

THE UNITED STATES NAVAL WAR COLLEGE

15-YEAR INFRASTRUCTURE, MODERNIZATION, AND MAINTENANCE PLAN

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Newport, Rhode Island
October 2022





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FROM THE PRESIDENT



On October 6th, 1884, Secretary of the Navy William E. Chandler issued General order No. 325 establishing the Naval War College. The first building of the College, Founders Hall, was donated to the Navy from the City of Newport, and presently houses the Naval War College Museum. Since 1884, our campus has grown to 13 buildings on 27 acres overlooking historic Narragansett Bay. Those who came before me made herculean efforts to maintain the infrastructure of our campus, but as you'd expect with buildings of this age, upkeep is constant and repairs are expensive.

In the following pages I provide a comprehensive review of our campus, its buildings, our challenges, and a 15-year vision of future facilities. Of particular importance to the College are two projects whose purpose and utility are integral to the future success of the College.

The first project, the International Forum, seeks to take advantage of the College's many internationally-focused programs and is designed to foster collaboration among Allies and Partners.

The second project, a Museum and Visitor Center, serves a dual purpose. First it allows the Museum and Archives to better serve the community of scholars who help us better understand the significance of the Navy in our Nation's history. Additionally, a new Museum and Visitor Center would broaden the Naval War College's community outreach and engagement by making our most prized possessions and artifacts more available to the general public.

In addition to these two new projects, I offer my priorities on maintaining our Flagship status within the Navy. This status has allowed us to consistently receive annual allotments of Sustainment funding in addition to biennial Restoration and Modernization funds for special projects, which are vital to the upkeep of our historic buildings. As important as these funds are, the College needs access to additional resources if we are to remain engaged and relevant to the public we serve. This 15-year plan provides a vision that postures the U.S. Naval War College for decades to come.

S. S. CHATFIELD Rear Admiral, U.S. Navy

NAVAL WAR COLLEGE CAMPUS

The Naval War College (NWC) campus covers approximately twenty-seven acres of waterfront property on Coasters Harbor Island, within the bounds of Naval Station Newport, Rhode Island. The eleven core academic buildings, consisting of 670K square feet of interior space, plus 103K square feet

of Parking for a total of 773K square feet of space our buildings contain offices, classrooms, conference and event areas, classified wargaming centers, operational planning trainers, four auditoriums, a learning commons/library, computer rooms, a museum, and designated international officer communal spaces.



International Forum

BUILT: FUTURE

The International Forum provides for a new 90,000 square foot facility which will include a purpose-built home for all international programs at the Naval War College. This encompasses the Naval Command College, the Naval Staff College and a co-use adjoining International Officer Wardroom. In addition, it will house several NWC groups and functions who operate in the international arena, to include the China Maritime Studies Institute, the Russia Maritime Studies Institute and the Stockton Center for International Law.

The International Forum will also provide the college with a much needed 125 seat conference center, 18 modern classrooms and student study/ collaboration rooms.

The building is planned for the location of the old steam plant (Bldg. 86) and provides a complimentary bookend to Luce Hall on the south end of campus. Cost is estimated at \$85M.



Museum & Visitors Center

BUILT: FUTURE

The U.S. Naval War College and the Navy's History and Heritage Command have a shared purpose in informing and educating the public on the Navy's history and influence in the Narragansett Bay area and beyond. The events of September 11, 2001, and subsequent force protection measures, severely impacted public access to the Naval War College Museum and impeded the Navy's ability to perform its outreach and education mission. Having the Museum located outside the perimeter of the Naval Station, but still on government property, will greatly enhance the public's access to important community and educational resources.

Relocating the Museum, Archives, Visitors' Center, and potentially the offices of the Naval War College Foundation, outside the perimeter of Naval Station Newport will serve several purposes. The Museum is currently located in Founders Hall, constructed in 1820, and the oldest building on campus. It does not provide

a proper climate-controlled environment and requires constant repair. Relocating the museum to a purpose-built, temperature-controlled facility will allow for proper display and storage of important historical artifacts. The Archives are currently housed in Mahan Hall, which, if vacated, could be used to expand the College's academic footprint in upper campus, allowing for new offices, modern classrooms, and collaborative spaces. Relocating archival collections to a new building would allow for greater access to a treasure trove of historical documents containing the history of the college and the Navy's presence in the Narragansett Bay region.

Additionally, integrating the current pass and ID office into a new Visitors' Center concept, with publicly accessible classrooms, will expand community outreach, allowing for a convenient gathering space for the Navy and the greater community to meet and connect.

Estimated Cost: \$40M



FOUNDERS HALL

Building number: 10 Built: 1820

Founders Hall is a National Historical Landmark, originally constructed in 1820 as the Newport Asylum for the Poor. The Secretary of the Navy established the U.S. Naval War College in Founders Hall in 1884. The College's second President, Captain Alfred Thayer Mahan, delivered lectures in Founders Hall from 1885 to 1889 on the importance of sea power to the United States. Mahan incorporated these lectures in his seminal work, *The Influence of Sea Power Upon History, 1660–1783*, published in 1890.

