CHARLESTOWN NAVY YARD

Marine Barracks

- Gross Square Feet: 51,645
- Number of Floors Above Ground: 4
- Building Height: 60 feet
- Status: Occupied/NPS
- Current Use: Office, Residential

Significance: The Marine Barracks (Building I) is significant as the oldest remaining Marine Barracks Structure in the United States, although additions and alterations make its original configuration impossible to see. The major alternations to the south façade with fire escape towers and porches in 1941, later glazed for sleeping quarters are historic in association with World War II.

Building Description

In August 1810 Marine Corps Commandant Lt. Col. Franklin Wharton visited the yard. During that visit, he and the yard's commanding officer, Capt. Samuel Nicholson, agreed to locate the new barracks to the east of the Commandant's House. It would be oriented parallel to the yard's northern boundary and be constructed partly by contract and partly by the Marines themselves.

The structure was of a design which would become standard for Marine Barracks—a long, low center section housing enlisted personnel bookended by taller quarters for officers. As originally constructed, the center section was a single story, while the left and right wings were three stories in height.

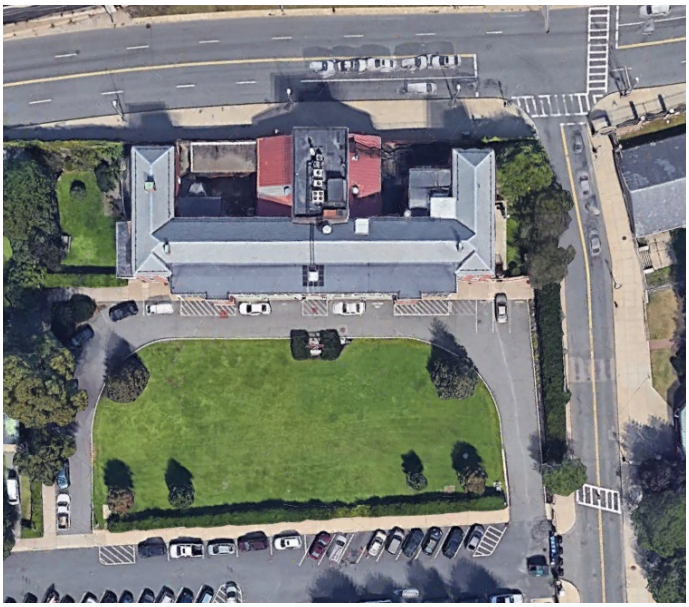
In keeping with orders to use local materials, the structure was built of brick with a slate roof. Work began almost immediately, and by mid-October the walls were ready for the roof. Although the building would not be completely finished for some time, it had progressed to a point where it could be first occupied by the Marine guards on February 19, 1811.

By 1860 the Barracks was in need of significant repair and inadequate to house the increased Marine complement. Thus, the FY 1862 Naval Appropriations Act, approved on February 14, 1861, provided $19,456 for "repairs of marine barracks." The initial plan involved replacement of the gabled roof of the main section with a mansard roof to create a second floor for enlisted personnel. The existing stable would be demolished and replaced by a new 20 ft. x 38 ft. freestanding structure perpendicular to the Navy Yard Boundary Wall opening onto a new 25-ft.-wide courtyard between the Barracks and Chelsea Street.

The east side of this courtyard would be lined by an18 ft. x 44 ft. wing containing a kitchen and washrooms. The center portion was widened to approximately 25 ft. and was raised to three stories in height with a gabled roof. Portions of the granite wall were removed to accommodate the new facility, which had doors opening onto Chelsea Street from both the stable and courtyard. A 12 ft.- wide portico extended the entire length of the main structure facing south toward the Parade Ground. There were also modifications to the wings. Both wings received a fourth story and a hipped roof. The officers' quarters were lengthened 10 ft.

Oriel windows were added on the north side of the second floor and west side of the third floor of the commanding officer's quarters, along with a new main entrance from a porch built on unexcavated ground on the west side at the second floor level (in plans of the house this level was labeled 'first floor') at the same grade as the base of the Yard Boundary Wall along Chelsea Street.
In August 1964 the Barracks and the surrounding area were formally transferred to Marine Corps ownership, although the shipyard's Public Works Division continued to provide maintenance support for the facility.

Most of the projects in this period dealt with interior issues, although in June 1972 it contracted for the repainting of the south elevation. At that time, the dark green paint on the first-floor enclosure was changed to a lighter shade of green.



