MARE ISLAND NAVAL SHIPYARD, ELECTRICAL DISTRIBUTION CENTERS
(Shore Power Supply)
Railroad Avenue near Eighteenth Street
Vallejo
Solano County
California

HABS CA-1543-CV
CA-1543-CV

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
PACIFIC GREAT BASIN SUPPORT OFFICE
National Park Service
U.S. Department of the Interior
600 Harrison Street
San Francisco, CA 94103

HISTORIC AMERICAN BUILDINGS SURVEY
MARE ISLAND NAVAL SHIPYARD, ELECTRIC DISTRIBUTION CENTERS
(MARE ISLAND NAVAL SHIPYARD, BUILDINGS 734 & 736)

HABS No. CA-1543-CV

Location: Located in Shipyard South, east of Railroad Avenue, Mare Island, City of Vallejo, Solano County, California

U.S.G.S.: Mare Island, 7.5' Topographic Quadrangle, 1959, photorevised 1980
UTM Coordinates: Zone 10 565084 E, 4215777 N (Building 734); Zone 10 565013 E, 4215853 N (Building 736)

Present Owner: 63D United States (U.S.) Army Regional Readiness Command

Present Use: Electric Distribution Centers

Significance: Buildings 734 and 736, built in 1941, are considered significant for their association with U.S. Naval history and the Mare Island Naval Shipyard (MINSY), the first naval installation on the west coast of the United States. Portions of the Mare Island Naval Shipyard comprise a National Historic Landmark. These buildings are outside of the landmark, within the Mare Island Shipyard Historic District, and constitute contributing elements of the successful base operations at Mare Island. They are representative examples of electric distribution center design, construction methods and materials used on the Finger Piers at Mare Island during the World War II (WWII) era, and are two of three similar electrical distribution buildings constructed in the same year. Furthermore, the addition of the Finger Piers with their updated servicing facilities, allowed the naval shipyard to berth and service 100 ships at one time.

Description: Buildings 734 and 736 are two-story buildings of a functional design, each with approximately 3,000-square-feet of space including a lower story with differing uses per each building and an upper story that has historically held the electrical distribution equipment for each pier. These electrical distribution centers are located at the Shipyard South area of the island, each set on one of the Finger Piers that extend into Mare Island Strait. Building 734 (CA-1543-CV-1, CA-1543-CV-2) is located on Finger Pier 22 and Building 736 (CA-1543-CV-3) is on Finger Pier 23. These and other buildings in this area were

constructed in the early 1940s at the onset of WWII. Architectural plans and drawings for these buildings identify draftsmen and contractors by initial only. Buildings 734 and 736 were used by U.S. Navy until MINSY closed in 1993. The substations on Piers 22 and 23 were retrofitted with modern equipment in 1997 to meet the needs of the U.S. Army Reserve. Buildings 734 and 736 each have a footprint that measures 16 feet (northeast and southwest sides) by 85 feet (northwest and southeast sides) and a maximum height of approximately 22 feet. The foundation of each consists of tapered concrete footings that are each approximately 20 square inches at top on which a one-inch-thick, 20-square-inch metal plate is attached. The first floor of each building is a concrete slab. The buildings' walls and second floor are framed with steel components, consisting of I-beams, channel beams and angle beams (at the corners). The second floor's surfacing is laid over the steel framing and consists of removable steel plates of varying size. The extremely low-pitched gabled roof is constructed of steel components, including I-beams and two-by-four-inch lumber.

Building 734 (CA-1543-CV-1, CA-1543-CV-2) has corrugated metal-surfaced exterior walls and roof surfacing. The lower story of the northeast and southwest sides each have an eight-foot-high by eight-foot-wide doorway with a metal double door. Each door includes a six-pane metal sash glazing at its upper half; the glazed areas of the east side's doors have been boarded over. Window openings on the building measure approximately six feet, five inches wide by three feet, 10 inches high, each including one of three metal sash window types. The upper story of the northeast and southwest sides each have a window opening with a central metal-louvered section flanked to each side by a fixed two-pane window. The northwest and southeast sides include a combination of two window types – six-pane awning flanked by two-pane fixed and six-paned awning flanked metal-louvered vents. One original window opening has been covered over with metal sheeting.

