

U.S. NAVAL BASE, PEARL HARBOR, HEAVY MATERIALS
STOREHOUSE
(U.S. Naval Base, Pearl Harbor, Naval Shipyard, Facility No. 129)
Second Street near Avenue C intersection
Pearl Harbor
Honolulu County
Hawaii

HABS HI-494

HI-494

HABS

HI-494

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
PACIFIC GREAT BASIN SUPPORT OFFICE

National Park Service

U.S. Department of the Interior

1111 Jackson Street

Oakland, CA 94607

HISTORIC AMERICAN BUILDINGS SURVEY

**U.S. NAVAL BASE, PEARL HARBOR, HEAVY MATERIALS STOREHOUSE
(U.S. Naval Base, Pearl Harbor, Naval Shipyard)
(Facility No. 129)**

HABS No. HI-494

Location: Seventh Street near Avenue C Intersection
Optional Additional Location
Pearl Harbor Naval Base
City and County of Honolulu, Hawaii

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This building is at UTM coordinates 04.608410.2361660 and is within the boundaries of the Pearl Harbor, Naval Shipyard as defined in the location section of the overview report HI-483.

Significance: Facility 129 is associated with the expansion of the Shipyard facilities at Pearl Harbor in the 1930s, especially the repair basin project. The facility was constructed from salvaged components from a mainland Navy Yard ordinance facility. The facility has been altered over the years in an on-going process to meet current mission needs. Facility 129 is located within the Pearl Harbor National Historic Landmark.

Description: Facility 129 has a warehouse appearance and open plan that corresponds to the minimal needs of storing large machinery and equipment. It was constructed as a permanent, rectangular plan, single-story warehouse. It consists of reinforced concrete footings, concrete slab floor, steel frame, and metal siding. It has a gable roof structure with a protruding central clerestory section that has a low-pitched gable.

The main structure is thirteen bays long and one bay wide (with three interior columns running the transverse direction at the end bays). The column-to-column dimensions are 68'-11" x 260'-0". The outside-to-outside dimensions of the building are 71'-6" x 262'-6". In the longitudinal direction, thirteen bays at 20'-0" per bay span 260'-0". The total floor area measures 19,220 SF. Its height from grade to the top of the ridge is 64'-0".

The building has a reinforced concrete slab foundation with 3'-0" x 3'-9" concrete footings supporting the structural steel columns. The last bay at the east end of the building is depressed 3'-0" below the main floor. There is a corresponding drop in grade level from the main building to large roll-up doors which are on either side of this last bay. A 2'-0"-high exterior concrete curb wraps the perimeter of the walls, except where doors are located. The siding above this curb is corrugated metal siding.

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The super-structure of the building is made entirely out of steel. Heavy I-beam columns are anchored to the foundation footings, web joists form beams, which run at the center-span and tops of the columns. Steel members cross-brace the columns to give lateral strength, and steel trusses support the roof. A rail for a 120-ton capacity bridge crane that runs the entire length of the building is supported by shorter columns, which are attached to each of the standard columns at every bay.

The roof structure has a 1:2-pitched gable with clipped eaves and a continuous clerestory section on the roof's ridge. The pitch of the roof and the pitch of the clerestory portion are not the same. The clerestory roof pitch is shallower than the roof's. The steel truss roof framing is characterized by its spider-web-like shape, diagonal bracing, and riveted construction. The roof is covered with corrugated metal panels, which are exposed at the interior. Eleven metal roof ventilators are aligned at intervals along the roof ridge. Originally, both sides of the protruding clerestory portion were glazed with multi-light metal sash windows. Although the form of the roof has not changed, the glass clerestory has been replaced with translucent corrugated metal panels.

The entryways appear to have been altered, though the locations appear original. The oversized roll-up steel slat doors located at the second bay from the west end wall doors were originally large steel sliding doors, and their present size is larger than originally built. Other smaller entries located at the fifth bay in from the west wall and the fourth bay in from the east wall is a smaller standard sized entry door but these appear to have been larger entries originally.

Fenestration is symmetrical and strictly utilitarian. Originally, all four walls had two bands of multi-light steel windows, a thicker one along the bottom portion of the building and a thinner band at the top, under the roof eaves. They are approximately uniform in size and shape, some being fixed lights and some horizontal pivoting windows. The panes are wire safety glass of varying color and texture (originally all blue color); many panes of the multi-light windows have been replaced over the years. In 1981, all of the windows and glazing on the upper portions of the building, including the bands of windows just below the roof eave and the bands of windows on the clerestory portion of the roof, were removed and replaced with corrugated translucent panels. All of the windows and glazing on the east side were also replaced with translucent corrugated metal siding as well.

An overhead bridge crane runs the full length of the structure. The plan is open except for two freestanding structures within the space. The first is a temporary office structure located at the east end of the building. The next is a temporary clean room structure near the south wall towards the west end of the structure.