Under National Park Service ownership the Barracks has undergone radical interior change while the exterior has been preserved. Although the lower portion was initially repainted white, it was restored to the historic light green color during a 1989 repainting project. The aluminum storm windows were replaced with new ones in 1990; those in turn were replaced in 2007 with ones which resembled the original 1950s sliding design. With the exception of one missing sign, all of the historic signage on the building has been replicated. While the second floor of the Barracks was divided into dormitory rooms for seasonal employees, the remainder of the main building has been converted for office use as both the headquarters of Boston National Historical Park and the home of the NPS Northeast Museum Services Center.

The most extensive conversion project took place between 2003 and 2006. In addition to a total reconfiguration of the third and fourth floors, an elevator was installed in the former sallyport/courtyard area. During this work, the well at the rear of the original Barracks was discovered.

Rededicated on May 13, 2000, as part of the celebration of the 200th anniversary of the Navy Yard's founding, the Marine Barracks is today, as it has been throughout its history, a mixed-use facility containing housing and office spaces.

Building Analysis

Character-defining Elements

Exterior

- Brick exterior walls of 19th century wings with granite sills and water table. Later concrete sills and a variety of lintels and rebuilt brick arches are not individually significant but correspond to different periods of alteration.
- Brick arch with granite piers at original two-story masonry opening in north boundary wall on Chelsea Street aligned with the sallyport through passage (1811, 1923, 1939)
- Slate hipped roofs and brick chimneys at original east and west flanking buildings
- Enclosed porch on west elevation above open ground floor stair connection and side door including open stair and link balcony
- 1862 shutters at 2/2 wood windows under the enclosed porch
- Brick fire escape towers and 4-story concrete porch structure with glazed enclosure and historicist wood portal at south entrance to the sallyport.
- Carved entrance door surround at east wing entrance
- Oriel windows
- Signage
- Light green ground level and white/cream upper stories paint scheme from1972
- Torii gate (Navy Yard structure 282)

Interior

- Brick vaulted sallyport passage from south entrance to enclosed courtyard.
- Visible field stone foundation walls in basement

Integrity/Intactness

The building incorporates successive periods of major change in section, elevations, and extent of enclosure- with extensive changes within. Office conversion of 3rd and 4th floors between 2003 and 2006 removed interiors occupied by enlisted Marines'. Former bar/club room, basement pistol range, laundry, tailor, and barber shop are uses lost from spaces that remain. Chelsea Street presence is obscured and diminished by masonry infill and fence insertions at original doorways through the boundary wall.

The World War II wooden addition is tall story above the sallyport wing. It is clad in large shingles that contrast sharply with brick volumes below and at the wings on either end of the block. Aluminum spandrel panels at end bays beyond the fire stair towers are not painted or detailed to match the five central bays of the south facade. Some panels are visibly detached, and none are insulated although they now enclose interior living space. They are backed up by original steel porch railings. Porch windows have been removed at the second-floor dormitory leaving no thermal barrier between living space and uninsulated porch. Almost all windows in the flanking wings are replacement 1/1 sash in what must have been multi-paned openings (6/6 and 12/12). The WPA fire tower doors and entrance doors have circular lites at eye level.

Building Envelope Condition

Generally, the building's west and east masonry elevations are in poor condition. Numerous locations on the north elevation are in underutilized service areas where maintenance has almost been discontinued.

The lower roofs of the central courtyard construction are being recovered in natural copper. Brick walls and window surrounds below require masonry repairs and repointing. The building is without insulation. Slate roof planes appear to be sound, but snow guards and flashings are likely to need replacement. The concrete balcony ("Arcade") structure is in good condition. The wooden enclosed porch on the west wing is in very poor condition and being repainted in March 2019. Many window openings have lost their original brick arches. Inserted steel lintels and brick replacement courses are seriously failing.

Building Interior Condition

The ground floor interior is painted brick walls, exposed steel stairs, 19th century wood stairs, and floors and ceiling materials that are non-architectural. Some floor areas have asbestos-containing tiles. The central second floor dormitory spaces are in rough condition, but reasonably livable. The office floors on third and fourth floors are in very good condition in terms of finishes and enclosure. Elevator and access stair are in excellent condition.

