



MEMO

DATE: March 21, 2025

TO: Capitol Area Architectural and Planning Board (CAAPB)

FROM: Minnesota Historical Society (MNHS)

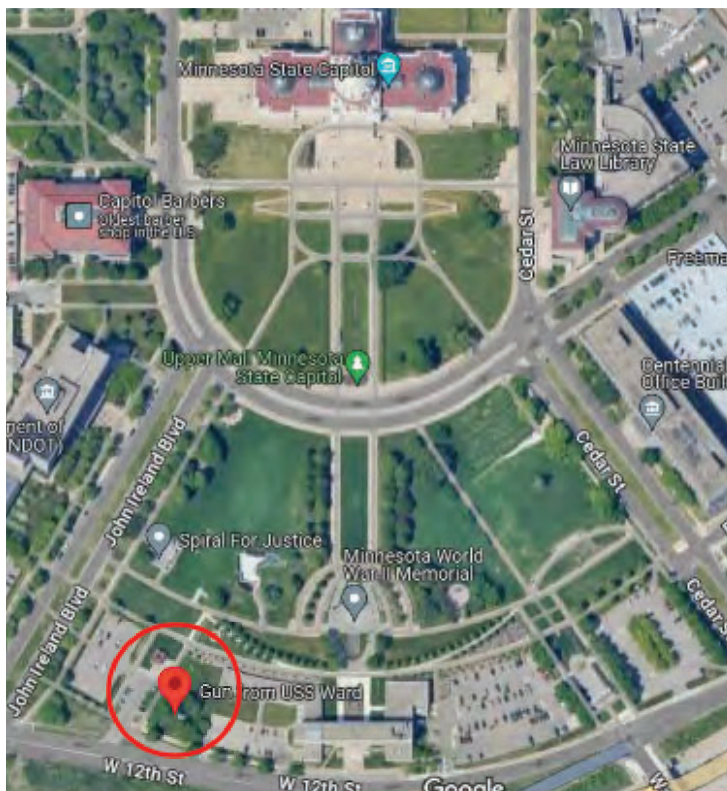
RE: Memo in response to the application to remove the USS *Ward* gun from the Capitol grounds, pursuant to [Minnesota Administrative Rules 2400.2703 STANDARDS FOR COMMEMORATIVE ARTWORK](#).

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OVERVIEW

On the morning of December 7, 1941, the USS *Ward* Number Three Gun, a World War I-era Navy Destroyer, fired on and sank an enemy vessel. Roughly 70% of the crew were naval reservists from St. Paul. After the war, the US Navy agreed to loan the ship's Number Three Gun to the Minnesota Department of Veterans Affairs with the assurance that the state would maintain it. The gun was installed on the State Capitol grounds in 1958. The US Navy owns the gun.



Aerial view of the State Capitol grounds, USS *Ward* gun circled (lower left), 2024

Naming

The gun's technical name (as listed on loan documents) is **Gun Mount, 4'/50 Caliber (OR 0138), from USS WARD (DD 139)**.

In correspondence, the gun is also known as the **USS *Ward* Number Three Gun**. For simplicity, this memo will refer to the weapon as the **USS *Ward* gun**.



USS *Ward* gun, camera facing west, 2024



USS *Ward* gun, camera facing north, 2024

Staff acceptance of application, review, and preliminary findings

On August 19, 2024, the Capitol Area Architectural and Planning Board (CAAPB) staff received an application from Randal Dietrich, Executive Director of the Minnesota Military & Veterans Museum, requesting the removal of the USS *Ward* gun from the Capitol Mall. CAAPB staff reviewed the application and determined it to be complete on August 26, 2024.

The following is a requirement of Minnesota Administrative Rules [2400.2703](#) Standards for Commemorative Artwork, Subpart 7:

(7) a memorandum from the Minnesota Historical Society evaluating the impact of the proposed modification or removal on the historic context and resources of the Capitol grounds and the State Capitol building pursuant to Minnesota Statutes, section 15B.34, clause (3).

A Capitol Artwork Review Committee (CARC) will be established. This memorandum and other resources will inform the committee's final report. The CAAPB will make a final determination on the application to remove the USS *Ward* gun from the Capitol Mall.

Contributors

This memo is a response to the requirements in state statutes and administrative rules related to the application to remove the USS *Ward* gun from the Capitol Mall. It is not an exhaustive history of the gun. This memo summarizes the gun's history and conservation over multiple decades and provides a brief cultural resources assessment.

Minnesota Historical Society (MNHS) staff representing multiple divisions across the institution contributed to this memo. Individual contributors include:

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Lindsey Rulon-Miller, who also serves as the MNHS-appointed representative to the CARC, compiled this memo. Questions can be directed to her at lindsey.rulon-miller@mnhs.org or 651-259-3252.

HISTORICAL CONTEXT

December 7, 1941: USS *Ward* gun fires the first impact shot of WWII

On the morning of December 7, 1941, the crew of the World War I-era destroyer USS *Ward* was patrolling and monitoring the entrance channel into Pearl Harbor, the location of the American naval base in Honolulu, Hawaii. At 6:53 am, Lt. William Outerbridge, captain of the *Ward*, sent this message to the 14th Naval Command: "We have attacked, fired upon, depth bombed, and sank submarine operating in the defensive sea area."

None of the officers or crew (mostly St. Paul Navy reservists) were sure they had sunk a Japanese submarine; they only knew that all submarines entering the harbor should be on the surface. This submarine was not. The captain of the *Ward* had the authority to take necessary action, including gunfire, against suspicious and unauthorized watercraft.

Outerbridge took a considerable risk by ordering an attack. The United States had not yet entered the war. Firing in error at a US or allied submarine would have ruined his career and could have caused an international incident.

One hour after the *Ward* incident, the Imperial Japanese Navy aircraft and a small flotilla of two-man miniature submarines attacked the US naval base and airfield at Pearl Harbor. This surprise attack resulted in 3,581 American casualties (2,403 killed and 1,178 wounded) and the loss or damage of eight US battleships and four cruisers in the Pacific Fleet. The attack pushed the United States into war.

Precursor to the first shot

It had been a busier-than-usual Sunday morning patrol for the *Ward*. At 3:42 am, the USS *Condor* (a mine sweeper) radioed to report a submarine periscope. The *Ward* investigated. Unable to pick up the vessel on sonar, it continued to patrol.

Several hours later, the supply ship USS *Antares* entered the harbor towing a barge. The *Antares* alerted the *Ward* to a sighting of a submarine conning tower. The submarine trailed behind the *Antares*, trying to slip past the lowered torpedo nets protecting the harbor. At the same time, a PBY seaplane patrolling the harbor confirmed the presence of a submarine and dropped markers to pinpoint its location. Lt. Outerbridge sounded general quarters for a second time that morning. The St. Paul reservists manned their battle stations, including all four 4-inch, 50-caliber main guns.

The *Ward* spotted the miniature submarine's conning tower and set a course to intercept. Some sailors on deck thought their captain planned to ram the submarine. Instead, the destroyer changed course to pass the submersible's bow. This allowed three of its four guns to bear down on the target. The *Ward* closed to within 100 yards. The bow gun, Number 1, received the order to fire what became the first shot of US involvement in World War II. The crew of the No. 1 gun overshot the submarine. Now just 50 yards away, the Number 3 gun, on the starboard side, fired and hit the base of the submarine's conning tower. As it passed the submarine, *Ward* released four depth charges that lifted the sub out of the water. The impact of those underwater explosions and the hole in its conning tower hastened the submarine's sinking.

These events were the beginning of a hectic hour. Following the attack on the submarine and still at high alert, the *Ward's* crew continued patrol duties. They stopped a sampan fishing boat in the restricted area, then picked up more sonar pings on what they believed was a second submarine. This action resulted in Outerbridge ordering several more depth charges to be launched. They had no effect.

In less than an hour, the *Ward* had engaged two of the five Japanese mini-submarines ordered to wait outside the harbor. The submarines were to slip into Battleship Row and launch torpedoes once the air attack began. The *Ward* survived an attempted bombing during the air attack. Two Japanese planes dropped bombs that exploded on both sides of the ship, lifting its bow out of the water.

