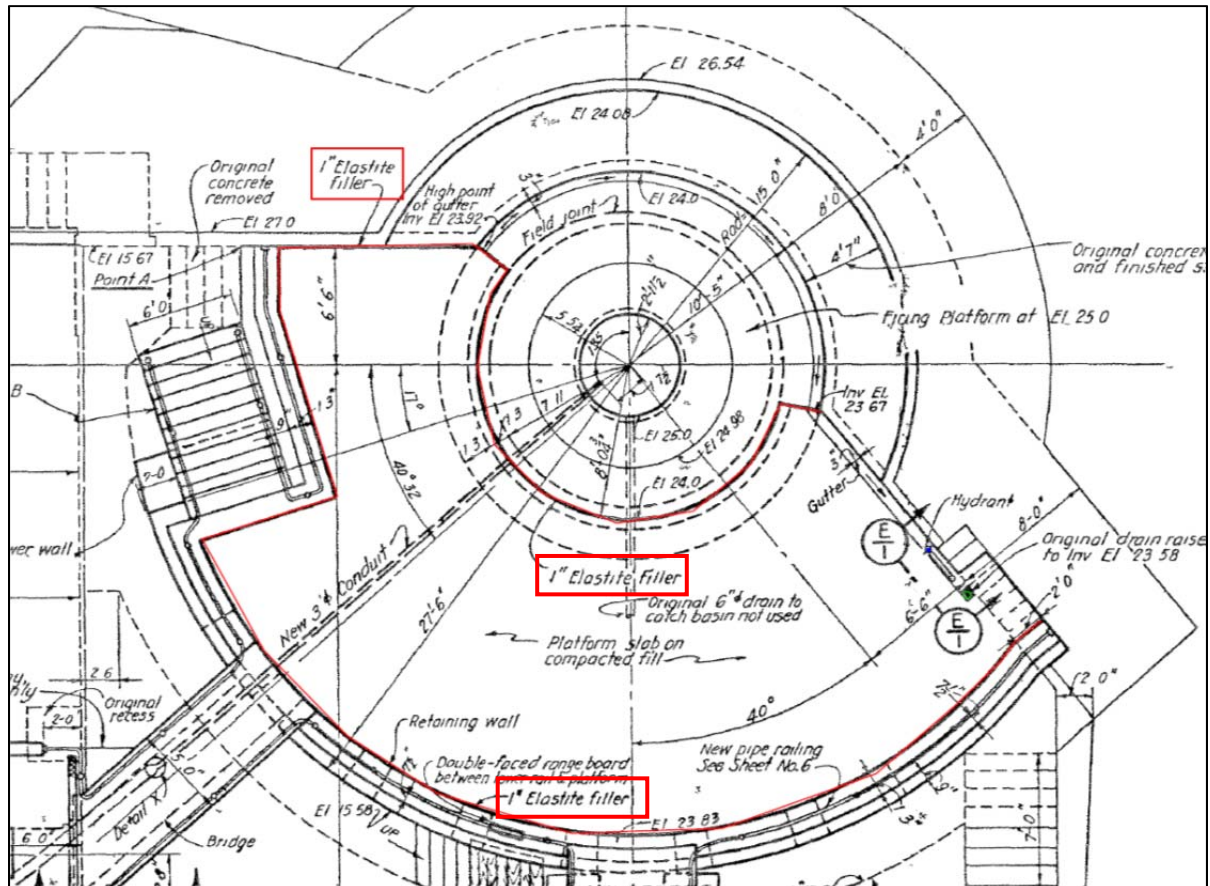


Re-install expansion joint on Gun #1 platform
at Battery Gunnison/New Battery Peck
Ft. Hancock, New Jersey

Army Ground Forces Association received permission to re-install the expansion joint on the Gun #1 platform as originally designed in 1943. This project was completed on 11 October 2020.