Structural Assessment

- The foundation is assumed to be timber piles.
- The ground level is a slab-on-grade; the slab exhibits at least one full depth penetration in good condition.
- Basement walls are granite stone and brick masonry in fair condition. Certain locations of the wall have mixed stone and brick infill; other locations have utility penetrations.
- The floor construction is Reinforced Concrete Slab and Slab on Metal Deck; Concrete Encased Steel Beams. Overall the condition is fair to good condition but poor in local areas. The slab has been unevenly cut and penetrated for utilities. The structural steel exhibits heavy rusting in exposed locations; several areas exhibit severe section loss due to heavy rusting. Slab exhibits are cracking and minor spalling in a few areas. Slab utility penetrations have resulted in surrounding spalls in a few areas.
- The stairs are concrete framing in good condition.
- The slate, EPDM membrane, and copper roof uses reinforced concrete slab, all in good condition with copper gutters.
- The interior walls are brick and concrete masonry in fair condition because the walls exhibit cracking in several areas at ground level.
- The exterior walls are brick masonry in fair condition. The walls at the top level exhibit signs of leakage under roof in a few areas, and one corner exhibits settlement.

Mechanical System:

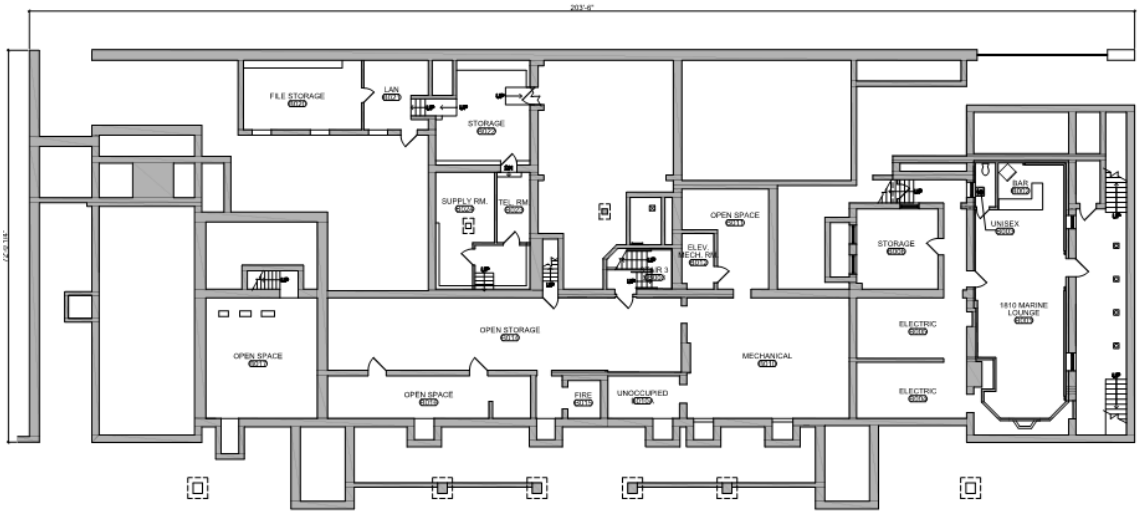
Heating Systems

- The building is served a 300MBH hydrotherm #MR-2100 modular boiler system, with seven modules; gas-fired, atmospheric, with flue pipes connecting to a header which is routed up the exterior wall to roof, this serves Barracks and Commandant's House (via 3" piping running thru trench). These boilers have outlived their useful lives.
- Cast iron radiators (converted from steam) are located throughout the building that is in poor condition.
- Fin tube radiation has been added to specific spaces- including Basement Lounge, second-floor sunroom, and miscellaneous other spaces that are in poor condition.