In 1974, the College leadership formally named Founders Hall and in 1978 the NWC Museum was established to feature prominent exhibits on the history of naval warfare and the naval heritage of Narragansett Bay. Today Founders Hall remains an active museum and is under the purview of the Naval Heritage and History Command (NHHC). Founders Hall underwent a major renovation in 1984, as well as structural repairs and a roof replacement in 2008, exterior porch repairs and replacement in 2011 and 2015, and upgrades to the entire HVAC system in 2016 to provide museum quality environmental conditions. A design is currently in progress to



address several building deficiencies including issues with the fieldstone façade and window systems, adding fire suppression, upgrading the fire alarm system, power and lighting, site improvements, and updating finishes. A future renovation project is currently unfunded but is being advocated by NHHC. There is the potential to execute scope specific minor repair projects over future fiscal years versus waiting until the full special project amount (\$3.1M) is available. Although the building still requires additional restoration and modernization, it currently suffices as a historical building and sustains the historical activity consistent with the mission of the College.

Last major upgrades:

- Cupola repairs completed in 2021
- HVAC upgrades in 2016.
- Porch replacement in 2011 and 2015.
- Structural repairs and a roof replacement in 2008.

Current projects:

None.

Long-term plan:

• Special project or prioritized minor repair projects for issues being addressed via in-progress design.



Luce Hall

Building Number: 1CHI Built: 1892

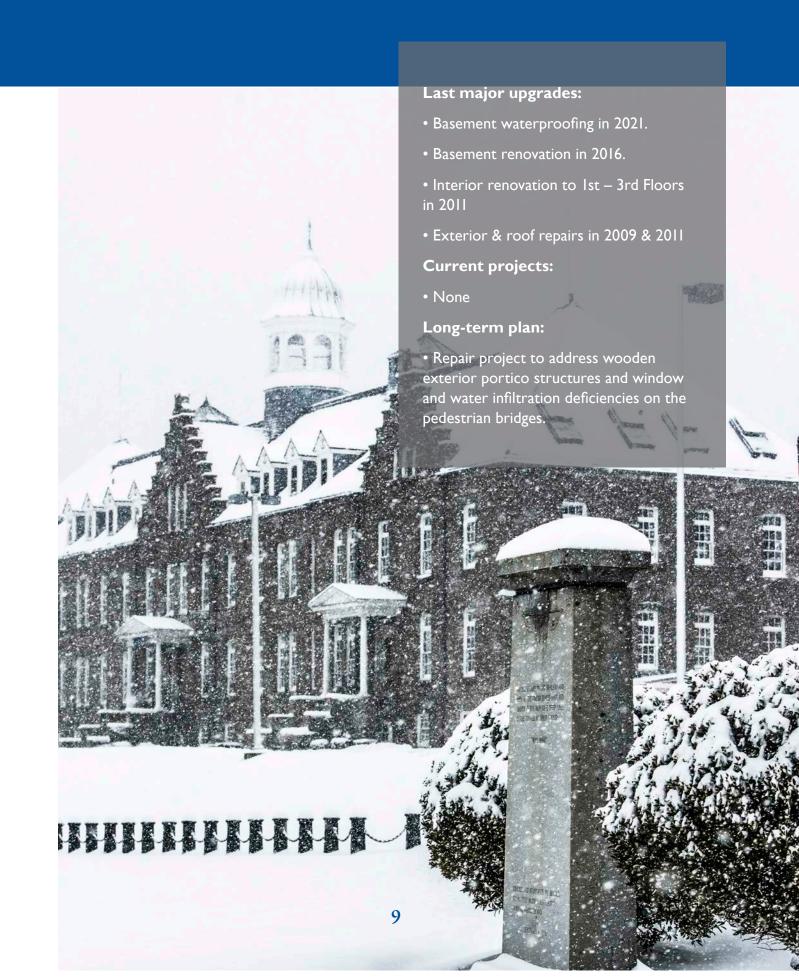
Luce Hall is named after the first President of the College, Rear Admiral Stephen B. Luce. Luce Hall was constructed in 1892; it is also a National Historical Landmark. A partial renovation of Luce Hall was completed in 1988 to restore the building's appearance to that of the early 1900s, and the Naval Command College wardroom underwent a \$275,000 renovation in 2006.

Between 2008 and 2011, full building restoration and modernization projects were completed to both the interior and exterior of

Luce Hall. This provided significant repairs and upgrades to the roof, granite façade, mechanical, electrical, fire protection/life safety, and telecommunication systems in addition to new interior finishes. In 2016, the basement of Luce Hall was renovated to provide additional office space.

Today, Luce Hall is home to International Programs, the Naval Command College, College of Leadership and Ethics, Stockton Center for International Law, the Naval War College Foundation, and several classrooms.





MAHAN HALL

Building number: 3 Built: 1904

Mahan Hall was constructed in three phases starting with the original NWC library completed in 1904. This was followed by two additions in 1938 and 1964 to add library focused support and storage spaces. Mahan Hall currently houses two of NWC's premiere event spaces with the historic Rotunda and ornate Reading Room as well as the NWC Archives and Historical Collection.