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Several additions and alterations have been made to the structure over the years. These alterations have been listed and described within the Historical Context section of this report.

Historical Context:

The year of the original construction of the building is not known, since it was constructed in West Virginia and moved here pre-World War II. (Marine Barracks Hawaii, n.d.) Pre-1926 (exact date unknown), the Heavy Materials Storehouse Facility No. 129 was dismantled at the Navy Ordnance Plant at South Charleston, West Virginia, and transferred to Pearl Harbor for erection. (Naval Shipyard n.d.: 33) According to the records of the Marine Barracks Hawaii, in the fiscal year of 1926, when the Assistant Secretary Robinson inspected the Navy Yard at Pearl Harbor, the structure, which is described as a "260 x 70 foot steel building for storage of heavy materials", is noted on a list, entitled 'development progress'. The original structure likely started out at South Charleston as a general stores facility to the forge and furnace building constructed during the major expansion for the West Virginia facility in 1917. It was a common practice to share salvaged construction materials among Navy Yards. An appropriation of \$422,000 brought the 200 ton hammer head crane to Pearl Harbor from the Brooklyn Navy Yard in 1933.

Formal plans to reconstruct Facility 129 at Pearl Harbor began in 1930 with an appropriation of \$80,000 for its erection; (Dodge, 2004) however, the building was not completed until 1933. In 1932 the first appropriations were made for the new repair basin and improvements to Pearl Harbor's industrial plant. In the rehabilitation (reconstruction) of Facility 129 (Project 992) omission of an unnecessary mezzanine floor expedited completion. Since then, it has undergone several renovations and additions. Years of major renovations are 1942-1944, 1978 and 1981.

At the South Charleston site, Roger M. Freeman was in charge of the design of facilities and F. D. Warren was the supervising engineer during the building's earlier construction contract, but the Hawaii architect or engineer working on the re-erection is not known. Drawings from the Bureau of Yards and Docks dated January 10, 1931 were checked by persons with the initials HPC & CDH, indicating that these persons were in charge of the reconstruction drawings. It is also not clear what construction battalion did the reconstruction of the building in 1933. However, the 1942 additions were done by the Contractors Pacific Naval Air Bases, as part of the large block of buildings that they were altering during this time. (CPNAB, n.d.)

During the war, Facility 129 and the surrounding area were taken over entirely by the Ordnance Section, used for about one year, and then

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released to the Industrial Department in August of 1943. Because this building had a 40-ton bridge crane, it was used for the storage of heavy material, including heavy guns and fire control equipment. The space available for Ordnance was about 9250 sq. ft. (Walden c. 1945?)

In 1942, three additions were constructed. The largest was the one and two-story lean-to wood frame addition was construction along the exterior side of the north elevation of Facility 129. Its dimensions were approximately 20 in width by 180' in length. Typical of many temporary buildings built during this time, it was constructed of horizontal simple drop siding and wood multi-light double-hung windows. This was removed in 1974. The second addition was a new mezzanine floor located at the far east end of the building. It was one bay wide (20') and spanned the width of the structure. The mezzanine floor was constructed of steel members and stood 12'-6" off the ground plane. The third smaller addition was a Superintendent's Office located on the exterior side of the far southeast corner of the building. The construction was wood frame having overall dimensions of 20' by 20'. It is uncertain when these additions were removed; however, none of these additions were in existence by the 1981 repair and repainting project.

In 1943, a hose rack and a tool house were added to the east end of the building. The entire rack and tool shed spanned 36' and had a width of 3'-8". The hose rack was covered by a lean-to roof but was open on all sides. There were several steel arms that projected out from the east end wall upon which the hose was hung. At one end was a small locker room which sat on a concrete pad which had dimensions of 5' by 2'-6' by 6'(h), which held miscellaneous tools. This is no longer in existence.

In 1978, several repairs were made on the windows and walls. Many windows were 'renewed', meaning that putty glazing was removed and replaced and several window muntins and frames were 'renewed'. Most of the metal siding was replaced and new roofing was laid. Also, new roof ventilators were installed.

In 1981, Facilities 64, 64A and 129 underwent an Exterior Painting and Repair project. All of the windows and glazing on the upper portions of the building, including the bands of windows just below the roof eave and the bands of windows on the clerestory portion of the roof, were removed and replaced with corrugated translucent panels. Much of the exterior wall siding along the base of the north and south walls were replaced, signs were redone, and openings were modified. All of the exterior wall surfaces were prepared and painted at this time.

For an overview of the Naval Shipyard see HABS No. HI-483.

