PRATT ROCK PARK

Phase 1: Initial Needs Assessment
Pratt Rock Park, Prattsville, New York

Panoramic view of Pratt Rock from drone footage collected by Vertical Access, November 22, 2021.

prepared for:
Pratt Park Committee
Prattsville, New York

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TABLE OF CONTENTS

1 INTRODUCTION

This report has been prepared by Integrated Conservation Resources, Inc. (ICR) for Carolyn Bennett, Pratt Park Committee Chair, for a Phase 1 Scope of Work, Initial Needs Assessment, of the carved stone features within Pratt Rock Park, located in Prattsville, NY and the Schoharie Valley of the Catskill Mountains.

The town and park have a rich history owed to Colonel Zadock Pratt, who founded Prattsville in 1833, mainly to support his impressive tannery operations. He conceived of Pratt Rock in 1842 as a public pleasure park for the town, which was adorned with various bas-relief sculptures depicting important aspects of Pratt's life carved into the main stone outcropping between 1843-1871. Several benches were also carved into smaller stone outcroppings along the trails up the hillside. The Park draws much public attention for its scenic hiking trails, but also has importance as it is believed to include the first man-made Civil War monument in the U.S., it predates Mount Rushmore by over 80 years and is fondly referred to as "the Mount Rushmore of the East," and has been placed on the National Register of Historic Places.[1,2]

As part of a new restoration project of Pratt Rock Park being designed by Michael Van Valkenburgh Associates, Inc. (MVVA), ICR's initial needs assessment herein is to be used to make well-informed decisions in developing a comprehensive conservation and stabilization program for the carved details in the forthcoming Phase 2 Scope of Work, Design Development. The work for Phase 1 included: review of archival research provided by the Zadock Pratt Museum; general conditions survey of the carved features; limited laboratory coatings analysis; development of potential conservation treatment options of the carved features and associated cost estimates; and development of a more detailed plan for forthcoming phases of work.

2 CONDITIONS SURVEY

2.1 Methodology

ICR visited Pratt Rock Park for preliminary review of the site restrictions and conditions on June 21, 2021 and August 28, 2021. Based on the findings of the initial review, and the challenges of reaching the sculptures of the main outcropping, ICR recommended collaboration with Vertical Access, LLC (VA), a firm specializing in industrial rope access, to help perform the general conditions survey. ICR and VA made another site visit on November 22, 2021 for a hands-on survey of the sculptural features of the main outcropping via rope and ladder access, as well as a hands-on survey of the stone benches from the ground. Surveyed carved features included: "Horse"; "Hemlock Tree"; "Portrait Bust of George W. Pratt"; "Medallion with Raised Hand"; "Medallion with Crest and Motto"; Portrait Bust of Zadock Pratt"; "Bureau of Statistics"; "Arm & Hammer"; "Plaque to George and Julia Pratt"; "Unfinished Crypt"; an obscured carving called "Unnamed Sculpture 1" herein, which may be a representation of the Pratt tannery; a potentially unfinished carving offset to the right of the main features called "Unnamed Sculpture 2" herein; "Benches A-E," named sequentially from the lowest point on the trail to the main outcropping; and the "Gravestone" surrounded by hemlock trees near the head of the trail. Refer to

[1] "Zadock Pratt Museum: Pratt Rock," accessed April 13, 2022, https://zadockprattmuseum.org/pratt-rock/.

[2] Bonafide, John A., "Pratt Rock Park," National Register of Historic Places Registration Form (NYS Office of Parks, Rec, and Historic Preservation, October 7, 1992), NRIS Reference Number 92001645, accessed on April 13, 2022, https://catalog.archives.gov/id/75318027.

Appendix A: Images of Main Carved Features herein for a visual identification of the locations included in the general conditions survey. Note, although rope access improved the ability to review most of the main outcropping sculptures, hands-on access was not possible at all locations due to significant overhanging ledges.

VA utilizes a digital documentation system called TPAS® to record conditions data and photos directly into AutoCAD drawings. While no background elevations or plans of the site were available on which to record the data, ICR provided background images, taken from the ground during our initial visits, to document conditions in AutoCAD. While these background images are not to scale, they provide the most comprehensive view of the survey area available. ICR and VA developed a common glossary of conditions prior to our joint site visit based on our preliminary observations to be implemented during the survey. VA compiled the resulting survey data in their report, including images, drawings, and spreadsheet of preliminary condition extents, included herein *Appendix C: Vertical Access Condition Survey Report.* Note, additional materials from VA, including several videos taken during the survey will be delivered separately to the client.

2.2 Findings

The main outcropping and various bench features appear to be a sedimentary stone, specifically siltstone and shale according to a previous geological report provided to ICR by the Zadock Pratt Museum.[3] The stone has very pronounced exposed and weathering horizontal bedding planes, which is an inherent vice of this type of stone. Many of the sculptural features, mostly bas-relief and inscriptions, have typically been finished with a white coating (with previous coating campaigns evident), which may not be completely compatible with the vapor permeability of the stone, and is failing throughout. Biological growth obscures several of the sculptural details, water run-off has stained or likely caused coating failure at various locations, and graffiti, both carved and painted, is found throughout the survey area.

Several of the sculptural details are in overall fair condition as they are high enough out of reach of the public and shielded by overhanging ledges. Some of the more exposed locations exhibit more significant conditions, including spalls, cracks, loose stone, surface losses throughout (chipping, delamination, erosion, exfoliation, and friable stone), and previous repair patches that are either failing or aesthetically inappropriate.

Several observations were made of the overall outcropping, although this was not primary focus of the survey, nor the expertise of ICR and VA. Noted conditions included several large geological fissures, soil erosion (particularly beneath the bench features), encroaching trees (on or adjacent to features), undermined stone, loose bedding planes, and water seepage onto stone surfaces.

ICR has organized the observed conditions into a photographic glossary and matrix with definitions and potential treatment options, included herein as *Appendix B: Condition & Treatment Matrix.* Comprehensive survey data compiled by Vertical Access is also included herein as *Appendix C: Vertical Access Condition Survey Report.*

[3] Beinkafner, Katherine J., Ph.D., "Draft Report: Feasibility of Prevention of Further Water Damage to the Pratt Rock Park Carvings," January 31, 1993.

3 COATINGS ANALYSIS

3.1 Methodology

Most of the carved and inscribed details at Pratt Rock have evidence of applied coatings. While it's not completely clear whether the coatings were original in the 1800s, early renderings in the 1900s show that these features were historically painted white to highlight the sculptures from afar.[4] ICR and VA gathered coating samples by hand and/or using small hand tools from various sculptural locations during survey work to analyze in ICR's conservation laboratory. Samples were carefully removed from the mane of the "Horse," the trunk, underside, and top of the "Hemlock Tree," the hemlock tree detail of "Bench C," the "Portrait Bust of George W. Pratt," the "Medallion with Raised Hand," and the "Plaque to George and Julia Pratt."

The objective of the coatings analysis is to better understand the painted conditions of the sculptural features and determine if early coatings can be identified. Samples were set in resin, cut in cross-section, and photographed under a stereo binocular microscope. Samples were individually analyzed and compared to each other to help associate various coating campaigns across elements. Findings from these analyses can help inform repair and design decisions regarding potential coating removal and application of new coatings.

Note, analysis of existing finishes can be impaired by numerous factors, including, but not limited to, UV discoloration, soiling, material degradation, and substrate deterioration. The finishes at Pratt Rock were highly deteriorated, yielding several inconclusive results.

3.2 Findings

The following is a summary of the more comprehensive findings documented in *Appendix D: ICR Coating Analysis* herein.

ICR found relatively few extant coating layers at the various sculptural features, which is in line with the restricted access at the site, undoubtedly limiting the number of campaigns to reapply coatings. While archival and laboratory analyses cannot conclude whether the earliest extant coatings are original to the initial 1800s appearance of the sculptures, they are likely from an early time period and can be considered historic.

Analysis of the most intact and consistent samples shows that the earliest extant layer appears to be an off-white coating (Munsell Color® "White" N 9.5/), followed by a metallic gray coating, and the last white presentation layer. The most comprehensive stratigraphy observed was obtained from Sample 1, the mane of the "Horse" sculpture (see Figure 1 below). This sample shows an additional off-white layer in between the earliest coating and the metallic gray coating, with a soiling layer separating it from the previous layer. While this additional coating was not observed in the remaining samples, it is possible that the additional campaign was applied at the sculptures more easily accessed from the ground, or was selectively applied as needed, or had weathered away from the more exposed sculptures elsewhere.

The later metallic gray coating could likely be an aluminum paint coating, potentially applied as a protective layer. This may have unintentionally trapped water beneath the surface and accelerated the

[4] Michael Van Valkenburgh Associates, Inc., "Pratt Rock Park: Initial Concept Plan," October 21, 2019, p.11, image of "Postcard of Pratt Rock Park, ca. 1909."

deterioration of the stone in certain locations. It seems unlikely that the metallic gray coating would have been left exposed as a presentation layer, and no soiling was detected between it and the subsequent final white coating. As such, the two were likely applied in the same coating campaign, the gray coating used as a protective primer followed by the white presentation layer.

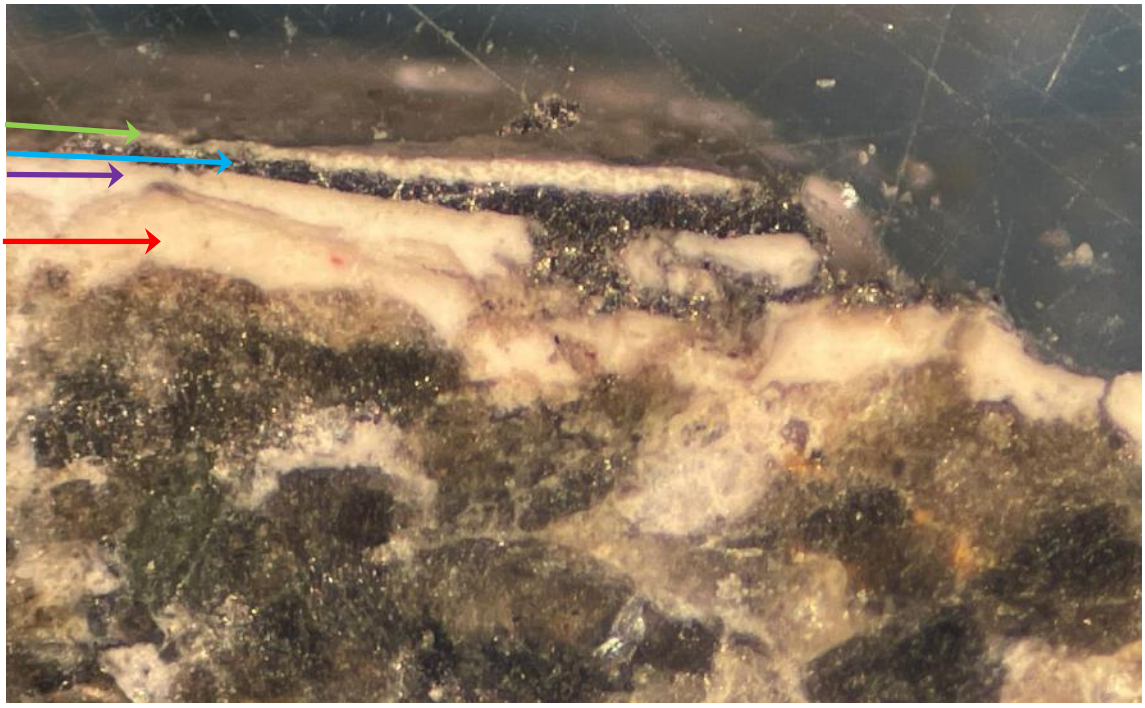


Figure 1: "Horse" Sculpture, Microscopic Image of Coating Sample 1 in Cross Section
Earliest off-white coating indicated in red, a subsequent off-white coating indicated in purple, a gray metallic coating indicated in blue, and the final white presentation layer indicated in green.

4 RECOMMENDATIONS & PRELIMINARY COST ESTIMATES

While there are some sculptural features in protected locations that are fairly intact, the more exposed locations exhibit an array of conditions that could benefit from conservation treatments to preserve the integrity of site in the long-term. Based on the findings of this Phase 1 Scope of Work, ICR has compiled a list of the prioritized potential repair treatments for the carved elements with tentative unit costs and repair extents. Refer to *Appendix E: Preliminary Cost Estimating.*

Note, hands-on access was not possible at all locations during our surveys, and a comprehensive treatment survey with improved access would be required to represent repair extents and estimated costs more accurately. In addition, various testing programs would need to be performed to determine feasibility of certain repair recommendations.

Progressing into the Phase 2 Scope of Work, Design Development, ICR has the following recommendations:

- Development of background drawings, potentially incorporating laser scanning or photogrammetry.

- Coordination with geologist and/or structural engineer to evaluate the overall geological features for stability and conditions.

- Coordination with specialists (MVVA or others) to determine the potential scope for soil erosion, encroaching trees/vegetation, and issues related to water seepage onto stone surfaces.

- Coordination with specialist for improved access at the main outcropping for design development and construction phases of work.

- Identification of full scope of carved elements with the assistance of research provided by Carolyn Bennett.

- Implementation of testing program to determine feasibility of biological growth removal on sculptural elements.*

- Implementation of testing program to determine feasibility of coating removal on sculptural elements and appropriate replacement options.*

- Implementation of testing program to determine feasibility of painted graffiti removal.*

- Implementation of testing program to determine feasibility of stabilization and/or tooling of delaminated, exfoliated, and friable stone.*

- Perform a treatment survey to refine the repair scope, extents, and cost estimates. Note, improved access, background drawings, and comprehensive design decisions would be required to proceed with a treatment survey.

- Begin development of a strategic maintenance program and ongoing monitoring program.

*Note: ICR has compiled a preliminary cost estimate for the testing programs listed above. See *Appendix E: Preliminary Cost Estimating* for additional information.

We recommend a meeting with the Project Team to review the existing conditions and treatment options documented in this report. This discussion will then inform design decisions for the carved elements and how their conservation fits within the overall goals of the Park restoration. Appropriate next steps for the future phases of work can then be more clearly defined.

Appendix A: Images of Main Carved Features

PRATT ROCK PARK

Images of Main Carved Features

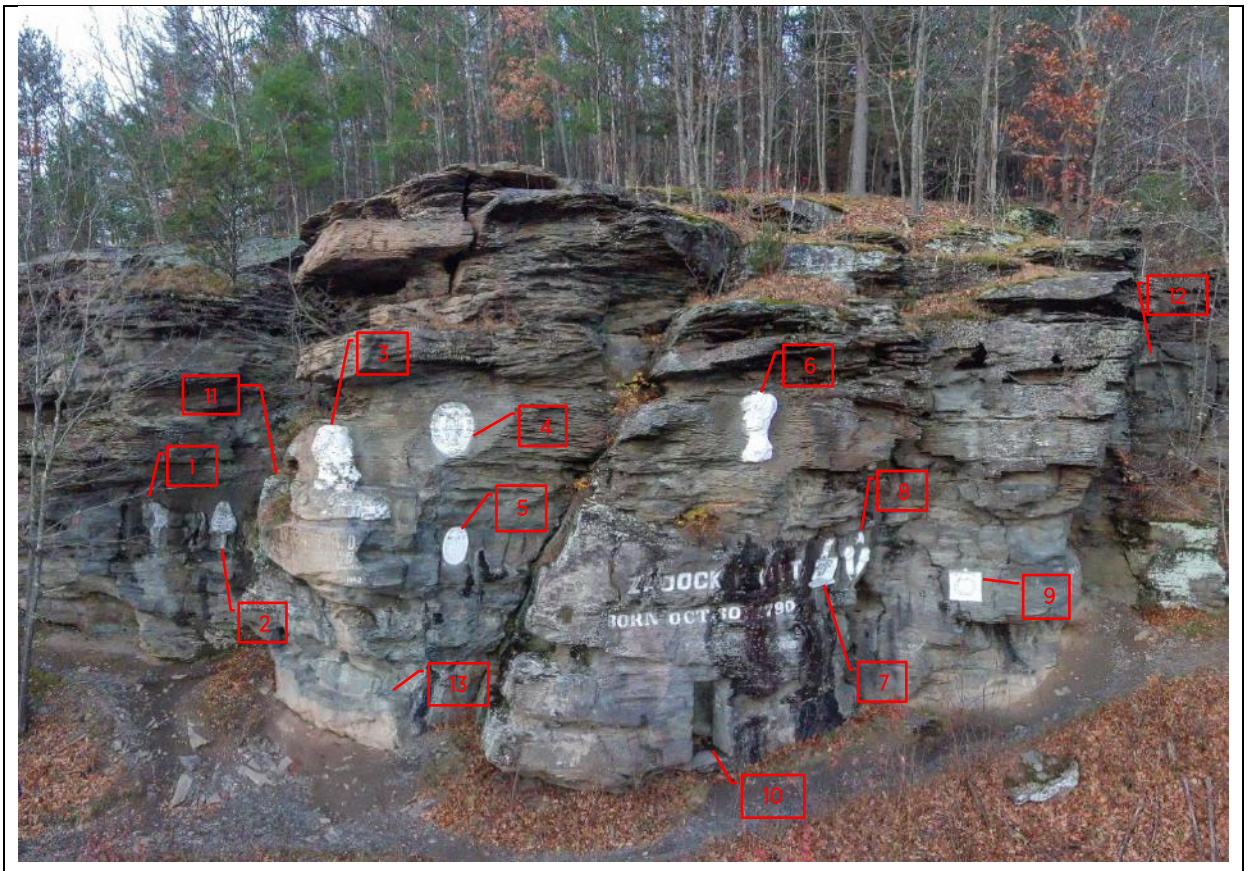


Figure 1: Main Outcropping and Sculptures

Panoramic view of Pratt Rock from drone footage collected by Vertical Access, November 22, 2021. Features shown as follows: 1) "Horse" 2) "Hemlock Tree" 3) "Portrait Bust of George W. Pratt" 4) "Medallion with Raised Hand" 5) "Medallion with Crest and Motto" 6) "Portrait Bust of Zadock Pratt" 7) "Bureau of Statistics" 8) "Arm & Hammer" 9) "Plaque to George & Julia Pratt" 10) "Unfinished Crypt" 11) "Unnamed Sculpture 1" 12) "Unnamed Sculpture 2" 13) "Bench "E".

Figure 2: Horse and Hemlock Tree
Horse at the left and hemlock tree at the right.

Figure 3: Portrait Bust of George W. Pratt
Note additional lettering below the sculpture bust and a portion of the "Unnamed Sculpture 1" to the left, which appears to be a low-relief carving of an open book.

Figure 4: Medallion with Raised Hand

Figure 5: Medallion with Crest and Motto

Figure 6: Portrait Bust of Zadock Pratt

Figure 7: Bureau of Statistics and Arm & Hammer Sculptures
"Bureau of Statistics" sculpture at left with a hand and scroll. "Arm and Hammer" sculpture at the right.