Since the mid 1960's Mahan Hall has only undergone several minor repair projects to address mechanical, electrical, life safety, and envelope system deficiencies. In 2010, a grant from the Naval War College Foundation provided a much needed facelift to the Mahan Reading Room by upgrading finishes and restoring original furniture. In order to resolve multiple water infiltration issues, the main slate roof was replaced in 2018 followed by minor finish upgrades to the Rotunda and Reading Room prior to hosting the Twenty-Third International Seapower Symposium. Due to limited investment, there are significant deficiencies associated with several of the major building systems (i.e., fused electrical panels, degraded telecommunications, and lack of



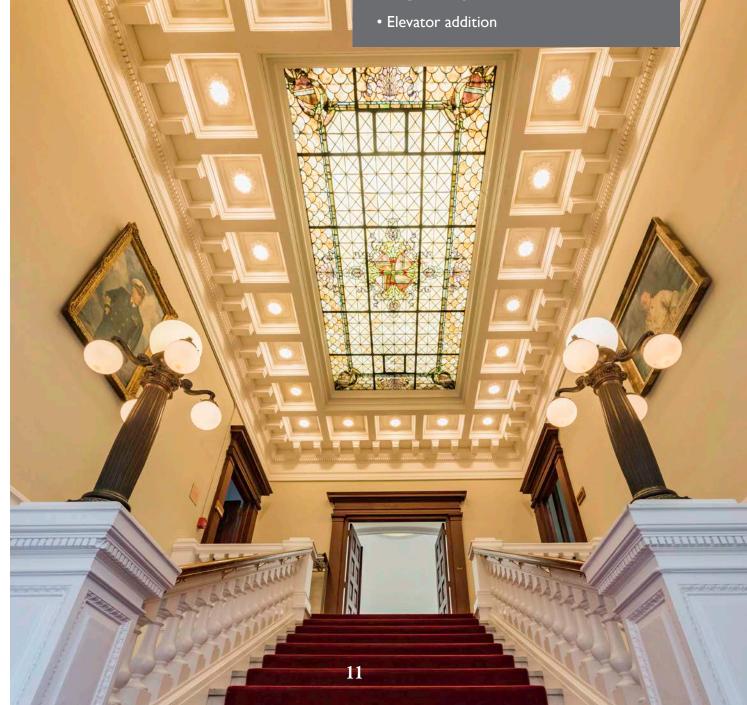
fire suppression). Finally in 2021, a major renovation project was awarded to provide the necessary upgrades to extend the building life span and meet the mission requirements of NWC.

Last major upgrades:

• Roof replacement in 2018.

Current projects:

• Mahan Hall renovation awarded in 2021 and scheduled to be complete in 2023.



PRINGLE HALL

Building number: 1A Built: 1934

Pringle Hall was funded by the Emergency Relief and Construction Act of 1932. It is a three-story granite structure that was built in 1934. Pringle Hall is a building of significant historical importance to the U.S. Navy and the nation. In July 1934, all of the U.S. Fleet was on station in Narragansett Bay for its christening as the nation's first wargaming facility. The Commander in Chief, U.S. Fleet, Admiral Joseph Mason Reeves, chose the occasion to deliver an address that marked the beginning of the Navy's transformation from a peacetime fleet to a force comprised of officers and men mentally and emotionally prepared

for war. The vast amount of the wargaming that shaped our Navy's thinking in the Pacific War took place in Pringle Hall. Pringle Hall currently houses the Naval Staff College, the College of Leadership and Ethics, several academic and mission support departments, a 280-seat auditorium, and a multi-purpose lecture room that support several International Programs courses.

Pringle Hall received a number of minor renovations and improvements between 1988 and 1992. As are most of the College's buildings, Pringle Hall is located on Narragansett Bay. The prevailing winds of summer and winter drive moisture and precipitation directly against the building,



which has, over the years, resulted in moisture penetrating the exterior wall cavity, due to the deteriorated mortar, destabilizing angle joints and cracking the granite. As a result, the steel structural members have become rusted and delaminated. The Navy allocated \$2.1 million on two special projects in 2003 to repair the degraded structural elements, repaired the granite dormers in 2006 for \$480,000 and completed emergency roof repairs valued at \$200,000 in 2006 to repair damage from a 2005 storm. In 2013, a \$9M interior and exterior renovation of Pringle Hall was completed which repaired and upgraded building envelope (roof, granite façade and windows), mechanical, electrical, life safety, and interior finishes.

Despite the recent upgrades, Pringle Hall has continued to experience water infiltration issues specifically associated with the roof above the Pringle Hall Auditorium stage. A minor roof and interior finishes repair project was completed in 2021 to minimize near future impacts. Further roof analysis and repairs, however, are required to eliminate the potential of leaks from significant storm events. In addition, due to funding and schedule limitations, all issues associated with the granite façade were not addressed during the last major renovation. A building envelope study and design is required to identify all structural and water infiltration issues and develop a cost-effective solution to extend the building's life span.