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Sources:

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- Dodge, Jeffrey N.
Written comments on draft copy of Facility 129 HABS report, by the Historical Architect NAVFAC Hawaii. 2004.
- Marine Barracks Hawaii
n.d. Marine Barracks Hawaii, Command Chronology, (b) 1916-1930. Unpublished material in four binders, from the collection of Marine Barracks Hawaii, now located in basement of Facility 1 at Camp Smith, Hawaii.
- National Archives II, Still Photo Collection
Photos in group RG71CA.
- NAVFACPAC: Plan Files.
Drawings for Facility 129.
- U. S. Navy, Bureau of Yards and Docks.
1921 *Activities of the Bureau of Yards and Docks, World War 1917-1918*. Washington: U.S. Government Printing Office.
- Pearl Harbor Naval Shipyard
1941 *75th Diamond Jubilee Anniversary: A brief history of Pearl Harbor in its relation to the U.S. Navy*. Brochure provided by Jeff Dodge, Pacific Division Naval Facilities Engineering Command.
- Pearl Harbor Naval Shipyard
1947 Property Record Card. From the files of the Pearl Harbor Naval Shipyard.
- Robert Walden Collection
[1945] "Yard Supply", typescript report, filed at UH Hamilton Library War Records Department. Information on World War II use of buildings was obtained from a typescript report with no title or title page that is part of the Robert F. Walden Collection at the University of Hawaii, Hamilton Library, Hawaii and Pacific Room. The subject of the report was the war efforts carried out by the Yard Supply Department from January 1941 to August 1945.

Project Information:

Photo documentation and recordation of this facility by the Navy has been done in anticipation of future alterations or potential demolition of the structure. Photo documentation of historic facilities by the Navy assists in expediting planned undertakings by having the documentation prepared prior to taking actions. Also, photo

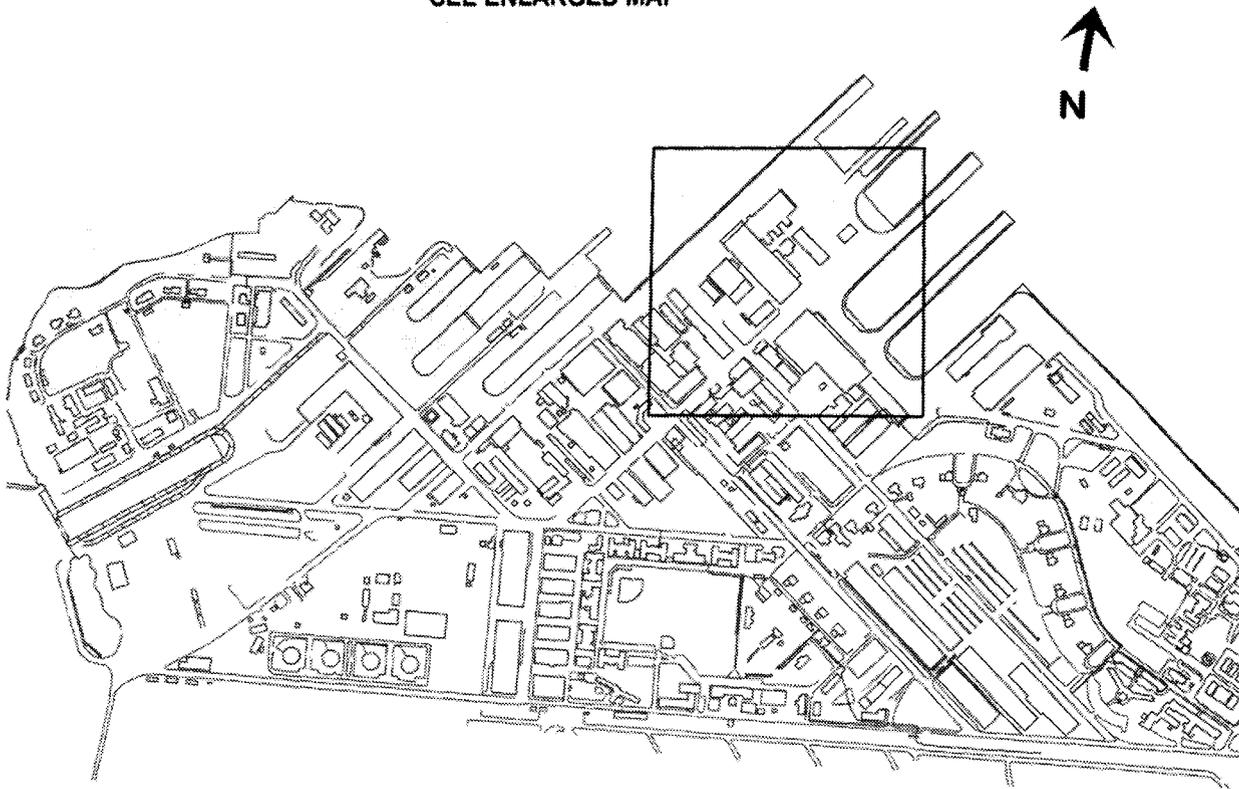
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documentation assists the Navy in gaining more information about its historic facilities to assist in making proactive management decisions. This project is being supervised by Jeffrey Dodge A.I.A., Historical Architect NAVFAC Hawaii. The photographic documentation was undertaken by David Franzen, photographer. Loraine M. Palumbo, Ph.D, Architectural Historian, of Mason Architects, Inc. prepared the written documentation. The field work and research was conducted for this report between July 2001 and December 2001.