Figure 8: Plaque to George & Julia Pratt

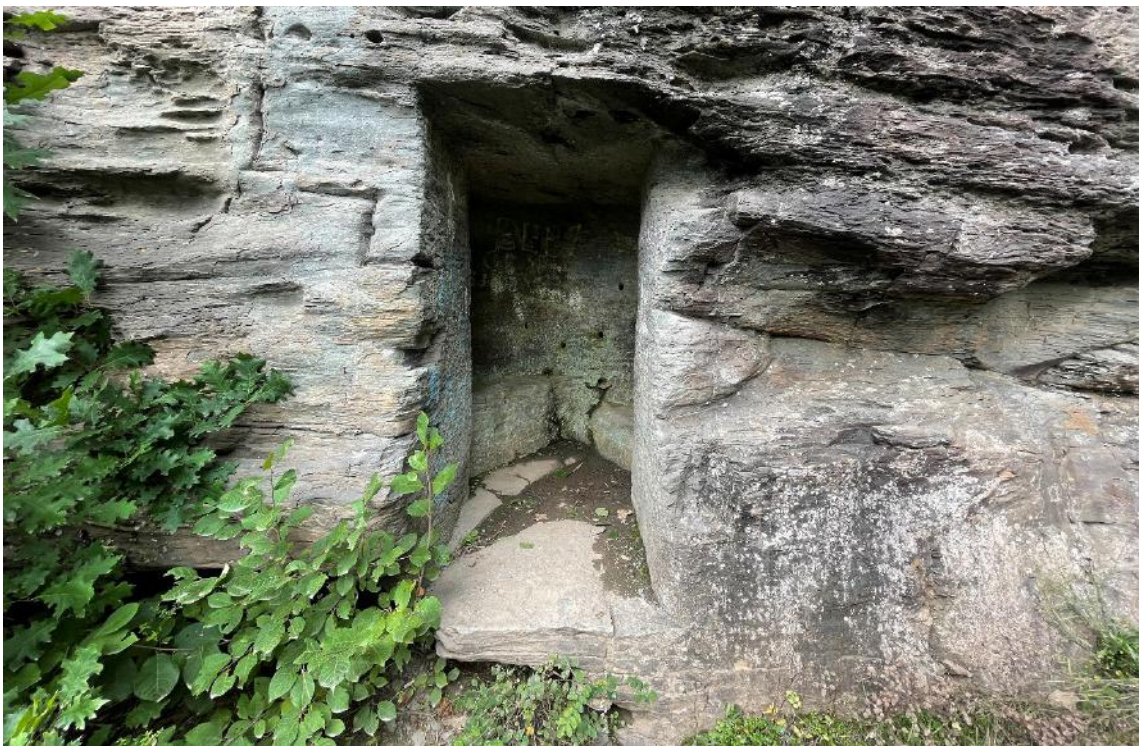


Figure 9: Unfinished Crypt

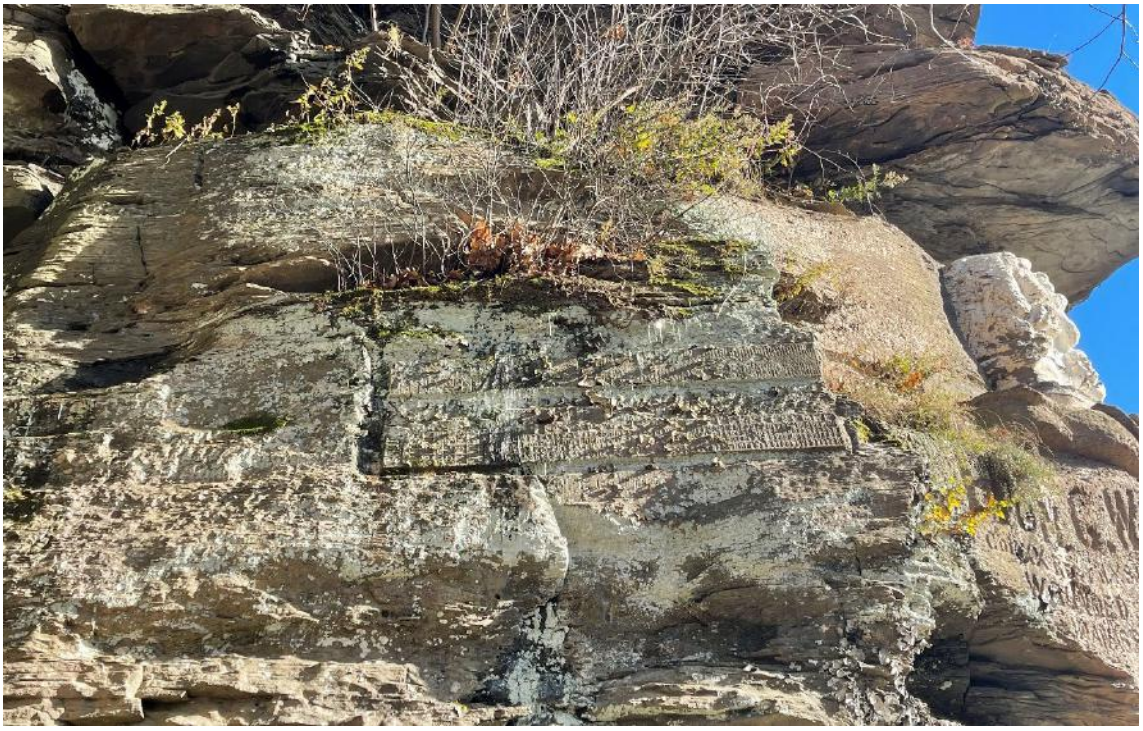


Figure 10: Unnamed Sculpture 1
Heavy biological growth obscures most of this low-relief sculpture, but there appears to be a depiction of books and/or an architectural structure.

Figure 11: Unnamed Sculpture 2
This sculpture is offset to the right of the main outcropping and is undetermined as to the original design intent and whether it was left unfinished.

Figure 12: Bench "A"
Note the small hemlock tree carving at the upper right portion of the bench.

Figure 13: Bench "B"
Note the encroaching tree adjacent.

Figure 14: Bench "C"
Note the small niche and hemlock tree carving at the backrest of the bench. Also note the extensive soil erosion and encroaching tree atop the feature.

Figure 15: Bench "D"
Note the extensive soil erosion beneath the feature.

Figure 16: Bench "E"
Note the low-relief sculptural crest/shield at the center of the bench. Also note the extensive soil erosion beneath the feature.

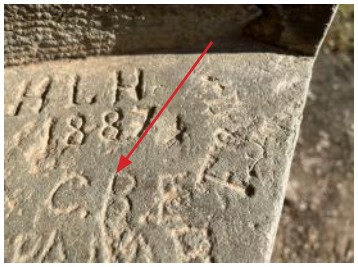
Figure 17: Gravestone
Note the encroaching trees around the monument.

Appendix B: ICR Condition & Treatment Matrix

Material: Stone

Representative Image	Condition & Definition	Potential Treatment Options
	**Biological Soiling** Locations at stone carvings of surface growth and/or discoloration indicative of biological colonization from micro-flora, including fungi, moss, lichen, algae, and bacteria.	A. Remove dense biological growth by hand and treat residual soiling with chemical product and pressurized water rinsing. B. Implement a biological growth inhibitor misting program. Note: Further testing is required to determine feasibility of removal with a chemical product.
	**Coating, Failed** Previous coating intervention at stone carvings exhibiting loss, loose material, and/or cracks.	A. Remove previous finish and apply new coating, compatible with the existing stone properties and original aesthetic intent. Note: Further testing is required to determine feasibility of finishes removal via chemical product and an appropriate new coating.
	**Crack Repair, Failed** Previous crack repairs at stone carvings exhibiting edge separation, loss, loose material, and/or cracks.	A. Remove previous repair and fill void with cementitious patching material to match the adjacent stone.
	**Crack System** Small to moderately sized fractures or fissures in the sculptures or adjacent stone.	A. Remove loose material, prepare crack, and fill with grout or cementitious patching material as appropriate to match the adjacent stone.
	**Embedment, Ferrous** Ferrous fasteners, fixtures, or nails embedded in the stone that are no longer in service.	A. Remove existing ferrous embedment and fill resulting hole with cementitious patching material matching the adjacent stone.
	**Fissures, Large** Large stone cracks, fissures, and/or voids resulting from geological and environmental forces.	A. ICR recommends coordination with a specialized project team, including a geologist and structural engineer, to determine outcropping stability and potential scope.

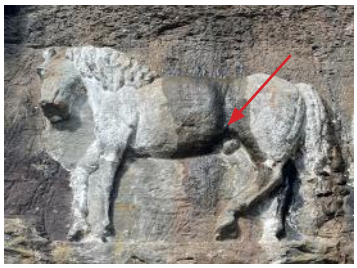
Material: Stone

Representative Image	Condition & Definition	Potential Treatment Options
	**Graffiti, Carved** Locations of carved markings or graffiti on stone surface, some of which could be considered "historic."	A. No further action.
	**Graffiti, Painted** Locations of painted graffiti on stone surface.	A. Remove painted graffiti with chemical product and pressurized water rinsing. Note: Further testing is required to determine feasibility of removal with chemical products.
	**Repair Patch, Failed** Previous repairs at stone carvings exhibiting edge separation, loss, loose material, and/or cracks.	A. Remove previous repair and fill void with cementitious patching material to match the adjacent stone.
	**Repair Patch, Sound** Aesthetically incompatible but sound previous repair at stone carvings.	A. No further action. B. Remove previous repair and fill void with cementitious patching material to match the adjacent stone.
	**Soil Erosion** The loss of topsoil to wind, rain, or other environmental forces.	A. ICR recommends coordination with the specialized project team to determine scope.
	**Spall, Missing** Locations of missing portions of stone carvings characterized by loss in form, profile, or ornament.	A. No further action. B. Remove loose material, prepare void, and infill with cementitious patching material to match the adjacent stone.

Material: Stone

Representative Image	Condition & Definition	Potential Treatment Options
	**Surface Loss, Chipped** Small and shallow carved stone surface loss characterized by loss in form, profile, or ornament.	A. No further action.
	**Surface Loss, Delaminated** Planar detachment and loss parallel to the carved stone surface, where sounding techniques indicate loose portions of stone.	A. No further action. B. Mechanically tool to remove loose material and finish to shed water. C. Stabilize delaminated portions of stone to minimize loss. Note: Further testing is required to determine feasibility of stabilization treatment.
	**Surface Loss, Eroded** Carved stone surface deterioration and loss due to environmental forces characterized by loss in form, profile, or ornament.	A. No further action.
	**Surface Loss, Exfoliated** Surface deterioration and loss characterized by fine networks of planar detachment parallel to the carved stone surface.	A. No further action. B. Mechanically tool to remove loose material and finish to shed water. C. Stabilize exfoliated portions of stone to minimize loss. Note: Further testing is required to determine feasibility of stabilization treatment.
	**Surface Loss, Friable** Surface deterioration and loss characterized by the disaggregation of carved stone into loose particles.	A. No further action. B. Mechanically tool to remove loose material and finish to shed water. C. Stabilize friable portions of stone to minimize loss. Note: Further testing is required to determine feasibility of stabilization treatment.
	**Trees, Encroaching** Locations of unmaintained trees or clinging/rooted vegetation on/near carved features.	A. ICR recommends coordination with the specialized project team to determine scope.

Material: Stone

Representative Image	Condition & Definition	Potential Treatment Options
	**Undermined Stone** Erosion of stone, limiting the support of material above.	A. ICR recommends coordination with a specialized project team, including a geologist and structural engineer, to determine outcropping stability and potential scope.
	**Unsecured, Loose Bedding Plane** Loose separation of layers of stratified stone from its preceding or subsequent depositional plane layer.	A. ICR recommends coordination with a specialized project team, including a geologist and structural engineer, to determine outcropping stability and potential scope.
	**Unsecured, Loose or Removed Stone** Locations where sounding techniques indicate detached portions of stone.	A. Mechanically remove loose material to a sound surface.
	**Water Seepage** Water infiltration from runoff or groundwater migration onto carved stone surfaces causing deterioration and/or staining.	A. ICR recommends coordination with the specialized project team to determine scope.

Appendix C: Vertical Access Condition Survey Report

CONDITION SURVEY REPORT

Pratt Rock Assessment

Prattsville, NY

Vertical Access • PO Box 4135 • Ithaca, NY 14852 • tel 607.257.4049

Report Narrative

Report Narrative

Pratt Rock
Prattsville, NY

Vertical Access LLC
PO Box 4135, Ithaca, NY 14852
Tel: 607 257 4049 / Fax: 607 257 2129

Vertical Access LLC (VA) was retained by the Town of Prattsville, NY and the Zadock Pratt Museum to assist Integrated Conservation Resources (ICR) with the assessment of the carvings comprising nearby Pratt Rock. VA technicians Dan Gordeyeva and Evan Kopelson were on site November 22, 2021 to perform the hands-on assessment with still photo and video documentation of seven of the nine painted carvings at Pratt Rock. Karen Stone of ICR documented conditions and performed the assessment of the remaining two painted carvings, the horse and the hemlock, and the grave marker and carved benches at the lower part of the site. Zadock Pratt Museum Executive Director Carolyn Bennett was on site during portions of the investigation to assist with site access.

This *Report Narrative* with photographs, annotated AutoCAD drawings and spreadsheet of condition quantities constitute VA's *Condition Survey Report* for Pratt Rock. A user's manual for VA's Tablet PC Annotation System (TPAS®) is also included.

Description of Deliverables

Report Narrative

This *Report Narrative* includes a description of the project deliverables, the scope of work and a summary of the conditions noted during the inspection. Supporting photographs illustrating representative and notable conditions are cited in the *Report Narrative*. The last section of the *Report Narrative* includes conclusions and preliminary interpretations of the survey findings.

Guide to TPAS Annotated Drawings

A *Guide to TPAS Annotated Drawings* follows the *Report Narrative*. While printed photographs and drawings are presented as part of this report, the most efficient way to analyze the survey data is by using the features available in the digital drawing files. Readers are encouraged to refer to the *Guide to TPAS Annotated Drawings*

before using the report to develop recommendations.

The *Guide* describes key TPAS features:

- Enabling hyperlinks and opening digital photographs directly from the AutoCAD and PDF drawings
- Viewing and editing survey data embedded within condition annotations
- Creating views within AutoCAD or within the PDF drawing to visually display information about specific conditions, by turning layers on and off
- Extracting numerical survey information contained in the AutoCAD drawing for export into a spreadsheet or database

Photographs

The *Photographs* section of the report includes images of representative and notable conditions taken during the survey using TPAS. Each photograph is hyperlinked to a condition code within the AutoCAD and PDF drawings so that it can be viewed easily as a digital file. Each photograph has a three-part name including the Cartesian (x-y) coordinates corresponding to the condition's location within the AutoCAD drawing, the type of material and condition documented, and the year in which the photograph was taken. The Cartesian grid used to name the photographs is shown on the drawings. For reference, the table below lists the x-coordinates of the section views:

X-Coordinate	View	Drawing and Sheet Number
0 to 80	Painted carvings	Sheet 1, Drawing 1.1
125 to 175	Grave marker and benches	Sheet 1, Drawing 1.2

Annotated Drawings

The drawings document the condition of the painted carvings, grave marker and benches. VA used photos taken by ICR during a previous site visit in order to create the background drawings. These photos are not to scale, but provide the most complete view of the investigation area that could be established before the field work.

Digital Files

The digital files include a full *Condition Survey Report* in PDF format, the Report

Narrative in PDF format, JPG image files of survey photographs, video documentation of carvings (MP4), annotated drawings in AutoCAD DWG and PDF formats, a spreadsheet of condition quantities in XLS and PDF formats and the guide to TPAS annotated drawings.

The evaluations and recommendations in this report and its exhibits regarding the condition of building materials and the potential effect on the safety of persons and property are made in the opinion of the VA technical personnel who observed the materials on site and are based on their judgment, knowledge, and prior experience of similar conditions; however, VA makes no warranty or guarantee regarding the accuracy of these evaluations and recommendations.

Scope of Work

VA Technicians performed four rope access drops to gain hands-on and close visual access to seven of the nine painting carvings of Pratt Rock. Vertical Access also set up a sectional ladder with fall protection to allow ICR hands-on access to the remaining two carvings, the horse and the hemlock at the far east end of Pratt Rock. VA used the sectional ladder for hands-on access to one of the carvings at the west end of the feature. During the course of the investigation, VA and ICR documented existing conditions of the carvings using still photographs, video recordings and annotated photographic elevation views. During the hands-on assessment, VA took paint samples at three of the carvings that were given to ICR for analysis at the conclusion of the field work.

Industrial rope access techniques were used for the investigation. In general terms, technicians are suspended on one rope termed the “work positioning line” with a redundant “fall protection line” used as backup. Descent devices are equipped with both-hands-free stopping functions and panic locking functions, and industry-specific fall protection devices are integrated into site-specific rigging systems, along with industry-specific climbing and suspension harnesses. Vertical Access technicians are third-party certified for industrial rope access work by SPRAT, the Society of Professional Rope Access Technicians.

Description

Pratt Rock was created between 1842 and 1862 by Zadock Pratt to memorialize his life. Located within the town of Prattsville, NY at a natural rock outcropping, the monument consists of carvings depicting important aspects of his life and painted to

highlight the carved features.[1] The following carvings comprise the features that were included in the current assessment, as viewed from left to right when looking at Pratt Rock: 1) horse in side profile; 2) hemlock tree; 3) bust of George W. Pratt; 4) medallion with raised hand; 5) medallion with crest and motto; 6) bust of Zadock Pratt; 7) hand holding Bureau of Statistics scroll; 8) arm holding a hammer; and 9) plaque to George and Julia Pratt (see figure 1). Most of the carvings are done in low or medium relief, with the exception of the busts that are roughly 3/4 complete. Near the bust of George Pratt is an unpainted, low-relief carving. Farther away from the painted carvings but incorporated into the same general outcropping is an unpainted medium relief carving of an architectural feature. Also located within the park at a lower elevation than the painted carvings of Pratt Rock are benches carved out of natural stone outcroppings and a grave marker.

The rock into which the carvings are made appears to be a shaley sandstone, with distinct horizontal bedding planes. Some of the carvings, especially the busts, which are carved more deeply into the natural outcropping, are protected by overhanging rock ledges.

Figure 1: Panoramic view of Pratt Rock from drone footage collected by Vertical Access November 22, 2021, with the nine painted carvings numbered.

[1] From the Zadock Pratt Museum website: https://zadockprattmuseum.org/pratt-rock/, accessed 12/16/2021.

Findings

Carvings

Each of the painted carvings documented by Vertical Access exhibits paint loss and exfoliation of the carved stone. The severity of loss varies depending on the exposure of the carving. The carvings that are more protected from sun exposure and water run-off due to overhanging ledges above, such as the medallion with crest and motto, are in better condition than the less protected carvings, such as the hand holding the scroll. Some of the carvings also exhibit loss of material that is deeper than exfoliation and was documented at spalls.

- Each of the nine carvings currently have a white coating. At some areas there appears to be multiple paint coatings and at other areas only one layer of paint was visible during the field investigation. At most areas the coatings are unstable with the main mode of deterioration appearing to be flaking. Areas of failed paint coatings are annotated "CtF". (See photographs 13-23, 41-27, 44-9, 50-8.)
- Each carving also exhibits exfoliation ("Exf") of carved portions of the stone. At the more protected carvings, such as the medallion with crest and motto, the exfoliation is limited to small areas of the carving and generally less than 1/8 inch deep. (See photographs 12-21, 21-17.) At the more exposed carvings, such as the hand with scroll and plaque to George and Julia, the areas of exfoliated stone are more widespread and greater than 1/4 inch in depth. (See photographs 46-11, 60-14.)
- The exfoliated stone at some of the carvings, including the bust of George Pratt, is friable ("Fri"), with loss of material up to one inch deep. (See photographs 12-21.)
- Deeper loss of some features of the carvings were documented as spalls, designated as "M" in the annotated drawings for missing material. This includes spalls at the hand holding the scroll, the arm with hammer and the plaque to George and Julia. The spalls range between 10 and 16 square inches. (See photographs 47-13, 48-11, 48-12.)
- A vertical crack just below the bust of George Pratt appears to have been repaired with a filler material, which is deteriorating and failing. The crack is approximately two feet long and 1/4 inch wide. (See photographs 13-20.)
- A vertical crack approximately three feet in length and 1/4 inch in width runs through the carved lettering below the George Pratt bust. This crack does not appear to have been previously treated or repaired. (See photographs 10-18.)
- A vertical crack hairline in width and approximately six inches in length was documented at the top of the square plaque to George and Julia. (See photographs 59-115.)

Outcropping

During the course of the investigation of the painted carvings, VA also documented notable conditions at the surrounding outcropping. These conditions include loose material at some of the bedding planes of the sandstone and large fissures in the stone near some of the carvings. Water seepage between bedding planes and within fissures was documented near and at some of the carvings.

- The bedding planes of the shaley sandstone outcropping are clearly visible both at the carvings and in the areas surrounding the carvings. Some of the rock at the bedding planes adjacent to the carvings is loose, with the drawings annotated "LBP" for loose bedding planes. (See photographs 16-24, 19-15, 23-22, 24-28.) At one location above the bust of George Pratt some loose material that appeared to be in danger of falling was removed. (See photographs 16-24.)
- Large fissures in the rock outcropping were documented near most of the carvings. The vertical fissures typically run five to fifteen feet in length and are up to a couple inches wide in some locations. Fissures near the carvings are documented as cracks ("C") on the annotated drawings. (See photographs 19-22, 21-18, 22-34, 32-17, 50-8.)
- The hands-on investigation of Pratt Rock was performed during intermittent periods of light drizzle. Areas of water seepage near the carvings were noted and documented. (See photographs 31-18, 43-27.) In some cases, such as the hand with scroll and arm and hammer, water flows directly over the carvings. (See photographs 44-12, 48-13.)