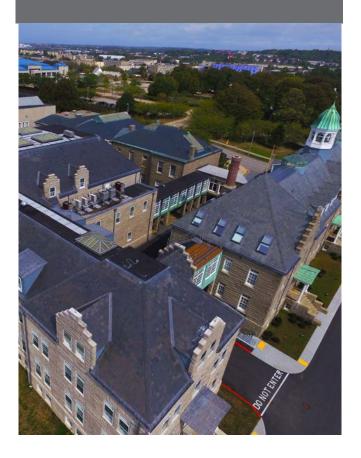
Last major upgrade:

• Pringle renovation in 2013.

Current projects:

 Repair project to address high humidity conditions in Pringle Hall Auditorium.

- Repair project to complete roof repairs above Pringle Hall Auditorium roof followed by upgrades to stage audiovisual, lighting, and curtain/rigging systems and repairs to stage decorative finishes.
- Conduct a study and design and execute repair project to address granite façade structural and water infiltration issues not addressed during 2013 renovation.



SIMS HALL

Building number: 29 Built: 1904

Sims Hall was built in 1904 as a barracks. It is a three-story masonry building comprised of three major wings connected by a central passageway. In the late 1940's and early 1950's the building began its transition from berthing to academic missions and eventually was transformed into the Naval War College's War Gaming hub. It was planned for demolition upon completion of the new wargaming facility (McCarty Little Hall) in 1999 and again in 2014, but the plan was not executed due to future mission requirements. For several decades, Sims Hall was the primary home for both the Navy Warfare Development Command (NWDC) and the Chief of Naval Operations' Strategic Studies Group (CNO SSG); both of these tenants, however, have since vacated. The Naval War College's utilization of Sims Hall has recently expanded. It currently houses the Maritime Operational Planner's Course, Humanitarian Response Program, and the Assist and Assess Team (from the College of Maritime & Operational Warfare), the NWC Special Security Office, the Naval War College Press, and several classrooms, as well as supporting our high security war gaming mission.

Sims Hall experienced limited repair and maintenance projects throughout late 1990's and early 2000's. Starting in Fiscal Year 2014, several repair projects were initiated to extend the building's life expectancy and meet emerging mission expansion. These included mechanical system upgrades for all three wings, East Wing architectural repairs, and exterior and roof repairs. In 2018, the entire building's fire alarm system was replaced, and in 2019 architectural upgrades were executed to support the Maritime Operational Planners Course relocation from Brett Hall.



The increased demand for high security war gaming necessitated a special project to renovate the majority of the Center Wing which was awarded in 2019 and is expected to be fully functional in the Spring of 2022.

Despite the building's age and condition, Sims Hall hosts many high levels events which will only continue to grow with the completion of the Center Wing War Gaming Facility. This will require continued attention (see projects highlighted on the right) to remain operationally viable and extend the life expectancy well beyond its current 120 years.



Last major upgrade:

- Sims Hall upgrades to support the Maritime Operational Planners Course relocation from Brett Hall in 2019.
- Sims Hall full building fire alarm system replacement in 2018.
- Exterior repairs and various mechanical system repairs/upgrades in 2014.

Current projects:

- Sims Hall Center Wing upgrades project in 2022.
- •Mechanical repair project for the cooling system supporting the high security conference room.
- Repair project to address structural and cosmetic issues associated with the masonry façade at the Sims Hall Center Wing Main Entrance.

- Transform the Northern gravel parking lot into a permanent lot and address issues with Hampshire Road and Sims Hall East Parking Lot.
- Repair project to upgrade electrical, mechanical, and finishes within the NWC Special Security Office and Conference spaces.
- Repair project to configure and upgrade all building systems in the West Wing to meet future mission requirements.
- Repair project to continue structural repairs to masonry façade.
- Repair project to update restrooms in all wings.
- Begin design project to upgrade East and West Wings.

McCarty Little Hall

Building number: 27 Built: 1999

McCarty Little Hall (MLH): The newest building on campus, McCarty Little Hall was completed in 1999. McCarty Little Hall supports all research, analysis, and gaming functions as well as some academic programs, and is designed to accommodate the technology essential to wargaming, e.g., multimedia presentations, video teleconferencing, and computer networking systems. The first floor contains a 160-seat, stadium-style auditorium and a large wargaming floor. The second floor includes four large and eight small game cells used for operational play, as well as the Decision Support Center and an executive conference room. The third floor houses the Joint Command Center, which is patterned after various operational command centers that

are used by joint task force commanders. Today, the room has the versatility to be reconfigured as needed to simulate real-world scenerios. The third floor also has a high-tech conference room, various classrooms, and administrative office space.

McCarty Little Hall also houses the Maritime Advanced War Fighting School, the Mahan Scholars, the Halsey Groups, as well as the Naval War College's main server room.

As a result of expedited construction, commissioning, and building acceptance, McCarty Little Hall has been plagued with numerous building deficiencies. Immediately after occupancy, the combination metal and rubber roofing system began to fail causing significant water infiltration. The majority of these issues were finally resolved following a full roof replacement project in 2012 and



repairs to the atrium skylight in 2019. In addition, providing a stable and comfortable work environment has been a challenge from the building's opening. There have been several small projects to improve and upgrade the mechanical systems to address these deficiencies. In 2019, as part of a basewide mechanical system upgrades project, the mechanical system was re-tested and balanced to improve overall building heating, cooling, and ventilation conditions. Utilizing the test data, the Naval War College is working with the Naval Facilities Engineering Command to develop future repair projects for continued improvement.

