

To: Jerald Schnabel
Continental Materials Corp.
File: July 2022 Monitoring Summary

From: Paul Kos
Denver, CO 80222
Date: August 26, 2022

Reference: July 2022 Geotechnical Monitoring Summary Pikeview Quarry

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has prepared this July 2022 Geotechnical Monitoring Summary for the Pikeview Quarry. The Pikeview Quarry is situated along the foothills of the Rocky Mountains, northwest of Colorado Springs, Colorado. Continental Materials Corp. (CMC) operates the quarry, which is currently closed and undergoing reclamation. A geotechnical monitoring program was established to monitor reclamation activities which will affect the geotechnical performance of the existing and reclaimed slopes during and following reclamation grading. This report presents the geotechnical monitoring results for the slope reclamation activities at the site through the month of July 2022. Continuous monitoring by the robotic survey system began in 2010 and has continued through the month July 2022. The survey base station was moved on July 18, 2022 to allow reclamation grading to occur in the original location. The baseline for movements had to be reset as part of the move, and data from both the original and new locations are included in this report. Also, several prisms had to be relocated after the base station had been moved because they were either blocked by the site topography or the base station housing. Visual inspections of the slopes were performed by CMC employees and Stantec engineers.

1.1 PURPOSE

The purpose of this report is to summarize the July 2022 geotechnical monitoring results and verify the geotechnical performance of the existing and reclaimed slopes with respect to the historical performance record. The goals of the geotechnical instrumentation monitoring program can be described as:

- Meet corporate risk management requirements,
- Provide ongoing slope monitoring and advance warning of any changed conditions that could pose a hazard to workers or to the public,
- Document the geotechnical performance of the slope, and
- Document monthly site grading activities and construction quality assurance.

1.2 MONITORING SUMMARY

Major components of the instrumentation monitoring program are listed in Table 1 and shown on Figure 1.

Table 1 Monitoring Frequency

Monitoring Type	Frequency
Visual inspection	Daily (CMC) and Monthly (Stantec)
Robotic theodolite/prism	Continuous
Drone inspection	Monthly
Compaction testing	Every 5,000 yd ³ (min.)

2.0 VISUAL INSPECTIONS

Inspections are completed daily by site personnel and monthly by Stantec personnel to document visual observations of slope conditions, including conditions of instability (i.e., cracking, slumping, over-steepened slopes, seeps, perched boulders, rock falls, erosion, and areas undercut by construction or maintenance activities). Certain areas of the landslide have been designated as safety exclusion zones, and these areas are inspected from adjacent locations.

On working days, site operators inspect their work areas for signs of instability daily before starting work per site safety rules and regulations. The daily inspection starts by reviewing any prism alerts/alarms and inspecting those areas before work begins in that area. The daily inspection also includes visual observations of the quarry walls and floor for any changes. No changes to the quarry conditions were identified during daily inspections in July 2022. The notes from the daily inspections are included in Table A-1 in Appendix A.

Stantec conducted visual inspections of the Pikeview Quarry slopes on July 26, 2022. The engineering inspections were conducted by traversing each area of the mine and observing the uphill slope and the downhill slope for signs of instability, and areas in need of maintenance. Slopes that have been graded and are 2 horizontal (H):1 vertical (V) or shallower are also traversed on foot. The findings are listed below, and photographs of notable observations are included on Figure 2 in Appendix A.

- Reclamation grading began in February 2022 and continued throughout July.
- The survey base station was moved from its original location near the shop to a new location in the central portion of the production floor. (Photo 1)
- Offsite fill was placed near the reclamation benches. The material was spread by dozers and compacted in one-foot lifts in accordance with the project specifications. (Photo 2)
- Operators are moving material from the North Borrow Area to the pit floor for compaction in one-foot lifts. Note that the North Borrow Area is a separate project associated with the City's plans for the property; this grading was permitted by El Paso County. (Photo 3)
- Several prisms have been removed, added and relocated throughout the site as construction has progressed and lines of sight have changed. (Photo 4)
- The shop was demolished to give access to the material in that area for excavation. (Photo 5)
- A safety buffer zone is being kept between the active work areas and the toe of the slide to stop any rocks that might come loose during grading operations. Compacted fill is placed in the buffer zone as the buttress fill is placed. (Photo 6)
- Riprap has been produced and stockpiled at several locations on site.
- No cracking was observed on the native granite slopes above the extents of the disturbed area.

- Known cracks were monitored for changes. Currently the cracks are not growing in any of the areas on the slopes of the site. The hummocky field in the area immediately above the southern extent of the slide shows evidence of cracking but they are not fresh or active. No new or open cracks were found immediately inside or next to the slide area. (Photo 8)
- The culvert remains cleared but mostly blocked inside. CMC has partially cleared the debris, but access limitations and supports within the culvert inhibit clearing all the debris. CMC has procured a pump and will begin pumping operations if any water collects behind the culvert. CMC inspects the culvert for ponded water following rain events, and should any water be observed, it will be removed using pumps. To date, no ponding has been observed.
- Visual inspections of the Pikeview Quarry did not reveal any evidence of large-scale instability outside of the landslide areas previously identified. No bulging, rippling, over-steepening, depressions, slumps, or dry slip-offs were observed in areas that have been graded and/or reclaimed.

3.0 PRISM SURVEY

A Leica Robotic station is used to continuously survey the prisms onsite to document slope movements. The station records the location of each prism every hour. The base station was moved on July 18 in preparation of reclamation grading activities near the former shop location. Several changes to the active prisms were required following the base station move:

- At the start of the month, there were 21 active prisms; 3 prisms were control points located outside the slope movement area, 15 prisms were located on the slopes surrounding the landslide area, and 3 prisms were located at the toe of the landslide.
- Following the base station move, there are 17 active prisms; 2 prisms are control points located outside the slope movement area, 14 prisms are located on the slopes surrounding the landslide area, and 1 prism is located at the toe of the landslide.
- Prism TS1 was previously reported; however, an audit of the active prisms following the base station move revealed that TS1 and BR1 are actually the same location and TS1 should have been identified as abandoned on April 8, 2022.
- Prism BR2 was not scheduled to be read following the base station move, and this was corrected on August 4, 2022.
- Following the base station move, 4 prisms were not in the line of sight of the new location, and these prisms were removed.
- Three additional prisms were adjusted and renamed.

As the slope is backfilled and graded, the existing prisms will be removed, and additional prisms will be installed. A log of prism removals and installations is included in Appendix B. The prism locations are shown on the current topography in Figure 3, and the proposed prism locations are shown on the reclamation topography in Figure 4. Both figures are included in Appendix B.

The monitoring software, GeoMos, has been programmed to provide automatic alarms if there is a movement recorded that is greater than 0.35 feet or if a prism cannot be located. The alarm notes and actions taken are logged, and the alarms are summarized in Table 2. Following each alarm, CMC clears the area of concern until the data can be reviewed and the slope can be inspected. CMC made sure that there were no workers in the area before inspecting the slope. During July 2022, a movement alarm was received from prism P35;

however, when the prism was inspected, there were no signs of slope movements. The subsequent readings returned to normal, and the alarm is assumed to be a data error related to weather conditions. All other alarms were determined to be caused by weather or animals blocking the prism.

Table 2 Alarm Summary

Date(s)	Alarm	Cause/Actions taken	Issue Resolved
07/01/2022 to 07/02/2022	Points not found	Fog and rain. No work being performed	07/05/2022
07/01/2022 to 07/04/2022	P32 exceedance alerts	Measured during bad weather. No crews onsite. Not repeated. Assumed to be data error. Readings of 0.386, 0.961, -0.788, -1.278	07/05/2022
07/01/2022 to 07/04/2022	P35 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +1.507, +1.645, -2.157, -0.462, +2.775, -1.332, 1.502, 2.281, -1.559, 1.502, -1.064	07/05/2022
07/01/2022 to 07/04/2022	P5 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +4.196, +2.242, -3.062, -0.593, -1.831, +6.295, 0.406, 0.882, -0.418	07/05/2022
07/03/2022	TOE4 and CP5 not found	Poor weather. No work being performed.	07/05/2022
07/03/2022 to 07/04/2022	NP2 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +2.238, -0.620, +1.523, -1.042	07/05/2022
07/03/2022 to 07/04/2022	NP66 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of -0.381, +0.692, -0.515	07/05/2022
07/03/2022	P1 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of -0.443, +0.707, 0.625	07/05/2022
07/03/2022 to 07/04/2022	P2 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +0.378, -0.825, 0.815, -0.825, -0.825	07/05/2022
07/03/2022 to 07/04/2022	P25 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +0.737, +0.737, -0.811, +1.588, -1.096	07/05/2022
07/03/2022 to 07/04/2022	P33 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of -0.912, +0.973, -1.430	07/05/2022
07/03/2022 to 07/04/2022	P70 exceedance alerts	Measured during bad weather. No crews onsite. Assumed to be data error. Readings of +0.673, -0.713	07/05/2022
07/06/2022	Points not found	Rain	07/06/2022
07/06/2022	NP2 exceedance alerts	Measured during bad weather. Assumed to be data error. Readings of +0.942, -0.713, -1.861	07/06/2022
07/06/2022	P1 exceedance alerts	Measured during bad weather. Assumed to be data error. Readings of +8.013, +3.522, +3.750, -3.468, -4.047, -5.759	07/06/2022
07/07/2022	Points not found	Rain and fog	07/07/2022

07/07/2022	P25 exceedance alert	Measured during bad weather. Assumed to be data error. Reading of -0.421	07/07/2022
07/09/2022	No communication	Planned power outage from hard wire to generator	07/09/2022
07/10/2022	Points not found	Rain and fog	07/11/2022
07/12/2022	No communication, points not found	Equipment operations interrupted readings	07/12/2022
07/12/2022	NP2 exceedance alert	Data error. Reading of -0.356	07/12/2022
07/12/2022	P32 exceedance alert	Data error. Reading of -0.419	07/12/2022
07/13/2022	P25 exceedance alert	Data error. Reading of -0.383	07/13/2022
07/14/2022 to 07/20/2022	No readings and communication errors	Planned system move	07/20/2022
07/22/2022	P63 and TOE5 not found	Equipment operations interrupted readings	07/22/2022
07/25/2022	Points not found	Rain and fog	07/25/2022
07/25/2022	CP7 and P25 not found	Equipment operations interrupted readings	07/25/2022
07/25/2022	P1 exceedance alerts	Poor weather. No work being performed. Readings of +0.430, +0.573, +0.579, -0.540, +0.743, +1.277, -0.729, -0.871, -1.095	07/26/2022
07/25/2022	P33 exceedance alerts	Poor weather. No work being performed. Readings of -0.384, -0.533, +0.996, -0.634, -0.665	07/26/2022
07/26/2022	Points not found	Rain and fog	07/26/2022
07/26/2022 to 07/27/2022	NP2 exceedance alerts	Poor weather. No work being performed. Readings of +4.389, +1.482, -1.449, -1.259, -2.912, +2.942	07/27/2022
07/26/2022 to 07/27/2022	NP66 exceedance alerts	Poor weather. No work being performed. Readings of +1.602, +0.82, -0.800, -0.690, -1.141, +1.602	07/27/2022
07/26/2022 to 07/27/2022	P1 exceedance alerts	Poor weather. No work being performed. Readings of -0.431, -0.360, -0.507, -0.415, +0.739, +0.594	07/27/2022
07/26/2022 to 07/27/2022	P2 exceedance alerts	Poor weather. No work being performed. Readings of +0.439, -0.426	07/27/2022
07/26/2022 to 07/27/2022	P25 exceedance alerts	Poor weather. No work being performed. Readings of -0.950, -0.810, -1.923, +0.984	07/27/2022
07/26/2022 to 07/27/2022	P32 exceedance alerts	Poor weather. No work being performed. Readings of +4.181, +2.184, +2.242, -2.087, -2.087, -3.082	07/27/2022
07/26/2022 to 07/27/2022	P33 exceedance alerts	Poor weather. No work being performed. Readings of +0.692, +0.795, +2.009, +0.648, -0.697, -1.127, -1.055, -1.515, -0.968	07/27/2022
07/26/2022 to 07/27/2022	P35 exceedance alerts	Poor weather. No work being performed. Readings of +0.467, -0.663	07/27/2022
07/26/2022	P63 exceedance alert	Poor weather. No work being performed. Reading of +0.468	07/27/2022
07/26/2022 to 07/27/2022	P69A exceedance alerts	Poor weather. No work being performed. Readings of -0.855, -0.880, -1.387, +0.959	07/27/2022
07/26/2022 to 07/27/2022	P70 exceedance alerts	Poor weather. No work being performed. Readings of -0.545, -0.493, +1.093, +1.645, -0.819, +1.093	07/27/2022
07/28/2022	No communication with sensor	Power outage due to generator malfunction. No work being performed at the time.	07/28/2022
07/28/2022	Points not found	Equipment operations interrupted readings	07/28/2022

07/29/2022	Points not found	Fog and rain	07/29/2022
07/30/2022	Points not found	Fog and rain	07/30/2022
07/30/2022	No communication with sensor	Power outage due to generator malfunction. No work being performed at the time.	07/30/2022

The prism monitoring results for transverse and height displacements, monthly change, and cumulative change are summarized in Tables 3a and 3b below. The transverse displacement measures the change in the horizontal distance from the robotic station to the prism; positive displacements indicate less distance between the station and prism (movement towards the total station). The height displacement measures the change in the vertical distance from the robotic station to the prism; positive displacements indicate upward movement. The values for the last reading in the month are included in Tables 3a and 3b. Table 3a shows the data for the start of July and before the base station was moved, and Table 3b shows the data for the end of July after the base station was moved. The monthly delta is the most recent reading cumulative delta displacement (horizontal, lateral, and vertical) subtracted from the last reading from the previous month. The cumulative delta values are a total displacement and are not associated with a direction. The transverse, height, and cumulative delta displacements are the total displacement over the life of the monitoring, which has been several years for all the prisms except P69. Prism P69 was moved on July 20, 2020, and the displacements included in Table 3 are the displacements since that date. According to Leica documentation, the survey accuracy is $\pm 4 \text{ mm} + 1.5 \text{ ppm}$ for prisms located greater than 500m from the station; these equates to an accuracy of $\pm 0.016 \text{ ft}$.

The data show stable conditions with no movement for 14 of 21 prisms with recorded displacements limited to data scatter and not actual movements. Prisms P63, TOE4, and TOE5 are located at the toe of the landslide, and these locations showed slope creep movements at slow velocities. Prisms BR1, BR2, NP66, and P69 are located above the landslide, and these prisms also recorded slope creep movements at slow velocity. This settlement is likely related to the landslide material consolidating under its own weight. New prisms are placed in areas where slope creep movements are likely to be recorded; therefore, slope creep movements being recorded at more locations is expected to occur. Plots of the transverse and height displacements for each prism are included in Appendix B.

Table 3a Prism Summary (Start of July)

Prism ID	Cumulative Transverse Displacement (ft)	Cumulative Height Displacement (ft)	Monthly Delta (ft)	Cumulative Delta (ft)	Notes / Recommendations
BR1	-0.039	-0.087	-0.3724	0.1710	Slope creep movements
BR2	-0.043	-0.202	0.0192	0.6204	Slope creep movements
CP1	-0.004	-0.019	0.0104	0.0293	Prism removed after base station move
CP4	-0.003	-0.032	-0.4967	0.0413	Prism removed after base station move
CP5	0.018	-0.052	-0.2484	0.0573	Prism renamed CP7 after base station move
NP2	0.129	-0.112	-0.0414	0.2048	
NP3	0.010	-0.042	-0.0328	0.0433	
NP66	0.665	-0.865	0.0360	1.3314	Slope creep movements
P1	0.368	-0.060	0.0415	0.3777	
P2	0.171	-0.032	0.0105	0.2503	
P25	0.014	0.032	-0.0438	0.1550	
P32	-0.054	-0.109	-0.0474	0.2780	
P33	-0.075	-0.082	-0.0627	0.2048	
P35	0.040	-0.193	-0.5931	0.4703	Prism renamed CP6 after base station move.
P5	0.427	-0.165	-0.8752	0.6604	
P63	15.892	-6.508	0.0216	17.1732	Slope creep movements
P69	0.038	-0.080	-0.4104	2.0249	Prism renamed P69A after base station move. Slope creep movements
P70	0.379	-0.328	-0.0083	0.6591	
TOE4	-0.058	0.013	0.0179	0.1037	Prism removed after base station move. Slope creep movements
TOE5	-0.082	-0.030	-0.4267	0.1191	Slope creep movements
TOE6	-0.015	0.005	-0.1586	0.0163	Prism removed after base station move

Table 3b Prism Summary (End of July)

Prism ID	Cumulative Transverse Displacement (ft)	Cumulative Height Displacement (ft)	Monthly Delta (ft)	Cumulative Delta (ft)	Notes / Recommendations
BR1	-0.010	-0.013	0.0080	0.0192	Previously recorded slope creep movements
BR2	na	na	na	na	Prism not read after base station move. Corrected on August 3. Previously recorded slope creep movements
CP6	-0.009	0.014	-0.0016	0.0169	Formerly P35
CP7	0.07	-0.006	-0.0104	0.0710	Formerly CP5.
NP2	-0.009	0.014	-0.0016	0.0169	
NP3	-0.012	0.019	0.0083	0.0227	
NP66	-0.006	-0.019	0.0156	0.0199	Previously recorded slope creep movements
P1	0.004	-0.017	0.0153	0.0206	
P2	-0.003	-0.019	0.0112	0.0205	
P25	-0.007	0.000	-0.0020	0.0071	
P32	-0.011	0.003	-0.0012	0.0129	
P33	-0.009	0.001	0.0029	0.0201	
P5	-0.006	-0.015	0.0127	0.0169	
P63	0.000	0.005	0.0029	0.0054	Previously recorded slope creep movements
P69A	-0.009	-0.020	-0.0023	0.0271	Formerly P69. Previously recorded slope creep movements
P70	-0.008	-0.013	0.0092	0.0153	
TOE5	-0.007	0.002	0.0051	0.0075	Previously recorded slope creep movements

4.0 DRONE SURVEY

The site was flown for aerial imagery using an unmanned aircraft system (UAS or 'drone') on, August 1, 2022. Scheduling and poor weather prevented the survey from occurring in July. The imagery was inspected for signs of instability and used to supplement the onsite visual inspections. Features noted in the aerial imagery review were inspected during Stantec's engineering inspection and are summarized in Section 2 above. The imagery was also used to create site topography.

The July topography was also compared to the June topography to identify changes in the site topography. Comparison of the two surveys showed the placement of the fill material at the toe of the landslide. Fill material is excavated from the Lower and South Borrow Areas or imported from offsite projects, including the North Borrow Area. No slope movements or other changes in topography were identified. The current imagery

and topography are included in Figures 1 and 3, and the comparison surface is included as Figure 5 in Appendix C.

As previously reported in the September 2020 monitoring report, there are limitations with the method of comparing drone surveys from different months. The drone data indicate changes in the slopes along each of the reclamation benches, buildings, and areas with trees or shrubs. These areas are stable, and the changes are the result of survey limitations on or near vertical slopes.

5.0 COMPACTION TESTING

Fill placement started on February 25, 2022 and continued throughout July. Fill was excavated from the North Borrow Area and placed in the buttress and buffer zones. Importing fill also continued. Fill was placed in one-foot lifts, moisture conditioned as necessary, and compacted. Compaction testing began March 2022 and occurs at the rate of at least one test per 5,000 yd³ placed. During July, approximately 157,000 yd³ was placed and compacted. This includes approximately 10,000 yd³ of imported fill. This volume placed in the buttress zone required at least 32 compaction tests. There were 72 compaction tests associated with the July fill. As of August 1, 2022, a total 1,033,000 yd³ had been placed and compacted. This requires 207 compaction tests (not considering the buffer zone volume), and 267 tests have been taken. All tests except two have met or exceeded the minimum compaction requirement of 90% of the optimal density as measured by a Standard Proctor Test. Test #221 originally measured 89% of optimal density; this area was moisture conditioned and recompact, and a retest measured 93% of optimal density. The compaction testing results are summarized in Appendix D, and the testing locations are shown on Figure 6.

6.0 RECLAMATION PROGRESS

CMC has initiated reclamation grading at the Pikeview Quarry and has contracted with Stantec to provide EPCM services through completion. As an updated feature of our monthly report, we will provide progress of activities, anticipated milestone schedule and a one month look ahead to better communicate project objectives. A phased or 'gated' approach will be used to complete the reclamation process going forward (See milestone schedule below)

Phase 1 - Value Engineering and issue RFP to qualified Contractors

Phase 2 - Commercial negotiations with successful contractor

Phase 3 - Execution planning and Contractor readiness review

Phase 4 - Site Construction execution

Phase 5 - Final revegetation (season 2)

Task/Milestone	Estimated Dates
Phase 1 – Issue RFP to Bidders	Completed June 2021
Phase 1 – RFP Evaluation & Recommendation	Completed July 2021
Phase 2 – Constructor Contract Award	Completed January 2022
Phase 3 – Project Kick-off with successful Contractor	Completed February 4, 2022
Phase 4 – Contractor Mobilization to Site	Completed February 2022
Phase 4 – Reclamation Grading	February 2022 to present
Phase 4 – Contractor Demobilize from Site	Fall 2023
Phase 5 – Final Revegetation season 2 Begins	2023 until acceptance

Progress of activities this month:

- Contractor continued earth moving activities
- Quality assurance testing continued
- Importing fill material continued
- Demolish and remove shop and begin grading in that area
- Move Leica building
- Geotechnical monitoring continued

Work planned for next month includes:

- Begin negotiations with blasting companies and preparation of blasting plan to remove rock in borrow areas on an as-needed basis
- Continue reclamation grading
- Continue importing fill material
- Continue geotechnical monitoring
- Continue removing and replacing prisms on an as-needed basis

7.0 CONCLUSIONS

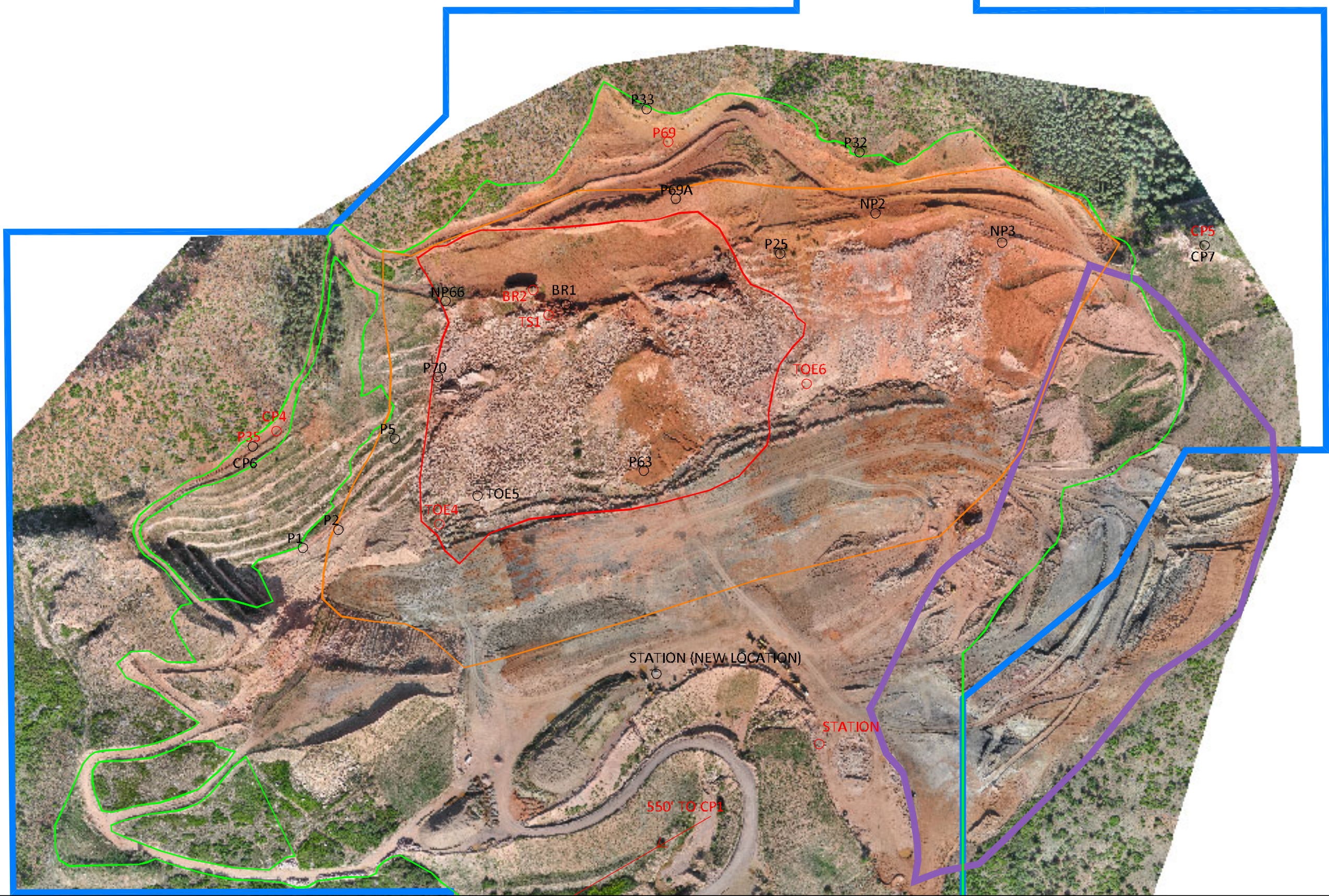
The data collected in July 2022 demonstrate compliance with the reclamation grading plan. The buttress fill is being placed as intended and specified; this includes one-foot-thick compacted lifts.

None of the data collected in July 2022 indicate evidence of any large-scale movements that increase risk to workers or to the public. The landslide area continues to show slope creep movements with slow velocities. Shallow surface erosion continues to occur requiring ongoing maintenance and cleanup.

- Restricted access to the ungraded landslide slopes should continue.
- All monitoring should continue at current frequencies.
- All alarms shall continue to be taken seriously even if data errors are suspected.

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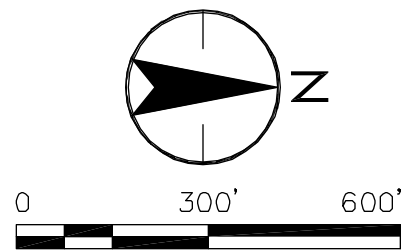
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LEGEND

- Permit/Affected Lands Boundary
- City Grading Permit Boundary
- Proposed Disturbance Limit
- Landslide Extent
- Buttress Fill Extent
- Existing Prism
- Removed Prism



Client/Project
CONTINENTAL MATERIALS
CORP.
PIKEVIEW QUARRY SLOPE
MONITORING

Project No.
2057288200

Title
SITE MAP

Revision

Drawn By
PK

Date
2022.08.26
Figure No.
1

Appendix A

Visual Inspections

Table A-1 Summary of Daily Inspections

Date	Notes	Inspection By
1-Jul-22	No work.	Not applicable
2-Jul-22	No work.	Not applicable
3-Jul-22	No work.	Not applicable
4-Jul-22	No work.	Not applicable
5-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
6-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
7-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
8-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
9-Jul-22	No work.	Not applicable
10-Jul-22	No work.	Not applicable
11-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
12-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
13-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
14-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
15-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
16-Jul-22	No work.	Not applicable
17-Jul-22	No work.	Not applicable
18-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
19-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
20-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
21-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
22-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
23-Jul-22	No work.	Not applicable
24-Jul-22	No work.	Not applicable
25-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
26-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
27-Jul-22	No work. No movement observed.	Jerald Schnabel
28-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
29-Jul-22	No movement observed. Good to proceed.	Jerald Schnabel
30-Jul-22	No work.	Not applicable
31-Jul-22	No work.	Not applicable

2022.08.26 11:21:19 AM \\us0389-pptss01\shared_projects\2057288200\06_design\monitoring\2022-07\dwg\pikview.pptm_08082022



6. Compacted area in the pit looking north.



5. Area where shop used to stand.

NOTE 1:
NO CRACKS

NOTE 1:
NO CRACKS



4. North Barrow Area from prism on haul road.



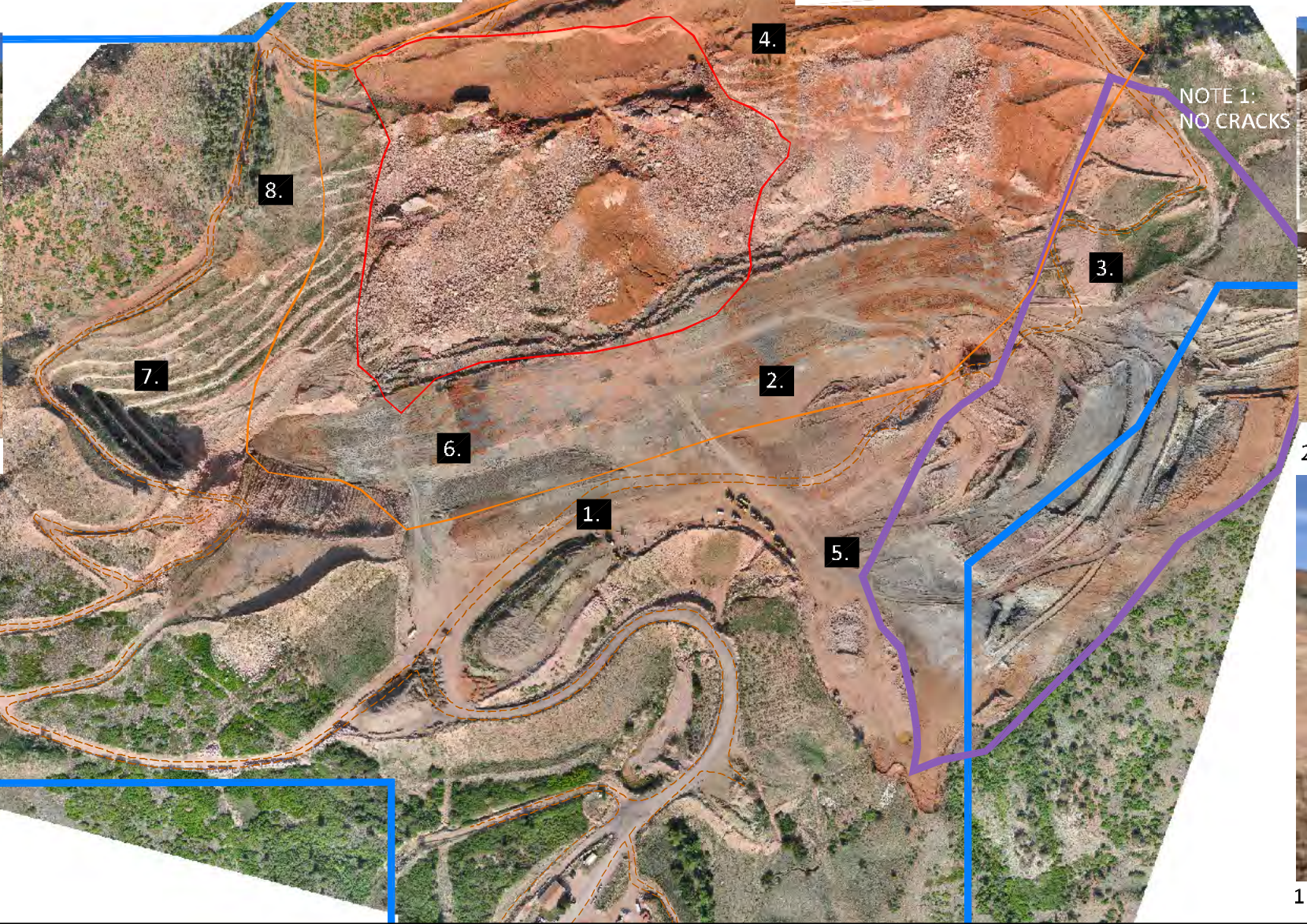
3. Dozer pushing down from top of NBA. Loading material and hauling to buttress area.



