

WASHINGTON CANOE CLUB

3700 WATER STREET, NW WASHINGTON, DC 20007

HISTORIC STRUCTURE REPORT

SITE HISTORY, EXISTING CONDITIONS, AND
RECOMMENDATIONS FOR TREATMENT







EHT TRACERIES, INC.
PREPARED FOR WASHINGTON CANOE CLUB

Final Submission | July 2021

WASHINGTON CANOE CLUB

3700 WATER STREET, NW WASHINGTON, DC 20007

HISTORIC STRUCTURE REPORT

VOLUME I: SITE HISTORY, EXISTING CONDITIONS, AND RECOMMENDATIONS FOR TREATMENT

FINAL SUBMISSION, JUNE 2021

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Unless otherwise noted, all images were taken in November 2020 by EHT Traceries.

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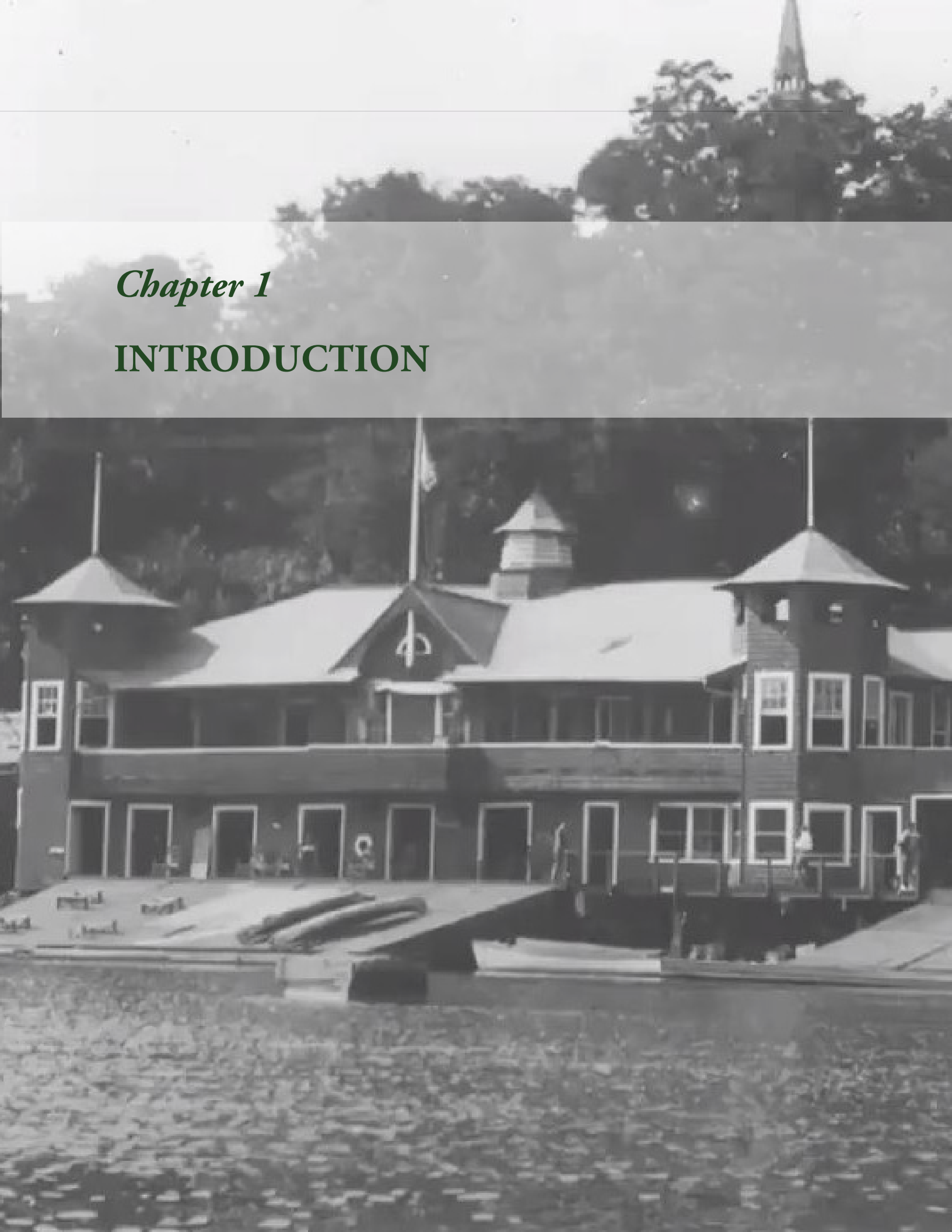
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Chapter 1

INTRODUCTION

INTRODUCTION



FIGURE 01 Washington Canoe Club, south elevation, looking north from dock.

The Historic Structure Report (HSR) for the Washington Canoe Club was prepared by EHT Traceries to inform and guide future rehabilitation and flood mitigation efforts. This HSR has been developed in accordance with the Sec*retary of Interior's Standards for the Treatment of Historic Properties* and *Preservation Brief 43: The Preparation and Use of Historic Structure Reports*. Historic Structure Reports were first developed by the National Park Service (NPS) in the 1930s, and since then have become a nationally recognized tool for the documentation and preservation of historically significant buildings and structures. Historic Structure Reports document the history and physical appearance of a building as well as providing guidance to property owners, architects, architectural historians, contractors, and regulatory review bodies prior to treatment. This HSR will be the guiding document to ensure responsible and appropriate preservation treatments for the rehabilitation and future maintenance of the Washington Canoe Club.

Building upon information developed in previous reports that were prepared to address the structural and preservation related deficiencies of the building, this HSR includes the following:

Volume I

1. Introduction and background information regarding the genesis and purpose of this report, as well as a summary of major findings presented in each of the following sections;

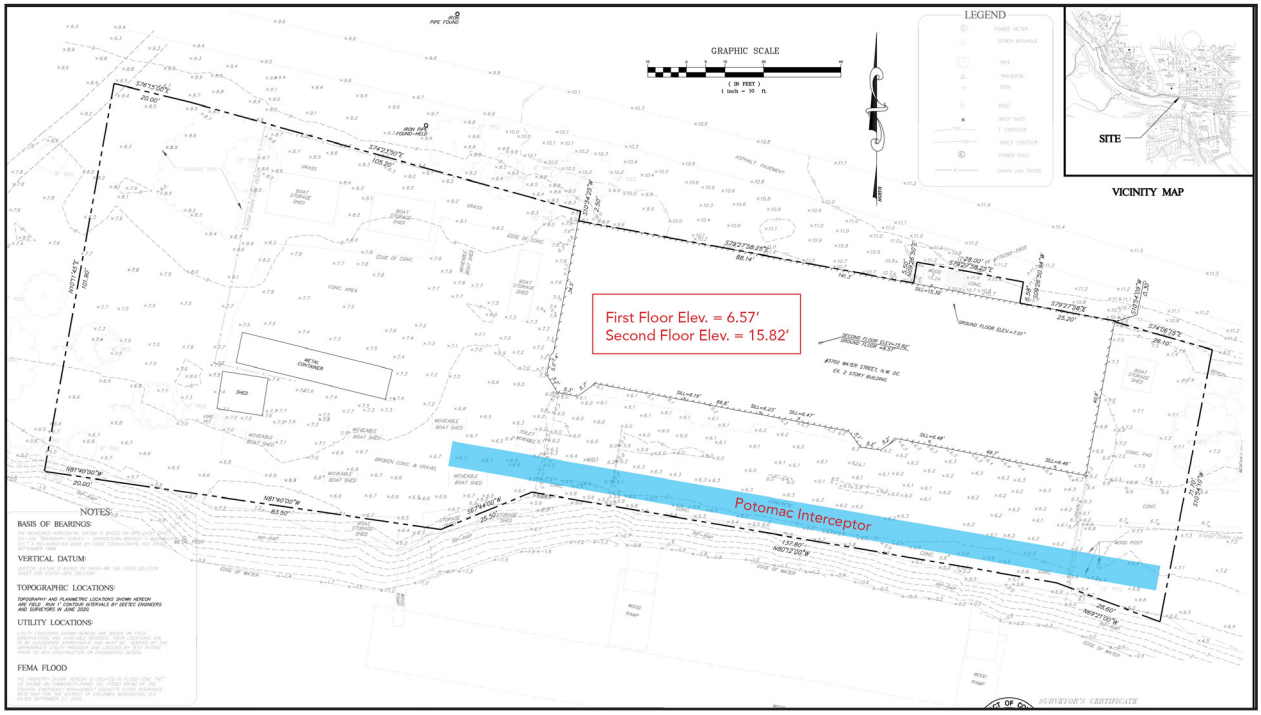


FIGURE 02 Topographic Survey of the Washington Canoe Club. Deetec Engineers and Surveyors, June 2020.

2. Detailed narrative of the building and site history, including development and construction history, evolution over time, and historical context;
3. Evaluation and identification of character-defining features;
4. Assessment of existing conditions;
5. Recommendations for treatment; and
6. Bibliography.

ADMINISTRATIVE DATA

SITE OVERVIEW

The Washington Canoe Club is located at 3700 Water Street, NW, at the western edge of the Georgetown neighborhood in Washington, District of Columbia as part of what was colloquially referred to as Boathouse Row. Prominently viewed from Key Bridge, it is located about 100 yards upstream (west) from the stone remnants of the Aqueduct Bridge. The building was constructed in three phases between 1905 and 1922 to accommodate the Washington Canoe Club. The building is located on Federal land within the boundaries of the Chesapeake and Ohio Canal National Historical Park. In 2019, a long-term lease agreement was signed between the National Park Service (NPS) and the Washington Canoe Club for the Club's continued use of the building.

PROJECT BACKGROUND

In 2017, the Washington Canoe Club retained Cox Graae + Spack Architects (CGS), a Washington, DC-based architectural firm, to develop plans for the full rehabilitation of the severely deteriorating building. Importantly, their plans incorporate flood mitigation to elevate the building above the floodplain to prevent future water damage. The scope of the rehabilitation project includes both exterior and interior renovations to support the Washington Canoe Club's continued use of the building. The HSR, requested by NPS, along with a future Cultural Landscape Inventory, will provide the information necessary to inform decision making about the significance, integrity, and treatment of the Washington Canoe Club.

PROJECT SCOPE AND METHODOLOGY

The purpose of a Historic Structure Report is to provide a compilation of the findings of research, investigation, analysis, and evaluation of a historic building. In addition to an existing conditions survey and documentation, this report will synthesize and update the work completed by the National Park Service and various consultants over the past decade. This HSR will serve both as a record document of existing conditions as well as a guide for decision-making in the future, both for major projects and for routine building maintenance. The HSR effort began in the fall of 2020 and the report was completed and presented to the Washington Canoe Club in the winter of 2021. The evaluation and analysis in this report focuses primarily on the building and its immediate surroundings.

The project methodology included the following:

Document Review and Additional Research: EHT Traceries reviewed all relevant research and planning documents created to date, including but not limited to all previous studies, assessments, and historic documentation. These documents serve as the basis for this report. Traceries worked with the Washington Canoe Club and Cox Graae + Spack to identify any document deficiencies during the review of previously gathered documents. Limited research was conducted to fill in the gaps and gather additional photographic documentation. Additional research was conducted as necessary.

Condition and Integrity Assessment: EHT Traceries conducted a survey of the building exterior and interior in the fall of 2020 to identify and photograph existing conditions. By comparing the findings of this survey against previous surveys, EHT Traceries confirmed and updated the condition and integrity assessments of previously identified historic features.

Significance, Evaluation, and Preservation Zoning: This section utilizes the information presented in existing National Register documentation. Preservation zone diagrams were developed to reflect the varying levels of architectural significance and integrity throughout the building.

Treatment Recommendations. Based on the evaluation of historical and architectural significance, condition, and integrity, treatment recommendations were developed for the property. Within the framework of an overall *Rehabilitation* treatment, both a general

preservation philosophy and specific feature-based treatment recommendations were developed. The recommendations addressed physical deterioration throughout the building, preservation best practices, and priorities for the preservation of the building.

Document Production. This report was drafted and reviewed internally by EHT Traceries and reviewed by the Washington Canoe Club, CGS, NPS, and the DC Historic Preservation Office. The final document will be made available in both printed and digital formats for ease of reference.

SUMMARY OF FINDINGS

Overview of Site and Building History[1]

The Washington Canoe Club, completed in 1905-1906 in the Shingle style for use by the newly chartered Washington Canoe Club, sits along the Potomac River and south of the Chesapeake and Ohio Canal. Original building permits identified George P. Hales as the architect and R. Z. Hazell & Bro. as the builder of record. When constructed, it stood on pilings to accommodate water access for the paddlers from the clubhouse. The original section of the building was two stories in height with a 40' by 60' footprint. From the time of its completion, the building served as a social center for clubhouse members as well as a storage space for equipment and canoes.

In 1909, Hales designed an addition to the boathouse. The builders contracted for this work were Howison & Skinker. The two-story addition, which expanded the boathouse to the east, included additional space for social functions, as well as a dressing room and bathroom for ladies use on the second floor. On the first floor, the expansion allowed for a grill room and a work room for canoe repair. Descriptions of the building also hailed the verandas and the corner towers and called attention to the shingled exterior that characterized its appearance and distinguished it architecturally.

A second addition to the boathouse -- a three-bay extension to the east -- was constructed between 1918 and 1922 to provide additional canoe storage on the first floor and a women's locker room on the second floor along the northern edge of the building. The women's locker room was expanded at some point between 1936 and 1939. The southern two-thirds of the addition was used as a roof deck, though this was covered in the mid-1970s and made into a workroom. In 1992, as changing canoe standards necessitated the need to update the storage, two club members removed the entire structural support system in the East Boat Storage Area, including the interior boat storage racks and the floor of the second floor workroom.

Throughout its existence, the boathouse has required several repairs to respond to damages incurred during flooding events and in response to civic improvements, such as the Potomac Interceptor Sewer System installation. Most significantly, the original proportions of the building's first story has been compromised.

In 2010, the National Park Service, owner of the land on which the Washington Canoe Club is located

1 This section utilizes and builds upon the historic context included in the Historic American Buildings Survey (HABS) report (No. DC-876) written by Virginia B. Price in 2013.

as well as the building itself, determined that the building was no longer structurally sound. While temporary stabilization measures were taken, the building, with the exception of the first floor East Boat Storage Area, has remained unoccupied since that time.

Overview of Significance

The Washington Canoe Club was designated as an individual landmark within the DC Inventory of Historic Sites in 1973 and was listed in the National Register of Historic Places (NRHP) in 1990. It is also considered a contributing resource to the Georgetown Historic District and Potomac Gorge.

The NRHP documentation identifies the period of significance as extending from 1904 through 1939. The NRHP identifies 1904 as a significant date as it corresponds to the year that the Washington Canoe Club was established. The NRHP further identifies 1924 as a significant date because it was the year that the Washington Canoe Club members prevailed in national competition to represent the United States at the Olympics.

This chapter also presents preservation zone diagrams to document the significance and integrity of spaces throughout the building.

Overview of Existing Conditions

The Washington Canoe Club is generally in poor condition, with some components being beyond repair. The only exception to this is the East Boat Storage Area.

In 1992, club members replaced a majority of the structural support system in the East Boat Storage Area. In 2010, the building was deemed structurally unstable. Between this time and 2013, NPS installed temporary structural stabilization measures to strengthen the damaged framing and to secure the structure. These measures enabled the partial re-opening of the boathouse to club members; presently only the East Boat Storage Area is accessible. Further stabilization is required.

Beyond the building's structural deficiencies, the building does not meet current code requirements for egress, accessibility, and life and safety. Further, the existing structure is located in the flood zone of the Potomac River. The building has experienced impacts from several severe floods throughout its history, with the worst taking place in 1936 when water levels reached the height of about fifteen inches above the second floor level of the boathouse.[2] The Federal Emergency Management Agency (FEMA) has established flood zones for the Potomac River and this property is delineated in the most severe of these areas.[3]

Overview of Treatment Recommendations

This section defines the preservation philosophy for the Washington Canoe Club and outlines specific treatment recommendations for all building features. The recommendations within this chapter follow the *Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*. Because

2 Historical data indicates a maximum flood water height at the Little Falls measuring station of 28.1 ft. on 3/19/1936.

3 Extracted from Baird Smith, FAIA, *Washington Canoe Club Boathouse Rehabilitation 2015 : Part I - Design Parameters,* March 15, 2016. .

this HSR is being prepared concurrently with the rehabilitation design process for the Washington Canoe Club, these recommendations will integrate the treatments and alternatives currently being proposed for the building with preservation best practices. Doing so will document the decision-making process for major and minor interventions for the Washington Canoe Club rehabilitation.

This report recommends an overall Rehabilitation treatment approach, reflecting the identified use of the building and its varying degrees of historic integrity, significance, and condition. Rehabilitation allows for the preservation of significant historic features while also allowing other planning and programmatic shortcomings to be addressed.

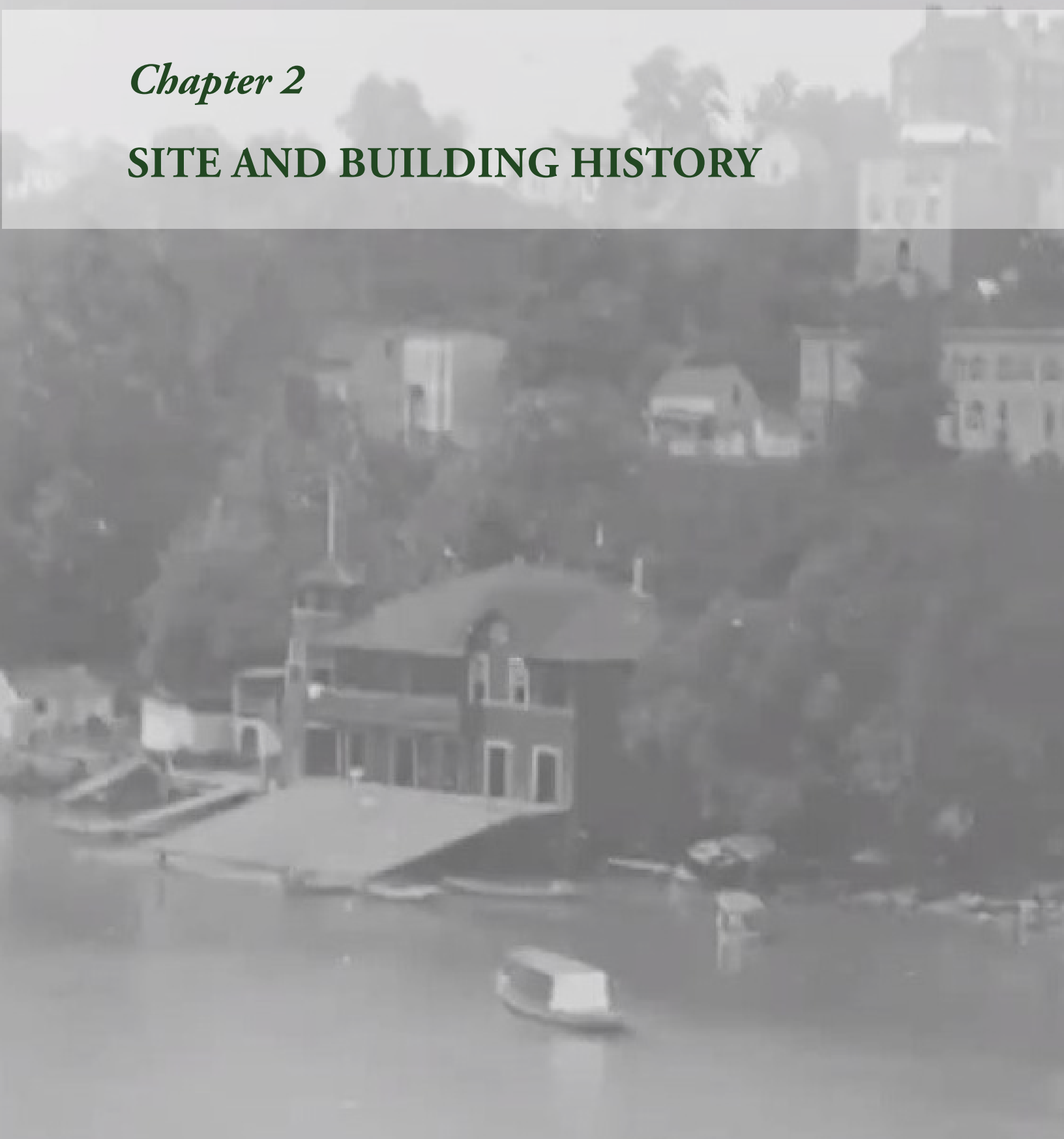
List of Common Abbreviations

B&O	Baltimore & Ohio
C&O	Chesapeake and Ohio
CGS	Cox Graae + Spack
DC SHPO	DC State Historic Preservation Officer
FEMA	Federal Emergency Management Agency
HPO	DC Historic Preservation Office
HPRB	DC Historic Preservation Review Board
HSR	Historic Structure Report
NPS	National Park Service
NRHP	National Register of Historic Places
WCC	Washington Canoe Club

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Chapter 2

SITE AND BUILDING HISTORY



HISTORIC CONTEXT

EARLY RIVER RECREATION AND THE RISE OF BOAT CLUBS IN WASHINGTON, DC

Following the Civil War, as the American economy shifted from agrarian to manufacturing pursuits, Americans began to rethink their attitudes toward lifestyle, specifically with regard to leisure and the outdoors.[1] A more concentrated population and increased leisure time for many set the stage for the development of sports and recreation that are now considered integral to American life.[2] Organized sports, including football; baseball; rowing; and cycling, became nation pastimes. A growing awareness of the costs associated with a more sedentary city life also helped created enthusiasm for exercise in the outdoors, and numerous fraternal organizations formed around the country. The introduction of streetcars and commuter rails made the country -- the outdoors -- accessible to city dwellers who took to mountain-climbing, fishing, hunting, and camping.[3]

Canoeing was very much a part of this national movement. While boats similar to canoes and kayaks had been used for millennia, their recreational use in both Europe and America boomed in the late nineteenth century. Canoeing was popularized by John MacGregor, a Scottish lawyer who toured Europe in the "Rob Roy," a 4.57 meter "canoe" (technically a kayak) of his own manufacture. During the 1860s and 1870s, MacGregor toured Europe in the "Rob Roy" and described his travels in a series of widely read books. In 1867 the Royal Canoe Club, founded in England in 1866, held its first flatwater race and began annual competitions in 1874.[4] In the United States, the New York Canoe Club was founded in 1871, followed by the American Canoe Association, the first national canoe association in the county formed in an effort to foster communication amongst the growing number of local clubs, in 1880.[5]

Washington's sultry summers and its location along the Potomac and Anacostia Rivers made canoeing a particularly appealing activity. The earliest known boat club in the region was the Falcon Club, formed in 1844. During the second half of the nineteenth century, many more clubs formed, including: the Gazelle and Undine clubs (late 1840s), Fletcher's Boathouse (c. 1860), the Potomac Boat Club (1868), the Analostan Club (1868), the Anacostia (later Washington) Club (1869), the Columbian Boathouse (1880), Sycamore Island Canoe Club (1885), High Island Canoe Club (1899), and Dempsey's Boathouse (1903).[6] The boathouses ranged in size and design based on use: some were built merely to store the boats, while others were a center for social activity. The members of some of these boathouses paddled canoes and kayaks, while other clubs featured rowing.

Despite the fact that the Washington Canoe Club is currently the only structure west of the abandoned

1 Christopher N. Brown, *Washington Canoe Club* (Charleston: Arcadia Publishing, 2020), 9.
2 National Register of Historic Places, Washington Canoe Club, Washington, DC, National Register # 90002151.
3 Dulles, p. 201-202; Washington Canoe Club, National Register Nomination.
4 Endicott, p. 1.
5 Toro, p. 2; Endicott, p. 4.
6 "Pioneer Potomac Boat Clubs," *The Evening Star*, 10 August 1941, Peabody Room, DCPL; "The Balmy Days for Clubhouses Along the Patowmack," and "Boat Club Reviving Old Potomac Rivalry," n.d., vertical files, Peabody Room, DCPL.



FIGURE 03 The Sycamore Island Canoe Club as it appeared in the mid-twentieth century. Founded in 1885, the club is located on the Potomac several miles upriver from Washington DC and the Washington Canoe Club. Christopher Brown, *Washington Canoe Club*.



FIGURE 04 1900s postcard of the Potomac River near Haines Point showing people in canoes and small boats enjoying the water. Christopher Brown, *Washington Canoe Club*.

Aqueduct Bridge, for much of the first half of the twentieth century it was surrounded by various buildings, first a feed mill and a warehouse-type structure, and later by a sheds, docks, and other boathouses. This section of the Potomac River was specifically attractive to boat and paddle clubs because members sought to avoid the marshy conditions downstream (beyond what is now Memorial Bridge) and the traffic and pollution emanating from Georgetown's industrial waterfront. Boathouses that neighbored the Washington Canoe Club included:

- Dempsey's Boathouse, the Washington Canoe Club's eastern neighbor. Built next to the Aqueduct Bridge in 1903 by Georgetown University's rowing coach Patrick Dempsey, the boathouse expanded approximately 200 feet upriver in the 1910s to accommodate as many as 1,000 canoes.[7] By 1922, Dempsey's Boathouse featured a two-story building with a long boat shed and ramps to the water and a single-story building abutting the Washington Canoe Club's East Bay addition. The single story building was replaced by a two-story building by

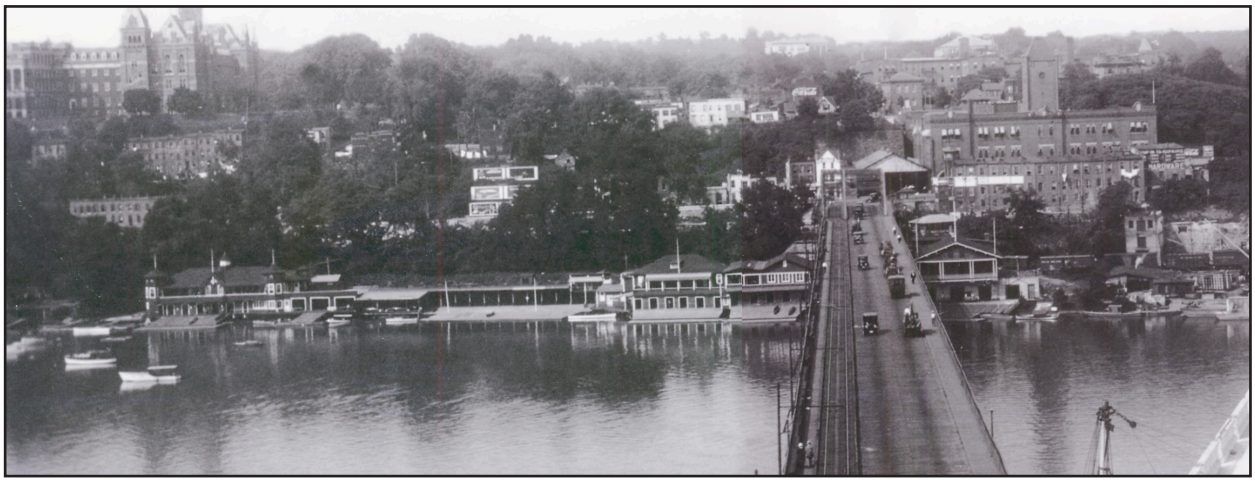


FIGURE 06 Image taken from Virginia looking north to the western end of the crowded Georgetown waterfront. The Washington Club is located at the left end of this image, seen between the one-story shed belonging to Dempsey's Boathouse to the east and several smaller sheds to the west, 2 September 1922. The Potomac Boat Club is visible directly to the east of Aqueduct Bridge. The People's Archive at the DC Public Library.