In order to ensure minimal interruptions to our telecommunication services hosted within the Naval War College's Main Server Room, a renovation project to provide back-up power, mechanical system redundancy, and life safety system upgrades was completed in 2020.

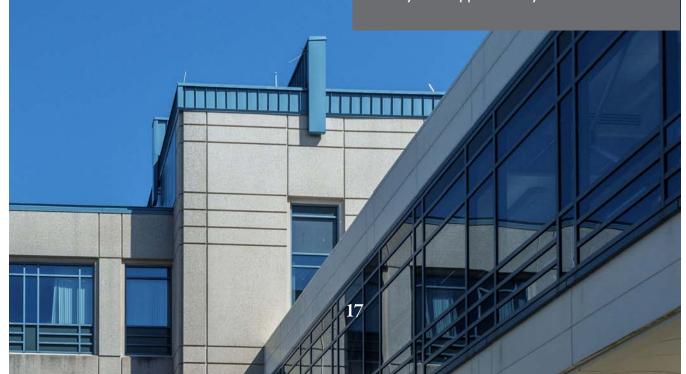
Last major upgrade:

- Naval War College Main Server Room upgrades in 2020.
- Roof & skylight replacement/repairs in 2012 & 2019.

Current projects:

• Repair project to address deficiencies associated the fire alarm system.

- Repair project to replace mechanical systems for the TV studio and maritime operations center.
- Repair project to upgrade localized mechanical system deficiencies identified during recent testing and balancing effort.
- Repair project to upgrade auditorium lighting and controls.
- Repair project to update auditorium finishes and seating.
- Repair project to upgrade specialty life safety fire suppression systems.



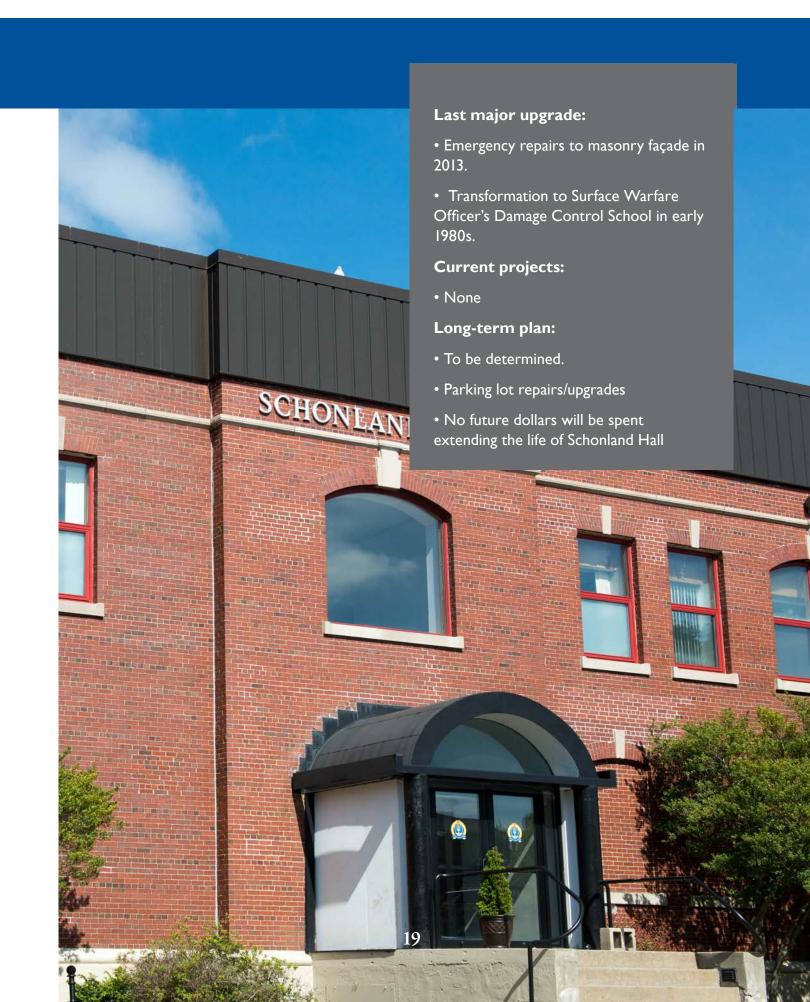
SCHONLAND HALL

Building number: 52 Built: 1918

Schonland Hall, originally built as a bakery and refrigeration plant in 1918, was acquired by the Naval War College in 2007. Prior to the Naval War College occupancy, it was converted to the Surface Warfare Officers Damage Control School in the early 1980's. Besides minor repair projects associated with the roof, radon mitigation, office space upgrades, and new localized heating and hot water, there have not been any significant renovation projects in the past 40 years. In 2013, an exterior repair project was executed

to address emergent structural deficiencies associated with the masonry façade. Due to the uncertainty of the building's future at the time, only limited repairs were performed to extend the building's life another five to ten years. In addition to the structural concerns, there are also significant issues with the building's cooling system as well as the domestic water supply. Based on these challenges, the Naval War College is beginning to evaluate options to relocate the current occupants (Comptroller, Contracting, and Facilities Departments) to necessitate the future demolition of Schonland Hall.