Building 736 (CA-1543-CV-3) differs from Building 734 in that the lower story is sided with thin horizontal tongue-and-groove wood boards and the lower story windows on the northeast and southwest sides are one-over-one or six-over-six wood sash window with extended stiles. The lower stories of the northwest and southeast sides were modified in 1998 by the U.S. Army Reserve. The original door in these areas were probably metal sash double doors as on Building 734; however, presently the southwest side has two separate modern

wood doors (leading to bathrooms), with a wood-framed plywood-sided partition between the two doors, and the northeast side has a single modern wood door (leading to a break room) and some modern approximately seven-inch-wide, siding. The approximately 14-foot-wide section (presently corrugated metal-surfaced) that bumps out a few inches from the main walls' surface at the northwest and southeast sides of both buildings is reportedly evidentiary of original service bays with sliding doors (Turner 1994a, 1994b). Each building includes exterior light fixtures. The light fixtures on Building 734 (CA-1543-CV-2) are probably original or early additions and include metal-hooded rectangular floodlights (two on the northeast and southwest sides) and irregularly-shaped, enameled-metal-hooded lights (two on the north side). The light fixtures presently attached to the exterior appear to be modern square floodlights.

The upper story of each building overhangs the northeast and southwest sides of the lower story for approximately three feet, six inches. The floor of each overhang includes an open accessway to the upper level that measures about three feet by two feet, six inches and is entered from an attached metal ladder.

The present interior of Building 734 includes a lower story with two rooms, including a transformer room, and an upper story that has, since the building's 1941 construction, held electrical distribution equipment. The interior walls on both levels have been left unfinished (framing is exposed). The lower level's two spaces are separated by a metal mesh screen wall; much of the view between the spaces is obstructed by sheet rock (or other man-made material) boards that are attached to the eastern side of the screen.

The larger of Building 734's two lower level spaces is entered from the southwest side's double-door and includes a large circuit breaker/transformer that was installed by the U.S. Navy before 1993. Along the southwest wall of this room are an iron hose rack, an enameled metal light fixture, and a grouping of 30 metal pipes (each approximately six inches in diameter). The northwest wall of the larger room includes a porcelain wall-mounted sink. The smaller lower level room is entered from the northeast side's double-door. This space includes wall-mounted circuit breaker boxes for former building-related electrical equipment. The two hanging fluorescent light fixtures in the smaller spaces may be original or early additions.

The upper story of Building 734 is outfitted with electrical distribution equipment. As mentioned above, this space is entered through either of two floor openings at opposite ends of the building; inside the second story, these openings have a metal pipe railing along their southeast sides. Judging by 1941 plans that depict the original placement of electrical distribution equipment, it appears that over the years equipment has been moved and/or replaced and most, if not all, of the present generators, switchgear and associated machinery are not original. The two generators are numbered T-1737 and T-1738. The switchgear is produced by Brown Boven Electric. Wall-mounted panels near the western accessway include those for circuit breakers, pump station controls and purge bubbler controls. The room includes modern fluorescent lighting.

The interior of Building 736 includes a lower story with bathroom areas at the western end, a break room/office/storage area at the eastern end and an upper story that has, since the building's 1941 construction, held electrical distribution equipment. Originally the lower story was used for small boat storage.

The lower story's bathroom areas, entered from the doors at the west side, resulted from modifications to the building by the U.S. Navy prior to 1993. The men's bathroom (CA-1543-CV-4, CA-1543-CV-5) is entered from the north door and the women's bathroom is entered from the south door. All fixtures (toilet, sinks, urinals and shower stalls), metal stall partitions, wall finishes, and wall-mounted sanitary dispensers are modern additions to the space. The break room area at the east end of the building is the result of a 1998 modification. This area consists of the breakroom, an office and a storage area. The interior walls are plywood-surfaced and painted. The storage area is separated from the other spaces by a metal screen wall (with a metal screened door). Furnishings in the area include modern metal lockers and modern manufactured cabinets. The lower story areas have modern fluorescent ceiling light fixtures.