Having evaded the Japanese attacks, the *Ward* returned to Pearl Harbor to refuel and replenish its depth charges. While still several miles out, the crew witnessed explosions and smoke plumes, indicating that their earlier warning had failed to alert Pearl Harbor's defenses. Only when the *Ward* got closer did the crew realize the destruction level in the harbor and the airfields. But their day was not over. That evening, they were ordered with other US Navy ships to intercept a possible invasion force heading to Hawaii. The invasion scare proved to be a false alarm.

Before and after Pearl Harbor

The *Ward's* role at Pearl Harbor seals its reputation as one of the storied ships of the US Navy. Because most of its crew hailed from St. Paul, the ship's Number Three Gun was placed on the Minnesota State Capitol grounds in 1958.

The USS *Ward* was constructed near the end of World War I. It was named in honor of James Harmon Ward, the first United States naval officer killed in the Civil War. The *Ward* did not see combat during World War I. It served in the Pacific and Atlantic before being decommissioned and drydocked in San Diego in 1921.

As war clouds gathered in the 1930s, the US Navy recommissioned dozens of destroyers, including the USS *Ward*. Entire reserve units were assigned to these recommissioned ships. Of the 122 sailors and officers assigned to the *Ward*, 85 were St. Paul reservists from the 47th Division, 11th Battalion, 9th Naval District, or the US Naval Reserve. They were headquartered at Raspberry Island in St. Paul and trained on the Mississippi River and Lake Superior.

Many of the St. Paulites were in their teens and early twenties. This activation was their first tour of duty and first time at sea. On February 28, 1941, after the *Ward* had passed sea trials, the ship with its new crew was stationed at Pearl Harbor.



USS *Ward* crew with the gun, shortly after the Pearl Harbor attack, about 1942. Courtesy Naval History and Heritage Command

Following the December 7, 1941 attacks, the *Ward* remained in Hawaii, providing escort duty for inter-island freighters and protection for passenger liners. She also continued patrol duties and anti-submarine training. In late 1942, she sailed to Bremerton, Washington, where she was outfitted and converted to an Advanced Personnel Destroyer (APD). Her new role was transporting and disembarking combat troops for assaults throughout the Pacific Theater. The *Ward* participated in five campaigns, including 16 amphibious landings; she received nine battle stars and a Navy Unit Commendation for her services.

On December 7, 1944, the *Ward* was supporting amphibious landings in the Philippines when she was severely damaged by a Japanese kamikaze plane. Miraculously, only two sailors were injured in that attack. Because of the severe damage and fire, another destroyer, the USS *O'Brien*, was ordered to sink her. Coincidentally, the captain of the *O'Brien* was William

Outerbridge, who had captained the *Ward* precisely three years earlier. Most St. Paul sailors aboard the *Ward* in 1941 transferred to other vessels or assignments. Only 14 of the original crew remained until the very end.

Postwar and coming to Minnesota

The Minnesota sailors who served aboard the *Ward* at Pearl Harbor participated in one of the most pivotal events in United States history. Their bond solidified after the war. In 1947, the surviving *Ward* crewmen created the First Shot Naval Vets (FSNV) organization. Its membership consisted mainly of St. Paul reservists, who comprised 70% of the crew.

As the years passed, the FSNV shifted its focus away from the ship's role in the war toward two goals. The first was to prove that they sank the Japanese mini-submarine. Even though sailors aboard the *Ward* and *Antares* witnessed the event, many scholars, naval officers, and others were reluctant to acknowledge the crew's actions. In 2002, however, the University of Hawaii's Undersea Research Laboratory identified the mini-submarine 1,200 feet below sea level outside the harbor. A hole in its conning tower matched the damage reported by the crew. This discovery increased the historic value of the USS *Ward* gun.



USS *Ward* conning tower; submerged with impact hole visible (center), December 7, 2016. Courtesy National Oceanic and Atmospheric Administration

The FSNV established its second goal in the 1950s: acquiring the USS *Ward* gun for permanent display in St. Paul. When the *Ward* was converted to a fast transport ship, the four original 4-inch guns were removed. Inquiries to the US Navy led FSNV members to the Washington Naval Yard. Due to its historical significance, plans were already in place for the Smithsonian Institution to acquire the gun. With help from Minnesota's congressional delegation, the veterans persuaded the US Navy and the Smithsonian that the *Ward*'s story should be told in St. Paul.

The Navy agreed to loan the gun with two stipulations: the State of Minnesota had to pay for the move, and then keep the gun in excellent condition. The St. Paul Veterans of Foreign Wars (VFW) helped fund the project.

The VFW suggested to the Minnesota Centennial Planning Committee that the gun placement and dedication be part of the state's 1958 commemoration. After the committee's approval, the US Navy and Air Force transported the gun from Washington, DC, to Minnesota. The Navy hauled the six-ton gun to Andrews Air Force Base, where it was loaded onto a cargo plane headed for Wold-Chamberlain Field (now the Minneapolis-St. Paul International Airport). It was then hauled by truck to the Minnesota State Capitol Mall.

The USS *Ward* gun was dedicated on May 9, 1958. More than 1,000 people attended the ceremony, which featured the Great Lakes Naval Training Center Band and speeches by Adm. E. P. Forrestal and Gov. Orville Freeman. Attendees were thrilled when the original nine-man gun crew assumed their positions around the gun.



First Shot Naval Vets event, about 2004. Courtesy St. Paul *Pioneer Press*

The gun was moved to the southwest corner of the Veterans Service Building in 1990 to accommodate the installation of the Minnesota Vietnam Veterans Memorial. This location was fitting, as the building is the state's official World War II memorial.

For decades, the FSNV held annual events at the gun. The organization ceased operation when its last member, Richard Thill, passed on March 12, 2020.

Conclusion

In the complex history of World War II, the first shot of the United States' involvement is a footnote. Yet few historical artifacts in Minnesota are as significant as the USS *Ward* gun. A crew of St. Paul sailors fired a shot that has echoed throughout generations. The gun's presence on the State Capitol grounds symbolizes veterans' dedication to shared history and reminds all visitors of Minnesota's contributions to World War II.

Bibliography: Historical Context

Craddock, John. *First Shot: The Untold Story of the Japanese Minisubs That Attacked Pearl Harbor*. McGraw Hill, 2006.

Klobuchar, Richard P. *The USS Ward: An Operational History of the Ship That Fired the First American Shot of World War II*. McFarland & Company, 2006.

Lott, Arnold S., and Sumrall, Robert F. *USS Ward Fires the First Shot*. Leeward Publications, 1983.

CONSERVATION

USS *Ward* gun, in parts

The USS *Ward* gun commemorative monument site incorporates several components in addition to the gun itself: a concrete foundation base and three inscribed plaques. Two plaques are made of copper alloys; the third is part of a large stone monument. (Appendix 1: USS *Ward* gun photos)

Conservation resources: pre-1989

Because the USS *Ward* gun has been displayed outdoors since 1958, preservation needs are significant. The gun's placement in Minnesota in 1958 resulted from a joint, long-term loan agreement among the federal Department of Veterans Affairs (VA), the Naval History and Heritage Command (NHHC), and the Minnesota Department of Veterans Affairs (MDVA), with occasional involvement from the Minnesota Historical Society (MNHS). The loan agreement placed the responsibility for preservation with the MDVA and also, in later years, with the First Shot Naval Veterans (FSNV).

Proper maintenance is challenging because conservation resources were not allocated as part of the agreement among the lenders or the borrowers of the gun. The same could be said about many Minnesota State Capitol Mall monuments designed, commissioned, and erected by private, nonprofit, or volunteer groups. After monuments were donated to the state, additional funds were rarely provided; it was often assumed that the State of Minnesota would provide for their preservation indefinitely. As the number of Capitol Mall monuments grew, responsibility for selection and oversight of monuments was assigned to the Capitol Area Architectural and Planning Board (CAAPB), which MNHS serves in an advisory role. In its statutory obligation, the CAAPB oversees the installation, modification, or removal of memorials. Once in place, maintenance for each is overseen by the Department of Administration through the State of Minnesota, with conservation advice provided by the Minnesota Historical Society. .