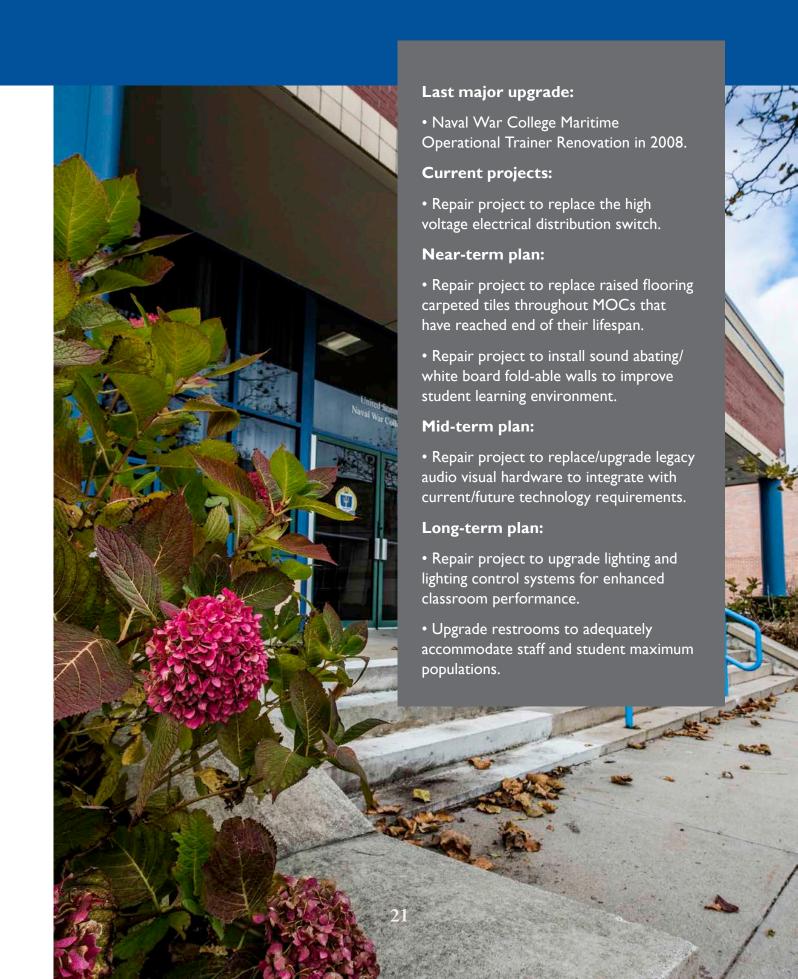


EVANS HALL

Building number: 1284 Built: 1986

Evans Hall, the former Surface Warfare Officers School Fast Frigate Combat Systems Trainer, was renovated in 2008 to support the Naval War College's new maritime operations mission. Evans Hall now contains several classrooms and two Maritime Operations Center Trainers (MOC-T) for the College of Maritime and Operational Warfare (CMOW), Since the Naval War College took occupancy, there have been several other repair projects including roof replacement (2009), and upgrades to the mechanical systems supporting offices and classrooms (2014), and replacement of exterior ductwork insulation (2021).





HEWITT HALL

Building number: 991 Built: 1976

Hewitt Hall, constructed in 1976 and named in honor of former NWC Student and faculty member Admiral H. Kent Hewitt, is the academic hub of the campus. It was originally intended to be the third of a five-building expansion plan, but the Department of the Navy canceled the fourth (a new library) and fifth buildings. The design phase of the Hewitt Hall expansion plan was nearing completion when the decision was made to terminate the plan. As a result, the library was incorporated on the original schedule, at the original cost.

Hewitt Hall has undergone numerous space modifications over the years including transforming dedicated student study space into staff and faculty offices and classrooms on the upper two floors to accommodate expanding college missions. In 2013, an accelerated military construction project was awarded to recapture this high demand student space and three years later in 2016, the lower three floors were transformed into the new Hewitt Learning Commons consisting of student study, computer, and collaboration spaces, the Eccles Library, IT Support Services, Dean of Students Office, and Teaching Excellence and Writing Centers. In addition,



the Learning Commons also includes a Café and several multi-function classrooms.

The upper two floors of Hewitt Hall house the majority of the academic classrooms (twenty-six in total) as well as offices for the College of Distance Education, Strategy and Policy, and Electives Departments.

In addition to the Learning Commons major renovation, Hewitt Hall has experienced several repair and maintenance projects including exterior façade repairs, roof replacement, and upgrades to electrical and mechanical systems. Despite the significant improvements in Hewitt Hall in the last 10 years, further investment is required to address numerous deficiencies on the upper floors where students spend the majority of their time on campus. These include removal of remaining asbestos-containing wall and flooring systems, upgraded mechanical, electrical, telecommunication, and plumbing systems, and replacement of worn and dated finishes. In addition, a project to replace the multi-story window systems is a top priority in order resolve continual water infiltration issues.

Last major upgrade:.