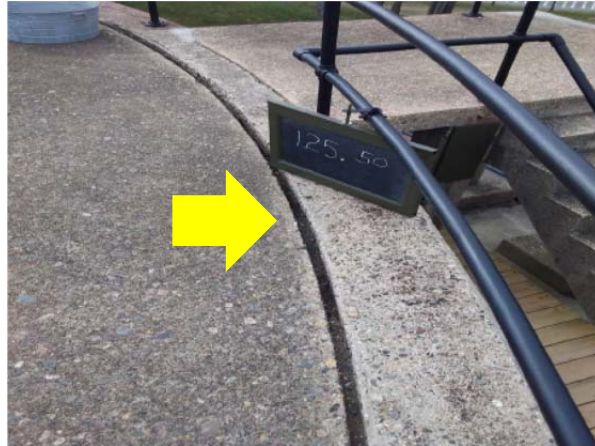
The Scope of Work was straight forward - install expansion joint in locations where expansion joint originally existed and then seal with joint caulking. Cost of materials was under \$400 total.

The drawing below is an excerpt from the "as built" drawings from the modernization and conversion of Battery Gunnison into "New Battery Peck" in 1943. The location of the 1-inch filler (expansion joint) is noted on the drawings using red boxes and red outline of the joint proper. The average size of the joints is three quarters inch to one and a half inch.



Prior to installation, the gap for the expansion joint is either filled with dirt (and as a result plant life), or concrete patch material. Using expansion joint filler material will keep debris and weeds out of the joint (gap) and eliminate a tripping hazard. The large arc is about 85 feet long and the small arc is 36 feet long. Most of the large arc requires 1.5-inches (three each half inch sections) of expansion joint.

The photos below show the expansion joint in two separate locations of the Gun #1 platform. The arc on the left is the small 36 foot arc and the arc on the right is 85 feet long.



The photo below at the base of Gun #1 shows the concrete patch on the small arc that has been applied in contrivention to the original drawings. This patching will be removed and replaced by expansion joint material. We have no idea who placed this patching material in this location. The original drawings make it clear it does not belong.



AGFA recommended installing quarter inch expansion joint (layered) to fill the expansion crack. This area is between a half inch to one and a half inch wide. We recommend roll expansion joint in half inch thicknesses. The expansion joint material will be placed in double and triple thicknesses based on width of the joint, joined with black sealer and cold asphaltic sealer.

NPS purchased Reflectix 4"X50' Expansion Joint EXP004050 at 0.5 inch wide by 4 inches tall - 50 foot roll. Eight rolls were purchased. The source was as follows: <https://www.eastcoasthardware.com/111504-reflectix-inc-expansion-joint-expo04050.html>



The adhesion material was MasterSeal® NP1™ - Black sealer. NPS Purchased 24 tubes at the following source: <https://www.qcsupply.com/masterseal-np1-black.html>



The sealer used was KoolSeal asphaltic crack and joint sealer. AGFA purchased two gallons at the following source: <https://www.grainger.com/product/KOOL-SEAL-Black-Joint-and-Crack-Filler-36MV66>



The first day of work was 27 August 2020. TSG Weaver was the primary installer. He used hand tools to dig out the trough along the large arc. The downside of this is difficulty getting some of the larger rocks that were wedged into place. Hammers and chisels did not work to dislodge them.