7. Reclamation benches on the south end of site.



8. Healed cracks on the slope on south end of site.



NOTE 1:
NO CRACKS



2. View of elevation change in pit floor - about 26 feet.



1. Shop was demolished and total station was relocated.



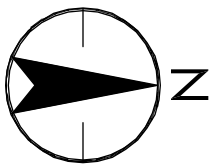
Stantec Consulting Services Inc.
2000 South Colorado Boulevard Suite 2-300
Denver CO 80222-7933
Tel: (303) 758-4358
www.stantec.com

LEGEND

- Permit/Affected Lands Boundary
- City Grading Permit Boundary
- Proposed Disturbance Limit
- Landslide Extent
- Buttress Fill Extent
- Observed Crack

NOTES

- NO CRACKS OBSERVED IN THIS AREA.
- ALL PHOTOS TAKEN JULY 26, 2022.



Client/Project

CONTINENTAL MATERIALS
CORP.
PIKEVIEW QUARRY SLOPE
MONITORING

Project No.

2057288200

Title

OBSERVATIONS FROM
JULY INSPECTION

Revision
#

Drawn By
PK

Date
2022.08.26

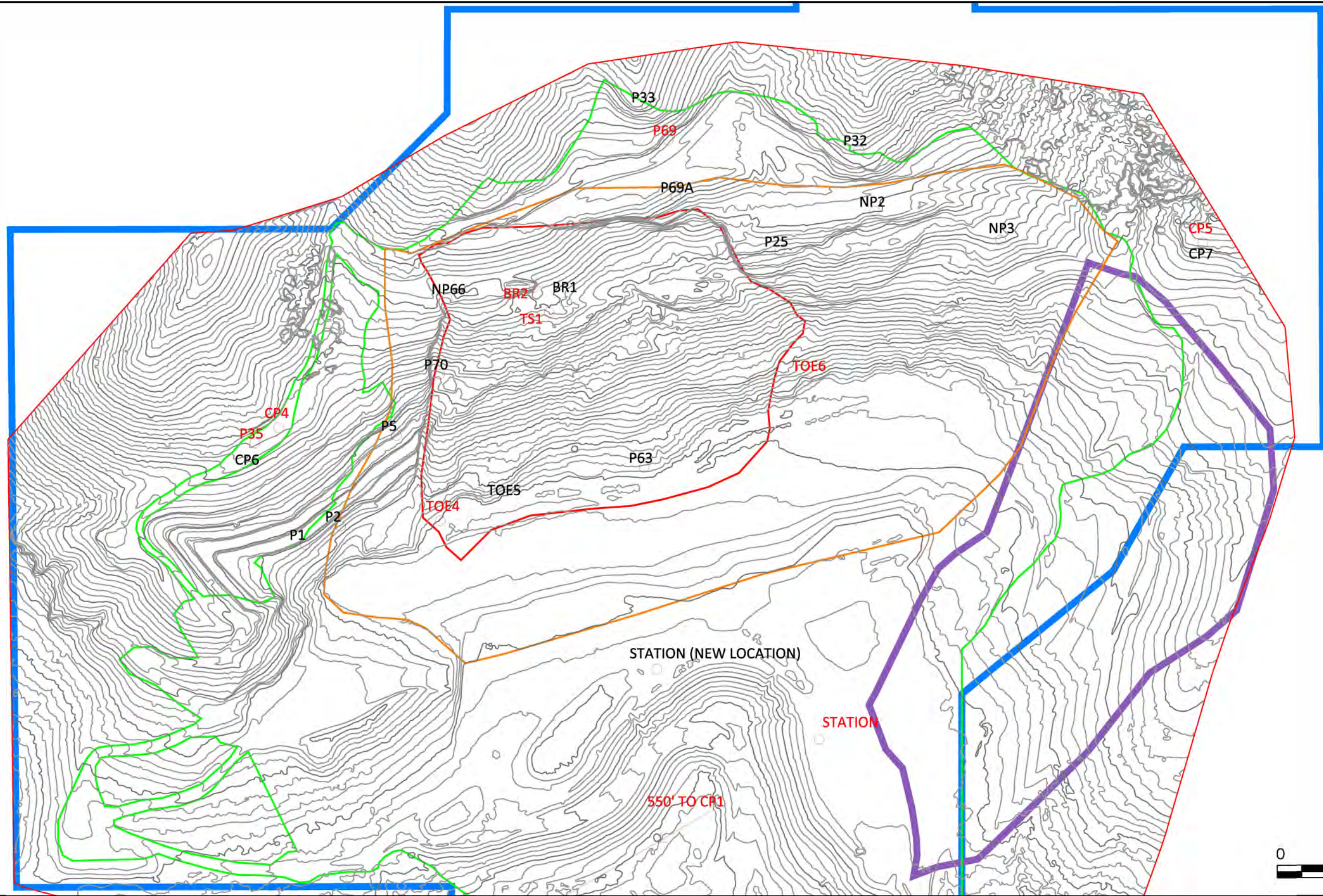
Figure No.
2

Appendix B

Prism Survey

\\us0389-ppfss01\shared_projects\2057288200\06_design\monitoring\2022-07\dwg\pikeview prisms_08082022

2022.08.18 8:32:22 AM



Stantec Consulting Services Inc.
2000 South Colorado Boulevard Suite 2-300
Denver CO 80222-7933
Tel: (303) 758-4058
www.stantec.com

LEGEND

- Permit/Affected Lands Boundary
- City Grading Permit Boundary
- Proposed Disturbance Limit
- Landslide Extent
- Buttress Fill Extent
- Existing Prism
- Removed Prism

- ALL PRISMS WILL BE RETAINED AS LONG AS POSSIBLE.
- TOPOGRAPHY FROM AUGUST 1, 2022 DRONE SURVEY.
- CONTOUR INTERVAL IS 10 FEET

Client/Project
CONTINENTAL MATERIALS
CORP.
PIKEVIEW QUARRY SLOPE
MONITORING

Project No.
2057288200

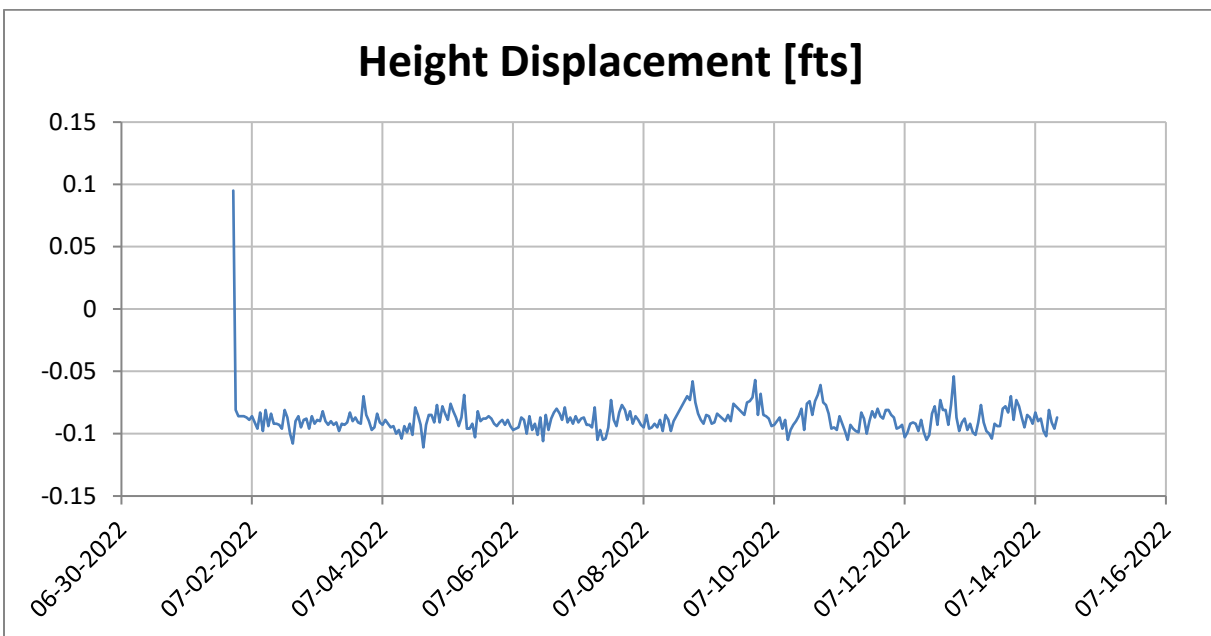
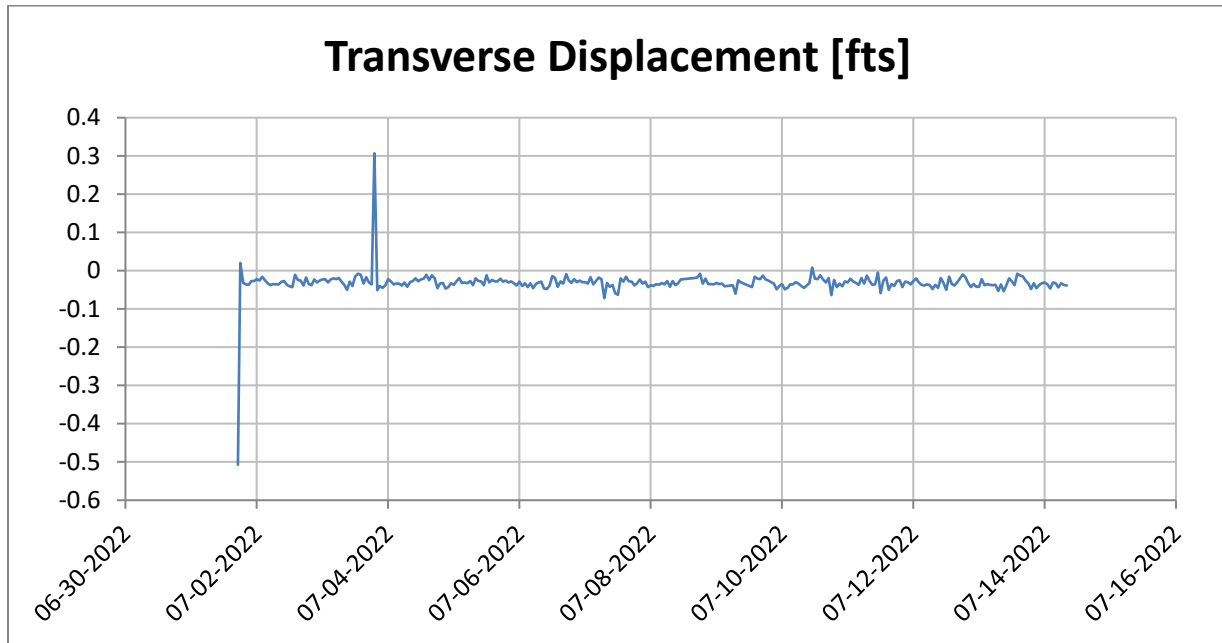
Title
EXISTING PRISMS WITH
CURRENT SURFACE

Revision #	Date 2022.08.26
Drawn By PK	Figure No. 3

Prism Log

Prism	Date	Action	Comment
CP2	11-Mar-22	Prism Removed	Reclamation grading to affect prism in near future
CP3	11-Mar-22	Prism Removed	Reclamation grading to affect prism in near future
NP1	11-Mar-22	Prism Removed	Reclamation grading to affect prism in near future
TOE2	11-Mar-22	Prism Removed	Reclamation grading to affect prism in near future
CP4	11-Mar-22	Prism Added	Control Point Replacement
CP5	11-Mar-22	Prism Added	Control Point Replacement
TS1	12-Mar-22	Prism Added	New Prism Added
TOE3	30-Mar-22	Prism Removed	Reclamation grading to affect buffer filling activities
TOE4	8-Apr-22	Prism Added	New Prism Added
TOE5	8-Apr-22	Prism Added	New Prism Added
BR1	8-Apr-22	Prism Added	New Prism Added
BR2	8-Apr-22	Prism Added	New Prism Added
NP1	22-Apr-22	Prism Removed	Originally NP1. Prism re-set in same spot and is now NP3
NP3	22-Apr-22	Prism Added	
TOE3	22-Apr-22	Prism Removed	Originally TOE3. Prism moved to a higher elevation and is now TOE6
TOE6	22-Apr-22	Prism Added	
TOE1	22-Apr-22	Prism Removed	Reclamation grading to affect buffer filling activities
P4	17-Jun-22	Prism Removed	Prism removed due to rock deterioration
P69	20-Jul-22	Prism Removed	Prism was originally P69. It has been re-set to Higher Elevation and is now P69A. Related to base station relocation.
P69A	20-Jul-22	Prism Added	
P35	20-Jul-22	Prism Renamed	Prism was originally P35. It has been re-set to Higher Elevation and is now CP6. Related to base station relocation.
CP6	20-Jul-22	Prism Added	
CP5	20-Jul-22	Prism Renamed	Prism was originally CP5. It has been re-set to Higher Elevation and is now CP7. Related to base station relocation.
CP7	20-Jul-22	Prism Added	
CP1	20-Jul-22	Prism Removed	Not in line of sight of new base station.
CP4	20-Jul-22	Prism Removed	Not in line of sight of new base station.
TOE4	20-Jul-22	Prism Removed	Not in line of sight of new base station.
TOE6	20-Jul-22	Prism Removed	Not in line of sight of new base station.

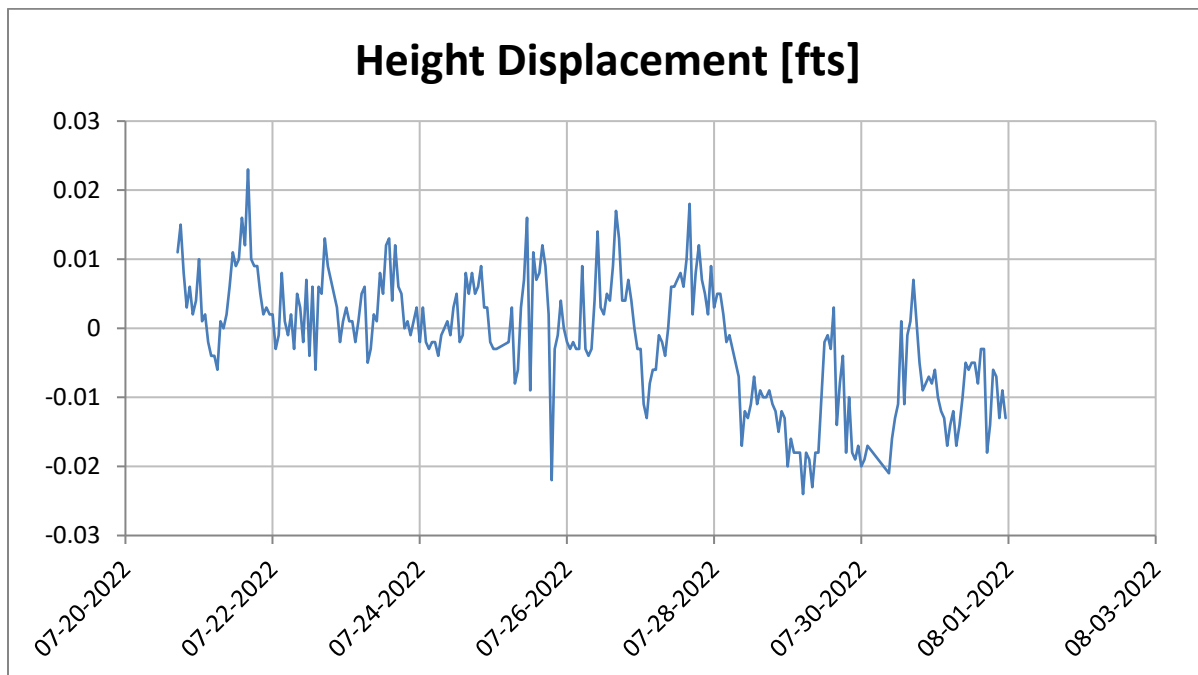
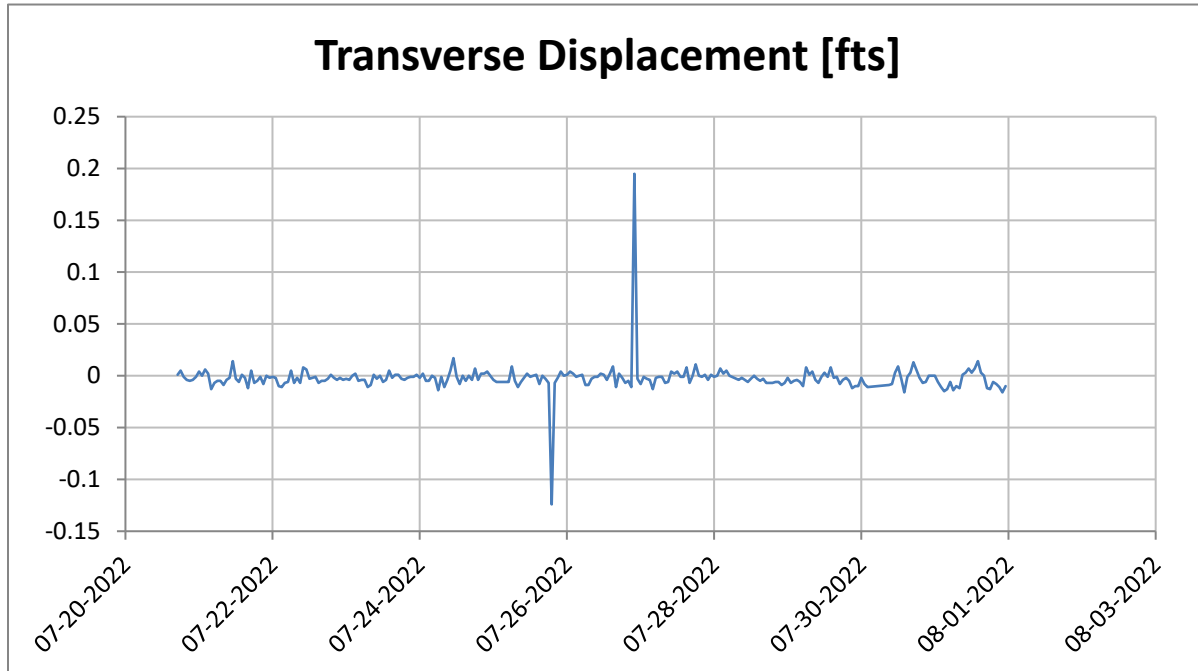
Prism BR1



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Plot displays data for 7/1/22 through 7/14/22.

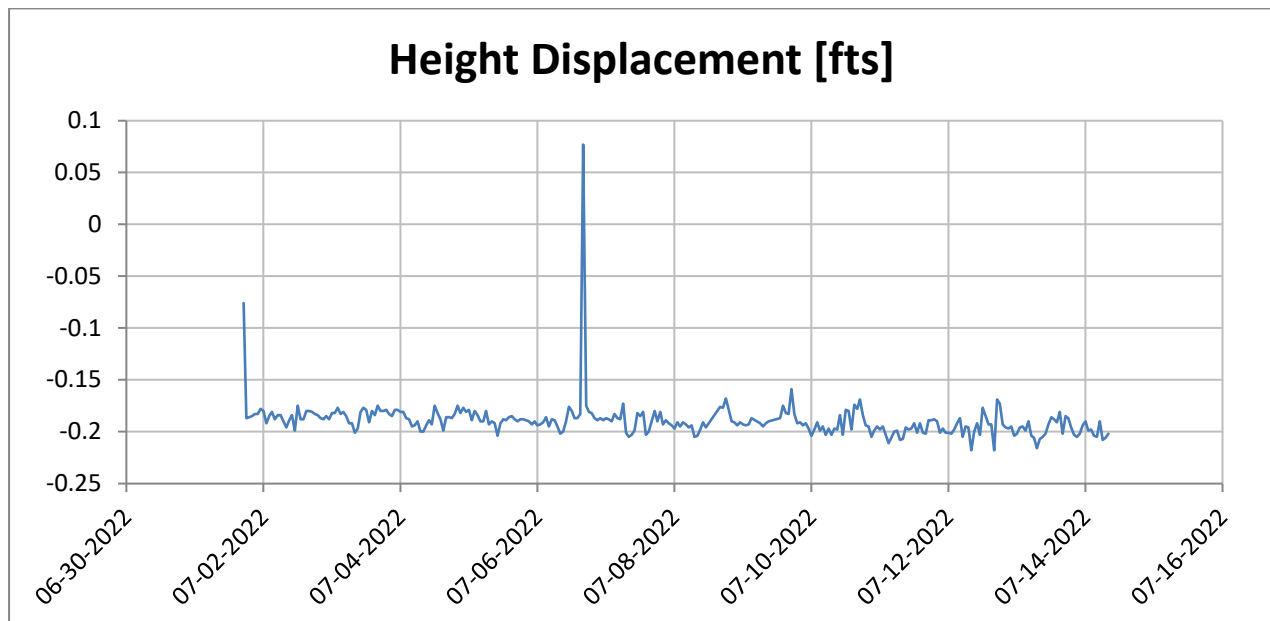
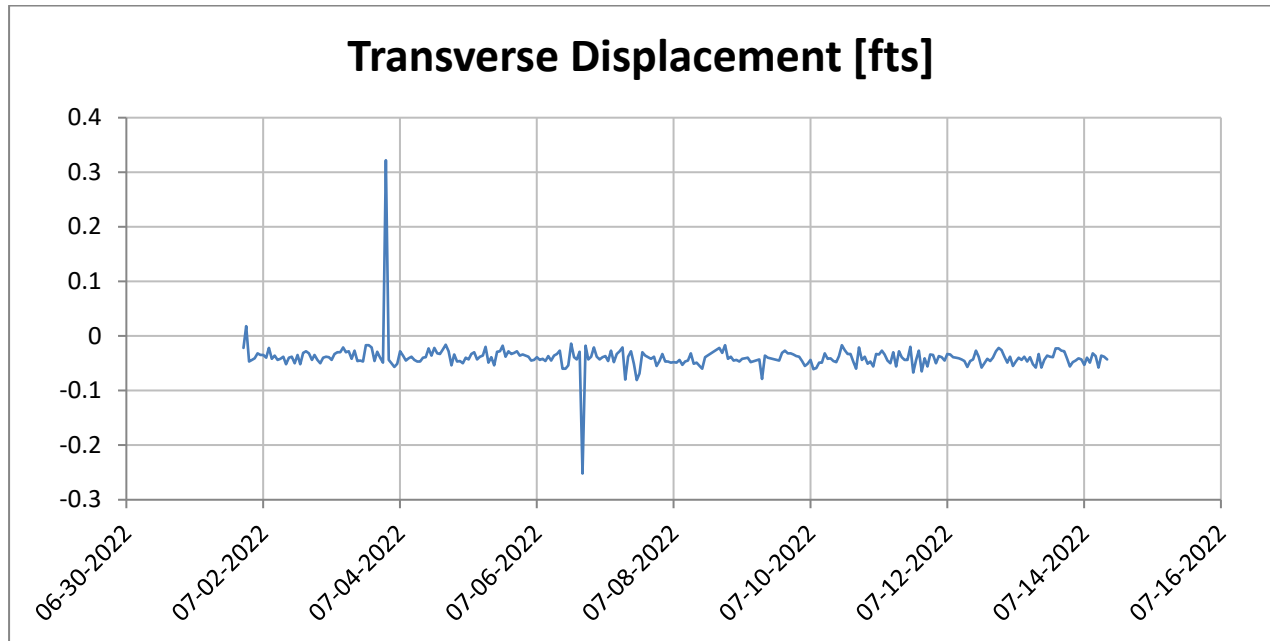
Prism BR1



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Plot displays data for 7/20/22 through 7/30/22.

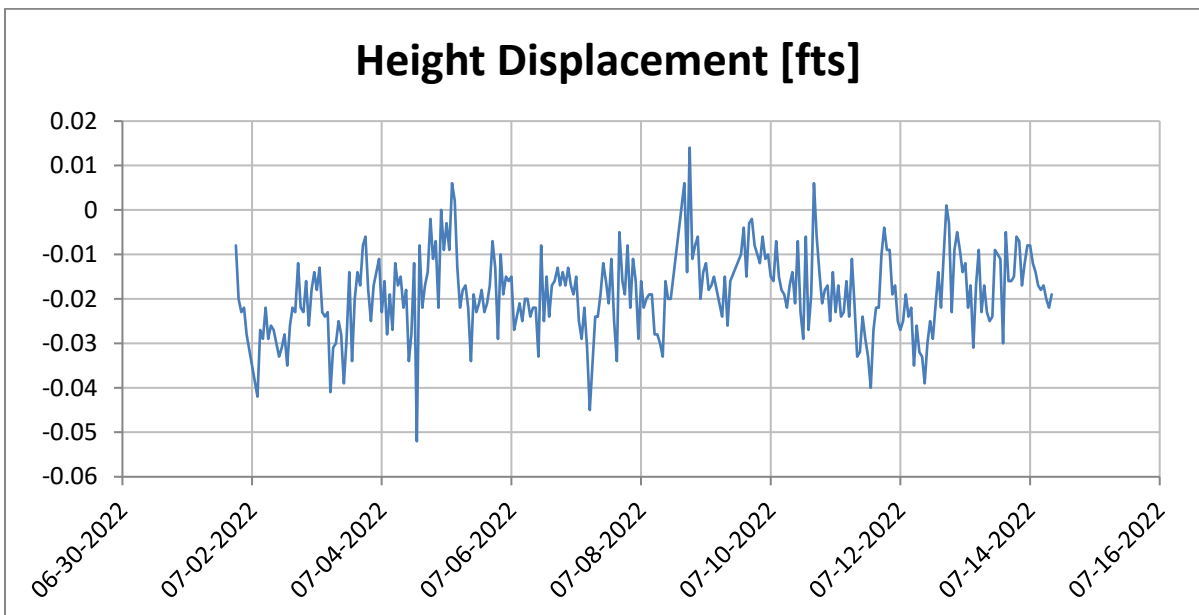
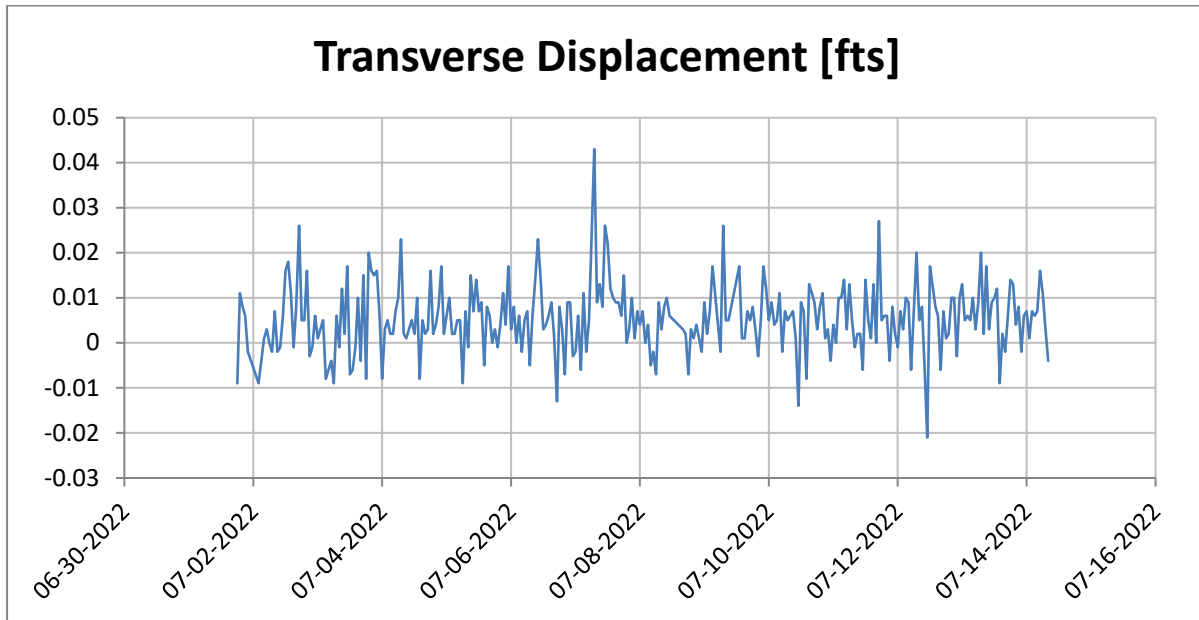
Prism BR2



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism is located in an area where ongoing movements are expected. The prism records slope creep movements with slow velocity.
6. Plot displays data for 7/1/22 through 7/14/22. Data were not collected from prism BR2 from July 18 through August 3.

