

PRELIMINARY/FINAL REVIEW

(NCPC Review Exception Requested)

Project Overview

NCPC Plans and Policies

NCPC Plan Review: The Navy will follow requirements for NCPC project review.

Environmental & Historic Preservation: The Navy will comply with NEPA by completing a Record of Categorical Exclusion (CATEX) and with NHPA by completing the Section 106 consultation process.

Stormwater Management: The Navy will comply with all applicable federal, state, and local stormwater management regulations.

Tree Preservation and Replacement: The Navy will follow the NCPC tree preservation and replacement policy.

Pollinator Best Practices: The Navy will follow the NCPC pollinator best practices by planting native plants that are beneficial to pollinators, e.g., New York aster and switchgrass.

Description of Project Area

The project area is flat grass and immature forest, adjacent to head-in parking.

The occupancy classification group is Group S-1 (Moderate-Hazard Storage) per IBC 2024.

Description of the Proposed Development and Alternatives

NSWC Carderock Division (NSWCCD) conducts research, development, test and evaluation (RDT&E) on lithium-ion battery subcomponents for military systems under the Navy's Lithium Battery Safety Program. Post-test battery assets require secure storage for forensic analysis until final test data is analyzed and reported to program sponsors. This project provides a safe, secure outdoor storage facility that complies with all fire protection, security, and environmental criteria.

The type of construction is Type IIB per International Building Code (IBC) 2024. The building area (total impervious area) is 1750 square feet (sq ft). Particulars include:

- 1,750 ft² reinforced concrete storage pad with driveway access for forklift operations
- Interior concrete/brick walls to delineate storage areas for larger batteries
- Single-pitch sloped roof structure of non-combustible metal deck covering entire pad
- 3-hour fire-rated perimeter firewalls (cast-in-place concrete)
- Perimeter chain link security fencing along grade at the rear of the site
- Controlled vehicle access by gate from main drive
- Electrical systems: Four (4) duplex GFCI 120 VAC, 20A outlets in weatherproof enclosures
- LED lighting mounted to roof support columns for complete site illumination with wildlife-sensitive design
- Radiant-energy fire detection system compatible with base Honeywell Notifier system
- Grounding and bonding of all metallic components
- Fire break and stormwater management feature

Location is collocated with new battery storage and battery testing facilities. Design and finishes are consistent with nearby buildings and the NSWCCD historic district.

Master Plan Alignment

The June 2018 Addendum to NSF Carderock Installation Master Plan included a project for the storage of lithium batteries, which included the construction a 1,500 sq ft facility and the demolition of Building 196, which was once a burn building. The project included in the addendum is consistent with the current Building 157 project in scope and location; however, the scope of the project no longer includes the demolition of Building 196.

Schedule

The project area is currently undeveloped, and construction will not impact any occupants. Construction is anticipated to last 208 days.

Project Cost Estimate

The estimated cost for construction is \$1,157,402.

Outreach and Coordination**Public Engagement**

No public engagement is planned as part of this project.

Coordination with Federal, State, and Local Jurisdictions

The Navy will consult with NCPC and the MD SHPO.

Detailed Project Information and Drawings**Description of Buildings**

The proposed facility is comparable to scale of Buildings 187 and 41. Building 187 is structure in the project area contributing to the NSWCCD historic district is Building 187. While the proposed project is adjacent to Building 187, construction would in no way disturb Building 187. Building 187 is a 1954 single-story abandoned pump house, which is already obscured from the new construction site by Building 41. Building 187 is scheduled for future demolition in the Master Plan.

The facility to be built is a storage area for post-test lithium-ion batteries. This facility will consist of a 1,750 sq ft cast-in-place concrete pad with an access road from the adjacent road for forklift access, a perimeter fence for access control with gate and 3-hour rated firewalls. Concrete walls delineate areas inside the building for larger batteries that cannot otherwise be stored in fire-rated lockers. A sloped roof structure of single pitch made of non-flammable material is to be erected to cover the pad and will allow forklift access. The height of the roof will be 13 feet and 1 inch on the high side and 10 feet 2 inches on the low side. Power requirements include low-voltage outlets and pole-mounted, LED-type flood lighting. Fire sensors and a fire alarm system activated by a radiant energy detection system is to be installed to alert the on-site fire department in the event of a fire event.

Site Plan

Below is a screenshot of sheet C141 from the design drawings. Please also see sheets C151, C161, L100, and AE100 for more information regarding site boundaries/dimensions and the surrounding area.

