

U.S. NAVAL BASE, PEARL HARBOR, GENERAL STOREHOUSE
(U.S. Naval Base, Pearl Harbor, Naval Shipyard, Facility No. 167)
Eighth Street at Avenue D
Pearl Harbor
Honolulu County
Hawaii

HABS HI-497
HI-497

HABS
HI-497

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, GENERAL STOREHOUSE (U.S. Naval Base, Pearl Harbor, Naval Shipyard) (Facility No. 167)

HABS
21-00-1
SP-11
HABS No. HI-497

Location: Eighth Street at Avenue D
Pearl Harbor Naval Base
City and County of Honolulu, Hawaii

This building is at UTM coordinates 04.608510.2361270 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 167 is located within the Pearl Harbor National Historic Landmark. It was constructed as part of what was an urgent buildup of industrial and support facilities at the Shipyard in anticipation of World War II in the Pacific. It is a large, prominent structure that filled a desperate need for efficient space to store war materials and supplies. It has distinctive architectural and structural features including several added in response to the December 7, 1941 attack. Facility 167 was designed by the firm of noted industrial facility architect of the period, Albert Kahn, who also designed the still extant Facility 67A(HABS HI-492), 155(HABS HI-496), 3A(HABS HI-445) and the former 4A(HABS HI-360) at the Shipyard, Hangar 175 and 176 at Ford Island.

Description: Facility 167 is a five-story rectangular structure. It is arranged on a 20'-0" square structural grid 9 bays wide by 25 bays long for an overall size of 180'-0" x 500'-0". Total floor area is 450,000 square feet. The approximate building height to the top of the parapet is 68', with elevator/stair towers extending another 16'-0".

The roof planes behind the parapet generally are barely pitched with two exceptions. First is the pronounced slope across the width of the seventh transverse bay from the west end transitioning from a fortified portion of the roof slab down to the typical slab thickness. Second are the angled roofs of three, north-facing saw-tooth light monitors spaced one bay apart and running longitudinally from the fifth through ninth bays back from the east (Eighth Street) end of the building. Also, the roof plane for the first 10 bays from the east end is raised several feet in elevation, but like the prevalent condition, only barely pitched. The roof is surfaced with built-up bituminous roofing.

The structural system of the building is all reinforced poured-in-place concrete. The first floor and loading dock foundation is slab-on-grade with continuous grade beams at the outer building walls and retaining walls at the vertical faces of the nearly full-length loading docks on each side. Support for columns is provided by massive spread

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footings or by concrete pile caps over multiple piles, depending on the specific local subsurface condition. All columns at exterior walls are engaged and inward facing except at a portion of the first floor facing Eighth Street, and across the front and for the first four bays on either side back from Eighth Street at the fifth floor. Columns occur at every grid intersection except in areas adjacent to elevator shafts and the non-engaged columns near the exterior wall line of the fifth floor. Typically, columns are round in section with conical flared tops, although some columns are octagonal with faceted flared tops. Columns decrease in section at each floor from the first up. All upper floors and the roof are structural slabs, with drop panels where each column occurs except at monitors, where beams reinforce the edges of openings through the roof slab.

Facility 167 presents a generally utilitarian appearance except at the first and fifth floors of the Eighth Street end, and at the elevator/stair towers, where a Moderne-design is discernable. Beginning from the visitor entry at the first floor fronting Eighth Street and extending five bays to the right, the exterior wall is held back from the columns and replaced with a continuous planter. Window and door lights there are divided in the pronounced low-wide, stacked elongated horizontal style characteristic of the period. Fenestration at the fifth floor fronting Eighth Street and for the first four bays on either side is a continuous curtain-wall of ganged industrial steel-sash window units slightly regressed from the exterior wall plane. A continuous horizontal shelf extends across the head of this first and fifth floor fenestration and the first floor entry.