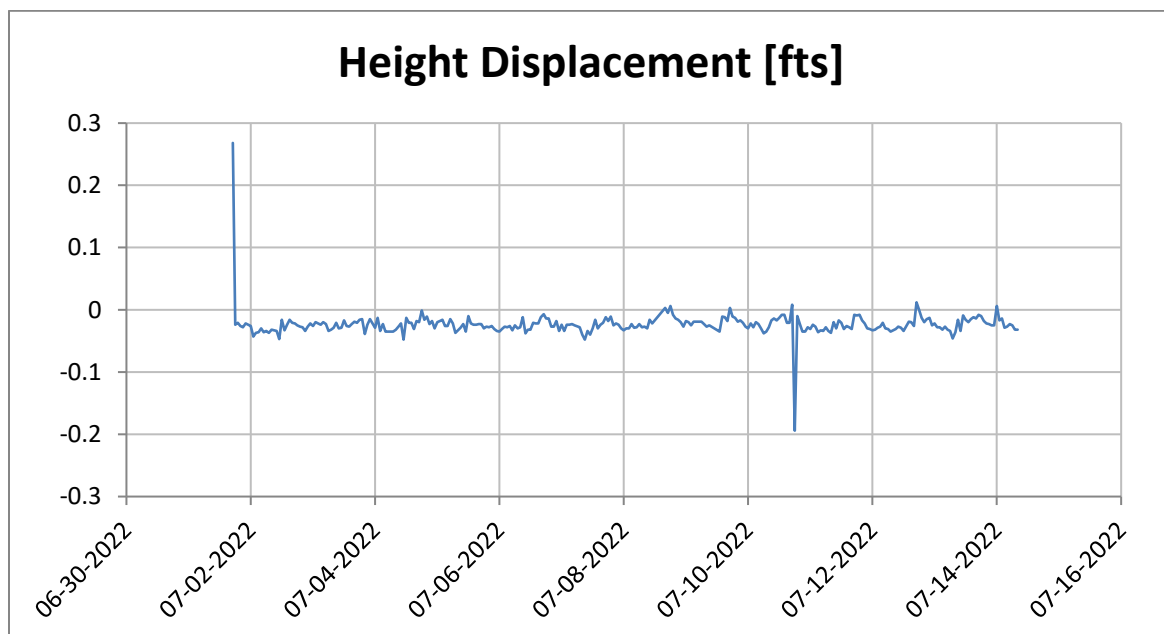
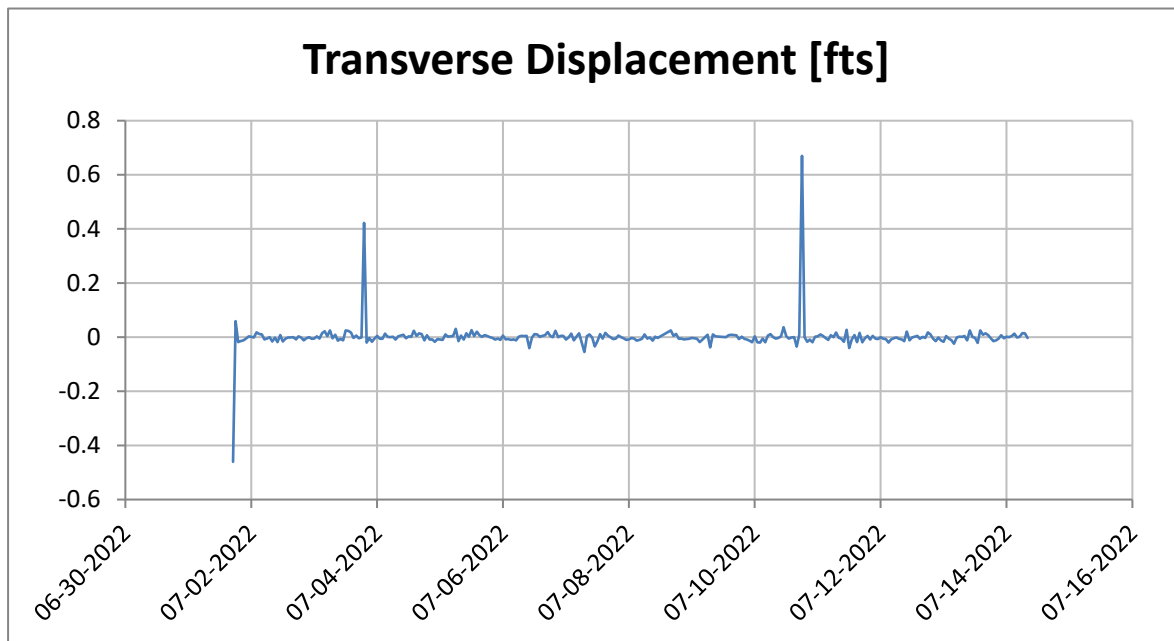
Prism CP1



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Plot displays data for 7/1/22 through 7/14/22. Prism removed following base station move.

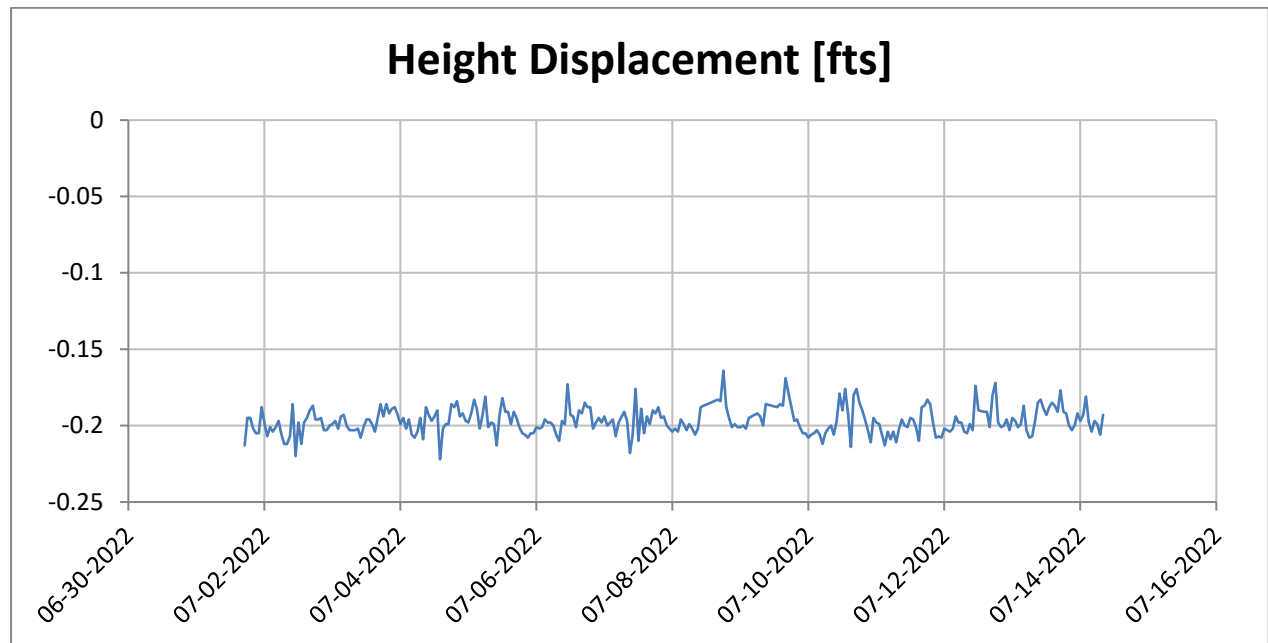
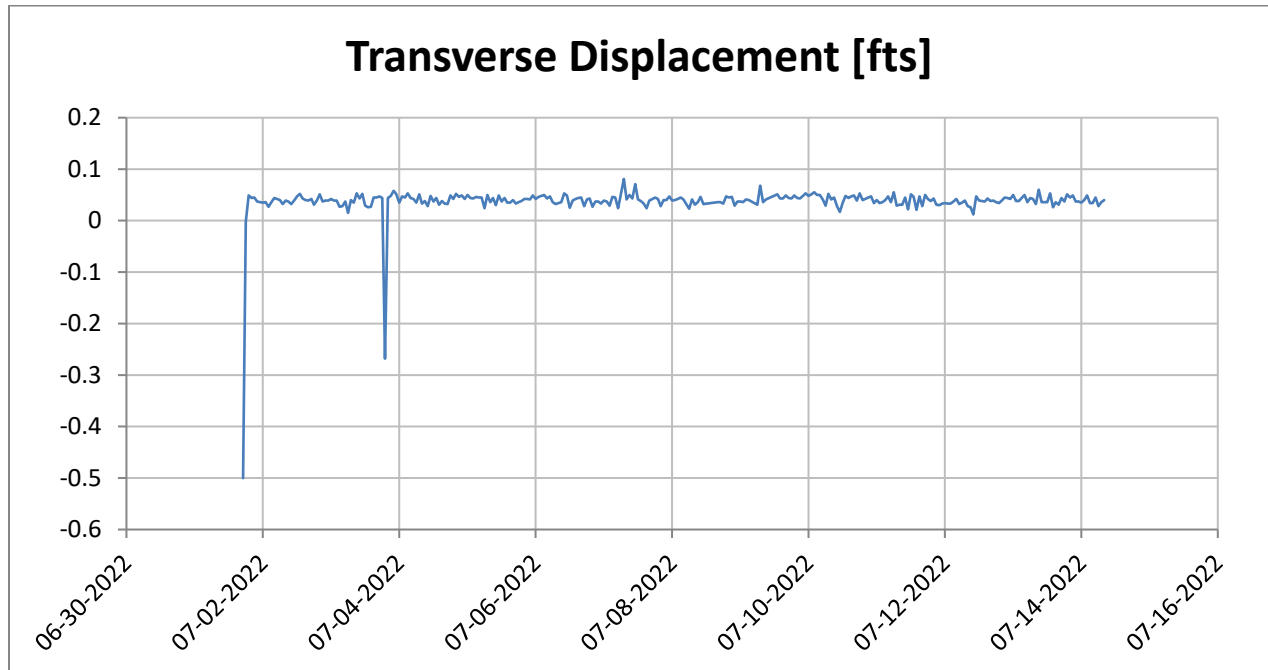
Prism CP4



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Plot displays data for 7/1/22 through 7/14/22. Prism removed following base station move.

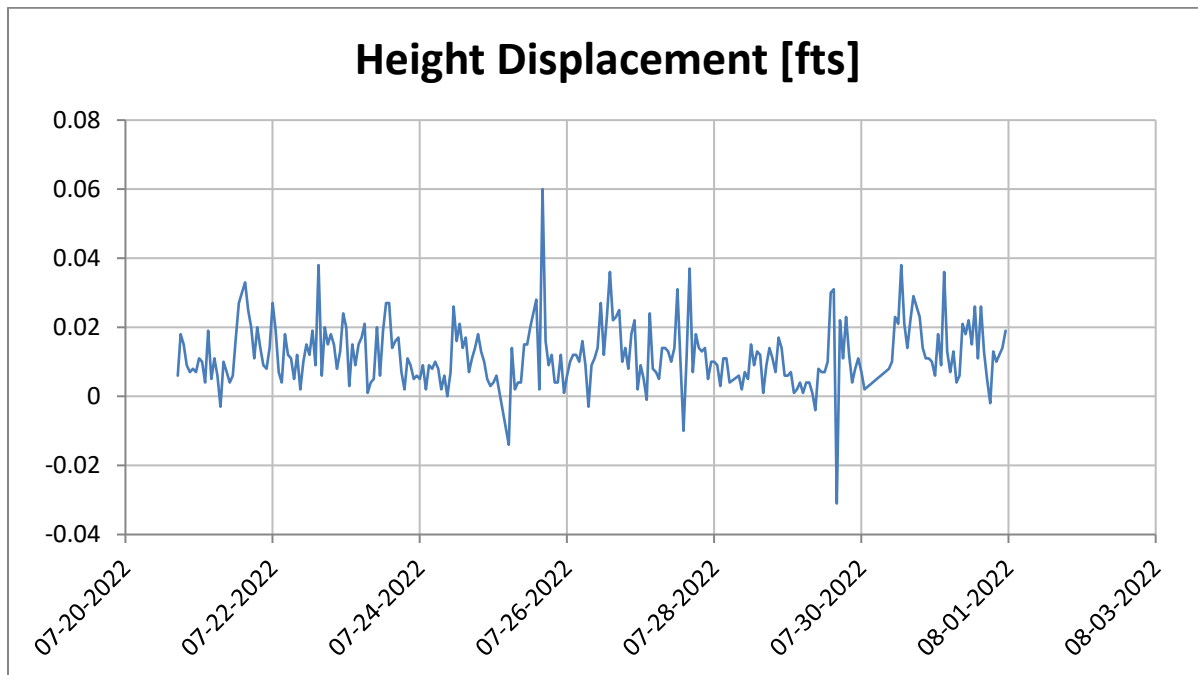
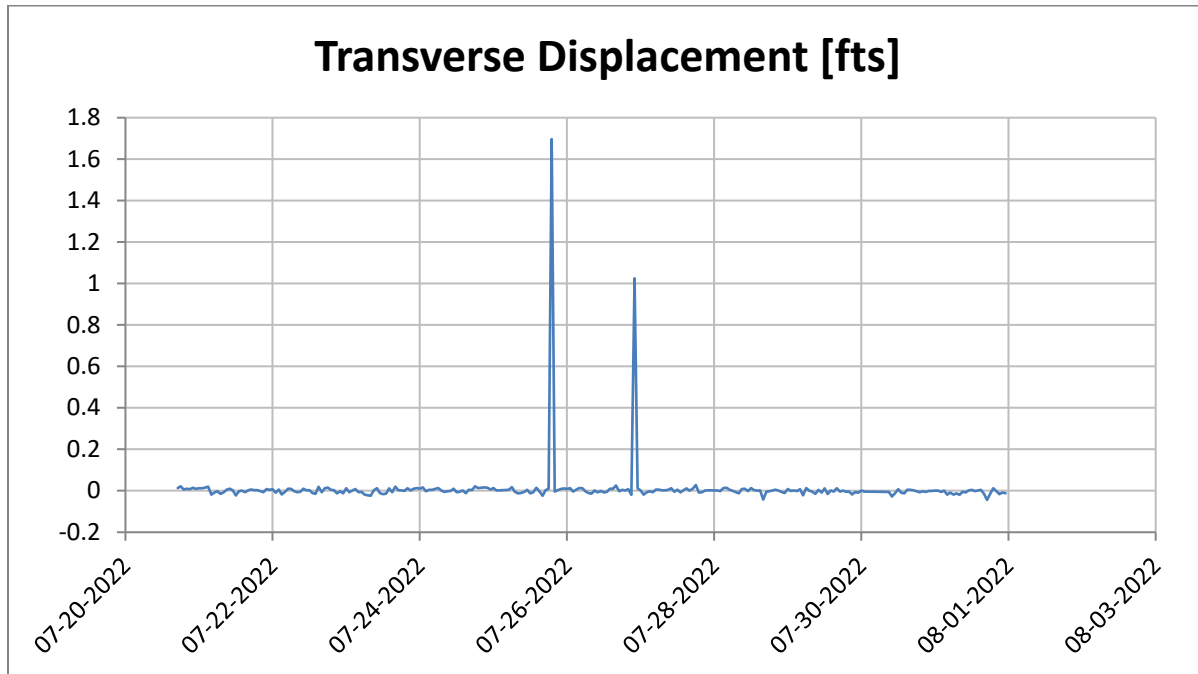
Prism P35 (renamed as CP6)



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts were received on 7/1, 7/2, 7/3, 7/4, 7/26, 7/27
6. Prism reading for 7/1/22 through 7/14/22.

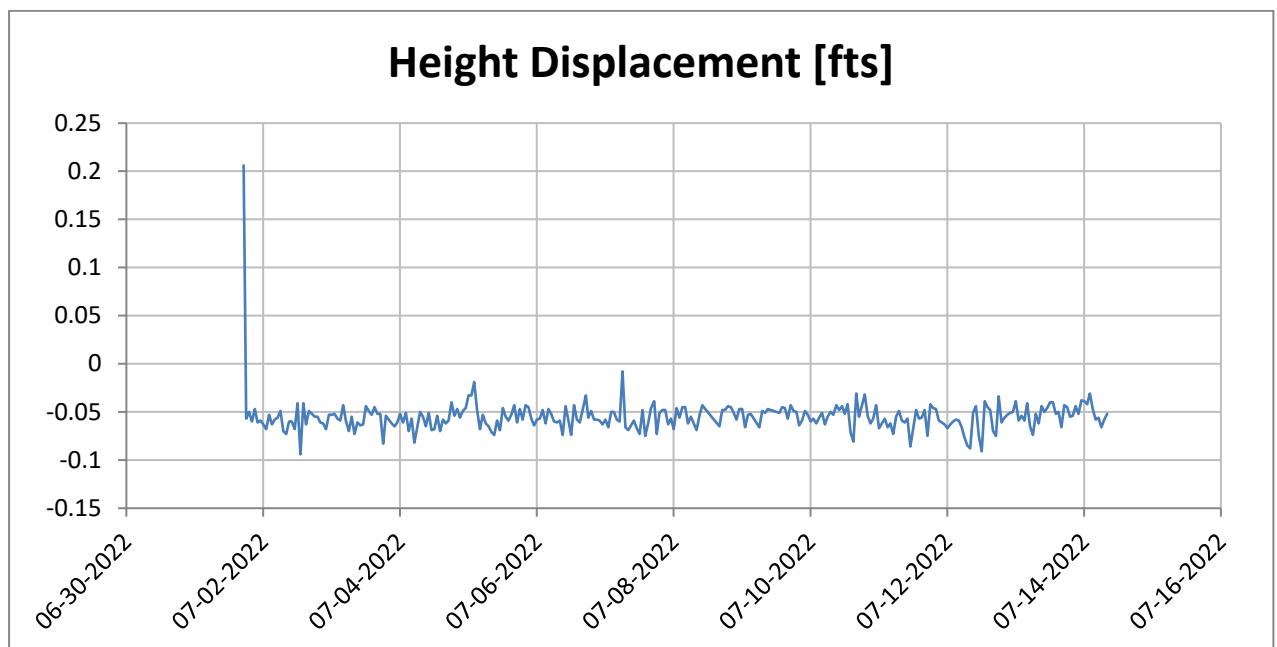
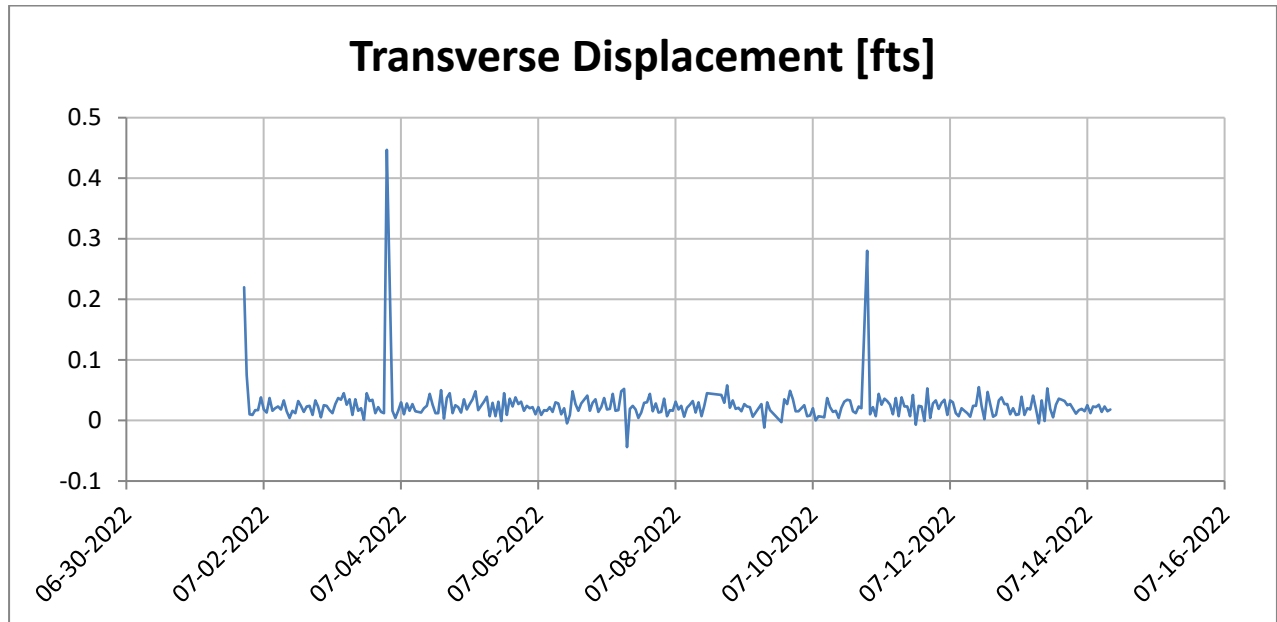
Prism CP6 (previously P35)



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism previously identified as P35
6. Prism reading for 7/20/22 through 7/30/22.

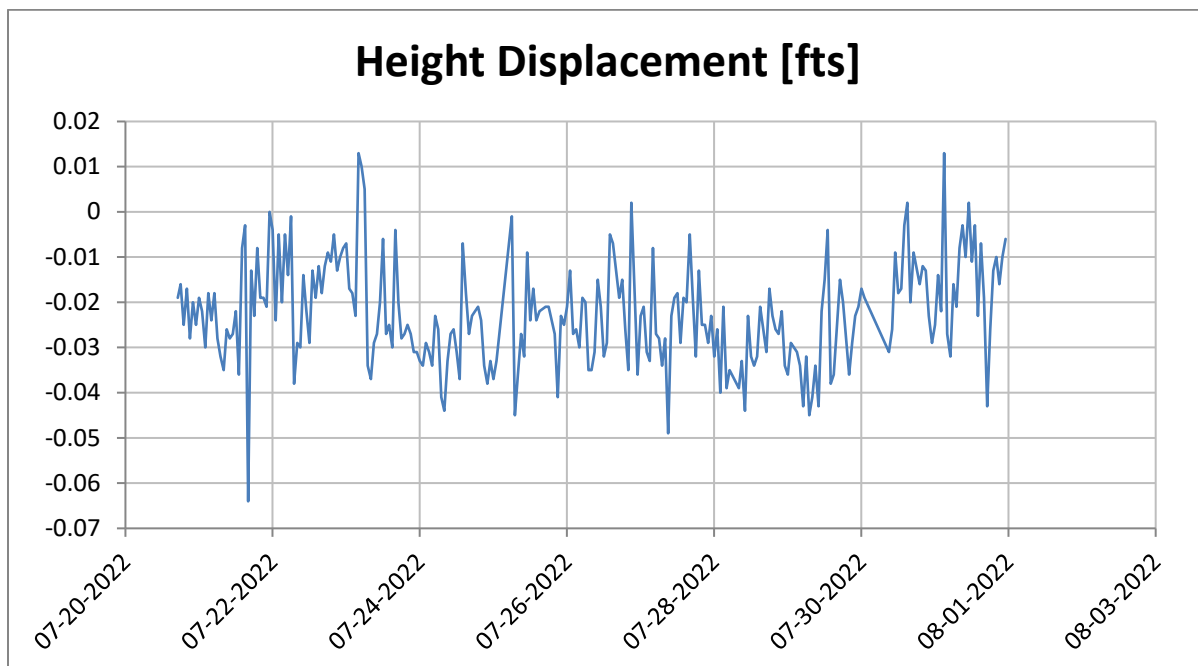
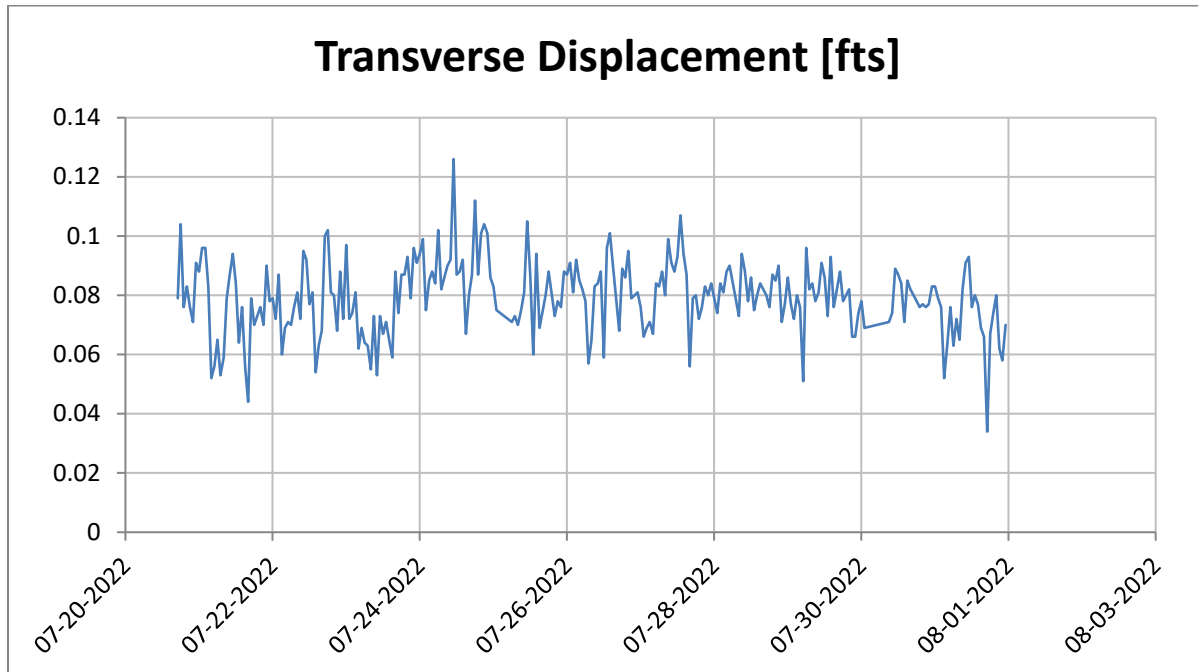
Prism CP5 (renamed as CP7)



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Plot displays data for 7/1/22 through 7/14/22.

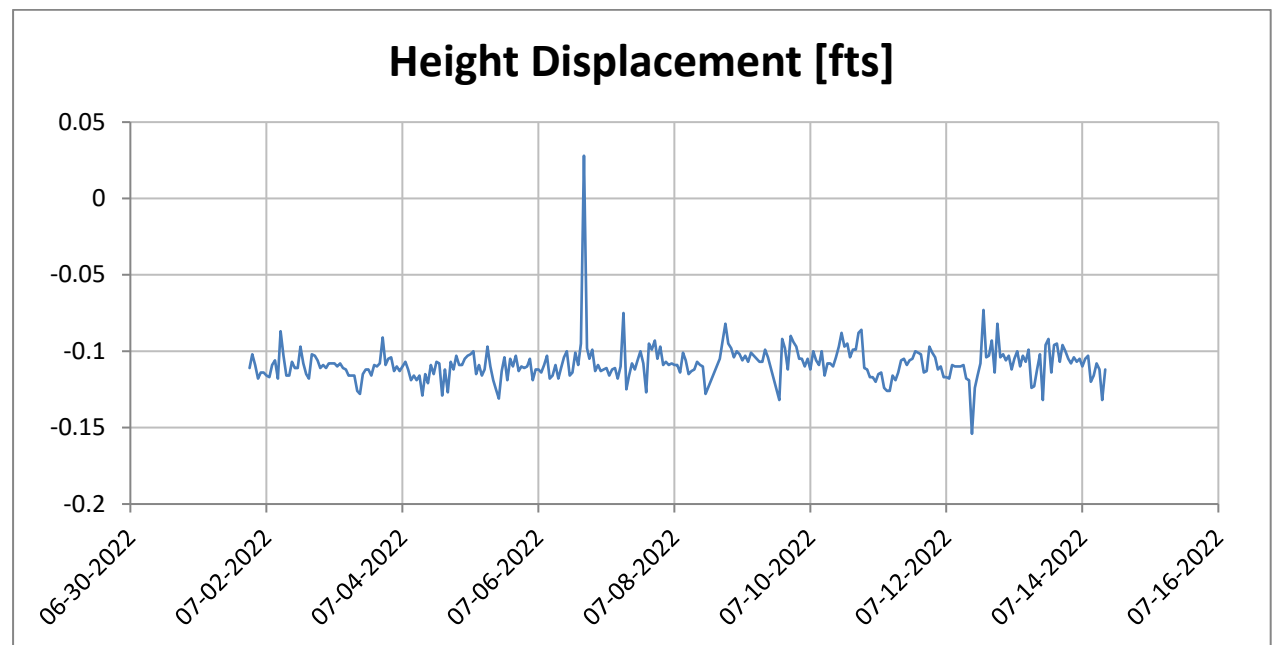
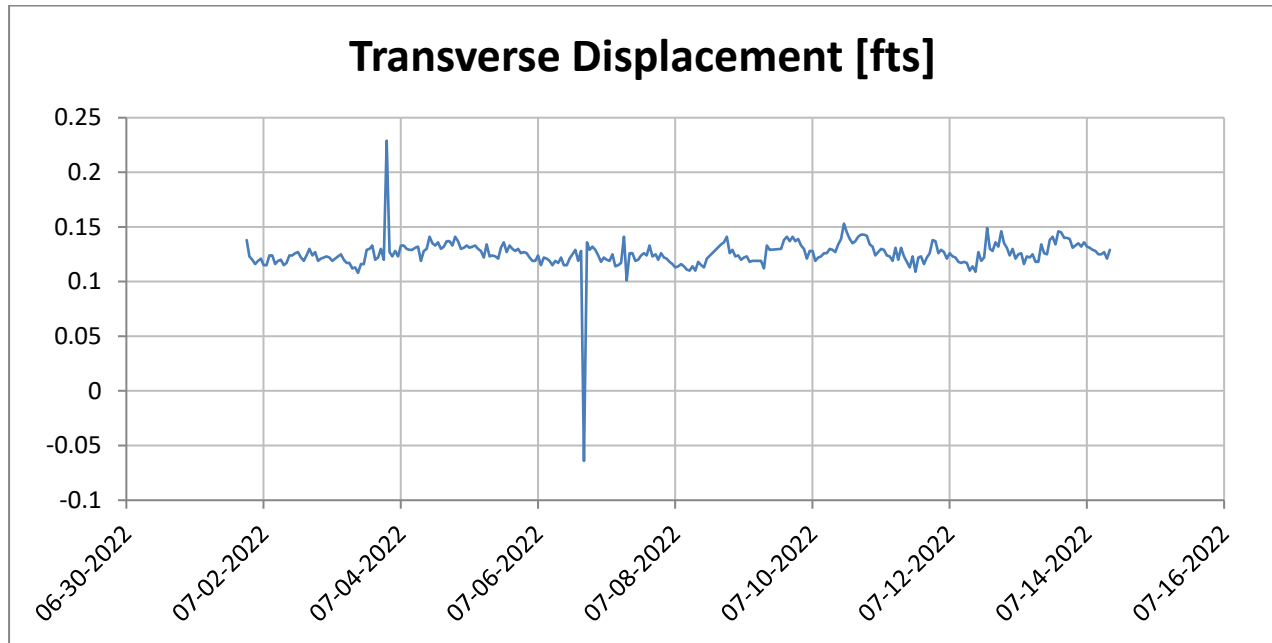
Prism CP7 (previously CP5)



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism previously identified as CP5
6. Plot displays data for 7/20/22 through 7/30/22.