From 1958 to the present, there has been much correspondence among the VA, the NHHC, the MDVA, and the CAAPB. MNHS has been provided with a few examples of this correspondence:

- Appendix 2: July 24, 1974 memo (Department of the Navy)
- Appendix 3: Jan. 19, 1989 memo (Department of the Navy)
- Appendix 4: Nov. 4, 1991 memo (Department of the Navy)
- Appendix 5: Nov. 13, 1991 memo (Department of the Navy)

According to MNHS records, MNHS was not involved with preservation efforts related to this artifact until the late 1980s. However, MNHS conservators believe preservation until the late 1980s resembled standard US Navy operating procedures. Specifically, enlisted soldiers (or the Department of Administration's Plant Management staff) would have scraped loose paint and reapplied fresh coats of gray-colored US Navy oil paint, perhaps annually. By 1989, the gun had become thickly concreted with layers of old, cracked oil paint and rusty brown iron corrosion.

Within MNHS, decisions regarding the preservation of accessioned artifacts are typically made by a curator with direction from a conservator. Since the USS *Ward* gun was neither MNHS nor State of Minnesota property, it was unlikely that MNHS would have made preservation decisions regarding its conservation. MNHS learned of the US Navy curator's wishes regarding preserving the USS *Ward* gun in 2013.

Conservation resources: 1989-present

In 1989, an objects conservator contracted by MNHS surveyed 19 artifacts associated with the Minnesota State Capitol grounds. Including the USS *Ward* gun, 11 artifacts were outdoors. The conservator, Linda Merk, worked for Fine Objects Conservation, Inc., based in Vero Beach, Florida. She submitted a report in June 1989. (Appendix 6: June 1989 Linda Merk survey) In her report, Merk recommended the removal of all of the accumulated paint that densely coated the USS *Ward* gun, followed by a fresh recoating of those metallic areas (both areas of steel and also areas of copper alloy). She also recommended ongoing maintenance. None of her recommendations were followed, partly because funds were unavailable.

In September of 2002, MNHS objects conservator, Paul Storch, performed a condition assessment of the USS *Ward* gun, which agreed with Merk's recommendations. Storch noted significant areas of excess paint application (at least four layers), paint failure, corrosion of steel and copper-alloy parts, some areas of unprotected metal, debris inside the barrel, and a loss of some metal parts (since direct public interaction with the gun had not been prevented). Storch recommended that all of the existing paint be removed, exposing stable metallic surfaces, which would then be recoated for protection; he also listed several methods considered unacceptable for completing this process, including sandblasting.

In 2004, Minneapolis *Star Tribune* columnist Nick Coleman wrote about the deteriorating state of the USS *Ward* gun. (Appendix 7: Dec. 8, 2004, Nick Coleman column)

In July 2006, Storch conducted a minor conservation treatment of the USS *Ward* gun. There were several reasons for this decision: 1) the gun had been tagged with graffiti; 2) the Coleman article had publicized the situation; and 3) no funding had been supplied for a more significant conservation effort. Storch removed some areas of graffiti and primed some places with a rust-prevention agent before the gun was painted, yet again, apparently by the Department of Administration's Plant Management staff. Storch also filled some areas of loss to the metal with epoxy putty, cleaned the copper-alloy plaques with a 10% disodium EDTA solution, and coated

them with clear Incralac resin for protection from corrosion. Because evidence of water, animals, and trash was found in the barrel, Storch inserted a standard-sized sewer pipe plug into the barrel. (This plug uses a large rubber cork and two metal plates with a bolt and a nut; when tightened, the nut and bolt compress the plug, expanding the rubber and ensuring a watertight seal on the end of the barrel.)

In 2015, MNHS objects conservator Tom Braun surveyed the USS *Ward* gun. He advised that, as a historically significant artifact, the gun no longer be displayed outdoors. Deterioration was progressing. Overall, areas of rust were showing through the paint, and many areas of the thick paint were severely cracked. The bronze centennial plaque required cleaning and recoating. Braun recommended the USS *Ward* gun be protected from precipitation. He suggested moving the gun to a space beneath the Veterans Service Building. Braun also recommended that visitors be blocked from touching the gun. Further, he recommended that all the paint layers be removed and replaced with a thinner coat, applied only in areas where paint was deemed appropriate, and that mechanical parts be lubricated or treated more appropriately with grease or other preservatives for protection from corrosion. At that time, treatment priority was low because MNHS was not positioned to decide how monuments should be treated, and there were no funds for the gun's preservation or restoration.

A report from November 3, 2015, prepared by Julie Kowalsky, Curator of the Naval History and Heritage Command, stated that the USS *Ward* gun was one of only six guns of this type in their collections. (Appendix 8: Nov. 3, 2015, Julie Kowalsky memo) Kowalsky's statements indicate that the USS *Ward* gun is the most significant of the six due to its provenance. In addition, Kowalsky noted that the gun is one of the few remaining parts of the USS *Ward*. She recommended the gun be maintained regularly, including treatment overseen by a conservator to retain its physical integrity, and that a suitable covering protect it from the elements.

Future conservation care of the USS *Ward* gun

In the years since the USS *Ward* gun's installation, MNHS has become aware of various conservation treatment guidelines prepared by the Naval Ordnance Systems Command that specify proper maintenance of such firearms. These include: LUBRICATION OF ORDNANCE EQUIPMENT (NAVORD OD 3000, 4th revision, November 1968) (Appendix 9: Lubrication of Ordnance Equipment) and PAINTING OF NAVAL ORDNANCE EQUIPMENT (NAVORD OSTD 52, 20th revision, July 1955). (Appendix 10: Painting of Naval Ordnance Equipment) More complete versions of these guides are [available online](#). If the guidelines specified in these documents had been followed as early as 1989, and the USS *Ward* gun had been protected from the outdoor environment, little more would ever need to be done.

CULTURAL RESOURCES ASSESSMENT

Above-ground historic resource assessment

Considering the potential impacts caused by the removal of the USS *Ward* gun, it is essential to note that the gun is located within, or close to, the boundaries of several overlapping historic designations. First, the Minnesota State Capitol is a designated State Historic Site, identified as such in 1971. The language in Minnesota Statutes 1971, Section 138.53, Subd. 59 did not specify boundaries other than identifying the “Minnesota State Capitol, owned by the state, is in Ramsey county [sic], located on a tract bounded by University and Aurora Avenues and Cedar and Park Streets.” (State of Minnesota 1974)

The Minnesota State Capitol building is also individually listed in the National Register of Historic Places (NRHP). This listing occurred in 1972, and the nomination includes the building itself, with an identified period of significance of 1896-1905. (Cavin 1971) No considerations or mentions of exterior landscape features or objects are included in the nomination. The USS *Ward* gun, having been mounted at the Capitol in 1958, was present at the time of the nomination but does not appear to be within the boundary of the listed Capitol building.

The USS *Ward* gun is located within the boundary of the Minnesota State Capitol Mall Historic District, which was first determined eligible for NRHP listing in 1995. The historic district was reevaluated in 2008, and boundaries were expanded, bounded by “University Avenue on the north, Rice Street on the west, 12th Street on the south, and portions of Robert Street and the properties fronting Cedar Street south of 14th Street on the east, with the extension of John Ireland Boulevard to Dayton Avenue and the extension of Cedar Street to 10th Street.” (Summit Envirosolutions 2016) In 2016, another evaluation of eligibility was completed, essentially concurring with the 2008 expanded boundary and significance under National Register of Historic Places Criteria A and C. The Minnesota State Historic Preservation Office (SHPO) concurred with the 2016 evaluation and recommendations. (Damon Farber et al. 2024) The Minnesota State Capitol Mall Historic District has an identified period of significance from 1902 to 1962 and includes seven buildings, the landscaped mall itself, and nine sculptures on the mall. (Summit Envirosolutions 2016) The USS *Ward* gun was not explicitly identified as contributing or non-contributing. The historic district is eligible for listing in the NRHP but has not been formally listed.