FIGURE 05 Washington Canoe Club, centered, with Dempsey's Boathouse addition seen to the right and Warner's Canoe Club to the left, c. 1925. Brown, *Washington Canoe Club*.

7 Brown, *Washington Canoe Club*, 37.

1925. By the 1950s, the buildings had fallen into disrepair, and in 1961, the main boathouse succumbed to a catastrophic fire.[8]

- The Potomac Boat Club constructed its third and current boathouse immediately east of the Aqueduct Bridge in 1908.
- By 1925, a long shed with ramps connecting to the River had been constructed directly to the west of the Washington Canoe Club for use by Warner's Canoe Club. It was subsequently destroyed in the 1936 flooding event.[9]

By the 1960s, the Washington Canoe Club was the only remaining building west of Key Bridge. Before any of the land could be redeveloped, the Chesapeake & Ohio (C&O) Canal National Park was designated in 1971, thereby protecting the Potomac waterfront and area around the C&O Canal from future building construction.

BOATHOUSE ARCHITECTURE

The first boat houses were utilitarian frame buildings meant only as a temporary place to store boating equipment. These structures were gradually replaced with frame and masonry buildings and were often architect-designed houses, such as those at Boathouse Row along the Schuylkill River in Philadelphia and along the Charles River in Boston. The boathouses present in Boathouse Row, for instance, are all examples of architectural styles prevalent during the late nineteenth century, representative of the shift from utilitarian to eye-catching architecture of a variety of styles. Boathouses became a place for architects to showcase their designs, as they were highly visible at races because of their location along the waterfront. Thus, characteristic elements of the building styles were confined to the façade that fronts on the water. Together, boathouses along a shore line create a "riverscape," similar to townhouses in an urban setting.



FIGURE 07 Boathouse Row along the west bank of the Schuylkill River in Philadelphia, undated. Library of Congress.

Because boathouses were typically owned by organizations or clubs, the layout of space within the boathouse reflected social and community involvement. In addition to boating activities, clubs often sponsored events such as dances, dinners, and various other gatherings. To provide the space necessary for these events, boathouses were frequently designed with rooms for social or business functions, such as ballrooms and board rooms. Additionally, as boathouses were largely unconditioned, many

8 Brown, *Washington Canoe Club*, 48.
9 Brown, *Washington Canoe Club*, 45.

(including the Washington Canoe Club) featured fireplaces or wood stoves to allow members to gather at the club house year-round.

THE WASHINGTON CANOE CLUB: CAMARADERIE AND COMPETITION

The Washington Canoe Club was chartered in 1904 for "mutual improvement, the promotion of physical culture, and the art of canoeing."[10] Once chartered, the quest to design and build a club house commenced. As part of the fundraising efforts, club members participated in a subscription contest to *The Washington Post*, and grabbed the first prize money of $1,000. They put on a minstrel show at Poli's Theatre (demolished) that raised an additional $700. A neighboring club, the Old Dominion Boat Club in Alexandria, sponsored a dance for them as well. With money to build, the Washington Canoe Club consulted with architect George P. Hales for the club house. Hales was a paddler from Boston, Massachusetts, and his design for the Washington Canoe Club was said to be an adaptation of the boathouses seen along the Charles River.[11]

Several of the founding members of the Washington Canoe Club had previously belonged to the rowing-focused Potomac Boat Club; however, they launched the Washington Canoe Club to concentrate on paddle sports, such as canoeing and



FIGURE 08 Washington Canoe Club outfitted for a regatta, c. 1920. Brown, *Washington Canoe Club*.



FIGURE 09 Photograph of Harry Knight, Jr. (future Olympian) and Elizabeth Smith competing in a Mixed Tandem race for the Washington Canoe Club, c. 1921. Washington Canoe Club.

10 While the original charter of the Washington Canoe Club barred membership of women, at the time of writing this report, formal language barring membership to minorities has not been found. That said, records reveal that the membership was originally limited to Caucasian males.

11 Washington Canoe Club, HABS No. DC-876, December 2013; DC Historic Preservation Office, Permit No. 0794, 18 September 1905; "Paddlers of Canoes," The Washington Post,3 September 1905, S4.

kayaking.[12] At the time of the Club's establishment, membership was limited to 100 men. Women enjoyed the club as guests, typically as passengers on the recreational canoes, cheering on the men in competitions, and participating in dinners and dances. Despite the fact that women were not granted early membership, the original building did include a "ladies' room", complete with a ceiling fan, in the southern portion of the second floor off the ballroom.[13]

As with other clubs, the Washington Canoe Club sponsored activities in addition to canoeing. Summer activities included boating excursions, regattas, lantern parades, swimming matches, and dining events. During the winter months, the ballroom was used for ladies' nights, dances, receptions, minstrel shows, and other theatre parties.[14]

As the social aspects offered by the club increased, so too did the need to expand the clubhouse's footprint. In 1909, Hales designed an addition to the building's east elevation. The addition provided symmetry to the building. Programmatically, several spaces were added, including a kitchen, grill room (a dining room), and board meeting rooms.

From Recreation to Olympics

In a pattern typical of country and athletic clubs of the late-nineteenth and early-twentieth centuries, the Washington Canoe Club not only provided activities to fill increased leisure time, but also helped to set standards for competition in amateur sport.



FIGURE 10 Stand up paddle race, 1922. Dock of the Washington Canoe Club seen in the foreground. Washington Canoe Club.

In 1915, the Washington Canoe Club, along with the Potomac and Analostan Clubs and the Maryland Swimming Club in Baltimore, joined together to form the Southern Division of the American Canoe Association with the goal of entering national and international competitions. The following year, the Washington Canoe Club won the fourteenth annual regatta of the Inter-club Canoe Association, and by 1920, members of the Washington Canoe Club dominated the sport. As the Washington Canoe Club experienced more and more success, interest in fielding an Olympic team developed. At the time, six

12 Blaise Rhodes to Virginia B. Price, personal communication, 13 August 2013; Ernie Brooks to Virginia B. Price, personal communication, 13 August 2013.

13 Brown, *Washington Canoe Club*, 49; "Washington's Latest Club: Success of New Canoe Organization Seems to be Assured," *The Washington Post*, 31 December 1905.

14 The Washington Canoe Club regularly hosted minstrel shows through its first decade of existence. Although research to date has not uncovered specific language of segregation, the shows are a good indication of the racial biases held by club members.

members of the Washington Canoe Club -- Harry Knight, Karl Knight, James Burch, Reginald Rutherford, Charles Wagner, and Fred Bammon -- held national titles.[15]

In the 1920s, paddling reached new prominence as a sport and the Washington Canoe Club hit its stride. As the Club began to seriously compete, they began to allow women athletes to join the club and participate in competitive races. In order to show their support for their female counterparts, an addition that included a women's locker room was added around 1920.[16]



FIGURE 11 1924 Olympic double-blade paddling team at the Washington Canoe Club. Washington Canoe Club.

In the first half of the twentieth century, clubs played a more direct role in the Olympic competition due to the fact that the Olympic teams were determined by national races among clubs with the winning club representing the United States, rather than a team composed of individuals brought together for the specific purpose of Olympic training as they are today.

In 1923, an international federation was formed to set dates for regattas and codify classes of boats. Standards for racing class canoes and kayaks were then set as single, double, and four-man kayaks (K-1, K-2, and K-4) and single and double Canadian canoes (C-1 and C-4). At the encouragement of the Washington Canoe Club, the international organization succeeded in placing flatwater canoeing in the 1924 Paris Olympics as a demonstration sport, the preliminary step to full Olympic status. Four members of the Washington Canoe Club prevailed in national competition to represent the United States team, winning six medals.[17] Because too few countries participated in the sport at the Olympic level, it was not officially recognized as an Olympic sport until 1936. During the intervening years, however, the Washington Canoe Club swept national championships and major events.[18] Additionally, the Washington Canoe Club double-blade four was undefeated for six years during the 1920s, and the club was designated a "Center of Excellence" by the U.S. Olympic Committee.[19] Members of the Washington Canoe Club won places on every competing U.S. Olympic team from the 1936 games through 1996, the most of any other paddling club.

15 "Feature Canoe Race to Washington Club," The Washington Post, 31 May 1916, 12; "Washington Paddlers May Be in Olympics If Canoe Contests Are Added to the Program," The Washington Post, 8 January 1920, 9; Washington Canoe Club, HABS No. DC-876, December 2013.

16 Brown, *Washington Canoe Club*, 49.

17 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

18 "Washington Oarsmen to Compete in Olympics," The Washington Post, 23 March 1923, S1; "Washington Canoe Club in First Drill," The Washington Post, 6 April 1924, S1; Canoeists Making Plans to Enter Olympic Games," The Washington Post, 20 April 1924, S2; Washington Canoe Club, HABS No. DC-876, December 2013.

19 Dacy, 393; Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

Women's kayak events were added to the Canoeing National Championships in 1938 and to the Olympics in 1948. In 1952, Ruth DeForrest became the first female kayaker to qualify for the U.S. Olympic team; however, due to disagreements about training, budgets, and chaperones, the sport's governing body retracted her qualification, thereby denying her the opportunity to participate.[20] During the 1960 Rome Olympics, the U.S. finally succeeded in sending a woman kayaker -- again associated with the Washington Canoe Club -- to the sole women's event.[21]

The 1960s brought major changes to the paddle sport, particularly for women. Not only were women finally offered membership to the Club, but beginning in 1960, women affiliated with the Washington Canoe Club were on Olympic teams continuously through 1996.

SITE HISTORY

CONSTRUCTION OF THE WASHINGTON CANOE CLUB[22]

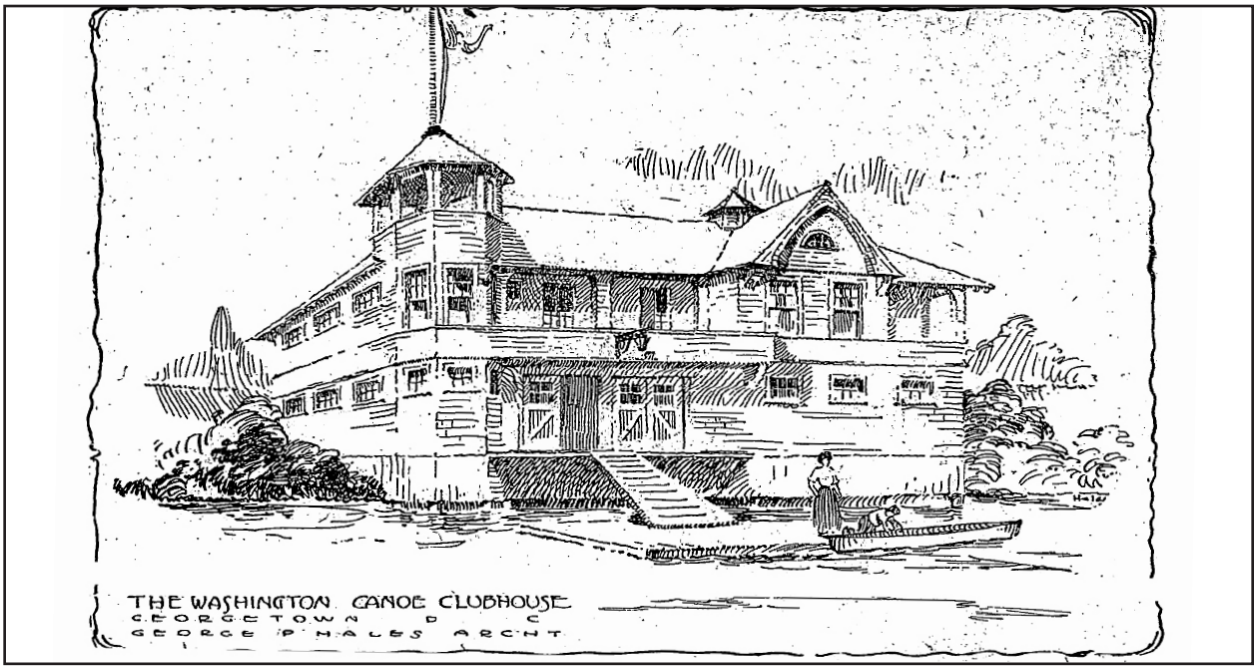


FIGURE 12 Sketch of the Washington Canoe Club. *The Washington Post*, September 3, 1905.

Original Construction

In 1905, *The Washington Post* announced that the "Washington Canoe Club, formed a few weeks ago, will begin to break ground for a clubhouse to be built about 100 yards above the Aqueduct Bridge,

20 While DeForrest was involved with the Washington Canoe Club, she was not granted full membership due to the rules and regulations Club.

21 Brown, *Washington Canoe Club*, 66.

22 This section is largely taken from Washington Canoe Club, HABS No. DC-876, December 2013.

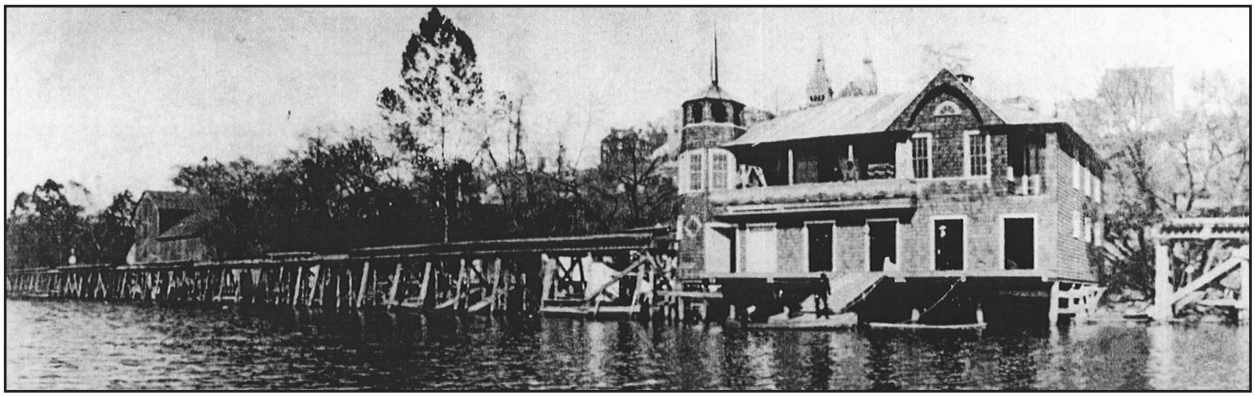


FIGURE 13 The Washington Canoe Club shortly after completion. Abandoned elevated railroad trestle extant on either side of the boathouse, c. 1906. The building's principal facade is the south (river facing facade). It incorporates several aspects of the Shingle style: uninterrupted shingle siding, complex massing, and octagonal tower Georgetown University Archives.

between the [C&O] Canal [towpath] and the River."[23] The article provided a detailed description of the proposed building:

> The exterior of the house will be plain, but attractive in appearance, and so built that should it be desired at any time to add to the building the addition may be made without marring the symmetry of the structure. At one corner there will be a tower, surmounted by a flagpole, from which will float the pennant of the club. The house will be 40 by 60 feet and two stories in height, with the top of the roof twenty-five feet above the level of the first floor, which will be at about six feet above the tide mark.
>
> The second floor will be on a level with the Canal [towpath], which is on the embankment at this point, and may be reached by crossing a bridge to the door. Another means of access is afforded by a flight of steps to the door on the first floor.
>
> The entire first floor will be used for storing canoes, and will have sufficient racks to accommodate 125 [canoes]. The members intend to have their canoes in the racks by October 1, if possible, and they continue to rush the completion of the house as they have the plans and the awarding of the contract they will probably succeed. The racks will be so placed that the canoe can be removed without moving any of the others.
>
> The second floor provides for the indoor entertainment of the members and their guests. The ballroom will be about 40 feet square, with an alcove fitted up as a cozy corner, overlooking the river, and casement windows leading onto two balconies also commanding a view of the water. At one end of the ballroom are the ladies room and the smoking-room, and between them is the hall leading to the locker and bathrooms. The ladies' room will be handsomely furnished.
>
> The lounging-room will be fitted up as a den. The locker room will contain 125 lockers, each one ventilated and very roomy. The clubhouse will be adequately heated. The shower and baths will be located off the locker-room. A stairway will lead from the

23 Club records date the organizations establishment to 1940. It is possible that the club was organized in 1904 and incorporated in 1905. "Paddlers of Canoes," *The Washington Post*, 3 September 1905.



FIGURE 14 Ballroom, looking northeast, c. 1909. William "Dusty" Rhodes family.



FIGURE 15 Ballroom, looking northwest, c. 1915-1935. Note that the interior was remodeled, likely as part of the c.1910 construction. Washington Canoe Club.

locker-room to the first floor.[24]

The building permit identified George Hales as the architect, and R.Z. Hazell & Bro. as the builder of record. Hales was an early member of the Canoe Club who practiced architecture in the District from 1905 to 1919. Originally from Boston, Hales' Shingle style design was likely inspired by the boathouses along the Charles River.

As seen from early images, when constructed, the building was painted red and featured a roof that was clad in wooden shingles. The building stood on pilings, and a large, canted, wooden dock afforded members direct access to the Potomac River.



FIGURE 16 Washington Canoe Club after second phase of construction, looking northwest, c. 1910. Note red siding. W. B. Garrison, Inc.. "View northwest over the Potomac River to Georgetown University," Postcard Collection, DC History Center.

Subsequent Alterations

As interest in the club and its social offerings flourished, it became apparent that the footprint of the building needed be expanded in order to accommodate an increased number of members and their families. During the fall of 1909, Hales presented a proposal to extend the boathouse to the east. The proposal was approved by the Washington Canoe Club's board of governors in October 1909, and in November of that year, contractors Howison & Skinker received a permit to build the two-story wood-frame addition that would sit on



FIGURE 17 Washington Canoe Club after second phase of construction, looking northwest. Catwalk bridge above train tracks visible in right side of image, n.d. Brown, *Washington Canoe Club.*

24 "Paddlers of Canoes," *The Washington Post*, 3 September 1905.



FIGURE 18 The WCC boathouse as it appeared after completion of the second construction phase c. 1910. Downspouts visible on the east and west ends of the balcony, and rectangular drainage holes ran across the balconies. Washington Canoe Club.



FIGURE 19 Catwalk bridge leading from C&O Canal towpath to entrance within tower at the north elevation, looking southwest, 1936. The elevated entrance comprised of double wood-panel doors with glazing. Note attached shed off of the northern elevation, as well as the openings at the first story level. Also note that by this time, the roof shingles had been replaced with some sort of composite. William "Dusty" Rhodes family

pilings.

As part of the scope, an overhead steel bridge was proposed to provide access to the clubhouse via the C&O Canal towpath.[25] This bridge was necessary because the construction of a new railroad spur (the Georgetown Spur) for the Baltimore & Ohio (B&O) Railroad laid directly to the north of the boathouse obstructed the building's original entrance.[26] The completed steel bridge connected to the building at the mezzanine level of the northeast tower. It is assumed that a small landing was located inside the tower, and a second set of stairs connected the landing with the second floor of the building (refer to Figure 19 for clarity). Also around this time, the Washington Canoe Club entered into talks with the U.S. Army Corps of Engineers for placing protective riprap above the boathouse and sought a permit to do so. This work was completed in the early 1910s. Once all work was completed, the boathouse's address changed from the C&O Canal to

25 DC Build Permit No. 4884, 10 March 1910, The People's Archive.
26 "Boathouse Gossip," *Evening Star,* 28 February 1909.

Water Street, reflecting the development of the Georgetown waterfront.[27]

When completed, the *Washington Times* pronounced the Canoe Club as the finest boathouse on the Potomac. Descriptions of the completed building hailed the verandas and the corner towers and called attention to the shingled exterior that characterized its appearance and distinguished it architecturally.[28] Beyond this, the additional square footage allowed for an expansion of programmatic offerings for club members. On the ground floor, the expansion allowed for increased boat storage, a grill room, a kitchen, and a workshop area for canoe repair. The grill room, considered an innovative boathouse amenity, featured a frieze painted on detachable panels depicting club members drinking and paddling that was designed and implemented by political cartoonist for the *Evening Star* Felix Mahony. On the second floor, the addition allowed for the expansion of the ballroom, the addition of a meeting roof for the board of governors, the expansion of the men's locker room, and the relocation and enlargement of the ladies room.

In 1913 the clubhouse was described as having been "enlarged and expanded" referencing this work and the growth of Georgetown's waterfront. The description continued, noting that:

> The clubhouse is situated on the north bank of the Potomac River, about 50 yards above the Aqueduct bridge. It is an attractive frame two-story structure, with shingle sheathing. The first floor is taken up with canoe storage racks, grill room, kitchen and work room. The second floor contains the ball room, locker room with showers, board room, and ladies' room. Access to the house is by a steel bridge extending from the canal tow path across the railroad tracks to the main entrance.
>
> The club has been financed entirely by members' dues and the proceeds of various entertainments and benefits.[29]

Other boat clubs along the Potomac also expanded their footprints during this era. Patrick Dempsey's boathouse, located to the east of the Washington Canoe Club and near the Aqueduct Bridge, planned for an addition that was approximately 200 feet in length to house approximately 1000 canoes. In May 1914, two rows of oak pilings were driven from the west elevation of Dempsey's to the Washington Canoe Club.[30]

On February 14, 1918, a major thaw caused an ice dam to form at the Fourteenth Street Bridge, which backed up the ice all the way to Chain Bridge. The dam caused the water to rise sixteen feet above normal levels in Georgetown, resulting in catastrophic damage to the boathouses located at the Georgetown waterfront. Beyond damages sustained to the Washington Canoe Club, which were estimated to be valued at approximately $25,000, the canoes stored within also sustained damage.[31]

---

27 DC Build Permit No. 3477, 26 November 1909, The People's Archive.

28 "Canoeists' Home Doubled in Size: Enlarged Quarters of Washington Canoe Club Considered Finest on the Potomac," *Washington Times*, 12 March 1910.

29 "Washington Canoe Club has House on Potomac River," *Christian Science Monitor,* September 26, 1913, 4.

30 "Erects Big Canoe House," *The Washington Post,* 3 May 1914.

31 "Flood Danger Passed," The Washington Post, 16 February 1918, 2; "30,000 Throng Aqueduct Bridge at Neighboring Roads to Witness Wreckage Left by Weeks' Flood," *The Washington Post*, 18 February 1918, 2; "Crest of Flood is Receding But Damage Has Increased," The Washington Post, 1 April 1924, 5; Washington Canoe Club, HABS No. DC-876, December 2013.



FIGURE 20 Bird's-eye view of the boathouses along the Potomac River damaged by the ice jam, February 1918. Library of Congress.



FIGURE 21 The west boat storage area sustained significant damage after a motor boat drove into the building during a flooding event, n.d. Brown, *Washington Canoe Club*.

In response to the growing number of women athletes allowed to participate in Club activities and races, in 1920, a simply constructed open-shed addition with three large openings was added to the east of the building with a small addition at the second story at the northwest corner.[32] In contrast to the main building, the shed was utilitarian and devoid of architectural detailing. The first floor was to be used for additional boat storage, while the second floor was to house a women's locker room.[33] The roof of the East Boat Storage Area was used as a deck. In response to the growing number of female athletes, the Women's Locker Room was expanded at some point between 1936 and 1939 to extend

32 DC Build Permit No. 6432, 14 May 1920, The People's Archive.

33 The ladies' lounge, which provided a space for the wives and children of club members, remained in use alongside the women's locker room -- a space specifically devoted to the women athletes.

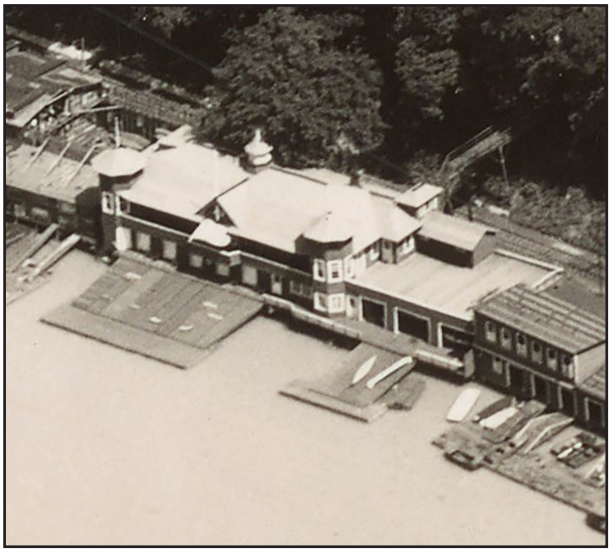


FIGURE 22 Aerial photograph showing the completed one-story, three-bay East Boat Storage Area with the Women's Locker Room addition on the second floor in the northwest corner, June 30, 1931. NARA II.