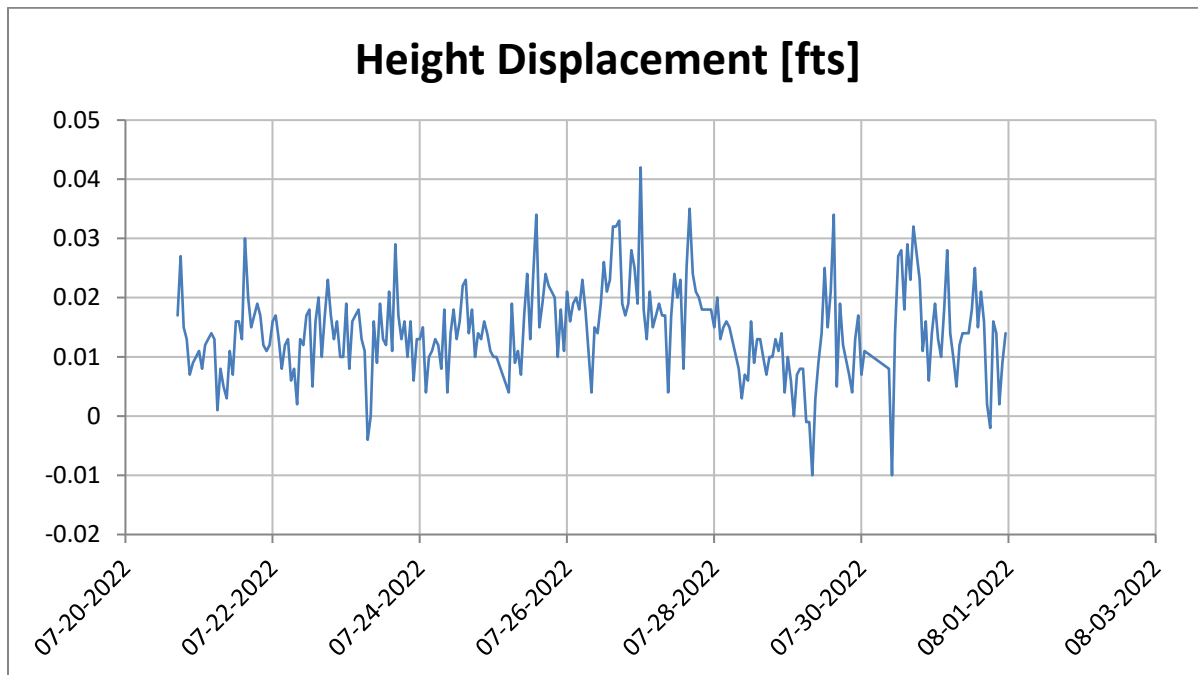
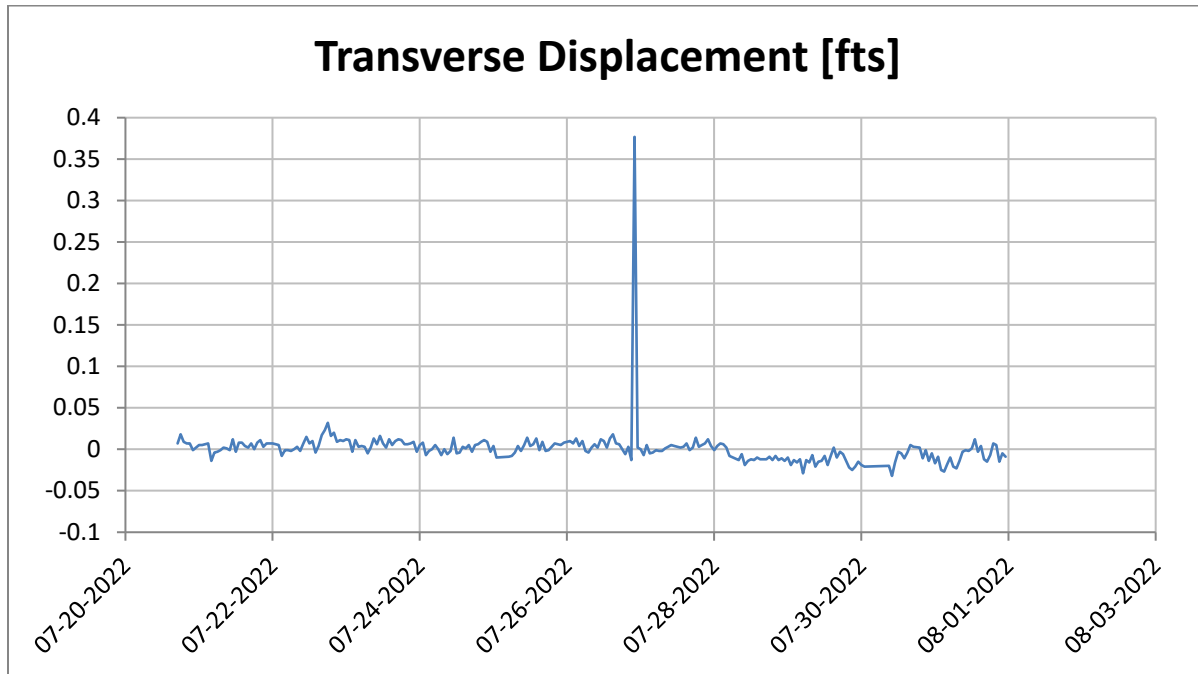
Prism NP2



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts were received on 7/3, 7/4, 7/6, 7/12, 7/26, 7/27.
6. Plot displays data 7/1/22 through 7/14/22.

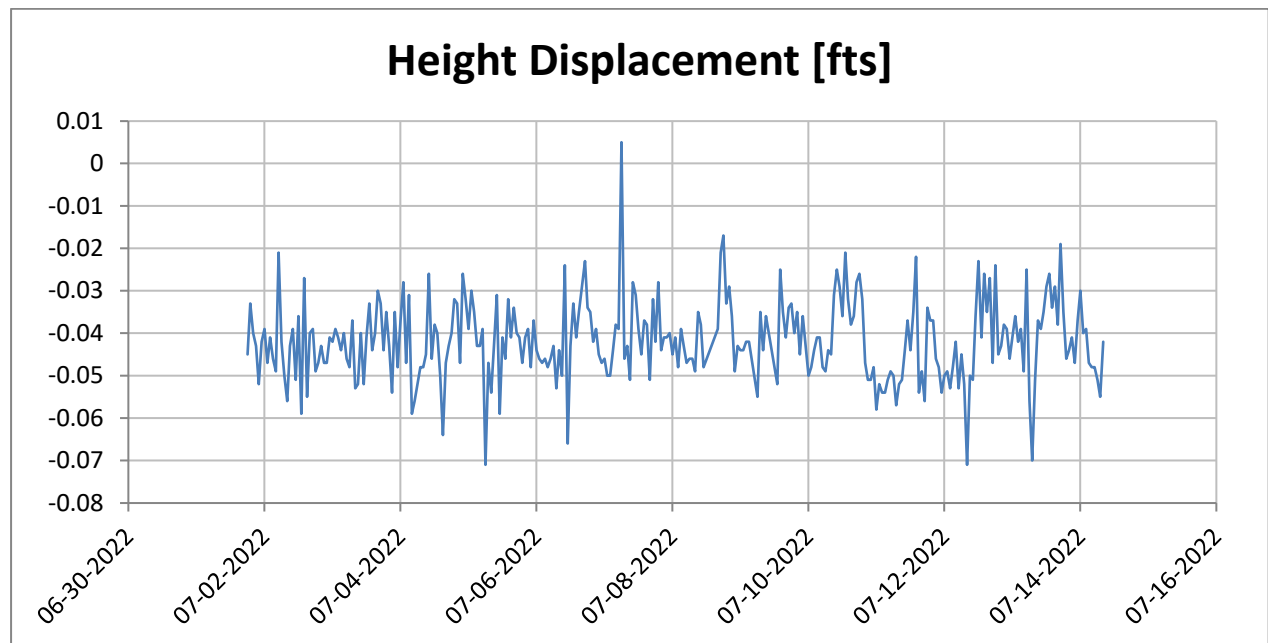
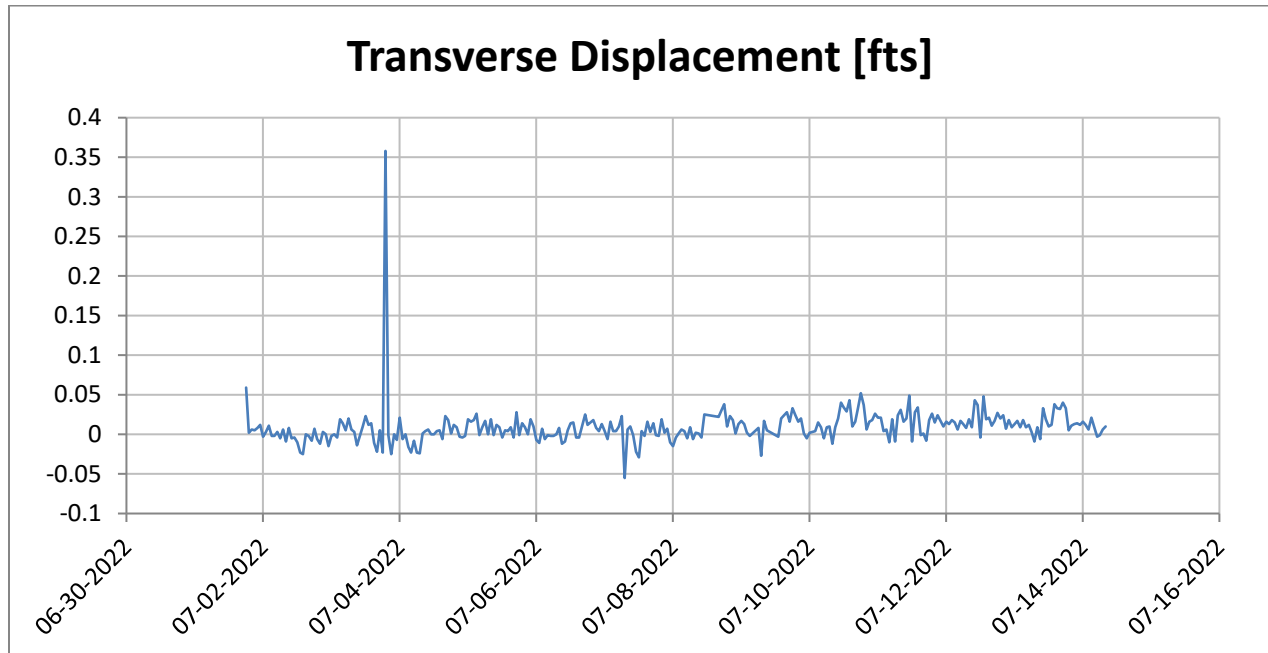
Prism NP2



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/6, 7/12, 7/26, 7/27.
6. Plot displays data for 7/20/22 through 7/30/22.

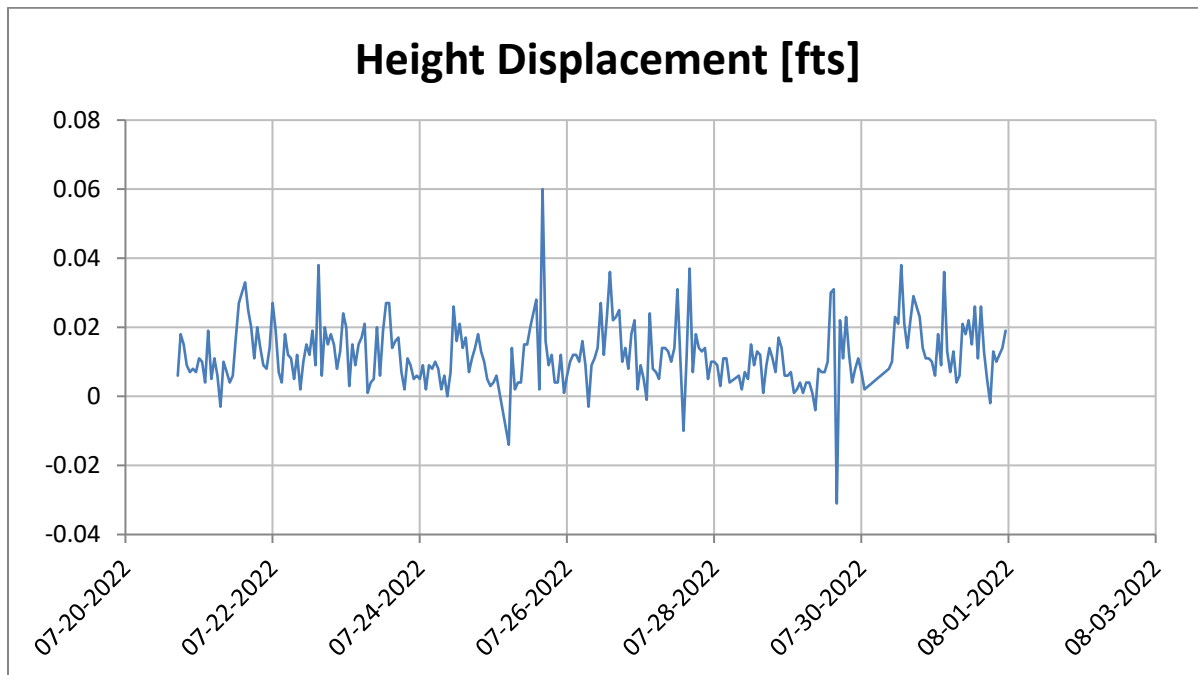
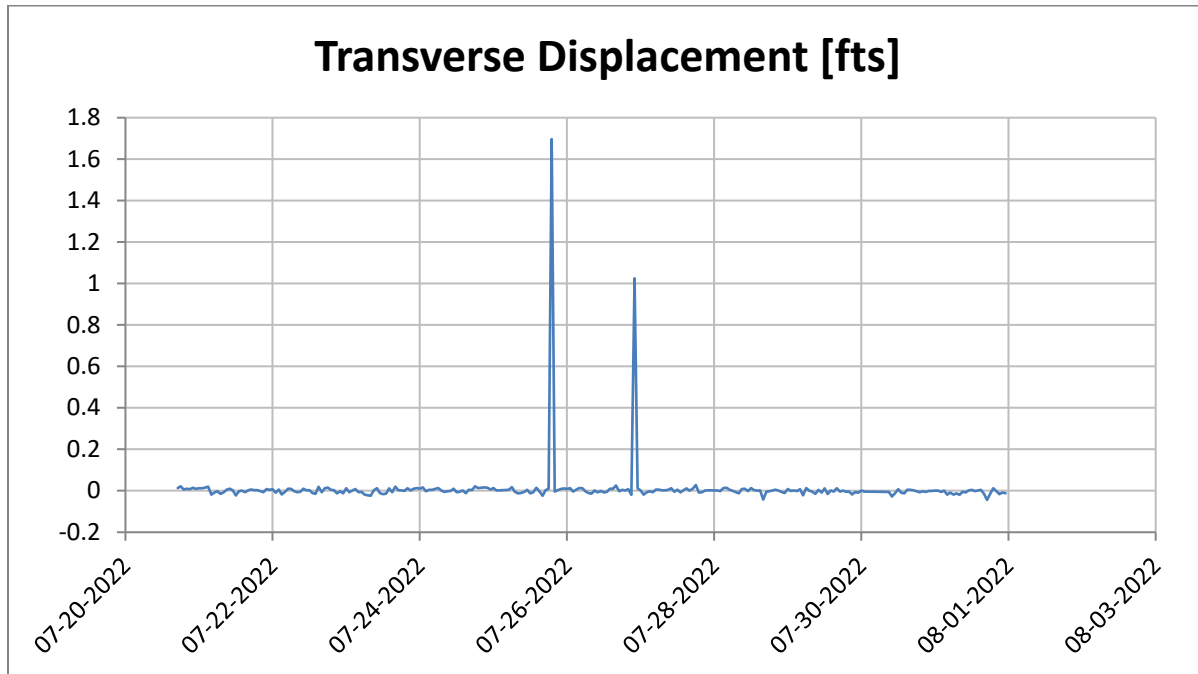
Prism NP3



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Plot displays data 7/1/22 through 7/14/22.

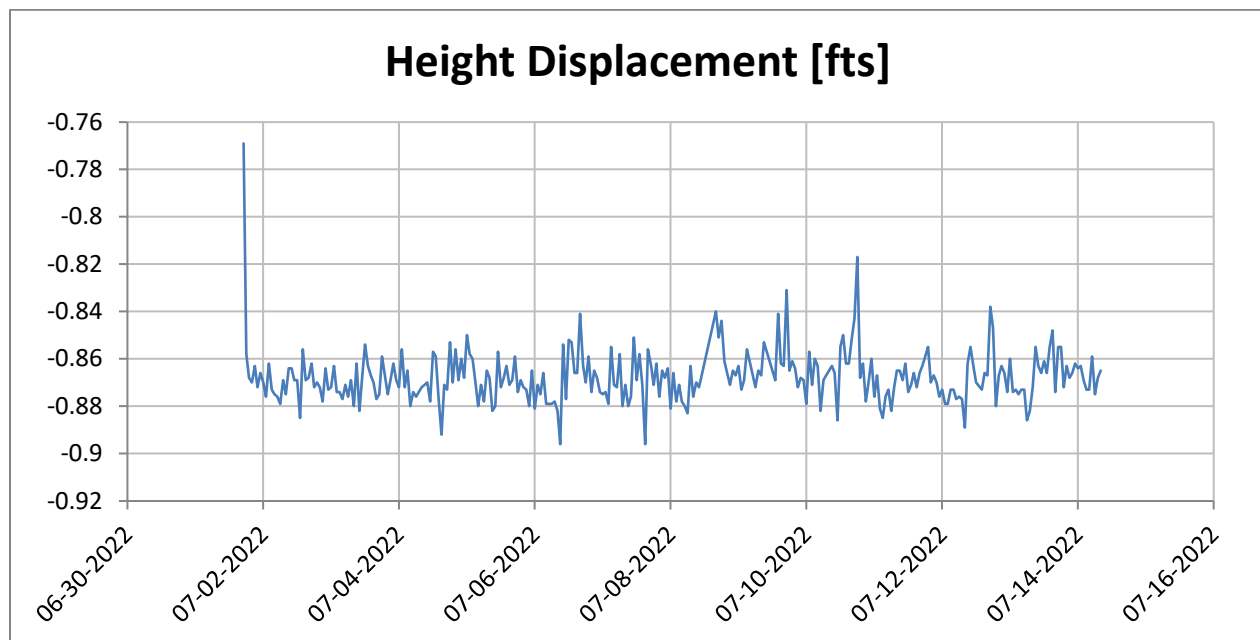
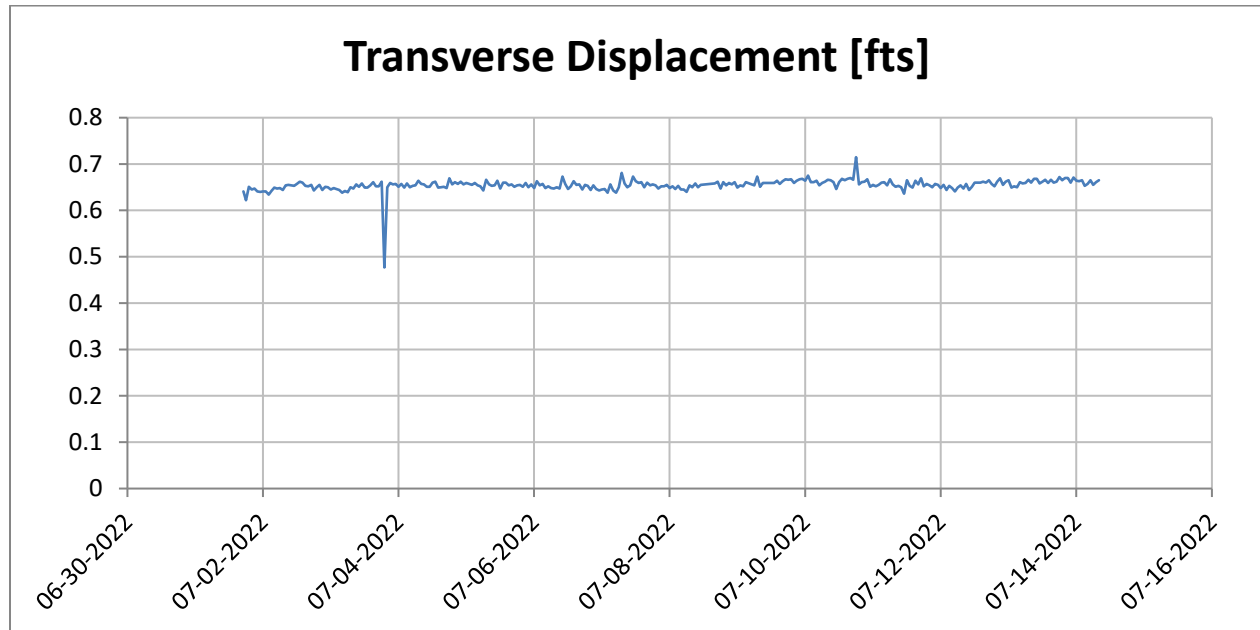
Prism NP3



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism reading for 7/20/22 through 7/30/22.

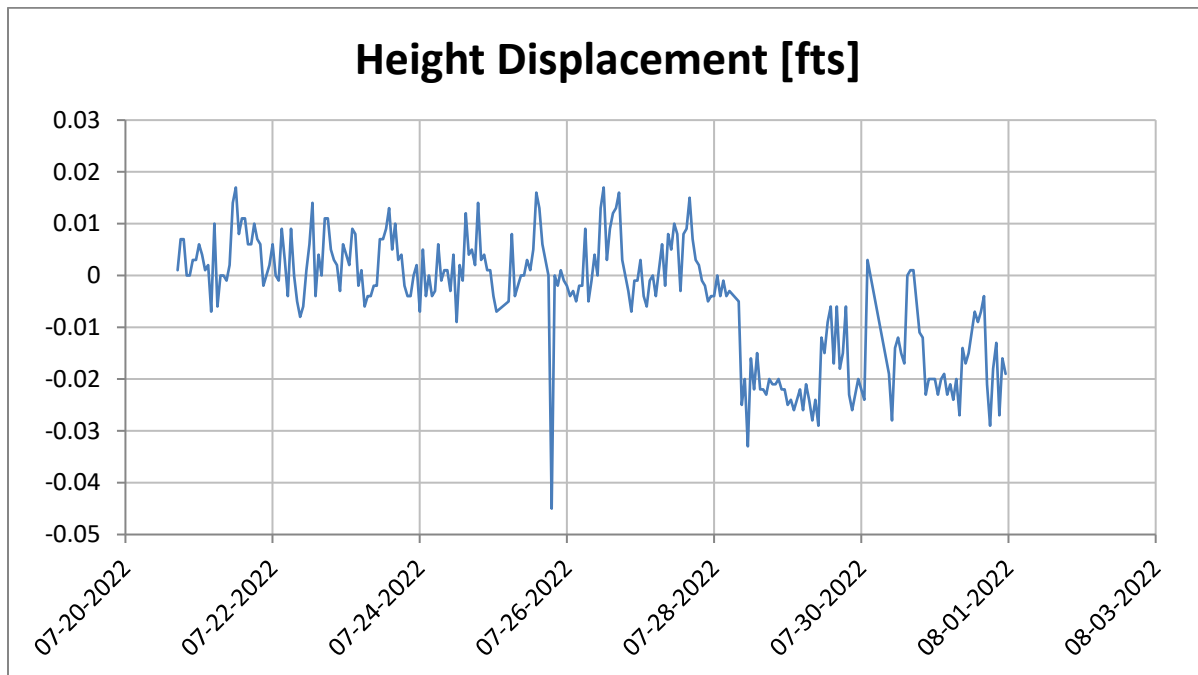
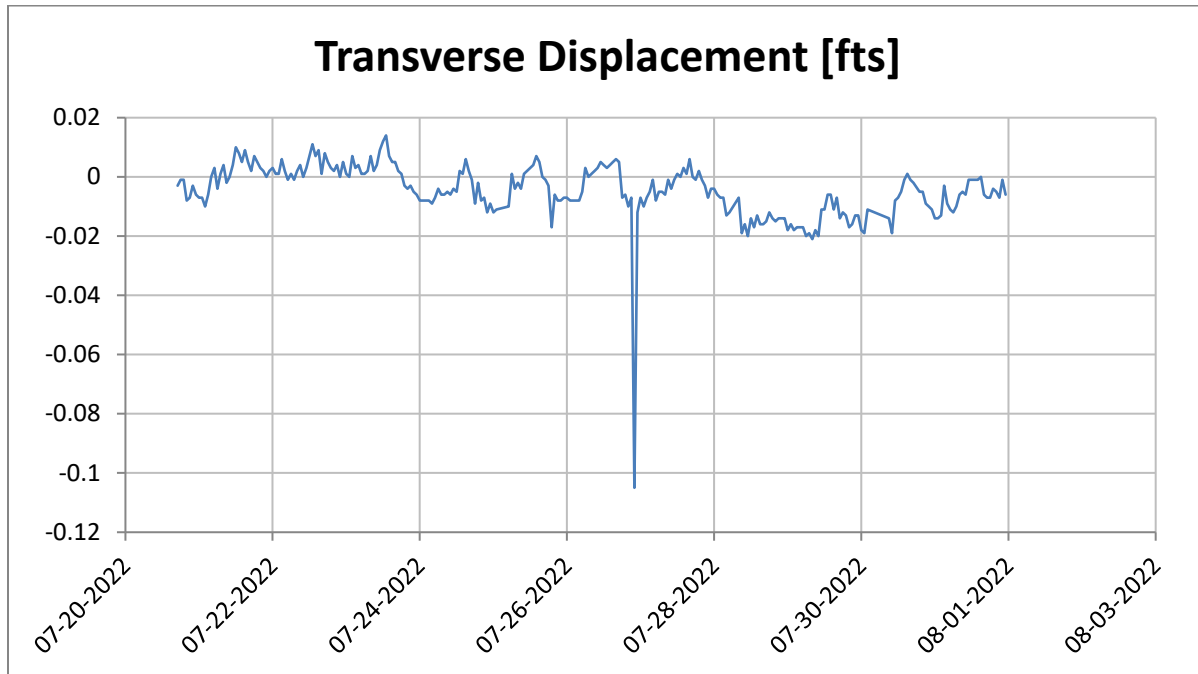
Prism NP66



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism reading for 7/1/22 through 7/14/22.
6. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27.

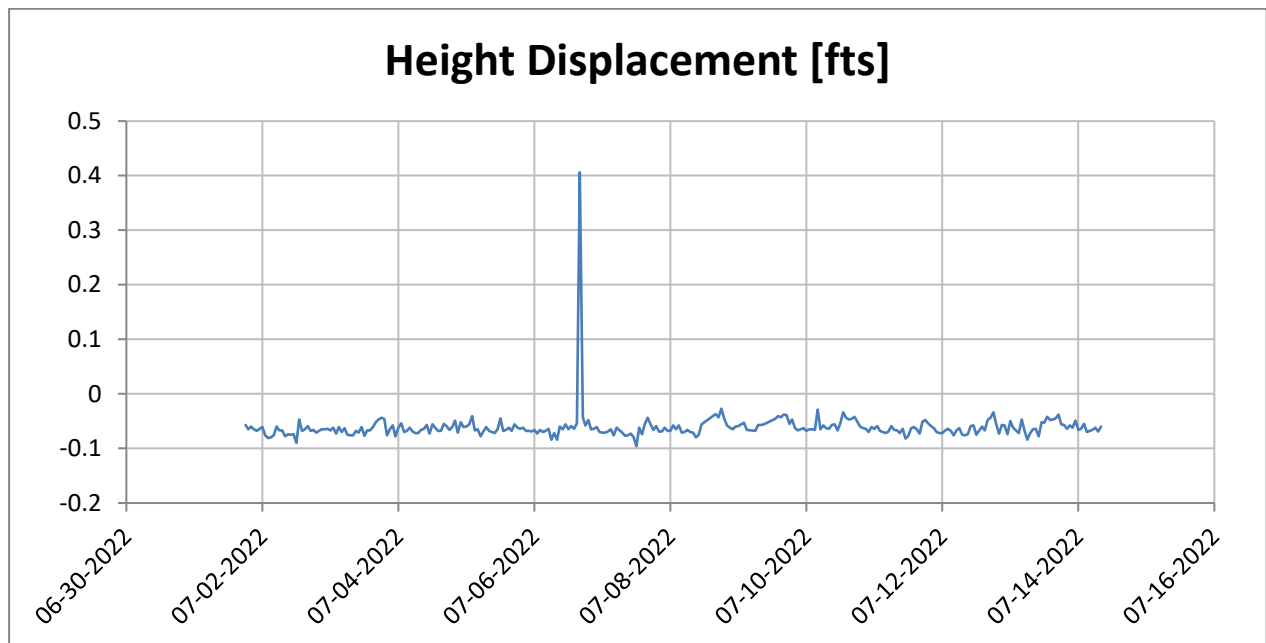
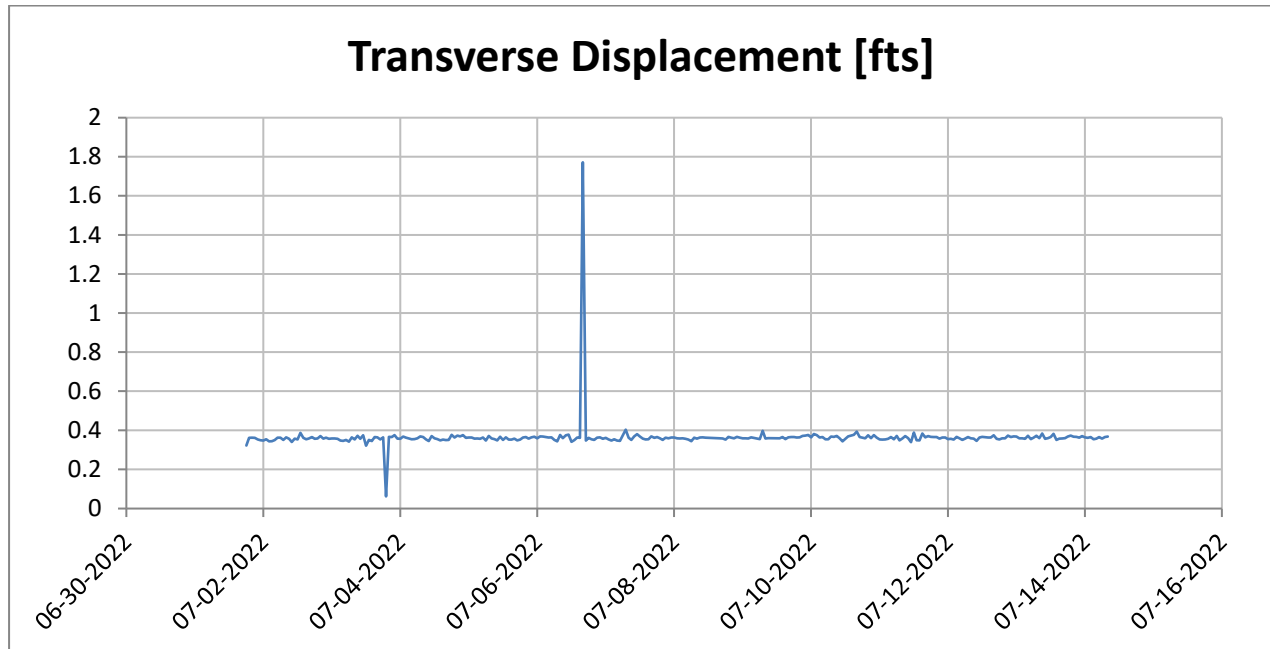
Prism NP66



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27
7. Prism reading for 7/20/22 through 7/30/22.