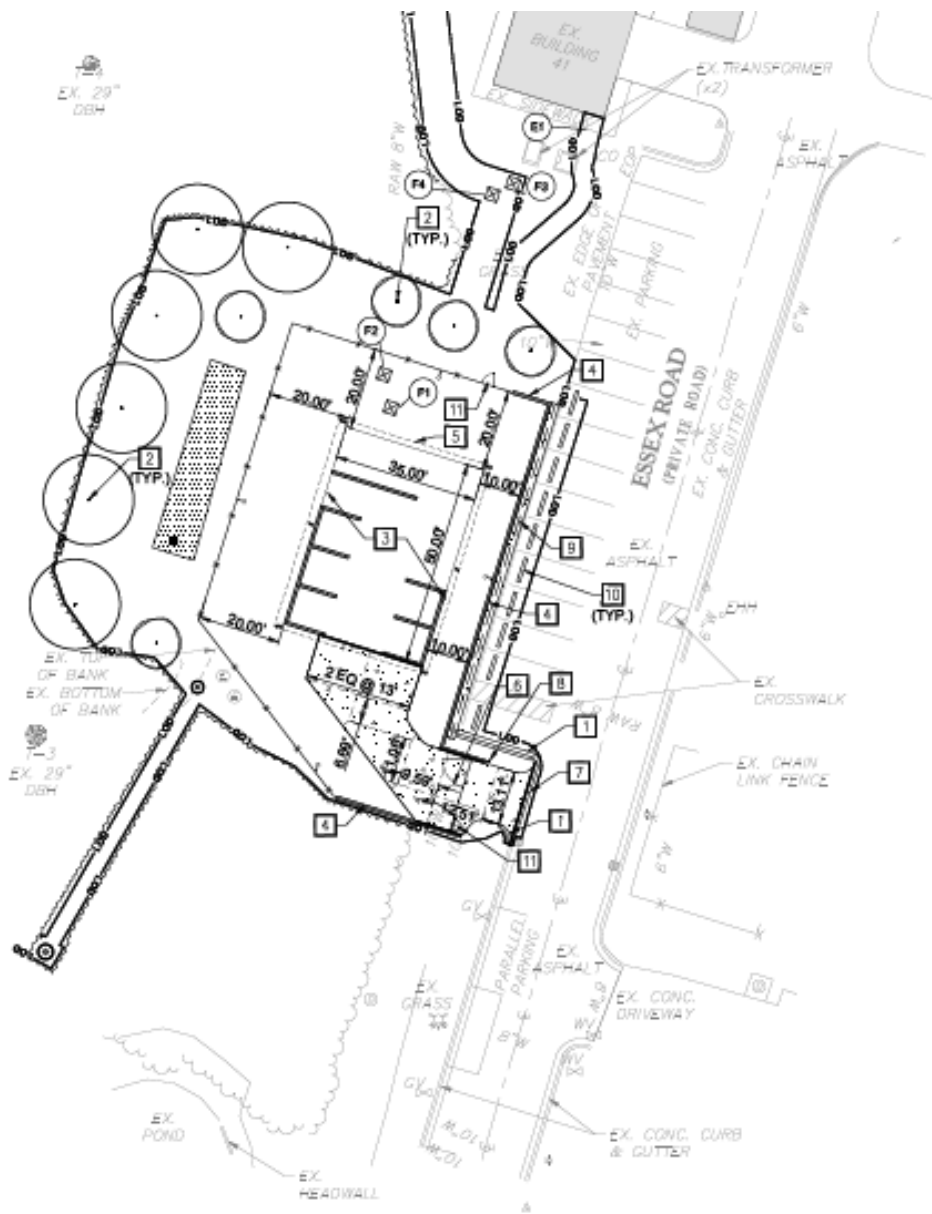


Figure 1: Proposed Building 157 Design

Vicinity Map

Please see design drawing sheets C111 and C141 for a description of the project site and its interaction with the surrounding area.

Architectural and Design Program

The site has no existing architectural characteristics as it is currently undeveloped.

The planned use for the new facility is as a post-test battery storage space. The entire 1,750 sq ft concrete pad will be for that purpose. See design drawing sheets GC100, GC110, AE100 and AE301 for more information.