Other Features

Several features adjacent to the painted carvings were noted during the course of the investigation and documented with video and photographs.

- An unidentified low relief carving slightly below and to the side of the bust of George Pratt is almost entirely covered with biological growth and does not appear to have intact paint coatings. (See photographs 6-19.)
- Another unidentified low-relief carving near the George Pratt bust still has traces of paint coatings and also has heavy biological growth. (See photographs 9-20.)
- Lettering carved into the rock near some of the features was also documented. (See photographs 18-14, 25-16.)
- General photographs and video documentation of the pagoda-like carving separated from the main outcropping were collected. (See photographs 74-15.)

Conclusions and Preliminary Interpretations

All of the painted carvings of Pratt Rock exhibit coating loss and exfoliation, with some areas of larger spalls also noted. These conditions are more severe at the carvings that are more exposed to light, weather and water run-off, such as the hand with scroll and arm and hammer.

Vertical Access remains available to the project team to discuss our findings and to demonstrate the functionality and utility of TPAS for evaluating the conditions of Pratt Rock.

Respectfully submitted for Vertical Access LLC by:

Evan Kopelson

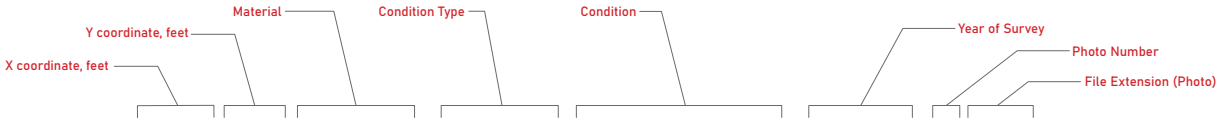
Partner-in-charge

Photographs

VA Photo Name Key

Vertical Access surveyors use TPAS during field evaluations to methodically name photographs. Within the standard TPAS photo naming convention, key attributes of each survey condition are used to create unique, descriptive file names.

Please use the accompanying diagram to understand and break down the typical layout of a VA photo name:



134-75 Stone_Crack Single unit 2020-2.jpg

tpas™

VERTICAL access

0-12 Stone_Coating Coating Failed 2021-1

0-12 Stone_Coating Coating Failed 2021-2

0-12 Stone_Coating Coating Failed 2021-3

0-12 Stone_Coating Coating Failed 2021-4

0-12 Stone_Coating Coating Failed 2021-5

0-12 Stone_Coating Coating Failed 2021-6

0-12 Stone_Coating Coating Failed 2021-7

0-13 Stone_Note Photo-water seepage 2021-1

0-13 Stone_Note Photo-water seepage 2021-2

0-13 Stone_Note Photo-water seepage 2021-3

0-13 Stone_SurfLoss Eroded 2021-1

0-13 Stone_SurfLoss Eroded 2021-2

0-13 Stone_SurfLoss Eroded 2021-3

0-13 Stone_SurfLoss Eroded 2021-4

0-13 Stone_SurfLoss Eroded 2021-5

1-11 Stone_Note Photo-overall 2021-1

1-11 Stone_Note Photo-overall 2021-2

1-11 Stone_SoilStain Biological 2021-1

1-11 Stone_SoilStain Biological 2021-2

1-11 Stone_SoilStain Biological 2021-3

1-11 Stone_SoilStain Biological 2021-4

1-12 Stone_Repair Patch Failed 2021-1

1-12 Stone_Repair Patch Failed 2021-2

1-12 Stone_Repair Patch Sound 2021-1

1-12 Stone_Repair Patch Sound 2021-2

1-12 Stone_Repair Patch Sound 2021-3

1-15 Stone_Note Photo-water seepage 2021-1

1-15 Stone_Note Photo-water seepage 2021-2

1-15 Stone_Note Photo-water seepage 2021-3

1-15 Stone_Note Photo-water seepage 2021-4

2-10 Stone_SoilStain Biological 2021-1

2-10 Stone_SoilStain Biological 2021-2

2-11 Stone_Crack System units 2021-1

2-11 Stone_Spall Missing 2021-1

2-11 Stone_Spall Missing 2021-2

2-11 Stone_Spall Missing 2021-3

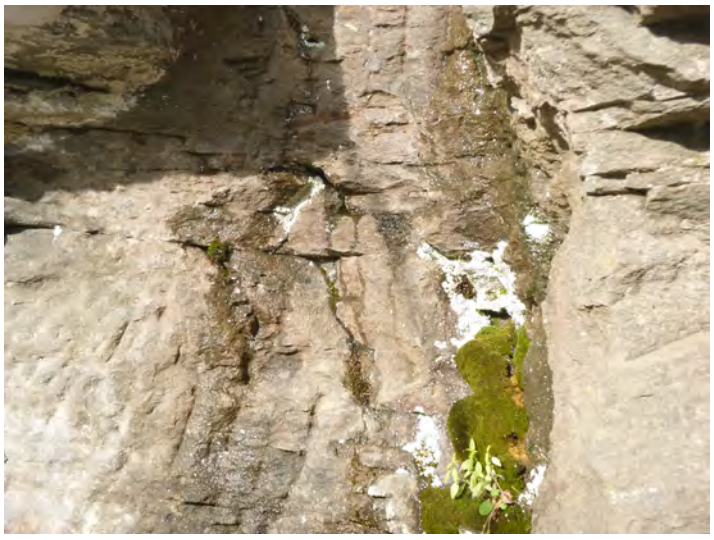
2-11 Stone_Spall Missing 2021-4

2-11 Stone_SurfLoss Exfoliated 2021-1

2-11 Stone_SurfLoss Exfoliated 2021-2

2-12 Stone_Crack System units 2021-1

2-12 Stone_Note Photo-water seepage 2021-1



2-12 Stone_Note Photo-water seepage 2021-2

2-12 Stone_Spall Missing 2021-1

2-12 Stone_Spall Missing 2021-2

2-12 Stone_SurfLoss Exfoliated 2021-1

2-12 Stone_SurfLoss Exfoliated 2021-2

2-12 Stone_SurfLoss Exfoliated 2021-3

2-12 Stone_SurfLoss Exfoliated 2021-4

2-12 Stone_SurfLoss Exfoliated 2021-5

2-13 Stone_SurfLoss Exfoliated 2021-1

2-13 Stone_SurfLoss Exfoliated 2021-2

2-14 Stone_SurfLoss Exfoliated 2021-1

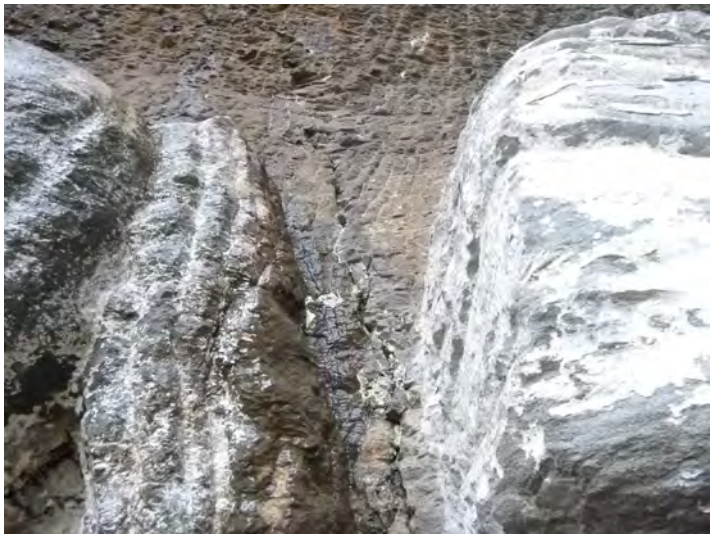
2-14 Stone_SurfLoss Exfoliated 2021-2

2-14 Test_Location Sample-paint 2021-1

2-14 Test_Location Sample-paint 2021-2

3-12 Test_Location Sample-coating 2021-1

3-12 Test_Location Sample-coating 2021-2



3-13 Stone_Crack System units 2021-1

3-13 Stone_Crack System units 2021-2

3-13 Stone_Note Photo-water seepage 2021-1

3-13 Stone_Note Photo-water seepage 2021-2

3-13 Stone_Note Photo-water seepage 2021-3

3-13 Stone_Spall Missing 2021-1

3-13 Stone_Spall Missing 2021-2

4-10 Stone_SoilStain Biological 2021-1

4-11 Stone_Crack System units 2021-1

4-12 Stone_Spall Missing 2021-1

4-13 Stone_Coating Coating Failed 2021-1

4-13 Stone_Coating Coating Failed 2021-2

4-13 Stone_Coating Coating Failed 2021-3

4-13 Stone_Coating Coating Failed 2021-4

4-13 Stone_Coating Coating Failed 2021-5

4-13 Stone_Coating Coating Failed 2021-6

4-13 Stone_SurfLoss Eroded 2021-1

4-13 Stone_SurfLoss Exfoliated 2021-1

4-13 Stone_SurfLoss Exfoliated 2021-2

4-13 Stone_SurfLoss Exfoliated 2021-3

4-14 Test_Location Sample-paint 2021-1

4-14 Test_Location Sample-paint 2021-2

5-11 Stone_Crack System units 2021-1

5-11 Stone_Crack System units 2021-2

5-11 Stone_Note Photo-water seepage 2021-1

5-11 Stone_Note Photo-water seepage 2021-2

5-14 Stone_Spall Missing 2021-1

5-14 Stone_Spall Missing 2021-2

6-19 Stone_SoilStain Biological 2021-1

6-19 Stone_SoilStain Biological 2021-2

9-20 Stone_Coating Coating Failed 2021-1

9-20 Stone_Coating Coating Failed 2021-2

9-20 Stone_Coating Coating Failed 2021-3

9-20 Stone_Coating Coating Failed 2021-4

10-18 Stone_Crack Single unit 2021-1

10-18 Stone_Crack Single unit 2021-2

12-18 Stone_Coating Coating Failed 2021-1

12-18 Stone_Coating Coating Failed 2021-2

12-18 Stone_Coating Coating Failed 2021-3

12-18 Stone_Coating Coating Failed 2021-4

12-21 Stone_SurfLoss Friable 2021-1

12-21 Stone_SurfLoss Friable 2021-2

12-21 Stone_SurfLoss Friable 2021-3

12-21 Stone_SurfLoss Friable 2021-4

12-21 Stone_SurfLoss Friable 2021-5

12-21 Stone_SurfLoss Friable 2021-6

12-21 Stone_SurfLoss Friable 2021-7

12-21 Test_Location Sample 2021-1

13-20 Stone_Crack Repair failed 2021-1

13-20 Stone_Crack Repair failed 2021-2

13-23 Stone_Coating Coating Failed 2021-1

13-23 Stone_Coating Coating Failed 2021-2

13-23 Stone_Crack Single unit 2021-1

13-39 Stone_Note Photo- undermined 2021-1

13-39 Stone_Note Photo- undermined 2021-2

15-19 Stone_Crack Single unit 2021-1

15-35 Stone_Unsecured LooseBeddingPlane 2021-1

15-35 Stone_Unsecured LooseBeddingPlane 2021-2

15-35 Stone_Unsecured LooseBeddingPlane 2021-3

15-35 Stone_Unsecured LooseBeddingPlane 2021-4

16-18 Stone_Spall Missing 2021-1

16-18 Stone_Spall Missing 2021-2

16-23 Stone_Crack Single unit 2021-1

16-23 Stone_Crack Single unit 2021-2

16-24 Stone_Unsecured Removed 2021-1

16-24 Stone_Unsecured Removed 2021-2

16-24 Stone_Unsecured Removed 2021-3

16-24 Stone_Unsecured Removed 2021-4

17-17 Stone_Crack Single unit 2021-1

17-17 Stone_Crack Single unit 2021-2

18-14 Stone_Note Photo-carved lettering 2021-1

19-15 Stone_Unsecured LooseBeddingPlane 2021-1

19-22 Stone_Crack Single unit 2021-1

19-22 Stone_Crack Single unit 2021-2

19-22 Stone_Crack Single unit 2021-3

19-22 Stone_Crack Single unit 2021-4

19-22 Stone_Crack Single unit 2021-5

19-22 Stone_Crack Single unit 2021-6

19-22 Stone_SoilStain Biological 2021-1

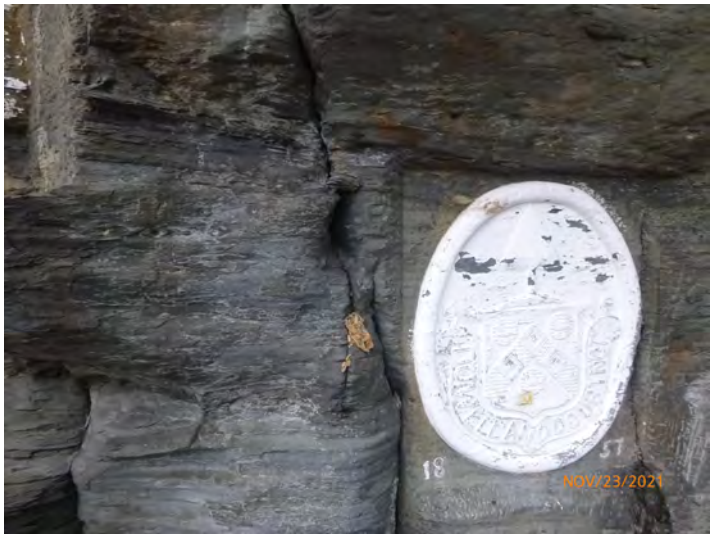
19-27 Stone_Embedment Ferrous Embedment 2021-1

19-27 Stone_Embedment Ferrous Embedment 2021-2

21-17 Stone_SurfLoss Exfoliated 2021-1

21-17 Stone_SurfLoss Exfoliated 2021-2

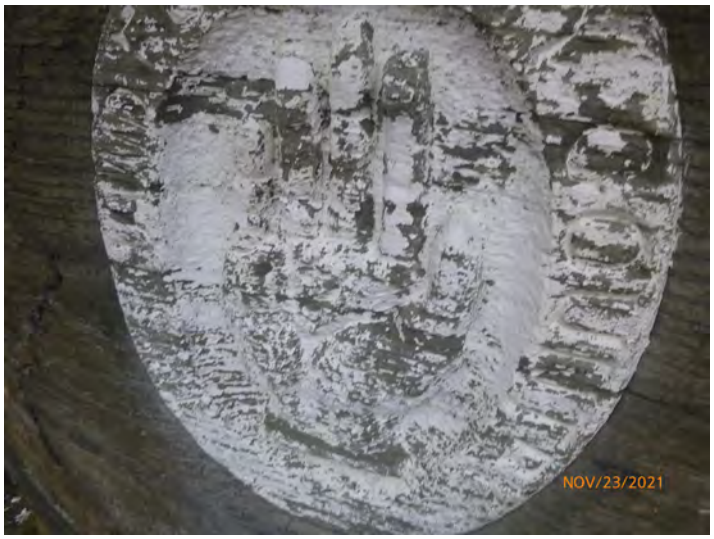
21-18 Stone_Crack Single unit 2021-1



21-18 Stone_Crack Single unit 2021-2

21-18 Stone_Crack Single unit 2021-3

21-22 Stone_Coating Coating Failed 2021-1



21-22 Stone_Coating Coating Failed 2021-2

21-22 Stone_Coating Coating Failed 2021-3

21-22 Stone_SurfLoss Eroded 2021-1

21-22 Stone_SurfLoss Eroded 2021-2

21-22 Stone_SurfLoss Eroded 2021-3

21-24 Stone_SurfLoss Exfoliated 2021-1

21-25 Stone_SurfLoss Exfoliated 2021-1

21-25 Stone_SurfLoss Exfoliated 2021-2

21-26 Stone_SoilStain Biological 2021-1

21-26 Stone_SoilStain Biological 2021-2

22-16 Stone_Coating Coating Failed 2021-1

22-16 Stone_Coating Coating Failed 2021-2

22-16 Stone_Coating Coating Failed 2021-3

22-24 Test_Location Sample 2021-1

22-24 Test_Location Sample 2021-2

22-24 Test_Location Sample 2021-3

22-25 Test_Location Sample 2021-1

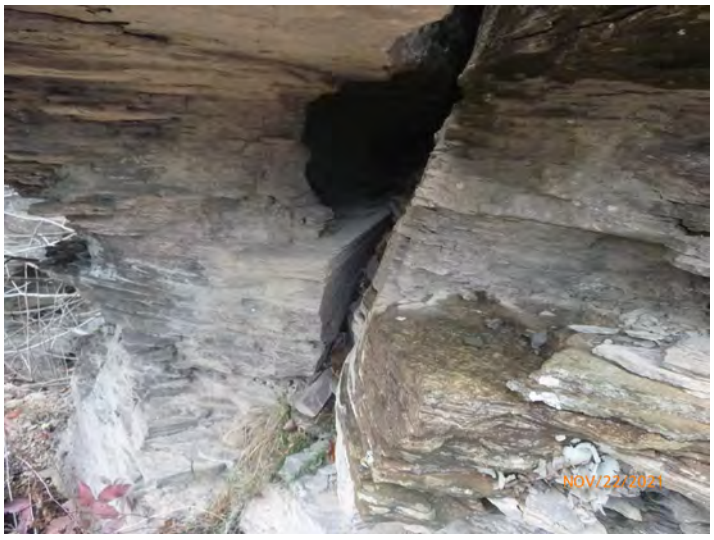
22-25 Test_Location Sample 2021-2

22-30 Stone_Note Photo-general 2021-1

22-30 Stone_Note Photo-general 2021-2

22-34 Stone_Note Photo-fissure above carving 2021-1

22-34 Stone_Note Photo-fissure above carving 2021-2



22-34 Stone_Note Photo-fissure above carving 2021-3

22-34 Stone_Note Photo-fissure above carving 2021-4

23-22 Stone_Unsecured LooseBeddingPlane 2021-1

23-22 Stone_Unsecured LooseBeddingPlane 2021-2

23-22 Stone_Unsecured LooseBeddingPlane 2021-3

23-25 Stone_SurfLoss Delaminated 2021-1

23-25 Stone_SurfLoss Delaminated 2021-2

23-25 Stone_SurfLoss Delaminated 2021-3

24-14 Stone_Note Photo-water seepage 2021-1

24-17 Stone_Crack Single unit 2021-1

24-17 Stone_Crack Single unit 2021-2

24-28 Stone_Unsecured LooseBeddingPlane 2021-1

24-28 Stone_Unsecured LooseBeddingPlane 2021-2

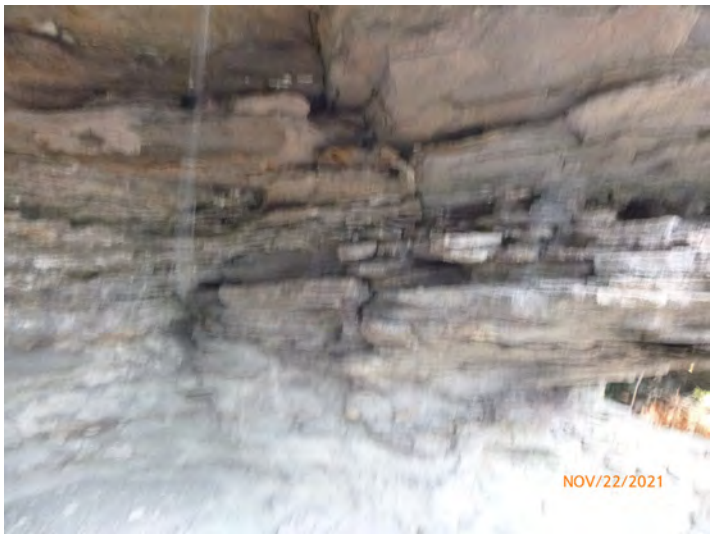
24-28 Stone_Unsecured LooseBeddingPlane 2021-3