- Hewitt Learning Commons in 2016.
- Repairs to the exterior granite façade, roof, and mechanical system in 2013.
- Upgrades to the main electrical service in 2010.

Current projects:

None

- Renovation of the 3rd and 4th floors.
- Replacement of original multi-story window systems and exterior storefront doors.
- Replacement of 3-story window system is required to address continued water infiltration issues.

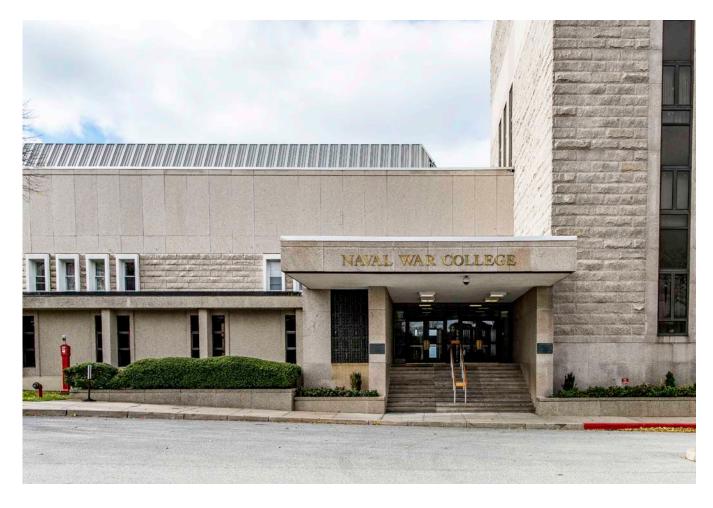


SPRUANCE HALL

Building number: 683 Built: 1972

Spruance Hall, constructed in 1972 and named in honor of World War II hero and former NWC President Admiral Raymond Spruance, is a four-level facility with the lower two levels consisting of a parking garage and auxiliary mechanical/electrical spaces. The main upper two levels accommodate an 827 seat auditorium with a seating expansion capacity up to 1,032, an assembly area, and

faculty and administrative offices located on the second floor. The College uses the auditorium daily throughout the year, for academic events, symposia, conferences, and formal ceremonies. The lobby of Spruance also functions as a forum for special events, conferences, and ceremonies. In 2009, the auditorium underwent a \$7.4M upgrade to an executive-level facility with state-of-the-art audiovisual capability as well as a full roof replacement. Subsequent projects have included replacing three main air handling



units (2013), upgrading the main electrical service (2014), repairing the exterior granite façade and lobby wood windows (2020), and most recently, structural and mechanical repairs to the parking garage (2022). In addition, the Naval War College Foundation gifted a new high definition video wall for the Auditorium in 2021, replacing the 1970's-era rear-projection system.



Last major upgrades:

- Structural and mechanical repairs to parking garage in 2022.
- Upgrades to the audio-visual projection system in 2021.
- Repairs to the exterior granite façade and lobby wood window systems in 2020.
- Upgrades to the main electrical service in 2014.
- Replacement of several main air handling units in 2013.
- Auditorium renovation including seating, finishes, and audio-visual upgrades in 2009.

Current projects:

• Repair project to provide stable temperature to the auditorium audiovisual control booth.

- Repair project to upgrade and incorporate cooling capability for the Lobby/Event area.
- Repair project to expand fire protection throughout the remainder of the building and upgrade the fire alarm system.
- Renovation project to improve aesthetics and performance of primary restrooms.

CONOLLY HALL

Building number: 686 Built: 1974

Conolly Hall, constructed in 1974 and named in honor of former NWC President Richard Conolly, is the home of numerous mission support departments, NWC leadership, two academic departments, executive-level classroom and conference space, and several academic classrooms. In addition, Conolly Hall also includes a two-level parking garage as well as a 37,000 square feet plaza overlooking Narragansett Bay (a.k.a. Colbert Plaza named

in honor former NWC President Richard Colbert). Up until recently, Conolly Hall has mainly undergone space layout modifications, finish upgrades, exterior and roof repairs, and minor isolated repairs to mechanical, electrical, and plumbing systems. Over the last 10 years, there have been several significant improvements including upgrading the high voltage main electrical distribution, refurbishing Colbert Plaza, repairing exterior granite façade and roof, and structural and mechanical repairs to the parking garage. Despite these recent projects, Conolly Hall