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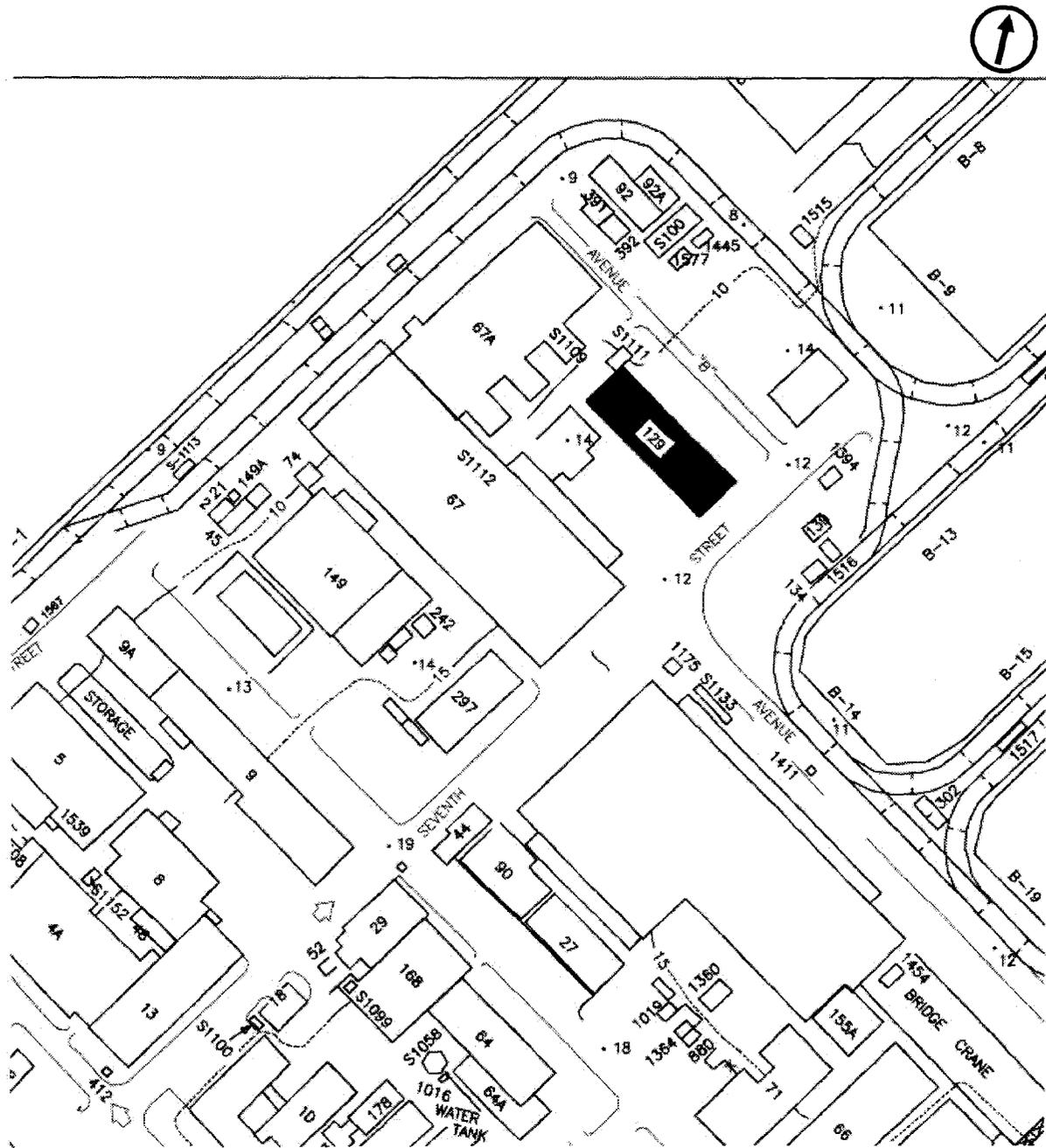
Shipyard Map