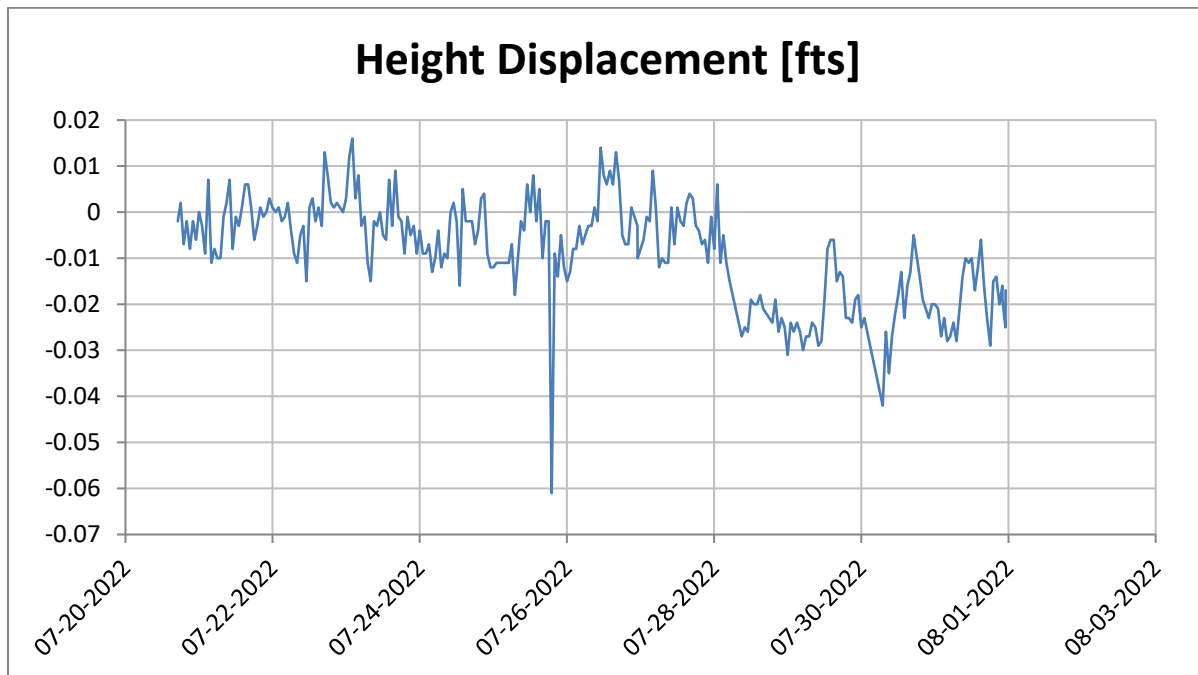
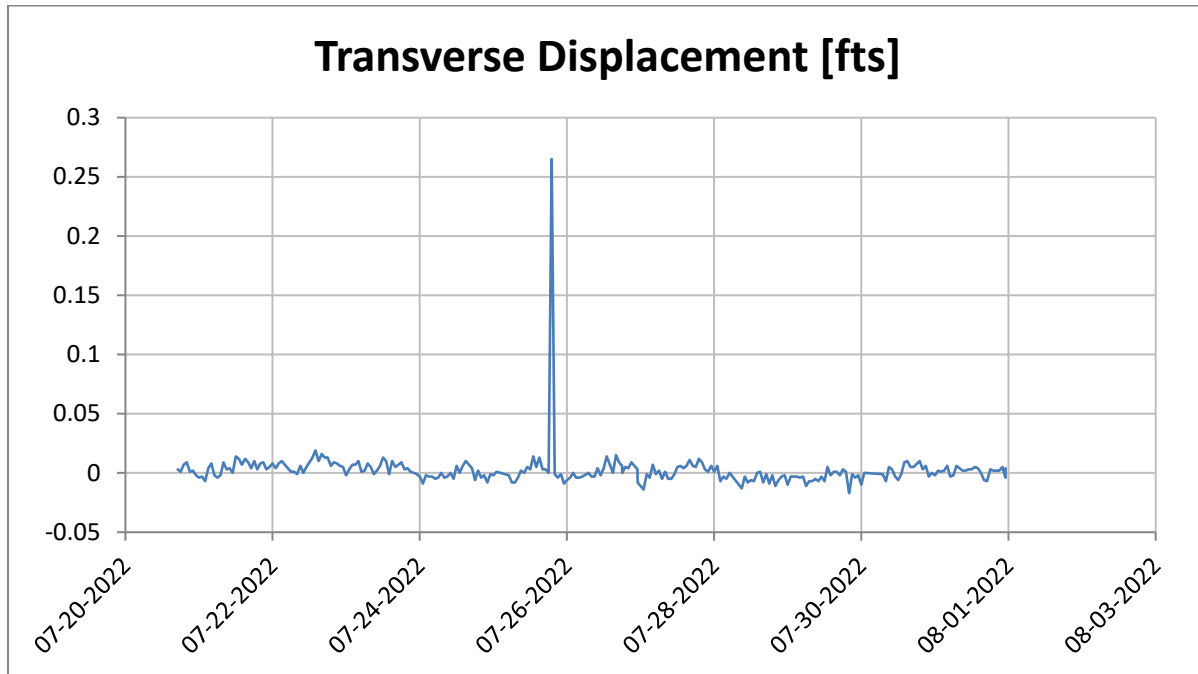
Prism P1



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism reading for 7/1/22 through 7/14/22.
6. Exceedance alerts received on 7/3, 7/6, 7/25, 7/26, 7/27.

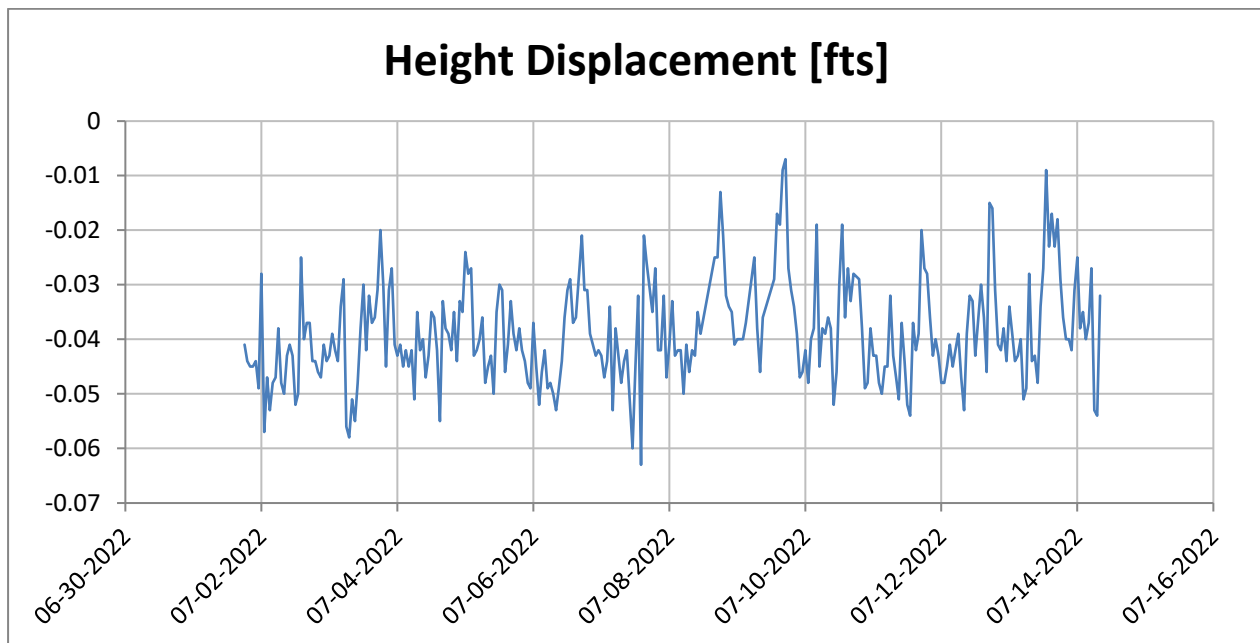
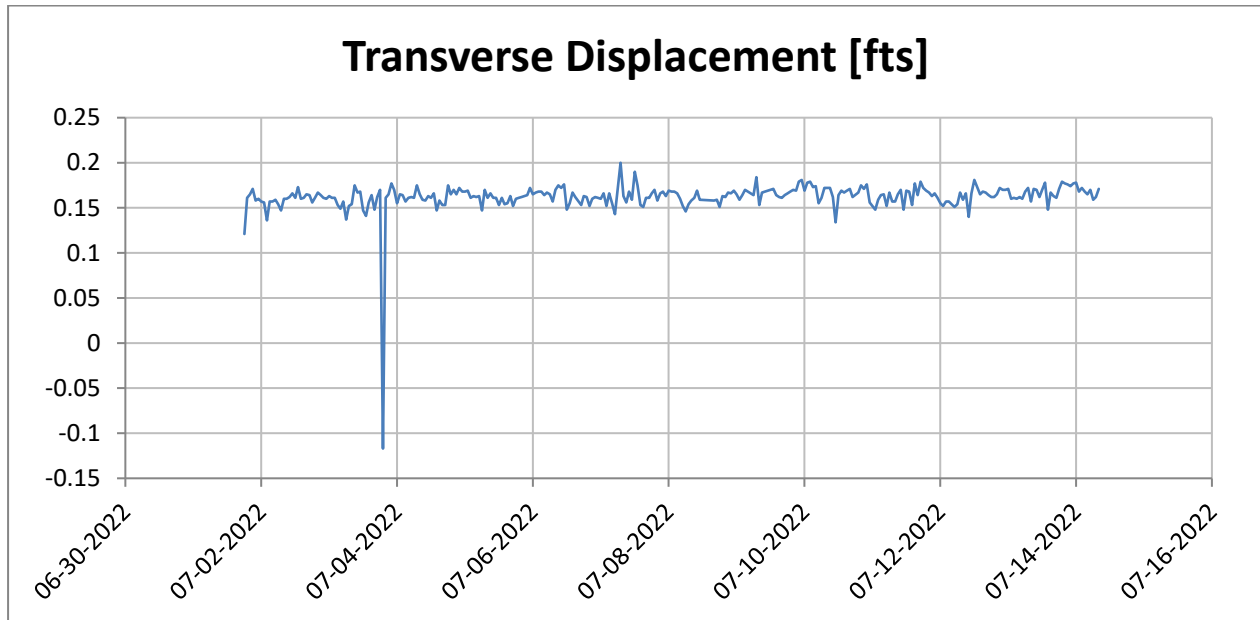
Prism P1



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism reading for 7/20/22 through 7/30/22.
6. Exceedance alerts received on 7/3, 7/6, 7/25, 7/26, 7/27.

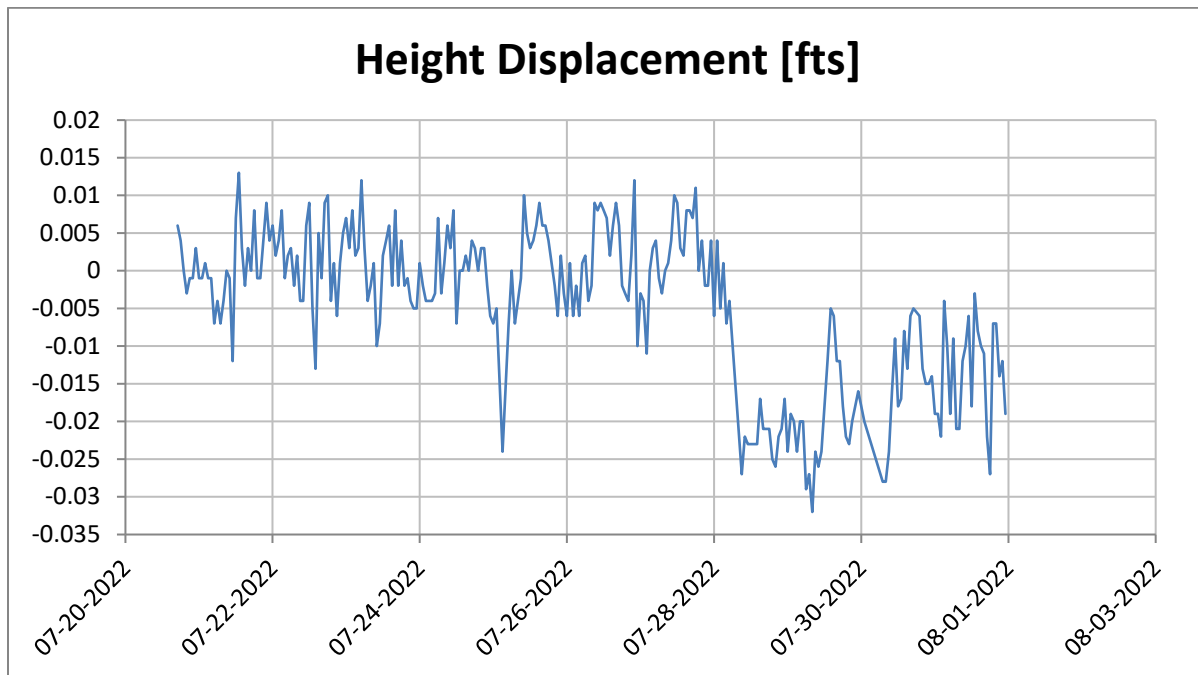
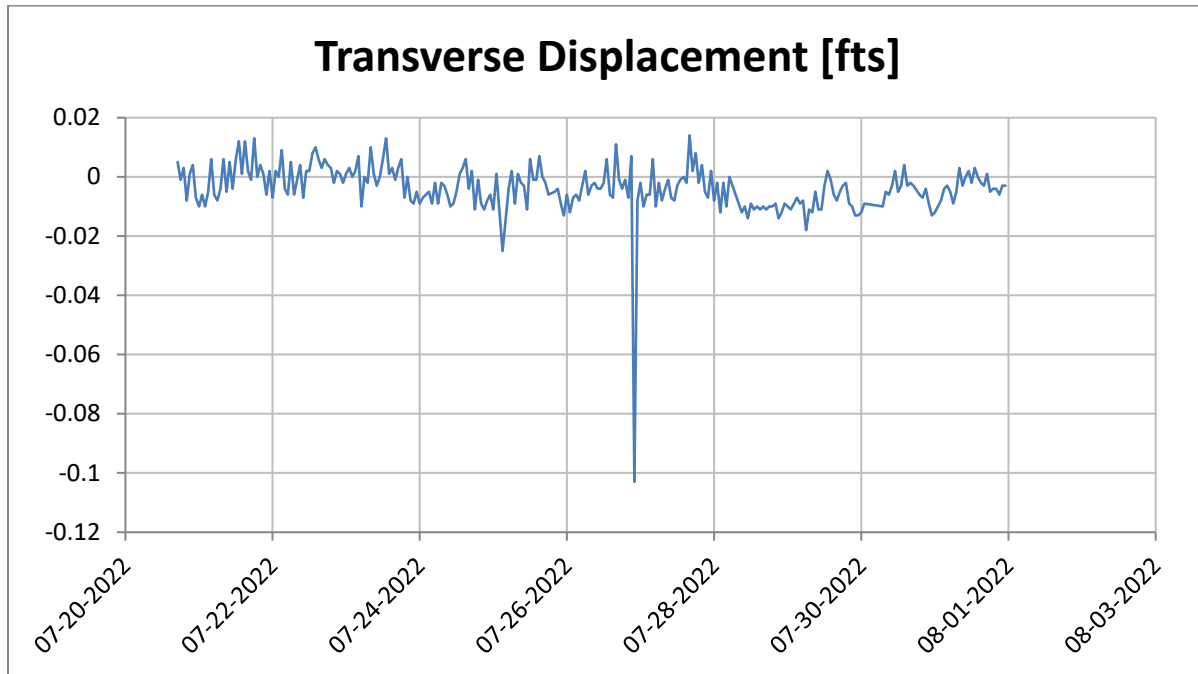
Prism P2



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27.
6. Prism reading for 7/1/22 through 7/14/22.

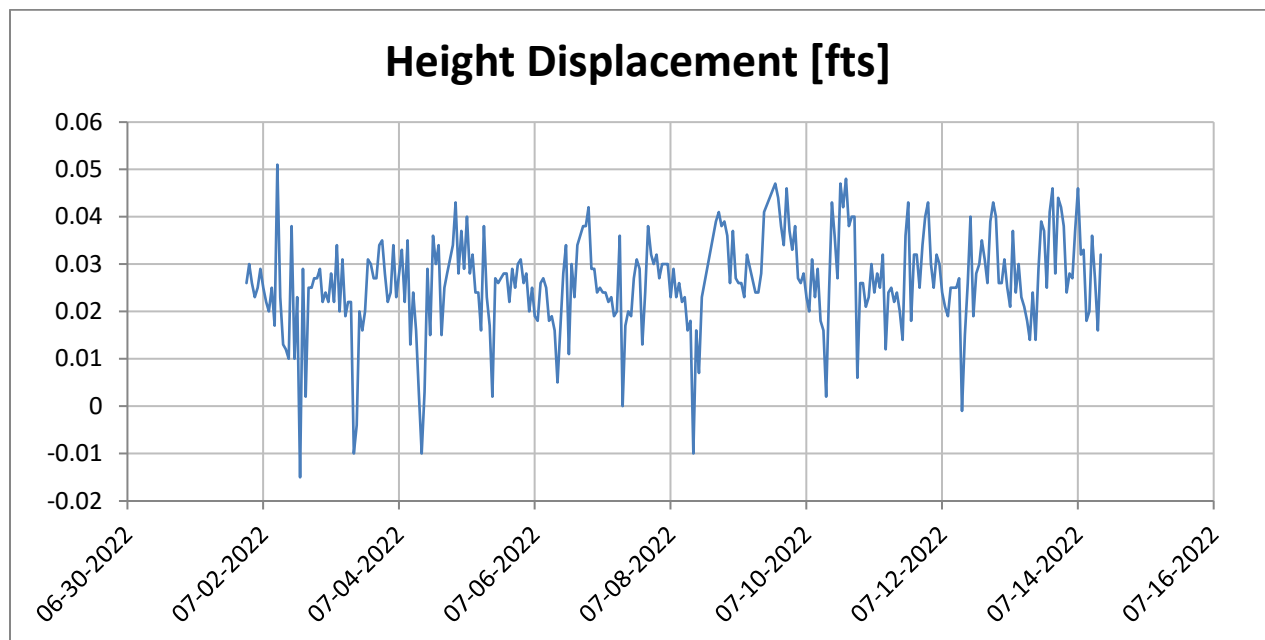
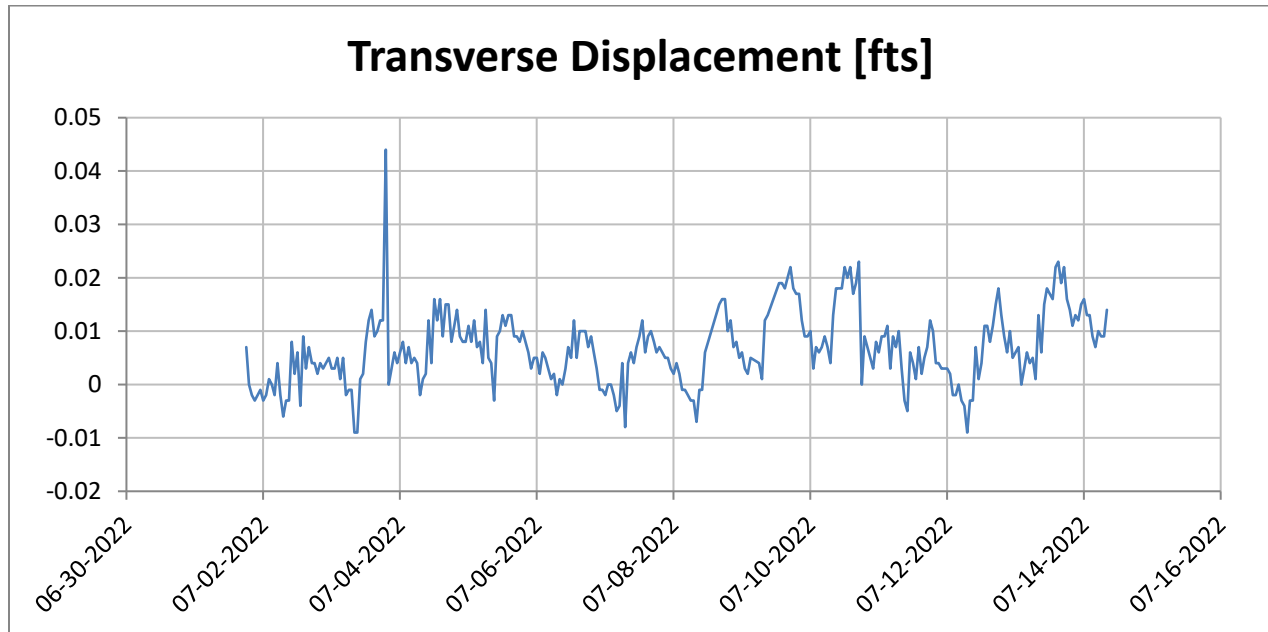
Prism P2



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27.
6. Prism reading for 7/20/22 through 7/30/22.

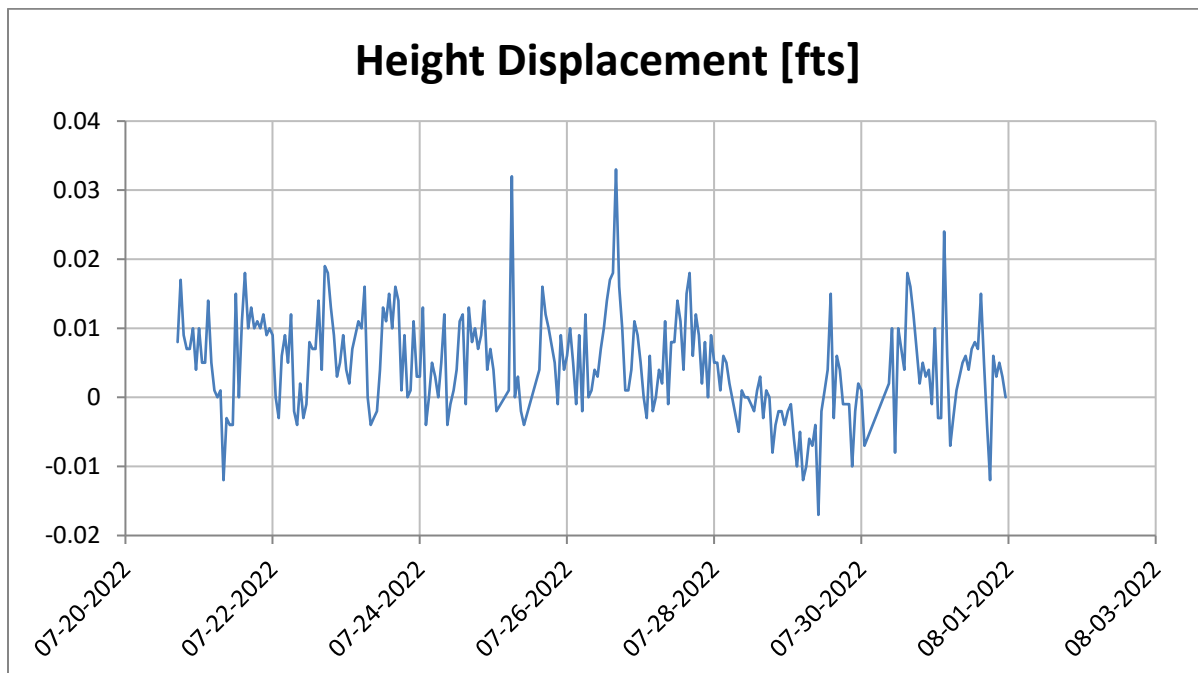
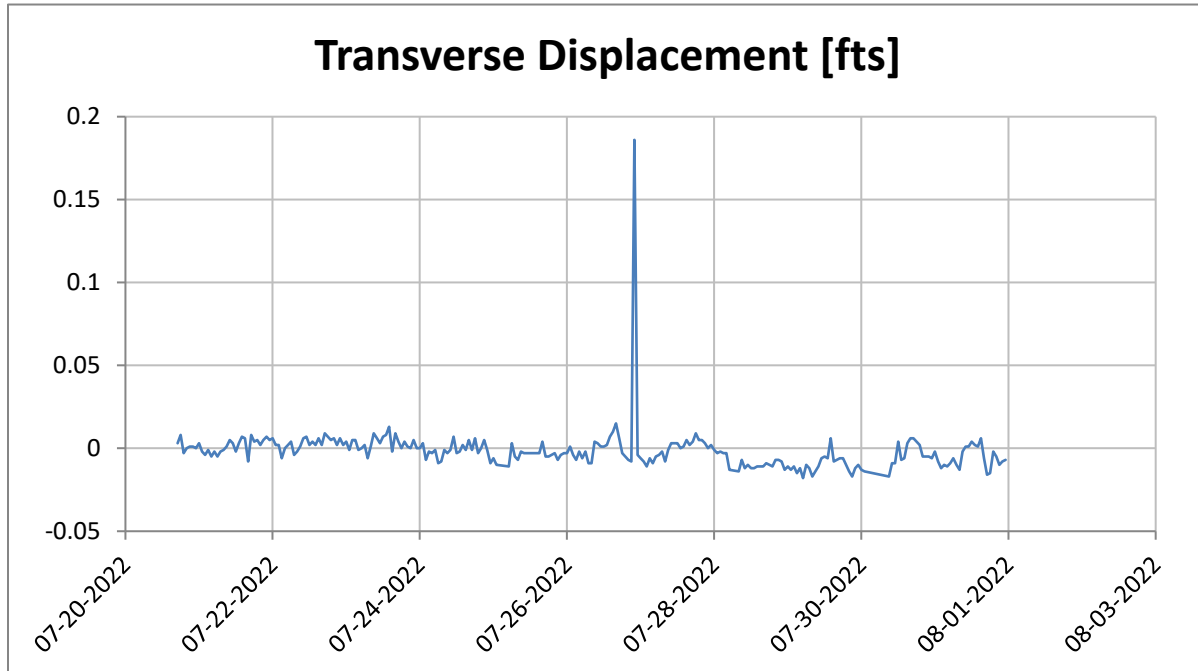
Prism P25



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
7. Height displacement is in the vertical direction. Positive direction means higher in elevation.
4. Exceedance alerts received on 7/3, 7/4, 7/7, 7/13, 7/26, 7/27.
5. Prism reading for 7/1/22 through 7/14/22.

Prism P25

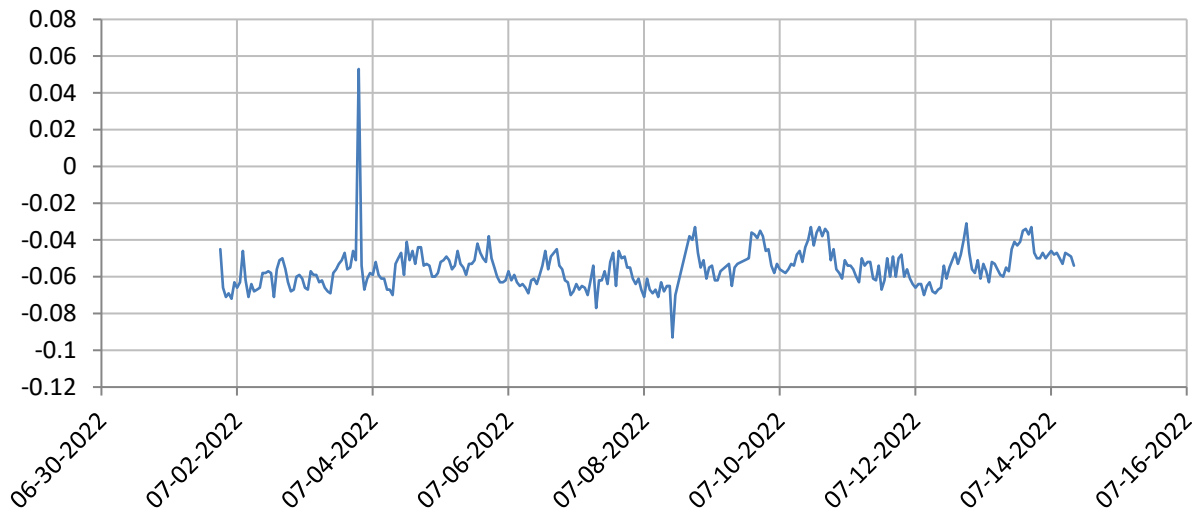


Notes:

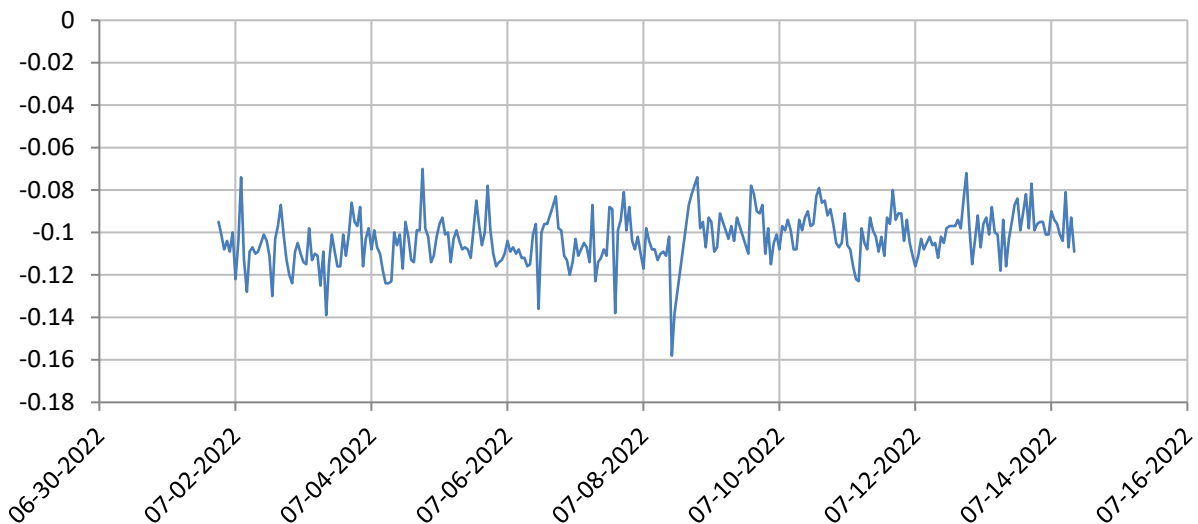
1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/7, 7/13, 7/26, 7/27.
6. Prism reading for 7/20/22 through 7/30/22.