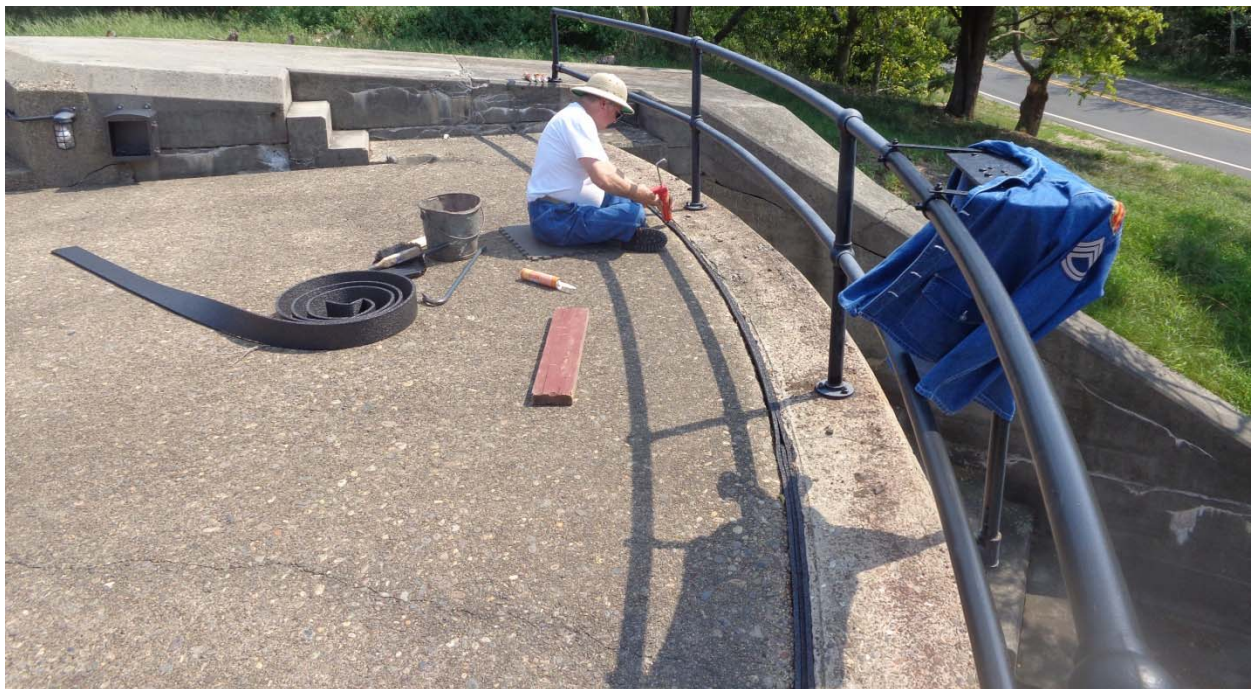
The photo below shows the work done by TSG Weaver to clean out the large arc. However, a number of jammed stones resulted in some portions of the expansion joint only being about 3 inches thick instead of four inches.



Below TSG Weaver is installing the expansion joint near the ammunition bridge.



The photo below shows TSG Weaver applying sealing caulking.



The photo below shows the large arc terminating point with expansion joint in place prepared for sealing. The horizontal expansion trough (top of powder passage stairs) is still filled with dirt and debris that must be removed prior to joint placement.



The photo below shows a wider view of the area above. Completed expansion joint is on the right. This was as far as the work proceeded on 27 August.



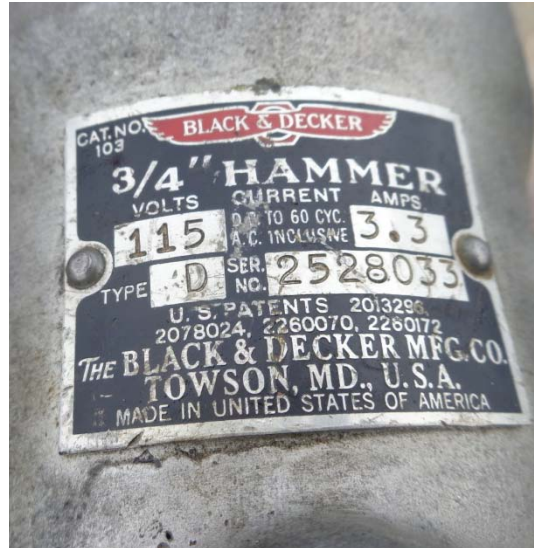
The next workday was 10 September. Below TSG Weaver prepares to remove spoil from the trough at the top of the powder passage stairs.



The photo TSG Weaver applies the sealant between the layers of expansion joint.



Removing the "patching cement" from the short arc next to the gun proved to be impossible by hand. The answer was a 1941 Black and Decker electric hammer shown below. This hammer was perfect for the job - just strong enough to remove targeted material without disturbing original concrete fabric.



The photo below shows LTC Welch using the Black and Decker hammer to remove the concrete patch around the small arc.