24-28 Stone_Unsecured LooseBeddingPlane 2021-4

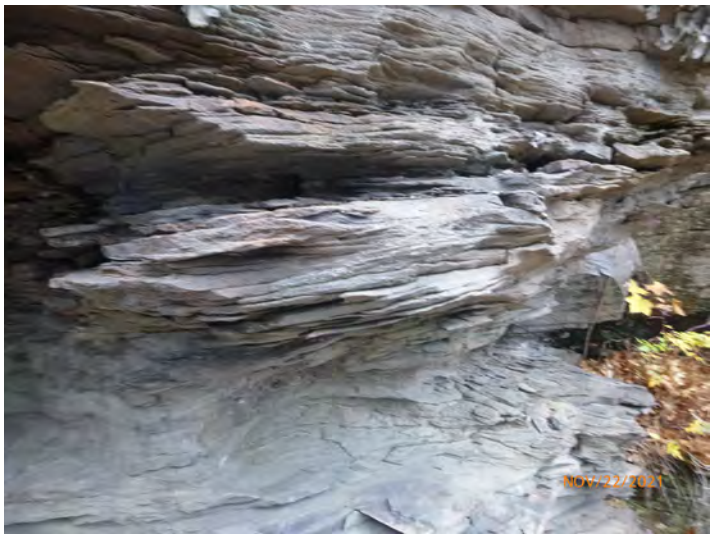
24-28 Stone_Unsecured LooseBeddingPlane 2021-5

24-28 Stone_Unsecured LooseBeddingPlane 2021-6

24-28 Stone_Unsecured LooseBeddingPlane 2021-7



24-28 Stone_Unsecured LooseBeddingPlane 2021-8



24-28 Stone_Unsecured LooseBeddingPlane 2021-9

25-16 Stone_Note Photo-carved lettering 2021-1

25-16 Stone_Note Photo-carved lettering 2021-2

27-23 Stone_Unsecured LooseBeddingPlane 2021-1

27-23 Stone_Unsecured LooseBeddingPlane 2021-2

27-23 Stone_Unsecured LooseBeddingPlane 2021-3

27-23 Stone_Unsecured LooseBeddingPlane 2021-4

31-18 Stone_Note Photo- Water Seepage 2021-1

31-18 Stone_Note Photo- Water Seepage 2021-2

31-18 Stone_Note Photo- Water Seepage 2021-3

32-17 Stone_Crack Single unit 2021-1

32-17 Stone_Crack Single unit 2021-2

36-14 Stone_Coating Coating Failed 2021-1

36-14 Stone_Coating Coating Failed 2021-2

36-14 Stone_Coating Coating Failed 2021-3

36-14 Stone_Coating Coating Failed 2021-4

36-14 Stone_Coating Coating Failed 2021-5

37-17 Stone_Crack Single unit 2021-1

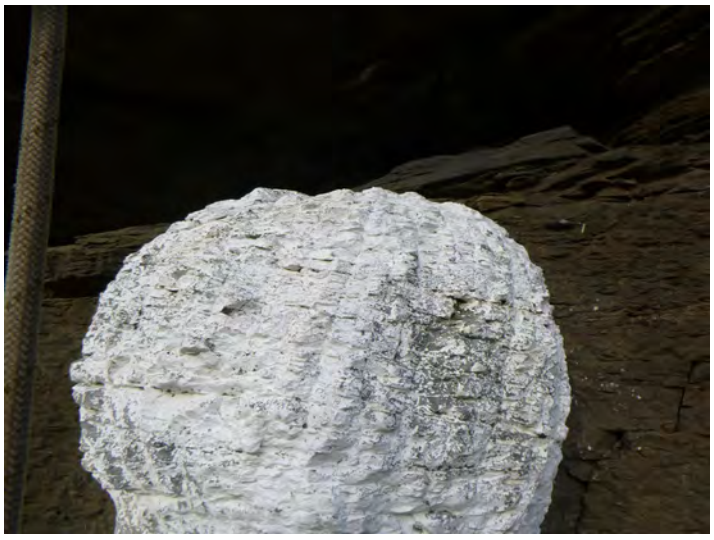
39-13 Stone_Crack Single unit 2021-1

39-24 Stone_Crack Single unit 2021-1

39-24 Stone_Crack Single unit 2021-2

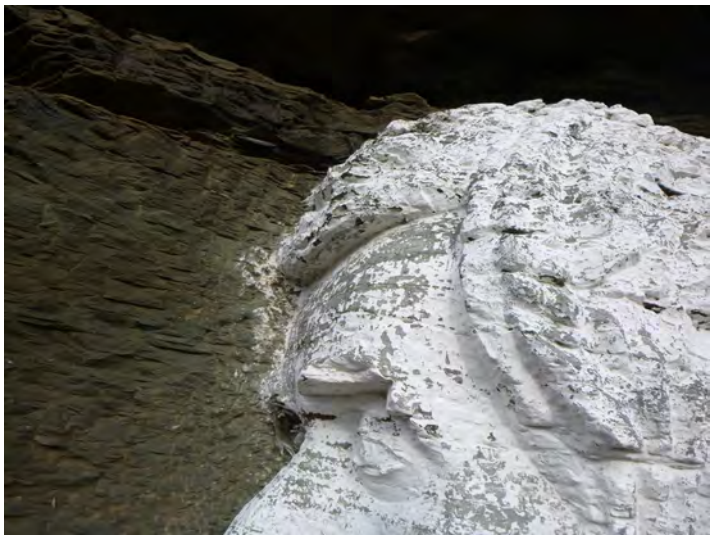
40-17 Stone_Note Photo- Water seepage 2021-1

40-17 Stone_Note Photo- Water seepage 2021-2



41-27 Stone_Coating Coating Failed 2021-1

41-27 Stone_Coating Coating Failed 2021-2



41-27 Stone_Coating Coating Failed 2021-3

41-27 Stone_Coating Coating Failed 2021-4

41-27 Stone_Coating Coating Failed 2021-5

41-27 Stone_Coating Coating Failed 2021-6

41-28 Stone_Note Photo-general 2021-1

41-28 Stone_Note Photo-general 2021-2

41-28 Stone_Note Photo-general 2021-3

41-28 Stone_Note Photo-general 2021-4

42-22 Stone_Crack Single unit 2021-1

42-22 Stone_Crack Single unit 2021-2

43-11 Stone_Note Photo-overall 2021-1

43-11 Stone_Note Photo-overall 2021-2

43-26 Stone_Crack Single unit 2021-1

43-27 Stone_Note Photo- Water seepage 2021-1

44-9 Stone_Coating Coating Failed 2021-1

44-9 Stone_Coating Coating Failed 2021-2

44-9 Stone_Coating Coating Failed 2021-3

44-9 Stone_Coating Coating Failed 2021-4

44-12 Stone_Note Photo-water seepage 2021-1

44-12 Stone_Note Photo-water seepage 2021-2

44-12 Stone_Note Photo-water seepage 2021-3

45-11 Stone_SurfLoss Exfoliated 2021-1

46-9 Stone_SurfLoss Exfoliated 2021-1

46-11 Stone_SurfLoss Exfoliated 2021-1

46-11 Stone_SurfLoss Exfoliated 2021-2

46-11 Stone_SurfLoss Exfoliated 2021-3

47-11 Stone_SurfLoss Exfoliated 2021-1

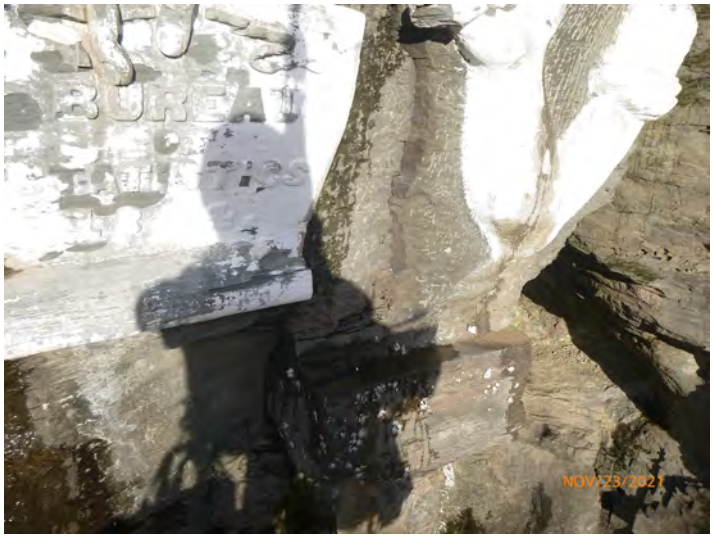
47-12 Stone_Repair Patch Failed 2021-1

47-13 Stone_Spall Missing 2021-1

48-11 Stone_Spall Missing 2021-1

48-12 Stone_Spall Missing 2021-1

48-13 Stone_Note Photo-water seepage 2021-1



48-13 Stone_Note Photo-water seepage 2021-2

48-13 Stone_Note Photo-water seepage 2021-3

48-13 Stone_Unsecured LooseBeddingPlane 2021-1

48-13 Stone_Unsecured LooseBeddingPlane 2021-2

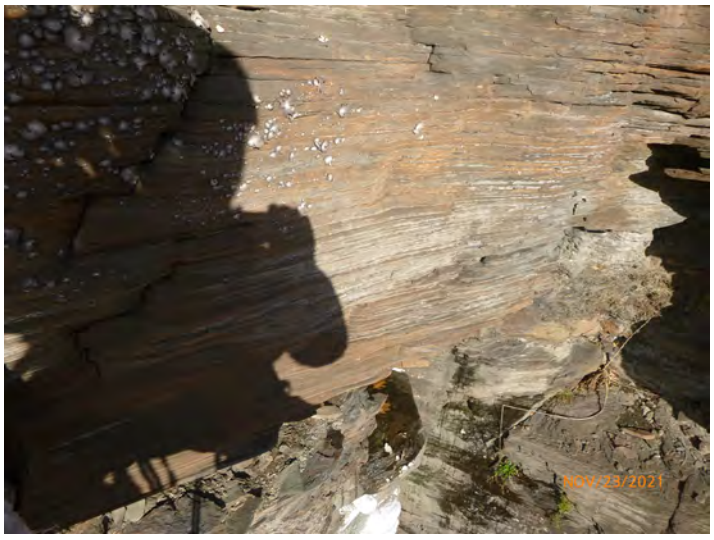
48-14 Stone_Note Photo-general 2021-1

48-14 Stone_Note Photo-general 2021-2

48-14 Stone_Note Photo-general 2021-3

48-14 Stone_Note Photo-general 2021-4

48-14 Stone_Note Photo-general 2021-5



48-14 Stone_Note Photo-general 2021-6

50-8 Stone_Coating Coating Failed 2021-1

50-8 Stone_Coating Coating Failed 2021-2

50-8 Stone_Coating Coating Failed 2021-3

50-8 Stone_Crack Single unit 2021-1

50-8 Stone_Crack Single unit 2021-2

50-8 Stone_Crack Single unit 2021-3

50-8 Stone_Crack Single unit 2021-4

50-12 Stone_Note Photo-water seepage 2021-1

50-12 Stone_Note Photo-water seepage 2021-2

50-13 Stone_Note Photo-water seepage 2021-1

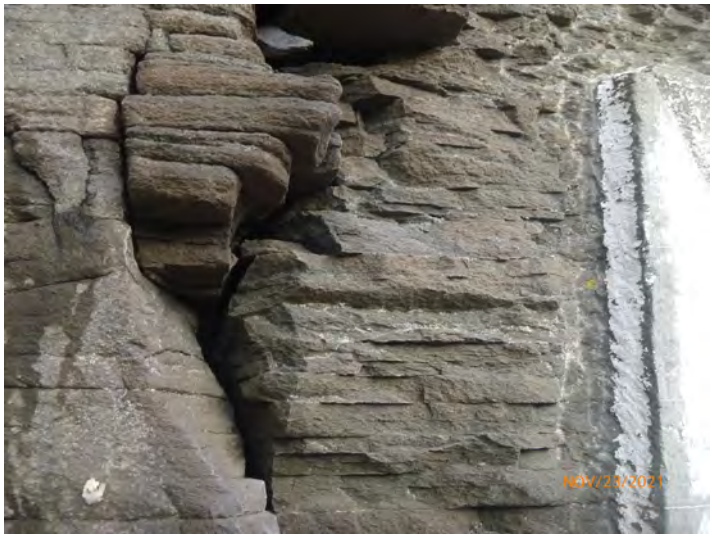
50-13 Stone_Note Photo-water seepage 2021-2

52-10 Stone_Note Photo-overall 2021-1

52-10 Stone_Note Photo-overall 2021-2

54-15 Stone_Crack Single unit 2021-1

54-15 Stone_Crack Single unit 2021-2



54-15 Stone_Crack Single unit 2021-3

54-15 Stone_Crack Single unit 2021-4

54-15 Stone_Crack Single unit 2021-5

56-15 Stone_SurfLoss Exfoliated 2021-1

56-15 Stone_SurfLoss Exfoliated 2021-2

57-10 Stone_Note Photo-water seepage 2021-1

57-13 Stone_SurfLoss Exfoliated 2021-1

57-13 Stone_SurfLoss Exfoliated 2021-2

57-15 Test_Location Sample 2021-1

57-15 Test_Location Sample 2021-2

57-15 Test_Location Sample 2021-3

58-11 Stone_Note Photo-27.5 inches high by 31 inches wide 2021-1

58-11 Stone_Note Photo-27.5 inches high by 31 inches wide 2021-2

58-11 Stone_SurfLoss Eroded 2021-1

58-11 Stone_SurfLoss Eroded 2021-2

58-11 Stone_SurfLoss Eroded 2021-3

58-16 Stone_Spall Missing 2021-1

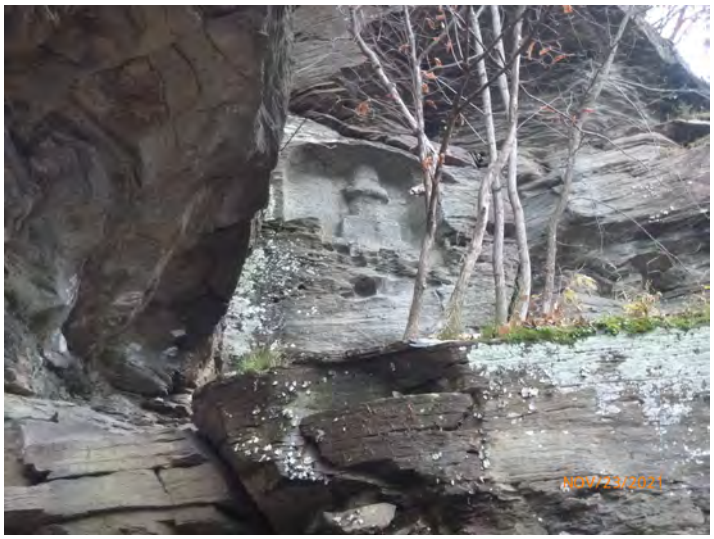
59-15 Stone_Crack Single unit 2021-1

59-15 Stone_Crack Single unit 2021-2

60-14 Stone_Coating Coating Failed 2021-1

60-14 Stone_Coating Coating Failed 2021-2

60-14 Stone_SurfLoss Exfoliated 2021-1



74-15 Stone_Note Photo-carving 2021-1

74-15 Stone_Note Photo-carving 2021-2

74-15 Stone_Note Photo-carving 2021-3

74-15 Stone_Note Photo-carving 2021-4

74-15 Stone_Note Photo-carving 2021-5

74-15 Stone_Note Photo-carving 2021-6

74-15 Stone_Note Photo-carving 2021-7

130-25 Stone_Note Photo-general-encroaching trees 2021-1

137-14 Stone_Crack System units 2021-1

137-14 Stone_SurfLoss Delaminated 2021-1

137-15 Stone_SoilStain Biological 2021-1

138-14 Stone_SurfLoss Exfoliated 2021-1

138-14 Stone_SurfLoss Exfoliated 2021-2

138-14 Stone_SurfLoss Exfoliated 2021-3

138-14 Stone_SurfLoss Exfoliated 2021-4

138-15 Stone_Coating Coating Failed 2021-1

138-15 Stone_Note Photo-carved graffiti 2021-1

138-15 Stone_Note Photo-carved graffiti 2021-2

138-15 Stone_SurfLoss Chipped 2021-1

138-15 Stone_SurfLoss Chipped 2021-2

138-15 Stone_SurfLoss Exfoliated 2021-1

138-25 Stone_SoilStain Biological 2021-1

139-14 Stone_Crack System units 2021-1

139-14 Stone_Crack System units 2021-2

139-14 Stone_Crack System units 2021-3

139-14 Stone_SurfLoss Delaminated 2021-1

139-14 Stone_SurfLoss Delaminated 2021-2

139-14 Stone_Unsecured Loose 2021-1

139-15 Stone_Note Photo-painted graffiti 2021-1

145-20 Stone_Note Photo-overall 2021-1

145-20 Stone_Note Photo-overall 2021-2

145-20 Stone_Note Photo-overall 2021-3

145-20 Stone_Note Photo-overall 2021-4

145-22 Stone_Note Photo-general 2021-1

145-22 Stone_Note Photo-general 2021-2

145-27 Stone_Coating Coating Failed 2021-1

145-27 Stone_Coating Coating Failed 2021-2

145-27 Stone_Coating Coating Failed 2021-3

145-27 Stone_Coating Coating Failed 2021-4

145-27 Stone_Coating Coating Failed 2021-5

146-20 Stone_Coating Coating Failed 2021-1

146-20 Stone_Crack System units 2021-1

146-20 Stone_Spall Missing 2021-1

146-20 Stone_SurfLoss Exfoliated 2021-1

146-20 Stone_SurfLoss Exfoliated 2021-2

146-20 Stone_SurfLoss Exfoliated 2021-3

146-20 Test_Location Sample-paint 2021-1

146-24 Stone_Spall Missing 2021-1

146-24 Stone_Spall Missing 2021-2

146-26 Stone_SoilStain Biological 2021-1

147-20 Stone_Spall Missing 2021-1

147-20 Stone_Spall Missing 2021-2

161-26 Stone_Crack System units 2021-1

161-26 Stone_Crack System units 2021-2

161-26 Stone_Crack System units 2021-3

161-26 Stone_Crack System units 2021-4

161-26 Stone_SurfLoss Eroded 2021-1

162-25 Stone_Spall Missing 2021-1

162-25 Stone_Spall Missing 2021-2

162-26 Stone_Spall Missing 2021-1

168-20 Stone_SurfLoss Eroded 2021-1

168-20 Stone_SurfLoss Eroded 2021-2

168-20 Stone_SurfLoss Eroded 2021-3

168-20 Stone_SurfLoss Eroded 2021-4

168-20 Stone_SurfLoss Eroded 2021-5

168-20 Stone_SurfLoss Eroded 2021-6

168-20 Stone_SurfLoss Eroded 2021-7

168-20 Stone_Unsecured LooseBeddingPlane 2021-1

168-20 Stone_Unsecured LooseBeddingPlane 2021-2

168-20 Stone_Unsecured LooseBeddingPlane 2021-3

168-21 Stone_SoilStain Biological 2021-1

168-21 Stone_SoilStain Biological 2021-2

168-21 Stone_SoilStain Biological 2021-3

168-25 Stone_Note Photo-general 2021-1

169-26 Stone_Coating Coating Failed 2021-1

169-26 Stone_Crack System units 2021-1

169-26 Stone_SoilStain Biological 2021-1

169-26 Stone_Spall Missing 2021-1

169-26 Stone_SurfLoss Eroded 2021-1

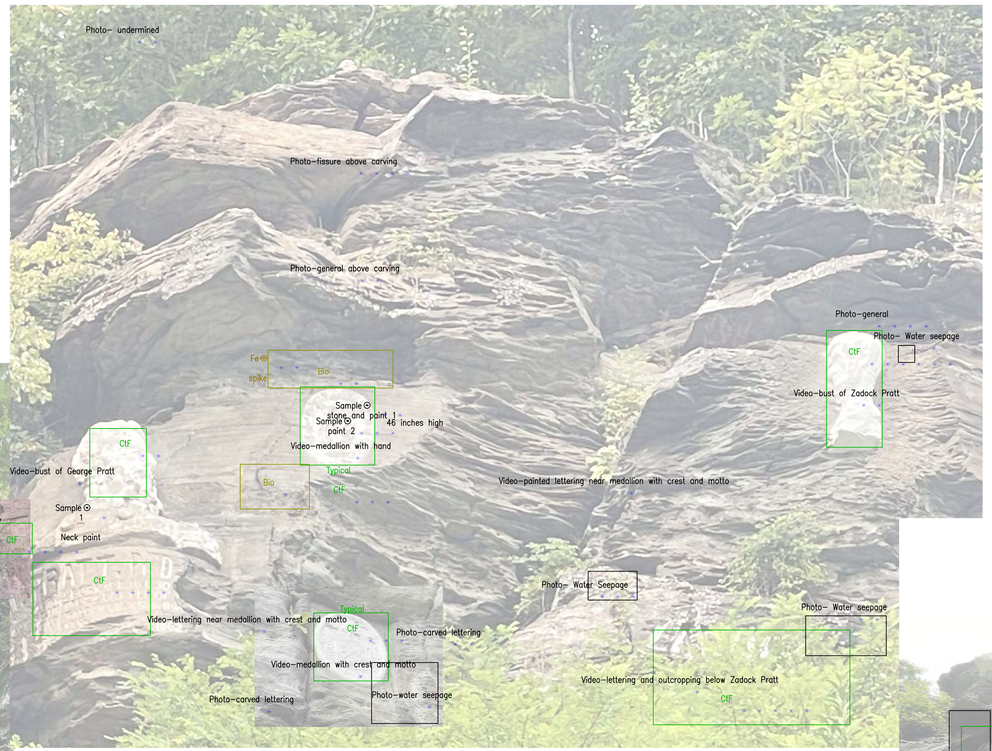
Annotated Drawings

KEY TO SYMBOLS	
Each TPAS annotation is comprised of a graphical symbol and text label. Four types of graphical symbols are used: --Target symbols depict faults having discrete locations, such as spalls or patch repairs. --Box symbols are rectangular symbols delineating conditions that span an area too large to be effectively represented with target symbols. --Polyline symbols depict cracks and specific joint conditions. --Picture Link symbols indicate the location of survey photographs. Text labels include a code describing the type of conditon, and if applicable, a severity code and Picture Link.	
This target symbol indicates a 20 square inch spall, which was removed during the survey and photographed:	Fault Code — R Severity — 20 Target Symbol Picture or Video Link
This box symbol indicates an area of biological soiling, which was not photographed:	Bio
This polyline indicates a crack system following a joint path, 3/16 inch wide, which was photographed:	CJ 3