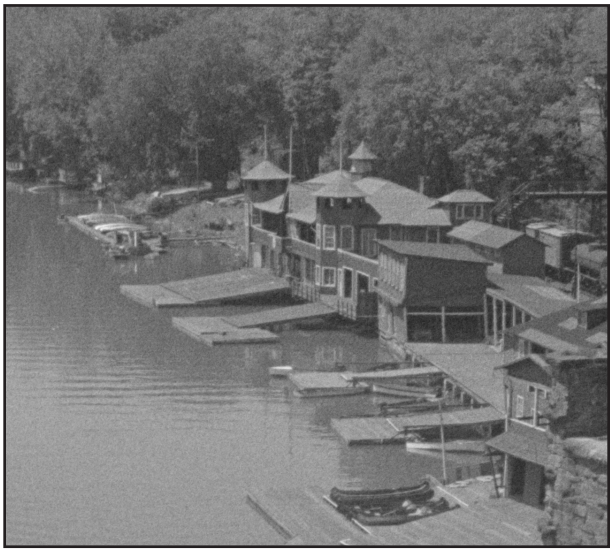


FIGURE 23 Addition of Women's Locker Room completed, c. 1939. The addition has a slightly darker roof coloring than the original (added c. 1920s). Library of Congress

the entire length of the East Boat Storage Area.

In March 1936, another major flooding event occurred following heavy rains and rapid snow melt.[34] A brass plaque located in the Board Room on the second floor marked the water line at about two feet above the floor. An article published in *The Washington Post* was ominously titled, "Washington Canoe Club Going Under," as the water covered the floats, piers, and ground floor. Only the second floor was visible, and the boathouse sustained significant damage.[35] In addition to cleaning, members repaired the leak in the radiator of the grill room. Around this time, club members also debated whether to replace the wood slat floor in the shower and proposed different solutions for securing the site, including the installation of barbed wire, suggesting the location of the boathouse made it vulnerable when unattended. Despite internal discussion, it does not appear that a fence was erected at this time.

In 1957, the boathouse was swept off its foundation piers after a flooding event that was the result of heavy rains and melting snow. The boathouse was swept five feet downstream, but was returned to its original position.[36] $800 worth of lumber was requested to complete the necessary repairs to the West Boat Storage Area.[37] Although separate in nature, the women's locker room was painted and the furnace room door re-hung at this time.

In 1960, following the enactment of Public Law 86-515, the District constructed a sanitary sewer that connected the DC sewer system to Dulles airport. The sewer installation was a major project along the riverfront, and the riverbank area was filled to facilitate access upriver for emergency vehicles. A

34 The Washington Canoe Club has been effected by several major flooding events that have taken place with some regularity. These events occurred in 1924, 1936, 1937, 1942, 1948, 1952, 1955, 1972, 1985, and 1996.

35 "Washington Canoe Club Going Under," *The Washington Post*, 20 March 1936, 21.

36 Jack Brosius to Virginia B. Price, personal communication, 13 August 2013; Washington Canoe Club, HABS No. DC-876, December 2013.

37 Washington Canoe Club Log, 1936-57, vertical files, Washingtoniana Collection, DCPL.



FIGURE 24 Images from the 1936 Flood. The upper image shows that the water was above the second flood level. Brown, *Washington Canoe Club*.

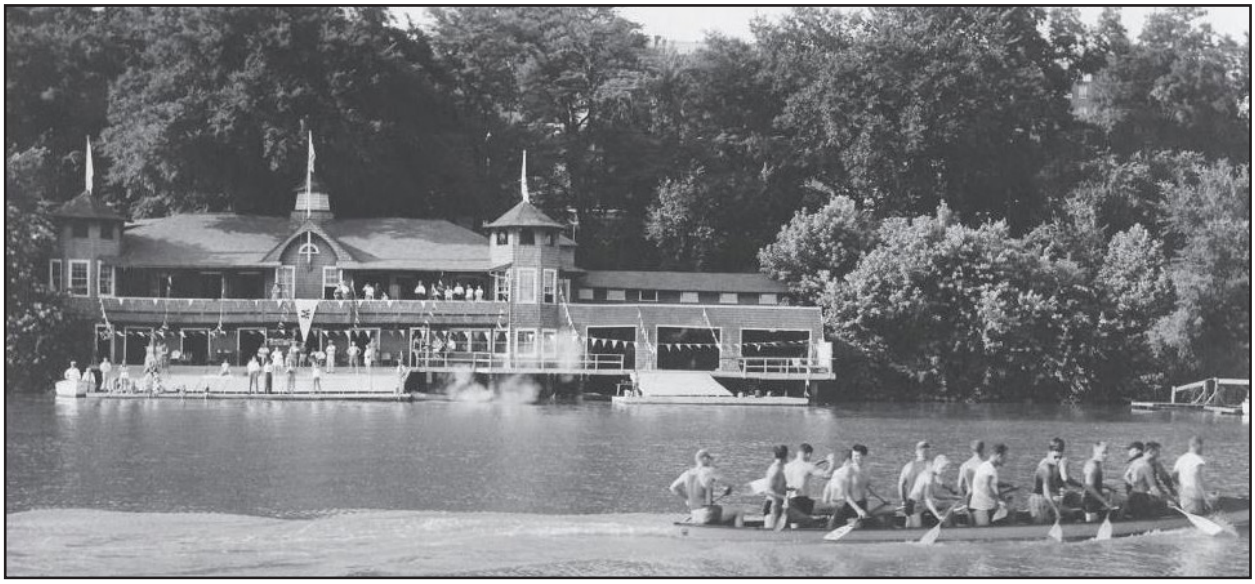


FIGURE 25 Photograph of the boathouse with the expanded Ladies Locker Room above the northern portion of the East Boat Storage Area, 1958. Dan and Bonnie Havens.



FIGURE 26 Installation of Potomac Inceptor Sewer Line, looking west, .c. 1965. Washington Canoe Club.

concrete deck was laid directly to the south of the Washington Canoe Club to shield the large pipe that was installed directly in front of the Club House. When completed, the finished grade elevation of the new concrete apron was approximately ten inches above the original floor level of the boathouse. Not only did this exacerbate the water infiltration into the building, but it also resulted in the loss of the building's original proportions and relationship of the first story to the ground plain. Around the same time, two concrete mixing companies donated the excess concrete generated during their work days and club members worked with that material to backfill the sewer pipe and under the boathouse to mitigate standing water beneath the building. Most of the wooden floor boards were removed, and concrete was filled in around the piers. The result was an uneven and heavily textured concrete floor throughout the first floor.[38]

The entry for the Washington Canoe Club in the 1968 catalogue *Georgetown Historic Waterfront* includes a photograph of the south (front) façade with the concrete in-fill beneath the building in place and picnic tables and canoes out in front. The floating dock is in place as well. Regarding the building itself, the flagpoles are present, and the tower windows are open as are most of the ground-floor doors. Fenestration consisted of sash glazed with six-over-six lights, smaller square windows glazed with six

38 Jim Ross (Vice President, Washington Canoe Club), in discussion with the author, January 2021.



FIGURE 27 Washington Canoe Club, 1968. *Georgetown Historic Waterfront* (Washington, DC: US Commission of Fine Arts, 1968).

lights, and the French or double doors opening from the ballroom onto the balcony. The description accentuates the romanticism of the Shingle style and notes of the floor plan:

> The ground is given over almost entirely to the canoes, while the second floor houses the facilities. Recessed at the western end of the second floor is the men's dressing room and at the eastern end, the lounge. In between is a ballroom ornamented by columns supporting the hipped ceiling at either end and by built-in benches. At the north end, or inland side, is a brick fireplace, and at the opposite end, on the water side, is a wooden bandstand.[39]

Around 1970, the catwalk over the railroad tracks that was completed in 1910 to connect the C&O Canal towpath to the Washington Canoe Club's second story entrance on its north elevation was removed.[40]

In 1972, following another devastating flood caused by Hurricane Agnes, long-time club member Joe Lederle spearheaded several projects to repair the first floor of the 1905-1910 portions of the building, all of which were completed by 1976:[41]

1. Damaged wooden framing at the base of the exterior walls was removed from the west and north sides of the building. For this work, Lederle slightly raised the wooden building with heavy duty jacks, removed the lowest 24 inches of damaged wooden wall framing, and then placed three courses of concrete masonry units. He then inserted a new horizontal wooden plate and reconnected the wood structure to the new concrete block wall.

39 *Georgetown Historic Waterfront: A Review of Canal and Riverside Architecture*, s.v., "Washington Canoe Club," 80.
40 Brown, *Washington Canoe Club*, 46.
41 Smith, FAIA, "Appendix A: WCC Structural Renovations (1972-2005), *Washington Canoe Club Boathouse Rehabilitation 2015,* 1-5.

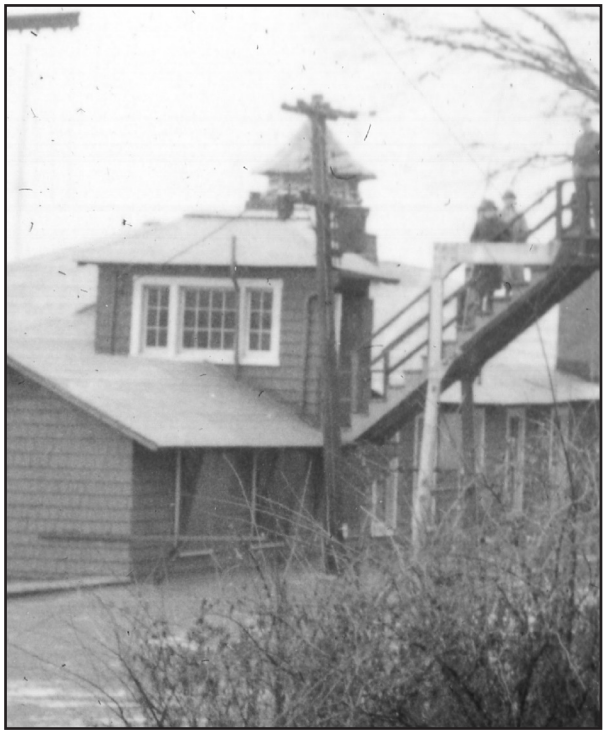




FIGURE 28 (LEFT) Elevated Second floor entrance accessed via catwalk, 1936. William "Dusty" Rhodes family. (RIGHT) Wooden porch and stairs added to shield the non-original entrance. North elevation of tower has also been infilled.



FIGURE 29 1972 flood. Water again completely encompassed first story of the Washington Canoe Club. Brown, *Washington Canoe Club*.

2. In order to align the first floor of the boathouse with the exterior concrete apron, the first floor slab was leveled and raised. In order to complete this, the limited extant wood flooring in the West Boat Storage Area was removed, and an eight-inch thick concrete slab with a four inch sand/gravel substrate was laid throughout the building's ground floor. The West Boat Storage Area was finished with a smooth concrete, while the areas within the c. 1910 portion of the building – the hallway, Kitchen, and Grill Room – were finished with a ceramic tile. The Kitchen area was topped with a two-inch thick leveling slab, resulting in a slight grade difference between it and the Grill Room. Not long after the project's completion, however, ground water entering the building from the north resulted in constant dampness and slippery conditions in the West Boat Storage Area. After several mitigation options were considered, trenches were chiseled in the top of the concrete floor to gather and direct the water along the north wall and then channel it toward the river.
3. Flood-damaged wall paneling in the Grille Room and Kitchen was removed entirely and a coating of cement plaster over galvanized metal lath was placed throughout. It is unclear why this treatment was not carried through into the hallway.
4. Steel columns and beams were added in the Grill Room and Kitchen to support the floors above.
5. Four small fixed windows were added to the exposed first story of the north elevation.

In the mid 1970s, the roof deck above the East Boat Storage Area was covered to allow space for a workroom on the second floor. Upon completion, it is likely that a door was added to the east elevation and accessed by a set of exterior wooden steps to provide another means of egress. In 2020, the stairs were removed; however, the door remains extant.

In 1992, as changing canoe standards necessitated the need to update the storage, two club members removed and replaced the entire structural support system in the East Boat Storage Area, including the interior boat storage racks and the floor of the second floor workroom. The renovation resulted in a thirty percent increase in boat storage capacity.[42]

In 1995, in an effort to provide ADA-compliant access, a ramp was added to the north elevation above the stairs that led to the porch. The ramp was not well maintained, and was removed by 2020.

Between 2005 and 2008, the wood floor and support frames of the balcony were reconstructed with all new materials due to severe deterioration. As part of this work, the south wall at the first story of the original portion of the building was reconstructed, as were the Boat Storage door openings and the sliding wood doors. The windows in the Grille Room were also replaced in kind.

In 2010, the National Park Service, owner of the Washington Canoe Club building and the land on which it is located, determined that the building was no longer structurally sound and that the structure presented a hazard with regard to life and safety standards. While temporary stabilization measures were taken, the building, except for the first floor East Boat Storage Area, has remained unoccupied since that time. In 2013, due to the renovations taken in 1992, the East Boat Storage Area was determined to be the only area of the building safe to occupy. The western bay was largely infilled,

42 Jim Ross (Vice President, Washington Canoe Club), in discussion with the author, January 2021.

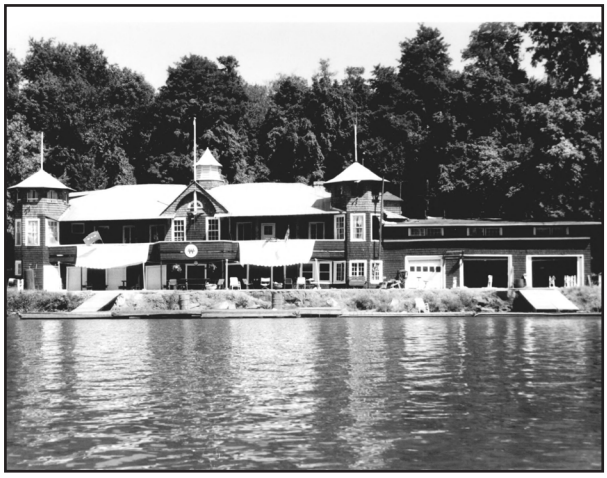


FIGURE 30 South elevation. NRHP, Office of Betty Bird, September 3, 1989.



FIGURE 31 Front facade from dock. NRHP, Office of Betty Bird, September 3, 1989.



FIGURE 32 Northwest corner of Grill Room. NRHP, Office of Betty Bird, August 27, 1989.



FIGURE 33 North Wall of Ballroom. NRHP, Office of Betty Bird, August 27, 1989.



FIGURE 34 Southeast corner of Board Room. Note carpeting. NRHP, Office of Betty Bird, August 27, 1989.

and a contemporary pedestrian door replaced a rolling garage door.

LAND OWNERSHIP

In 1890, the Washington & Western Maryland Railroad Company devised a plan to extend its rail lines from western Maryland to Georgetown. This plan called for the construction of an elevated trestle along the Potomac River's edge just south of the C&O Canal, at that time the principal transportation route for raw goods coming from Western Maryland to Georgetown.



FIGURE 35 The shore of the Potomac as it appeared in 1889 showing a railroad trestle, mill, and various other structures with Georgetown University in the background. Washington Canoe Club.

For reasons unknown, the project was halted after approximately 4,400 feet of trestle was built, and the tracks were eventually abandoned and torn down. In order to make way for the Washington Canoe Club, constructed between 1905 and 1906, a portion of the tracks were demolished. The remaining tracks were demolished in 1907.[43]

In 1906, the Baltimore & Ohio (B&O) railroad proposed the construction of a new line -- the Georgetown Branch -- along the Potomac River to provide a connection between Silver Spring, Maryland and Georgetown. The new line was proposed to run along the same path as the trestles built by the Washington & Western Maryland Railroad Company; however, because the Washington Canoe Club had been built, the tracks were diverted to run along the north side of the club house at the base of the C&O Canal embankment. Construction began in 1908 and was completed in 1910.

A 1922 trust document confirms that the canoe club was located on land controlled by the B&O Railroad, identified as tax parcel 27/36, and encompassing 1/10th of an acre between the C&O Canal and the Potomac River. In September 1938, due to financial strains caused by the Great Depression, the B&O Railroad, which owned a controlling interest in the C&O Canal receivership, sold the entire C&O Canal to the National Park Service (Reservation 404, Palisades District).[44] Once the land was transferred to the government, leases and special use permits were issued to the boat clubs and to commercial entities along the waterfront. These leases and permits allowed for the continued use of

43 Brown, *Washington Canoe Club*, 30.

44 "A Canal Becomes a Park," The Baltimore Sun, 19 November 1939, M2; DC Recorder of Deeds, Liber 7272, Folio 068, 23 September 1938. The National Register of Historic Places nomination identified the boundary lines for the Washington Canoe Club property as Parcel 301/4 of the DC Surveyor's description of the club's improvements on Reservation 404.

the land on which the various buildings stood, as was the case for the Washington Canoe Club.[45] The Canoe Club's lease with the B&O Railroad/C&O Canal was canceled out by the 1938 sale, and a special use permit was issued in October 1938 to bridge the gap between lease agreements.[46] Another special use permit was issued by the US Department of the Interior in 1939. [47]

The 184.5-mile C&O Canal was declared a National Monument in 1961 and legislation was passed in 1971 to establish the C&O Canal National Historical Park. From the establishment of the park and continuing through 2007, special use permits supplemented the lease agreements and allowed for the continued operation of the boathouse by the Washington Canoe Club.[48] Short-term leases were negotiated with the club after 2007.[49] In 2019, a 60-year lease agreement was signed between the Washington Canoe Club and NPS.

45 "Permit #NCR CHOH 6000 422, C&O Canal NHP, Palisades District," Washington, DC. Details on a special use permit relate to a "parcel of land approximately 96 feet by 157 feet, located in the C&O Canal National Historical Park, beside the Potomac River upstream (west) of the Old Aqueduct Bridge, in the vicinity of Georgetown, DC, as shown on the enclosed map…." Appraisals for the boathouse in 1989 identified the property as part of Square 1180, Lot 1, Site No. 18, and as consisting of 36,850 square feet.

46 Chesapeake and Ohio Canal National Historical Park, administrative files, Hagerstown, Maryland.

47 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

48 DC Historic Preservation Office, Permit No. 0794, 18 September 1905; Washington Canoe Club, HABS No. DC-876, December 2013.

49 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

BUILDING CHRONOLOGY

This section provides a timeline for additions and alterations that occurred to the Washington Canoe Club boathouse since its initial construction. The building has a Period of Significance that extends from 1904 through 1939, as defined by the NRHP documentation.

1905-1906	Phase 1 construction of the Washington Canoe Club completed.
1909-1910	Phase 2 construction included eastern addition to give the building a symmetrical design.
1910	Art panels around the perimeter of the Grille Room installed.
1910 c.	Construction of steel overpass pedestrian bridge over the Georgetown Branch of the B&O railroad to provide access to the first-floor of the clubhouse from the C&O Canal towpath.
1920 c.	Stone rip-rap filled in beneath building around pilings.
1920	Phase 3 construction included eastern shed addition.
1936-1939 c.	Women's locker room extended; boat sheds to the west of the clubhouse are demolished.
1939	End of Period of Significance
1957	Ice flow pushed the WCC off its pier foundations and jacks were used to move the building back into place.
1960 c.	Potomac Interceptor installed; Concrete apron laid
1970 c.	Steel overpass pedestrian bridge connecting the clubhouse to the C&O Canal towpath is removed; new porch on north elevation constructed.
1972-1976.	Damaged wooden framing along west and north elevations removed; first floor raised to align with concrete apron; flood damaged wall paneling removed and replaced with plaster over galvanized metal lath; additional structural support added; four small fixed windows added to first story of north elevation
1975 c.	Enclosure of roof deck at the east end of the clubhouse to create a workshop.
1992	Structure, joists, and columns in the East Boat Storage Area entirely updated (the structure under the Women's Locker Room remained); a new floor was installed in the Workshop
1995	Ramp added to non-original porch on north elevation to provide handicap accessibility to the second floor
2005-2008	Balcony structurally reinforced and reconstructed; first story of south elevation reconstructed, including doors and windows
2010-2013	Original portion of the building and c. 1909 addition closed; stabilization efforts undertaken by NPS

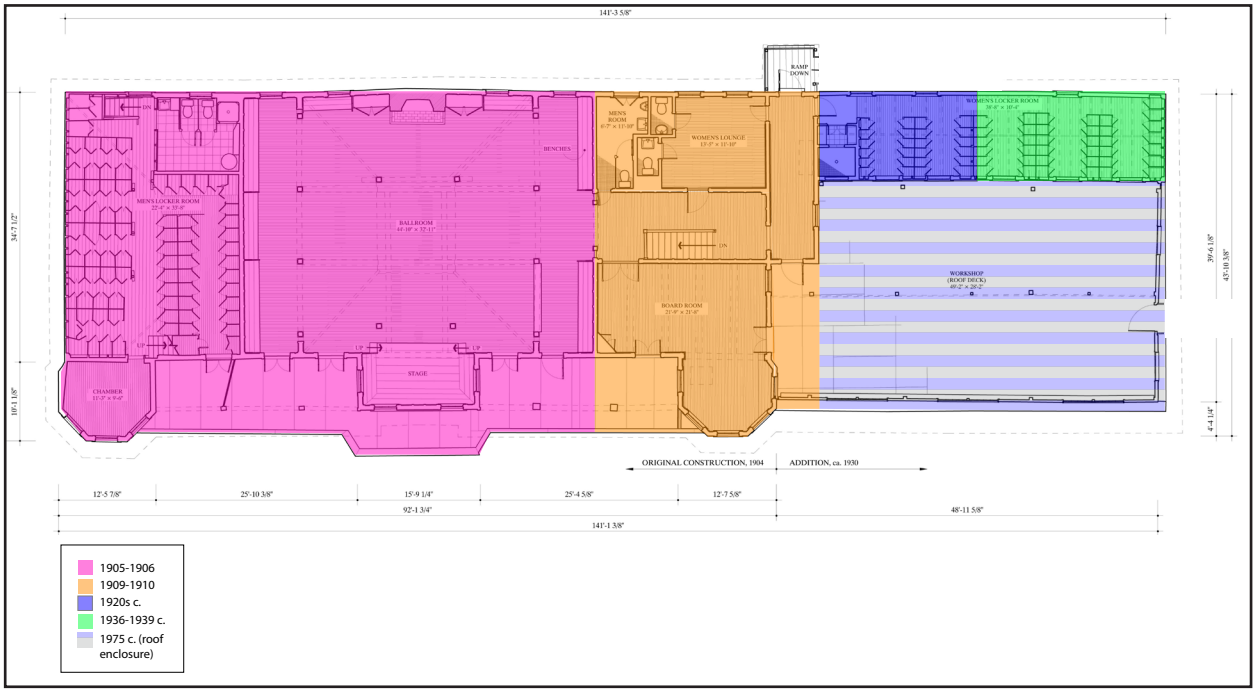


FIGURE 36 Building Chronology, Second Floor. EHT Traceries, 2020.

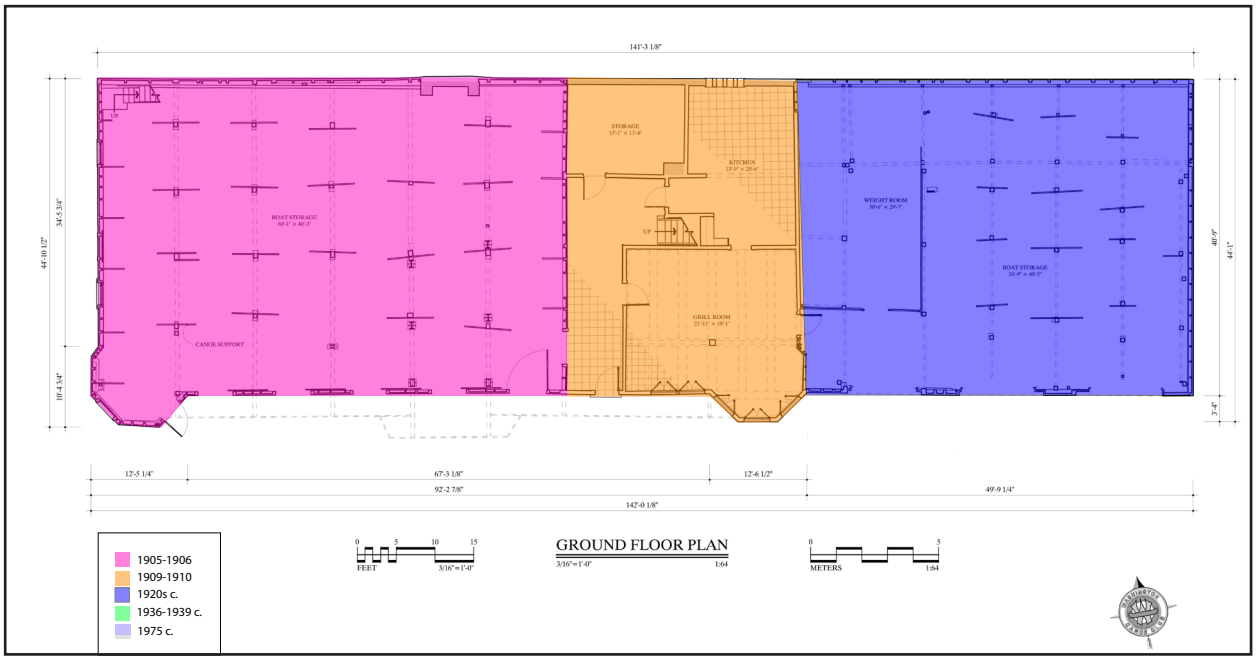
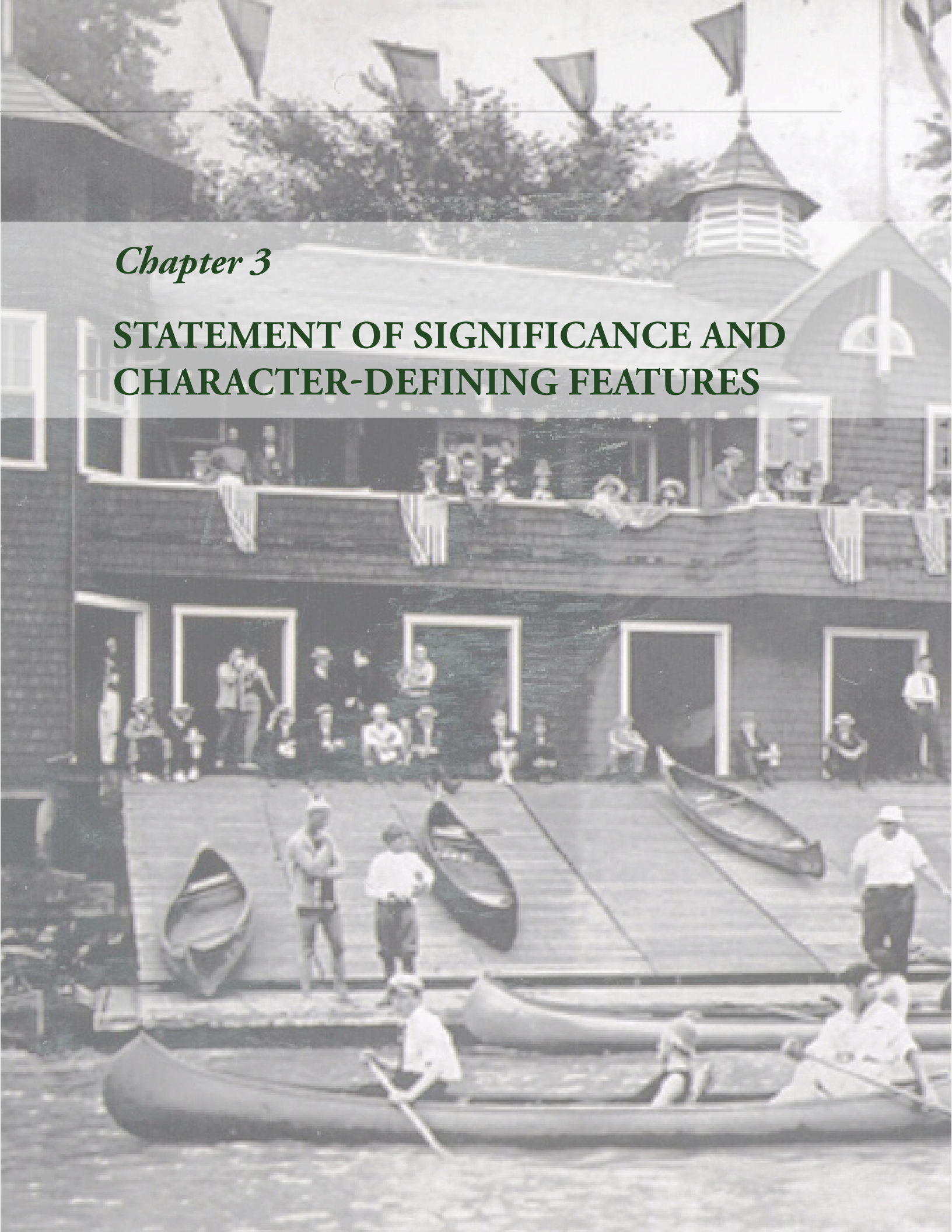


FIGURE 37 Building Chronology, First Floor. EHT Traceries, 2020.