SEE ENLARGED MAP



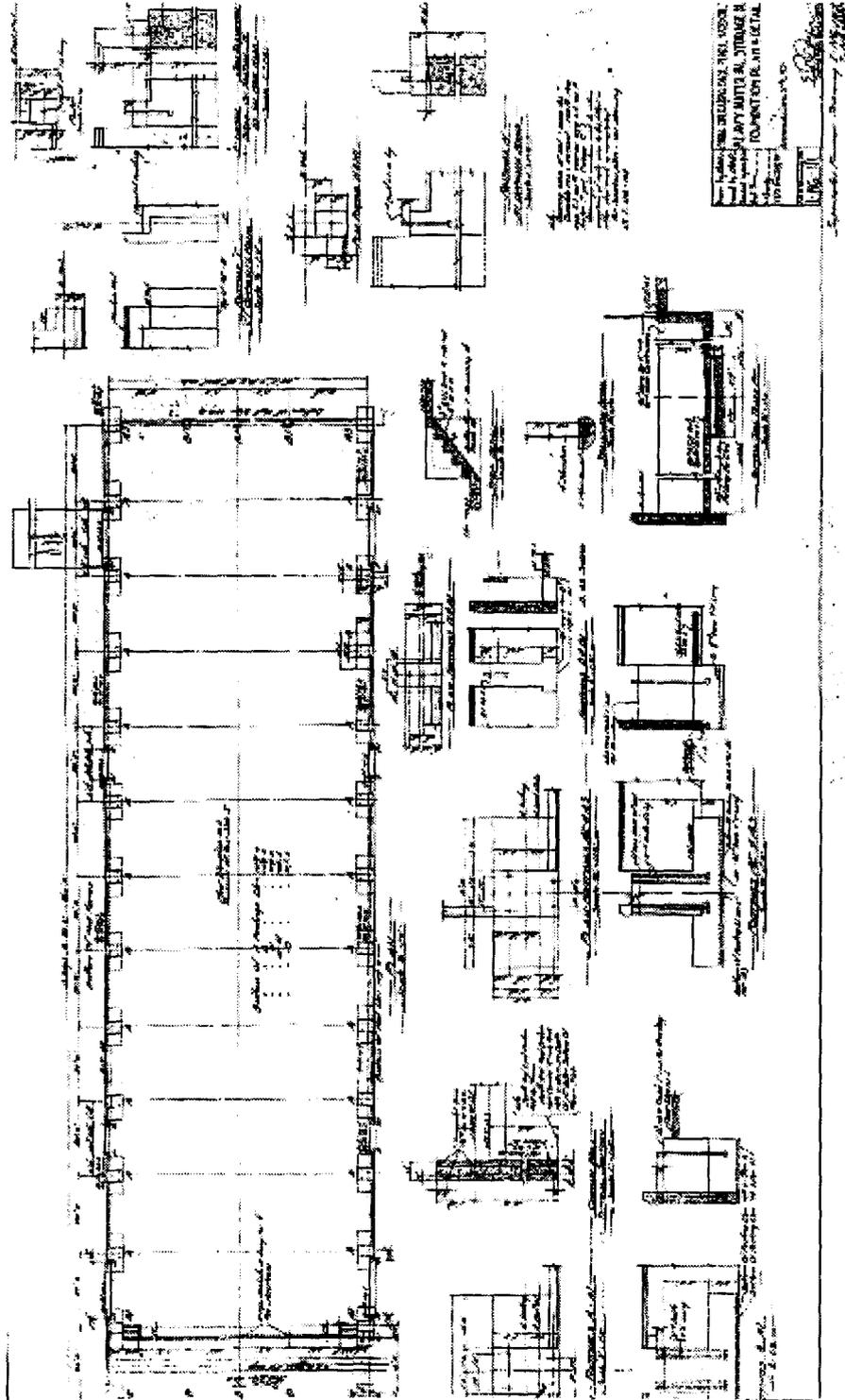
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Enlarged Area Map (reduced, not to scale)



