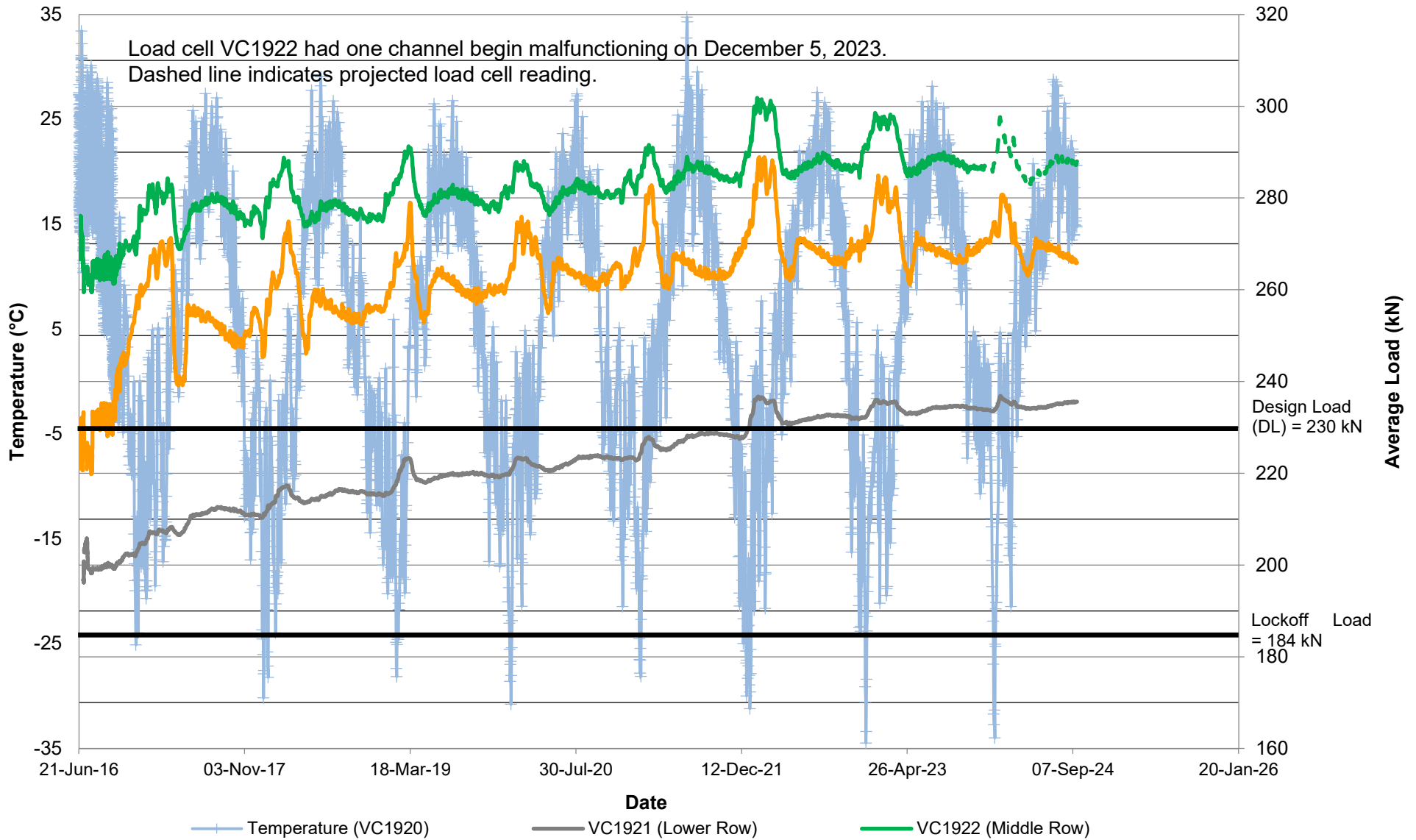


FIGURE PH071-4
LOAD CELL DATA FOR HWY 986:01, DAISHOWA WEST (PILE P060)



**FIGURE PH071-5
LOAD CELL DATA FOR HWY 986:01, DAISHOWA WEST (PILE P097)**