The two photos below show the arc after removal of the patching material and debris that were underneath that material.



The photo below shows more of the dirt and debris removal around the small arc at the base of Gun #1.



The final work was undertaken on 10 October. All that remained to be done was clean out all the remaining debris in the small arc and install the expansion joint. The 1941 Black and Decker Electric Hammer proved perfect for this task. The photo on the left is during the work and the right after.



The photo below shows the final cleanup of the arc before installation of the expansion joint.



The photo below shows the small arc and short run to the drainage trough completely cleaned out and ready for expansion joint.



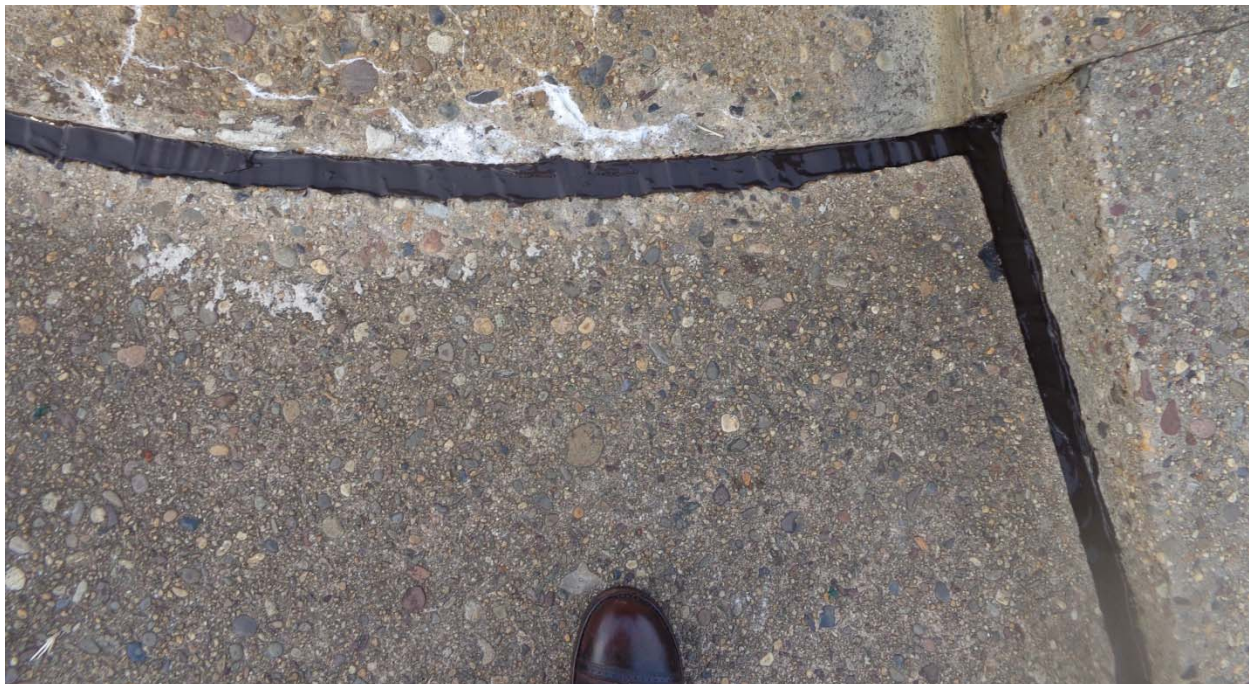
The photo below shows the installation of two strips of expansion joint around the small arc. The removal of debris was quite effective and it was deep enough to enable the entire run of expansion joint to be 4-inches deep.



The photo below shows the expansion joint with full sealing treatment applied to about half of the short arc up to the drainage trough.



The photo below shows the end of the arc and the short run to the drainage trough fully installed and sealed with KoolSeal asphaltic sealer.



The photo below shows the cover mounted and flush with the face of breach.



The photo below shows the section near the powder passage and stairs as completed and sealed.