A draft Cultural Landscape Report (CLR) for the Minnesota State Capitol Mall Historic District was completed in May 2024. The purpose of that study was twofold: to evaluate and analyze existing conditions and provide treatment recommendations. Unlike previous evaluations, the CLR more adequately identified the memorials present within the historic district and made recommendations on their status as contributing or non-contributing to the cultural landscape of the historic district. The USS *Ward* gun, located in the area identified in the CLR as Lower Mall,

was recommended as contributing. The CLR declares that a contributing feature “adds to the historic associations, historical architectural qualities, or other values for which the cultural landscape is significant.” (Damon Farber et al. 2024)

The CLR includes general treatment guidelines as well as area-specific guidelines. One general treatment recommends the retention of extant contributing resources within the district. The strategy for retention is to develop a comprehensive treatment plan for managing contributing and non-contributing memorials. Another general guideline related to commemorative spaces and memorial structures recommends future memorial placement in the Lower Mall, the cultural landscape integrity of which has already been affected by various commemorative spaces and memorials; doing so would aid in preserving the integrity of the Upper Mall. Developing design guidelines for these spaces and memorials within the Lower Mall is also recommended. These recommended treatment guidelines and strategies have not yet been developed or implemented.

Concerning the proposed removal of the USS *Ward* gun from the Lower Mall area of the Minnesota State Capitol Mall Historic District, the overall impact on the cultural landscape must be considered. In this case, the USS *Ward* gun is a contributing resource to the cultural landscape. The CLR specifically recommends that extant resources be retained. While there are sure to be modifications to the memorials and commemorative spaces in the future, a comprehensive plan to guide this process has not yet been developed. The USS *Ward* gun, installed in 1958, overlaps the period of significance for the historic district by four years, a relatively short time considering the period extends from 1902-62. Additionally, the CLR acknowledges that the integrity of the Lower Mall has been previously impacted by alterations related to commemorative spaces and memorials. Removing one contributing memorial is unlikely to further degrade the overall integrity of the Lower Mall. The USS *Ward* gun is not located in primary views toward or from the Capitol building. It is unlikely to result in adverse visual impacts to the State Historic Site and the NRHP-listed property.

The USS *Ward* gun is located closest to the Veterans Service Building, a contributing building to the Minnesota State Capitol Mall Historic District. The building was constructed in 1953, and the USS *Ward* gun was not mounted in its location west of the building until five years later. Again, the USS *Ward* gun is not located in primary views to or from the contributing building, and a large parking lot separates the two. Removal of the USS *Ward* gun from its location in proximity to the Veterans Service Building is unlikely to impact the overall integrity of the building itself.

In conclusion, consideration of the removal of the USS *Ward* gun, one of 11 memorials identified as contributing to the historic district in the CLR, must determine whether its absence from the Minnesota State Capitol Mall Historic District is enough to impact the ability of the historic district to convey its historical significance. The National Register Historian at the SHPO should determine whether removal of the USS *Ward* gun will adversely affect the integrity of the NRHP-listed historic district.

Archaeology resource assessment

In 2022, an archaeological assessment was completed for the State Capitol Complex, Cultural Resources Literature Review, and Archaeological Assessment for the Minnesota State Capitol Area Planning & Context Development Project (106 Group 2022) as part of the Statewide Survey of Historical and Archaeological Sites. The location of the USS *Ward* gun was included in the study area. The archaeological assessment outlined the documentation of previously identified archaeological resources within the State Capitol Complex and within 1.6 kilometers of the study area, in addition to archaeological surveys previously conducted within the State Capitol Complex.

The results of the archaeological assessment identified whether any portions of the State Capitol Complex have the potential to contain previously unidentified archaeological resources potentially eligible for listing in the NRHP and provided a management tool to inform potential future studies to identify resources eligible for listing in the NRHP. In addition, the report also identified archaeological, historical, or cultural contexts previously developed that may apply to the types of archaeological sites found within the State Capitol Complex. Before this report, the existing historical contexts were developed to support the evaluation of architectural history properties. The archaeological assessment identified gaps in existing historic contexts and the need to understand the presence of Indigenous peoples in St. Paul from 13,000 years ago through today, and the diverse residential neighborhoods that once existed in the State Capitol Complex, including numerous immigrant and ethnic communities. (106 Group 2022: 12)

The archaeological assessment conducted by the 106 Group identified the location of the USS *Ward* gun as having a high potential for below-surface archaeological resources that may be potentially eligible for listing in the NRHP. (106 Group 2022) The USS *Ward* gun is located near previously documented archaeological sites 21RA0030 and 21RA0031. This area has been determined to have a similar development history and thus has potential for similar resources. (106 Group 2022: Figure 5) In addition, archaeological field surveys and evaluations completed in 2024 in proximity to the USS *Ward* gun have confirmed the results of previous archaeological surveys and the 2022 archaeological assessment by 106 Group. (Nienow 2024) This includes identifying multiple contributing archaeological resources at varying depths throughout the State Capitol Complex.

If ground-disturbance activity is identified as part of the planning process for the removal of the USS *Ward* gun, additional archaeological review and consultation will be required, and potential archaeological survey and/or monitoring may be necessary. Consultation should include the Office of the State Archaeologist, State Historic Preservation Office, and American Indian Tribal Historic Preservation Offices. At the time of this report, the surface and below-surface impacts have not been determined. Planning for the removal of the USS *Ward* gun should identify information on the required extent of the disturbance below the surface, including both potential vertical and horizontal impacts. An archaeological evaluation may be necessary if a potentially significant archaeological site is identified during the survey.

Bibliography: Cultural Resources Assessment

Cavin, Brooks. *National Register of Historic Places Nomination Form—Minnesota State Capitol*, 1971. On file at the Minnesota State Historic Preservation Office, St. Paul, MN.

Damon Farber, 106 Group, and Sasaki. *Cultural Landscape Report—Minnesota State Capitol Mall Historic District*, 2024. On file at the Minnesota Historical Society, St. Paul, MN.

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Summit Envirosolutions. *Minnesota Architecture History Inventory Form—Minnesota State Capitol Mall*, 2016. On file at the Minnesota State Historic Preservation Office, St. Paul, MN.

106 Group. *Cultural Resources Literature Review and Archaeological Assessment for the Minnesota State Capitol Area Planning & Context Development Project*, 2022. On file at the Minnesota Historical Society, St. Paul, MN.

GLOSSARY OF ACRONYMS

APD	Advanced Personnel Destroyer
CAAPB	Capitol Area Architectural and Planning Board
CARC	Capitol Artwork Review Committee
CLR	Cultural Landscape Report
FSNV	First Shot Naval Vets
MDVA	Minnesota Department of Veterans Affairs
MNHS	Minnesota Historical Society
NHHC	Naval History and Heritage Command
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Office
VA	Federal Department of Veterans Affairs
VFW	Veterans of Foreign Wars

APPENDICES

- Appendix 1: USS *Ward* gun photos
- Appendix 2: July 24, 1974, memo (Department of the Navy)
- Appendix 3: Jan. 19, 1989, memo (Department of the Navy)
- Appendix 4: Nov. 4, 1991, memo (Department of the Navy)
- Appendix 5: Nov. 13, 1991, memo (Department of the Navy)
- Appendix 6: June 1989 Linda Merk survey
- Appendix 7: Dec. 8, 2004, Nick Coleman column
- Appendix 8: Nov. 3, 2015, Julie Kowalsky memo
- Appendix 9: Lubrication of Ordnance Equipment
- Appendix 10: Painting of Naval Ordnance Equipment

Appendix 1: USS *Ward* gun photos (page 1 of 4)

