Inter-American Defense College

Fort McNair, Washington, DC

RENOVATION CATEGORY

Project Name and Location
Inter-American Defense College, Fort McNair, Washington, DC

Project Size
22,657 SF

Owner / User
US Army Corps of Engineers—Baltimore District / US Army Inter-American Defense College

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A historic masonry structure originally designed by McKim, Mead & White and constructed in 1905, Building 60 had long functioned as a jewel of Fort McNair's historic Historic District and previously served as an officer's club. With its functionality stripped away by time and security restrictions that limited access to the post, the design-build team led the renovation design to restore the original intent and repurpose the space into a state-of-the-art education facility to meet the US Army's needs for a 50-year life expectancy. The restoration protected the building's character-defining features and ushered the building into its contemporary role to provide education programs, administrative needs, and ground assembly space for the Fort McNair community.

The project scope included all new interior finishes; improvements to the inter-office spaces and creation of a conducive learning and working environment for both soldiers and civilians; and overhaul of mechanical systems, fire alarm systems, and new electrical systems, as well as new architectural finishes and building envelope upgrades.

Design Approach
The historical significance of the building lends itself to the experience of stepping back in time, both in the appreciation of the architectural style and the construction methods used in the original build and previous renovations. A 1975 renovation, in particular, was comprehensive in scope and took a replacement rather than repair approach. Original windows were bricked over, and the original wooden entry door was replaced with a glass door and transom. A layer of R30 insulation had been added to the upper floor, formerly the orchestra pit, which had a foil back that did not allow for drying and altered the dew point of the entire building.

In the first phase of the project, the design-build team took steps to ensure that the structure was watertight through a roof assessment and window repair. To restore the original historic integrity, the project team used original photography to recreate the original wooden entry door, which filled the whole frame and contextualized the dentals of the building. The team uncovered bricked-over windows to allow natural light into the education spaces and follow the original design. They preserved and relocated a second set of entry doors, which were original to the building and included original hinges. The space that had formerly housed the orchestra pit was repurposed as a mechanical room. Additionally, the landscaping was restored to the original design intent, including lawn panels in the southern portion of the site and foundation plantings. The project included design and construction of site walkways, stairs, porches, ramps, and landscape within the immediate project site.

The renovation design of the building interior maintains the historic, character-defining features of the building while upgrading permanent finishes to meet the needs of a state-of-the-art soft-skills training facility. In the entry, a raceway was removed and trim pieces aligned for continuous expression. Marble flooring was patched and repaired, with the salvageable sconces and chandeliers preserved. Furniture within the main administrative spaces was selected to be traditional in appearance, while the furniture in the innovation lab is contemporary to match that area's contemporary and collaborative mission.

As part of the further commitment to respecting the original design, the project team relocated and repurposed a historic archway whose existing location conflicted with vital life safety upgrades.

A defining feature of the building foyer is a wallpaper mural printed with Jean-Julien Deltil's *View of North America*. Printed by the Zuber Factory since 1834, the scene is comprised of several panels that continue around the room, seamlessly joining the last piece to the first. The wallpaper was installed in the main hallway and heavily adapted to the space. The French portrait captures several idealized scenes from the 1830s, each depicting technological marvels of the period.

A key design challenge was to route the wet sprinkler pipe through the room with the mural perpendicular to the direction of the joists without impacting the mural or penetrating it in any way. The design team encapsulated the sprinkler pipe and heads by modifying the non-historic crown molding. The side wall sprinklers are unobtrusive and do not detract from the viewership of the mural, which is simultaneously protected from water damage. The mural itself was treated by an expert paper and pointing conservator to repair damage and deterioration.

Schedule and Cost
An early challenge presented by the project was to anticipate the unforeseen conditions of the deteriorating state of the building. The design and construction team conducted an investigative site walk at the proposal phase, noting a severe mold issue from water intrusion and general neglect from two years without occupancy. The owner had a quantity at the beginning of the project for bidding purposes, which the project team anticipated exceeding; the owner and project team agreed upon a pricing schedule and measuring system to track additional quantities of mold and multiple scopes for hazardous materials mitigation and historic element replacement.