ASSESSMENT OF ACTIONS HAVING AN EFFECT ON HISTORIC PROPERTIES

A. DESCRIPTION OF UNDERTAKING

1. **Park:** Gateway National Recreation Area

2. **Project Description:**

Project Name: SAHO Reestablish Expansion Joint at Gun #1 at Battery Gunnison

Prepared by: Holly Staggs **Date Prepared:** 08/11/2020 **Telephone:** (718) 815-7323

PEPC Project Number: 96983

Locations:

County, State: Monmouth, NJ

Describe project:

The National Park Service (NPS) proposes to authorize the Army Ground Forces Association (AGFA) to reestablish the expansion joint on the Gun #1 platform, as originally designed in 1943, at Battery Gunnison within the Sandy Hook Unit at Gateway National Recreation Area. The gap for the expansion joint is currently filled in with dirt or concrete patch material. The fill material will be removed by hand. The work would include the installation of expansion joints in two arc locations where they originally existed and then seal them with joint caulking. Installation of expansion joint filler material will keep debris and weeds out of the joint and eliminate a tripping hazard. The large arc is about 85 feet long, and the small arc is 36 feet long. Additional details are provided in the attached Statement of Work. The AGFA would like to complete the work before the end of September 2020. The proposed work is within the scope of an approved Interpretation and Education Services Agreement between the NPS and AGFA that expires November 2, 2020 (attached).

Area of potential effects (as defined in 36 CFR 800.16[d])

Fort Hancock and the Sandy Hook Proving Ground National Historic Landmark District, specifically Battery Gunnison

3. Has the area of potential effects been surveyed to identify historic properties?

No

Yes

Source or reference:

4. Potentially Affected Resource(s):

Archeological Resources Present: Yes

Historical Structures/Resources Present: Yes

Property Name: Fort Hancock - Battery Gunnison 337 **LCS:**

Cultural Landscapes Present: No

Ethnographic Resources Present: No

5. The proposed action will: (check as many as apply)

No Destroy, remove, or alter features/elements from a historic structure

Yes Replace historic features/elements in kind

No Add non-historic features/elements to a historic structure

No Alter or remove features/elements of a historic setting or environment (inc. terrain)

No Add non-historic features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape

No Disturb, destroy, or make archeological resources inaccessible

No Disturb, destroy, or make ethnographic resources inaccessible

No Potentially affect presently unidentified cultural resources

No Begin or contribute to deterioration of historic features, terrain, setting, landscape elements, or archeological or ethnographic resources

No Involve a real property transaction (exchange, sale, or lease of land or structures)

Other (please specify): _____

6. Supporting Study Data:

(Attach if feasible; if action is in a plan, EA or EIS, give name and project or page number.)

B. REVIEWS BY CULTURAL RESOURCE SPECIALISTS

The park 106 coordinator requested review by the park's cultural resource specialist/advisors as indicated by check-off boxes or as follows:

[X] Archeologist

Name: Holly Staggs

Date: 08/11/2020

Comments: This project will entail no ground disturbance, and no archeological work is recommended.

Check if project does not involve ground disturbance [X]

Assessment of Effect: No Potential to Cause Effect No Historic Properties Affected No Adverse Effect Adverse Effect Streamlined Review

Recommendations for conditions or stipulations:

Doc Method: Streamlined Review (PA)

Streamlined Activity:

1. Preservation Maintenance and Repair of Historic Properties

[X] Historical Architect

Name: Marilou Ehrler

Date: 08/14/2020

Comments: As proposed reestablishing the expansion joint on the loading deck of the battery is in keeping with the SOI Standards for the treatment of historic properties and will help to ensure the longer term protection of the resource. The original joint was filled with "elastite" filler which was likely an asphaltic material. The proposal is to clean out the joint by hand, to install joint filler material and joint sealant to minimize the amount of water infiltration into the concrete.

Check if project does not involve ground disturbance []

Assessment of Effect: No Potential to Cause Effect No Historic Properties Affected No Adverse Effect Adverse Effect Streamlined Review

Recommendations for conditions or stipulations: Stipulations: 1. The depth of the joint cleaning and the filler should be reviewed to ensure that the integrity of the fill beneath the concrete slab is maintained. If the 4" filler is too deep; use of a backer rod could be considered. 2. The original "elastite" filler was an asphaltic material, likely dark in color. Confirm that the sealant is rated for floor/ foot traffic. The color of the new sealant match the original asphaltic type filler.