Prism P32

Transverse Displacement [fts]



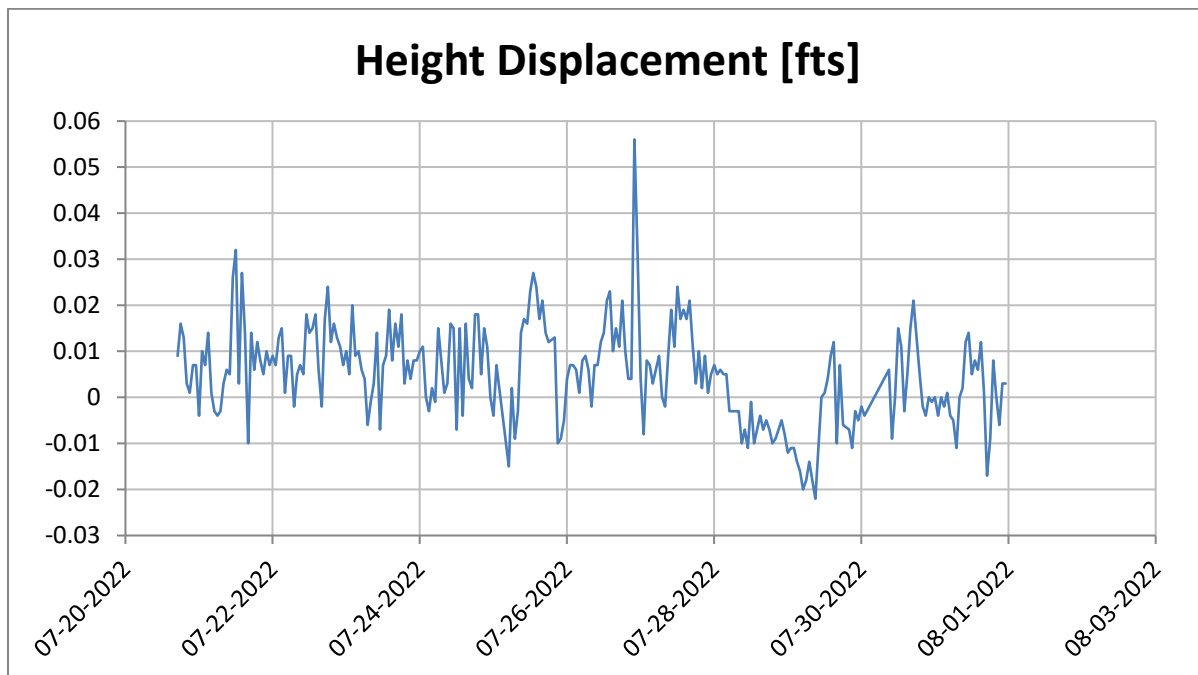
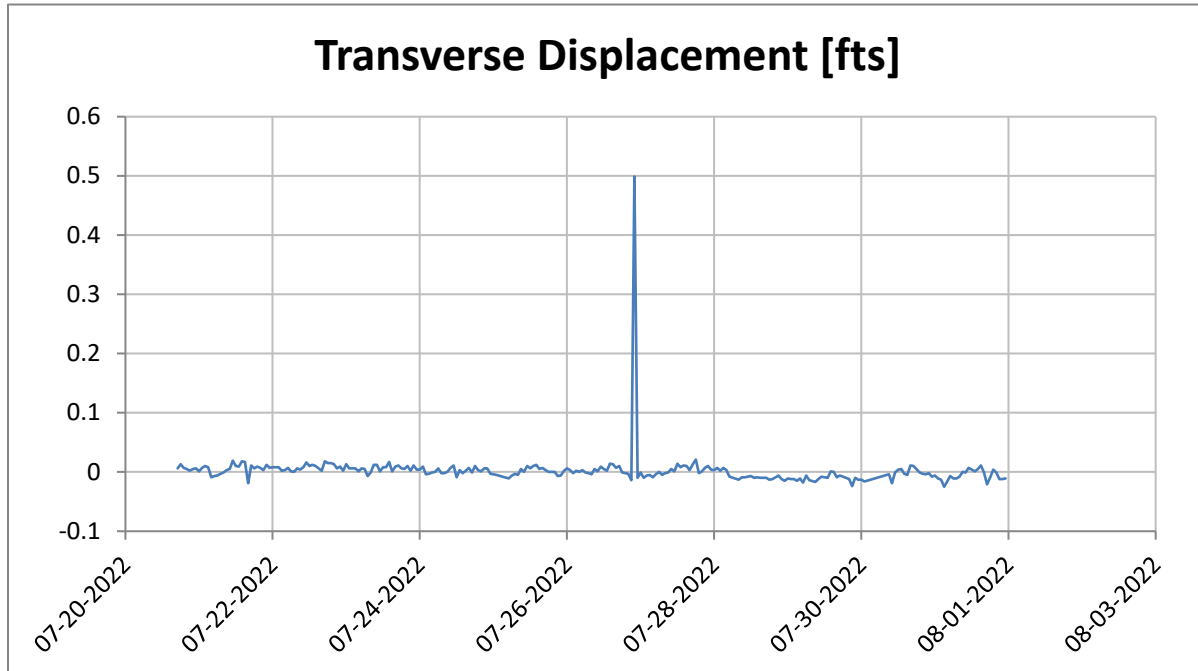
Height Displacement [fts]



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/1, 7/2, 7/3, 7/4, 7/12, 7/26, 7/27.
6. Prism reading for 7/1/22 through 7/14/22.

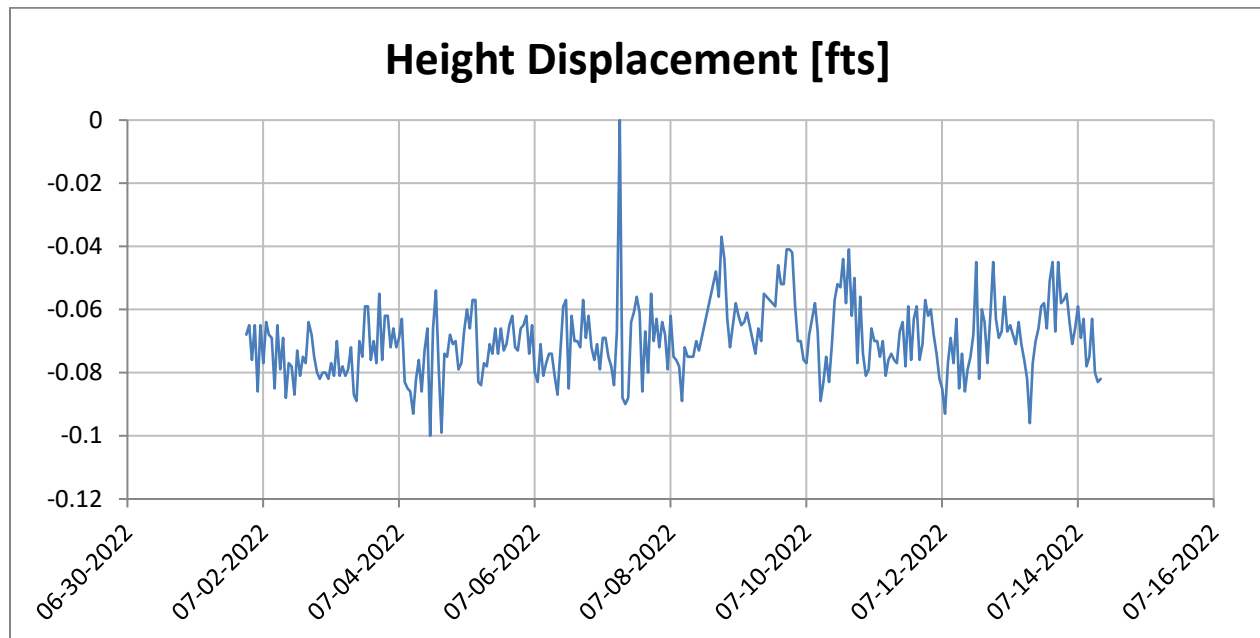
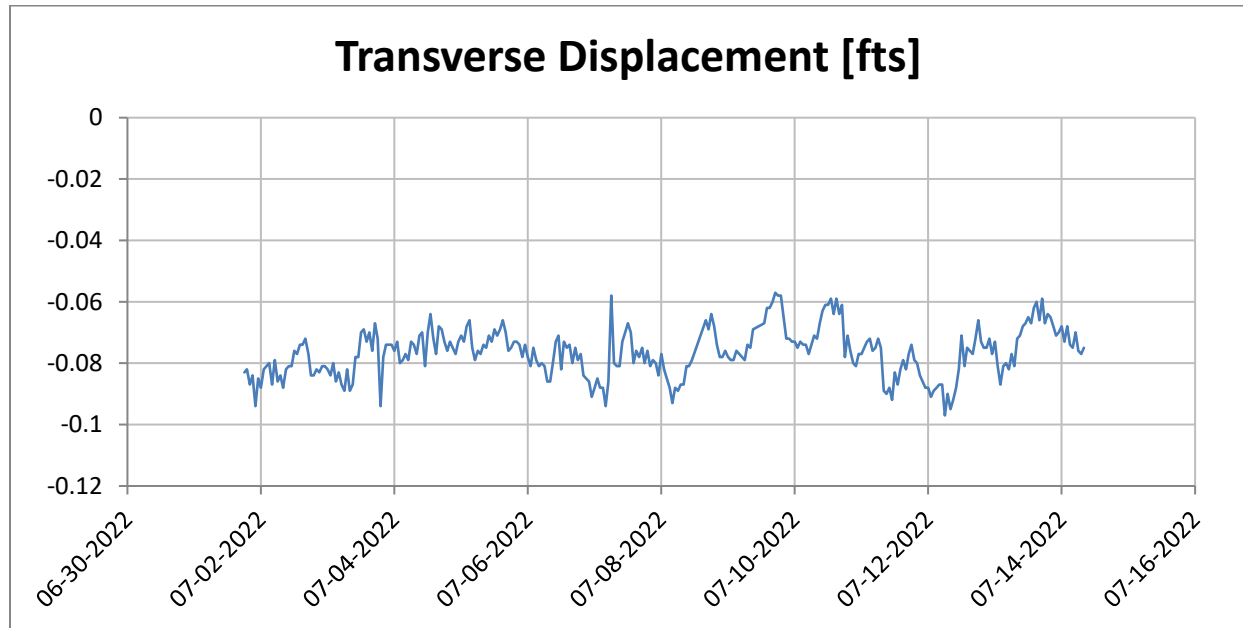
Prism P32



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/1, 7/2, 7/3, 7/4, 7/12, 7/26, 7/27.
6. Prism reading for 7/20/22 through 7/30/22.

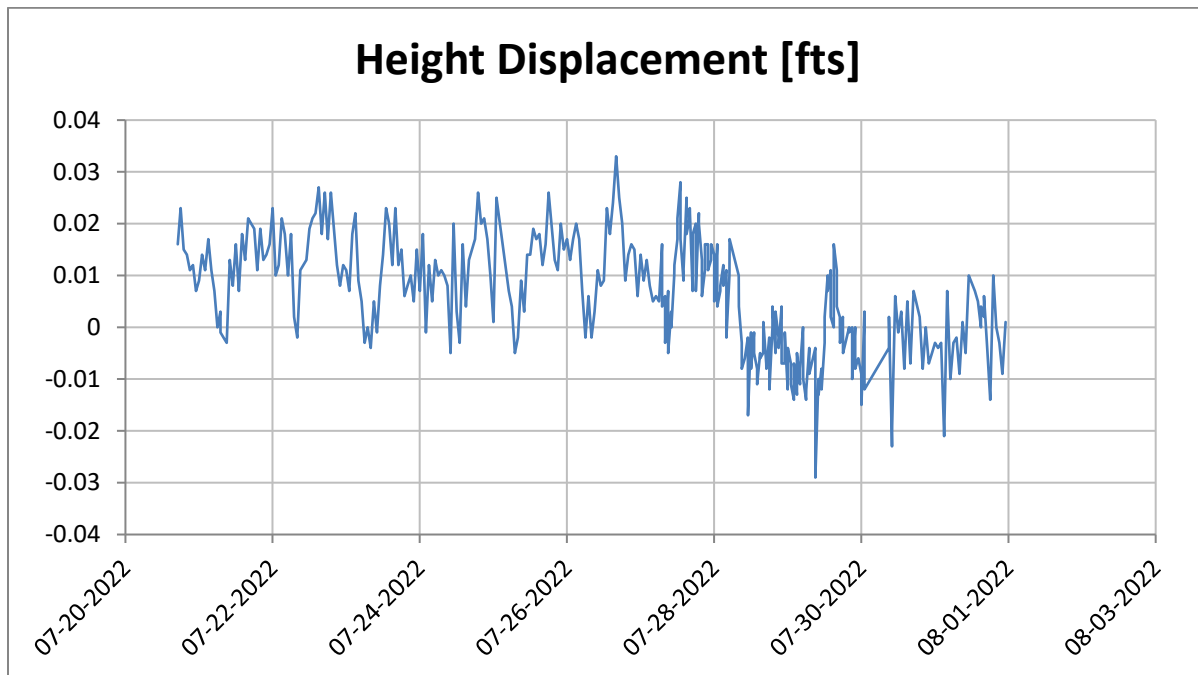
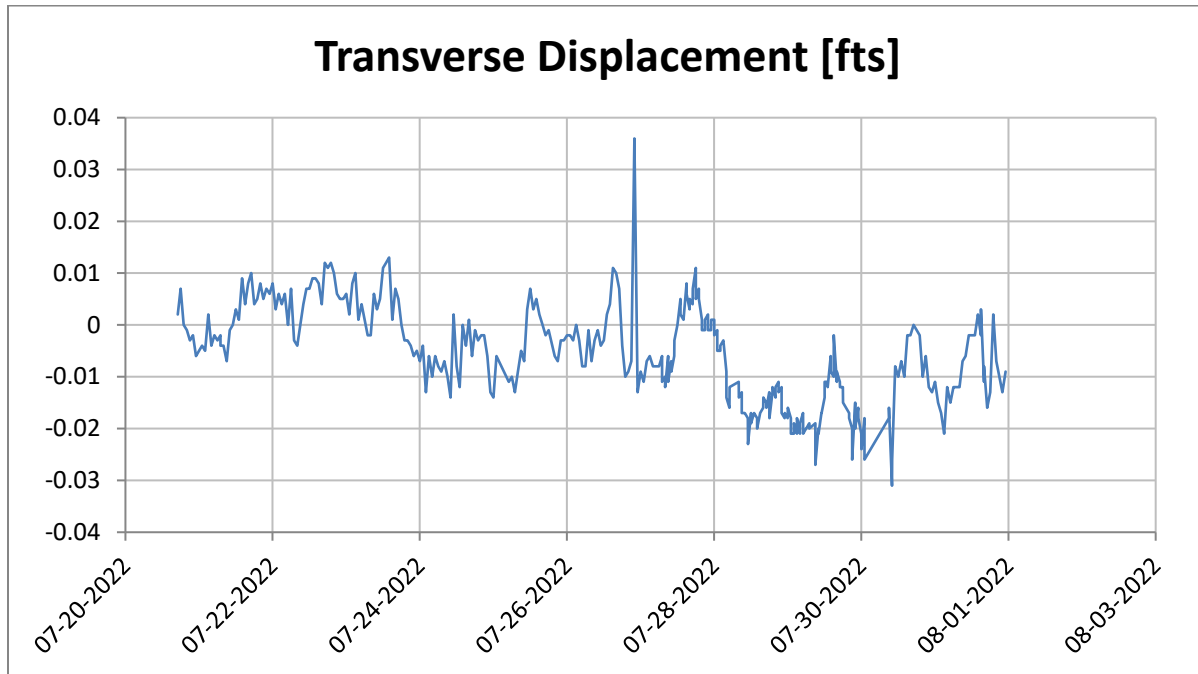
Prism P33



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/25, 7/26, 7/27.
6. Prism reading for 7/1/22 through 7/14/22.

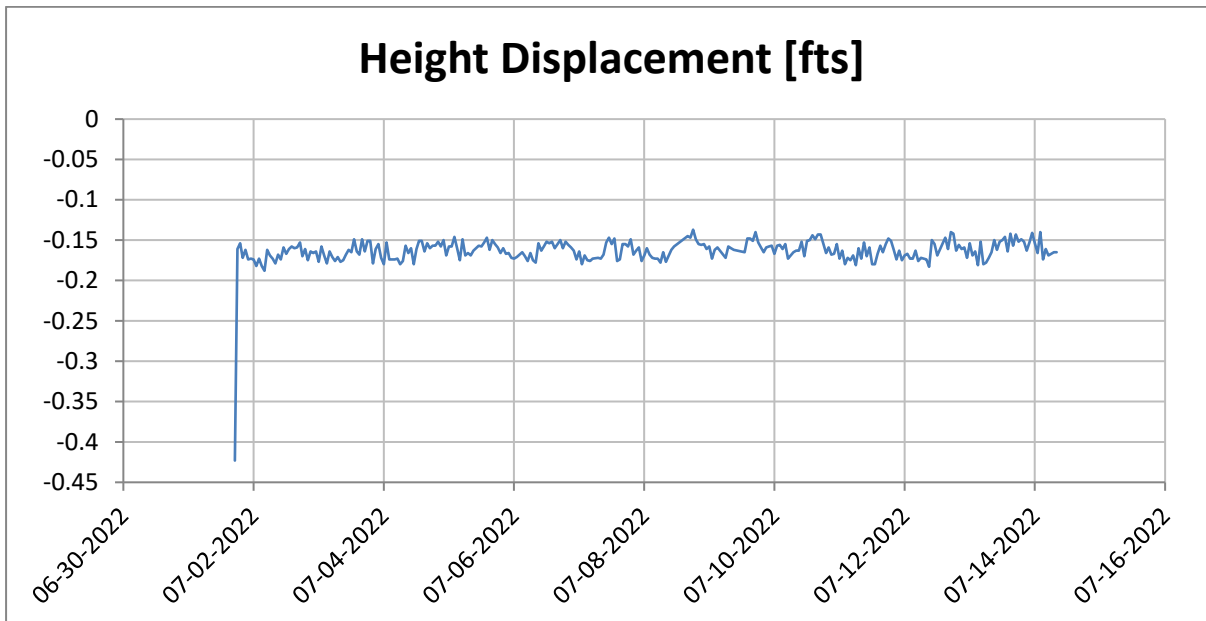
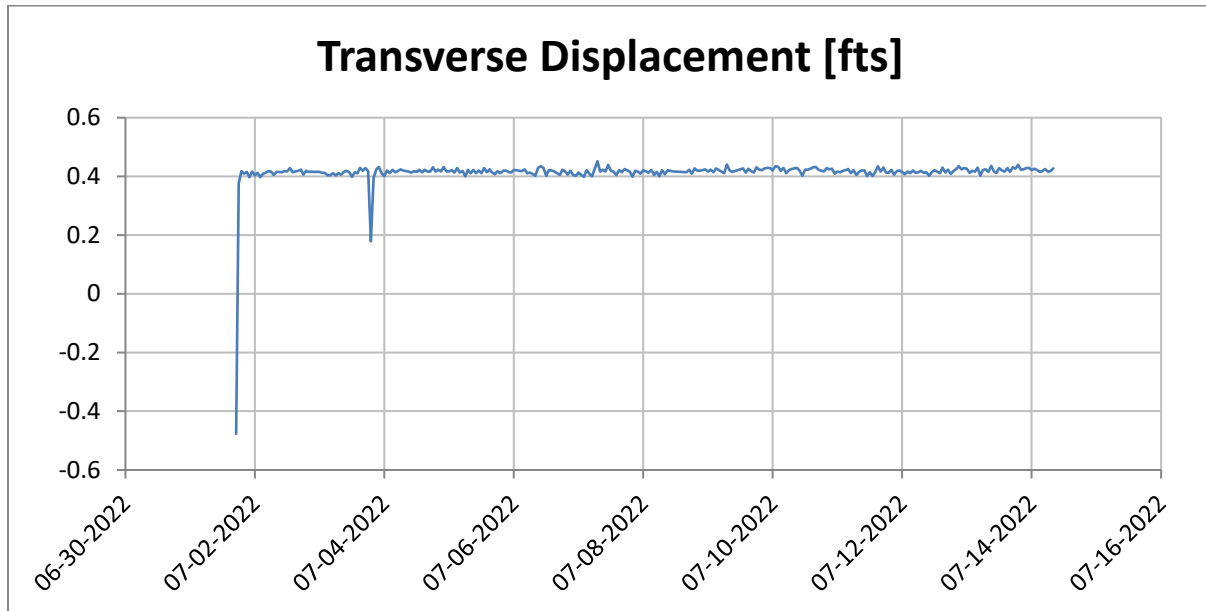
Prism P33



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/25, 7/26, 7/27.
6. Prism reading for 7/20/22 through 7/30/22.

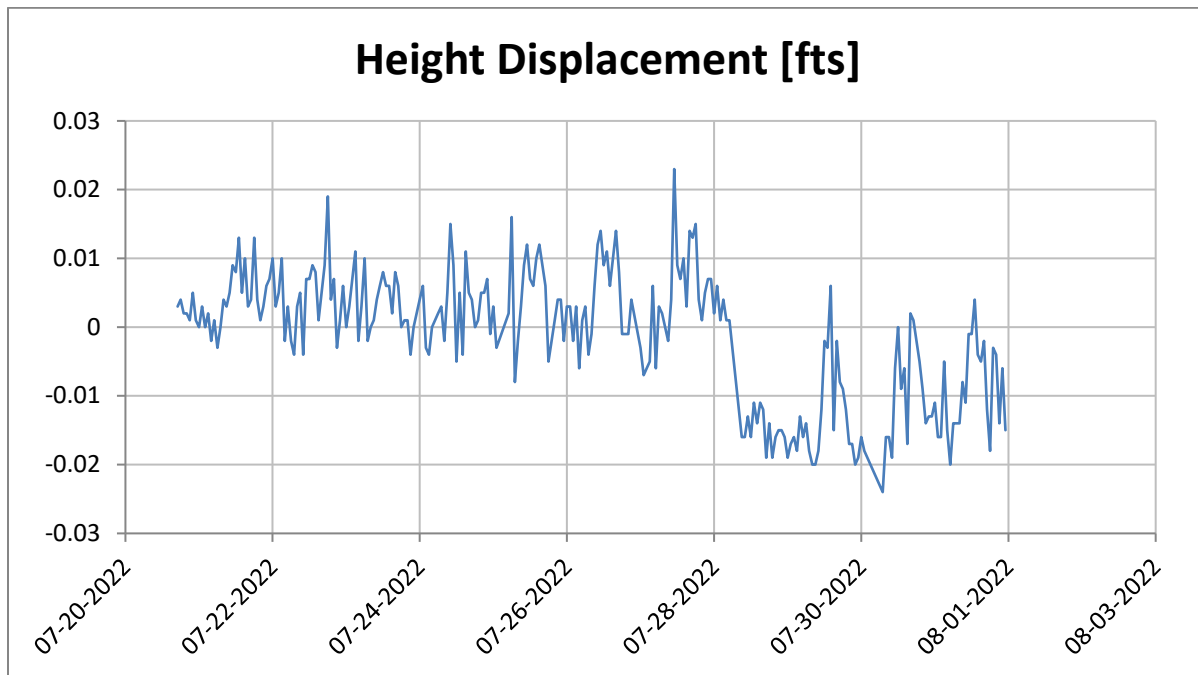
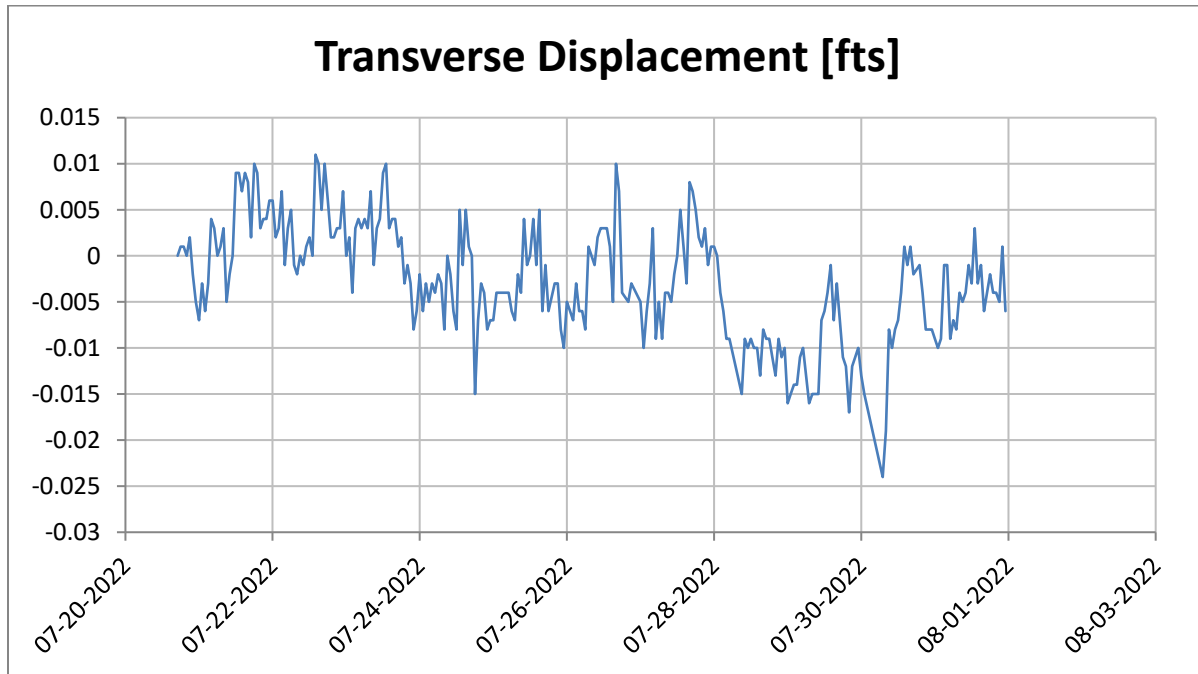
Prism P5



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/1, 7/2, 7/3, 7/4
6. Prism reading for 7/1/22 through 7/14/22.

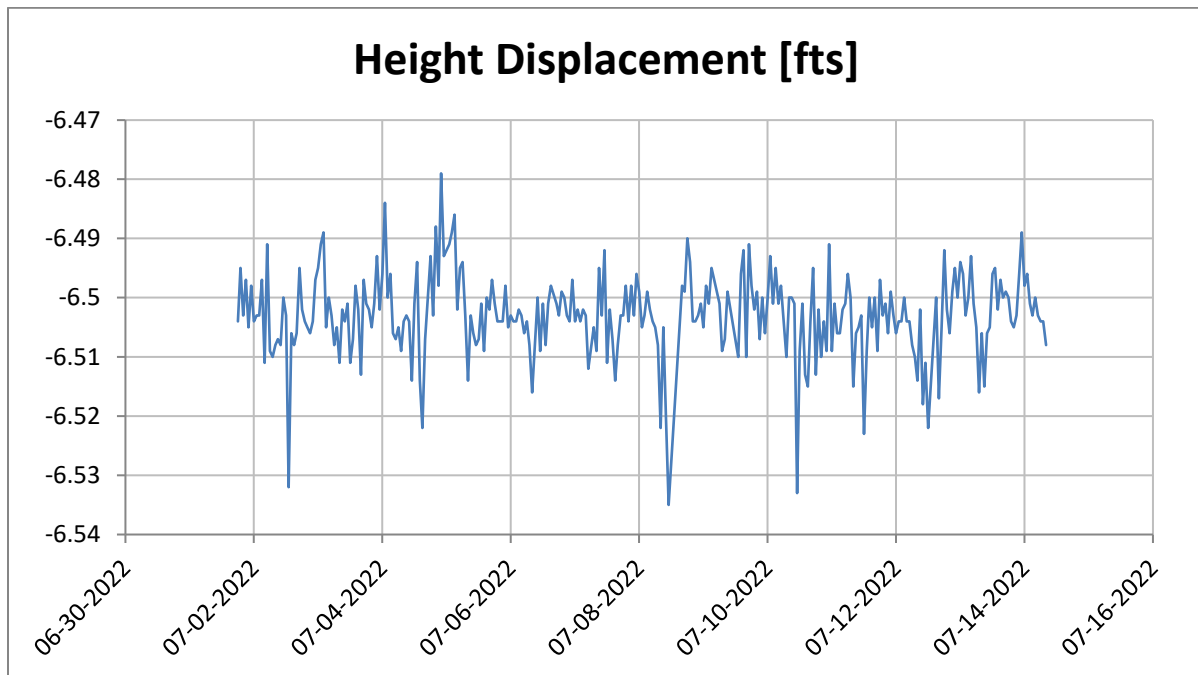
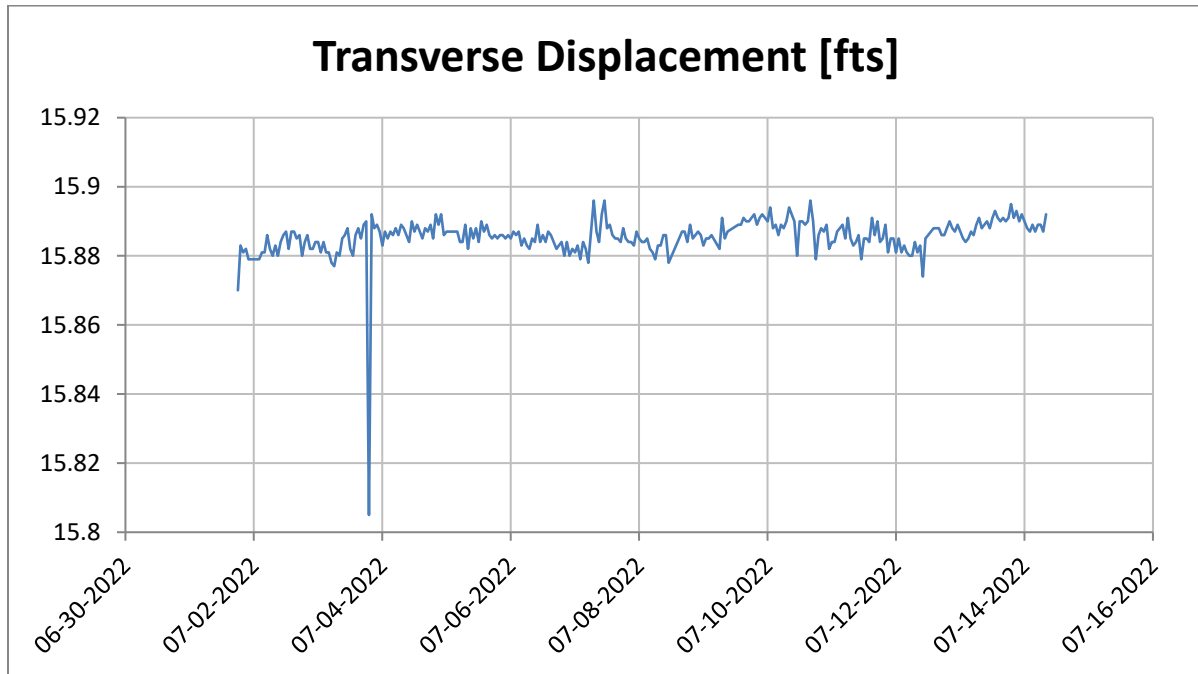
Prism P5



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism reading for 7/20/22 through 7/30/22.