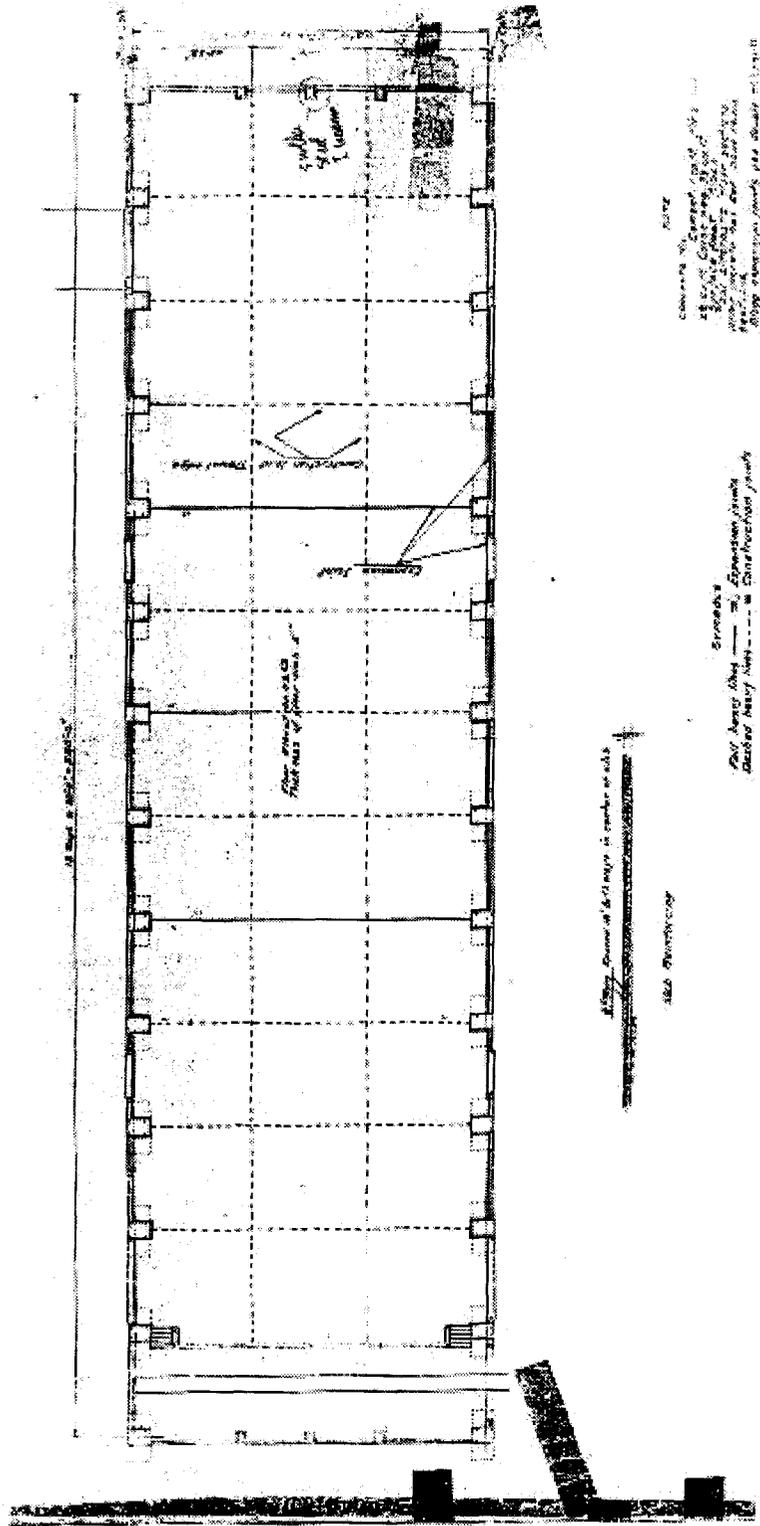
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Foundation Plan and Details (Drawing No. I-N6-111, dated 1/10/1931) (reduced, not to scale)



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Floor Slab Plan (Drawing No. I-N6-117, dated 1/20/1931) (reduced, not to scale)