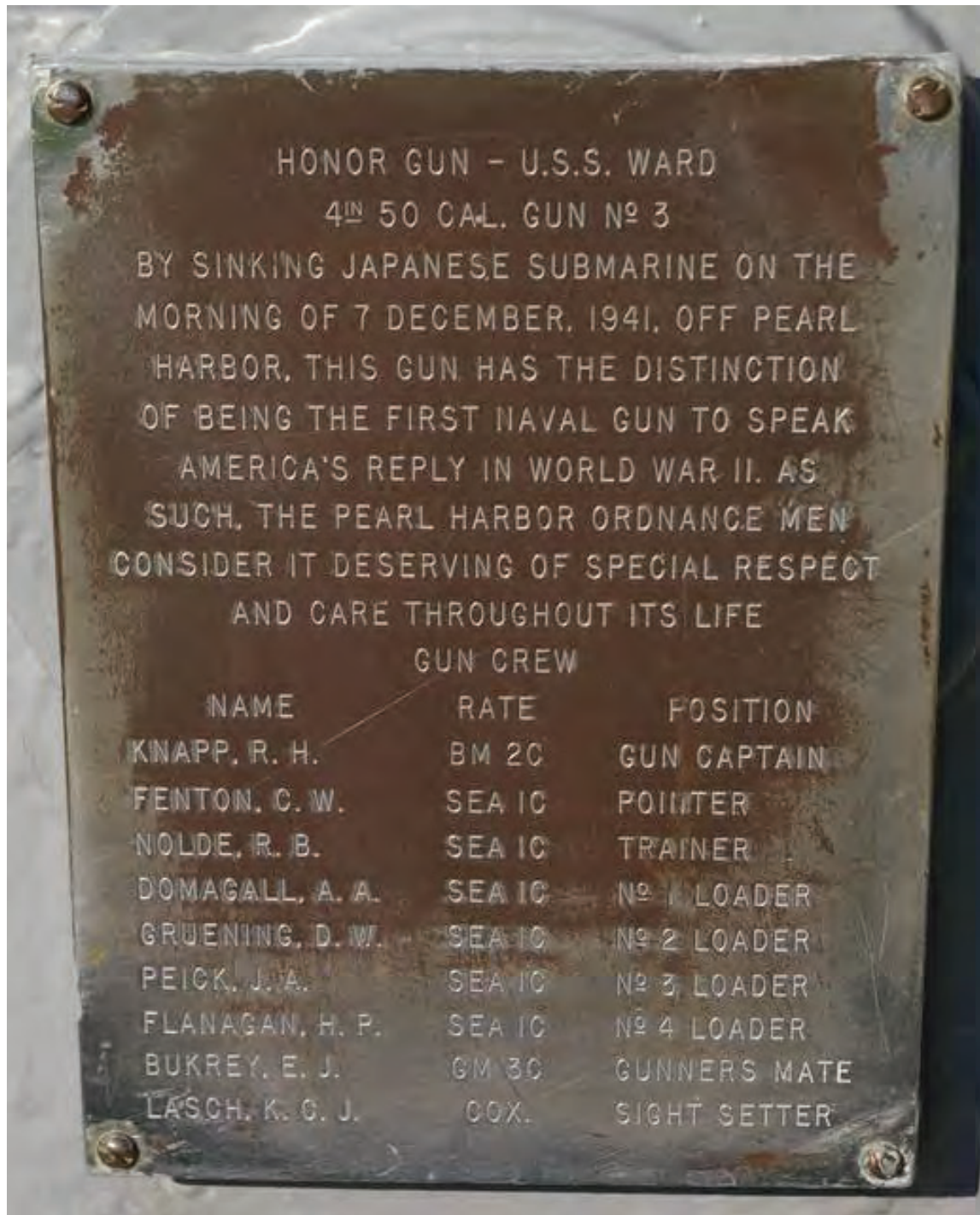


USS *Ward* gun and accompanying historic markers (2015)



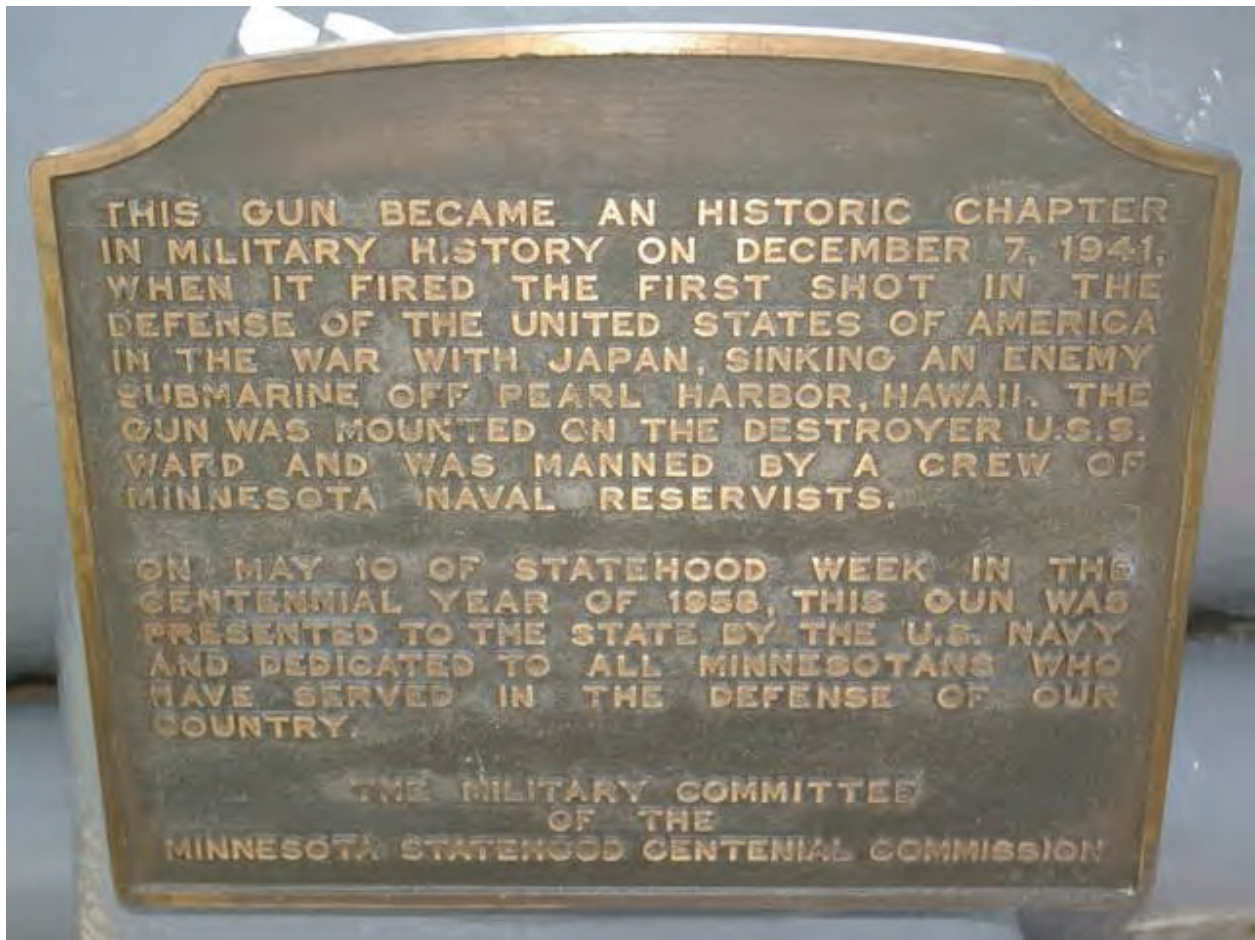
USS *Ward* gun and accompanying historic markers (2015)

Appendix 1: USS *Ward* gun photos (page 2 of 4)



USS *Ward* gun copper alloy historic plaque (2015)

Appendix 1: USS *Ward* gun photos (page 3 of 4)



USS *Ward* gun copper alloy historic plaque (2015)

Appendix 1: USS *Ward* gun photos (page 4 of 4)

USS *Ward* gun large stone monument historic plaque (2015)



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

22 (A)

CU
RY

IN REPLY REFER TO
Op-09BH
Ser 09BH/3959
24 Jul 1974

The Curator for the Department of the Navy has placed the below listed item(s) on indefinite loan with:

Veterans of Foreign Wars



First Shot Naval Vets
P.O. Box 17235
St. Paul, MN 55117

Post, First Shot Naval Veterans

St. Paul, Minnesota 55117

One (1) Ea. GUN MOUNT, 4"/50 caliber (OR 0138)
Removed from USS WARD (DD 139) (1918-1944)
Mark 8, Serial Number 1484, with gun barrel
Serial No. 912.
This gun fired the first shot in the war against
Japan at Pearl Harbor, 1941.
NAVDEPT Curator Accession No. 47-108-A

One (1) Ea. CARTRIDGE, 3"/50 caliber (OR 0103)
One round of dummy drill, inert load, fixed
3"/50 caliber ammunition.
NAVDEPT Curator Accession No. 74-325-A

one (1) Ea. 3" x 50 caliber cartridge case, jty. Mark 9 Mod 0
NAVDEPT Curator Accession No. 74-325-B

Cartridge 3/50 caliber Aug. 26, 1974
Cartridge 3/50 caliber Sept 09, 1974.
This complete my report for year 1986.