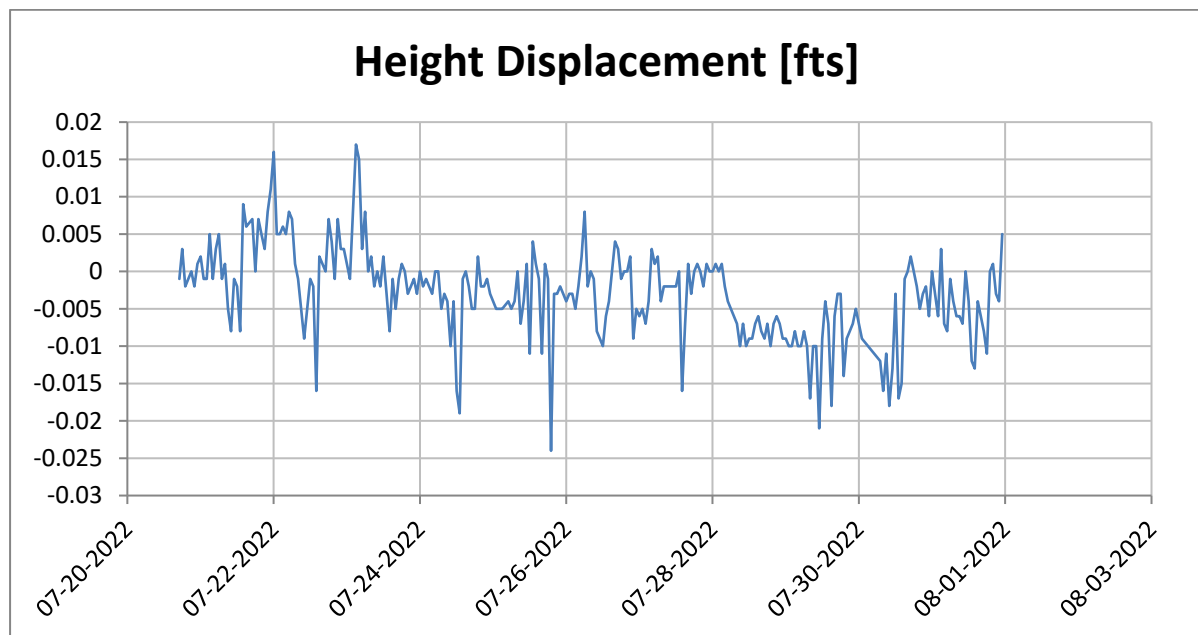
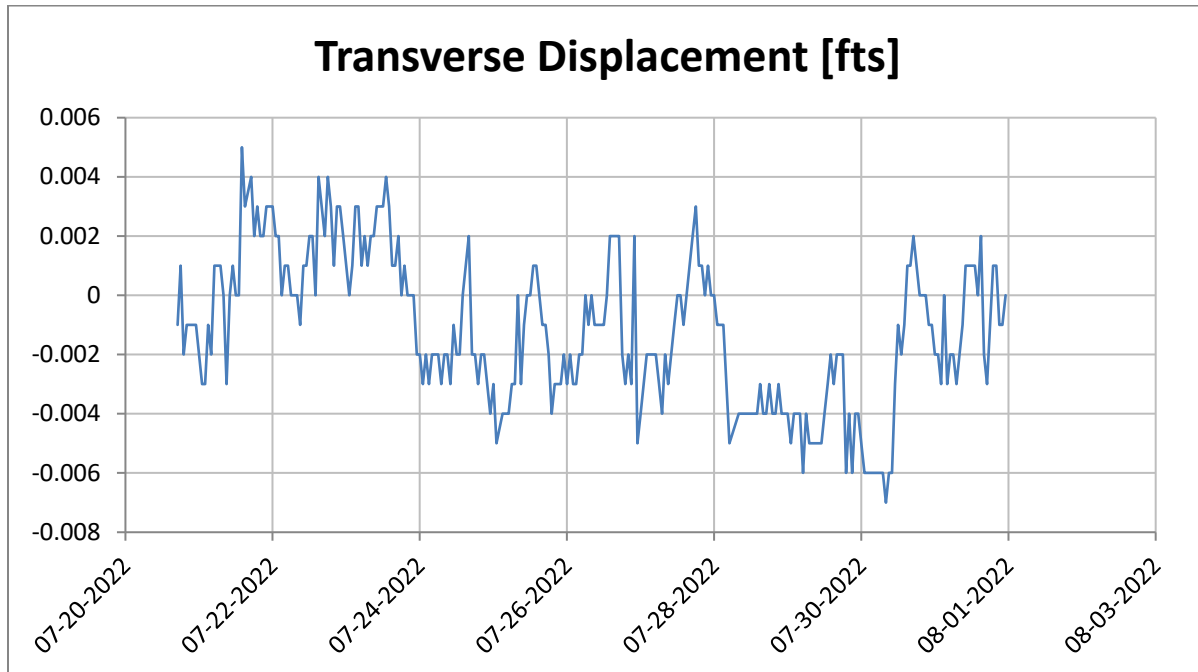
Prism P63



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Exceedance alerts received on 7/26.
7. Prism reading for 7/1/22 through 7/14/22.

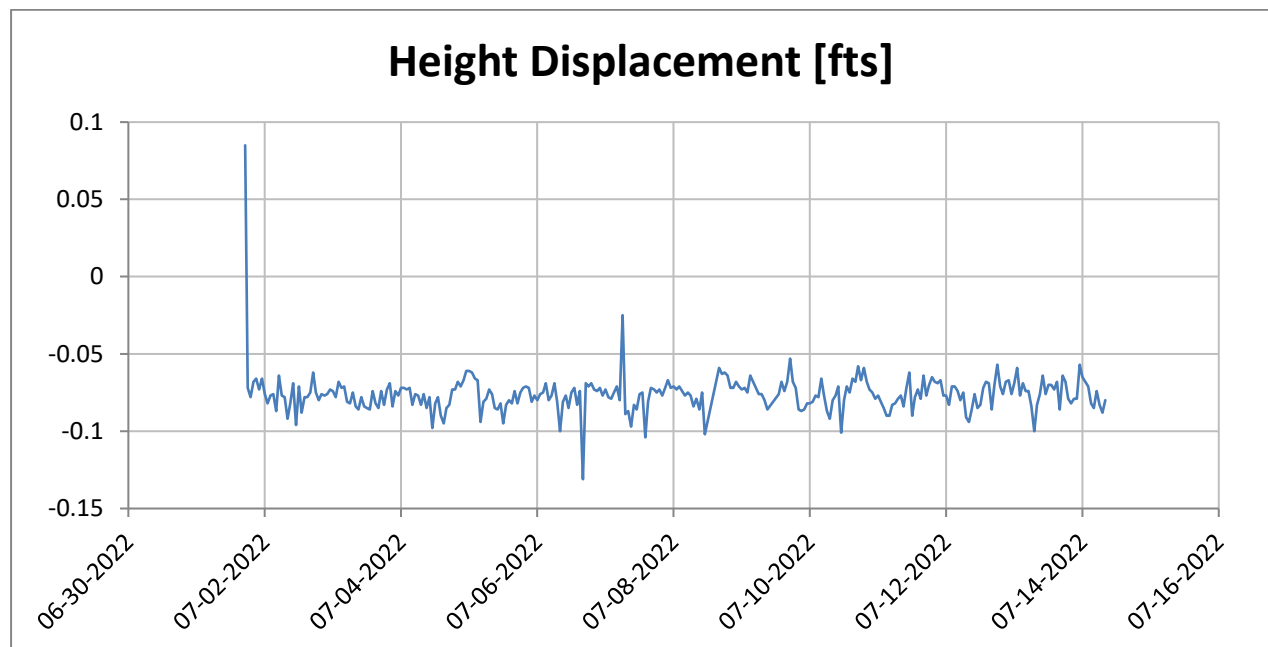
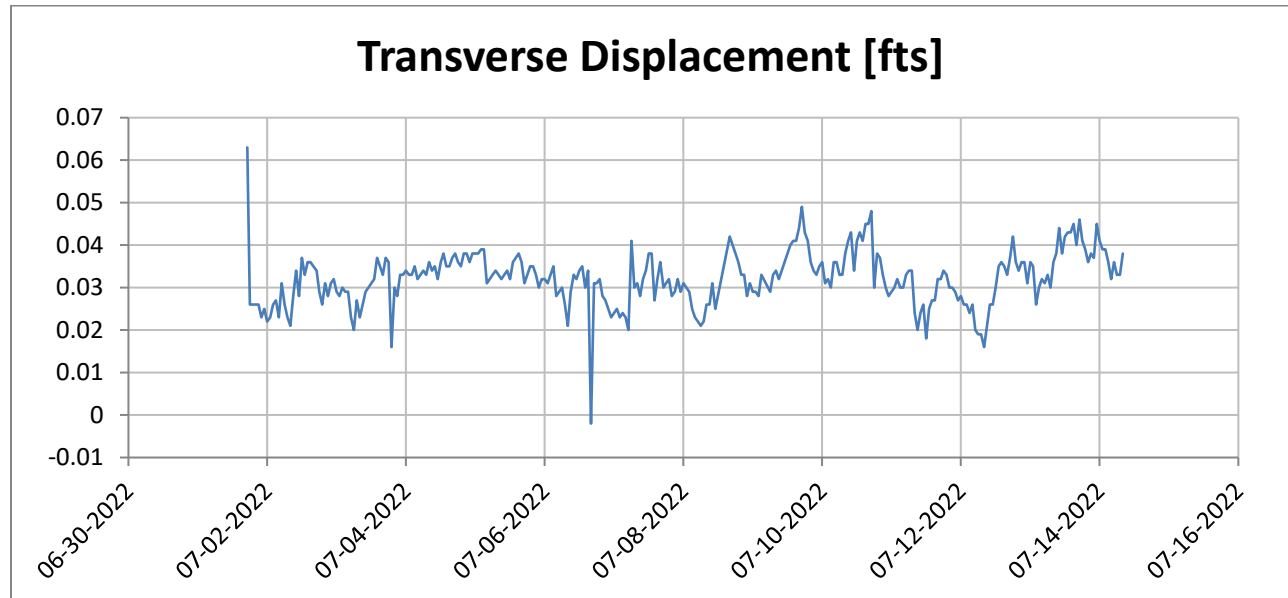
Prism P63



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Exceedance alerts received on 7/26.
7. Prism reading for 7/20/22 through 7/30/22.

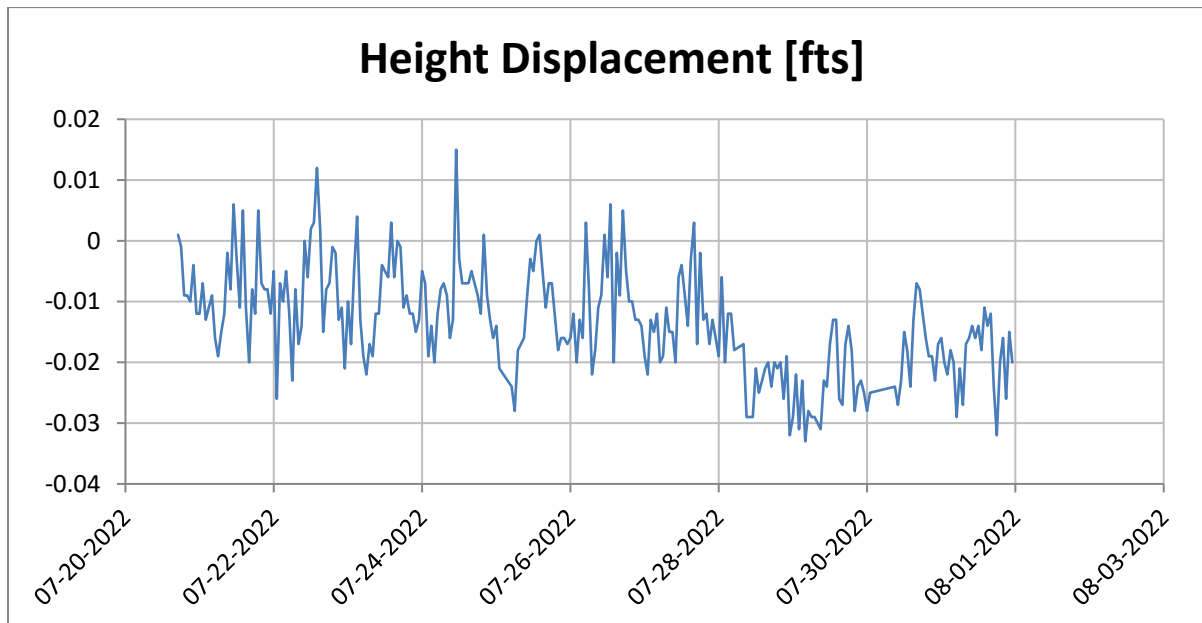
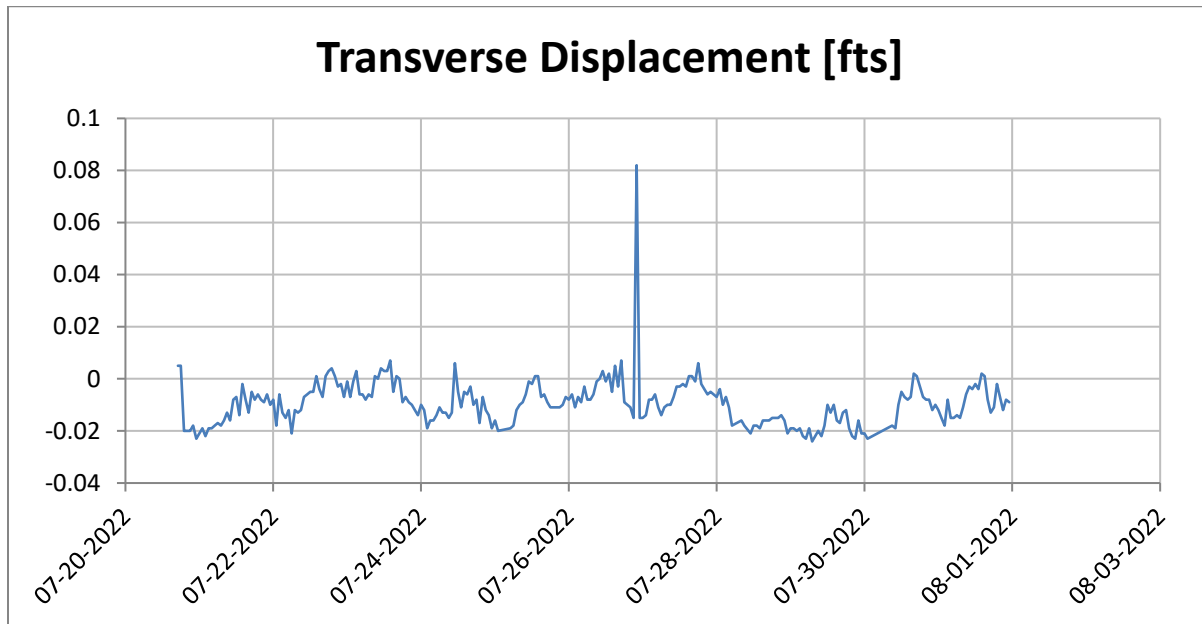
Prism P69



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Prism previously identified as P69.
7. Exceedance alerts received on 7/26, 7/27.
8. Prism reading for 7/1/22 through 7/14/22.

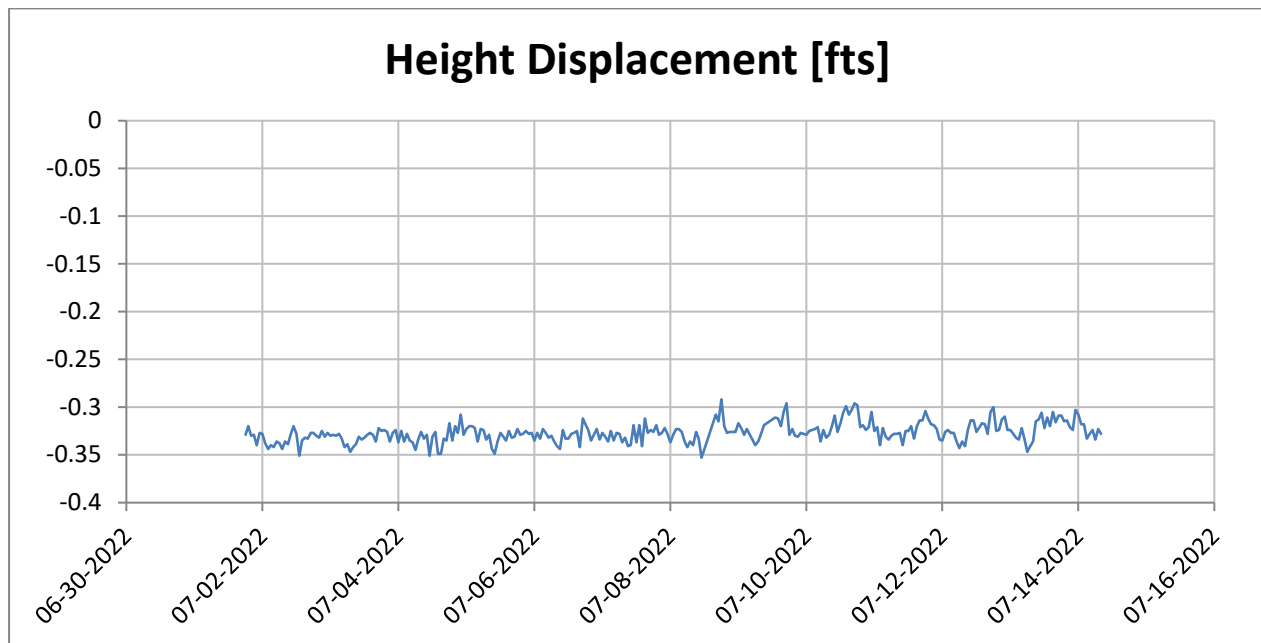
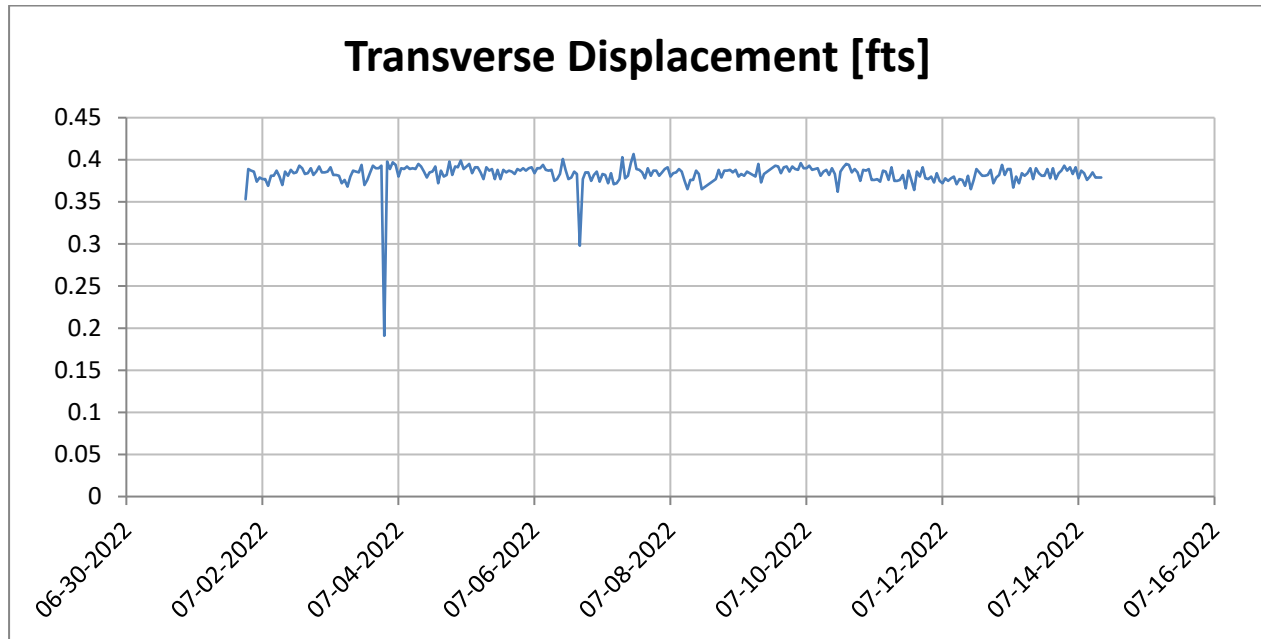
Prism P69A



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Prism previously identified as P69.
7. Exceedance alerts received on 7/26, 7/27.
8. Prism reading for 7/20/22 through 7/30/22.

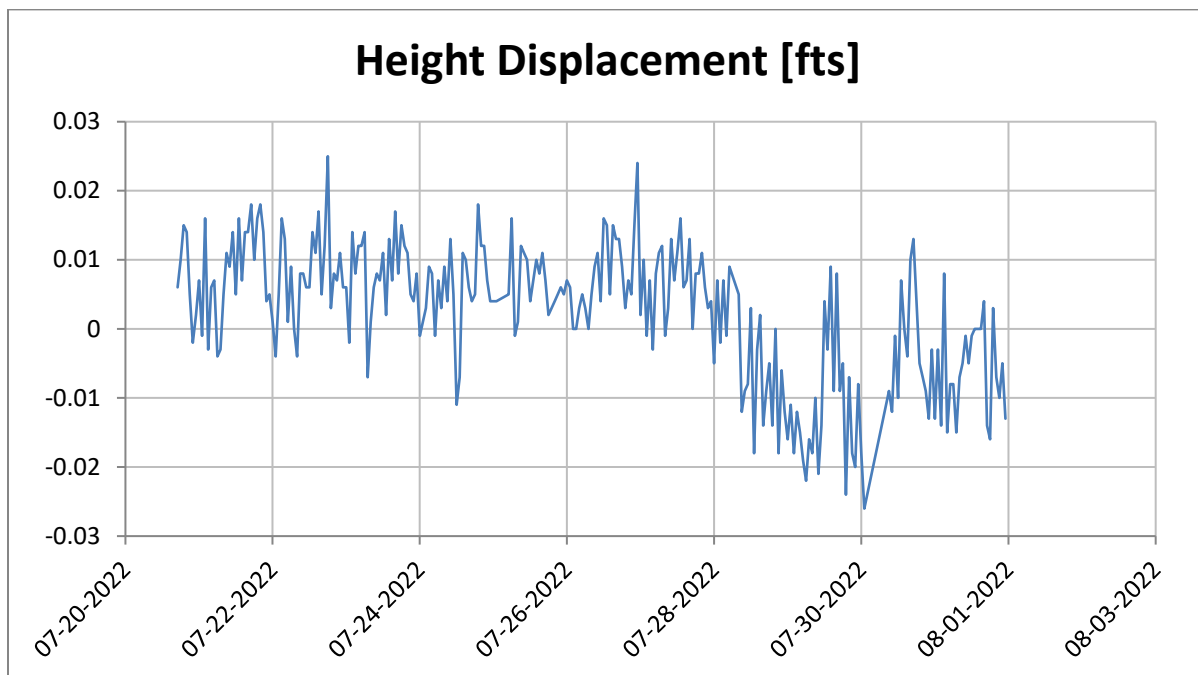
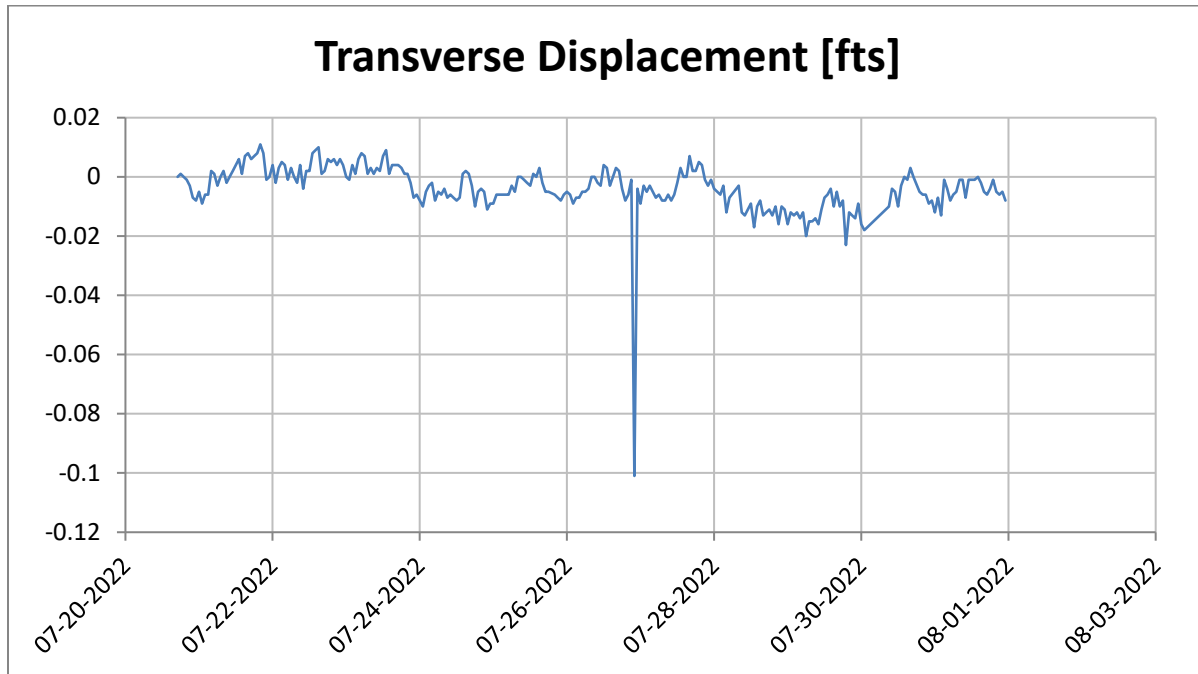
Prism P70



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27.
6. Prism reading for 7/1/22 through 7/14/22.

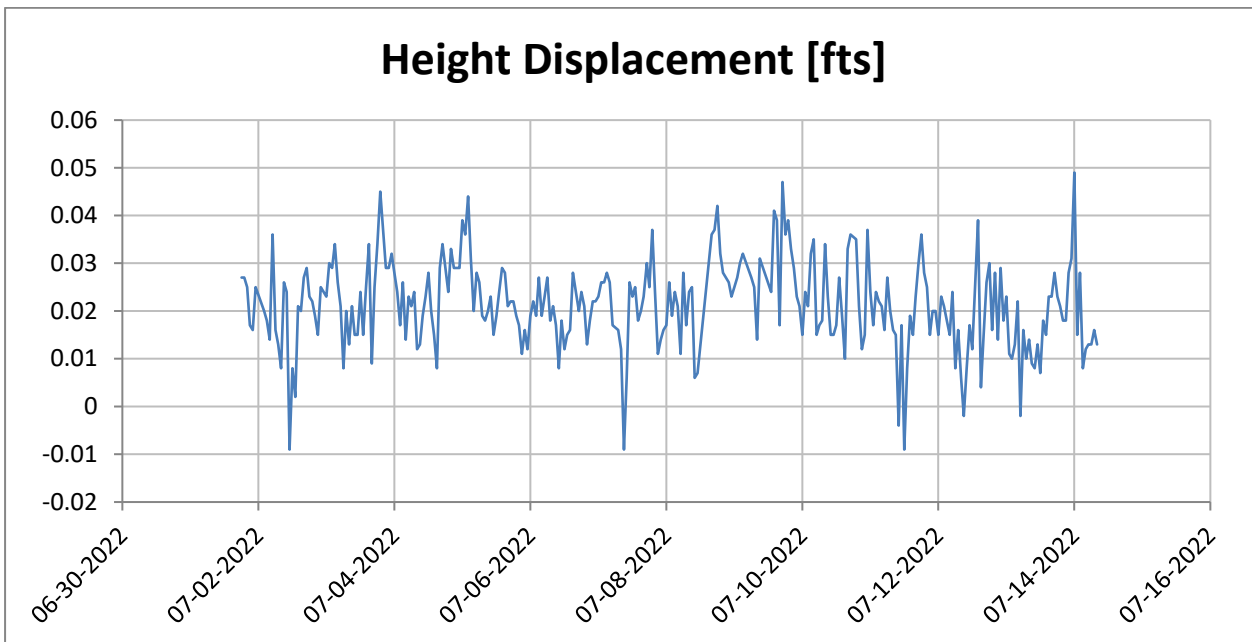
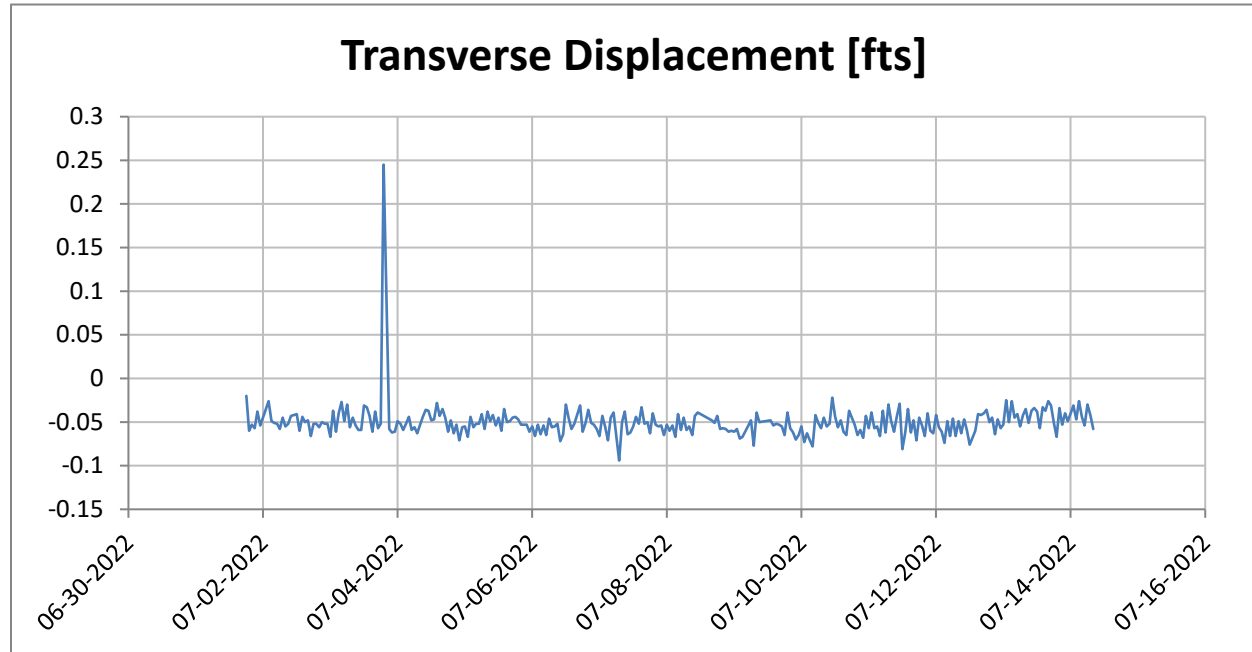
Prism P70



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Exceedance alerts received on 7/3, 7/4, 7/26, 7/27.
6. Prism reading for 7/20/22 through 7/30/22.