KEY TO PHOTO NAMES
Vertical Access surveyors use TPAS during field evaluations to methodically name photographs. Within the standard TPAS photo naming convention, key attributes of each survey condition are used to create unique, descriptive file names. Please use the accompanying diagram to understand and break down the typical layout of a VA photo name:

KEY TO SURVEY CODES: MASONRY				
Condition	Symbol	Fault Type	Severity	Amount
Coating		CtF Coating Failed	Not applicable	Area in sq. ft.
Cracks		C Crack CU Crack system; Units CRprF Crack Repair Failed	Width in 1/16" increments: 0 Hairline .5 Hairline to 1/32 inch 1 1/32 to 1/16 inch 2 1/16 to 1/8 inch	Length in lin.ft.
Embedment		Fe Ferrous element	Not applicable	Not applicable
Previous Repairs		PF Patch Failed P Patch sound	Size of repair in square inches	Not applicable
Soiled/Stained		Bio Biological growth	Not applicable	Area in sq. ft.
Spalls		M Missing	Size of spall in square inches	Not applicable
Surface Loss		Chp Chipped Dlm Delaminated Erd Eroded Exf Exfoliated Fri Friable	Depth of loss in 1/8" increments: 1 0 to 1/8 inch 2 1/8 to 1/4 inch	Area in sq. ft.
Unsecured		LBP Loose Bedding Plane L Loose R Removed	Not applicable	Area in sq. ft.

KEY TO SURVEY CODES: TEST LOCATION				
Condition	Symbol	Fault Type	Severity	Amount
Test Location	⊙	Sample Sample Location	Not applicable	Not applicable



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ELEVATION
SOUTH-ALL CONDITION

FROM PHOTOGRAPHS PROVIDED BY: Vertical Access APPROXIMATE SCALE: 3/8" = 1' WHEN PRINTED AT 24" x 36"

Pratt Rock
Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

VA PROJECT NUMBER: 21-2526

1

KEY TO SYMBOLS

Each TPAS annotation is comprised of a graphical symbol and text label.

Four types of graphical symbols are used:
--Target symbols depict faults having discrete locations, such as spalls or patch repairs.
--Box symbols are rectangular symbols delineating conditions that span an area too large to be effectively represented with target symbols.
--Polyline symbols depict cracks and specific joint conditions.
--Picture Link symbols indicate the location of survey photographs.

Text labels include a code describing the type of conditon, and if applicable, a severity code and Picture Link.

This target symbol indicates a 20 square inch spall, which was removed during the survey and photographed:	Fault Code — R; Severity — 20; Target Symbol; Picture or Video Link
This box symbol indicates an area of biological soiling, which was not photographed:	Bio
This polyline indicates a crack system following a joint path, 3/16 inch wide, which was photographed:	CJ 3

KEY TO PHOTO NAMES

Vertical Access surveyors use TPAS during field evaluations to methodically name photographs. Within the standard TPAS photo naming convention, key attributes of each survey condition are used to create unique, descriptive file names. Please use the accompanying diagram to understand and break down the typical layout of a VA photo name:

X coordinate, feet / Y coordinate, feet / Material / Condition Type / Condition / Year of Survey / Photo Number / File Extension (Photo)

134-75 Stone_Crack Single unit 2020-2.jpg

KEY TO SURVEY CODES: MASONRY

Condition	Symbol	Fault Type	Severity	Amount
Coating	▭	CtF Coating Failed	Not applicable	Area in sq. ft.
Cracks	⌐	C Crack CU Crack system: Units CRprF Crack Repair Failed	Width in 1/16" increments: 0 Hairline .5 Hairline to 1/32 inch 1 1/32 to 1/16 inch 2 1/16 to 1/8 inch	Length in lin.ft.
Embedment	◎	Fe Ferrous element	Not applicable	Not applicable
Previous Repairs	⊞	PF Patch Failed P Patch sound	Size of repair in square inches	Not applicable
Soiled/Stained	▭	Bio Biological growth	Not applicable	Area in sq. ft.
Spalls	⊠	M Missing	Size of spall in square inches	Not applicable
Surface Loss	▭	Chp Chipped Dlm Delaminated Erd Eroded Exf Exfoliated Fri Friable	Depth of loss in 1/8" increments: 1 0 to 1/8 inch 2 1/8 to 1/4 inch	Area in sq. ft.
Unsecured	▭	LBP Loose Bedding Plane L Loose R Removed	Not applicable	Area in sq. ft.

KEY TO SURVEY CODES: TEST LOCATION

Condition	Symbol	Fault Type	Severity	Amount
Test Location	⊙	Sample Sample Location	Not applicable	Not applicable

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ELEVATION
SOUTH - SURFACE LOSS AND SPALLS

APPROXIMATE SCALE: 3/8" = 1' WHEN PRINTED AT 24" x 36"

FROM PHOTOGRAPHS PROVIDED BY: Vertical Access

Pratt Rock
Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

VA PROJECT NUMBER: 21-2526

1.1

KEY TO SYMBOLS
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This target symbol indicates a 20 square inch spall, which was removed during the survey and photographed: Fault Code R, Severity 20, Target Symbol, Picture or Video Link
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This polyline indicates a crack system following a joint path, 3/16 inch wide, which was photographed: CJ 3

KEY TO PHOTO NAMES
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Material, Condition Type, Condition, Year of Survey, Photo Number, File Extension (Photo), Y coordinate, feet, X coordinate, feet 134-75 Stone_Crack Single unit 2020-2.jpg

KEY TO SURVEY CODES: MASONRY				
Condition	Symbol	Fault Type	Severity	Amount
Coating		CtF Coating Failed	Not applicable	Area in sq. ft.
Cracks		C Crack CU Crack system; Units CRprF Crack Repair Failed	Width in 1/16" increments: 0 Hairline .5 Hairline to 1/32 inch 1 1/32 to 1/16 inch 2 1/16 to 1/8 inch	Length in lin.ft.
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Unsecured		LBP Loose Bedding Plane L Loose R Removed	Not applicable	Area in sq. ft.

KEY TO SURVEY CODES: TEST LOCATION				
Condition	Symbol	Fault Type	Severity	Amount
Test Location	⊙	Sample Sample Location	Not applicable	Not applicable

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ELEVATION
SOUTH - CRACKS AND LOOSE BEDDING PLANES

FROM PHOTOGRAPHS PROVIDED BY: Vertical Access APPROXIMATE SCALE: 3/8" = 1' WHEN PRINTED AT 24" x 36"

Pratt Rock
Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

VA PROJECT NUMBER: 21-2526

1.2

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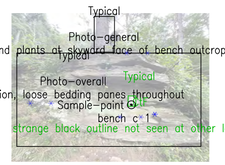
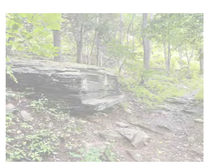
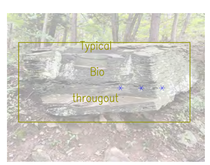
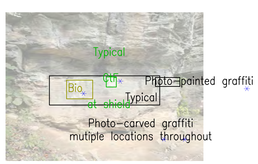
KEY TO SURVEY CODES: TEST LOCATION				
Condition	Symbol	Fault Type	Severity	Amount
Test Location	⊙	Sample Sample Location	Not applicable	Not applicable









20

10

120 130 140 150 160 170 180

30

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PHOTOGRAPHS

GRAVES AND BENCHES-ALL CONDITIONS

FROM PHOTOGRAPHS PROVIDED BY: Vertical Access APPROXIMATE SCALE: 1/2" = 1' WHEN PRINTED AT 24" x 36"

Pratt Rock
Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

VA PROJECT NUMBER: 21-2526

2

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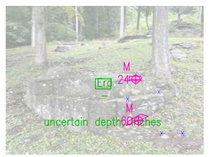

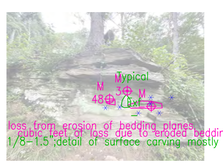

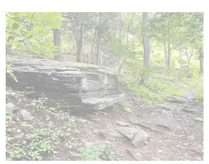

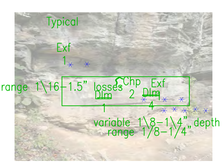

10 20 30

120 130 140 150 160 170 180

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FROM PHOTOGRAPHS PROVIDED BY: Vertical Access APPROXIMATE SCALE: 1/2" = 1' WHEN PRINTED AT 24" x 36"

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Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

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2.1

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Condition	Symbol	Fault Type	Severity	Amount
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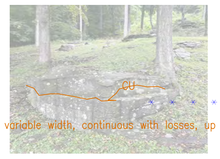
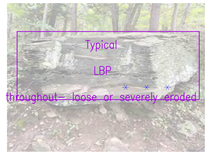
Cracks		C Crack CU Crack system; Units CRprF Crack Repair Failed	Width in 1/16" increments: 0 Hairline .5 Hairline to 1/32 inch 1 1/32 to 1/16 inch 2 1/16 to 1/8 inch	Length in lin.ft.
Embedment		Fe Ferrous element	Not applicable	Not applicable
Previous Repairs		PF Patch Failed P Patch sound	Size of repair in square inches	Not applicable
Soiled/Stained		Bio Biological growth	Not applicable	Area in sq. ft.
Spalls		M Missing	Size of spall in square inches	Not applicable
Surface Loss		Chp Chipped Dlm Delaminated Erd Eroded Exf Exfoliated Fri Friable	Depth of loss in 1/8" increments: 1 0 to 1/8 inch 2 1/8 to 1/4 inch	Area in sq. ft.
Unsecured		LBP Loose Bedding Plane L Loose R Removed	Not applicable	Area in sq. ft.

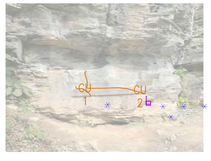
KEY TO SURVEY CODES: TEST LOCATION				
Condition	Symbol	Fault Type	Severity	Amount
Test Location	⊙	Sample Sample Location	Not applicable	Not applicable

PHOTOGRAPHS

GRAVES AND BENCHES - CRACKS AND LOOSE BEDDING PLANES







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Condition Survey
42°18'43"N 74°24'39"W
Prattsville, NY

VA PROJECT NUMBER: 21-2526

2.2

Spreadsheet of Survey Conditions

Summary of Condition Quantities

Block	Condition	Code	Total Locations	Total Quantity/Amount	
Stone_Coating	Coating Failed	CtF	16	128.4	Area in square feet
Stone_Crack	Single Unit	C	17	56.5	Length in linear feet
Stone_Crack	Repair Failed	CRprF	1	1.5	Length in linear feet
Stone_Crack	System Units	CU	15	14.7	Length in linear feet
Stone_Embedment	Ferrous Element	Fe	1	0.0	Count
Stone_Repair	Patch Failed	PF	2	18.0	Size in square inches
Stone_Repair	Patch Sound	P	1	0.0	Size in square inches
Stone_SoilStain	Biological	Bio	11	51.8	Area in square feet
Stone_Spall	Missing	M	19	1179.0	Size in square inches
Stone_SurfLoss	Chipped	Chp	1	0.0	Area in square feet
Stone_SurfLoss	Delamination	Dlm	3	3.8	Area in square feet
Stone_SurfLoss	Exfoliation	Exf	19	14.8	Area in square feet
Stone_SurfLoss	Friable	Fri	1	3.0	Area in square feet
Stone_Unsecured	Loose	L	1	0.0	Area in square feet
Stone_Unsecured	Removed	R	1	1.2	Area in square feet

Key to Condition Survey Codes

Block	Condition	Code	Severity	Amount
Stone_Coating	Coating Failed	CtF	N/A	Area in square feet
Stone_Crack	Single Unit	C	Width in 1/16" increments	Length in linear feet
Stone_Crack	Repair Failed	CRprF	Width in 1/16" increments	Length in linear feet
Stone_Crack	System Units	CU	Width in 1/16" increments	Length in linear feet
Stone_Embedment	Ferrous Element	Fe	N/A	N/A
Stone_Repair	Patch Failed	PF	N/A	Size in square inches
Stone_Repair	Patch Sound	P	N/A	Size in square inches
Stone_SoilStain	Biological	Bio	N/A	Area in square feet
Stone_Spall	Missing	M	Size in square inches	N/A
Stone_SurfLoss	Chipped	Chp	Depth in 1/8" increments	Area in square feet
Stone_SurfLoss	Delamination	Dlm	Depth in 1/8" increments	Area in square feet
Stone_SurfLoss	Exfoliation	Exf	Depth in 1/8" increments	Area in square feet
Stone_SurfLoss	Friable	Fri	Depth in 1/8" increments	Area in square feet
Stone_Unsecured	Loose	L	N/A	Area in square feet
Stone_Unsecured	Removed	R	N/A	Area in square feet

Extracted Survey Conditions

Block Name	Condition	X	Y	Code	Amount	Severity	Note	Photos
Stone_Coating	Coating Failed	0	12	CtF	12.071		failed throughout sculpture	Yes
Stone_Coating	Coating Failed	4	13	CtF	5.171		failing cementitious skim coatings as well as paint	Yes
Stone_Coating	Coating Failed	9	20	CtF	1.669			Yes
Stone_Coating	Coating Failed	12	18	CtF	11.973			Yes
Stone_Coating	Coating Failed	13	23	CtF	5.384			Yes
Stone_Coating	Coating Failed	21	22	CtF	8.102			Yes
Stone_Coating	Coating Failed	22	16	CtF	7.04			Yes
Stone_Coating	Coating Failed	36	14	CtF	25.887			Yes
Stone_Coating	Coating Failed	41	27	CtF	9.034			Yes
Stone_Coating	Coating Failed	44	9	CtF	10.786			Yes
Stone_Coating	Coating Failed	50	8	CtF	15.594			Yes
Stone_Coating	Coating Failed	60	14	CtF	11.257			Yes
Stone_Coating	Coating Failed	138	15	CtF	0.079		at shield	Yes
Stone_Coating	Coating Failed	145	27	CtF	4.255		at text, horse, and dog	Yes
Stone_Coating	Coating Failed	146	20	CtF	0.063		strange black outline not seen at other locations	Yes
Stone_Coating	Coating Failed	169	26	CtF	0.063			Yes
Stone_Crack	Single unit	10	18	C	2.969	4		Yes
Stone_Crack	Single unit	13	23	C	0.317	0		Yes
Stone_Crack	Single unit	15	19	C	0.424	2		Yes
Stone_Crack	Single unit	16	23	C	3.092	3		Yes
Stone_Crack	Single unit	17	17	C	1.282	3		Yes
Stone_Crack	Single unit	19	22	C	10.623	16		Yes
Stone_Crack	Single unit	21	18	C	7.264	16		Yes
Stone_Crack	Single unit	24	17	C	3.455	8		Yes
Stone_Crack	Single unit	32	17	C	3.623	48		Yes
Stone_Crack	Single unit	37	17	C	1.714	2		Yes
Stone_Crack	Single unit	39	24	C	0.593	1		Yes
Stone_Crack	Single unit	39	13	C	1.873	0		Yes
Stone_Crack	Single unit	42	22	C	0.66	1		Yes
Stone_Crack	Single unit	43	26	C	2.403	2		Yes
Stone_Crack	Single unit	50	8	C	6.375	16		Yes
Stone_Crack	Single unit	54	15	C	9.188	16		Yes
Stone_Crack	Single unit	59	15	C	0.653	0		Yes
Stone_Crack	Repair failed	13	20	CRprF	1.479	4		Yes
Stone_Crack	System units	2	11	CU	0.997	2	width range 1\16-greater than 1/8	Yes

Extracted Survey Conditions

Block Name	Condition	X	Y	Code	Amount	Severity	Note	Photos
Stone_Crack	System units	2	12	CU	0.215	2		Yes
Stone_Crack	System units	2	11	CU	0.463	2		Yes
Stone_Crack	System units	3	13	CU	2.534	2		Yes
Stone_Crack	System units	4	11	CU	0.851	2		Yes
Stone_Crack	System units	5	11	CU	1.222	2		Yes
Stone_Crack	System units	137	14	CU	0.56	1		Yes
Stone_Crack	System units	139	14	CU	2.151	2		Yes
Stone_Crack	System units	146	20	CU	0.112	2		Yes
Stone_Crack	System units	146	20	CU	0.08	2		Yes
Stone_Crack	System units	146	20	CU	0.09	2		Yes
Stone_Crack	System units	146	20	CU	0.28	2	variable width up to 1\2"with failing stone	Yes
Stone_Crack	System units	161	26	CU	4.629		variable width, continuous with losses, up to 1"	Yes
Stone_Crack	System units	169	26	CU	0.244	2		Yes
Stone_Crack	System units	169	26	CU	0.305	2		Yes
Stone_Embedment	Ferrous Embedment	19	27	Fe			spike	Yes
Stone_Repair	Patch Sound	1	12	P			aesthetically incompatible	Yes
Stone_Repair	Patch Failed	1	12	PF	6		edge separation and aesthetically incompatible	Yes
Stone_Repair	Patch Failed	47	12	PF	12			Yes
Stone_SoilStain	Biological	1	11	Bio	3.093			Yes
Stone_SoilStain	Biological	2	10	Bio	1.576			Yes
Stone_SoilStain	Biological	4	10	Bio	1.117			Yes
Stone_SoilStain	Biological	6	19	Bio	12.487			Yes
Stone_SoilStain	Biological	19	22	Bio	4.302			Yes
Stone_SoilStain	Biological	21	26	Bio	6.547			Yes
Stone_SoilStain	Biological	137	15	Bio	0.381			Yes
Stone_SoilStain	Biological	138	25	Bio	4.423			Yes
Stone_SoilStain	Biological	146	26	Bio	7.17			Yes
Stone_SoilStain	Biological	168	21	Bio	10.659		througout	Yes
Stone_SoilStain	Biological	169	26	Bio	0.074			Yes
Stone_Spall	Missing	2	11	M		2		Yes
Stone_Spall	Missing	2	12	M		10	uncertain extent of loss	Yes
Stone_Spall	Missing	3	13	M		5		Yes
Stone_Spall	Missing	4	12	M		420	uncertain extent	Yes
Stone_Spall	Missing	5	14	M		8		Yes
Stone_Spall	Missing	16	18	M		500		Yes