The upper story of Building 736 (CA-1543-CV-7, CA-1543-CV-8) is outfitted with electrical distributions equipment and its present condition is identical to the upper story of Building 734 as far as the ages, types and placement of the present equipment, including generators, switchgear and associated machinery. The two generators are produced by Vantran Electric Corp. (Waco, TX) and include parts produced by Qualitrol Corp. (Fairport, NY) and General Electric. An extant cabinet-style General Electric circuit breaker is at the northeast

end of the room. The switchgear is produced by Brown Boven Electric. Wall-mounted panels near the western accessway include those for circuit breakers, purge bubbler controls and for the exterior flood lights. The room includes modern fluorescent lighting and two enameled-metal hooded light fixtures (probably original).

Buildings 734 and 736 are centrally set on their respective concrete piers (with timber bumpers). Each building is surrounded by the aggregate-laden concrete-surface of the pier, with standard gauge railroad tracks to the northwest and southeast and work station/platforms to the northeast and southwest; sewage pump areas are located directly southwest of the electrical distribution centers.

Historical Context: Buildings 734 and 736 were constructed as part of the Mare Island naval facility located in Vallejo, California. The U.S. Navy established the shipyard in 1854 as a shipbuilding and repair facility. MINSY was the first west coast naval installation and was the only such facility in California for many years.

Mare Island's built environment is the product of over 100 years of military construction and consists of a blend of buildings that demonstrate many different historical functions, construction technologies and architectural styles. Buildings 734 and 736, constructed in 1941 for use as electrical distribution centers for Finger Piers 22 and 23, are located at the southern end of the island within the Shipyard South area.

In response to growing tensions in Europe, the U.S. Congress, in 1938, decided to expand the size of the American fleet by 20 percent. This expansion escalated at the end of 1941 with the entry of the U.S. into WWII. There was a massive expansion of aircraft and shipbuilding industries at Mare Island during WWII. A fundamental redesign of the Shipyard South area resulted at the brink of the U.S. entry into WWII, including the addition of the Finger Piers. The Finger Piers (Piers 21, 22 and 23) were integrated into the area's quay wall system and were fully completed and ready for service in 1942. Other buildings and structures, including a first aid station and fire station, were also constructed to support the bustling activity at the southern portion of Mare Island. Many WWII era buildings were erected at the southern portion of the island to support the U.S. Marine Security Detachment unit stationed at the Naval Ammunition Depot, located immediately south of the Shipyard South area.

The surviving buildings and structures from the WWII era represent an important collection of buildings, "arranged in a manner that enables an understanding of how the base functioned at that time" (JRP Historical Consulting with PAR Environmental Services, Inc. 1996: Section 8, page 53). The three Finger Piers within the Shipyard South area of the island were outfitted with identical equipment and facilities, including identical electrical distribution centers (Buildings 732, 734 and 736). Apparently the buildings that housed the electrical distribution equipment were completed in 1941; however, it appears that the electrical distribution equipment was installed in 1942. The second stories of Buildings 734 and 736 have been used for their original purpose (electrical distribution) from 1942 to the present.

The U.S. Navy stopped using the piers in 1993 when MINSY was closed. Prior to their withdrawal the U.S. Navy modified the bathrooms and used the lower levels of the buildings for storage. Small Boat Unit 11 continued to use the piers until 1997 and maintained storage space. In 1997 the U.S. Army Reserve received a use permit for Buildings 734 and 736 from the U.S. Navy.

The U.S. Army Reserve modified the lower level of Building 736 in 1998 to add the storage area, breakroom and offices. These modifications consisted of painting, lighting improvements, and new floor coverings. In 1998 the local power company, Island Energy, re-energized an existing transformer in Building 736 on Pier 23 to provide shore power. In 2000, a step down transformer was installed in Building 736 to energize lighting located on the work stations/observation platforms of Pier 23. On July 12, 2002, ownership of Buildings 734 and 736 was transferred from the U.S. Navy to the U.S. Army Reserve.