The project included a post-award design investigation requirement that required historic preservation research to document historically significant elements of the building. The investigations identified character-defining features and provided restoration and preservation solutions while maintaining the expedited design-build delivery schedule and responsible budget. Without accurate as-built documentation for 3D building coordination and design drawing production, installing new MEP systems in existing spaces with historically significant features presented a challenge. Lacking the original as-builts of the building at the time of award, the project team utilized laser-scan technology to accurately document existing conditions and historic features in the design packages.

Sustainability
Multiple sustainability initiatives were implemented as best practices throughout the design, including subterranean waterproofing and storm / groundwater management. The MEP systems meet current sustainable energy measures, the interior finish selection includes renewable and low-emitting products, and the exterior building envelope was improved to increase thermal performance.

Lasting Impressions
As a contributing building to a Historic District on the DC Inventory of Historic Sites that is National Register-eligible, the building provides significant historical context to the Fort McNair campus. The owner's commitment to preservation through adaptive re-use and the design and construction teams' quality of care of this historic resource has allowed the previously underutilized building to shine as a cultural icon on the campus while providing the end user with a high-tech facility. The project shows that historic preservation and modern technological upgrades can be compatible if performed by a team dedicated to collaboration, preservation, and stewardship. The adaptive re-use of the building provides a much-needed, technologically advanced educational facility to the Inter-American Defense College, and the sensitive application of the required modern technologies allows for a more comfortable, functional, habitable space while maintaining character-defining features of a 120-year-old building designed by one of the nation's preeminent architecture firms.

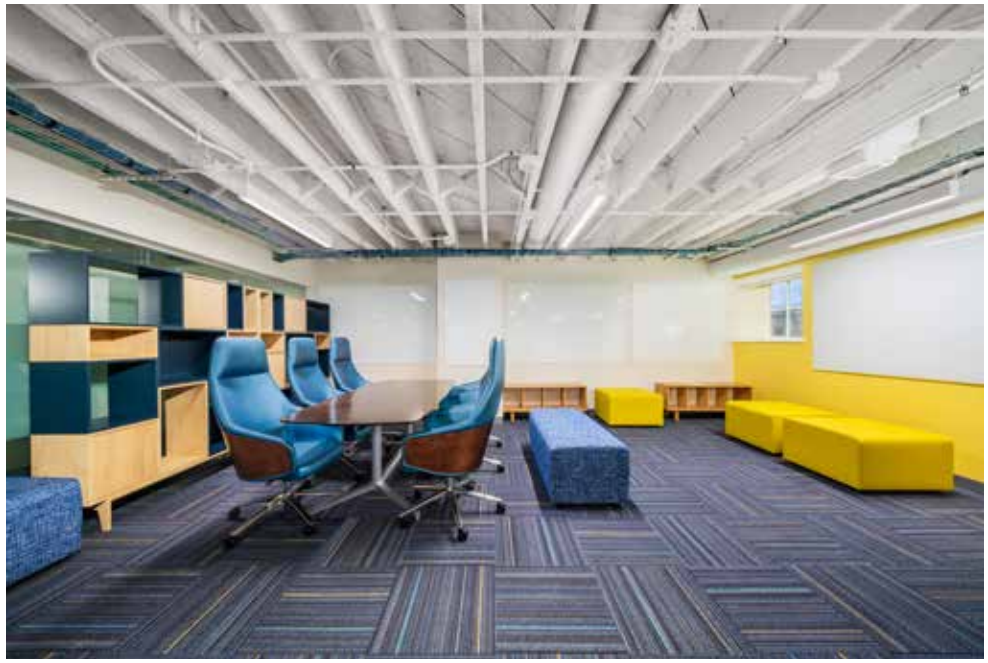
View of North America captures several idealized scenes from the 1830s, including “New York Bay,” “Military Review at West Point,” “Boston Harbor,” and “Niagara Falls,” each highlighting the technological marvels of the period.

Restored mural

Key repurposed features original to the building included the second set of doors and hinges (left), uncovered bricked-over windows to increase natural light (above), and a reinstalled archway (below).