1. We agree to:

- Display the materials loaned with dignity;
- Maintain them in good physical condition;
- Report to the Curator annually, on the anniversary date of this receipt, on the condition and location of the material;
- Request disposition instructions from the Curator whenever the material has served its purpose.

2. I certify that the above material was received this date.

Bernard J. Kinderman Pres.
(Name and Rank)
F. + S. + Naval Veterans
(Organization title)
July 17, 1986
(Date)

REPRODUCED AT GOVERNMENT EXPENSE



DEPARTMENT OF THE NAVY
NAVAL HISTORICAL CENTER
Washington Navy Yard
Washington, D. C. 20374

IN REPLY REFER TO

5414/1
Ser CU/7053
19 Jan 89

President
VFW, First Shot Naval Veterans Post

3

S



First Shot Naval Vets
P.O. Box 17235
St. Paul, MN 55117

7

Dear Sir:

The Curator for the Navy is required to maintain a current file of formal signed receipts for the historical properties of the United States Navy loaned to eligible recipients. In addition, on the anniversary date of the receipt, the Curator is required to receive an annual accounting from all borrowers on the condition and location of the material in their custody.

According to the Curator's records, the last annual report from your organization is enclosed. Please provide an updated report on the condition and location of the items concerned at your earliest convenience.

Your prompt attention to this matter would be greatly appreciated.

Sincerely,

H. A. VADNAIS, JR.
Head, Curator Branch

Enclosure



DEPARTMENT OF THE NAVY

NAVAL HISTORICAL CENTER
WASHINGTON NAVY YARD
WASHINGTON, D.C. 20374-0571

Capitol Area Arch. & Planning Board

NOV 19 1991

FILED

IN REPLY REFER TO:

4 November 1991

The Curator for the Navy has placed the below listed item on indefinite loan with:

Commissioner of Veterans Affairs
Department of Veterans Affairs
Veterans Service Building
St. Paul, MN 55155-2079

Gun Mount, 4"/50 Caliber (OR 0138), from USS WARD (DD 139), Mark 8, serial no. 1484, with gun barrel ser no. 912. This gun fired the first shot in the war against Japan at Pearl Harbor, 1941. Navy Department Accession Number: 47-108-A.

1. We agree to:
 - a. Display the material on loan with dignity;
 - b. Maintain the material on loan in good physical condition;
 - c. Report to the Curator annually in the month of November on the condition and location of the material;
 - d. Request disposition instructions from the Curator whenever the material has served its purpose.
2. I certify that the material has been received,

Lennie Melter
Name
COMMISSIONER
MINNESOTA VETERANS AFFAIRS
Title
11-18-91
Date



DEPARTMENT OF THE NAVY

NAVAL HISTORICAL CENTER
WASHINGTON NAVY YARD
WASHINGTON, D.C. 20374-0571

Capitol Area Arch. & Planning Board

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5754

Ser CU/07664

NOV 13 1991

Mr. Dennis Forsberg
Director of Veterans Programs
Department of Veterans Affairs
Veterans Service Building
St. Paul, MN 55155-2079

Dear Mr. Forsberg:

The gun mount listed in the enclosed loan agreement was recently transferred to your organization on an indefinite loan basis. When you receive this item, please sign and return to us the original of the enclosed loan agreement. The copy is for your organization's permanent files where it is to serve as a reminder of the annual condition report on the gun mount, the requirement for which is explained in the loan agreement itself.

Thank you for your attention to this matter.

Sincerely,

H. A. VADNAIS, JR.
Head, Curator Branch

Enclosure

FINE OBJECTS CONSERVATION INC

(Excerpted from larger report
including many other instruments)
T. Braun 2009

Linda E Merk
Objects Conservator
Fellow of AIC

STATUARY SURVEY

312 East 95th Street
New York, NY 10128
212 • 410 • 3870

PRESENTED TO: Ms. Carolyn Kompelien
Minnesota State Capitol
Aurora and Constitution
St. Paul, Minnesota 55155

SUBMITTED BY: Linda E. Merk
Fine Objects Conservation, Inc.
312 East 95th Street
New York, New York 10128


June 1989
Linda E. Merk
Fellow of AIC
Fellow of IIC

FINE OBJECTS CONSERVATION INC

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FINE OBJECTS **CONSERVATION INC**

TREATMENT PROPOSAL

CLIENT

Ms. Carolyn Kompelien
Minnesota State Capitol
Aurora and Constitution
St. Paul, Minnesota 55155

OBJECT DESCRIPTION

Title: World War II Gun

Artist: U.S. Navy

Material: painted grey steel with painted brass parts

Manufacturer: Linderman steel and machine, No. 1483

Date: placed 1958

Dimension: H: 57" L: 216"
(approx)

Location: Exterior Mall, Veterans Building, Northwest side

General Pose: Cannon

A

CONDITION

The gun has several abraded areas where the paint is missing and rust is now visible. There is an extensive amount of graffiti carved into the paint. Where the paint is missing on the brass handle, the etched metal is visible - caused by hand acids.

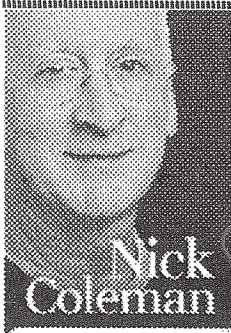
PROPOSED TREATMENT

1. The multiple layers of grey paint and rust should be removed before repainting.
2. Iron and copper specific corrosion inhibitors should be applied prior to painting the surface.

FINE OBJECTS **CONSERVATION** *INC*

3. Regular maintenance with periodic repainting will reduce the rust reoccurring.

Cost estimates from a contractor should be obtained. The bid should specify the material to be used for paint removal and the type of paint to be reapplied.



a little
about...

Nick
Coleman
writes about
people and
events in the
metro area.
His column
appears in
the Metro
section on
Wednesday,
Friday and
Sunday.

Last update: December 7, 2004 at 9:06 PM

Nick Coleman: We don't always fight the good fight

Nick Coleman, Star Tribune

December 8, 2004 NICK1208

Walk through Minnesota's memorials on Pearl Harbor Day and there is no doubt: We are a fighting people.

The 20-acre grassy mall that stretches from the State Capitol to the noisy trench of Interstate Hwy. 94 is nearly full of memorials, most of them to the honored dead of our many wars.

There is a wall with the names of the Minnesotans who died in Vietnam. A memorial to the dead of the Korean War. There are plaques in a Court of Honor memorializing those who served in the Civil War, the Spanish-American War and two World Wars, and plaques honoring civilians, women, prisoners of war and the missing.

After a planned Fire Fighters Memorial and a Workers Memorial go up, the mall will be full. Unless a couple of parking lots along 12th Street are eliminated, it's going to be tough to squeeze in one more memorial:

The one for the dead in Iraq.

Iraq was not the watchword on Tuesday, the 63rd anniversary of the day that lives in infamy and that marked the beginning of the Good War, the war won by the Greatest Generation, now fading into rest. On this Dec. 7th, as always, we remembered those heroes and what they did. But this year, remembrances of a good war collide with fears of a bad one.

A thousand Americans have died in combat in Iraq. As a journalist, I have been to three funerals for soldiers killed in action. I have watched children weep for a lost father, sisters bear their grief for a brother with crudely etched tattoos on their arms, teachers mourn the loss of a gifted



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student who will study war no more.

Only three funerals, but that is three more than our president. He maintains that things are going wonderfully well despite intelligence reports that say he is wrong, despite increasing numbers of attacks on our troops, despite the cities we have destroyed in order to make them safe, despite the toll of November, the bloodiest month so far.

So on a cold, gray, windy day in December on which we remembered an old Good War, it was hard to see how the war we have will get from the bloody mess it is today to the hallowed memories of tomorrow.

"I see no parallels between WWII and Iraq," said Annette Luther, a 23-year-old woman from Minneapolis. "We had a noble and just cause in WWII, but I am worried that we don't have those things in Iraq."