Cooling systems

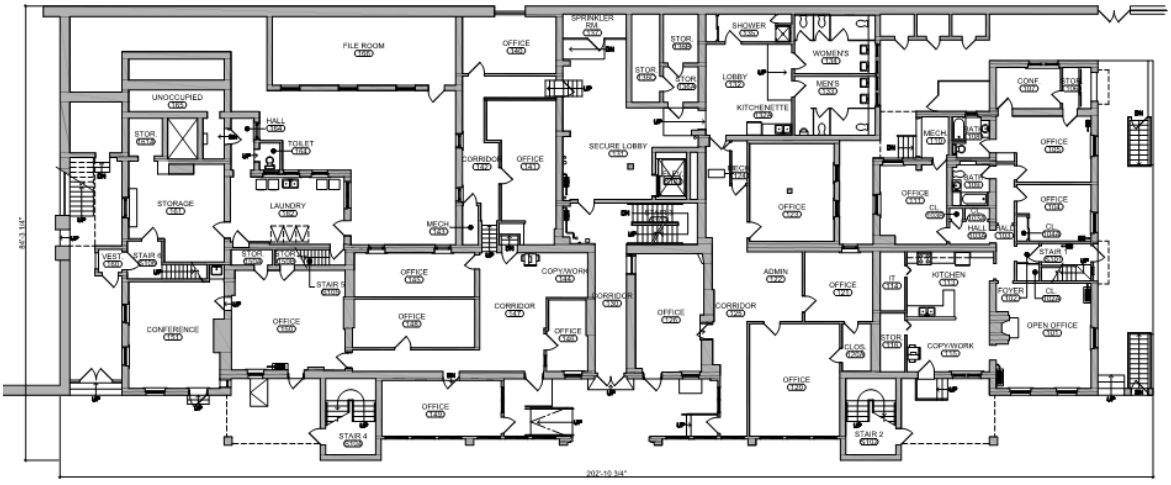
- The Ductless Split System (Mitsubishi City-Multi VRF system), with one heat pump mounted outdoors, piped to multiple indoor units, including wall-mounted and ceiling-mounted types serves the first-floor office spaces from 2008 and is in good condition.
- Window AC unit serves kitchen and discharges heat to the second-floor sun porch in poor condition.
- There are five air-cooled condensing units that are located on the roof, piped to five indoor air handling units: two at 5 tons, two at 6 tons, and one at 15 tons all in fair condition.
- There is an interior AHU-DX cooler/water heater piped to five roof-mounted air-cooled condensing units; serving third and fourth floors in good condition.
- The supply air is fully ducted for a 15-ton unit serving the first floor offices and for AHUs serving third and fourth floors in fair condition.
- The two-pipe hot water system is in poor condition.
- HVAC pumps consist of two base-mounted end-suction pumps in Basement boiler room plus miscellaneous pumps located around the building.
- The exhaust fans are in fair condition. There are miscellaneous fans serving toilet and utility rooms that are in fair condition.
- There are two residential-type kitchen exhaust hoods. The hoods located in the kitchen are vented to the roof and are in good condition.
- **Electrical Systems**
- The building is served by a 600V main disconnect outside the building in the basement entrance in good condition that feeds to several branch panelboards:
- Four 100A 42 circuit panels in good condition.
- Two 300A 42 circuit panels in good condition.
- One 150A 42 circuit panels in good condition.
- Two 225A 30 circuit panels in good condition.

Building Floor Plans



BUILDING I/ BASEMENT

SCALE 0 4 8 16 32 FEET



BUILDING I/ FIRST FLOOR

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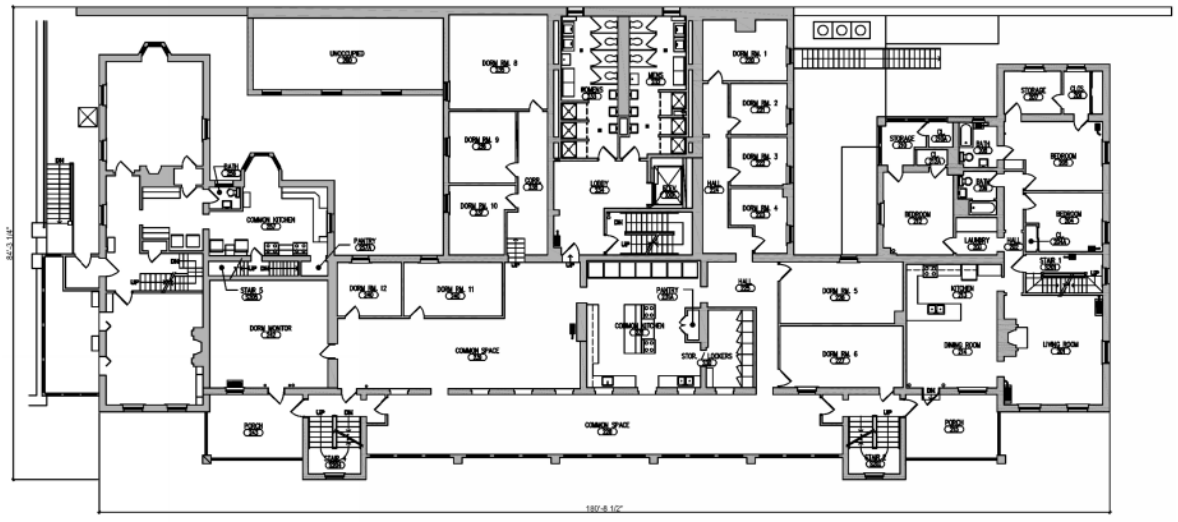