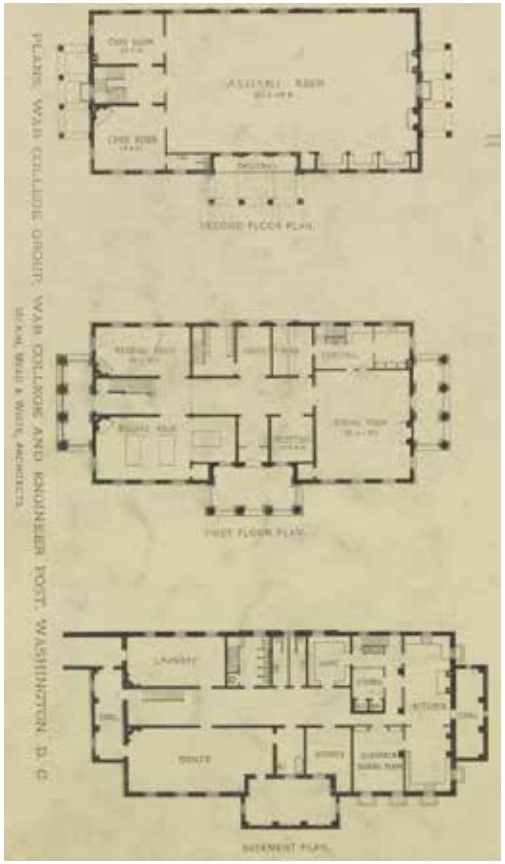
The project transitioned a former event space into a modern training and education space for the US Army's Inter-American Defense College, which included an innovation laboratory in the basement of the building and classrooms outfitted with state-of-the-art technology.

Classroom



Innovation lab

Using the original photography and drawings, the project team successfully recreated the original wooden entry door, shown below, which filled the whole frame and contextualized the dentals of the building. Additionally, the landscaping was restored to the original design intent, including lawn panels in the southern portion of the site and foundation plantings.



Original Design and Drawings by McKim, Mead & White

Post-Project Completion Images Showing Recreated Front Door and Landscaping

“Before” image of existing conditions entry glass door and transom

“After” image of wooden entry door recreated to match the original drawings

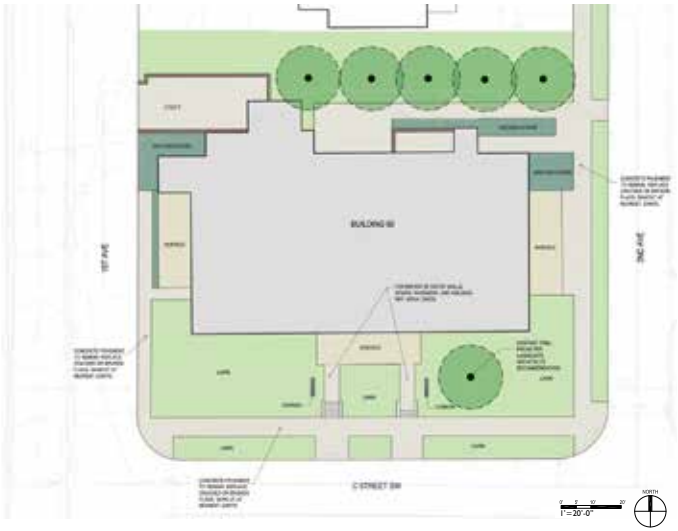
“Before” image of original location and existing condition of relocated and repurposed archway

“After” image of relocated and repurposed archway

“Before” image of existing conditions of foyer and mural

“After” image of foyer and mural

Site Plan



First-Level Floor Plan

LEGEND

SCALE: NTS

N

- CLASS/CONFERENCE
- OFFICE
- BREAK/STAFF ROOM
- CIRCULATION
- VERTICAL CIRCULATION
- RESTROOMS
- SERVICE
- STORAGE SHED

Basement-Level Floor Plan

LEGEND

SCALE: NTS

N

- CLASS/CONFERENCE
- OFFICE
- BREAK/STAFF ROOM
- CIRCULATION
- VERTICAL CIRCULATION
- RESTROOMS
- SERVICE
- STORAGE SHED

Second-Level Floor Plan

LEGEND

SCALE: NTS

N

- CLASS/CONFERENCE
- OFFICE
- BREAK/STAFF ROOM
- CIRCULATION
- VERTICAL CIRCULATION
- RESTROOMS
- SERVICE
- STORAGE SHED