Luther, who is trying to get into law school, woke up yesterday and realized it was Pearl Harbor day. So she came to the Capitol to wander among the memorials while thinking of a favorite great-uncle who died recently, a WWII vet named Harold Luther. When I met her, she was standing solemnly at the Vietnam War Memorial, looking for the name of a boyhood friend of her father.

"I respect all the soldiers," she said. "I can't even comprehend what they went through. Most of them don't even think of themselves as heroes. But I am afraid we are aren't going to look back and be proud of Iraq."

A good war is hard to find.

The president says we are winning in Iraq, the secretary of defense says we'll be able to get out in four years, no one is talking about light at the end of the tunnel or America becoming a weak, helpless giant. Nor is anyone talking yet about an Iraq memorial.

But the time will come. When it does, we will know where Iraq stands in our hearts and among the pantheon of memorials -- whether it belongs beside the Good War, or Vietnam.

Tuesday's Pearl Harbor remembrance, in spitting snow, took place beside the 4-inch naval gun that fired the first U.S. shot in World War II. A crew of sailors from St. Paul used the gun to sink a Japanese submarine before the bombs fell on Pearl. Now it stands forlornly and neglected at the edge of the mall, looking like it might blast the Minnesota History Center across the interstate. It isn't shipshape: Thick gray paint, slapped on in layers, is peeling in places, rusting in others. A proper WWII memorial is planned for the center of the mall, but for now, a decrepit gun from the USS Ward is all we have.

The Ward sank in a kamikaze attack three years to the day after Pearl Harbor, but the historic gun had been removed in recognition of its place in history. It was presented to Minnesota on the state's 100th birthday in 1958. A small plaque lists the names of the crew and says the gun was "the first ... to speak America's reply in World War II." This gun, it says, will always deserve "special respect and care."

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"Wow," said Brian O'Keefe, a truck driver from Bloomington who came to see the gun Tuesday with a pal, Brent Hoffbeck. "I've heard the story all my life -- how guys from St. Paul fired the first shot and sank a Japanese sub, but I never knew the gun was here until recently."

O'Keefe and I checked the names of the gunners against the names on another plaque listing all the St. Paul sailors aboard the Ward. They were all from St. Paul, those guys who fired that first shot: Knapp, Fenton, Nolde, Domogall, Gruening, Peick, Flanagan, Bukrey and Lasch.

"Wow," O'Keefe said again. "I finally get to see it and here it is: Rotting away."

Even war memorials turn to dust. Putting them up is the easy part.

Nick Coleman is at ncoleman@startribune.com.

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425 Portland Av. S., Minneapolis, MN 55488 [Map](#)

NHHC-47-108-A

4"50 Cal Gun Mount Mk 8 Serial Number 1484' with Gun Mk 7 serial number 912. Weight is approximately 11,000 pounds.

The gun is currently on loan to the Department of Veteran Affairs, St Paul, Minnesota from the Naval History and Heritage Command, Washington DC.

This gun was the number 3 gun mounted mid-ships on the starboard side of USS WARD DD-139. The Ward was originally commissioned on July 24th 1918. It only remained in service for four years and was officially put onto the reserve list on July 21st 1921, and decommissioned on June 5th 1922. The Ward would eventually join the other 66 decommissioned destroyers at San Diego in what was referred to as "red lead row."¹

The increasing tension in Europe and with Japan prompted the United States Navy to recommission ships some of which were offered to Allies under the lend lease scheme. The USS WARD was recommissioned on January 15th 1941 at San Diego into the United States Navy fleet. The majority of the WARD's crew consisted of personnel from the 47th Naval Reserve division of the 11th Naval Battalion based in St Paul Minnesota.² The WARD was ordered to Hawaii to protect the Pacific Fleet base at Pearl Harbor leaving Mare Island on February 28th 1941. There was a very real threat of submarine incursions into the Harbor and this was the role of the destroyer to provide surveillance and to neutralize any threats.

Because of the threat, "patrol destroyers were authorized to use force if necessary"³ This was the situation when the WARD encountered the Japanese mini-sub on December 7th 1941. The submarine was spotted semi-submerged following the ship Antares towards the Harbor opening. The WARD went to battle stations and managed to get two shots from its guns at the submarine. The first from gun No 1 missed but the second from gun No 3 hit the submarine at the waterline near the conning tower. The shell did not explode but the force of the impact heeled the submarine over to port. The Commander of the ~~submarine~~ ^{WARD} then fired off four depth charges in the vicinity of the submarine.⁴ The WARD recorded the sinking of the submarine, a fact which was vindicated when the submarine was found in 2002. The damage from the shell could be clearly seen. The WARD then fired the first shot in the Pacific War when war had yet to be declared.

The WARD was converted to a Troop Transport High Speed APD-16 on February 16th 1943. The number 3 gun was taken off the ship at this time. The WARD continued to have a distinguished career assisting in the landing of forces. It was finally attacked by a Japanese plane which damaged the ship beyond repair and it was subsequently sunk by the USS O'Brien on December 7th 1944.

¹ Richard P. Klobuchar. *The USS WARD: An Operational History of The Ship That Fired The First American Shot of World War II*. McFarland & Company, Inc., Publishers. Jefferson, North Carolina. 2006 Page 36.

² Ibid page 53.

³ Ibid page 56

⁴ Ibid page 80

This is highly significant artifact of national importance and should be treated with upmost care.

1. The gun was the first to fire a shot in the Pacific War.
2. The artifact tells the story of the Minnesotan Naval Reservists who manned the ship and whose direct and forthright actions minimized the risk of additional damage from the enemy submarine.
3. The artifact tells the story of the patrol destroyer in WWII.
4. The artifact is a visual reminder of the USS WARD which was sunk during the war.
5. The artifact is one of only six 4" 50 Cal guns that we have in the collection. The guns were already being phased out at the beginning of WWII and the majority of these guns were utilized through the lend lease program.

The artifact should have a regular maintenance schedule and treatments overseen by a conservator to maintain its physical integrity. The artifact should not be exhibited externally but if circumstances dictate that the gun cannot be exhibited elsewhere then the artifact should have an appropriate covering/awning supplied to protect it from the elements.

Prepared by Julie Kowalsky
Curator, Naval History and Heritage Command.
11/03/2015.

23549-11

NAVORD OD 3000

FOURTH REVISION

**LUBRICATION
OF
ORDNANCE EQUIPMENT**



**THIS PUBLICATION SUPERSEDES NAVORD OD 3000 THIRD REVISION
DATED 31 JANUARY 1958**

**PUBLISHED BY DIRECTION OF
COMMANDER, NAVAL ORDNANCE SYSTEMS COMMAND**

1 NOVEMBER 1968

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FOREWORD

1. NAVORD OD 3000, Fourth Revision, covers materials and methods used in the lubrication and hydraulic systems of naval ordnance equipment. Information is given on lubricants, preservative materials, coolants, cleaning materials, and fluids used in power transmission, buffers, recoils, counterrecoils, and damping devices.

2. This publication is intended as a general guide for personnel concerned with the use of the various materials under both normal and extreme climatic conditions, and the selection of materials to be designated on lubrication charts in accordance with NAVORD OSTD 50. Current specifications and stock numbers are included. The information contained herein supplements, but does not replace, current instructions for specific equipment. This publication does not cover conditions of exposure to nuclear radiation, nor the remedies for such conditions.

3. This publication supersedes NAVORD OD 3000, Third Revision, which should be destroyed.

4. The Naval Ordnance Systems Command invites constructive comments and criticisms from all concerned, in order to make this publication more useful. Comments should be forwarded to Commanding Officer, Naval Weapons Services Office (NAVWPNSERVO) Code SSS, Philadelphia Naval Base, Philadelphia, Pennsylvania 19112.

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Chapter 1

INTRODUCTION

1.1 PURPOSE.

The purpose of OD 3000 is to serve the user as a general reference for the description, selection and application of lubricants, hydraulic fluids, coolants, and related products in the maintenance of naval ordnance. It also provides guidance for operating personnel in cleaning and preservation of equipment in active service or in standby condition.

1.2 SCOPE.

This publication covers lubricants (oil, greases and antiseize compounds), hydraulic fluids (power transmissions and recoil), cleaners, coolants, and materials used for normal operating conditions. General information is also given on lubrication equipment, hydraulic, buffer, recoil, counter-recoil, and damping systems, with related data on operation and maintenance under normal and extreme climate conditions.