Elevation

The facility will be surrounded by a cast-in-place firewall and a chain link security fence. The firewall will be 11 feet 8 inches tall. The fence will be 8 feet tall (including barbed wire support arms). The pitched roof height will vary from 13 feet 1 inch to 10 feet 2 inches. Masonry walls separating storage areas on the concrete pad will be 7 feet 9 inches tall.

See design drawing sheet AE200 for more elevation information.

Cross Sections

See design drawing sheet AE200, AE300, AE301 and AE400 for elevation/cross section information.

Roof Plans

The facility's roof will be a single slope standing seam metal panel roof. See design drawing sheets SE111, SE551, AE150, AE200, AE301 and AE400 for more information.

Construction and Equipment Drawings

Not Applicable.

Landscape and Grading Plan

See design drawing sheets C101, C111, C161 and L100 for grading and landscaping information.

Existing Tree Survey and Inventory

The project would affect an area largely consisting of maintained lawn with an additional 0.25 acres of immature forest including a 23" beech in good condition and a 29" red maple in good condition.

Tree Preservation and Replacement Plan

Reforestation within the project area would include six Sweetgum (*Liquidambar styraciflua*) and five Sweetbay Magnolia (*Magnolia virginiana*). Additional native, non-invasive trees will be planted within areas established in the 2018 Installation Master Plan to mitigate the balance of lost forest canopy consistent with 2020 NCPC Tree Canopy and Vegetation policies (part FE.G.2 2c). The supplemental planting area currently maintained as lawn will be removed from maintenance to replace lost forest area.

Landscape and Streetscape Plan

The project site is currently flat grass and immature forest, adjacent to head-in parking. The project will develop this space into a battery storage location surrounded by a security fence and cast-in-place concrete firewall with a driveway for forklift access. The vehicle and pedestrian gates will remain locked when not in use. The driveway will meet the adjacent street between existing parking spaces and will require removing one parallel parking space. The facility will have lighting around the fence perimeter as well as under the roof at the storage location. The project will replant ten trees outside the perimeter fence but within the limits of disturbance. A micro bioretention cell will also be built within the limits of disturbance.

See design drawing sheets C141, L100, AE100 and E101 for more information.

Transportation and Circulation

The project will not increase the number of vehicle trips to NSWCCD. Access to NSWCCD will remain unchanged. Access to the Storage Facility will be through Essex Road. The project would remove one parking spot.

Perimeter Security

Access to NSWCCD is restricted through two gates, one off of Clara Barton Parkway and the other through MacArthur Boulevard. A perimeter chain link security fence will be installed along grade at the rear of the site.

Photographs



Figure 2: Proposed Site Location



Figure 3: Present Day Site Conditions

Environmental and Historical Considerations

Historic Preservation

The Navy has made a determination that this project will have no adverse effects to historic properties. A determination letter was sent to the MD SHPO on 13 May 2026 requesting their concurrence on this determination.

Natural Resources

The project would affect an area largely consisting of maintained lawn with an additional 0.25 acres of immature forest including a 23" beech in good condition and a 29" red maple in good condition. Reforestation within the project area would include six Sweetgum (*liquidambar styraciflua*) and five Sweetbay Magnolia (*magnolia virginiana*). Additional trees will be planted within areas established in the Installation Master Plan to mitigate the balance of lost forest canopy. Construction would occur outside the protective buffer surrounding delineated wetlands. The concrete pad with metal roof and driveway would create approximately 2500 sq ft of new impervious surface which is mitigated by a 500 sq ft bioretention feature. There are no known protected species or critical habitats present at NSWCCD. Forests at NSWCCD are not vital to tidal waters, tidal wetlands, or tributary streams of the Chesapeake Bay. Eighty-one bird species have been identified at NSWC Carderock. The construction and operation of the storage area are expected to have negligible effects on migratory birds.

Public Realm and View Sheds (if applicable)

The proposed facility is comparable to scale of Buildings 187 and 41. The project would utilize a finish schedule comparable to adjacent structures, with a palette using natural gray, birch, dark bronze, and extra white. The Navy does not foresee any change in public view sheds.

Flooding

This project is not within a 100- or 500-year floodplain as depicted on Flood Insurance Rate Maps provided by FEMA. The project does not pose an increased risk of flooding to the surrounding landscape or properties. Runoff from the site will be managed through the applications of stormwater best management practices per an MDE approved Stormwater Management Plan.

Stormwater Management

The stormwater mitigation feature consists of approximately 500 sq ft of a micro-bioretenion feature with proper cleanout features, pending approval by Maryland Department of the Environment (MDE).