Chapter 3

STATEMENT OF SIGNIFICANCE AND CHARACTER-DEFINING FEATURES

STATEMENT OF SIGNIFICANCE

The Washington Canoe Club was designated as an individual landmark within the DC Inventory of Historic Sites in 1973 and was listed in the National Register of Historic Places (NRHP) in 1990. It is also considered a contributing resource to the Georgetown Historic District and Potomac Gorge.

Below is the official statement of significance for the Washington Canoe Club, as provided by the NRHP documentation:

> The Washington Canoe Club, constructed in 1904, is one of two remaining boat clubs along the Potomac River in Washington, DC. An excellent example of shingle style architecture, the building has served as the sole home of the Washington Canoe Club, which pioneered the development of flatwater racing as an Olympic sport and which continues to play an important role in Olympic competition. The Washington Canoe Club also represents the role of athletic clubs and active sports in the District of Columbia's recreational life in the early 20th century. The Washington Canoe Club meets National Register Criterion C because it embodies the distinctive characteristics of the shingle style. It meets Criterion A because of its association with the Olympic sport of flat water racing and because of the role it played in the social and recreational life of the District of Columbia in the early 20th century.[1]

PERIOD OF SIGNIFICANCE AND INTEGRITY

The NRHP documentation identifies a period of significance as extending from 1904 through 1939. The NRHP identifies 1904 as a significant date as it corresponds to the year that the Washington Canoe Club was established. The NRHP further identifies 1924 as a significant date because it was the year that the Washington Canoe Club prevailed in national competition to represent the United States at the Olympics.

CHARACTER-DEFINING FEATURES

The Technical Preservation Services Division of the National Park Service outlines an approach for identifying visual aspects of a building that contribute significantly to its architectural character and historic character. This process is documented in *Preservation Brief 17: Architectural Character - Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*.

The process of identifying and describing these distinguished characteristics - generally referred to as character-defining features - serves to establish an inventory of significant physical elements that are worthy of preservation. *Preservation Brief 17* outlines a hierarchical process that begins with a building's major formal qualities (including shape, size, and setting), moving to more detailed characteristics (such as openings, roof form and shape, and projections), and finally details observed at close range (such as materials and evidence of craftsmanship). Similarly, they provide a methodology for assessing

1 National Register of Historic Places, Washington Canoe Club, Washington, DC, National Register #90002151.

interior architectural character by establishing a hierarchy of significant spaces, features, and finishes. An inventory of the visual characteristics of the Washington Canoe Club is listed in the chart below.

Overall Visual Aspects	
Form and Massing	Rectangular massing with characteristics of shingle-style architecture including: shingled walls and roof, asymmetrical facade, irregular roof lines, moderately pitched roofs, crossed gables, expansive wide porches, small sash and casement windows with many panes, and polygonal shingled towers
	Five-bay original structure featuring prominent central bay with cross gable roof and hooded canopy with pointed arch soffit motif
	Flanking three-story octagonal towers with third story observation decks and conical tower roofs with integral flag masts
	Full-length second-story overhanging porch with projecting central bay
	Modest three-bay east boat storage addition to main block with ground floor shed roof and two-story women's locker room with gable roof
Roof and Related Features	Hipped roof on main block of building
	Conical roofs over east and west octagonal towers
	Arched projecting cross gable over the south elevation central bay
	Symmetrical flanking towers of the main block
	Octagonal louvered cupola with conical roof at main ridgeline
	Flag masts on the tower roofs and on the gable roof
	Masonry chimneys
	Roof line including other minor roof features including the hipped roof over the north entry tower
Openings	Placement of window and door openings on the main block
	Recessed balcony openings on the second floor of the main block
	Boat doors at river elevation
	Full-length double casement windows to access balcony
Projections	Wide roof overhangs and rafter tails on towers and main block
	Balcony overhangs on the second floor
	Hooded arched cross gable roof at center bay
Trim and Secondary Features	Traditional shingle style detailing w/ use of textured materials (wood shingles)
	Shingle-encased posts at second floor balconies
	Linear detailing of trim features at the balcony, roof eaves, and ridge.

Overall Visual Aspects	
Setting	Location and orientation of the building on the banks of the Potomac River
	Immediate access to the river
	Unobstructed views of the Potomac River, Key Bridge, and Rosslyn, VA

Visual Character Aspects at Close Range	
Materials	Use of traditional wood detailing, wood doors, and wood windows
	Dark green-painted shingle exterior siding[2]
	Exposed brick chimneys above roof line
Craft Details	Horizontal coursed patterning of original random-width wood shingles
	Day-mark green with white trim exterior color of original building
	Louvered octagonal cupola on main block
	Exposed roof sheathing and rafter tails on roof overhangs
	Flagpole piercing the central gable roof on the south elevation
	Washington Canoe Club logo sign

Visual Character of Interior Spaces, Features, and Finishes	
Prominent Individual Spaces	Grill Room with a historic painted frieze depicting club members
	Entry Hall with prominent staircase, newel posts, and balustrade
	Boat storage area on the first floor
	Ballroom and Board Room on the second floor
	Locker Rooms and lockers
Related Spaces and Sequences of Spaces	Direct access to river from boat storage areas on the first floor
	Architectural entrance into Ballroom and Boardroom at second floor hall
	Direct access to balcony from Men's Locker Room, Ballroom, and Board Room at second floor
	Relative isolation of the Men's Locker Room from other spaces (sequence on construction)
	Mezzanine level above the Men's Locker Room
	Original viewing platforms with openings in the upper levels in the towers (now converted to non-character-defining interior spaces)

2 The building was originally painted red with white trim. A preliminary paint analysis leads to the conclusion that the building was likely completely repainted to green following the devastating 1936 flood, thereby falling within the building's period of significance.

Visual Character of Interior Spaces, Features, and Finishes	
Interior Features	Detachable frieze hung in Grill Room
	Five-panel and six-panel wood doors (with hardware)
	Stair, balustrade, and newel posts
	Architectural entrance to Ballroom (columns w/ dropped beam)
	Side galleries and interior hipped ceiling of Ballroom
	Built-in benches and shelves in Ballroom and Board Room
	Brick fireplace and mantle in Ballroom
	Six-over-six double-hung wood windows
	Full-length double casement windows opening to balcony
	Historic door and window hardware
	Selected wooden locker units
Surface Finishes and Materials	Painted tongue-and-groove wood paneling on walls and ceiling at first floor hallway & stair (vertical and horizontal orientation)
	Stained vertical tongue-and-groove paneling in the Board Room
	Beaded tongue-and-groove paneling in the Ballroom
	Stained hardwood floors
	Fabric covered wall panels and decorative trim in Ballroom (likely Phase 2 construction era ca. 1910)
Exposed Structure	Exposed second-floor framing in west boat storage areas
	Exposed roof framing and sheathing in the locker rooms

PRESERVATION ZONING

Preservation zoning is a decision-making tool widely used by federal agencies, cultural institutions, and historic preservation professionals to guide the treatment of historic buildings. Preservation zones are often developed to accompany Historic Structure Reports, Cultural Landscape Reports, and Building Preservation Plans. Preservation zones establish a hierarchy of significance and integrity for interior and exterior architectural and landscape components. The adoption of preservation zones allows for the preservation of significant historic features while also providing for flexibility to incorporate new requirements, technology, and program.

The following zone definitions and treatment descriptions have been developed following the Secretary of the Interior's Standards for the Treatment of Historic Properties ("Standards"). The Secretary of the Interior outlines four treatment approaches: Preservation, Rehabilitation, Restoration, and Reconstruction. Although these words are sometimes used interchangeably in the general discourse, each has a specific meaning when applied to professional historic preservation practices. **Restoration** is defined as "the act or process of accurately depicting the form, features, and character of a property as

it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period." **Preservation** is defined as: "the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property." **Rehabilitation** is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." Finally, **Reconstruction** is defined as "the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location." Each preservation treatment has a series of associated standards and guidelines, developed by the Technical Preservation Services division of the National Park Service.[3]

The development of preservation zones for an historic building or landscape should be guided by a close understanding of the property's history, significance, and evolution over time. Archival documentation and physical inspection will inform an understanding of the building as originally constructed and/or during the period of significance. When analyzed against existing conditions, this understanding will allow for the identification of significant individual spaces and building elements. This in turn will allow for the creation of specific and general recommendations for the treatment of the resource.

Survey, research, and analysis undertaken in 2015, 2016, and in 2020 have resulted in the identification of three zones that reflect the architectural and historical significance of the Washington Canoe Club: Restoration, Preservation, and Rehabilitation. This hierarchical classification reflects the associated architectural, historical, and/or landscape importance within the historic property. When considering potential alterations to the building, it is most important to maintain the layout, materials, and finishes of Zone 1 spaces. Changes to non-original materials but not to layout may be considered in Zone 2 spaces. Greater alterations are permissible in Zone 3 and 3A spaces, as long as they do not negatively affect spaces designated Zone 1 or 2.

Restoration (Zone 1)

Restoration is the most rigorous treatment designation and has been applied to areas of high integrity and/or architectural and historical significance. These spaces should be restored or maintained to their appearance during the period of significance (not necessarily to its original appearance). Areas designated as Restoration Zones shall retain their historic use and distinctive materials, features, and finishes or, if necessary, replaced in kind. Replacement of missing features from the Period of Significance is recommended, but shall be based on sound documentary evidence. The limited and sensitive modernization of building systems and equipment necessary for functionality, safety, and accessibility is appropriate.

Preservation (Zone 2)

Preservation Zones apply to areas of moderate architectural and/or historical significance containing significant details that should be preserved or restored as part of any repair or alteration project. Similar

3 "The Secretary of the Interior's Standards," Technical Preservation Services, National Park Service, accessed February 26, 2016. http://www.nps.gov/tps/standards.htm.

to Restoration, a Preservation treatment mandates the retention, repair, and maintenance of extant historic features; however, Preservation does not specify the replacement or recreation of missing historic features. Changes to a property that have acquired historic significance in their own right—including those outside the period of significance—will be retained and preserved.

Rehabilitation (Zone 3)

Rehabilitation Zones apply to the areas with the least degree of architectural and/or historic significance, including those that exhibit a diminished degree of historic integrity. Rehabilitation makes possible an efficient contemporary use while preserving those portions and features of the property that are significant to its historical, architectural, and cultural values. Significant historic features should be retained and repaired if possible. New work shall be compatible, yet clearly differentiated, from the old. Repairs and/or alterations in Rehabilitation Zones should not adversely affect Restoration or Preservation zones.

Rehabilitation (Zone 3A)

Spaces within the Zone 3A designation should be rehabilitated. Unlike Zone 3 spaces, Zone 3A spaces have been significantly altered outside the Period of Significance; therefore, additional flexibility should be afforded when repairing or altering the spaces. As with Zone 3, significant historic features should be retained and repaired if possible. New work shall be compatible, yet clearly differentiated, from the old. Repairs and/or alterations in Rehabilitation Zones should not adversely affect Restoration or Preservation zones.

PRESERVATION ZONING DIAGRAMS

Preservation zone diagrams for the Washington Canoe Club are located on the following pages. The application of these zones is a reflection of the significance and integrity of those component parts and the associated priorities for treatment, maintenance, and continued use.

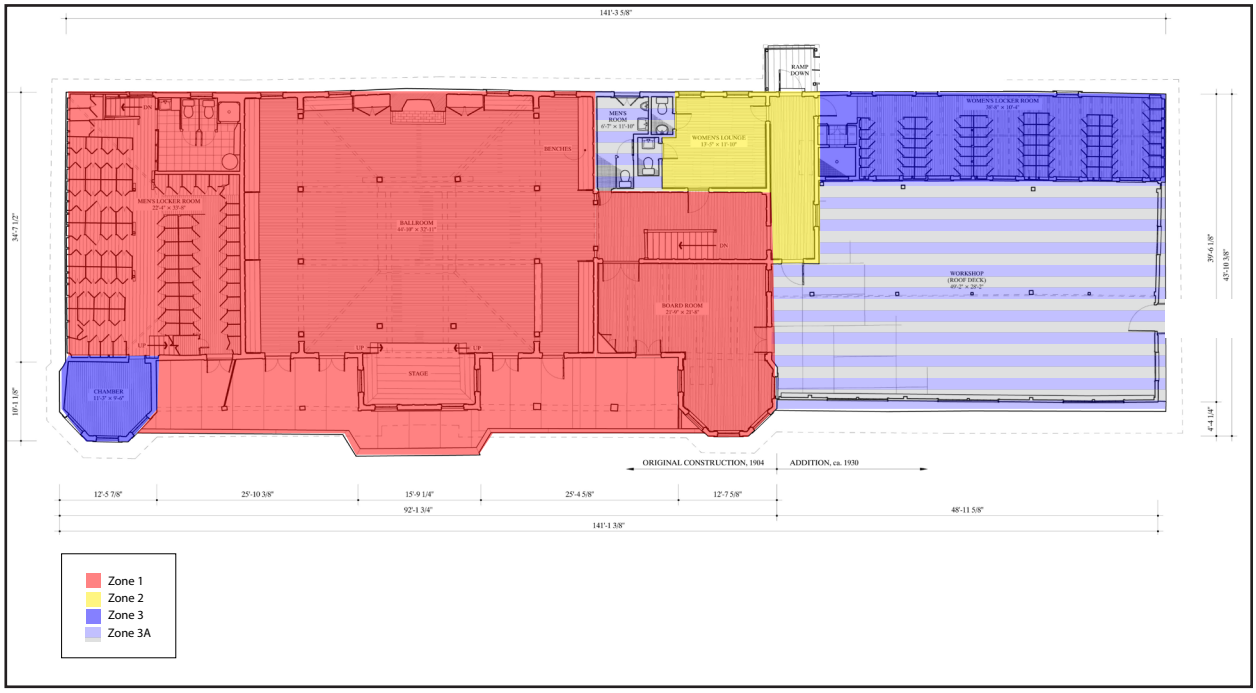


FIGURE 38 Preservation Zoning Diagram, Second Floor. EHT Traceries, 2020.

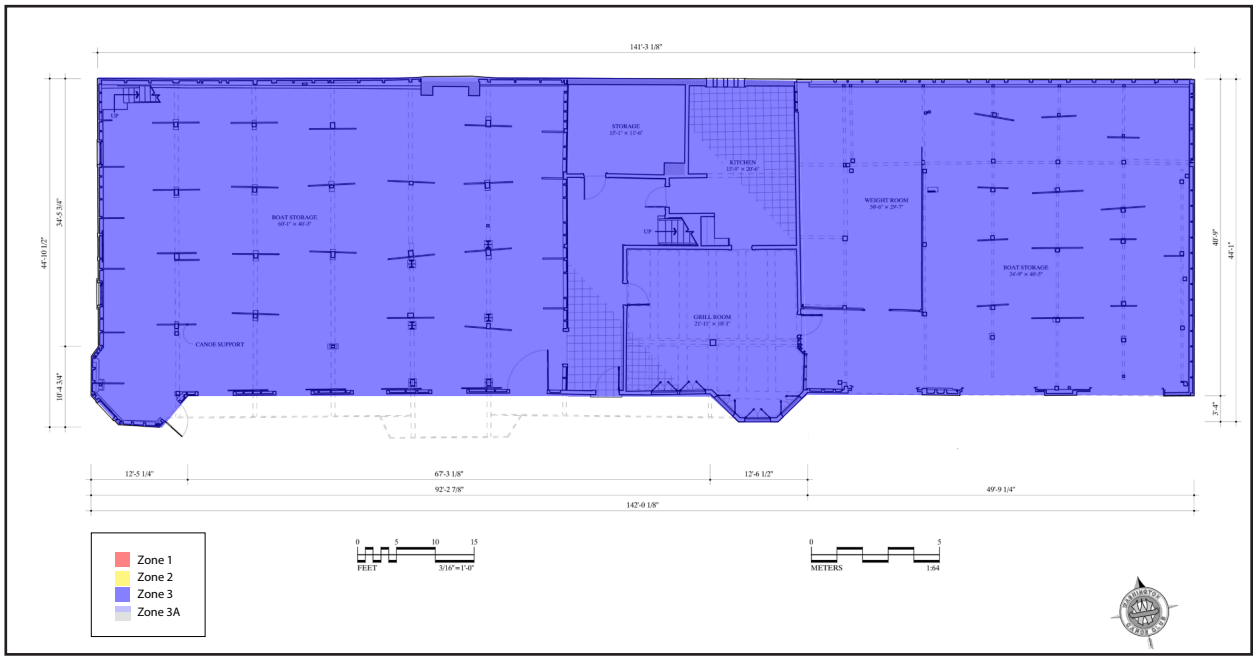


FIGURE 39 Preservation Zoning Diagram, First Floor. EHT Traceries, 2020.

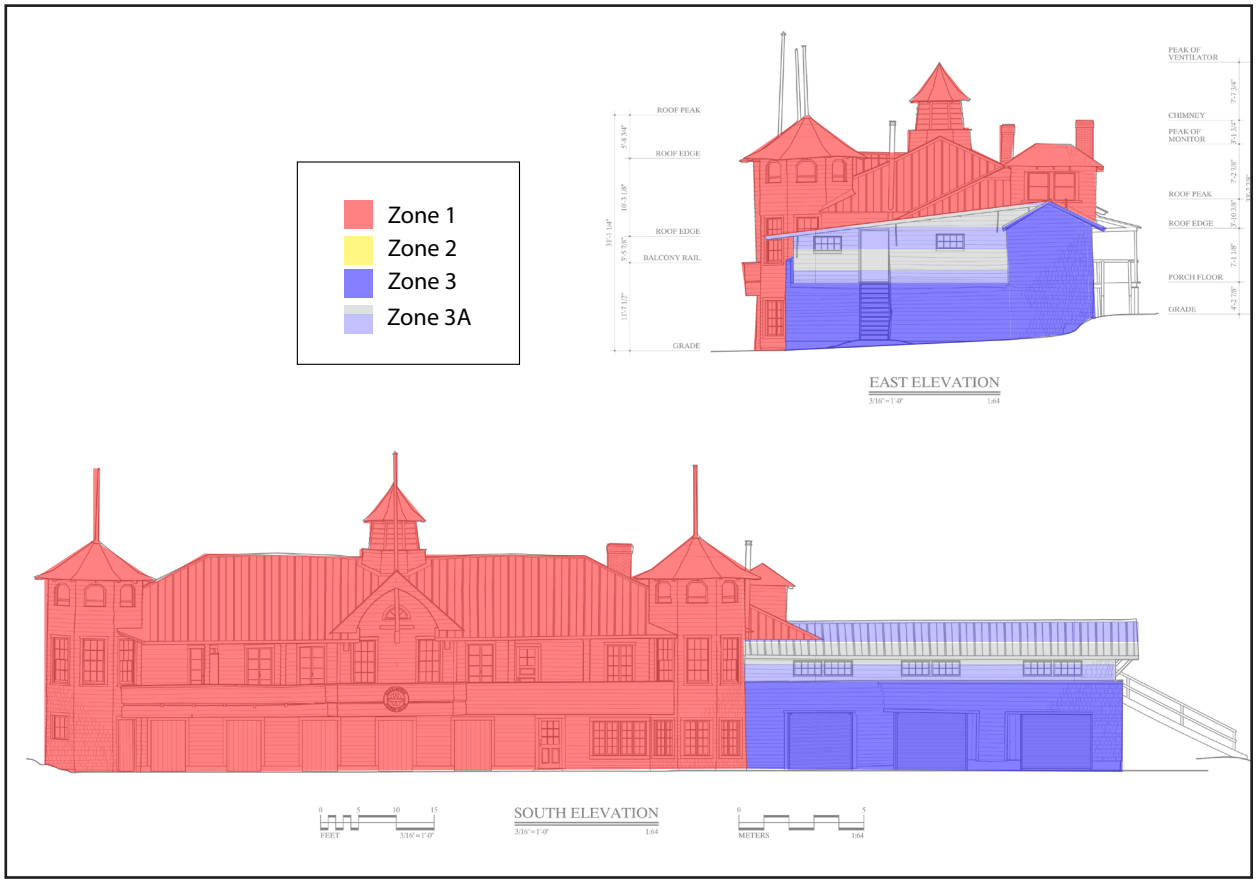


FIGURE 40 Preservation Zoning Diagram, South and East Elevations. EHT Traceries, 2020.

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Chapter 4

EXISTING CONDITIONS SURVEY AND ASSESSMENT

INTRODUCTION

This chapter provides an overview of the condition of the Washington Canoe Club through a detailed analysis of its features and feature types. The condition assessment addresses site and landscape components, building structure and exterior envelope, interior finishes and fixtures, casework, and miscellaneous specialized components found throughout the building.

Based on the current conditions of the building as seen during our exterior assessment, EHT Traceries has determined the Washington Canoe Club to be in overall poor condition. The condition of the Washington Canoe Club has been assessed based on the following scale:

> **Excellent**: The building is structurally sound, intact, functioning as intended, has no or few cosmetic imperfections, is well maintained, and does not need repairs.
>
> **Good**: The building is structurally sound, intact, functioning as intended, has some cosmetic imperfections, needs minor repairs, and needs limited maintenance such as general cleaning painting.
>
> **Fair**: The building shows signs of wear and age, and has some failure and deterioration of elements and materials. It needs repairs and it needs general maintenance. Some components may be missing and need replacement.
>
> **Poor**: The building is no longer functional, significant elements are missing, require extensive repairs and/or replacement, and areas of the structural systems poses a threat to life safety.
>
> **Beyond Repair**: The building is no longer functional, significant elements are missing or substantively deteriorated, evidence of hazardous materials that are beyond remediation, the structural system poses a threat to life safety, and there appears to be no way to return the building to active use without demolition of significant portions.

The conditions assessment does not address major building systems including electrical, plumbing, mechanical, or fire and life safety systems. These systems have been designated for total replacement during the forthcoming rehabilitation project; therefore, the functionality of the non-character-defining historic systems was not determined to be relevant for this report.

SOURCE MATERIAL

Between 2010 and 2015, extensive survey was conducted on the Washington Canoe Club and corresponding condition assessment reports were prepared. These reports have created the foundation for this chapter. Specific reports include:

1. McMullan & Associates, *Draft Report of Findings and Recommendations*, prepared for NPS in 2010.
2. Protection Engineering Group, Inc., *Structural Investigation of the Washington Canoe Clue: Condition Assessment Report*, prepared for NPS in 2014.
3. Historic Preservation Training Center, *Historic Structure Assessment Report: Washington Canoe*

Club, prepared for NPS in 2014.

4. *Boathouse Rehabilitation 2015*, prepared for the Washington Canoe Club in 2016.

These reports have been included as appendices to this document. This report is not intended to replace or supersede these documents; rather, it is intended to provide an update on conditions and combine information from all reports into a single, accessible reference document.

CONDITION OVERVIEW

The physical condition of the building was described in the 2014 HSAR to be poor, perhaps unstable. That report also provided a detailed assessment and listing of the character-defining features of the building. The determinations found in the HSAR are cited in the lease agreement between the NPS and WCC and form the basis for WCC use of the building. The HSAR determined that the building was unsafe to occupy with the exception of the east storage room.[1]

The following conditions assessment has been largely been taken from the HSAR documentation prepared in 2014. Several conditions have been updated to reflect the building's appearance as of November 2020.

SITE AND LANDSCAPE

The site is bound to the north by the Capital Crescent Trail and to the south by the Potomac River. The site itself is marked with a chain link fence and includes three distinct parcels: the outside boat storage area to the west of the building, the concrete apron in front of the boathouse, and the outside boat storage area to the east of the building. The western outside storage area was temporarily and significantly enlarged by approximately 2,018 square feet in 2020 to off-set the loss of the eastern outside storage area that will result from the rehabilitation (as agreed upon in the long-term lease agreement between WCC and NPS).[2]



FIGURE 41 West elevation with outside boat storage visible in forefront

Notable site features inside the current NPS boundary include: floating docks on the river, riprap along the shoreline, concrete apron (which serves as the cover for the Potomac Interceptor), and mature trees.

There are considerable concerns about site drainage, due both to the building's current setting below flood level and due the grade change of the site. The existing structure is located in the flood zone of the Potomac River. The building has experienced major flooding events in 1918, 1924, 1936, 1937,

2 Exhibit A, Lease Agreement between the United States of America acting through the National Park Service and Friends of the Washington Canoe Club, made 10 December 2019.