BUILDING I/ SECOND FLOOR

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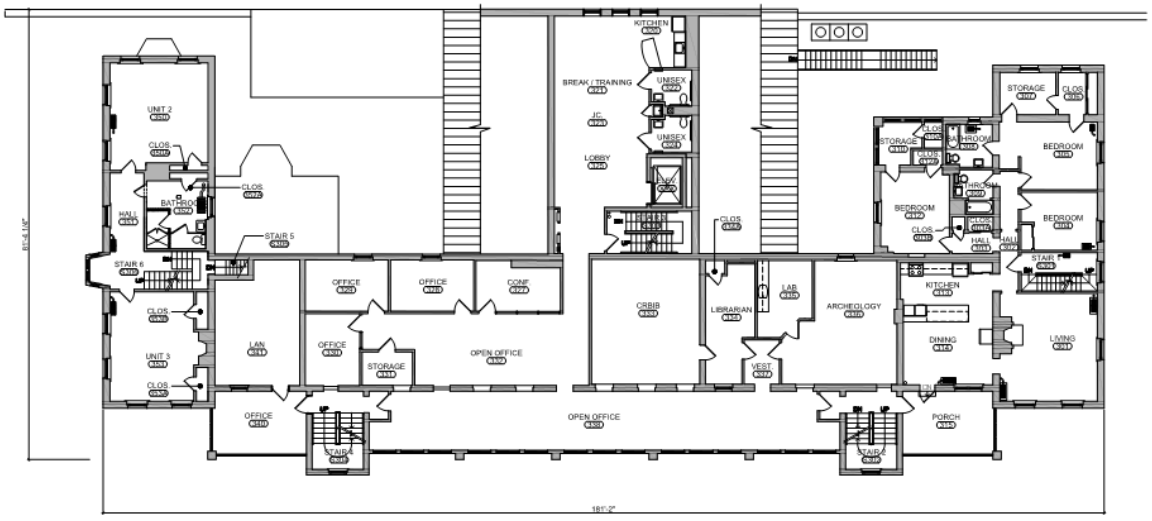

BUILDING I/ THIRD FLOOR

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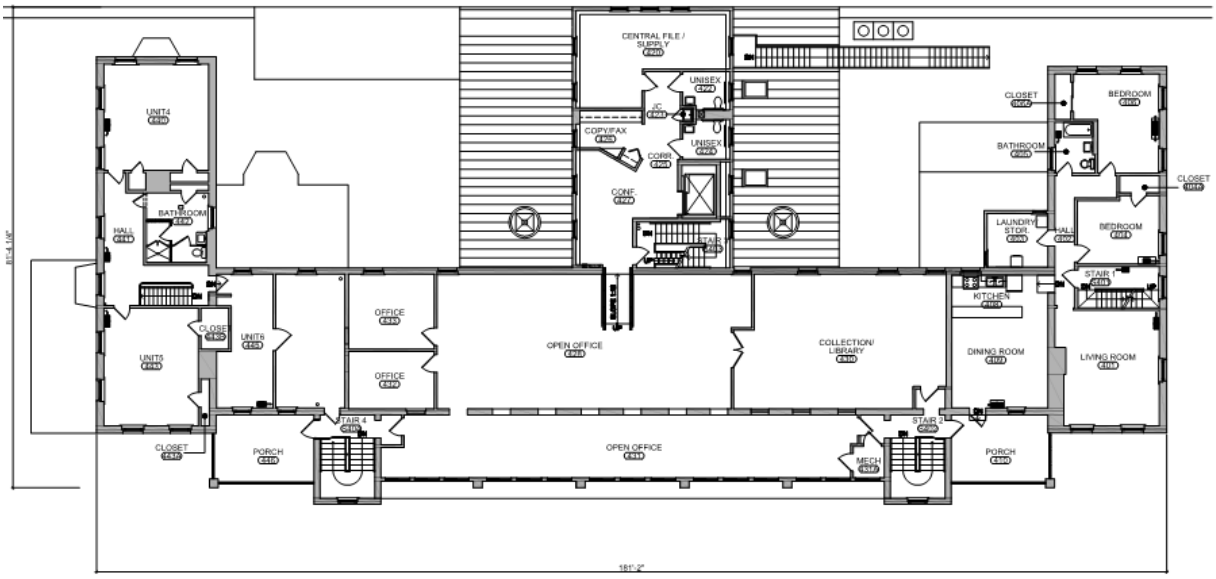

BUILDING I/FOURTH FLOOR

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