1.3 APPLICATION.

1.3.1 IN DESIGN. This publication provides data useful to the designer in selecting the proper lubricants, hydraulic fluids, and other materials, in identifying them in accordance with the Federal Supply Catalog and applicable specifications, and in showing how they are related to the lubrication charts. Instructions for the use of the materials are also provided. Essential properties of the materials and the conditions and limitations under which they are used are given in the text and tables. These conditions include temperature ranges, maximum permissible loads and unfavorable operating environments. Brief descriptions of certain types of equipment are given to provide general information on the principles involved, however, the selection of new or improved types of equipment on the basis of sound engineering principles is not to be limited in any way by these descriptions. The applications of lubricants and other materials given in this publication are intended only as examples of the type of application in which the materials may be utilized.

1.3.2 IN OPERATION. Instructions for the operational maintenance of equipment are included. These instructions cover the procedures for applying lubricants and for filtering and replacing oils or hydraulic fluids. They also include procedures for performing any required tests in connection with the application of these products. The information in the publication is not intended to replace instructions furnished by the manufacturer and approved by NAVORDSYSCOM for operational maintenance of any equipment. To determine the required lubricant or other material for a particular application, refer to the applicable lubrication chart and/or instructions covering the equipment.

1.4 LIMITATIONS ON THE USE OF ALTERNATE AND SUBSTITUTE MATERIALS.

1.4.1 ALTERNATE MATERIAL. As used in this publication, the term "alternate material" refers to a material which may be used when a specified material is not available. Lubrication charts or instructions may indicate alternates and specify the conditions and limitations under which they may be used.

1.4.2 SUBSTITUTE MATERIAL. A substitute material may be used only if the specified material, or an alternate is not available. Use of substitutes should always be temporary; they must be replaced by the specified or alternate material as soon as either becomes available.

1.4.3 EMERGENCY SUBSTITUTE. Emergency substitute materials generally differ in many respects from the specified or authorized material and should be used only in an emergency. They must be replaced by specified materials or alternates as soon as either becomes available.

1.5 REFERENCED DOCUMENTS.

The following is a list of documents for additional information on the subjects covered:

Federal Test Method Standard 791 - Lubricants, Liquid Fuels and Related Products; Methods of Testing

Rev #2

NAVORD OSTD 52
(TWENTIETH REVISION)

PAINTING OF NAVAL ORDNANCE EQUIPMENT

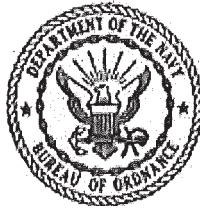


A BUREAU OF ORDNANCE PUBLICATION

NAVORD OSTD 52

(TWENTIETH REVISION)

**PAINTING OF NAVAL ORDNANCE
EQUIPMENT**



7 JULY 1955

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DEPARTMENT OF THE
NAVY
BUREAU OF ORDNANCE
WASHINGTON 25, D. C.

7 July 1955

ORDNANCE STANDARD 52 (TWENTIETH REVISION)

PAINTING OF NAVAL ORDNANCE EQUIPMENT

1. NAVORD OSTD 52 (Twentieth Revision) covers materials, methods, and processes approved for use in the painting of various types of Naval Ordnance Equipment.
2. This publication is intended for use as a general guide in identifying the designations of painting materials and processes shown on drawings and other documents. When so used, reference must be made to the particular paint systems and processes described herein.
3. This publication supersedes all previous editions of NAVORD OSTD 52, which should be destroyed.

F. S. WITHINGTON

A handwritten signature in dark ink, appearing to read "Paul D. Stroop".

PAUL D. STROOP
Rear Admiral, U. S. Navy
Deputy Chief,
Bureau of Ordnance

352704-55

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1. SCOPE.-This standard covers materials, methods, and processes approved for use in the painting of various types of Naval ordnance equipment. The term "painting" is understood to include such preparatory treatments as cleaning, descaling, rust removal, chemical treatment, filling, calking, etc., and the subsequent application of coatings such as pretreatments, primers, and final coats of paint, enamel, varnish, or other protective films.

Painting of certain ammunition items such as projectiles and containers, rockets, and bombs, is not covered herein. For these items, reference should be made to the appropriate publications or drawings, including the following NAVORD specifications:

NAVORD Marking, Painting, and Greasing OS 1427- of Projectiles.

NAVORD Painting and Marking of Rocket OS 3378- Heads and Motors by the Manufacturer of Inert Parts.

NAVORD Painting and Marking of 3" OS 3405- Caliber and Larger Gun Ammunition and Ammunition Components by Loading Activities.

NAVORD Painting and Marking of Gun OS 3410- Ammunition Boxes and Tanks by Loading Activities.

NAVORD Painting and Marking of Rocket OS 3571- Heads and Motors by Loading Activities.

NAVORD Painting and Marking of Jato OS 6427- Units and Guided Missile Boosters and Sustainers.

should be given when particular processes, materials, and paint systems are to be used.

3. SURFACES NOT TO BE PAINTED.- Certain types of surfaces do not require painting, or are harmfully affected by painting. These include the following, which should not be painted or otherwise surface treated:

a. Machined surfaces that are required to move with respect to one another, such as threads, slides, bearing contacts, gear teeth, etc. Such surfaces generally are lubricated when in use, but may be protected by readily removable preservatives when stored.

b. Electrical parts already assembled, such as contacts, relays, bearings, insulators, etc. When any of these parts are to be painted, the coating shall be done prior to assembly. When "touch-up" is required, as on machined plastics, the utmost care must be used to avoid any paint residue on surfaces in electrical contact, or whose proper operation may in any way be affected by such residue.

c. Parts of copper or copper alloy, plated or unplated, such as electrical sockets, plugs, connectors, contacts, and terminals. Plastic and rubber insulators, mounts, spacers, etc., used in connection with these items, also shall not be painted, except where "touch-up" on cut ends of plastics is desirable.

d. Lubrication fittings, cups, etc., should not be painted, but adjacent piping or equipment may be color coded for identification.

4. MATERIALS AND PROCESSES.-The

2. USE OF THIS STANDARD.-This Standard is intended for use as a general guide to the selection of suitable painting materials, systems, and procedures. In designating these on drawings or in specifications or other documents, reference to NAVORD OSTD 52 as a whole should be for general procedures only, e. g., preparation. Specific references in accordance with this standard

following is a list of approved specification materials and processes, classified by types, that are commonly used for surface preparation and painting of ordnance material. This list does not include all of the materials which may, under proper conditions and with prior Bureau of Ordnance approval, be used.

In all cases, the latest issue of a specification is to be used.

4.1 Cleaning Materials and Processes:

FEDERAL

O-P- Perchlorethylene

191- (Tetrachlorethylene), Technical Grade.

O-T- Trichlorethylene, Technical Grade.
634-

2

FEDERAL-Continued

P-S- Solvent, Dry Cleaning.
611-

TT-R- Remover, Paint and Varnish
251- (Organic-Solvent Type).

MILITARY

MIL-C-490-Cleaning and Preparation of Ferrous and Zinc-Coated Surface for Organic Protective coatings. (Grade II-Cleaning Treatments.) MIL-M-7752(Aer)-Metal Cleaner, Silicate Soap.

NAVORD

OS Cleaning and Protecting Interior Non-
1158- machined Surfaces of Castings and Fabrications.

4.2 Chemical Treatments and "Pretreatments":

FEDERAL

QQ- Plating, Cadmium (Electrodeposited).-
P- Types II and III Supplementary
416- Treatments.

MIL- Surfacers, Sanding.
S-974-

MIL- Packing Material, Joint-Sealing, (Oil
P- and Water Stop).
2829-

MIL- Primer, Zinc Chromate, For Aircraft
P- Use.
6889-

MIL- Cement, Smoothing (Formula No.
C- 62).
15202-

MIL- Calking Compound (Liquid Polymer
C- Polysulfide Synthetic Rubber,
15705- Formula No. 112, For Metal Enclosures).

MIL- Primer, Paint, Vinyl-Zinc Chromate
P- Type, Formula No. 120.
15930-

MIL- Calking Compound (For Metal
C- Seams).
16231-

4.4 Paints (Paints, Enamels, Lacquers, and Varnishes):