FIGURE 42 Detail of southwest corner of building with drainage trough cut into concrete slab with water discharging from the building.



FIGURE 43 Excavation at northwest corner of the building reveals lack of waterproofing and drainage system at the foundation area.

1942, 1948, 1952, 1955, 1972, 1985, and 1992. Based on past records, the worst flood took place in 1936, where water levels reached a height of about fifteen inches above the second floor level of the boathouse. FEMA has established flood zones for the Potomac River and this property is located in a Special Flood Hazard Area (SFHA) Zone "AE", Flood Insurance Rate Map (FIRM) 1100010014C, effective September 26, 2010. One of the most concerning drainage issues occurs at the building's north elevation, where the perimeter grade is adjacent to and sloping towards the foundation wall. There is no drainage system at this location, resulting in surface water shedding towards and against the building's exterior wall rather than away from it. This problem is further exacerbated by the fact that there are no roof gutters. The continuous drainage through the wall is discharged via a series of troughs cut into the concrete floor slab on the building's ground floor. These troughs carry the drainage water through the building, across the concrete apron between the river elevation of the building and the shore of the river.

EXTERIOR

The Washington Canoe Club's boathouse has a rectangular footprint measuring about 142' by 45'. The building faces south, overlooking the Potomac River, and the rear (north) elevation backs up to the former rail line, now the Capital Crescent Trail. The steel footings for the connecting walkway remain in situ near the boathouse. The original section of the building, the western portion of the structure including what is now the central pavilion, measures about 61' by 45'. The 1909 section tacked another 30' onto the east, including the corner tower/east turret, resulting in the building's overall footprint increasing to 92' x 45'. The ca. 1920s eastern extension measures approximately 50' by 44' (front by east end).

The 1905 to 1909 structure is five bays across, with each bay marked by a large square opening designed to provide room to access the canoe storage areas. Rolling doors slide horizontally on interior tracks to open the four westernmost portals; the doors are made of wood and are painted white. The easternmost of the five openings is a single door made of wood and painted white; it is mounted on hinges and opens inward. The ca. 1920s eastern extension adds another three bays to architect George



FIGURE 44 Partially obstructed south elevation, looking northeast.



FIGURE 45 East and partial south elevation of c. 1920s addition, looking west.



FIGURE 46 North and partial east elevation, looking west.



FIGURE 47 Obstructed west and south elevation, looking east.

Hales's 1905/1909 design. Originally one-story with a small second story at its northwest corner, it is characterized by contemporary overhead doors wherein the doors are mounted on tracks and roll up to open the space.

The present configuration of the eastern extension includes the gable-roofed addition for the women's locker room; this narrow, east-to-west addition joined the main building on the north end of the east elevation. To the south of the locker room was a roof-deck defined by a parapet-like balustrade. This was later enclosed, covered by extending the southern slope of the gable roof into a long shed roof and filling in the walls. The changes are particularly evident on the east elevation. Presently the east elevation fenestration consists of the single contemporary door and two inward-swinging awning windows both now covered with plywood and painted to represent glazing of eight lights per opening.[3]

3 With the removal of the plywood coverings, the architectural field team saw that these windows are inward-swinging awning windows; the windows in the women's locker room are hopper windows. Robert Arzola, Paul Davidson, and Daniel DeSousa to Virginia B. Price, personal communication, July 2013.



FIGURE 48 Green painted wood shingle siding with white trim on south elevation. Areas of replacement and missing shingle evident. Note that the balcony structure is leaning away from the building.



FIGURE 49 Newer shingles on south elevation of east bay.



FIGURE 50 Wood shingle siding on north elevation



FIGURE 51 Detailing of weathered, cracked, missing, and dislodged shingles on the west elevation. Mold visible. Red paint (possibly original) exposed.



FIGURE 52 Detailing of weathered, cracked, missing, and dislodged shingles on the west elevation.

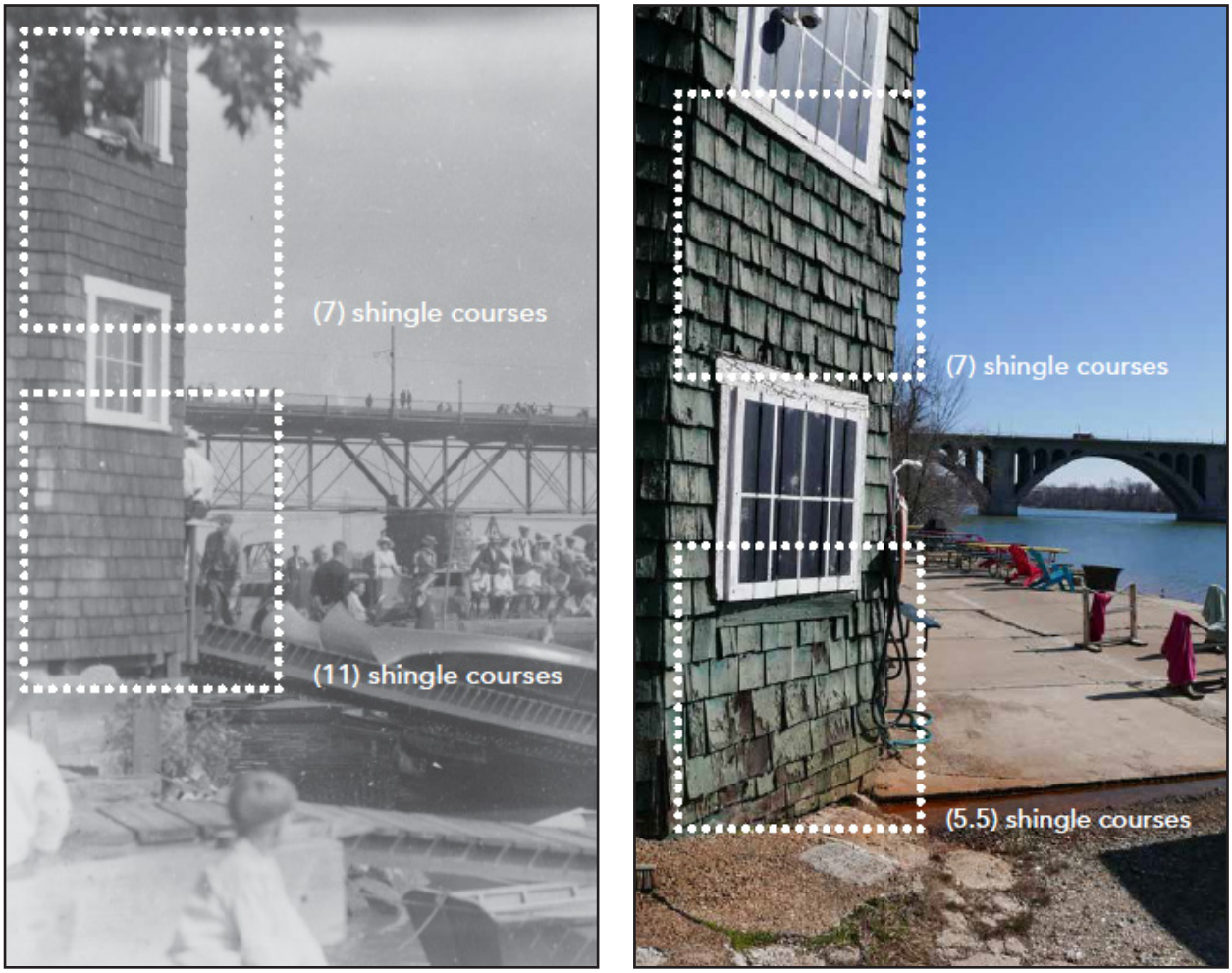


FIGURE 53 Image on left, dated c. 1910 compared to image on the right, dated c. 2020, provides evidence that the building's relationship to the ground has changed since its initial construction. Cox Graae + Spack, 2020.

Exterior Envelope

Exterior Walls

The exterior wall surface of the building consists of painted green wood shingle siding that covers all elevations of the building. The trim on the building is painted white. Between 2005 and 2008, south elevation at the first story was removed and reconstructed.

An initial paint analysis undertaken by EHT Traceries in March 2021 indicates that the building was originally painted a dark red with white trim. The paint analysis was undertaken at eight locations on the building's north elevation. Nearly every sample had the same red layer (color identified as SW 6055), including samples taken from the north elevation of the Women's Locker Room.[4] This finding is consistent with the building's depiction in a c. 1910 colorized postcard (Figure 14 of this report). Based on stratigraphy, which showed several layers of green paint, the building has been repainted several times using various hues of green. It is most likely that the building was completely repainted green following the devastating 1936 flood. The paint analysis can be referenced in Appendix A of this Report.

The shingles are random widths with approximately eight inches of exposure. A comparison of historic and existing photographs shows that the number of shingles between the bottom of the window opening and the ground has greatly reduced. This reflects the introduction of the concrete apron following the installation of the Potomac Interceptor sanitary sewer pipe. The shingle siding varies in condition. Severe deterioration of the shingles is seen in many areas across all elevations, characterized by cracked, warped, and missing shingles. Generally, the shingles themselves are in fair condition; however, the majority have failing finishes. Replacement cedar shingles were installed by club members at various locations, including the reconstructed south elevation, between 2005 and 2008, and by NPS on the southern elevation of the east bay in 2011. These newer, replacement shingles are in good condition.

Cupola Louver Panels

The roof cupola provides passive ventilation to the attic space and Ballroom areas of the building through the updraft or "chimney effect" method. The cupola is a prominent feature of the roof being eight-sided with a shingled base, white-painted louver panels and a conical roof topped with a pinnacle.

The louver panels exhibit UV deterioration to the wooden members, loose joints, failing paint, and poor flashing.



FIGURE 54 . Detail of deteriorated wood louver panels.

4 Color matches from the paint analysis are approximations from the samples. Sherwin William codes were used in lieu of Munsell colors.



FIGURE 55 Balcony, looking northeast.



FIGURE 56 Detail of western balcony.



FIGURE 57 Detail of brackets under balcony, looking northwest, c. 1950s. Washington Canoe Club.



FIGURE 58 Balcony without brackets. Noticeable sag in the cantilevered balcony structure visible.

Projections

Balcony

There is an integral balcony extending to either side of the central pavilion that terminates at the towers. Between 2005 and 2008, the wood floor and support frames of the balcony were reconstructed with all new materials due to severe deterioration. The walls of the balcony on the south elevation consist of painted wood shingle siding similar to the other elevations of the building. The siding on the west and center sections of the balcony is in particularly poor condition with many warped, cracked, and broken shingles; water penetrates the core of the structure and may be causing accelerated deterioration of the support structure. The siding on the eastern section of the balcony appears to be newer and is in fair to good condition.

A cantilevered balcony projects from the center of the south elevation. Originally, the balcony was supported by wood brackets; however, they were removed at some unknown date after the concrete apron was laid. The balcony is in poor condition with a clearly noticeable sag in the structure.

Porch

The non-original north entrance is sheltered by a small, non-original, wood porch with a shed roof and a wooden staircase. The paint is peeling, and there are signs of rot. Neither the porch nor the stairs are structurally sound.



FIGURE 59 Porch sheltering north entrance.

Roof

The building features a standing seam metal roof that is not original to the building. Based on research conducted to date, by the 1910s, the roof comprised of either sheet metal pans or some type of synthetic asbestos-cement shingle.[5] Several areas exhibit severe rusting and corrosion. The flashing is also deteriorating. Secondary roofing, such as the turrets, cupula, and dormers, feature a modern roll roofing membrane. It appears that these roofs have reached the end of their useful life and should be replaced.

The south elevation (principal façade) of the Washington Canoe Club features a complex roof that has many overhanging and recessed soffit areas, including: the overhang of the balcony roofs (part of the main hipped roof), the east and west tower and cupola overhanging roofs and the overhanging eaves of the other roof systems. The overhang at the balcony was extended using supplemental rafters to protect the balcony deck from the weather.



FIGURE 60 Washington Canoe Club, looking west, c. 1910-1920. The building's original roof likely featured wood shingles. By the 1910s, however, the roofing comprised of either sheet metal pans or some type of synthetic asbestos-cement shingle (widely available after 1920). Washington Canoe Club Historic Structure Assessment Report.



FIGURE 61 1920 c., Distinctive roof patterns indicate sheet metal or early composition shingles on the main gable roof. Cupola and towers feature sheet metal. Note gutters on either side of balcony, and drainage slots across the front of the balcony. Washington Canoe Club.

5 Research to date has not definitively uncovered the original roofing material.



FIGURE 62 Detail of exposed sheathing and missing wood.



FIGURE 63 Shed roof enclosure of southern portion of East Storage Bay overlapping gable roof of Ladies Locker Room.



FIGURE 64 Soffit detail on east tower and east bay (right)



FIGURE 65 Roof on north elevation, looking south from C&O Canal toepath. Extensive rusting visible at northwest corner of the building.



FIGURE 66 Roof on south elevation, looking north floating dock. Extensive rusting visible.



FIGURE 67 South portion of Women's Locker Room clad in green-tinted mineral surfaced roll roofing material installed above plywood substrate visible as seen from Workshop.



FIGURE 69 North side of chimney that serves the ballroom..



FIGURE 68 Exterior view of second floor Board Room with painted mothball panels attached.

The recessed arch feature in the central gable is generally in fair condition. The roof edges are deteriorated. The underside of roof shows exposed rafter tails and unpainted replacement roof deck plywood sheathing that is in poor condition.

The east storage shed has two roofing types: the older gable roof at the rear over the Ladies Locker Room and an overlapping shed roof over the Workshop. The north elevation of the Women's Locker Room has several structural issues that creates a wavy roof edge. The original roofing material for this part of the building -- a heavy weight green-tinted mineral surfaced roll roofing material installed over a plywood substrate -- is visible from the exposed shed roof in the workshop.

This roof overhangs the exterior walls on the south and east elevations. It is supported by the lightweight roof frame and plywoof roof deck. There is a vertical fascia board on both elevations. Materials are generally in fair condition.

Chimney

There are two masonry chimney stacks, both placed in the north rear of the building. The main chimney served the fireplace in the ballroom, while the secondary chimney historically served the boiler room (now a storage closet). The boiler room chimney is east of the original building, in the 1909 portion.

Both chimneys are failing and lack adequate flashing. Bricks are missing and displaced, and loss of mortar is visible. Where visible, the interior condition of the brick work appears to be in fair condition. The condition of the flues is unknown but likely to be poor since both chimneys are open to the weather.

Openings

Windows

Originally many of the windows were not glazed,

such as those in the west tower. Later a mixture of wood sash glazed with six-over-six lights or eight-over-eight lights and sash glazed with one-over-one lights was used along with six-light and eight-light casement windows and pivot windows. The windows vary in terms of operation. Virtually all of the window assemblies were covered in plywood as a protective measure by NPS between 2010 and 2012. The plywood has been painted to represent the glazing of the sash behind it. Thus, windows were observed from the interior only, and appear to have varying conditions.

The first floor of the main block has four windows located in the west wall of the West Boat Storage Area. The windows appear to be original and consist of a painted wood fixed sash with pegged sash joints and six lights. The windows are in poor condition. Some glass and window frames have been damaged, and the overall condition of the sash and frames is poor.

The first floor of the c. 1909 addition has five windows located in the south wall of the Grill Room. The windows in this room were



FIGURE 72 Windows in Grill Room, looking south. Windows are in fair condition.



FIGURE 70 Detail of window in West Boat Storage Area.



FIGURE 71 Acrylic panel coving Kitchen window.

reconstructed between 2006 and 2008. The windows consist of newer painted wood double casements that open to the interior space. Each window set is similar and has two eight-light sashes with a brass casement latch, modern inset hinges, and surface bolts at the top and bottom of one sash. All windows



FIGURE 73 Typical double-hung window in Ballroom around the stage. This particular example has missing muntins.

are in good condition.

The Kitchen has a single window opening in the concrete foundation wall on the north elevation. This window was added in the 1970s. The opening is divided into four openings by concrete blocks encased in painted wood. The exterior side of the opening has a single clear acrylic panel covering the opening. The acrylic panel is loose and in poor condition.

The windows on the second floor of the main block consist of wood double-hung windows, wood double casement windows, wood hopper windows, wood awning windows, and some modern windows. Generally, most of the windows are in fair condition based on the interior visual inspection.

The windows in the south wall of the Ballroom are original full-length double casement windows with five lights per sash. The windows swing out and provide access from the Ballroom to the exterior Balcony. The windows are currently removed from the openings and stored in the Ballroom. Each set of casement windows has a stained interior finish and a painted exterior finish. Original hardware includes a mortise latch set with a brass knob, rosette, and key escutcheon on the exterior face. The interior hardware includes a brass lever, rosette, key escutcheon, pull chain bolt at the top, surface bolt at the bottom, and brass curtain rods at top and bottom. The windows are in fair condition with some minor areas of wood damage, finish failure, and missing hardware components.

Four six-over-six double-hung wood windows surround the stage located in the central bay on the south elevation. The windows have thinner muntins than other similar windows in the Ballroom and may be later replacements. The windows are in poor condition with cracked or missing panes, wood damage, and missing muntins. Four similar double-hung windows are located on the north wall of the Ballroom and are in fair condition. Two of the windows appear to be original sash.

The window located in the Men's Toilet Room on the second floor is a four-light double casement window with obscure glass. The window appears to be original to the 1909 construction and is in fair condition. Hardware includes a casement latch, surface bolt, and butt hinges with ball finials.

Two six-over-six double-hung wood windows are located in the north wall of the Women's Lounge. The

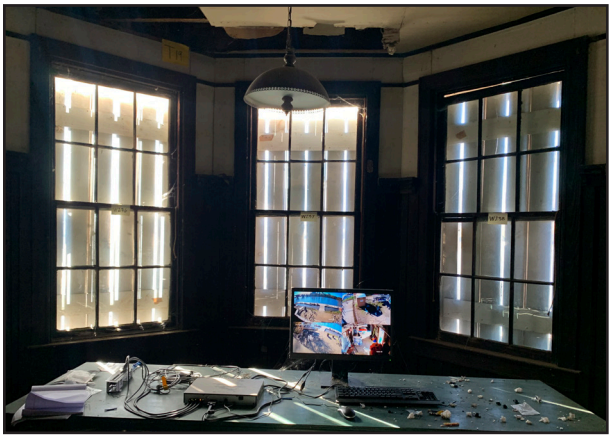


FIGURE 74 Six-over-six windows in Board Room.



FIGURE 75 Window openings on south side of Ladies Locker Room (originally exterior wall). Some windows have been painted over while other windows have been removed from their frames.



FIGURE 76 Three-light hopper window in the Men's Locker Room.

windows are similar to the double-hung windows in the Ballroom but with obscure glass installed. The interior casings consist of stained flat stock with a wide recess on the face. This trim detail is found throughout the building. The windows appear to be original to the 1909 construction period and are in fair condition.

The Board Room has five 6-over-6 double-hung wood windows located around the perimeter of the tower. The room also has two full-length double casement windows that provide access to the Balcony and to the Workshop, respectively. These windows are similar to those in the Ballroom and are in fair condition.

The windows on the north wall of the Women's Locker Room consist of two six-over-six double-hung wood windows and one six-over-one double-hung wood window. The windows on the south wall of the locker room are six-light hopper windows that open outward (into the Workshop). The windows have strap hinges and chain sash holders, and the glass has been painted. The sash in the window has been removed and stored in the Workshop. All windows are in generally fair condition; however, they all require some repair and maintenance.

The windows in Workshop consist of eight 8-light hopper windows that open in toward the interior. The windows were added when the rooftop of the east boat storage addition was enclosed to create a workshop. The sashes are painted and have simple strap hinges and surface bolts. All windows are in fair condition.

The gable on the south elevation of the main roof has a single 4-light fan window. The window is painted on both sides and is in fair condition with some areas of failing paint.

The west elevation has a small dormer with a 3-light fixed currently non-operable sash that provides light into the Men's Locker Room. The



FIGURE 77 . Detail of deteriorated dormer.



FIGURE 78 Windows in upper level of west tower.

window is in poor condition with deteriorated frame, broken glass, failing paint finish, and screening tacked on the exterior.

The east and west towers have eight window openings in the upper-most level (third floor) of the towers. These openings originally had no sash and simply provided ventilation and views of the river. These rooms were retrofitted into sleeping chambers at some time in the past (no longer in use). The West Tower Chamber has awning-style sash installed in some of the openings and framing has been installed to decrease the size of the openings. The exteriors of all of the openings are covered with typical painted wood planks and screening for ventilation. These windows are considered to be in poor condition due to the modifications to the original windows openings.

Doors

Pedestrian Doors: The canoe club building has several door types. All door surrounds are made of wood and the members are butt joined. The various doors include the following:

1. A nine-light, two-panel exterior door is located on the first floor on the south elevation. The door opening is located at the eastern end of the original building; however the door itself is most likely a replacement door. The door is in fair condition with some areas of minor wood deterioration, paint failure, but otherwise structurally viable;
2. An eight-light double door leads from the Board room to the southern Balcony. The door is in fair condition, but has been boarded up from the outside for protection and ventilation;
3. An eight-light double-door leads from the Board room to the Workshop that originally led to a balcony. The door is in fair condition. Original and contemporary hardware are extant;
4. A four-light, three-paneled door leads from the Ballroom to the exterior Balcony. The door has original hardware. It is in fair condition with some areas of deteriorated wood components, failing finish and missing panes of glass;
5. A four-light, three-paneled door leads from the North Entry Hall into the Workshop and was constructed as part of the second phase of construction. The door has original hardware. It is in fair condition with some areas of deteriorated wood components, failing finish and missing panes of glass.



FIGURE 79 Eight-light double door leading from Board Room to Workshop.



FIGURE 80 Four-light, three paneled door leading from Ballroom to Balcony.



FIGURE 81 Interior of north entrance door with contemporary ADA hardware.



FIGURE 82 Exterior of north entrance door. Hardware has been removed.

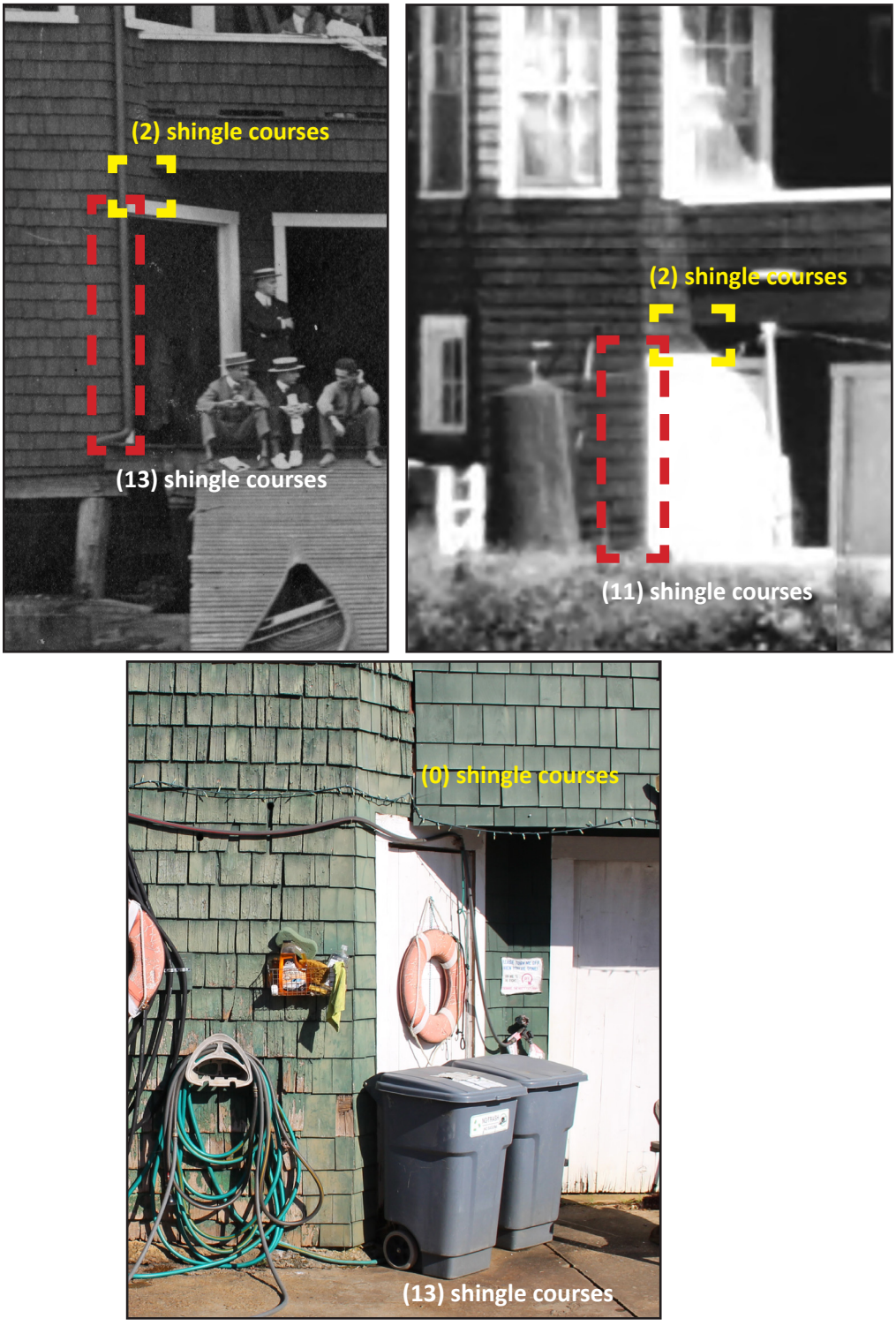


FIGURE 83 Image on upper left, dated c. 1930s, shows original height of the openings of the West Boat Storage Area as compared to the balcony. Image on upper right, dated 1989, shows that reduced height of the door opening following the installation of the concrete apron. All of the doors within the openings were cut to accomodate the reduced door opening height. Bottom image, dated 2020, shows the restored height of the door openings (completed as part of the 2005-2008 scope). The relationship between the top of the frame to the bottom of the balcony, however, was compromised as part of this effort.



FIGURE 84 Non-original exterior door in the West Boat Storage Area.



FIGURE 85 Openings of south side of East Boat Storage Area. The eastern and middle bay feature metal roll-up doors; the western bay as been infilled.