Sources:

A. Architectural Drawings:

U.S. Department of the Navy. *Navy Yard, Mare Island, California – Finger Piers & Building Ways #3, Substations Piers 21-22-23, Electrical Work,* (Y & D Drawing No. 282880) (P.W. Drawings 10368-78 & 10368-78A), 1941. On file, U.S. Army Reserve, Vallejo, CA.

B. Historic Maps and Views:

No historic views or aerials for these buildings were located during this effort.

C. Interviews

Volk, J. S. Telephone communication between Tracy Bakic, PAR Environmental Services, Inc. and J. Stephen Volk (Environmental Scientist [Adecco TAD], 63D U.S. Army Regional Readiness Command CST Environmental Division), 2002.

D. Bibliography

JRP Historical Consulting Services with PAR Environmental Services, Inc. *National Register of Historic Places Registration Form for Mare Island Historic District, Vallejo, California*, 1996. On file, California Office of Historic Preservation, Sacramento and U.S. Department of the Interior, National Park Service, Washington, D.C.

PAR Environmental Services, Inc. *Integrated Cultural Resource Management Plan for Army Lands at Mare Island National Historic Landmark, Vallejo, Solano County, California*, 2002. On file, California Office of Historic Preservation, Sacramento.

Turner, G. (Mare Island Naval Shipyard). California Department of Parks and Recreation Primary Record forms for Buildings 734 and 736, Mare Island Naval Shipyard, Mare Island, California, 1994. On file, State of California Office of Historic Preservation, Sacramento.

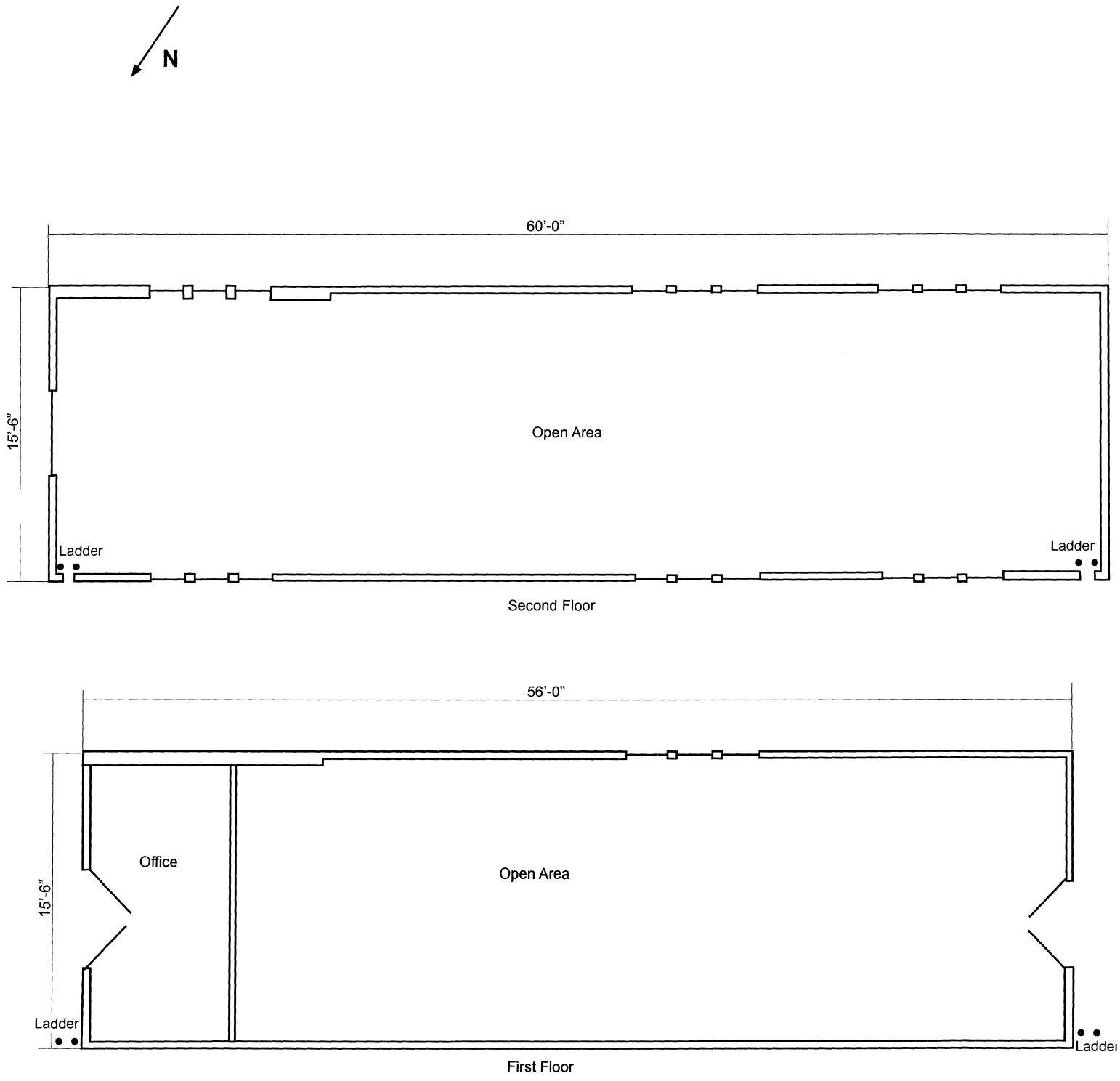
Project Information: After the September 11 terrorist attack, new standards were implemented for federal facilities. Building setbacks from roads and parking areas have been greatly increased. The Department of Defense's Antiterrorism Standards for Buildings, 4-010-01 8 October 2003 Distances per United Facilities Criteria require minimum setbacks that are greater than the existing setbacks, thereby requiring this facility's removal. This undertaking has been approved in accordance with a Memorandum of Agreement between the California State Historic Preservation Officer and the U.S. Army Reserve, pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f).