Doc Method: Streamlined Review (PA)

Streamlined Activity:

1. Preservation Maintenance and Repair of Historic Properties
-

[] **Historical Landscape Architect**

Name: David Uschold

Date: 08/17/2020

Comments: Repair project as described will no effect on cultural landscape resources at Sandy Hook.

Check if project does not involve ground disturbance []

Assessment of Effect: No Potential to Cause Effect No Historic Properties Affected No Adverse Effect Adverse Effect Streamlined Review

Recommendations for conditions or stipulations:

Doc Method: Streamlined Review (PA)

Streamlined Activity:

1. Preservation Maintenance and Repair of Historic Properties
-

No Reviews From: Curator, Historian, 106 Advisor, Other Advisor, Anthropologist

C. PARK SECTION 106 COORDINATOR'S REVIEW AND RECOMMENDATIONS

1. Assessment of Effect:

- No Potential to Cause Effects
- No Historic Properties Affected
- No Adverse Effect
- Adverse Effect

2. Documentation Method:

[] **A. Standard 36 CFR Part 800 Consultation**

Further consultation under 36 CFR Part 800 is needed.

[] **B. Streamlined Review Under the 2008 Servicewide Programmatic Agreement (PA)**

The above action meets all conditions for a streamlined review under section III of the 2008 Servicewide PA for Section 106 compliance.

Applicable Streamlined Review Criteria

(Specify 1-16 of the list of streamlined review criteria.)

1. Preservation Maintenance and Repair of Historic Properties.

C. Undertaking Related to Park Specific or Another Agreement

The proposed undertaking is covered for Section 106 purposes under another document such as a park, region or statewide agreement established in accord with 36 CFR 800.7 or 36 CFR 800.14.

D. Combined NEPA/NHPA Process

Process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with Section 106 is in accord with 36 CFR 800.8.c.

E. Memo to Project File

3. Consultation Information

SHPO Required: No

SHPO Sent:

SHPO Received:

THPO Required: No

THPO Sent:

THPO Received:

SHPO/THPO Notes:

Advisory Council Participating: No

Advisory Council Notes:

Additional Consulting Parties: No

4. Stipulations and Conditions: Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

1. The depth of the joint cleaning and the filler should be reviewed to ensure that the integrity of the fill beneath the concrete slab is maintained. If the 4" filler is too deep, the use of a backer rod could be considered.

2. The original "elastite" filler was an asphaltic material, likely dark in color. Please confirm that the sealant is rated for floor/ foot traffic. The color of the new sealant match the original asphaltic type filler.

5. Mitigations/Treatment Measures: Measures to prevent or minimize loss or impairment of historic/prehistoric properties: (Remember that setting, location, and use may be relevant.)

6. Assessment of Effect Notes:

The work as proposed is in keeping with the Secretary of the Interior's Standards for the Treatment of Historic Properties and will help to ensure the longer-term protection of the resource.

D. RECOMMENDED BY PARK SECTION 106 COORDINATOR:

Compliance Specialist:

NHPA Specialist

Marilou Ehrler

MARILOU EHRLER Digitally signed by MARILOU EHRLER
Date: 2020.08.25 09:23:26 -04'00'

Date: _____

Holly Staggs

HOLLY
STAGGS

Digitally signed by HOLLY
STAGGS
Date: 2020.08.24 15:35:40
-04'00'

Date: _____

E. SUPERINTENDENT'S APPROVAL

The proposed work conforms to the NPS *Management Policies* and *Cultural Resource Management Guideline*, and I have reviewed and approve the recommendations, stipulations, or conditions noted in Section C of this form.

Signature

JENNIFER
NERSESIAN

Digitally signed by JENNIFER
NERSESIAN
Date: 2020.08.25 12:56:35 -04'00'

Superintendent:

Date: _____

Jennifer T. Nersesian