Extracted Survey Conditions

Block Name	Condition	X	Y	Code	Amount	Severity	Note	Photos
Stone_Spall	Missing	47	13	M		15		Yes
Stone_Spall	Missing	48	11	M		15		Yes
Stone_Spall	Missing	48	12	M		16		Yes
Stone_Spall	Missing	58	16	M		10		Yes
Stone_Spall	Missing	146	20	M		48	loss from erosion of bedding planes	Yes
Stone_Spall	Missing	146	20	M		3		Yes
Stone_Spall	Missing	146	24	M		12		Yes
Stone_Spall	Missing	147	20	M		-	cubic feet of loss due to eroded bedding planes	Yes
Stone_Spall	Missing	162	26	M		24		Yes
Stone_Spall	Missing	162	25	M		60		Yes
Stone_Spall	Missing	169	26	M		25	uncertain extent of loss	Yes
Stone_Spall	Missing	169	26	M		2		Yes
Stone_Spall	Missing	169	26	M		4		Yes
Stone_SurfLoss	Chipped	138	15	Chp	0	2		Yes
Stone_SurfLoss	Delaminated	23	25	Dlm	3.727			Yes
Stone_SurfLoss	Delaminated	137	14	Dlm	0.012	1		Yes
Stone_SurfLoss	Delaminated	139	14	Dlm	0.012	4	range 1/8-1/4"	Yes
Stone_SurfLoss	Eroded	0	13	Erd	21.782	1	uncertain typical depth of erosion	Yes
Stone_SurfLoss	Eroded	4	13	Erd	10.149	1	uncertain extent	Yes
Stone_SurfLoss	Eroded	21	22	Erd	9.107	0.5		Yes
Stone_SurfLoss	Eroded	58	11	Erd	1.536	1		Yes
Stone_SurfLoss	Eroded	161	26	Erd	0.123	-	uncertain depth, inches	Yes
Stone_SurfLoss	Eroded	168	20	Erd	9.217	-	variable erosion with lager losses	Yes
Stone_SurfLoss	Eroded	169	26	Erd	1	-		Yes
Stone_SurfLoss	Exfoliated	2	12	Exf	0.014	-		Yes
Stone_SurfLoss	Exfoliated	2	13	Exf	0.03	-		Yes
Stone_SurfLoss	Exfoliated	2	14	Exf	0.106	-		Yes
Stone_SurfLoss	Exfoliated	2	11	Exf	0.006	-		Yes
Stone_SurfLoss	Exfoliated	2	12	Exf	0.187	-		Yes
Stone_SurfLoss	Exfoliated	4	13	Exf	5.448	1	throughout	Yes
Stone_SurfLoss	Exfoliated	21	25	Exf	0.78	1	at lettering	Yes
Stone_SurfLoss	Exfoliated	21	17	Exf	0.795	1		Yes
Stone_SurfLoss	Exfoliated	21	24	Exf	0.517	2		Yes
Stone_SurfLoss	Exfoliated	45	11	Exf	0.146	1	finger	Yes
Stone_SurfLoss	Exfoliated	46	11	Exf	2.626	2		Yes

Extracted Survey Conditions

Block Name	Condition	X	Y	Code	Amount	Severity	Note	Photos
Stone_SurfLoss	Exfoliated	46	9	Exf	0.451	2		Yes
Stone_SurfLoss	Exfoliated	47	11	Exf	0.254	4		Yes
Stone_SurfLoss	Exfoliated	56	15	Exf	0.119	1		Yes
Stone_SurfLoss	Exfoliated	57	13	Exf	0.217	2		Yes
Stone_SurfLoss	Exfoliated	60	14	Exf	0.144	3		Yes
Stone_SurfLoss	Exfoliated	138	15	Exf	0.005	1	variable 1\8-1\4" depth	Yes
Stone_SurfLoss	Exfoliated	138	14	Exf	2.9	1	range 1\16-1.5" losses	Yes
Stone_SurfLoss	Exfoliated	146	20	Exf	0.066	-	1/8-1.5";detail of surface carving mostly eroded	Yes
Stone_SurfLoss	Friable	12	21	Fri	2.972	8		Yes
Stone_Unsecured	Loose	139	14	L	0.015			Yes
Stone_Unsecured	LooseBeddingPlane	15	35	LBP	10.645		Loose pieces close to edge	Yes
Stone_Unsecured	LooseBeddingPlane	19	15	LBP	2.699			Yes
Stone_Unsecured	LooseBeddingPlane	23	22	LBP	4.792			Yes
Stone_Unsecured	LooseBeddingPlane	24	28	LBP	13.117			Yes
Stone_Unsecured	LooseBeddingPlane	27	23	LBP	14.765			Yes
Stone_Unsecured	LooseBeddingPlane	48	13	LBP	11.721			Yes
Stone_Unsecured	LooseBeddingPlane	168	20	LBP	9.687		throughout- loose or severely eroded	Yes
Stone_Unsecured	Removed	16	24	R	1.152		Pushed rock further backfrom edge 100 sq inches	Yes

TPAS® User's Manual

Guide to TPAS Annotated Drawings

Tablet PC Annotation System (TPAS®)

Updated August 2020

Quick Start

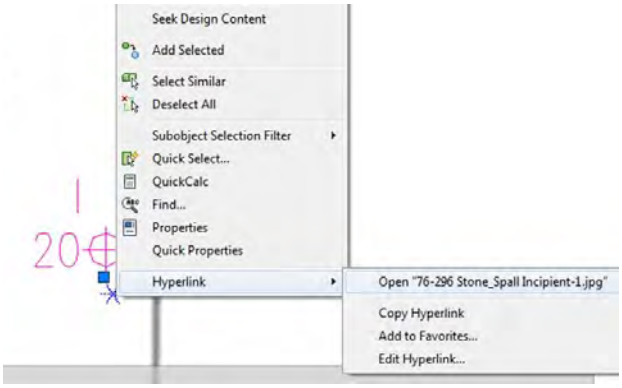
The Tablet PC Annotation System (TPAS®) allows direct input of both visual and numerical survey data into an AutoCAD drawing during investigations of buildings and other structures. The annotated drawings are delivered in three formats: paper drawings, PDF files, and AutoCAD DWG files. Survey photographs are delivered in both hard copy and digital format. **The most efficient way to view the survey photographs is to open them directly from the AutoCAD drawing**; if AutoCAD is not available, it is also possible to reference printed or digital photographs from the printed or PDF drawing. Both methods are discussed below.

Open digital photographs using the AutoCAD hyperlinks

Survey photographs can be opened and viewed from within the AutoCAD drawing using the hyperlinks, which appear as blue asterisks. Not all observations are photographed. Before using the hyperlinks for the first time (and each time the digital files are transferred to a new computer or the file folders are renamed) **you must edit the HYPERLINKBASE setting in order for AutoCAD to be able to locate the hyperlinked photographs.**

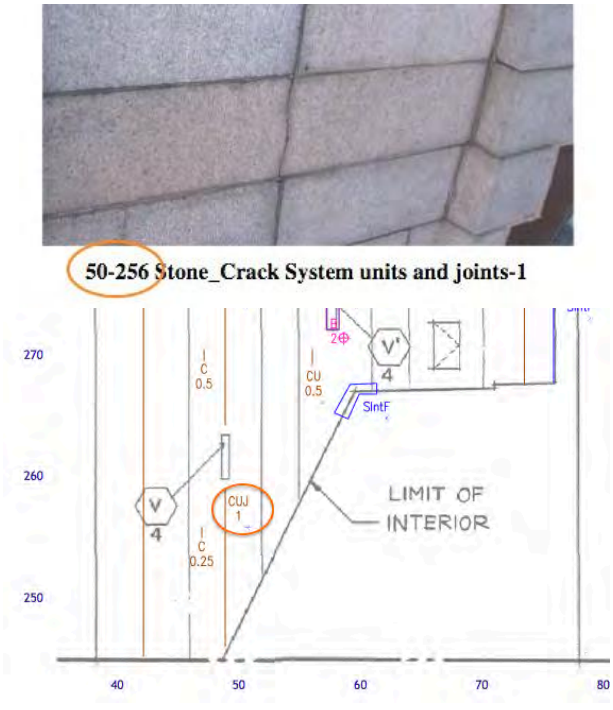
1. Make sure that all of the hyperlinked photos are in a single folder in the computer.
2. Type HYPERLINKBASE at the AutoCAD command line, and hit enter.
3. Open the folder containing the hyperlinked photos and copy the folder's file path from the Windows "Address Bar."
4. Paste the folder's file path into the command line, and hit enter.

In recent versions of AutoCAD, CTRL + click on the hyperlink to open the photograph. In older versions, select the link, then right-click anywhere in the drawing. Choose *Hyperlink* at the bottom of the drop-down menu, then choose *Open "filename.jpg."*



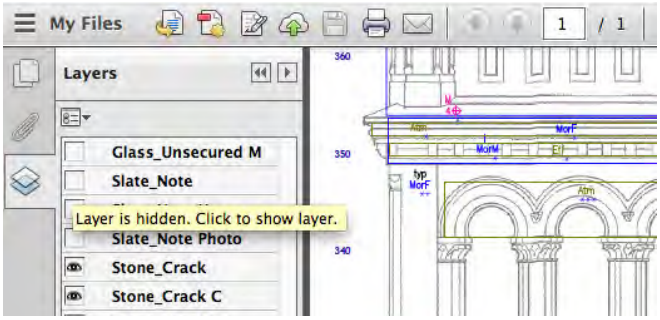
Use x-y coordinates to match photographs to condition locations

Each survey photograph is named with a unique X-Y coordinate (not necessarily the beginning of the photo name) corresponding to its location on the drawing. Photo locations are referenced by their X-Y coordinates within the report narrative. If AutoCAD is not available, use the X-Y coordinates to match annotated conditions on the drawings to the corresponding printed photographs.



Manage layers in the PDF drawing for selective viewing and printing

All of the TPAS annotations are grouped together on layers named for each material and condition, and these layers can be turned on and off for ease of viewing. Open the PDF drawing in Adobe Reader to access the layer management panel. Print additional copies of the drawing showing only the selected layers, if desired. The PDF drawings may be printed full-size (typically 24” x 36”) or reduced.



View AutoCAD drawings with raster background images

Raster images - taken from PDFs, JPEGs, or other file formats - are sometimes used as background references for TPAS drawings in AutoCAD. In order for the background to appear in the AutoCAD drawing, the referenced file must be stored in the same folder as the AutoCAD drawing. The referenced file is included on the deliverables DVD.

Open hyperlinks in the PDF drawing to view associated photographs

Survey photographs can be opened and viewed from within the PDF drawing using the hyperlinks, which appear as blue asterisks. Not all observations are photographed. Before using the hyperlinks for the first time (and each time digital files are transferred to a new computer or the file folders are renamed) you must download Adobe Acrobat Reader DC and maintain the file directory structure.

1. Download Adobe Acrobat Reader (free download) and follow the prompts to install.
2. Download the Photographs folder associated with the drawings you wish to view in its entirety.
3. Drag the drawing PDF into the Photographs folder and open the drawing PDF with Adobe Acrobat Reader DC.
4. Click on the asterisk (*) symbol below the condition you wish to view.
5. In the popup window select “Allow” then “Okay” and the photograph will open.

AutoCAD Features

This section addresses more advanced digital analysis of the TPAS survey data, for users familiar with basic AutoCAD features including model and paper space, layers, and blocks.

Print AutoCAD drawings

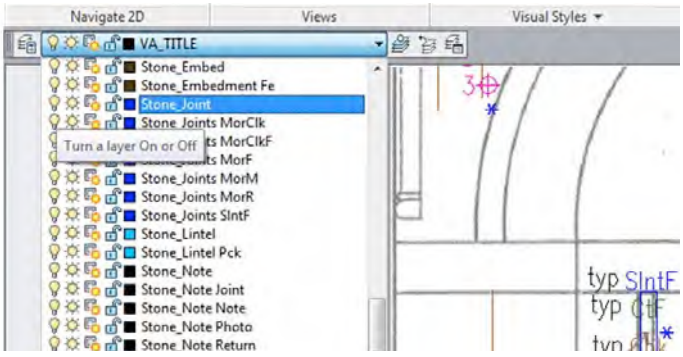
As-delivered printed drawings can be reproduced from the AutoCAD DWG file. All TPAS annotations are created in model space with a 9” text height, in order to plot at 3/32” in a 1/8” = 1’ drawing view.

TPAS drawings are plotted, or printed, from paper space layouts. Title block information and drawing keys are present directly in paper space—no external references are used. The x-y coordinates shown on the paper drawings are model space data visible through veiwports.

Manage layers in AutoCAD

All of the TPAS annotations are grouped together on layers named for each material and condition, and these layers can be turned on and off for ease of viewing. Photo hyperlinks are on the same layer as the condition with which they are associated.

Use the AutoCAD Layer Manager to turn layers on and off, and to freeze and thaw layers: use the LAYER command, choose Layer from the Format menu, or click the layer button on the Object Properties Toolbar.



In paper space, the “Current VP Freeze” option becomes available in the Layer Manager. This allows each viewport to have its own freeze/thaw layer settings, allowing the user to present multiple combinations of layers on a single print layout.

To freeze or thaw layers in a paper space viewport:

1. Select the viewport.
2. Set the viewport to Model by clicking the Model/Paper button at the bottom of the AutoCAD window (or by double clicking anywhere within the viewport boundaries).
3. Open the Layer Manager.
4. Use the “Current VP Freeze” column to freeze or thaw layers within the current viewport.

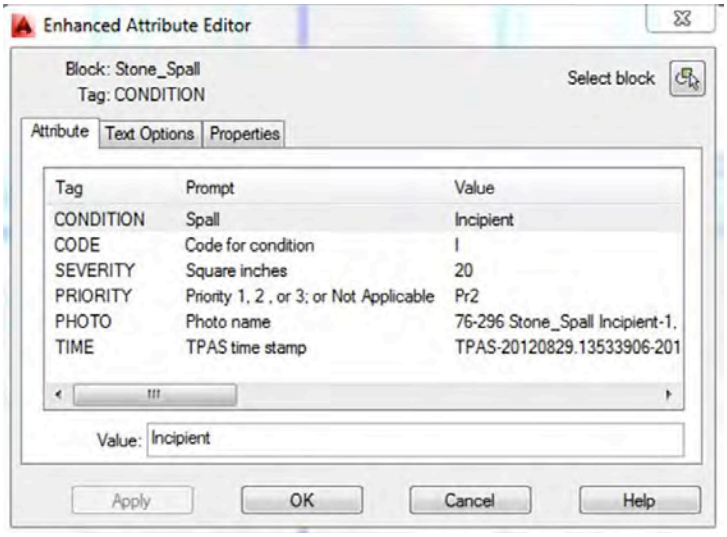
View and edit conditions data recorded in block attributes

All TPAS annotations consist of *blocks* - pre-drawn and reusable graphical symbols that represent distinct material conditions. *Block attributes* are text labels that add descriptive information to a block. During the investigation, quantitative data about survey conditions (e.g. crack widths or areas of soiling) are entered as block attributes.

Standard TPAS blocks contain seven attributes: Condition, Code, Severity, Amount, Priority, Photo, and Time. All blocks contain the Condition, Code, Photo, and Time attributes; all others are optional. In cases of observations that are not photographed, the Photo attribute will be blank.

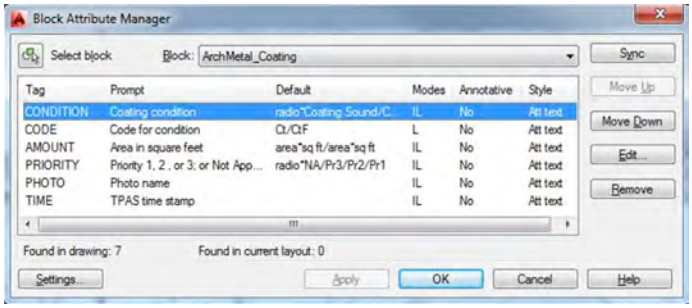
It is possible to add custom attributes to standard blocks, or to create entire custom blocks. For clarity, typically only the Code and Severity attributes are visible in the drawing; all others are set in Invisible Mode and do not print or appear in model or paper space.

To view and/or edit a block's attributes, open the Enhanced Attribute Editor command by double-clicking on a block reference containing attributes (or from the command line –EATTEDIT, from the Ribbon: Home tab>Block Panel>Edit Attributes, from the menubar: Modify>Object>Attribute> Single, or from the Modify II toolbar). The



Enhanced Attribute Editor can only access and edit an individual block reference and therefore will not affect block definitions. Attributes in Invisible Mode do appear in the editor, and are available for editing.

Global changes to blocks with attributes are made with the Block Editor, which accesses and edits block definitions. Launch the Block Editor from the command line—BEDIT, from the Ribbon: Home tab>Block panel>Block Editor, from the menubar: Tools>Block Editor or from the Modify II toolbar.



The Block Editor is not available in AutoCAD 2000/2002 or 2004. In those versions, use the Block Attribute Manager, which is launched from the command line—BATTMAN, the Modify menu: Modify>Object>Attribute>Block Attribute Manager or the Modify II toolbar.

Both methods are available in recent releases of AutoCAD. For in depth guidance, refer to the AutoCAD Help documentation.

Extract survey data from block attributes

Survey data in the form of block attributes can be exported to a spreadsheet or database application, in several file formats depending on the version of AutoCAD in which the extraction is performed.

For the purposes of survey annotations, the information extracted includes block names, X-Y insertion coordinates, and block attribute values. Use the commands ATTOUT (most efficient method,) DATAEXTRACTION or ATTEXT to extract block attribute values and other information.

The process of extracting data varies substantially among various AutoCAD releases. Refer to the AutoCAD Help documentation for specific capabilities and procedures.

Key to TPAS Codes
Tablet PC Annotation System®

Vertical Access LLC
PO Box 4135, Ithaca, NY 14852
Tel: 607 257 4049 / Fax: 607 257 2129

TPAS®, the Tablet PC Annotation System, utilizes a combination of graphical and text symbols to represent conditions. Each annotation includes a block, which is a pre-defined group of text and symbols containing data fields. The library of condition blocks for each building material includes one color-coded block for each general class of conditions. Within each class of conditions, there may be several sub-classes or specific conditions. Not all sub-classes apply to all materials. See Vertical Access' Conditions Glossary (http://www.vertical-access.com/glossary.html) for definitions of terminology and photographs illustrating each specific condition.

The classes and subclasses of conditions represented in the standard TPAS block libraries are shown in the table below.