Prepared By: This report was prepared by Tracy Bakic, cultural resources specialist with PAR Environmental Services, Inc., Sacramento, California.

Photography and the associated photographic index were prepared by David DeVries, Mesa Technical, Berkeley, California.

Submitted By: 63D U.S. Army Regional Readiness Command Headquarters, 4235 Yorktown Avenue, Los Alamitos, CA 90720-5002

Inventory Date: November 7, 2002 (Updated April 18, 2005)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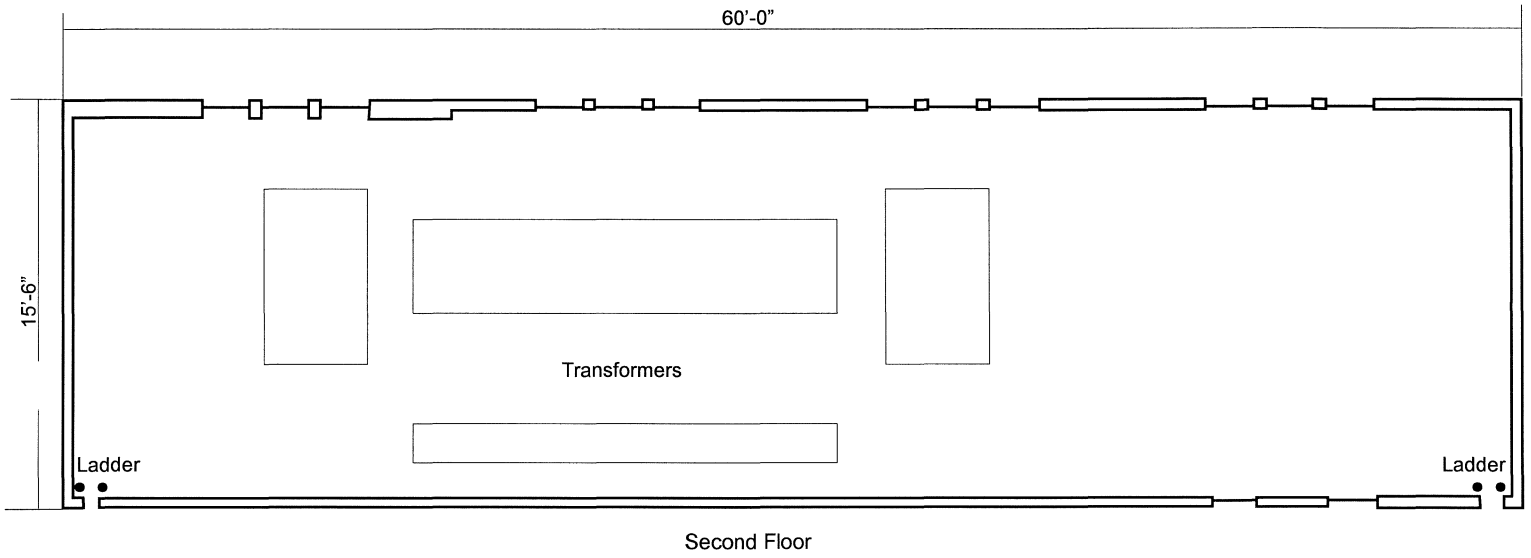