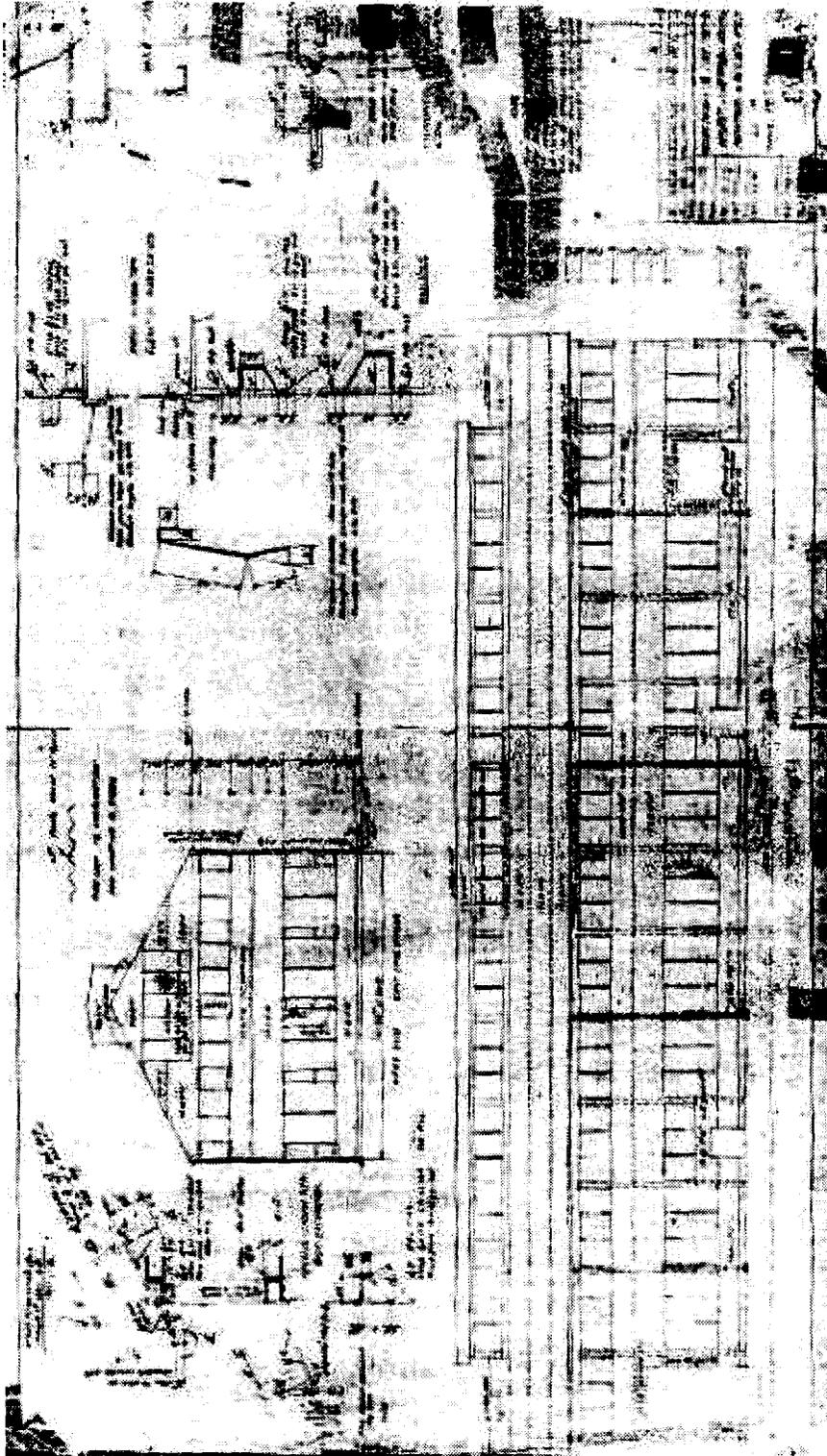
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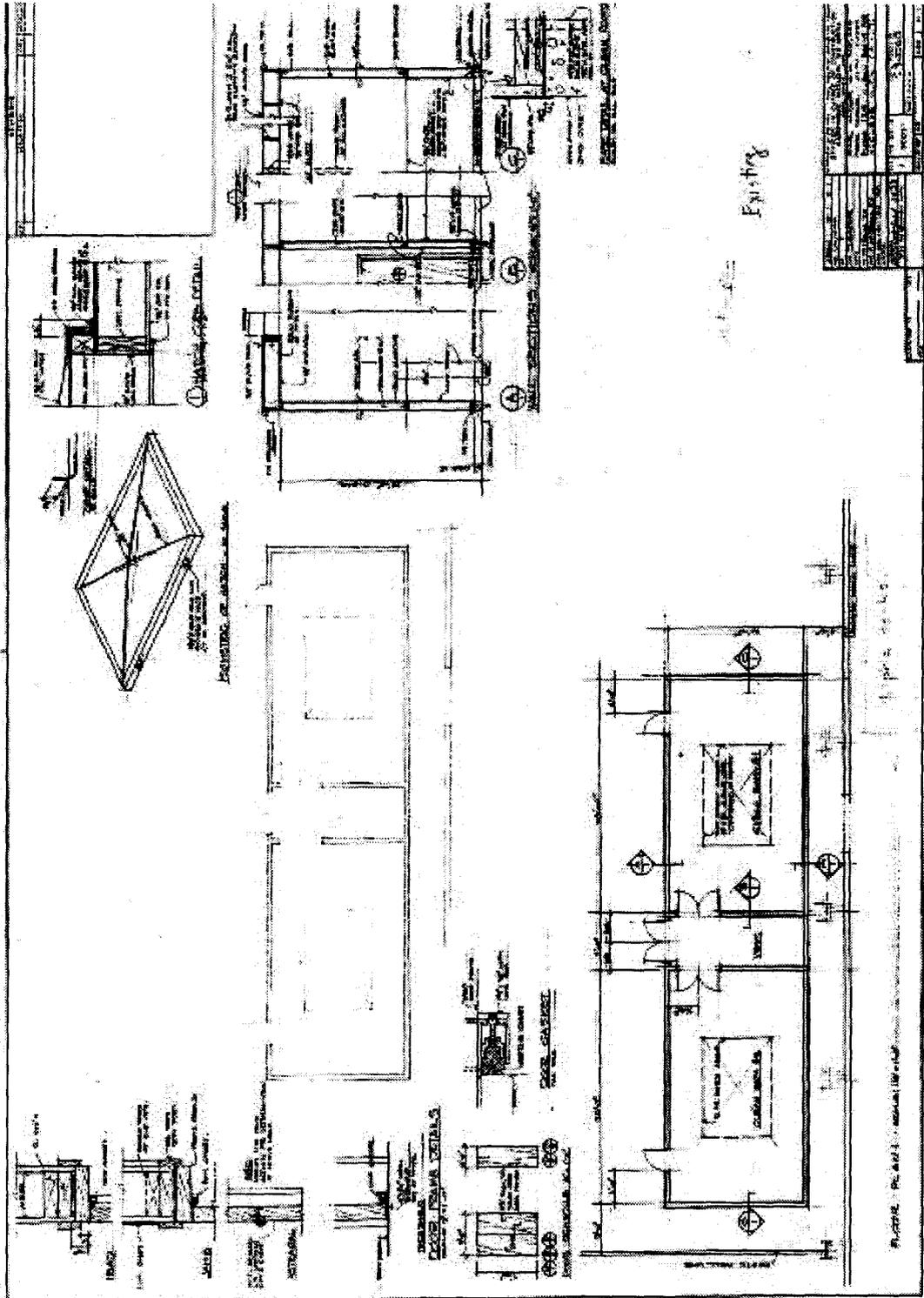
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Roofing and Siding Plan (Drawing No. I-N6-118, dated 3/4/1932) (reduced, not to scale)