Class of Condition	Subclass	Code	Materials
Biological Growth	Fungi	Fng	Wood
	Lower Plants	PlntLo	Wood
	Higher Plants	PlntHi	Wood
Coating	Coating Sound	Ct	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Coating Failed	CtF	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
Connection	Fastener Failed	FstF	Metals
	Flange Failed	FlF	Metals
	Weld Failed	WldF	Metals
Corrosion	Fastener Rusted	FstRst	Metals

Class of Condition	Subclass	Code	Materials
	Surface Corrosion	Srf	Metals
	Pitted Corrosion	Pit	Metals
	Perforated Corrosion	Prf	Metals
Crack/Checked	Crack	C	Metals, Glass, Plaster, Stucco, Wood
	Checked	Chk	Wood
	Crazing	Crz	Masonry
	Single Unit	C	Masonry
	System Units	CU	Masonry
	System Joints	CJ	Masonry
	System Units & Joints	CUJ	Masonry
	Repair Sound	CRpr	Plaster, Stucco, Masonry
	Repair Failed	CRprF	Plaster, Stucco, Masonry
	Repair Removed	CRprR	Plaster, Stucco, Masonry
Damaged	Bent	Bnt	Metals
	Dented	Dnt	Metals
	Punctured	Pnc	Membrane Roof, Metals
	Torn	Trn	Membrane Roof, Metals
Damage/Infestation	Insect	Ins	Wood
	Mammal	Mam	Wood
Debonded	Debonded	Dbnd	Membrane Roof
	Debonded + Water	DbndW	Membrane Roof
	Blister	Bls	Membrane Roof
Deteriorated	Abraded	Abr	Wood
	Crack	C	Membrane Roof

Class of Condition	Subclass	Code	Materials
	Crazing	Crz	Membrane Roof
	Rotten	Rot	Wood
	Weathered	Wthr	Wood
Displacement	Horizontal	Hor	Masonry
	Vertical	Ver	Masonry
	Horizontal & Vertical	HV	Masonry
	Bulge	Blg	Glass
Embedment	Ferrous	Fe	Stucco, Masonry
	Aluminum	Al	Stucco, Masonry
	Copper	Cu	Stucco, Masonry
	Wood	Wood	Stucco, Masonry
	Plastic	Pls	Stucco, Masonry
	Other	Otr	Stucco, Masonry
Lath	Lath Failed	LthF	Plaster, Stucco
Lintels Rusted	Surface Rust	Srf	Masonry
	Pack Rust	Pck	Masonry
Seams and Joints	Mortar Caulked	MorClk	Masonry
	Mortar Caulked Failed	MorClkF	Masonry
	Mortar Failed	MorF	Masonry
	Mortar Missing	MorM	Masonry
	Mortar Removed	MorR	Masonry
	Sealant Failed	SlntF	Glass, Plaster, Stucco, Masonry, Metals, Wood
	Ornament Joint Failed	OrnJtF	Plaster
	Panel Joint Failed	PnlJtF	Plaster

Class of Condition	Subclass	Code	Materials
	Putty Failed	PtyF	Glass
	Gasket Failed	GskF	Glass
	Insulated Glazing Unit Failed	IGUF	Glass
	Fastener Failed	FstF	Membrane Roof, Metals
	Folded Seam Failed	FldF	Metals
	Seam Failed	SmF	Membrane Roof
	Solder Failed	SldF	Metals
Previous Repairs	Dutchman Sound	D	Masonry, Wood
	Dutchman Failed	DF	Masonry, Wood
	Dutchman Removed	DR	Masonry, Wood
	Patch Sound	P	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Patch Failed	PF	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Patch Removed	PR	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Replacement	Rpl	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Consolidation Sound	Con	Plaster, Stucco
	Consolidation Failed	ConF	Plaster, Stucco
	Stabilization Sound	Stb	Plaster, Stucco
	Stabilization Failed	StbF	Plaster, Stucco
Soiled or Stained	Atmospheric	Atm	Plaster, Stucco, Masonry, Membrane Roof
	Biological	Bio	Plaster, Stucco, Masonry
	Bituminous	Bit	Plaster, Stucco, Masonry, Membrane Roof, Wood

Class of Condition	Subclass	Code	Materials
	Black Crusts	Blck	Masonry
	Cementitious	Cem	Stucco, Masonry, Membrane Roof, Wood
	Copper	Cpr	Plaster, Stucco, Masonry, Membrane Roof
	Efflorescence	Eff	Stucco, Masonry
	Guano	Gua	Plaster, Stucco, Masonry, Membrane Roof, Wood
	Leached Salts	Lch	Stucco, Masonry
	Paint	Pnt	Plaster, Stucco, Masonry, Membrane Roof, Wood
	Rust	Rst	Plaster, Stucco, Masonry, Membrane Roof, Wood
Spalls	Bonded	B	Masonry
	Incipient	I	Masonry
	Missing	M	Masonry
	Missing + Steel	MS	Masonry
	Removed	R	Masonry
	Removed + Steel	RS	Masonry
	Hazardous	Haz	Masonry
Surface Loss	Chipped	Chp	Masonry
	Delaminated	Dlm	Masonry
	Eroded	Erd	Masonry
	Exfoliated	Exf	Masonry
	Friable	Fri	Masonry
	Glaze Loss	Glz	Masonry
Unsecured	Fastener Failed	FstF	Wood
	Hazardous	Haz	Glass, Plaster, Stucco, Metals, Masonry, Wood

Class of Condition	Subclass	Code	Materials
	Hollow	H	Plaster, Stucco, Masonry
	Loose	L	Glass, Plaster, Stucco, Metals, Masonry, Wood
	Missing	M	Glass, Plaster, Stucco, Metals, Masonry, Wood
	Removed	R	Glass, Plaster, Stucco, Metals, Masonry, Wood
Water Damage	Water Damage	WDmg	Plaster
Water Stain	Water Stain	WStn	Plaster

Appendix D: ICR Coatings Analysis

PRATT ROCK PARK

Coatings Analysis

INTRODUCTION

Integrated Conservation Resources, Inc. (ICR) and Vertical Access (VA) gathered existing coating samples during survey work at Pratt Rock on 8/28/21 and 11/22/21. Samples were removed by hand and/or using small hand tools from various sculptural locations to analyze in ICR's conservation laboratory. Samples were carefully removed from the mane of the "Horse" (Sample 1), the trunk, underside, and top of the "Hemlock Tree" (Samples 2-4 respectively), the hemlock tree detail of "Bench C" (Sample 5), the "Portrait Bust of George W. Pratt" (Sample 6), the "Medallion with Raised Hand" (Sample 7) and the "Plaque to George and Julia Pratt" (Sample 8). See Figures 1-7 for images of sample locations.

The objective of the coatings analysis is to better understand the painted conditions of the sculptural features and determine if early coatings can be identified. Samples were set in resin, cut in cross-section, and photographed under a stereo binocular microscope (see Figures 8-15 for microscopic images of each sample). Samples were individually analyzed and compared to each other to help associate various coating campaigns across elements. Findings from these analyses can help inform repair and design decisions regarding potential coating removal and application of new coatings.

Note, analysis of existing finishes can be impaired by numerous factors, including, but not limited to, UV discoloration, soiling, material degradation, and substrate deterioration. The finishes at Pratt Rock were highly deteriorated, yielding several inconclusive results.

FINDINGS

ICR found relatively few extant coating layers at the various sculptural features, which is in line with the restricted access at the site, undoubtedly limiting the number of campaigns to reapply coatings. While several samples yielded inconclusive results due to severe coating degradation (Samples 4-5 & 8) or were more of a cementitious skim patch repair than proper coatings (Samples 3 & 7), several samples exhibited consistent coating stratigraphies.

Analysis of the remaining samples shows that the earliest extant layer appears to be an off-white coating (Munsell Color® "White" N 9.5/), followed by a metallic gray coating, and the last white presentation layer. The most comprehensive stratigraphy observed was obtained from Sample 1, the mane of the "Horse" sculpture. This sample shows an additional off-white layer in between the earliest coating and the metallic gray coating, with a soiling layer separating it from the previous layer. While this additional coating was not observed in the remaining samples, it is possible that the additional campaign was applied at the sculptures more easily accessed from the ground, or was selectively applied as needed, or had weathered away from the more exposed sculptures elsewhere.

While archival and laboratory analyses cannot conclude whether the earliest extant coatings are original to the initial 1800s appearance of the sculptures, they are likely from an early time period and can be

considered historic. ICR observed what may be red, and occasionally blue, pigment particles within the earliest stratigraphy layer. This could indicate a historically early coating made with dry powder pigments, however further analysis would be required to confirm this finding. ICR also spot tested isolated samples of the earliest layers with hydrochloric acid, which produced an effervescent reaction, potentially indicating a lime or calcium carbonate component. This finding may also indicate a historically early coating.

The later metallic gray coating could likely be an aluminum paint coating, potentially applied as a protective layer. This may have unintentionally trapped water beneath the surface and accelerated the deterioration of the stone in certain locations (see Figure 16 for an image of the metallic gray layer isolated in a hand sample). It seems unlikely that the metallic gray coating would have been left exposed as a presentation layer, and no soiling was detected between it and the subsequent final white coating. As such, the two were likely applied in the same coating campaign, the gray coating used as a protective primer followed by the white presentation layer.

RECOMMENDATIONS

The extant coatings at the sculptural features of Pratt Rock may be concealing and/or exacerbating stone conditions at these significant details. ICR recommends that a testing program is performed to assess the feasibility of coating removal without causing further damage or deterioration to the stone. Since it cannot be confirmed whether the coatings were original to the initial 1800s appearance of the sculptures, it should be discussed with the Project Team, whether or not the forthcoming conservation scope of work should include a new white coating application in keeping with the overall historic appearance, and which is compatible with the stone substrate.

FIGURES

Figure 1: "Horse" Sculpture, Coating Sample 1 Location
Coating sample was obtained by ICR on 11/22/21 from the horse's mane.

Figure 2: "Hemlock Tree" Sculpture, Coating Sample 2-3 Locations
Coating samples 2-3 were obtained by ICR on 8/28/21 at the tree trunk and underside of the branches respectively.

Figure 3: "Hemlock Tree" Sculpture, Coating Sample 4 Location
Coating sample was obtained by ICR on 11/22/21 from the top of the hemlock tree.

Figure 4: "Bench C" Sculpture, Coating Sample 5 Location
Coating sample was obtained by ICR on 11/22/21 from the hemlock tree detail of the bench.

Figure 5: "Portrait Bust of George W. Pratt," Coating Sample 6 Location
Coating sample was obtained by VA on 11/22/21.

Figure 6: "Medallion with Raised Hand," Coating Sample 7 Location
Coating sample was obtained by VA on 11/22/21 from the right side of the sculpture.

Figure 7: "Plaque to George and Julia Pratt," Coating Sample 8 Location
Coating sample was obtained by VA on 11/22/21 from the left side of the sculpture.

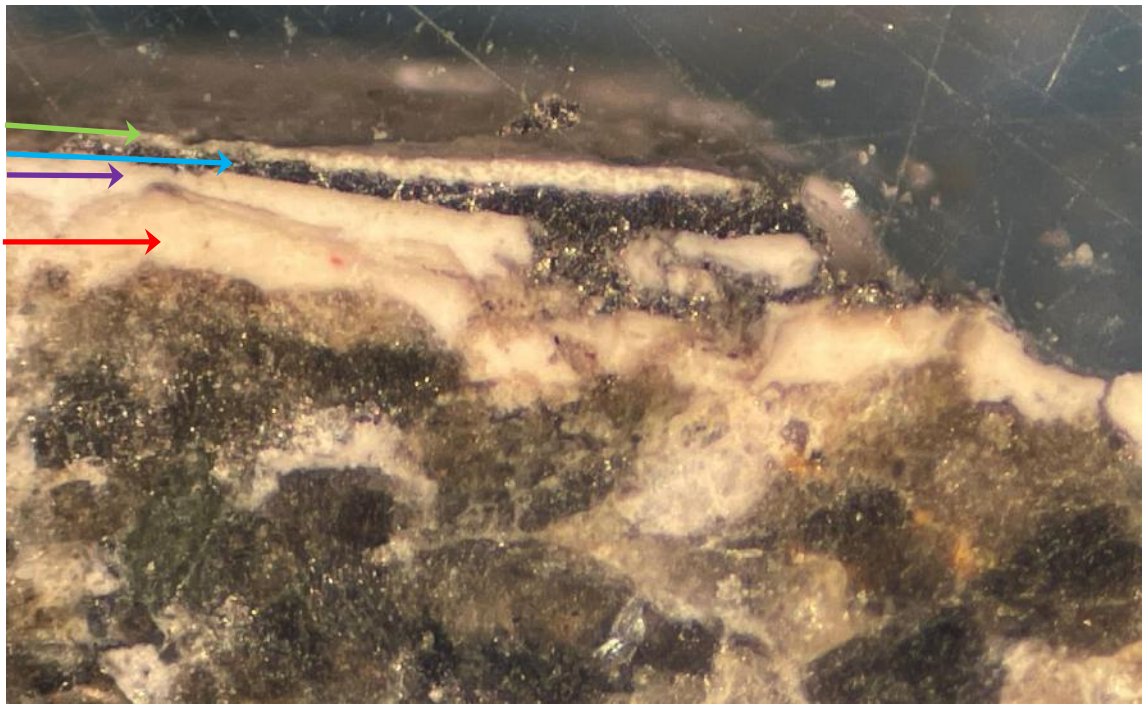


Figure 8: "Horse" Sculpture, Microscopic Image of Coating Sample 1 in Cross Section
Earliest off-white coating indicated in red, a subsequent off-white coating indicated in purple, a gray metallic coating indicated in blue, and the final white presentation layer indicated in green.

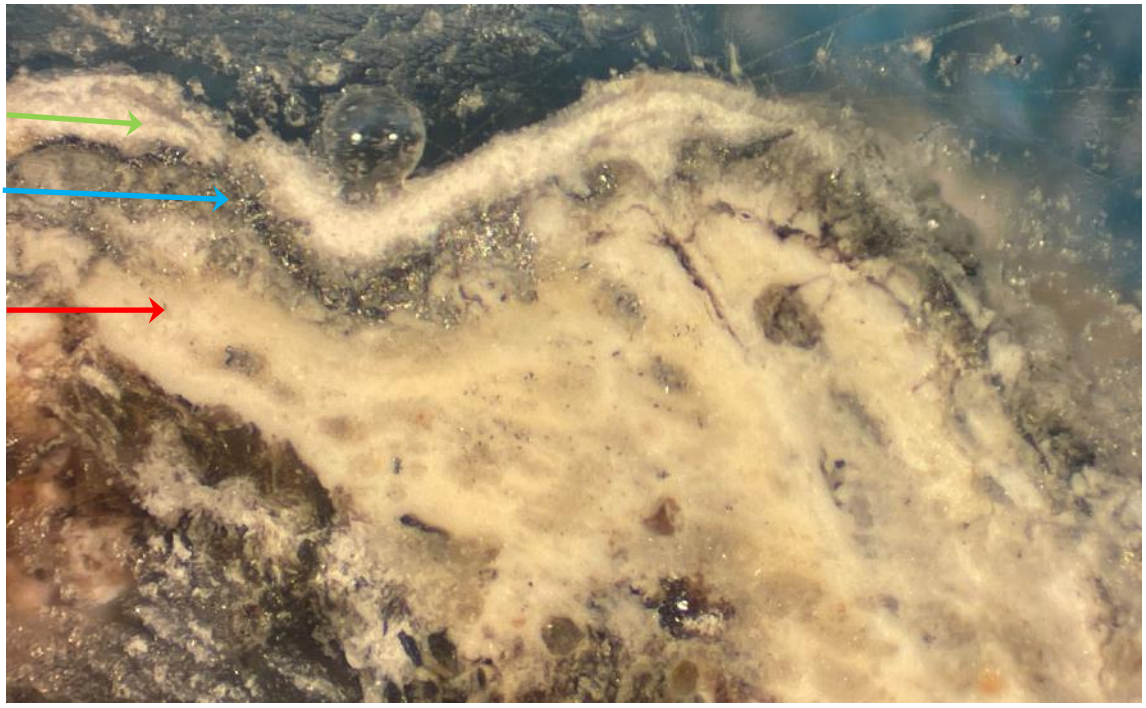


Figure 9: "Hemlock Tree," Trunk Location, Microscopic Image of Coating Sample 2 in Cross Section
Earliest off-white coating indicated in red, a gray metallic coating indicated in blue, and the final white presentation layer indicated in green.

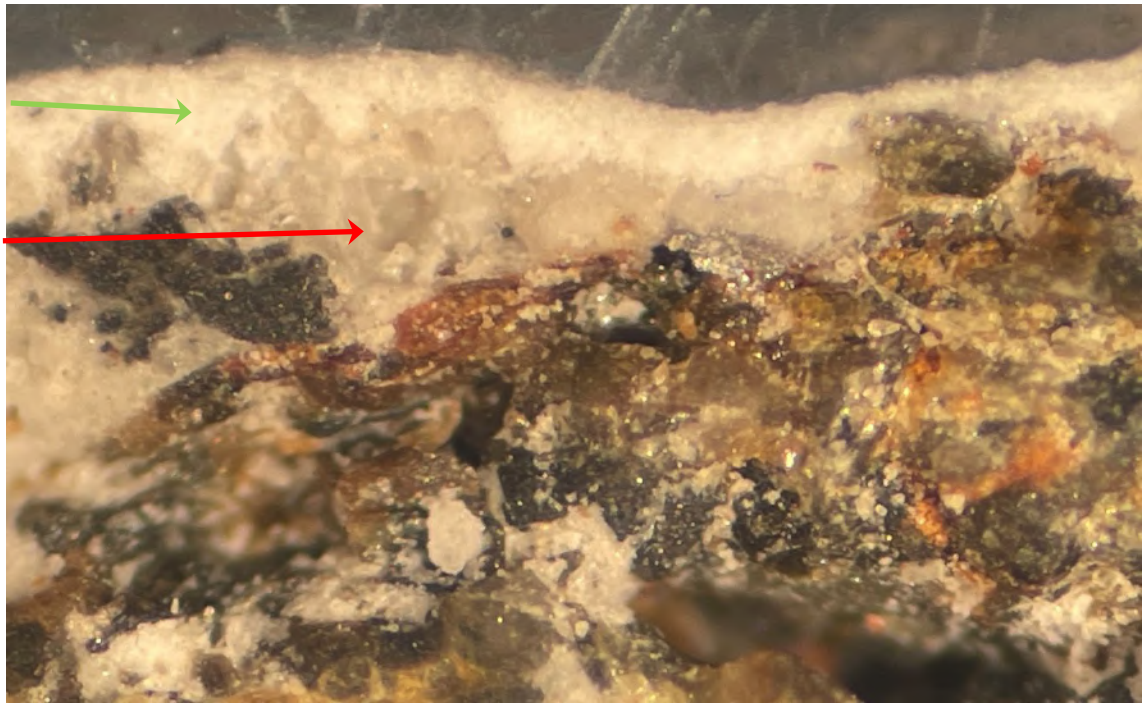


Figure 10: "Hemlock Tree," Underside of Tree Location, Microscopic Image of Coating Sample 3 in Cross Section
Earliest extant layer appears to be a white cementitious skim coating (indicated in red), followed by a thin white layer (indicated in green), possibly a thin paint or laitance from the skim coating.

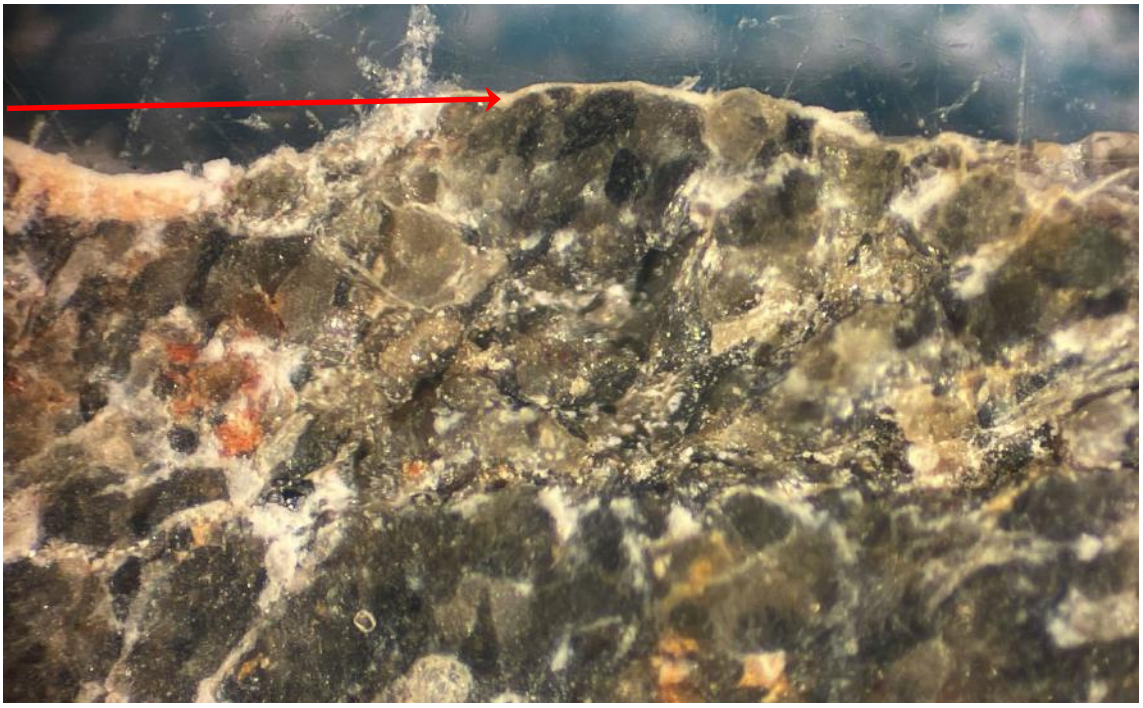


Figure 11: "Hemlock Tree," Top of Tree Location, Microscopic Image of Coating Sample 4 in Cross Section
Minimal extant coatings observed with just a single white layer indicated in red. Sample was not very informative with incomplete stratigraphy.