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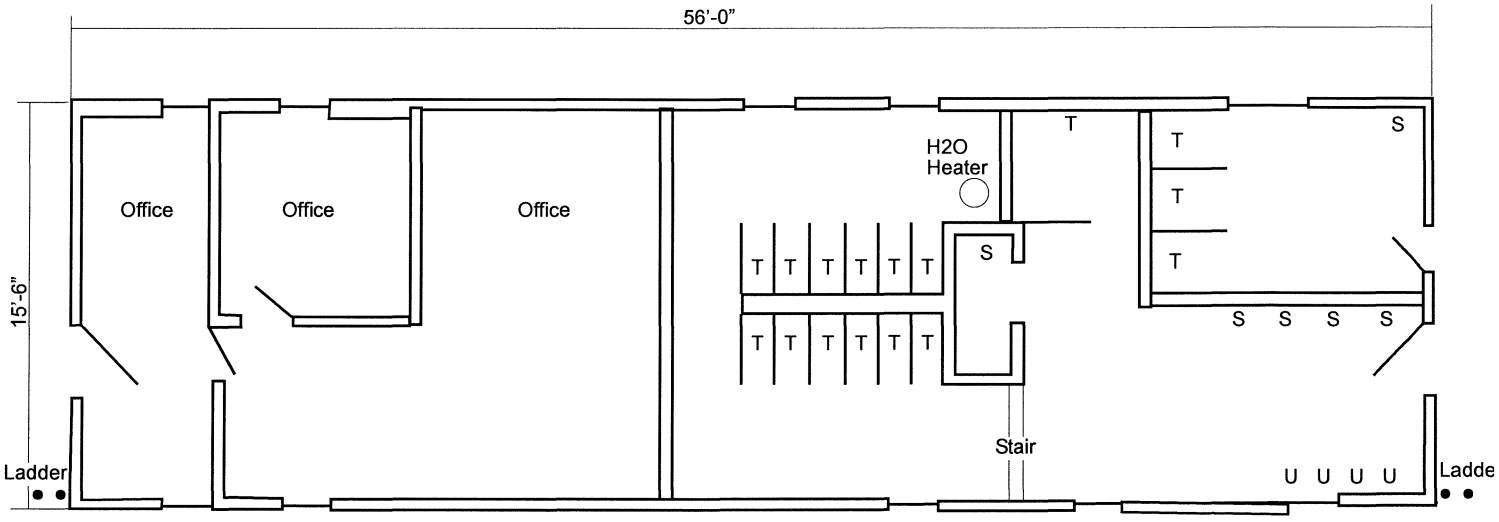