There are several kinds of solid exterior doors that are all in fair condition, and include:

1. There are five rectangular boat ports in the West Boat Storage Area. The openings feature sliding and non-original swinging barn-style doors. Following the addition of the concrete apron and the subsequent raising of the Club's first floor level, the height of the openings was reduced, and the original wood sliding/swinging doors were cut down. As part of the 2005 to 2008 reconstruction of the south elevation, the height of the door openings were restored. The original doors were removed and replaced in-kind (hardware was reused);
2. A non-original five-panel wood door with raised panels is located at the north entrance. Contemporary ADA-compliant hardware has been added; and
3. A contemporary metal door located at the second floor of the east elevation of the East Storage Bay. It is not compatible with the building, and is no longer accessible.

The three bay doors in the East Boat Storage Area consist of modern overhead metal roll-up doors. Although research to date has not uncovered the original design of the East Boat Storage Area doors, it is likely they were either wood garage-style doors or wood sliding doors. The western-most door opening was infilled in 2011 to provide pedestrian access to the building after the main club house was determined unsound. The infilled opening features wood shingle siding to match the existing siding. A modern metal man-door has been installed within the infill. All doors are in good condition.

STRUCTURAL

In 2010, the structure was surveyed by the structural engineering firm McMullan & Associates Structural Engineers. Their report concluded that the structural system was in poor condition and was inadequate to support the required loads. The wood posts that make up the structure exhibited moderate to severe rot, and they sat slab-on-grade with no foundation or connection, instead sitting on pieces of blocking at the base.[6]

6 McMulland & Associates, *Draft Report of Findings and Recommendations*, prepared for NPS in 2010.



FIGURE 86 Temporary pipe columns installed in West Boat Storage Area.



FIGURE 87 Cross bracing in West Boat Storage Area.



FIGURE 88 Bracing in the Ballroom.

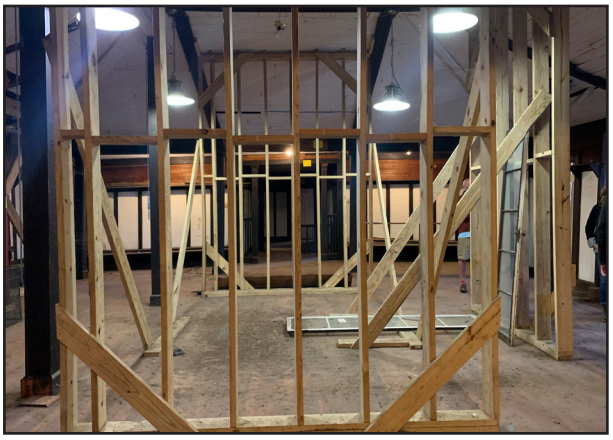


FIGURE 89 Bracing in Ballroom.

In response to this report, NPS temporarily stabilized the structure of the building between 2010 and 2012 in two phases based on the design provided by McMullan & Associates. The first phase of the structural stabilization -- the overall stabilization of the building -- occurred between September and December of 2010. As part of this phase, temporary pipe columns and wood cross-bracing were added in the West Boat Storage Area, Ballroom, and Workroom to support the failing structure. The second phase was completed between November 2011 and January 2012. The second phase focused on the East Canoe Storage Area, which was to remain the only usable portion of the building. This phase also included selected roof repairs.

A second report was completed in 2014 by Protection Engineering Group, Inc. (PEG) for the National Park Service. The report provided a conditions assessment for all of the components of the structural framing system. The following conditions assessment is taken from this report.[7] As no additional stabilization work has been completed following the issuance of this report, it is assumed that all

7 Protection Engineering Group, *Structural Investigation of the Washington Canoe Club: Conditions Assessment Report* (Contract No. P09PC60802, prepared for NPS, April 2014).



FIGURE 90 Concrete foundation with channel at the right hand side of the image.



FIGURE 91 Missing section of concrete floor in West Boat Storage Area.

conditions have worsened.

Foundation

Originally the building was built partially over the water, on pilings. In the 1960s, the Corps of Engineers demolished the Aqueduct Bridge and used the stone as riprap along the shoreline at the Washington Canoe Club. The riprap and the installation of the Potomac Interceptor sewer line caused water to stagnate under the boathouse. The sewer pipe ran between the boathouse and the Potomac River; the Corps filled around the pipe and covered the whole with a 15' wide concrete apron. This created the concrete pad or deck on the south (river) side of the building seen today, and necessitated a change in docks and floats, and produced space for a parking lot and grassy area.[8]

In order to align the first floor of the boathouse with the exterior concrete apron, the first floor slab was leveled and raised. The existing slab-on-grade is in poor condition with visible cracks with water seepage.

In 2013, NPS's Historic Preservation Training Center (HPTC), in coordination with Protection Engineering Group, Inc. (PEG), attempted to expose the foundation of the building for examination in two locations from the exterior of the building. Concrete slabs were encountered in both areas. HPTC began to remove the slab on the northwest exterior corner of the building; however it was found to be over 16" thick, so the test pit was halted.

HPTC also sawcut and removed a portion of the interior slab in an attempt to expose the foundation from inside the building. It was discovered that the interior slab in the west boat storage area consists of a 2-1/4" to 4-1/2" top slab with 3" of gravel/sand, then a 15"+ thick lower slab. The lower slab core was broken and removed at approximately 15" long when the coring drill reached its maximum depth. PEG was unable to view the foundation since the bottom of the lower slab was not found; however, fragments of wood at the base of one of the concrete cores was observed, suggesting that wood piles

8 Bird, "Washington Canoe Club," NRHP, Sec. 7:3; Christopher Brown and Jim Ross, "Chronology", outline draft dated April 2013.

may be embedded in the lower slab. Both slabs appear to be unreinforced.

Additionally, significant water infiltration was documented. It was noted when the water was removed from the slab openings, they immediately fill with water again. Further, in order to contain the water, a series of channels have been cut into the floor slab to allow water to drain from the north retaining wall, through the building, across the concrete apron to the south of the building, and into the Potomac River.

Structural System, Framing

Roof Framing

The roof framing over the men's locker room on the west side of the building consists of 2x6 rafters at approximately 28" on center (spacing varies). The rafters are supported by the exterior wall and 2x8 hip beams. An additional support frame made of modern lumber has been added, presumably due to deflection in the rafters. 2x posts have also been added under the hip beam. Connections to the hip beams are with toe nails. This roof has apparently remained intact in the past through interconnection of the roof framing and decking, three-dimensional geometry, and the nature of wood to absorb deformation beyond code recognized limits. There has been some movement of the framing that is evident at the top of the exterior wall has pushed out. The hip beams and rafter will need to be strengthened to meet code requirements.

The typical roof rafter framing over the ballroom and boardroom room consists of 2x6 rafters with a 2x ridge nailer and 2x6 collar ties that act as a truss. These trusses support the wood ceiling over the ballroom, which frames into a collar tie on two sides. The collar tie and connection supporting the ceiling is overstressed and exhibiting excessive deflection. Through discussion with the Canoe Club members, it was discovered that the roof trusses originally spanned to the exterior walls and the porch beams. The 5-1/2" x 11" interior beams with posts were added at a later date to prop the roof rafters. The rafters have multiple miscellaneous shims to the 5-1/2"x11" beams which are not mechanically connected. Beyond the hung ceiling, the rafters have been propped with 2x members down to the exterior walls. The members are not adequate to support the required loads.

The roof over the women's locker room is supported by trusses that span approximately 11 feet to bearing walls on either side. The roof trusses appear in good condition, however the balloon wall framing on the north wall shows signs of rot and movement and requires repair. Shoring has been installed for temporary support.

The roof over the workshop consists of modern 2x6 wood rafters at 24" on center. This framing appears to have been added to the original structure to enclose a portion of the porch area. Each rafter consists of four pieces of 2x6 nailed together over three spans. However, no one piece is continuous to at least two supports (see Figure 9). It is likely that there are enough nails in these members that they have been transferring load adequately to remain intact. However, this condition is structurally deficient under code-required loads.

The beam along the north wall is a single 2x8 spanning up to 16'-10". Despite the addition of diagonal supports, there is substantial deflection and multiple areas of water infiltration in this area. This has led



FIGURE 92 Rotted post on block in west boat storage area.



FIGURE 93 Framing in men's locker room.



FIGURE 94 Severe rot in roof sheathing over workshop.

to rot in some members and in the roof sheathing. Local areas of severe rot in the sheathing are in danger of collapse (see Figure 12 below). Repairs are required.

Floor Framing

The men's locker room has permanent wood lockers on two levels. The lower level lockers appear to support the Mezzanine level and upper level lockers, which makes the lower level lockers load bearing. The Mezzanine level floor framing size and spacing varies, however 2x4s at 16" o.c is common. There are penetrations through the joists to allow for a conduit line. The mezzanine level has been added to allow access to the southwest turret. Both levels of lockers are supported by the second floor framing. The additional dead load from the mezzanine level and the upper lockers reduces the live load capacity of the second floor. The mezzanine level and the upper level lockers should be removed. See repair plan for strengthening and replacement options.

The second floor framing over the west boat storage area supporting the men's locker room and ballroom floors consists of 2x10 joists at 16" on center. Floor joists are supported by five lines of beams and posts. The beams and posts vary in size, but are typically 5-1/2x7-1/2" wood beams supported on 5-1/2"x7-1/2" wood posts. Galvanized wide flange columns and beams were added at the south side of the space, and several steel adjustable-height posts have been added over the years. The wood posts in this space are typically not pressure-treated and exhibit moderate to severe rot at the base. The four posts in the ballroom that support the 5-1/2" x 11" beams sit on blocking over the floor girders which is not nailed. Termite tunnels were observed in this area.

The floor framing over the east boat storage area consists of older members supporting the women's locker room and more modern framing supporting the Work Shop floor. Framing typically consists of

2x10 floor joists at 16" on center. The joists are supported by six lines of girders and columns, and one wood bearing wall on the west end of the space. The girders are (2) 2x12 pieces nailed together to form a continuous member. The support columns vary but are typically 5-1/2" x 5-1/2". There is a line of (2) 2x12 beams which run east-to-west in the space which support the locker room wood bearing wall above. Some of the framing in this space is pressure-treated and some is not. The wood posts typically exhibit moderate to severe rot at the base and are sitting on the slab-on-grade with no foundation and no connection. There are two posts that are loose and do not make contact with the beam above. These conditions require repairs.

Floor framing is generally inadequate to support the required loads. Floor joists and beams should be strengthened under the men's locker room, ballroom, women's locker room and work shop. The upper level of lockers and upper floor in the men's locker room should be removed. The loose posts under the women's locker room need to be repaired. The floor should be brought back to level, particularly in the ballroom.

Walls

The north bearing wall which supports the roof trusses is heavily damaged by rot, particularly visible around the fireplace on the second floor. Temporary shoring has since been installed in this area to support the roof.

Between 1972 and 1976, damaged wooden framing at the base of the exterior walls was removed from the west and north sides of the building. For this work, the building was slightly raised with heavy duty jacks, the lowest 24 inches of damaged wooden wall framing was removed and replaced by three courses of concrete masonry units (CMUs). The wood structure was then replaced and connected to the concrete block wall via a horizontal wooden.

The wood framing primarily consists of 4x4 studs at 34" on center (spacing varies) which sits on the CMU. It appears that there has been water infiltration in this area, and the 4x4's exhibit moderate to severe rot at the base. There is also water damage along the north wall. The concrete/CMU wall does show some signs of water infiltration, but only minor cracking was noted. At the second floor the wall



FIGURE 95 Rot in rafters, wall studs, and top plate around the fireplace due to water intrusion.



FIGURE 96 Water damage, cracking, and biological growth at north wall of west boat storage area.

consists of 2x4 studs at 24" on center. There was substantial rot/termite damage noted to the women's locker room wall.

The east, west and south walls are made up of CMU blocks at the base with wood framing above. The south wall framing is typically not connected to the foundation in these areas, but rather hangs from the second floor framing above. The National Park Service has recently replaced much of the south wall.

The east wall in the west boat storage area appears to have racked at the rear of the space. The upper level west walls in the ballroom and men's locker room have rotated out at the roof, and in at the floor as a result of the thrust from the roof rafters. This movement appears to be the cause of the ballroom floor being out of level. These walls need to be brought back to plumb and repaired. Signs of damaged studs and wall plates in the south wall were also observed. There is a mixture of wood materials used for wall sheathing and much of it shows signs of deterioration.

Most of the exterior walls, as well as some interior walls have substantial rot which should be repaired or replaced. In addition, the second floor walls should be brought back to plumb and secured to the floor framing. New plywood sheathing should be added to provide lateral stability.

INTERIOR

Space Utilization

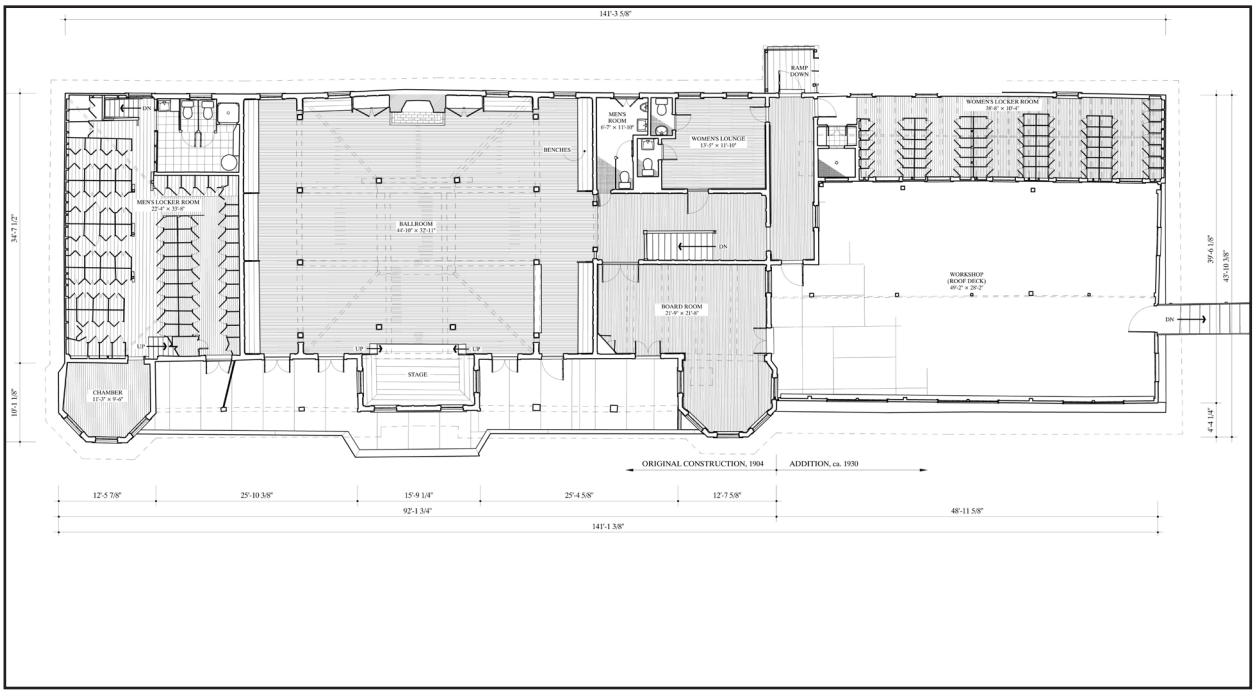


FIGURE 97 Second Floor. HABS, 2013.

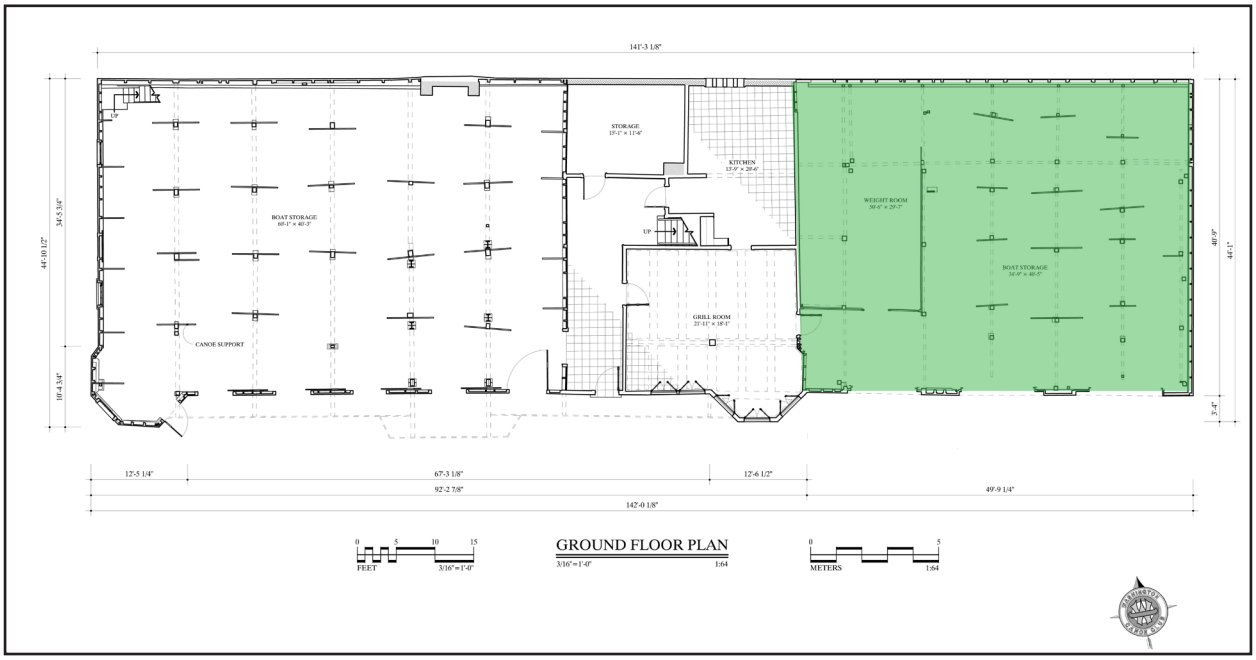


FIGURE 98 First Floor. Highlighted area is the only portion of the building currently occupiable. HABS, 2013.

General

First Floor

The majority of the first-floor plan is open and devoted to canoe storage. A central hallway provides access to the grill room that is east of the hall, kitchen that is north of the grill room, and storage located to the rear (north) of the hall. While the West (original) Boat Storage Area remains completely open, a weight room was partitioned from the Eastern Boat Storage Area.

As described in the report entitled *Washington Canoe Club Boathouse Rehabilitation 2015,* the condition of the ground floor ranges from poor to fair. The conditions are summarized easily into three conditions, basically moving from west to east. The western section of the old boathouse is in poor condition with combinations of original framing and many generations of wooden and steel temporary support. This section has been damaged by floodwaters on many occasions. The central core, which includes the Grill, Kitchen and Storage Rooms, is in good condition. Steel beam/columns have been added to support the floor above and the walls were coated in the 1970s with hard cement plaster which remains today in very good condition. This coating has protected the underlying wooden framing. The condition of the East Boat Storage Area is fair to good as all the structural framing was replaced in the 1992.

Second Floor

The second-floor plan features the ballroom in the center of the building, with a stage to the south and a fireplace to the north and ceiling rising up to where the ventilator (also referred to as a louvered lantern) is placed. In the west end and tower is the men's locker room, with a bathroom in the rear and banks of lockers filling the remainder of the space. At the mezzanine level, there are additional lockers and access to the tower chamber. East of the ballroom, in the space that was appended in 1909, is the boardroom; the boardroom opens into the east tower. The main staircase and bathrooms for men and for women are to the north of the boardroom. Both bathrooms open off the stair hall. In the later addition (extending eastward and in line with the north elevation), the present workshop occupies the roof deck and the women's locker room runs along the north wall. The enclosure of the deck happened in the mid 1970s, outside of the building's Period of Significance.[9]

The interior spaces on the second level are in generally good condition because of the continuous maintenance by WCC. Most historic finishes and features remain, along with some modern and recent temporary structural bracing. The ballroom, measuring about 35 by 45 feet, is the most notable and most decorated space in the building. The floor level in the ballroom drops almost 8 inches from north to south at the western corner.

9 Washington Canoe Club, HABS No. DC-876, December 2013.



FIGURE 99 Grill Room, first floor, looking north.



FIGURE 100 Kitchen, first floor, looking north.



FIGURE 101 West Boat Storage Area, first floor, looking north.



FIGURE 102 East Boat Storage Area, first floor, looking east.



FIGURE 103 Weight Room, East Boat Storage Area, first floor, looking north.



FIGURE 104 Central Hallway, first floor, looking south.



FIGURE 105 Central Hallway, second floor, looking east.



FIGURE 106 Workroom, second floor, looking east.



FIGURE 107 Boardroom, second floor, looking southeast.



FIGURE 108 Ballroom, second floor, looking southwest towards the stage.



FIGURE 109 Ballroom, second floor, looking northwest.



FIGURE 110 Men's Locker Room, second floor and mezzanine, looking north.



FIGURE 111 Main staircase, looking west.



FIGURE 112 Non-compliant and flimsy stairs in northwest corner of West Boat Storage Area.

Stairways

There are two staircases on the interior of the building. In the northwest corner of the ground floor, in the West Boat Storage Area, there is a staircase with a quarter turn near the bottom. It is in poor condition. The lower steps have been removed to accommodate temporary shoring and the landing has been replaced with a flimsy section of plywood. The steps to the second floor lack adequate support and a handrail.

The other stair -- the main stair -- is in the center of the building and leads from the first floor hall to the main hall on the second floor. The stairs consist of painted wood treads and risers with wall-mounted wood handrails. A wood balustrade with newel posts and decorative balusters surrounds the stair opening on the second floor. All stair components are in fair condition. The treads have worn nosings and a scuffed finish from years of foot traffic.



FIGURE 113 Tile in Grill Room and hall, first floor. Note cut down interior door.

Flooring

Originally, wood plank flooring was featured throughout the building. In order to combat the standing water that infiltrated the building following the installation of the concrete apron, the first floor slab was leveled and raised. In order to complete this, an eight-inch thick concrete slab with a four inch sand/gravel substrate was laid throughout the building's ground floor. The West



FIGURE 114 Wood floor in Ballroom, second floor.



FIGURE 115 Wood floor, second floor.



FIGURE 116 Wood plank flooring in Men's Locker Room.

Boat Storage Area was finished with a smooth concrete, while the areas within the c. 1910 portion of the building – the hallway, Kitchen, and Grill Room – were finished with a ceramic tile. The Kitchen area was topped with a two-inch thick leveling slab, resulting in a slight grade difference between it and the Grill Room.

The second floor features narrow wood boards on the second floor, wood plank flooring in the Men's Locker Room, non-original tile in the bathrooms, and some carpeting (in the tower sleeping rooms).

Generally the floor finishes are in fair condition. The finish on the wood flooring is worn and scratched from years of foot traffic. The concrete floors in the boat storage areas have cracks in some areas. Also, several large sections of concrete floor have been sawcut and removed as well as cores drilled to inspect the floor and foundation conditions.

Wall and Ceiling Finish

The interior of the Washington Canoe Club boathouse is a mixture of finished and unfinished spaces, with bead board walls and ceilings throughout except for the boat storage areas in which the framing is exposed. A Burlap covering is used to create the effect of wainscoting on the second floor. Also on the second floor, the wood trim for the door architraves, balustrade, benches, trophy cases, piers, and shelfing is stained a dark brown, almost black color. Generally the wall finishes are in fair to good condition with some areas of failing paint finish or broken or missing boards. Some areas of wall finishes have been removed for structural investigation. The wall material in these areas will be re-installed or replaced during rehabilitation.



FIGURE 117 Wall treatment in Ballroom. Note areas of peeling and bubbling paint.



FIGURE 118 Wall treatment in Boardroom.



FIGURE 119 Wood in hallway on first floor is of early 20th C. wood construction. The wall cavity was filled with silt from periodic inundation during Potomac River floods Portions of the wall were removed in 2014 for investigation. .



FIGURE 120 Painted bead board, first floor.

The ceiling finishes in the canoe club building include painted bead board, painted tongue-and-groove paneling, and exposed framing. Generally the ceiling finishes are in fair condition with some cracked boards and localized areas of failing paint finish. Several sections of ceiling boards have been removed in various areas for structural investigation. These materials have been retained and are available for reinstallation or repair during an overall building rehabilitation.

Doorways and Doors

Most of the doors are wood and paneled; the architraves are mitered or butt joined at the corners. Several are embellished with backbands, such as the cavetto molding seen on the main floor doorways.

Generally, most of the solid doors are in fair condition and still retain the original door hardware. Other doors are in poor condition with missing hardware, damaged or cracked components, and failing paint finishes. Some doors at the first floor have been trimmed substantially in order to accommodate the



FIGURE 121 Original five-panel wood door with original hardware. Note that the door was cut down to fit in the opening after the floor was raised.



FIGURE 122 Right door in the double five-panel door leading from the hall to the Board Room.

changes in floor levels.

Decorative Features and Trim

The majority of the decorative features are located in the Ballroom. Besides the stage or bandstand, decorative features include built-in benches with curving ends, bracketed shelfing, a corbelled fireplace, built-in glass-front trophy cases, and the piers with concave moldings. The built-in wood cabinets are not original but were likely installed during the second phase of construction. The cabinets consist of a stained wood frame with two glass doors and two storage compartments below with hinges doors and with glass pulls. Each cabinet has two glass shelves on the interior. The cabinets are in poor condition with broken or cracked wood components, cracked door glass, and missing hardware.

Possibly the most notable feature in the Canoe Club, however, is a detachable decorative frieze that lines the perimeter of the Grill Room.[10] The frieze, painted by Felix Mahoney in 1910, was executed in oil paint on card or paper that was maroflauged to pressboard or Masonite panels that are nailed

10 Over the years, the decorative frieze has incorrectly been referred to as a mural. According to the Merriam-Webster dictionary, a mural is "applied to and made integral with a wall or ceiling surface." This nomenclature does not reflect the frieze because the panels are not part of the building's fabric.



FIGURE 123 Bench with curving ends under bracketed shelf, Ballroom.



FIGURE 124 Trophy case adjacent to fireplace, Ballroom.



FIGURE 125 Detail of frieze.



FIGURE 126 Section of the frieze falling off of the south wall; another section showing an illustration of the Canoe Club.

or screwed into the wall substrate. Mahoney was known for his cartoons and political images in the Washington Evening Star. The frieze in the Grill Room depicts the artist and club members engaging in rambunctious antics, drinking beer, and paddling.[11] The frieze was extensively restored by Charles W. Lundmark in 1981 to 1982. Portions of the artwork panels have recently been removed from the walls as they were found to be in conflict with the goals and ideals of the current membership.