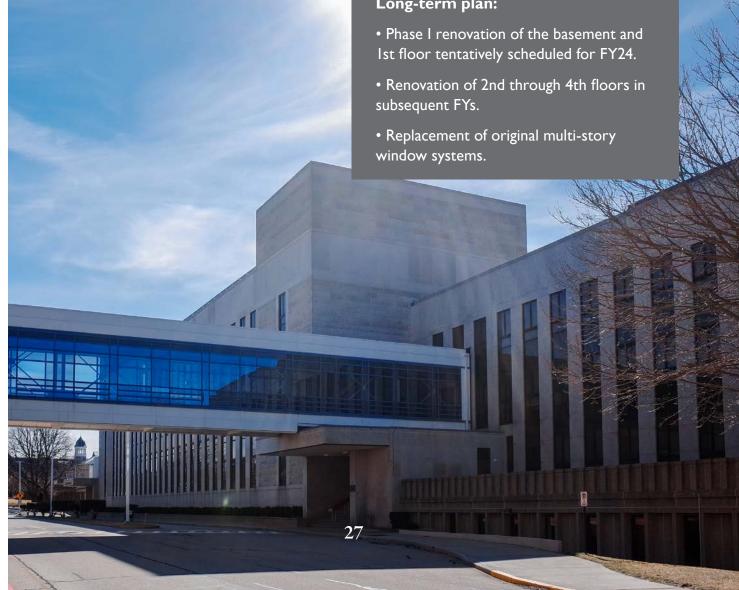
is in desperate need of a full building major renovation to abate asbestos-containing walls and flooring systems, replace deteriorating mechanical and plumbing systems, upgrade electrical and telecommunication systems, and install new life safety systems. The design for Phase 1 consisting of the basement and 1st floor was recently awarded in January 2022 with an anticipated construction award in FY24.



- Structural and mechanical repairs to parking garage in 2022.
- Repairs to the exterior granite façade and roof in 2020.
- Upgrades to the main electrical service in 2014.
- Upgrades to Colbert Plaza waterproofing and paver systems in 2014.

Current projects:

None



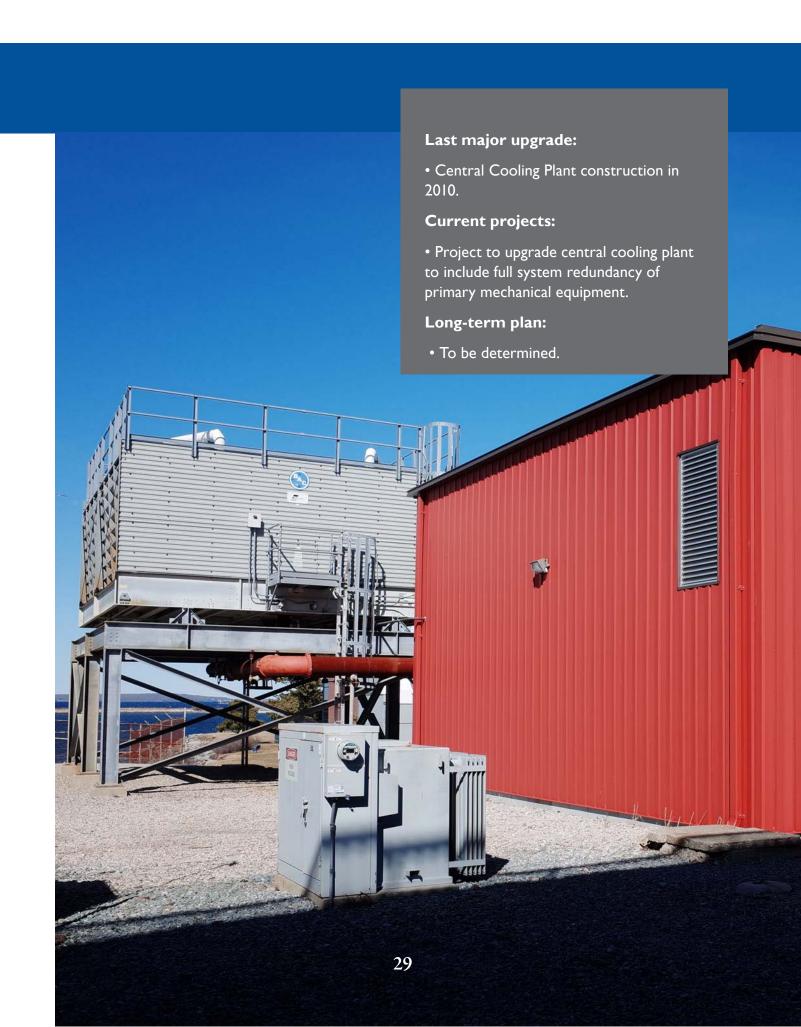
CHI CENTRAL COOLING PLANT

BUILDING NUMBER: 1284A BUILT: 2010

In 2010, as part of a base-wide energy savings performance contract (ESPC), a Coasters Harbor Island central cooling plant was constructed to provide primary cooling to numerous Naval War College and Surface Warfare Officer School's facilities including Evans, Sims, McCarty Little, Hewitt, Conolly, and Spruance Halls on the Naval War College Campus. The central cooling plant consists of one primary chiller and two single-building-

only space chillers, however this configuration has limited redundancy if issues arise. Based on the essential missions performed in serviced buildings and recent issues with the mechanical equipment resulting in extended cooling outages, it is a top priority of the Naval War College to upgrade the central cooling plant to add a second full capacity chiller as well as back-up auxiliary pumps. This upgrades project is currently in design and scheduled for FY22 award.







The motto of the Naval War College is "Victory through Sea Power."

The trident rising from the water symbolizes mastery of naval activities—its three times are evocative of naval warfare on sea, air, and land. The pilot wheel atop the shield alludes to the mission of the college—education in naval warfare. The wheel's eight spokes symbolize honor, duty, leadership, command, strategy, tactics, logistics, and weapons. The laurel wreath represents achievement of the mission.