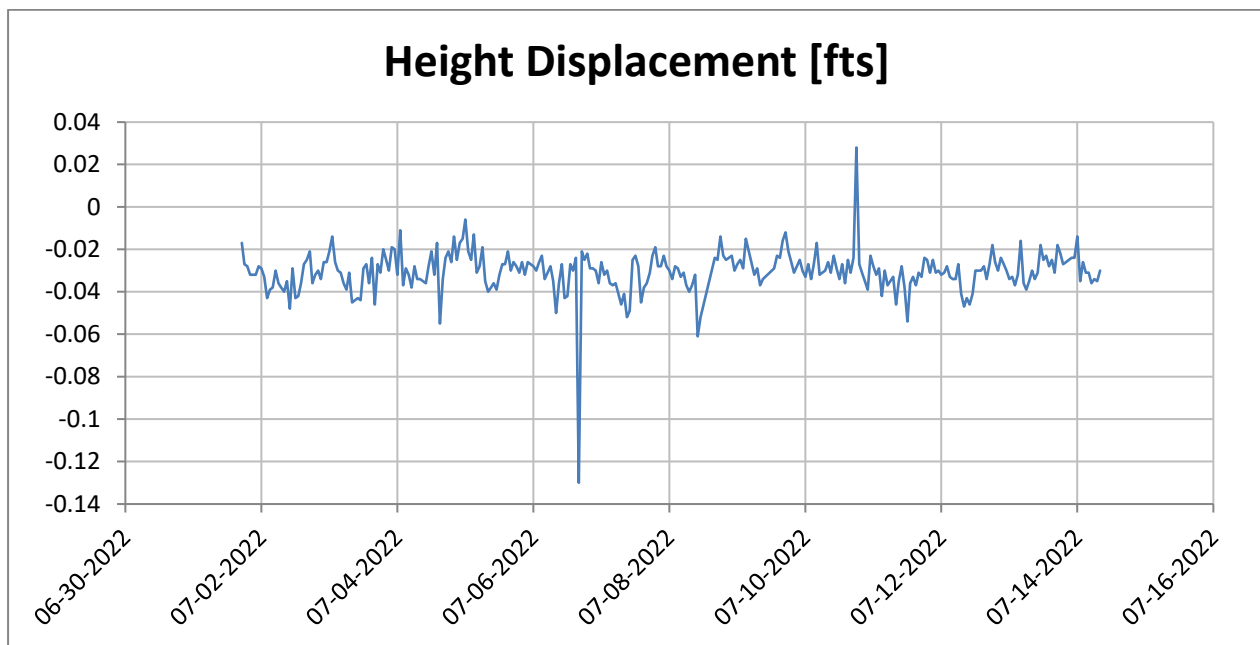
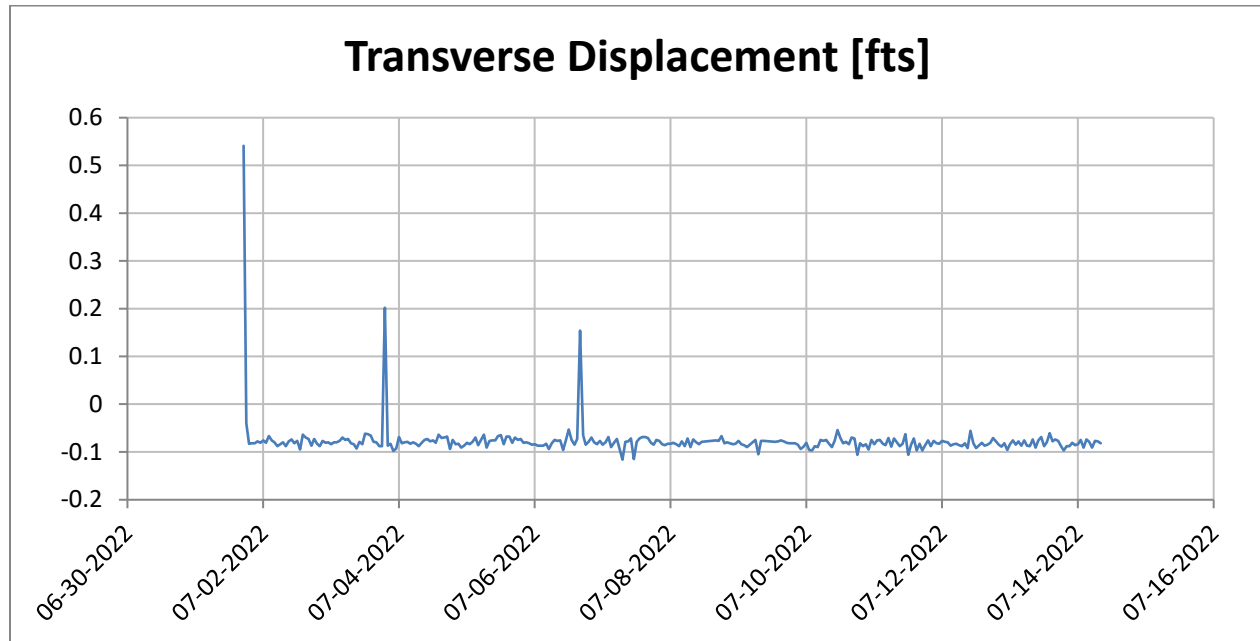
Prism TOE4



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Prism was removed 7/14/2022.

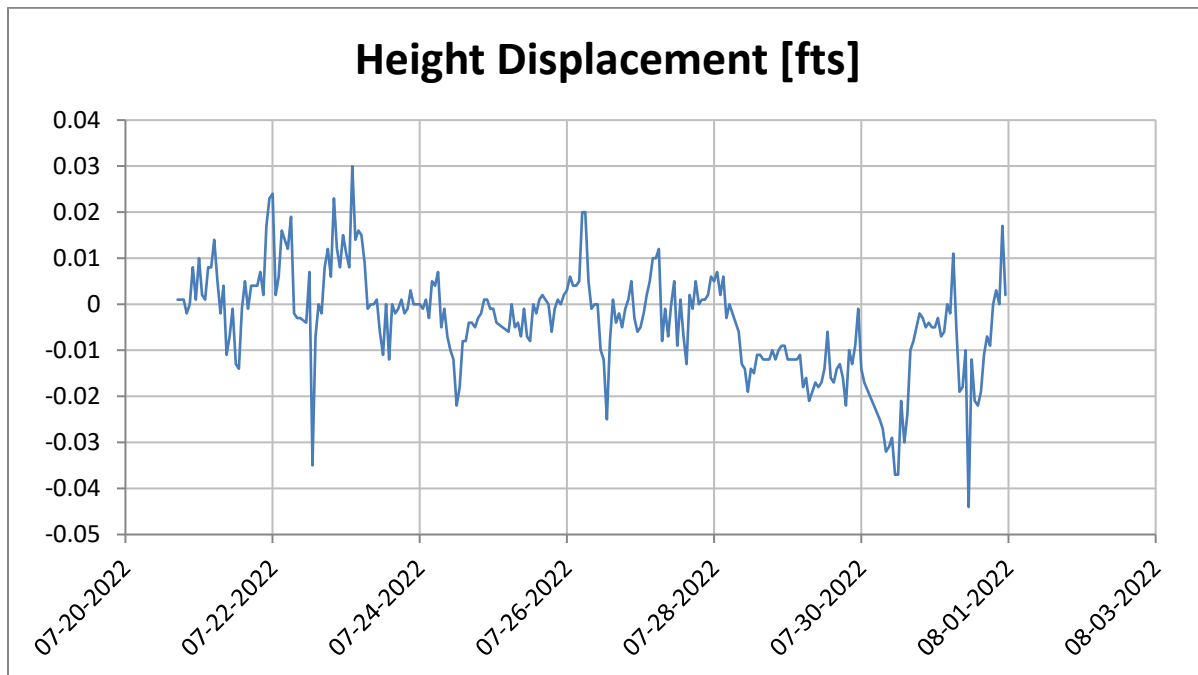
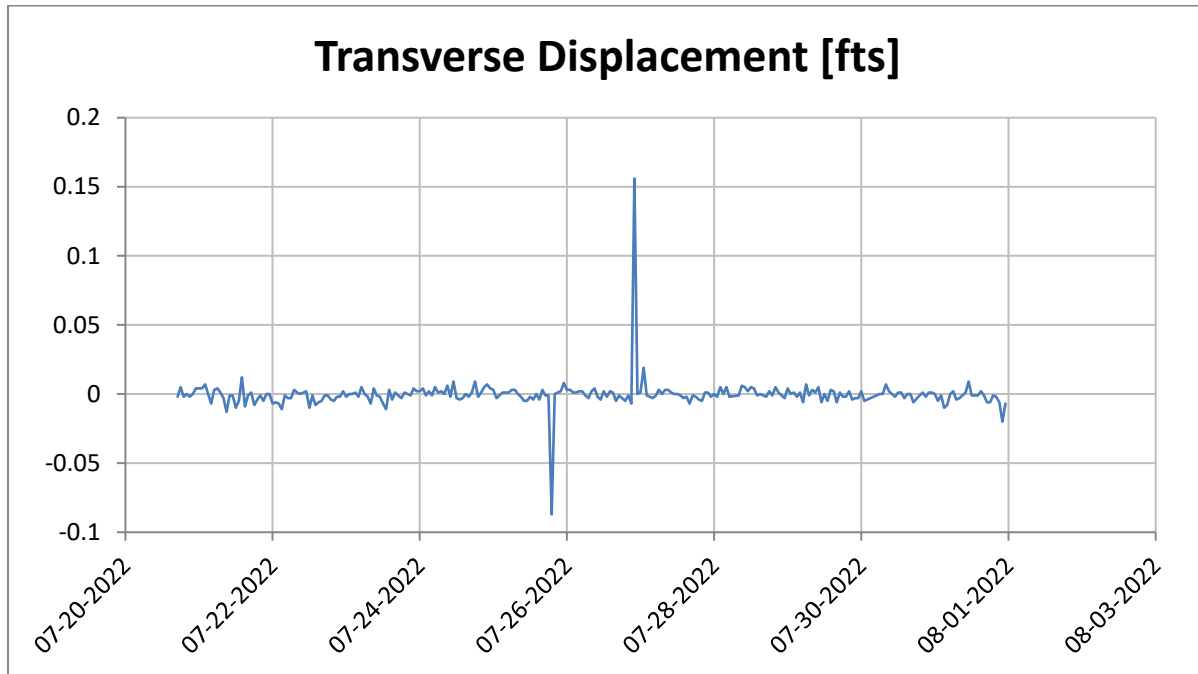
Prism TOE5



Notes:

1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Prism reading for 7/1/22 through 7/14/22.

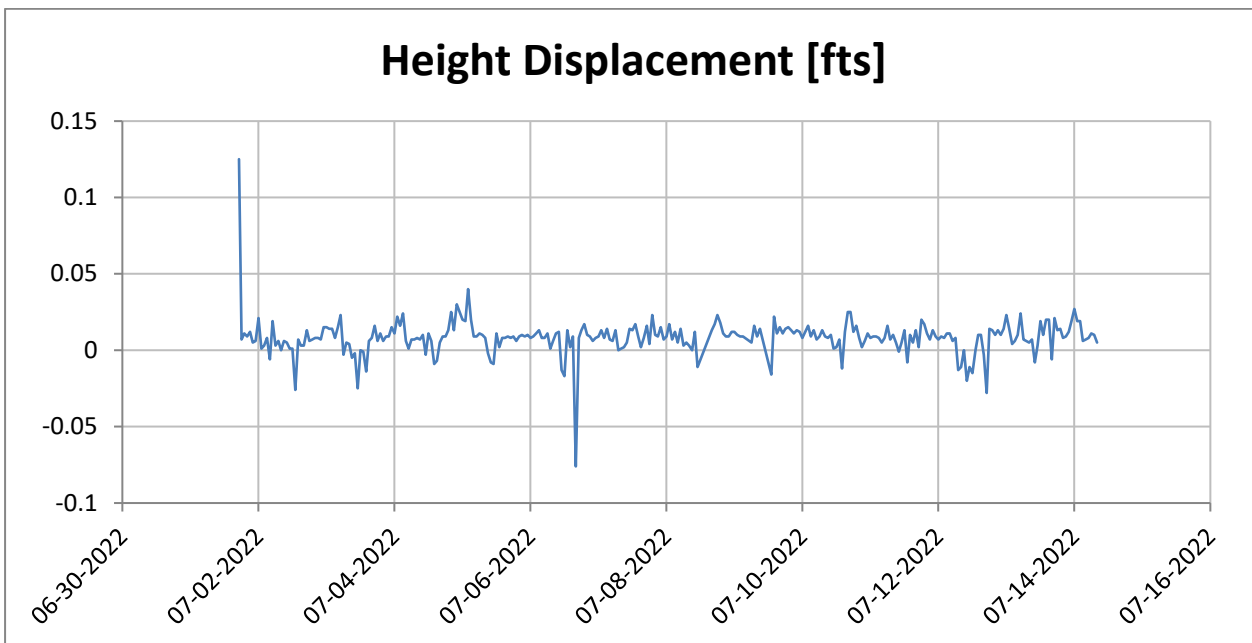
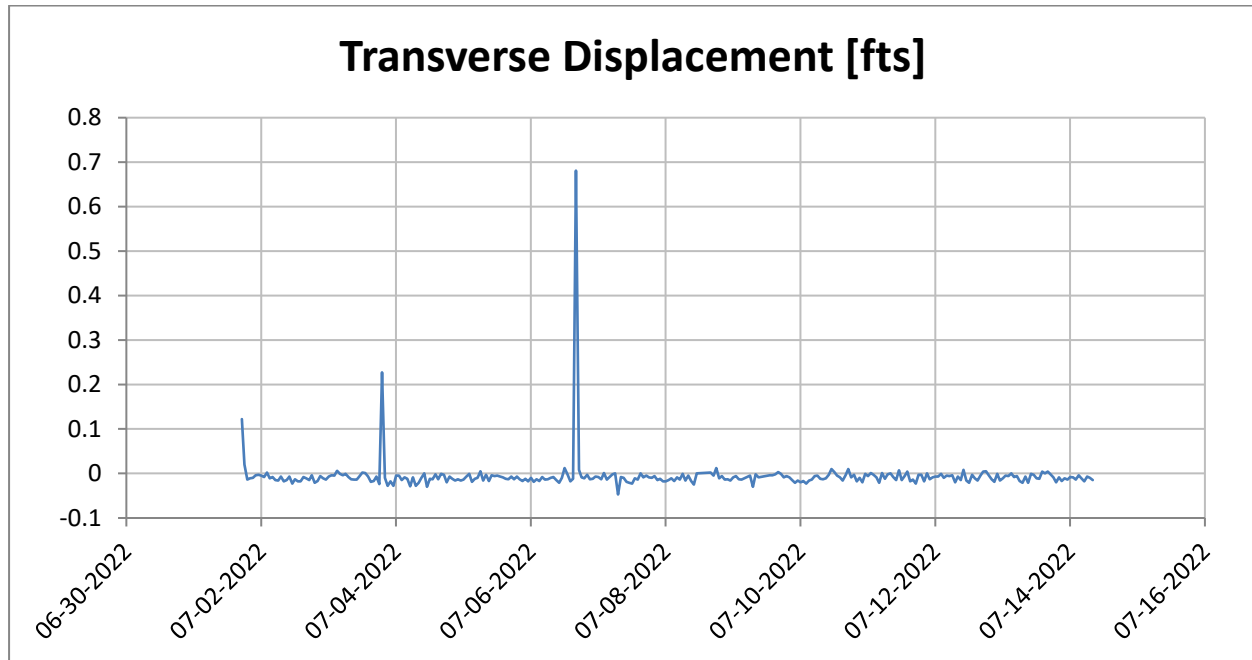
Prism TOE5



Notes:

1. Survey accuracy is ± 0.016 feet.
2. Alarm threshold is ± 0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism records slope creep movements with slow velocity.
6. Prism reading for 7/20/22 through 7/30/22.

Prism TOE6



Notes:

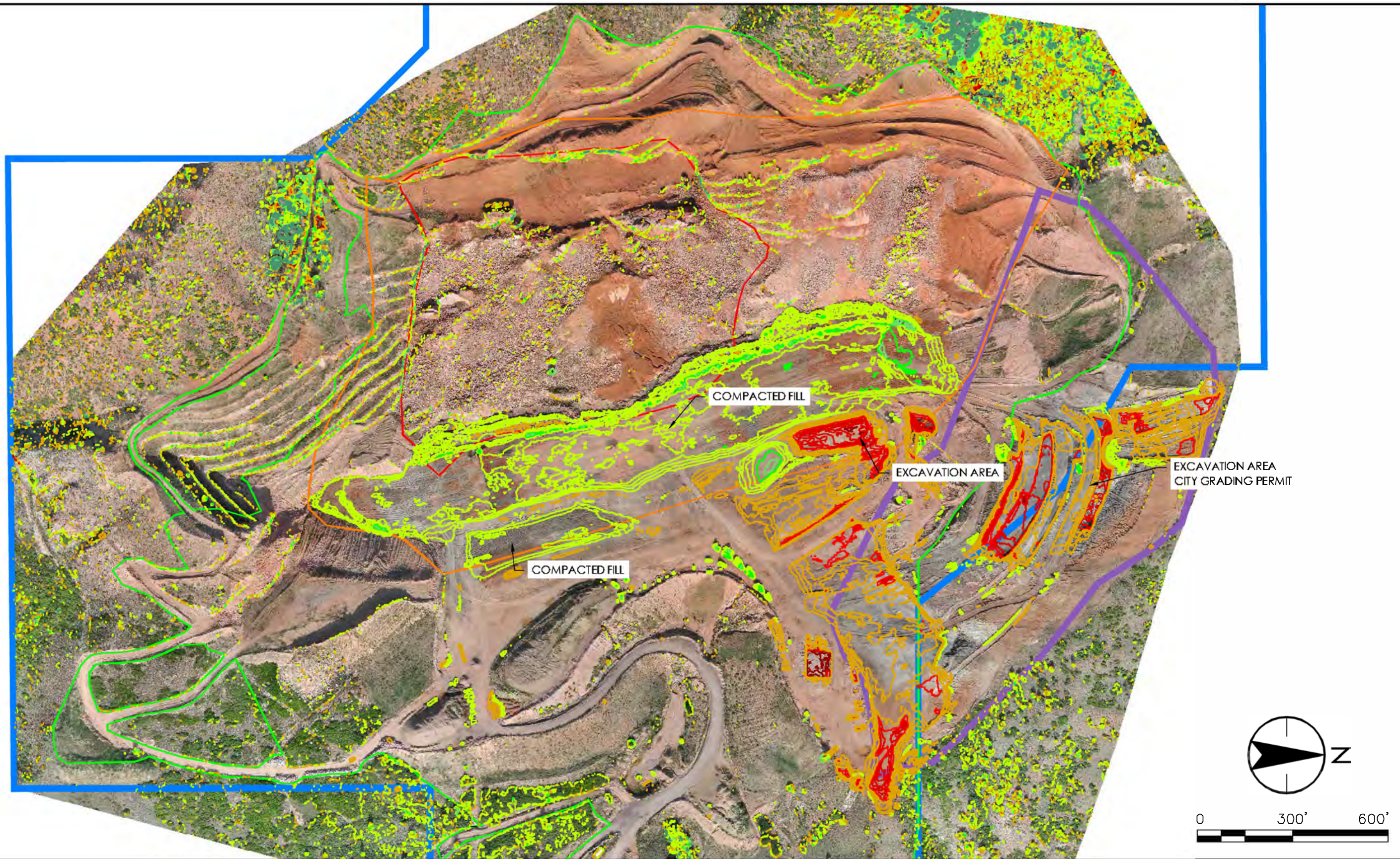
1. Survey accuracy is +/-0.016 feet.
2. Alarm threshold is +/-0.35 feet.
3. Transverse displacement is in the horizontal direction. Positive direction means closer to the robotic station.
4. Height displacement is in the vertical direction. Positive direction means higher in elevation.
5. Prism previously known as TOE3.
6. Prism was removed 7/14/2022.

Appendix C

Drone Survey

\\usc389-ppfsr01\shared_projects\2057288200\06_design\monitoring\2022-07\dwg\pkreview\pkreview_06082022

2022.08.18 8:44:52 AM



Stantec Consulting Services Inc.
2000 South Colorado Boulevard Suite 2, 300
Denver CO 80222-7933
Tel: (303) 758-4058
www.stantec.com

LEGEND

- Permit/Affected Lands Boundary
- City Grading Permit Boundary
- Proposed Disturbance Limit
- Landslide Extent
- Buttress Fill Extent
- Comparison Contour. Increase in elevation. (CI=2')
- Comparison Contour. Decrease in elevation. (CI=2')

1. COMPARISON OF DRONE FLIGHTS FROM 06/28/2022 to 08/01/2022.

Client/Project
CONTINENTAL MATERIALS
CORP.
PIKEVIEW QUARRY SLOPE
MONITORING

Project No.
2057288200

Title
EXISTING PRISMS WITH
CURRENT SURFACE

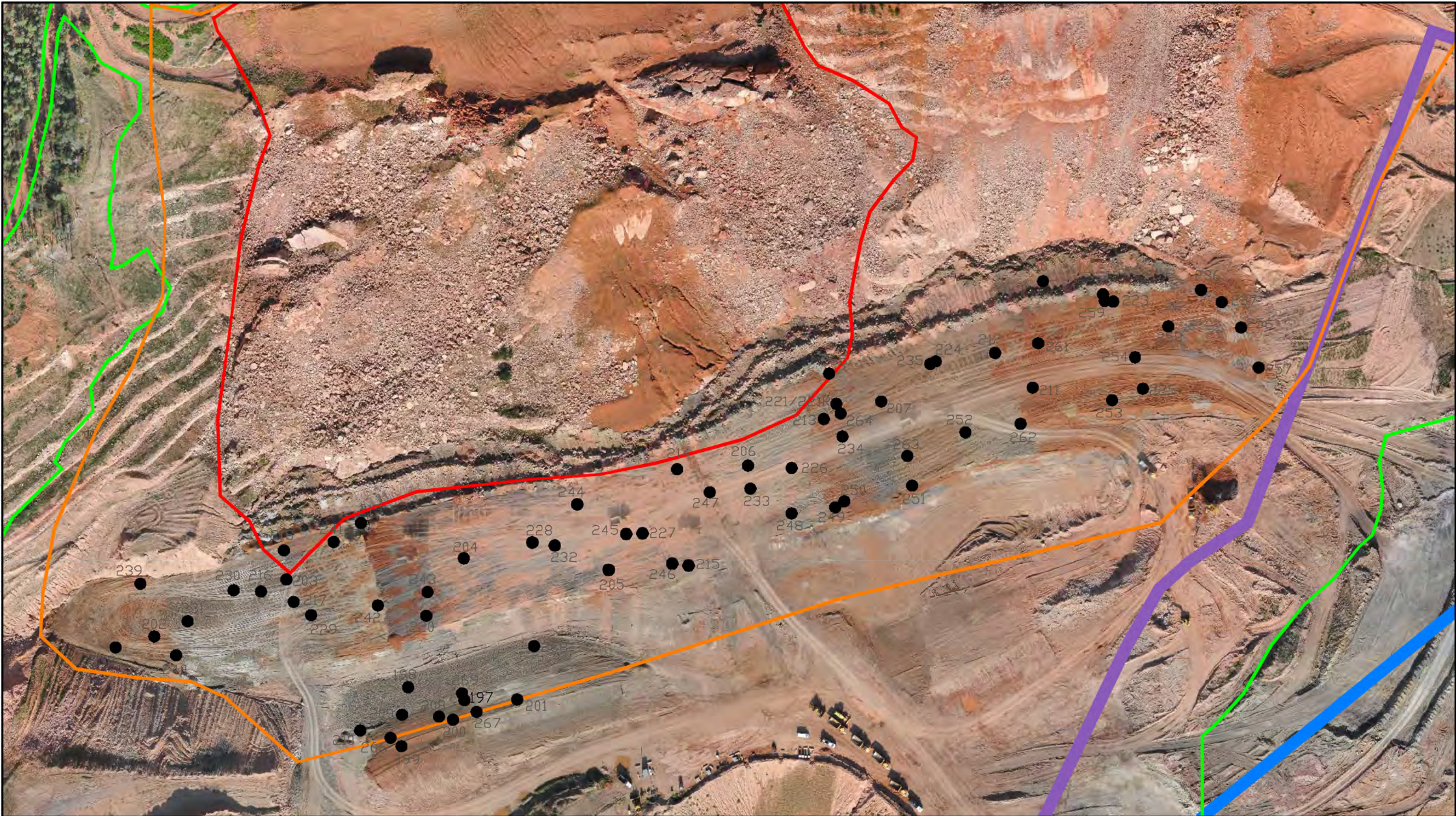
Revision #	Date
PK	2022.08.26
Drawn By	Figure No.
PK	5

Appendix D

Compaction Testing Results

\\us0389-ppt\01\shared_projects\2057288200\06_design\monitoring\2022-07.dwg\pkreview\pkreview_08082022

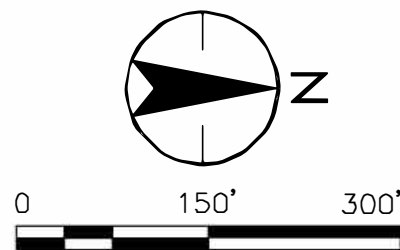
2022.08.18 9:30:58 AM



Stantec Consulting Services Inc.
2000 South Colorado Boulevard Suite 2.300
Denver CO 80222-7933
Tel: (303) 758-4058
www.stantec.com

LEGEND

- Permit/Affected Lands Boundary
- City Grading Permit Boundary
- Proposed Disturbance Limit
- Landslide Extent
- Buttress Fill Extent
- Compaction Test Location



Client/Project
CONTINENTAL MATERIALS
CORP.
PIKEVIEW QUARRY SLOPE
MONITORING

Project No.
2057288200

Title
COMPACTION TEST
LOCATIONS

Revision #	Date 2022.08.26
Drawn By PK	Figure No. 6

Compaction Testing Log

BCC Test	Test No.	Date	Elevation (ft)	Northing (ft)	Easting (ft)	Wet Density (pcf)	Moisture Content (%)	Dry Density (pcf)	Compaction (%)
Test G3	#197	6-Jul	7198	1401435	3173680	123.2	5.7	117.5	93
Test G4	#198	6-Jul	7199	1401342	3173659	125.8	4.4	121.4	93
Test G5	#199	6-Jul	7195	1401331	3173756	131.3	4.1	127.2	96
Test G6	#200	6-Jul	7196	1401416	3173712	127.3	8.9	118.3	93
Test G7	#201	6-Jul	7196	1401522	3173679	127	4.8	122.2	94
Test U1	#202	6-Jul	7229	1400923	3173575	143.6	5.5	138.1	100
Test U2	#203	6-Jul	7231	1401141	3173481	133.9	7.1	126.9	96
Test U3	#204	6-Jul	7228	1401434	3173446	136.6	5.2	131.4	99
Test U4	#205	6-Jul	7236	1401673	3173465	131.2	6	125.2	95
Test U5	#206	6-Jul	7235	1401903	3173293	130.8	5.6	125.2	95
Test U6	#207	6-Jul	7240	1402123	3173187	133.6	14.6	119	98
Test G8	#208	8-Jul	7198	1401393	3173707	130.4	4.9	125.4	95
Test G9	#209	8-Jul	7198	1401332	3173704	118.3	7.9	110.5	90
Test G10	#210	8-Jul	7197	1401263	3173730	130.4	4.9	125.5	94
Test V1	#211	8-Jul	7247	1402373	3173164	133.1	8.7	124.5	95
Test V2	#212	8-Jul	7251	1402311	3173107	138.6	9.3	129.3	98
Test V3	#213	8-Jul	7240	1402028	3173216	124	9.7	114.3	93
Test V4	#214	8-Jul	7238	1401786	3173299	129.1	8.4	120.7	94
Test V5	#215	8-Jul	7227	1401805	3173458	125.2	9	116.2	94
Test V6	#216	12-Jul	7233	1401099	3173501	142.5	5.5	135.1	100
Test V7	#217	12-Jul	7230	1401153	3173518	140.1	3.7	135.1	100
Test V8	#218	12-Jul	7235	1401137	3173433	132.1	7.8	122.6	99
Test V9	#219	12-Jul	7235	1401264	3173388	126.6	7.8	117.5	95
Test V10	#220	12-Jul	7223	1401372	3173541	124.3	8.5	114.6	93
Test W1	#221	14-Jul	7243	1402049	3173191	120.8	9.4	110.4	89
Retest W1	#221R	18-Jul	7243	1402073	3173178	123.7	7.3	115.3	93
Test W2	#223	14-Jul	7257	1402506	3173022	124.1	4.7	118.5	96
Test W3	#224	14-Jul	7249	1402213	3173121	139.4	5.1	132.7	100
Test W4	#225	14-Jul	7249	1402555	3173166	128.1	6	120.9	98
Test W5	#226	14-Jul	7236	1401975	3173297	135	3.8	130.1	100
Test W6	#227	14-Jul	7232	1401729	3173405	116.1	4.8	110.9	90
Test W7	#228	14-Jul	7231	1401547	3173420	127.6	3.7	123	100
Test W8	#229	14-Jul	7229	1401182	3173540	128.8	5.9	121.7	99
Test X1	#230	19-Jul	7236	1401054	3173499	136.2	3.6	131.5	100
Test X2	#231	19-Jul	7234	1400978	3173550	137.9	4.6	131.8	100
Test X3	#232	19-Jul	7232	1401584	3173425	116.9	5.7	110.6	90
Test X4	#233	19-Jul	7236	1401907	3173331	127.1	13.5	112.1	91

BCC Test	Test No.	Date	Elevation (ft)	Northing (ft)	Easting (ft)	Wet Density (pcf)	Moisture Content (%)	Dry Density (pcf)	Compaction (%)
Test X5	#234	19-Jul	7241	1402059	3173245	122.7	9.1	112.4	91
Test X6	#235	19-Jul	7250	1402204	3173125	117.3	6.1	110.6	90
Test X7	#236	19-Jul	7261	1402651	3173003	112.4	1.5	110.7	90
Test X8	#237	19-Jul	7262	1402685	3173023	120.7	4.6	115.4	93
Test Y1	#238	22-Jul	7234	1400859	3173593	120.6	7.5	112.3	91
Test Y2	#239	22-Jul	7239	1400900	3173488	116.1	4.9	110.6	90
Test Y3	#240	22-Jul	7232	1400959	3173606	124.2	5.1	118.2	96
Test Y4	#241	22-Jul	7238	1401219	3173419	118.3	6.8	110.7	90
Test Y5	#242	22-Jul	7230	1401292	3173524	119.2	6.7	111.7	90
Test Y6	#243	22-Jul	7230	1401374	3173502	118	4.5	112.9	91
Test Y7	#244	22-Jul	7238	1401621	3173357	113.9	2.9	110.7	90
Test Y8	#245	22-Jul	7235	1401702	3173406	121.7	3.3	117.9	96
Test Y9	#246	22-Jul	7231	1401778	3173455	117.1	5.6	110.9	90
Test Y10	#247	22-Jul	7238	1401840	3173337	123.2	1.5	121.3	98
Test Y11	#248	22-Jul	7234	1401975	3173372	118.9	1.8	116.7	95
Test Y12	#249	22-Jul	7234	1402047	3173362	120.1	4.8	114.5	93
Test Y13	#250	25-Jul	7234	1402062	3173352	123.2	5.6	116.7	95
Test Y14	#251	25-Jul	7237	1402174	3173326	123.7	3.2	119.9	97
Test Y15	#252	25-Jul	7245	1402262	3173238	133.5	3.2	129.3	100
Test Y16	#253	25-Jul	7250	1402504	3173185	123.3	3	119.7	97
Test Y17	#254	25-Jul	7254	1402542	3173114	122	1.4	120.4	98
Test Y18	#255	25-Jul	7260	1402489	3173010	124.8	3.3	120.9	98
Test Z1	#256	28-Jul	7264	1402717	3173065	117.8	3	114.4	93
Test Z2	#257	28-Jul	7262	1402746	3173131	118.1	2.6	115.1	93
Test Z3	#258	28-Jul	7259	1402597	3173063	125.4	2.9	121.8	99
Test Z4	#259	28-Jul	7260	1402492	3173021	119	2.8	115.7	94
Test Z5	#260	28-Jul	7259	1402390	3172989	128.9	6.9	120.6	98
Test Z6	#261	28-Jul	7257	1402382	3173091	129.9	3.3	125.8	100
Test Z7	#262	28-Jul	7247	1402353	3173224	119.3	2.3	116.6	94
Test Z8	#263	28-Jul	7247	1402166	3173277	124.6	8.6	114.7	93
Test Z9	#264	28-Jul	7245	1402056	3173207	113.2	2.4	110.6	90
Test Z10	#265	28-Jul	7248	1402037	3173141	114	2.8	110.9	90
Test I10	#266	28-Jul	7197	1401313	3173742	126.9	12	113.3	92
Test I11	#267	28-Jul	7198	1401455	3173699	126.7	10.6	114.6	93
Test J10	#268	29-Jul	7201	1401550	3173591	120.8	9.7	110.6	90
Test J11	#269	29-Jul	7200	1401431	3173669	124.8	6.9	116.7	95

Notes:

1. Test #221 originally did not meet the project specifications; after moisture conditioning and recompacting, the retest, #221R, met the project specifications.
2. As of July 31, 2022, a total 1,033,000 yd³ had been placed and compacted. This requires 207 compaction tests, and 267 tests have been taken.
3. There is no test #222.