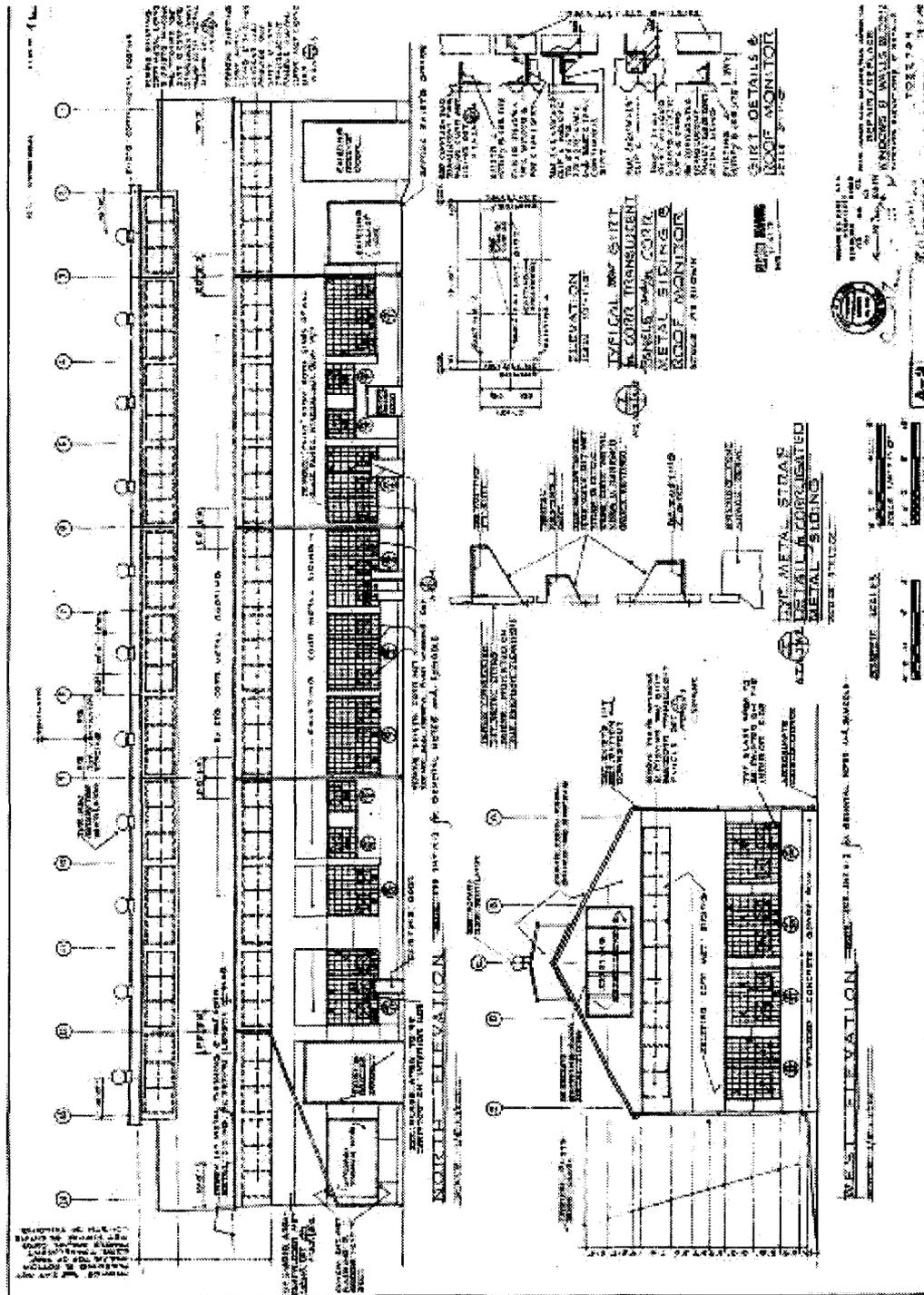
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Clean Rooms Floor Plan, Wall Section, and Details (Drawing No. 1230068,
dated 5/6/1968) (reduced, not to scale)



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**Repair and Replace Window and Walls,
 Exterior Elevations and Details (Drawing No. 7022769, dated 4/17/1981) (reduced, not to
 scale)**



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**Repair and Replace Window and Walls,
 Window Types and Details (Drawing No. 7022771, dated 4/17/1981) (reduced, not to scale)**