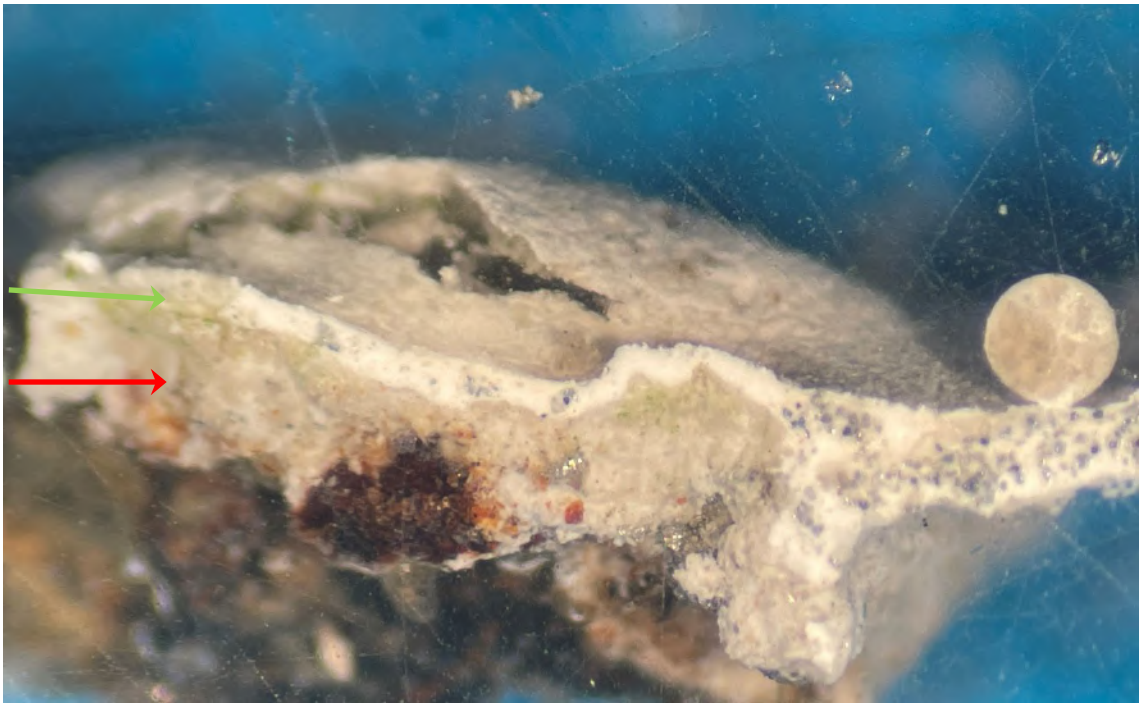


Figure 12: "Bench C" Hemlock Sculpture, Microscopic Image of Coating Sample 5 in Cross Section
Earliest off-white coating indicated in red, and the final white presentation layer indicated in green. There appear to be mobilized gray particles similar to the metallic gray layer observed in other samples, rendering inconclusive results.

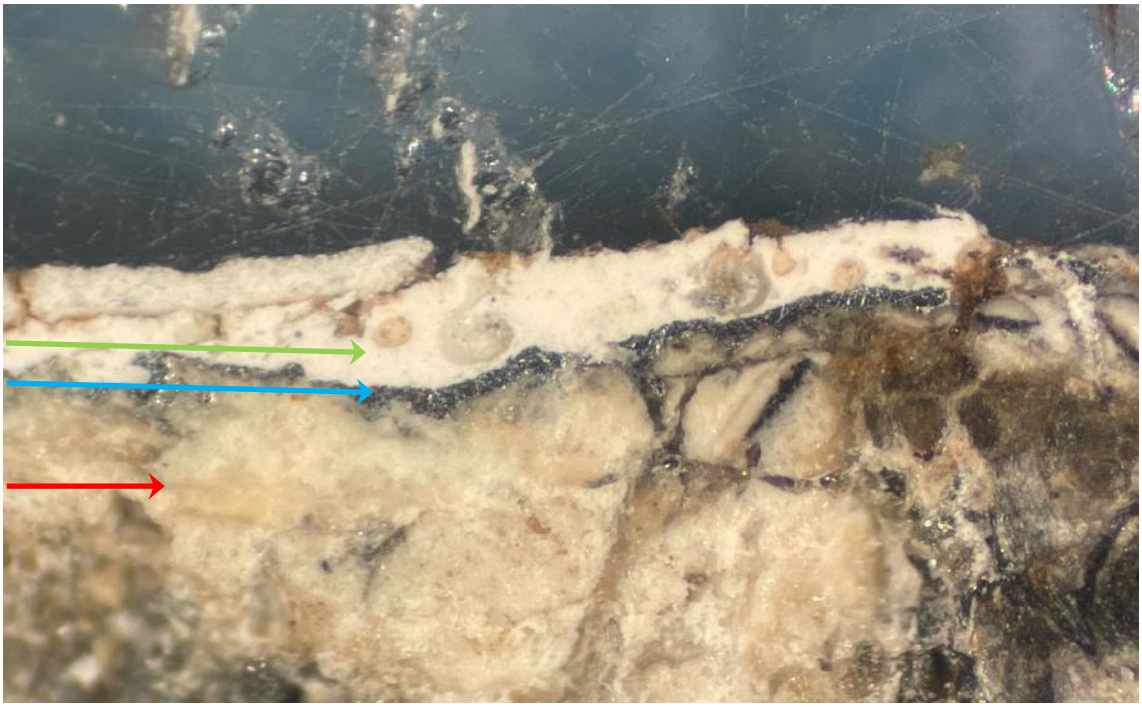


Figure 13: "Portrait Bust of George W. Pratt," Microscopic Image of Coating Sample 6 in Cross Section
Earliest off-white coating indicated in red, a gray metallic coating indicated in blue, and the final white presentation layer indicated in green.

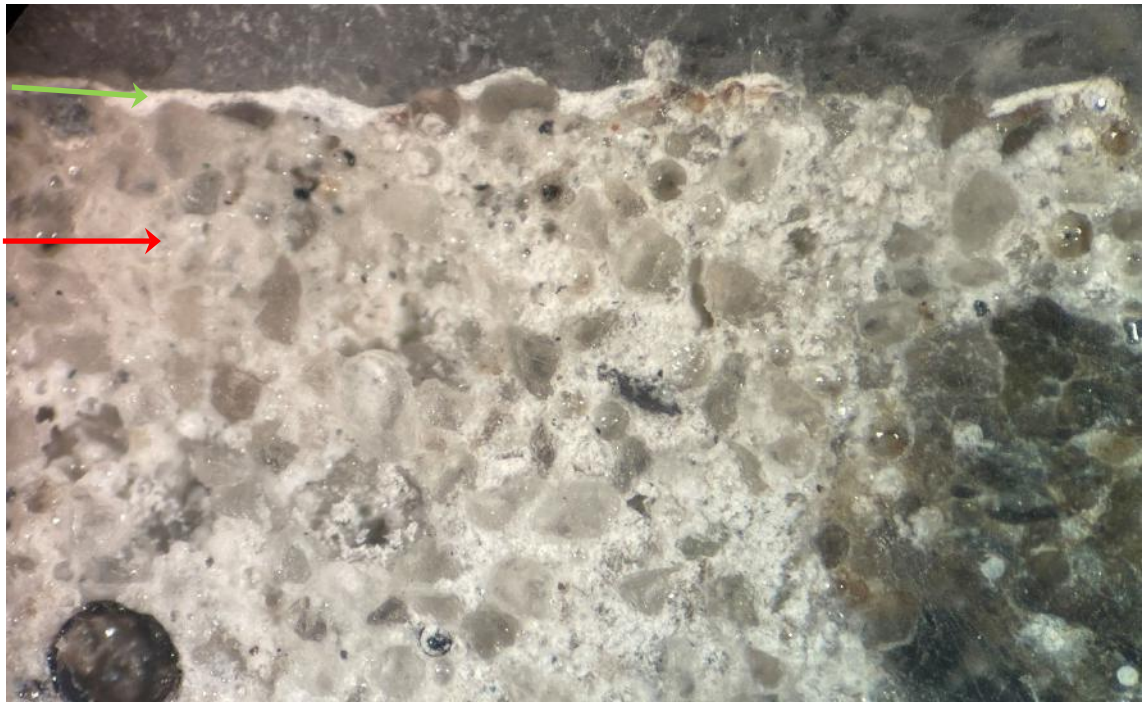


Figure 14: "Medallion with Raised Hand," Microscopic Image of Coating Sample 7 in Cross Section
Earliest extant layer appears to be a white cementitious skim coating (indicated in red), followed by a thin white layer (indicated in green), possibly a thin paint or laitance from the skim coating.

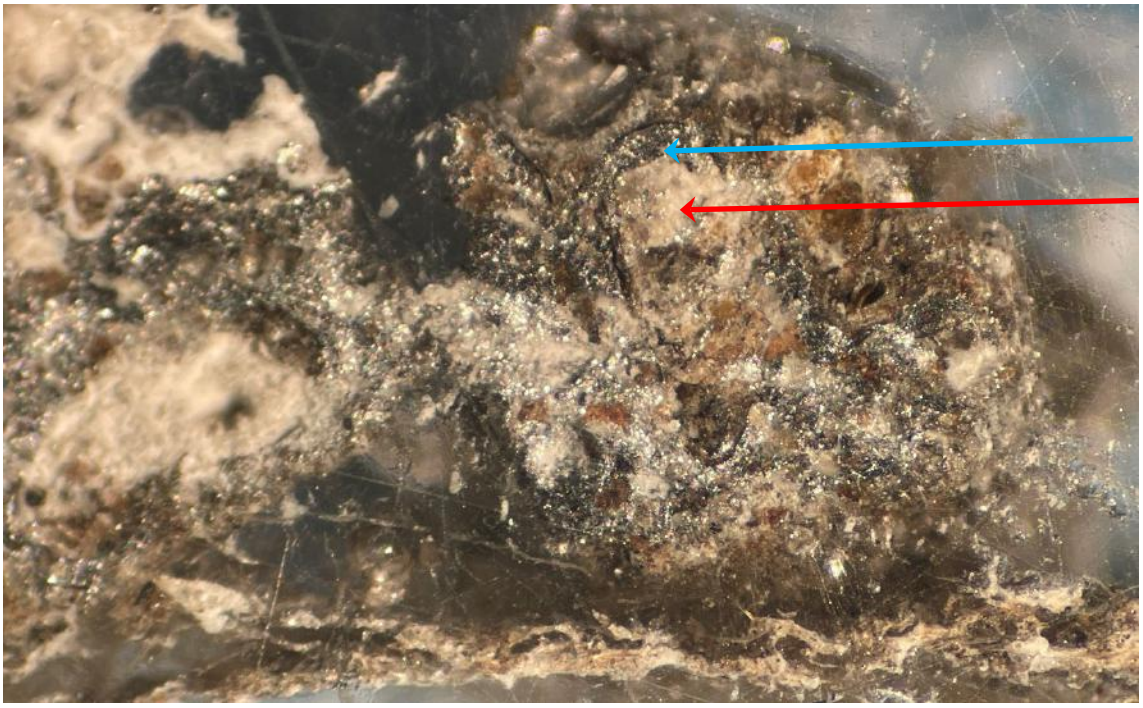


Figure 15: "Plaque to George and Julia Pratt," Microscopic Image of Coating Sample 8 in Cross Section
Sample stratigraphy was irregular and could not be analyzed chronologically. Off-white coatings (red) and metallic gray coatings (blue) similar to layers in other samples were observed, but the findings are inconclusive.

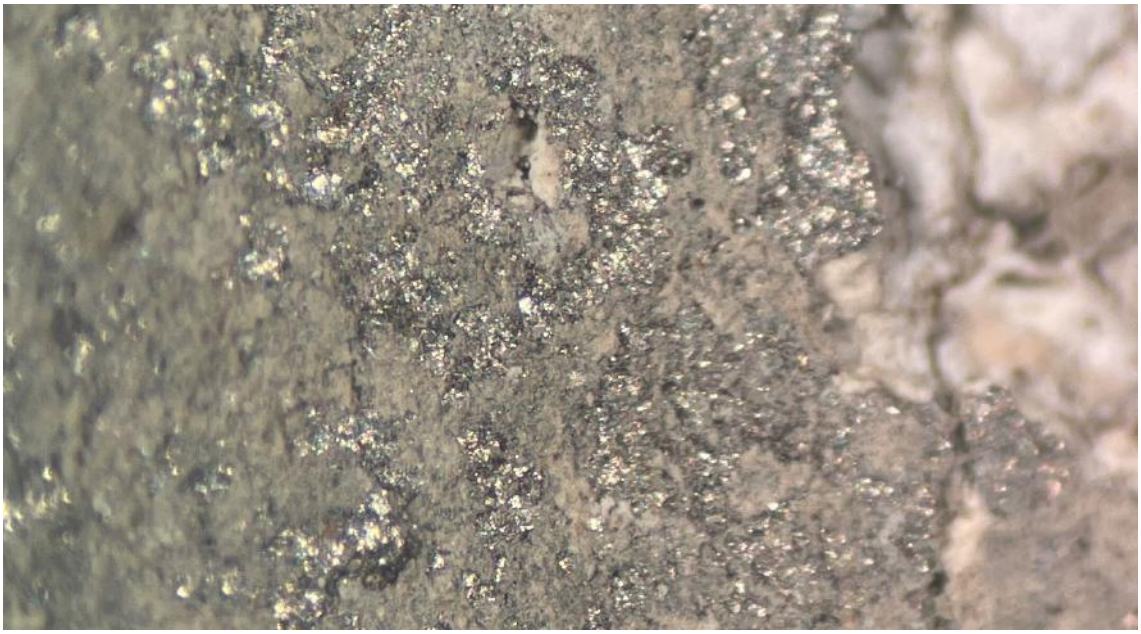


Figure 16: "Horse" Sculpture, Microscopic Image of Hand Sample of Coating Sample 1
Metallic gray layer exposed in hand sample, which could potentially be an aluminum paint, used as a protective layer beneath the final white presentation layer.

STRATIGRAPHY DATA

Sample No.	1	2	3	4
Sample Location	"Horse" - top portion of mane	"Hemlock Tree" - trunk of tree	"Hemlock Tree" - underside of hemlock branches	"Hemlock Tree" - top of tree
Date Sampled	11/22/21 - ICR	8/28/2021 - ICR	8/28/2021 - ICR	11/22/21 - ICR

Mounted?	Yes	Yes	Yes	Yes
Analysis Completed By	KS	KS	KS	KS

Substrate	Stone	Stone	Stone	Stone

Stratigraphy	off-white	off-white	white (cementitious)	off-white to white
(Starting from the first layer over the substrate)	soiling layer	metallic gray	white (thin)	
	off-white	white		
	metallic gray			
	white			
Notes	First coating layer may have visible red pigment particles. Further research required for confirmation. Metallic gray layer may be an aluminum paint.	First coating layer may have visible red pigment particles. Further research required for confirmation. Metallic gray layer may be an aluminum paint.	Sample location may have been a skim coated patch area, with a very thin white coating or patch material laitence on the surface.	Poor sample with few stratigraphy layers captured.

Sample No.	5	6	7	8
Sample Location	"Bench C" - hemlock tree	"Portrait Bust of George W. Pratt"	"Medallion with Raised Hand"	"Plaque to George and Julia Pratt"
Date Sampled	11/22/21 - ICR	11/22/21 - Vertical Access	11/22/21 - Vertical Access	11/22/21 - Vertical Access

Mounted?	Yes	Yes	Yes	Yes
Analysis Completed By	KS	KS	KS	KS

Substrate	Stone	Stone	Stone	Stone

Stratigraphy	off-white	off-white	white (cementitious)	off-white
(Starting from the first layer over the substrate)	soiling layer	metallic gray	white (thin)	metallic gray
	white	white		
Notes	Poor sample. Islands of metallic gray observed, but stratigraphy was not intact.	First coating layer may have visible red and blue pigment particles. Further research required for confirmation. Metallic gray layer may be an aluminum paint.	Sample location may have been a skim coated patch area, with a very thin white coating or patch material laitence on the surface.	Poor sample with unclear stratigraphy due to inconsistent/friable layers. Fibrous layer noted beneath first coating layer, which could be biological.

Appendix E: Preliminary Cost Estimating

PRATT ROCK PARK

Preliminary Cost Estimating

INTRODUCTION

The following contains preliminary cost estimates for potential conservation work associated with the forthcoming restoration of Pratt Rock Park. This information has been compiled by Integrated Conservation Resources, Inc. (ICR) based on our cursory observations from the Phase 1 Scope of Work, Initial Needs Assessment. The intent of this cost estimating exercise is to assist the Town of Prattsville in determining approximate fund-raising goals associated with selected scopes of work. The cost estimates below are divided into two sections:

- Testing Program Implementation
- Conservation Treatment Work

Note, several other recommended scopes of work are not included in these estimates, which may significantly impact the overall fund-raising goals. It may be necessary to complete these excluded items prior to or concurrent with the cost estimated scopes presented herein. Scopes of work not included in the cost estimates include, but are not limited to, the following:

- Development of background drawings, potentially incorporating laser scanning or photogrammetry.
- Coordination with geologist and/or structural engineer to evaluate the overall geological features for stability and conditions.
- Coordination with specialists (MVVA or others) to determine the potential scope for soil erosion, encroaching trees/vegetation, and issues related to water seepage onto stone surfaces.
- Coordination with specialist for improved access at the main outcropping for design development and construction phases of work.
- Identification of full scope of carved elements with the assistance of research provided by Carolyn Bennett.
- Treatment survey to refine the repair scope, extents, and cost estimates. Note, improved access, background drawings, and comprehensive design decisions would be required to proceed with a treatment survey.
- Begin development of a strategic maintenance program and ongoing monitoring program.

TESTING PROGRAM IMPLEMENTATION ESTIMATES

The following contains preliminary cost estimates for implementation of ICR's testing program, which includes:

- Testing to determine feasibility of biological growth removal on sculptural elements.

- Testing to determine feasibility of coating removal on sculptural elements and appropriate replacement options.
- Testing to determine feasibility of painted graffiti removal.
- Testing program to determine feasibility of stabilization and/or tooling of delaminated, exfoliated, and friable stone.

ICR believes the above testing program could be performed for approximately $75,000, including typical transportation and lodging expenses. Please note the following assumptions and exclusions from this estimate:

- Assumptions:
    - Improved hands-on access is provided by others.
    - Access to water and electricity is provided by others.
- Exclusions:
    - Cost of access.
    - Cost of access to water and electricity.

CONSERVATION TREATMENT WORK ESTIMATES

The following contains preliminary cost estimates for potential conservation treatment work at the carved features of Pratt Rock Park. Note, these estimates have been prepared with the following caveats, assumptions, and exclusions:

- Caveats:
    - Extents extrapolated from the initial needs assessment surveys may be inaccurate due to the following limitations:
        - Background drawings were not available, so information was documented on roughly scaled images.
        - Rope access was insufficient to review all locations hands-on.
        - Existing coatings may be concealing additional conditions.
- Assumptions:
    - Design Development Phase has been completed, including the following:
        - Recommended testing program has been completed.
        - Improved background drawings have been provided by others.
        - Coordination with specialized consultants has been completed.
        - Treatment survey has been completed.
    - Full scaffolding will be provided by others to access every stone surface included in the scope of work.
    - Access to water and electricity is provided by others.
- Exclusions:
    - Cost of access.
    - Cost of collection, protection, waste removal, and/or garbage disposal.
    - Cost of access to water and electricity.
    - Cost of mobilization, transportation, and lodging.

Task	Qty	Unit	Unit Cost	Cost
Abandoned Anchor Removal & Patching	1	Ea	$182.00	$182.00
Crack Repair	73	LF	$182.00	$13,286.00
Removal of dense biogrowth (not included)				
Biogrowth inhibitor treatment	350	SF	$4.00	$1,400.00
Biogrowth staining removal	350	SF	$24.00	$8,400.00
Coating/graffiti removal	155	SF	$204.00	$31,620.00
Coating application	135	SF	$64.00	$8,640.00
Patch repair	23	Ea	$424.00	$9,752.00
Tooling	23	Ea	$270.00	$6,210.00

GC	15%	$11,920.00
Total w GC	Total w GC	$91,410.00
Contingency	25%	$22,850.00

Estimated Total Cost	**$114,260.00**

Add/Alt	QTY	Unit	Unit Cost	Cost
Consolidation treatment	22		$75.00	$1,650.00

Add/Alt Total with GC & Contingency	$2,310.00