In December 2018, EverGreene Architectural Arts completed a cursory investigation of the frieze. EverGreene's report, issued in January 2019, determined that the frieze is in fair to poor condition. There are several areas of paint loss or discoloration and paper delamination. There are also some instances of water damage and mold growth.

EverGreene also investigated the feasibility of removing the panels. After examining a variety of options, including leaving the panels as they are with no treatment; undertaking minimal treatment in situ; documenting and storing on-site in purpose built racks; and documenting and storing off-site,

11 EverGreene Architectural Arts, *Washington Canoe Club: Cursory Mural Investigation* (January 31, 2019).

EverGreene concluded that, even though the panels are extremely fragile, removing, treating, and storing them off-site is the best solution for the frieze's long-term preservation.

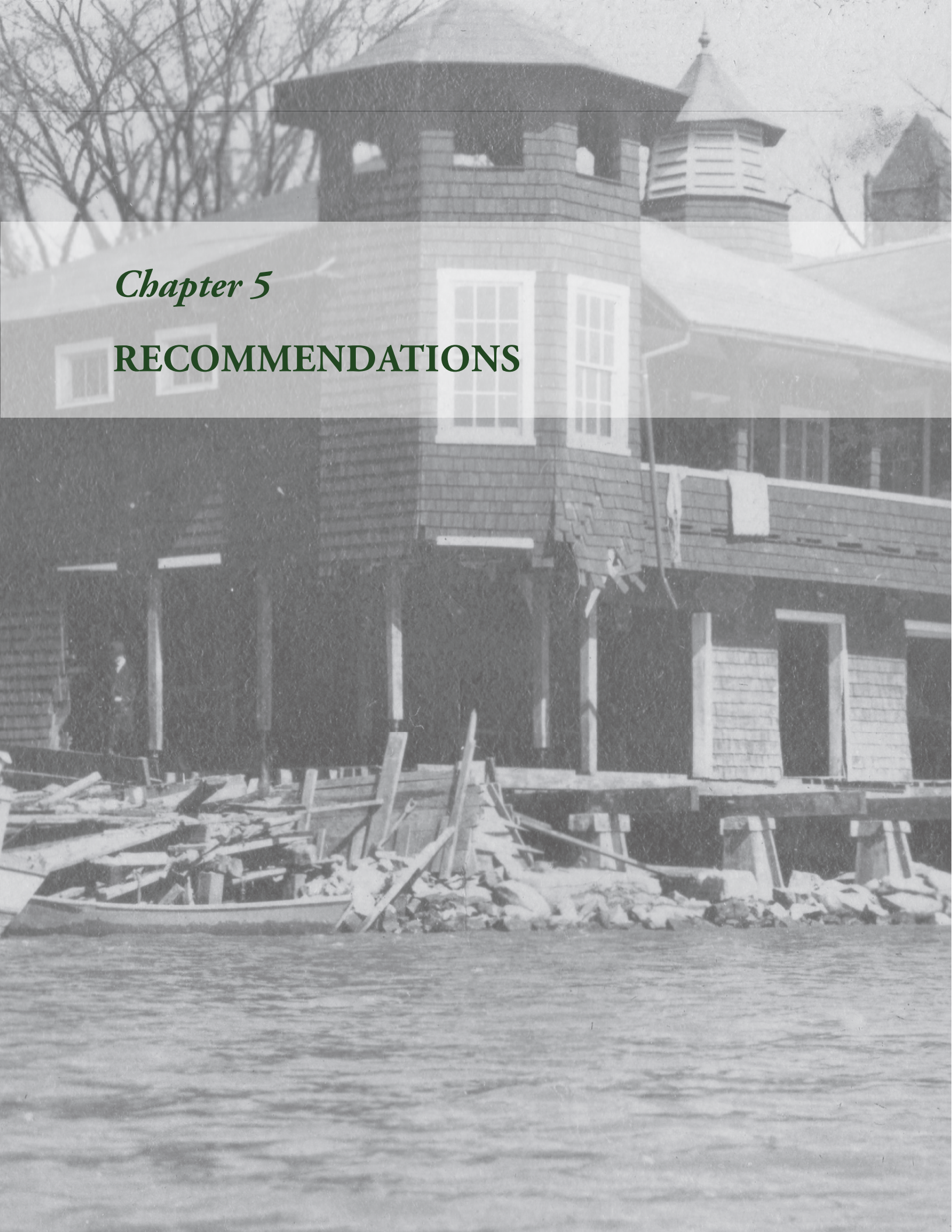
EAST BAY

In 1920, a simply constructed open-shed addition with three large openings was added to the east of the building for additional boat storage. A small second story mass was constructed atop the addition's northwest corner and was to serve as a locker room for women. The remaining space above the boat storage area was used as a roof deck. The women's locker room was expanded at some point between 1936 and 1939. In the mid 1970s, the roof deck was enclosed so it could be converted into a workshop. In order to support the structural loads of the new second floor, all the floor framing was replaced and upgraded, along with the columns. In 1992, the entire structural support within the first floor of this portion of the building was again upgraded. The roof structure above the workshop was not altered; however, the floor of the workshop was also completely replaced. The floor is now in poor condition, with several areas of staining and water damage visible. Additionally, a section of the floor adjacent to the Ladies Locker Room has been removed and is temporarily patched with plywood.

In 1992, as part of the work completed on this section of the building, wood roll-up doors were replaced with modern overhead metal roll-up doors. In 2011, the western-most door opening was infilled to provide pedestrian access to this area of the building after the main club house was determined structurally unsound. The infilled opening features wood shingle siding to match the existing siding. A modern metal-door has been installed within the infill. All doors are in good condition.

Overall, the condition of the East Bay is fair. This is because large parts of the structure have been replaced at several points during the second half of the twentieth century. The replacement and upgrading of historic framing has allowed Club members to continue to occupy the first floor of the East Boat Storage Area. The floor of the second floor and the roof structure above the workshop, however, is not structurally sound and should be replaced. Limited work has been undertaken at the northern end of the East Bay. The north elevation of this section of the building is in poor condition, as evidenced by an undulating roof edge.

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Chapter 5

RECOMMENDATIONS

PRESERVATION PHILOSOPHY

The purpose of this chapter is to support the rehabilitation preservation philosophy for the Washington Canoe Club and to identify specific treatment recommendations in alignment with that philosophy. The philosophy and recommendations are grounded in the documentation and analysis presented in the previous chapters. These recommendations address physical deterioration throughout the building, preservation best practices, and priorities for the preservation and rehabilitation of the building.

EXISTING USE

The majority of the building is no longer in use due to structural and fire and life safety concerns. After NPS undertook efforts to temporarily stabilize the oldest sections of the building, the Washington Canoe Club was permitted to re-occupy only the East Boat Storage Area and weight room. The area in the immediate vicinity of the boathouse continues to be used by the Washington Canoe Club members for boat storage and for launching the canoes. A chain link fence secures the site.

PROPOSED USE AND TREATMENT

The ultimate goal of the proposed project, which will be undertaken by the Washington Canoe Club in coordination with NPS, is to secure the building against future flood events, stabilize the structure, and have the Washington Canoe Club once again occupy the building for club-related functions. As part of this, several project objectives have been developed:

- Preserve the building's connection with the Potomac River to the south;
- Rehabilitate the building with careful consideration to the building's character-defining features;
- Working within the footprint of the historic building, reconfigure the building to create more efficient space utilization so it can better serve the programmatic needs of the Club as well as meet all applicable codes (building, accessibility, life and safety);
- Plan for flood resiliency by utilizing sustainable design and building techniques wherever possible as a model for waterfront development; and
- Integrate the building into the planned Georgetown Waterfront Non-motorized Boat Zone.

GENERAL PRESERVATION GUIDANCE

The Secretary of the Interior's Standards for the Treatment of Historic Properties ("Standards") are the most commonly accepted national standards of good preservation practice. The Secretary of the Interior outlines four treatment approaches:[1]

Preservation is defined as the act or process of applying measures necessary to sustain

1 Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Washington, DC: US Department of the Interior, National Park Service, Technical Preservation Services, 2017).

the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project. However, new exterior additions are not within the scope of this treatment. The Standards for Preservation require retention of the greatest amount of historic fabric along with the building's historic form.

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values. The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project. The Restoration Standards allow for the depiction of a building at a particular time in its history by preserving materials, features, finishes, and spaces from its period of significance and removing those from other periods.

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. The Reconstruction Standards establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

Although these treatments are sometimes used interchangeably in the general discourse, each has a specific meaning when applied to professional historic preservation practices. Each preservation treatment has a series of associated standards and guidelines, developed by the Technical Preservation Services division of the National Park Service.

REHABILITATION TREATMENT

The Washington Canoe Club is a significant both for its continued use as an athletic club in Washington and as an excellent example of the Shingle style. Its physical integrity allows it to convey its architectural character during its period of significance that extends from 1904 to 1939.

As the Washington Canoe Club prepares to mitigate future flood risks and complete a renovation to the building to allow for its continued use, it was determined that a more rigorous preservation approach, such as a restoration to a specific period of significance, would neither address the flood risks nor meet

their needs and priorities for creating a twenty-first century facility. Similarly, a preservation treatment approach would not provide the desired level of flexibility. Therefore, a rehabilitation treatment has been identified as the most appropriate approach.

The Secretary of the Interior recommends rehabilitation "…when repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate..."[2] Rehabilitation allows for the preservation of significant features while also allowing other conditions and programmatic shortcomings to be addressed. Finally, a rehabilitation approach accommodates changes to a property over time and the interpretation of multiple periods of history, which is important for preserving the physical legacy of the Washington Canoe Club, and acknowledges the continual evolution of the building from its original construction to the most recent changes at the east bay.

The *Secretary of the Interior's Standards for Rehabilitation* have been codified in the Code of Federal Regulations (36 CFR 67) as:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved**.**
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner

2 "Rehabilitation as a Treatment," National Park Service, Technical Preservation Services, accessed 12 January 2021, http://www.nps.gov/tps/standards/four-treatments/ treatment-rehabilitation.htm.

> that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[3]

GUIDELINES ON FLOOD ADAPTION

In 2019, the National Park Service published *Guidelines on Flood Adaptation for Rehabilitating Historic Buildings* to provide information about how to adapt historic buildings to be more resilient to flooding risk in a manner that will preserve their historic character and will meet *The Secretary of the Interior's Standards for Rehabilitation*. The Guidelines on Flood Adaption are meant to be used in conjunction with the Standards for Rehabilitation and are meant to be applied only to historic properties that have an established risk of flooding.[4]

An initial review of the FEMA 100-year flood zone map for this area indicates that the Potomac River flood stage would be at an elevation of about 17.30 feet. The average daily elevation of the river is at an elevation of 3.5 feet, thus the 100-year floodplain is about 13.8 feet higher. The current elevation of the first floor level of the boathouse is about 6.57 feet and the current elevation of the second floor level is about 15.82 feet, both of which fall below the established FIRM (Flood Insurance Rate Map) flood elevation.[5] With evidence of severe floods in 1918, 1924, 1936, 1942, 1948, 1952, 1955, 1972, 1985, and 1996, and with its location within the floodplain, the Washington Canoe Club has an established risk of flooding.

The Guidelines on Flood Adaption offer that:

> A project is considered to meet the Standards when the overall effect of all work is consistent with a property's historic character. Treatments that might not be considered in other rehabilitation contexts because of their impact on the historic character of the property may be acceptable in the context of adapting the property to flooding hazards. Even in this context, the selected treatment should always be one that minimizes the changes to the building's historic character and appearance. Adaptation treatments should increase the building's resilience to flooding risks as much as possible, but should do so without destroying significant historic materials, features, or spaces.[6]

In order to protect the Washington Canoe Club from further catastrophic flooding, it has been determined that the most appropriate treatment is to elevate the building on a new foundation. Given the current elevation of the Washington Canoe Club, the building should be elevated on a new foundation to raise the second floor level above the floodplain. Based on the current elevation of the second floor level and the Potomac River flood stage, the building will only need to be raised approximately 24 to 30 inches. Further investigation is needed to determine the right height for the

3 Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*.

4 Local and federal rules and regulations, such as the District Department of Energy (DDOE) floodplain management guide, should also be considered.

5 Smith, *Boathouse Rehabilitation 2015: Part II - Rehabilitation Concept,* 20.

6 Jenifer Eggleston, Jennifer Parker, and Jennifer Wellock, *Guidelines on Flood Adaption for Rehabilitating Historic Buildings*, (Washington, DC: US Department of the Interior, National Park Service, Cultural Resources, Partnerships & Science, 2019), 6.

first floor relative to the surrounding grades so as not to adversely effect the adjacent area.

While raising a historic building can have adverse effects on the historic character and integrity of the building, the *Guidelines on Flood Adaption for Rehabilitating Historic Buildings* explains that buildings can generally be elevated at least a nominal amount without a major impact on the property's historic character. There is no universal standard for how high any given building can be elevated; instead, size, scale, height, and massing of a building will affect how much change in height may be acceptable without impacting the historic character of the property or the historic spatial and architectural relationship between the building, the C&O Canal, and the Potomac River. Generally, there is less perceived impact on the character of a historic building when the proportional massing relationships of the foundation to the body of the building and the overall vertical or horizontal emphasis of the building are maintained.[7] In the case of the Washington Canoe Club, raising the building would not only mitigate the risk of flooding for the programmed spaces of the building, but it would also allow for the restoration of the building's original first story proportions and relationship to the ground plain -- a preservation benefit.

RECOMMENDATIONS FOR TREATMENT[8]

SITE

Flood Protection

- Raise the historic building (main block and 1909 addition) approximately 24 to 30 inches so that the second story elevation is above the floodplain. Care should be taken to reestablish the first story's original proportions relative to the surrounding grade without adversely effecting adjacent areas and site access.
- Repair any structural deficiencies before beginning work to separate the building from the existing foundation. A new mat foundation should be laid on micro-piles with formed concrete perimeter knee walls to support the wood framing and lateral soil pressures at portions of the building perimeter.
- Construct low concrete walls designed to support the existing wood framed exterior and interior walls and to resist future anticipated flooding.
- Anchor and laterally brace the structure, where necessary, to prevent movement or collapse of the historic building.
- Install flood doors or break-away wall panels at the new foundation along the west, south, and east walls to allow flood water to enter the building without damage and to allow the water to recede as quickly as possible.

7 Eggleston, Parker, and Wellock, *Guidelines on Flood Adaption for Rehabilitating Historic Buildings*, 34-35.

8 This section utilizes and builds upon the recommendations included in the Historic Structure Assessment Report prepared by the National Park Service Historic Preservation Training Center in 2014, the S*tructural Investigation of the Washington Canoe Club: Condition Assessment Report* prepared by Protection Engineering Group in 2014, and the *Boathouse Rehabilitation 2015: Part II - Rehabilitation Concept* prepared by Baird Smith.

- Retain the historic access locations and approach/orientation of the building.
- Relocate all utilities above the established flood risk level or protect them in place with a watertight or impermeable enclosure.
- New floor finishes on the first floor should be highly water-resistant, such as concrete or ceramic tile, due to the high probability of flooding events.
- In instances where new lumber is required, cedar; white oak; and/or teak should be used. All three of these wood species have a natural ability to repel rot, moisture, and insects. New wood should match
- Retain historic materials, features, and finishes that are flood-damage resistant on the floor. If historic features need to be replaced due to damage or deterioration, use substitute materials that match the design and appearance of the historic component but that are more flood-damage resistant.
- Local rules and regulations, including the District Department of the Environment (DDOE) floodplain management guideline, should be considered.

Site Improvements

- Improve the Potomac River's edge through careful site planning and the introduction of compatible strategic plantings that takes into account storm water issues, habitat creation, and riparian health.
- Repair or cover severely cracked and deformed concrete apron located to the south of the building.

Site Security

- Install a new perimeter fence around the property.

EXTERIOR

Exterior Envelope

- Raise the building approximately 24 to 30 inches to reestablish the building's original first story proportions (i.e. the full building elevations relative to the surrounding grade).
- Remove the existing wall sheathing to allow for direct access to repair deficient wall framing and to plumb displaced walls. In order to remove the wall sheathing, the exterior skin (wood shingles) will also have to be removed. Effort should be made to salvage the existing historic wood shingles as much as possible during removal, or leave selected areas of original shingling (with red stain seen on reverse of shingle) in-situ; however some amount of damage and loss of shingles is expected. After the siding has been removed and the framing repairs have been completed, installation of plywood wall sheathing is recommended per the structural engineering report for increased lateral stability. The exterior shingle siding should then be

re-installed to match the original appearance.[9]

- Replace in-kind any warped, cracked, broken, or missing wood shingles to match the adjacent wall shingles. It is recommended that any replacement shingles be of 100% heartwood cedar (red or white) as this wood is naturally resistant to decay. Other materials, such as a naturally water and decay resistant wood species; pressure treated wood; or thermally treated wood, may be appropriate replacement shingles as well. Replacement shingles should be edge-grained, as these tend to split and warp less than flat-grained. If wood shingles are in good condition, detach, vertically align with extant adjacent pattern, and re-secured to the substrate.
- All wood trim should be sorted. If in poor condition, the trim should be replaced in-kind to match the size and profile of the original feature. If the material is in fair condition, it should be re-used. Any pieces identified for reuse should be documented and tagged during their removal.
- All shingles and trim should be prepared, primed, and repainted with quality exterior-grade paint, with attention paid to the end grain. As part of the preparation, remove loose and peeling paint, loose fibers, and gently clean. Prime replacement wood on all sides. Following manufacturer's instructions, it may be helpful to thin the primer when applying to the end grain to allow it to penetrate the surface further.
- Most preservatives treatments can only be applied to bare wood, so treatment of new wood will be the easiest. Otherwise, finishes will need to be removed. One possible product to consider are Bora-Care with Mold-Care to deter wood-destroying pests, mold, and decay fungi. In outdoor applications, sealants need to be used with this product. Application methods and compatibility with finishes should be determined following the manufacturer's instructions and through testing. Though the structure is obviously not a bridge, *Guide for In-Place Treatment of Wood in Historic Covered and Modern Bridges* (https://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr205.pdf) has additional relevant information. Water-repellent preservatives slow the absorption of liquid water. These are often applied to new wood through using vacuum pressure or dipping, but can also be brush applied to bare wood during refinishing after loose paint has been removed. Special attention should be paid to treating the end-grain, as this is the most susceptible to moisture. They likely will not perform as well on weathered wood. Manufacturer's recommendations should be followed, and one should be selected that can be used with the selected finish. Wolman Woodlife Classic Clear Wood Preservative is one paintable option to test. See *Applying a Water-Repellent Preservative to Wood (*https://www.gsa.gov/technical-procedures/applying-water-repellent-preservative-wood?Form_Load=88473) for more guidance.
- Preliminary paint analysis undertaken in March 2021 by EHT Traceries indicated that the building was originally painted a dark red with white trim. The paint analysis was undertaken at eight locations on the building's north elevation. Nearly every sample had the same red layer at as the base color, including samples taken from the north elevation of the Women's Locker Room. It is likely that the building remained red throughout much

9 Protection Engineering Group, *Structural Investigation of the Washington Canoe Club: Condition Assessment Report*.

of its Period of Significance. At some point, possibly after the devastating 1936 flood, the building was repainted a dark green. The stratigraphy shows that the building has been repainted several times with various hues of green. The building remains green today. When the building is rehabilitated and paint colors are chosen, it is important to remember that Shingle Style buildings are characterized by colors reminiscent of wood. Dark brown or red stains are most common; however, darker greens and grays are also appropriate. Appropriate colors, or similar colors, include: Baize, Gedney Green, Pointed Fir, Winter Balsam, Moss Glen, Pettingill Sage, Burnished Pewter, Wooly Thyme, Milkweed, Pitch Pine, Sturgis Gray, Britches, Portobello, Tankard Gray, Hitching Post, Cummings Oak, Tyson Taupe, Bargeboard Brown, Rawhide, Chocolate, Monument Gray, Fieldstone, and Gropius Gray.[10] Trim should be painted in a neutral color that contrasts with the paint color chosen for the building (i.e. white, beige, or tan).

- The appropriate finish will be dependent on what type of finish is already present as they will need to be compatible. The red, early layer observed on the shingles is likely oil-based. Oil-based paints will help to protect the substrate from liquid and water vapor, but because they are film-forming, when water inevitably infiltrates, they are slow drying. Oil-based paints do brittle with age and can crack as wood expands seasonally. Latex paints, which are also form filming, are less resistant to damage from expansion; however, these are likely not compatible with previous finishes and may be less durable. Regardless of the finish, regular upkeep will be required to ensure the wood stays sealed. The service life of finishes on weathered wood will be less than that of new wood.

Cupola Louver Panels

- Damaged or deteriorated louvers on the cupola should be repaired or replaced in-kind. The flashing at the base of the louvers should be replaced with new corrosion resistant metal flashing. The interior metal screening should be inspected and resecured to the louvers or replaced as required. All wood components of the louver panels should be prepared, primed, and repainted.

Balcony

- The structural framing for the balcony walls should be inspected and stabilized as required when the shingles are removed and repairs conducted as per the overall rehabilitation of the building. Historically accurate brackets (Figure 55 of this report) should be re-installed and the original drainage slots observed in historic photographs (Figures 17, 21, and 25 of this report) should be reopened for drainage.
- The walls of the balcony should be repaired as required. The north interior face (north elevation) of the balcony walls should be sheathed and shingled to match the exterior walls.
- Any warped, cracked, broken, or missing wood shingles should be replaced in-kind to match the adjacent wall shingles. Existing historic shingles (if in good condition) should

10 *Historic Colors of America: A Guide to Style, Color, and Architectural Periods,* Historic New England, https://www.historicnewengland.org/preservation/for-homeowners-communities/your-old-or-historic-home/historic-colors-of-america/ (accessed 1 April 2021).

be detached, vertically aligned with extant adjacent pattern, and re-secured to the substrate. All shingles and trim should be prepared, primed, and repainted with quality exterior-grade paint.

- The top railing boards and trim boards should be replaced with weather-resistant wood to match existing boards.
- The contemporary awnings that have been affixed to the balcony should be removed, and the drainage slots restored.
- The support brackets historically under the balcony should be restored.

North Porch

- The north porch is not original and does not contribute to the significance of the building; therefore, the porch can be removed in its entirety. As the project architects investigate accessibility in the building, this may be a location for a new stair and ramp designed and constructed in compliance with the 2010 ADA Standards for Accessible Design. All components should be rebuilt according to applicable egress and building codes.

Roof

- Based on research conducted to date, by the 1910s, the roof comprised of either a sheet metal pans or some type of synthetic asbestos-cement shingle. The existing standing seam metal roof is in poor condition, and should be replaced. Repairs to the roof are critical to securing the building and making it weather-tight. As the extant roof must be replaced in its entirety, the roof should be replaced with a sheet composition roofing material or some other material that is compatible with the style and age of the building. Any roof finishes should be installed according to the manufacturers recommendations and should receive regular inspection and maintenance.
- All flashings on the main block hipped roof should be removed and replaced during the roof replacement including hips, valleys, counter flashing and side wall flashing against the gables and towers. New flashings should be installed in accordance with manufacturer's recommendations. Hip and valley flashings may also include roll roofing depending on the final roof finish. All flashings should receive regular inspections and maintenance.
- The exposed soffits should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.
- The ceiling height above the non-original Workshop does not meet code. As this section of the roof is not original to the building and does not contribute to the building's significance, it should be removed and the pitch reconfigured to meet applicable code requirements.
- Currently no roof drainage system exists on the building; however, historic photographs

show gutters and downspouts on the south side of the original section of the building. Additionally, as noted in the balcony recommendations section, rectangular drainage holes were located across the balcony. A new drainage system should be designed and installed on the building to include gutter and downspout components that are compatible with the roof types and styles. A system of half-round gutters and round downspouts is recommended. Gutters should be installed at the eaves of all sloped roofs on all elevations. Gutters are not required on the octagonal tower roofs or on the cupola roof. The downspouts should lead to subsurface drains that direct the runoff to an approved outlet area or drainage system. Discharge or roof runoff into the river is not recommended.

- Gutters and downspouts should receive regular maintenance, including cleaning of gutters and flushing of downspouts.

Chimney

- As the scope of work is finalized or when a General Contractor is on board and can engage a restoration mason, it may be helpful to undertake a mortar analysis of both the pointing and bedding mortars should be conducted to determine the mortar's original color, texture, and bonding strength. Determine the type of binder, mix ratios, and any additives. Aggregate should match in grading, shape, and color.
- Loose or missing mortar in the joints of the brick chimney should be replaced with appropriate new mortar that matches the original in color, texture, and bonding strength.
- The corbeled cap of the chimney should be dismantled and reconstructed with existing bricks and new mortar that matches the original in-kind.
- A new compatible cement wash should be installed on the top of the chimney.
- The existing metal chimney cap should be replaced with a new custom-fitted, vented, and screened non-corrosive sheet metal (stainless steel, copper, or galvanized metal) cap to prevent water and animals from entering the chimney flue.
- If the chimneys must be reconstructed, the existing chimney flashing should be removed and replaced. New flashings shall be copper or other approved metal and shall be installed using traditional flashing details.

Windows

- An overall strategy should be developed for the windows. All of the exterior wood panels covering the window openings should be removed and an assessment made as to the condition of window sashes and frames to determine if restoration is the appropriate approach. If determined that the windows should be replaced, they should be replaced with wood or aluminum-clad wood windows that match the configuration of the original windows.
- All loose or missing glazing compound on all window sashes should be replaced in-kind with new oil-based glazing compound.
- If the windows are determined to be salvageable, the sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted. A chemical paint stripper can

be used such as Citristrip Paint and Varnish Stripper. Prior to removal of paint, a paint sample should be taken for analysis to ascertain the original color of the wood mullions and windows. Following the stripping of the paint, the mullions should be inspected to determine if there are any previously covered areas of rot or damage.