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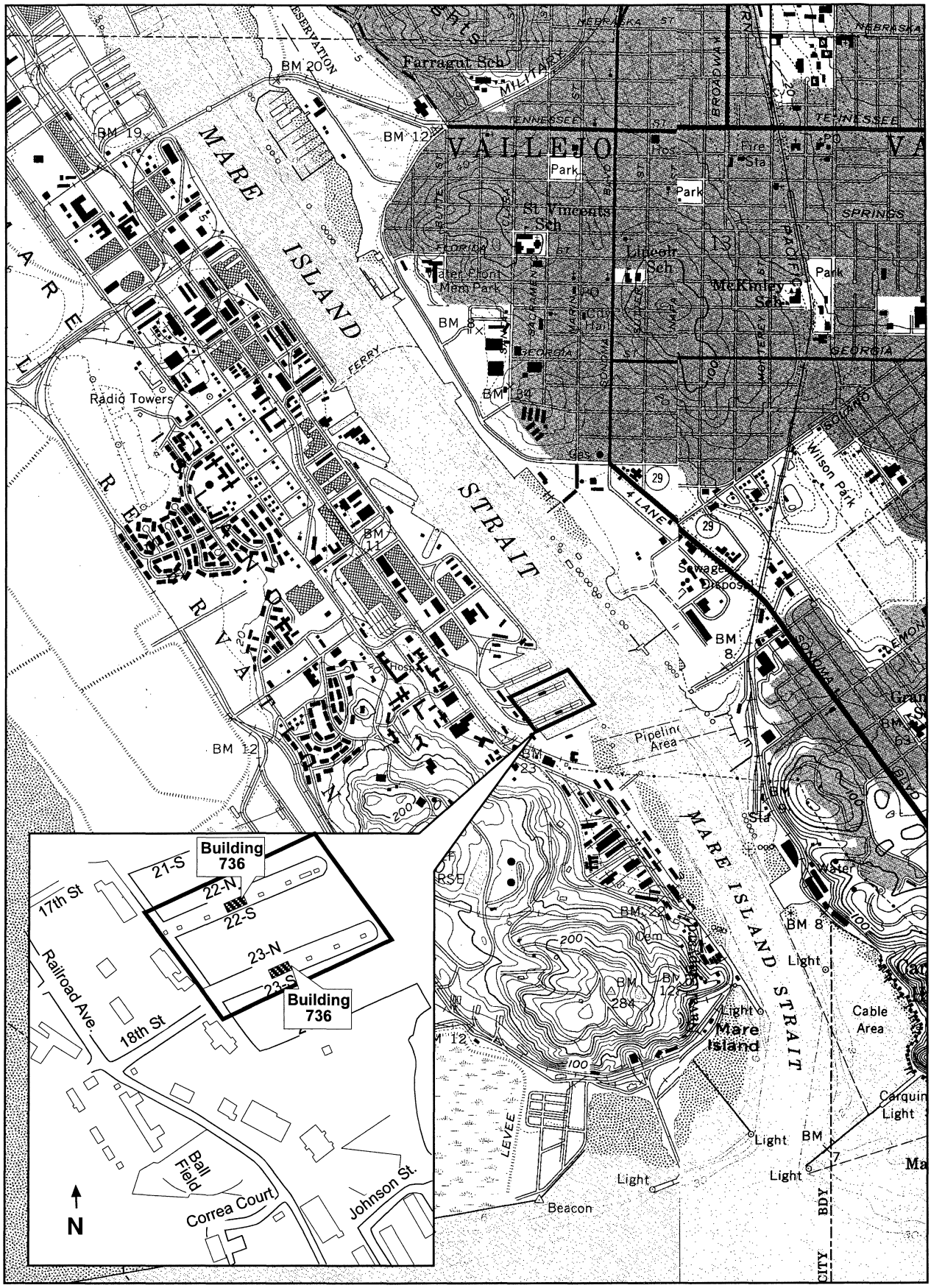
U= URINAL



Location Map and Site Plan (Inset) of Mare Island Naval Shipyard Buildings 734 and 736 (USGS: Benicia and Mare Island, CA 7.5' Topographic Quadrangle, Both 1959, Photorevised 1980)