- When cleaning wood, gentle methods should be used. Harsh chemicals should be avoided as they can raise the grain of the wood. If the finish needs to be removed, odorless mineral spirits can be used. Always test chosen mineral spirit in a small, inconspicuous area prior to treating the entire surface. In general, the nonpainted wood in the building should respond to a gentle cleaning first using a soft brush directed into a HEPA vacuum, with care not to scratch any surfaces, damage the grain, or catch bristles on rough areas. If more work is needed, a qualified conservator should be consulted.
- If there is damage to wood components, it should be repaired with patching or a dutchman, as appropriate, using a wood of the same species, cut, grade, and hardness. Replacement may be permissible depending on the severity of the damage.
- All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components.
- The two modern windows on the east elevation of the North Tower should be removed and replaced with a palladian-style window to match the original window at this location. The modern slider window should be removed and the opening in-filled or a new wood window should be installed to be more compatible with the styles and configurations of the rest of the building. Additionally, the acrylic panel in the window opening in the Kitchen should be removed and replaced with permanent units such as glass block or a wood-frame fixed sash.

Doors

- The glazed doors on the second floor should be repaired as required including the frames and casings. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible.
- The non-original sliding wood garage doors in the West Boat Storage Area should be removed and replaced with doors that fill the expanded opening. The new doors should be made of water-resistant wood, and their design should be compatible with the historic building.
- The non-historic solid exterior boat bay doors in the East Boat Storage Area are in good condition; however, as they are not original, they may be replaced. Replacement doors should be compatible with the historic building. The westernmost opening should be reopened to restore the addition's original appearance.
- Failing paint should be removed from all doors, jambs, and trim. All door components shall be prepared, primed, and repainted or stained.
- All existing original door hardware should be cleaned of paint, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components.

- New heavy duty deadbolt locks should be installed on all exterior doors for added security.

STRUCTURE[11]

- Construct a new mat foundation on micro-piles with formed concrete perimeter knee walls to support the wood framing and lateral soil pressures at portions of the building perimeter.
- Install new reinforced concrete columns designed to cantilever from the mat foundation and carry both gravity and lateral loads down to the new foundation.
- A sub-drainage system under the mat should be installed to prevent the intrusion of ground water into the lowest floor level during non-flood events.
- A perimeter sub-drainage system should be installed to collect water behind the below-grade walls during non-flood events.
- Roof framing is generally inadequate to support the required snow loading. The roof rafters and hip beams over the men's locker room and for the trusses over the ballroom and club room should be strengthened or replaced. The ceiling over the ballroom should be removed or, as determined by a structural engineer, additional support should be installed in concealed locations or in a manner that is sensitive to the original design. Joist hangers and hurricane ties should be installed. Roof framing over the Workshop should be completely replaced with full-length rafters, beams and columns that are able to support the required live load of the roof. Columns should stack with supports below, and have blocking installed. New plywood roof sheathing should be added to provide lateral stability.
- The water that travels through the structure from behind the north retaining wall should be diverted around the building with a new drain tile and foundation drain or other system such as a pump. Porous backfill to improve drainage should also be considered. Waterproofing and flashing should be installed during repair procedures so that new framing will remain in good condition.
- Floor framing is generally inadequate to support the required loads. Floor joists and beams should be strengthened under the men's locker room, ballroom, women's locker room and work shop. The loose posts under the women's locker room should be repaired. The floor should be brought back to level, particularly in the ballroom.
- Any areas of deteriorated interior wall framing or wall sheathing should be repaired or replaced with a compatible water-resistant alternative material. Removal of existing wall finishes may be necessary to access wall framing. Existing wall finishes should be removed carefully and, if possible, salvaged for re-installation. Document and tag each piece upon removal. If the historic fabric is taken off-site, the storage facility should have a similar temperature and relative humidity to that of the Canoe Club.
- Wet wood is attractive to subterranean termites. These termites require access to the soil, which they may get through direct contact with wood or by building tubes to connect the

11 These recommendations are derived from the *Structural Investigation of the Washington Canoe Club Condition Assessment Report* and the Geotechnical Engineering Narrative and Investigation Report. To review these documents in full, please refer to Volume 2 of this HSR.

wood to the soil. Metal shields may be installed to limit the ability of termites to make contact with wood.

- New plywood sheathing should be added to provide lateral stability.

INTERIOR

Significant interior features and materials, including the flooring, doors, and the beaded wall paneling, should be carefully evaluated for re-use. Spaces identified as Zone 1 spaces should be restored to their appearance during the building's period of significance. Changes to non-original materials but not to layout may be considered in Zone 2 spaces. Greater alterations are permissible in Zone 3 and 3A spaces, as long as they do not negatively affect spaces designated Zone 1 or 2.

Stairways

- All components of the main stair should be inspected, re-secured, and repaired, including treads, risers, handrails, balusters, and newel posts. If necessary, components can be replaced in-kind. The balustrade should be prepared and repainted, and the stair treads should be refinished when the wood floors are refinished.
- The stair in the northwest corner of the West Boat Storage Area should be removed in its entirety and reconstructed according to applicable egress and building codes. The new stair should meet all requirements including stair width, tread and riser sizing, handrails, and egress signage.

Flooring

- New floor finishes on the first floor should be highly water-resistant, such as concrete or ceramic tile, due to the high probability of flooding events.
- The flooring on the second floor should be leveled and assessed for damage and ability to be refinished. The typical tongue-and-groove wood strip flooring throughout the building should be refinished, stained, and sealed where possible. Wood floors can only be sanded a limited number of times before the wood needs to be replaced. Therefore, sanding should only be used as a last resort and even then, only if there is enough thickness remaining to do so. The existing finish can be carefully stripped mechanically or chemically (without introducing too much water) and then a new finish applied once dried. Modern polyurethane finishes should never be applied to historic floors. Preservation grade treatments such as Tongue Oil should be used instead. For areas that are missing, or irreparably damaged, wood of a matching species can be used as replacement. Or, preferably, if any areas of wood are approved for permanent removal during construction, the wood should be salvaged and used as replacement.
- All floors should receive regular maintenance.

Wall Finishes

- Loose boards should be re-secured to the wall framing. Boards that have been removed for

structural investigation should be re-installed.

- Broken or missing boards should be replaced in-kind to match adjacent paneling. Holes and cracks in plaster walls should be repaired in kind so as to match the adjacent wall surface.
- Torn or damaged sections of painted cloth should be replaced to match the original finish as close possible.
- All painted walls should be cleaned, prepared, and repainted.
- All stained wall finishes should be cleaned, touched-up, and resealed as required.
- Biological growth should be removed from the frame walls. Trees and shrubs should be cut back at least a foot from the building to prevent additional biological growth.

Ceiling Finishes

- Ceiling finishes consist primarily of painted tongue-and-groove paneling and beaded board paneling. Loose boards should be re-secured to the ceiling framing.
- Boards that have been removed for structural investigation should be re-installed.
- Broken or missing boards should be replaced in-kind to match adjacent paneling.
- All ceilings should be cleaned, prepared, and repainted or stained. Areas with exposed ceilings can remain exposed.

Doors

- The interior doors, frames, and trim should be repaired as required. Original doors that have been modified to accommodate changes in building's ground floor height should be restored to their original height once the boathouse has been raised.
- When cleaning wood, gentle methods should be used. Harsh chemicals should be avoided as they can raise the grain of the wood. If the finish needs to be removed, odorless mineral spirits can be used. In general, the nonpainted wood in the building should respond to a gentle cleaning; however, if more work is needed, a qualified conservator should be consulted.
- Wood doors and trim should be retained and repaired as necessary. If repair is needed, as much of the historic material should be retained as possible and new matching or compatible (not too hard) wood cut in as a dutchman. Automatic door openers and/or power-assisted door openers can be added to meet accessibility requirements.
- Modern, incompatible doors should be replaced with new wood panel doors that are compatible with the building style and the other interior door styles.
- Doors that have been trimmed or modified should be restored to fit their opening after interior rehabilitation has been completed. All door finishes shall be prepared for repainting or re-staining.
- If a door opening is within an inch or two of meeting the 32" (81 cm) clear opening requirement, it may be possible to replace the standard hinges with off-set hinges to increase the size of the door opening as much as 1" (3.8 cm). Historic hardware can be retained in place, or adapted with the addition of an automatic opener, of which there are several types.

Door hardware can also be retrofitted to reduce door pressures. As feasible, existing original door hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components.

Decorative Features and Finishes

- The broken components of the wood cabinets should be repaired or replaced in kind. New components should match the original material as closely as possible. The cabinet boxes and drawer boxes should be re-secured and straightened as needed. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible. The wood finish should be cleaned. If areas of damage in the wood are found, the damaged finish should be stripped carefully with odorless mineral spirits, allowed to dry, and then a matching finish applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components.
- The corner built-in cabinet should be repaired and re-secured as needed. The glass shelves should be cleaned and the wood finish should be cleaned or stripped and re-applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components.
- Prior to undertaking any work related to the frieze, the frieze should be documented in place, stabilized, and cleaned.
- Use an aqueous cleaning solution, such as ammonium hydroxide (pH 8.5), ammonium citrate (pH 5.5), or distilled water to remove spatter and surface dirt from the frieze. Any cleaning should be done carefully, and solutions should be applied with a cotton swab.
- In consultation with a trained conservator, carefully remove the artwork panels from the walls of the Grill Room. Store the panels off-site at a conservation facility for the duration of construction. In consultation with the DCSHPO, determine the best location for re-installation. Alternatively, remove the panel and donate it to the DC History Center for long-term curatorial storage and archival protective measures.

EAST BAY

East Bay

The East Bay was originally constructed in 1920 as a one-story utilitarian addition to accommodate boat storage. This addition was devoid of any shingle-style ornamentation to tie the architecture back to the original building. Instead, the East Bay was a simply constructed open-shed with three large openings for boat storage. A small second story massing was constructed at the northwest corner of the shed to serve as the women's locker room, while the remaining space above the boat storage area was used as a roof deck.. The women's locker room was expanded at some point between 1936 and 1939. When the roof deck was enclosed in the mid-1970s all the floor framing was replaced and upgraded,

along with the columns to support the new loads. In 1992, the entire structural support within the first floor was again upgraded. More recently, the westernmost boat storage opening was infilled, and contemporary metal garage doors were added to close off the remaining two opening.

The significant loss of historic fabric, coupled with the changes to the roof deck, results in the diminished integrity of this portion of the building, and provides opportunities for change and reconstruction that will better accommodate the WCC program without compromising the integrity of the original building and 1909 addition.

- The East Bay may be reconstructed to meet modern code requirements.
- Any new construction should be referential to the main block of the building, but contemporary in feeling and materiality.
- The design for the new second floor should be pulled back from the parapet to return the front portion to its original use as a roof deck.

MISCELLANEOUS

Monitoring

- The site's proximity to the Potomac River and foliage, coupled with its history of water infiltration puts the structure at risk for continued deterioration from pests and fungal decay. Regular inspections (seasonal or biannual) should be conducted to monitor for rot and pest activity. Special attention should be made to vulnerable areas, such as the north wall adjacent to the embankment and where wall framing members meet the foundation. Look for wet areas (wood with a moisture content greater than 15% is typically considered wet), new holes, new damage, frass, tunnels, tubes, and nests. Remove any accumulated plant materials. Document any observations or interventions.

Building Systems

- Replace and upgrade all existing electrical, plumbing, and sanitary sewer systems to meet current code requirements.
- Implement a thoughtfully designed and controlled strategy to conceal piping for new systems.

Accessibility

- The entrance on the north elevation is not original, so it may be adapted for ADA compliance. The porch and staircase can be removed in its entirety. A new a new stair and ramp should be designed in a manner that is compatible with the historic building and constructed to comply with the 2010 ADA Standards for Accessible Design. All components should be rebuilt according to applicable egress and building codes.
- If required, a limited use elevator (LULA) may be added within a Zone 2 or Zone 3 areas of the building. Zone 1 areas should not be adversely effected by the addition of the elevator. Care should be taken to contain any mechanical equipment required for the elevator within

the building's existing attic space.

Fire Suppression

- Applicable building codes should be consulted. At a minimum, install a full smoke detection system and place hand-held fire extinguishers throughout the building.

ADDITIONAL GUIDANCE

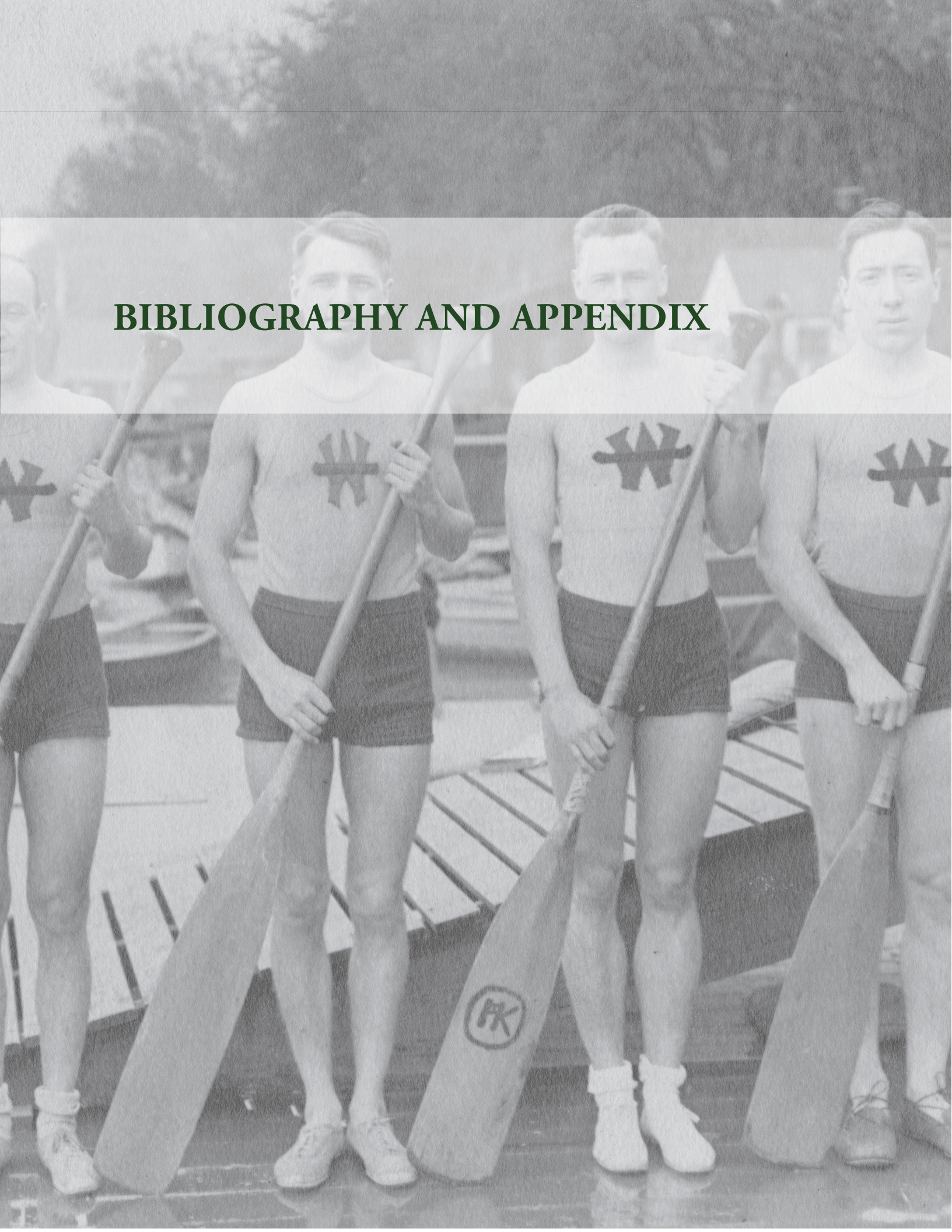
The Technical Preservation Division of the National Park Service (NPS) develops and maintains guidance on the preservation and rehabilitation of historic buildings and landscapes. These publications are widely available online and in print. The following selected publications are relevant to the treatment of the historic building.

- Preservation Brief 3: Improving Energy Efficiency in Historic Buildings
- Preservation Brief 4: Roofing for Historic Buildings
- Preservation Brief 9: The Repair of Historic Wooden Windows
- Preservation Brief 10: Exterior Paint Problems on Historic Woodwork
- Preservation Brief 14: New Exterior Additions to Historic Buildings: Preservation Concerns
- Preservation Brief 24: Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
- Preservation Brief 32: Making Historic Properties Accessible
- Preservation Brief 40: Preserving Historic Ceramic Tile Floors

The DC HPRB and HPO use written design standards and guidelines to review construction affecting historic properties in the District of Columbia. These standards and guidelines are available online via the DC Office of Planning. Applicable topics include:

- Door Repair and Replacement
- Window Repair and Replacement
- Walls and Foundations
- Roofs
- Additions to Historic Buildings
- Sustainability Guide for Existing and Historic Properties
- Accommodating Persons with Disabilities
- Energy Conservation

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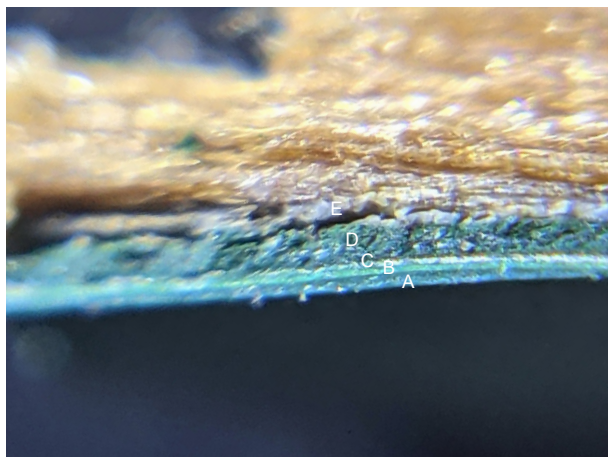
Requirements." January 1999.

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APPENDIX A: 2021 PAINT ANALYSIS

WASHINGTON CANOE CLUB: NORTH ELEVATION
FINISHES ANALYSIS

SAMPLE 1: SHINGLE

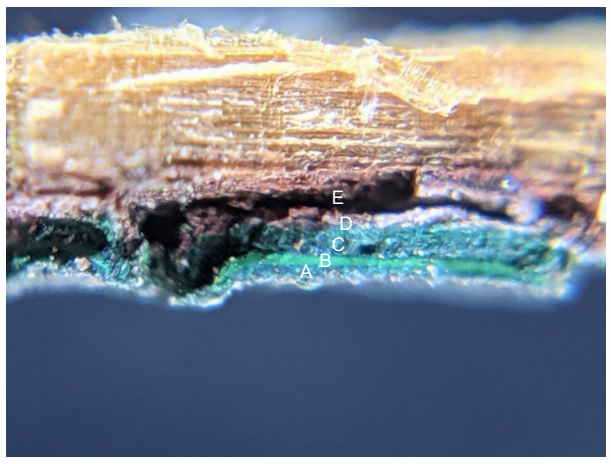


SUBSTRATE

SW 6747

SW 0041*

SAMPLE 2: SHINGLE



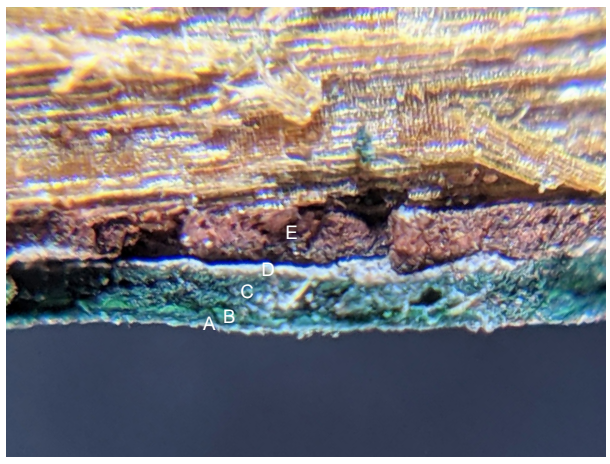
SUBSTRATE

SW 6055

SW 6747

SW 6195

SAMPLE 3: SHINGLE



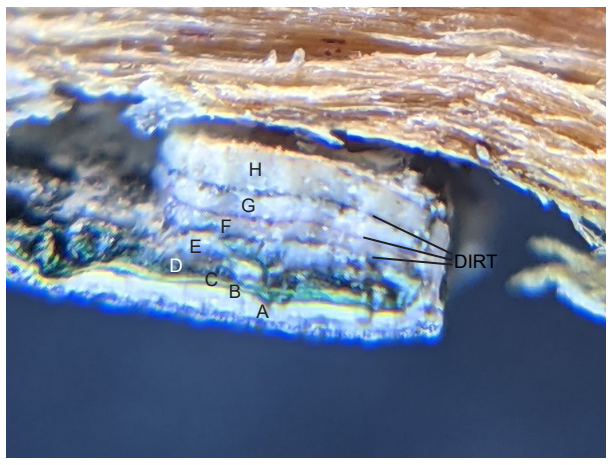
SUBSTRATE

SW 6055

SW 6747

SW 0041

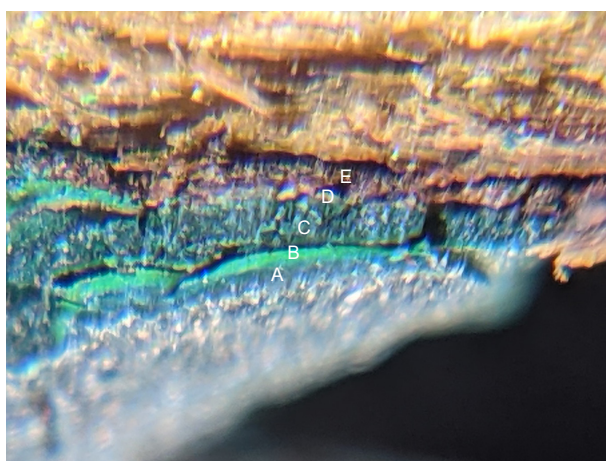
SAMPLE 4: WINDOW TRIM



SUBSTRATE

(SW 6055 was not visible in the stratigraphy, but was apparent directly on the substrate where the above layers had failed.)

SAMPLE 5: SHINGLE



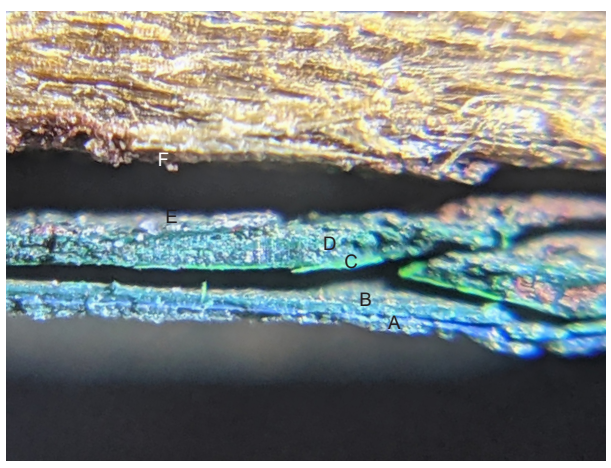
SUBSTRATE

SW 6055

SW 6747

SW 0041

SAMPLE 6: SHINGLE



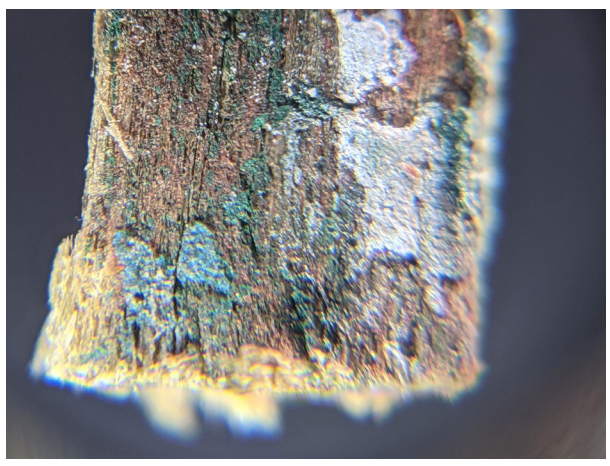
SUBSTRATE

SW 6747

PRESUMED GRAFFITI

SW 0041

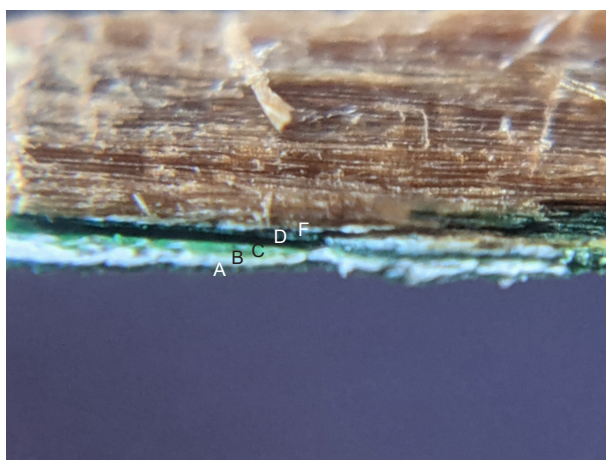
SAMPLE 7: SHINGLE



SUBSTRATE

The full stratigraphy for Sample 7 could not be determined. The sample was not viable as a result of brittleness.

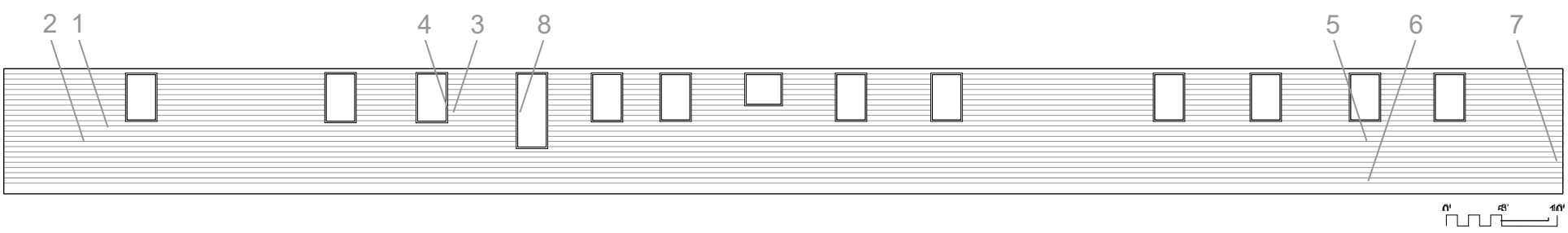
SAMPLE 8: DOOR STILE



SUBSTRATE

SW 6747

SW 0041



Sampling conducted March 5th, 20201.

*Colors matches are approximations from the samples. Sherwin Williams codes are used in lieu of Munsell colors. These are for matching purposes and are not an endorsement of or recommendation for a manufacturer or type of paint. Matches to clean, exposed paint should be confirmed on a larger scale on site with natural light. Additional trim samples are recommended.

EHT TRACERIES

HISTORIC PRESERVATION