Elsewhere the exterior of the building is characterized by a mainly undifferentiated expanse of flat wall plane, from the second floor loading dock canopy up, with slightly regressed, ganged industrial steel-sash window units of about one half the floor-to-floor height interrupted horizontally at each column and vertically at each floor level. However, in another expression of the Moderne period, this pattern is broken at the three elevator/stair towers on either side of the building, where the wall plane projects slightly and the window units are ganged in a continuous vertical band. The first floor is similar except for the numerous roll-up and other doors where windows otherwise might occur, and the greater head height of the doors and windows. A cantilevered continuation of the second floor structural slab forms a visor which extends above the loading docks to their outer edge along their full length.

Window units typically have multiple fixed lights surrounding multi-light, pivot sash in several different configurations, some with a lower hopper sash. The window units at the monitors have rack and pinion operating hardware. Most original window units appear intact except at the northwest corner of the ground floor where some have been removed and infilled. Metal awnings have been added on the second floor at the west end.

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The interior of the building as constructed was mainly open storage space interrupted only by the structural columns. This space had bare concrete floors, exposed ceilings and pendant-mounted period-standard industrial lighting fixtures with green-colored shades and a white reflective finish inside. The building also has a first floor lobby and finished office space on the fifth floor at the east end, both of which remain substantially intact.

Although only one story, the lobby has a high ceiling inside the entry doors due to the floor there being at street grade rather than the main, loading-dock level prevailing elsewhere throughout the first floor. Stairs across the width of the lobby effect the transition to this higher main floor level and the pair of passenger elevators beyond at the back of the lobby. These elevators are the only ones not architecturally expressed on the exterior of the building.

The three side-by-side full glazed wood entry doors are set back to align with the recessed first floor wall line from the lobby across to the north side of the building. All are hinged on the right and open outward, a configuration sometimes used in the period. To the left of the doors is a faceted half round, wood framed glazed security booth. The booth extends only to the head height of the doors. Above the doors and booth is a curtain wall up to the lobby ceiling with elongated horizontal glazing.

The fifth floor general office space is served by the first floor lobby elevators and has its own simple lobby. Although the distinctive continuous glazing on the east end of the fifth floor extends around the sides for four bays, the original office space extended back for ten bays and, later, renovated to be further back. As noted, the roof slab in this area is raised.

Below this raised area at about the level of the underside of the roof slab elsewhere on the fifth floor, is a site-fabricated suspended tegular ceiling system finished in 12" x 12" acoustic tiles with the closely-spaced, orthogonal perforation pattern so prevalent in the period. The same acoustic tiles are directly adhered to the underside and sides of the sloped monitor.

The plenum above the suspended ceiling is identified in drawings as "duct space." Circular louver ceiling diffusers characteristic of the period are extant but no definitive evidence was located that this portion of the building originally was air-conditioned rather than just ventilated by a combination of forced air and cross-ventilation through opened windows. Possibly original fluorescent luminaries hung from pendant-mounted, continuous electrified parallel tracks for interior office lighting.

Floors in the general office area have early and possibly original 12" x 12" composition floor tile. Partitions extending to the exterior walls in the first four bays back from Eighth Street terminate at the inside wall face, allowing the curtain wall glazing to be continuous. Some private

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office partitions along the outside of the office area clearly date from the period of significance but not necessarily the building's original construction. Most extend up only to the door header. The upper halves of these partitions and the doors are glazed with stacked lights of period-characteristic low-wide proportions.

The building also was constructed with a bombproof base command center on the first floor. This was located two bays in from the west-facing exterior wall and adjacent sidewalls and extended toward the center of the building for three bays, for a total area of near 6,000 square feet. This space had decontamination facilities at its main entry for use in a possible poison gas attack.

The walls that surround this bombproof area and protect its entry are 4'-0" thick. For one bay outside and a half bay inside the area the depth of the slab-on-grade is fortified downward to a 3'-0" thickness and second floor slab above is fortified upward to a 3'-0" thickness. The third floor slab is similarly fortified but to a shorter distance beyond the first floor walls. From the west end of the building, east six bays and across the building's width, the roof is fortified to a 3'-0" thickness and tapers down to the typical 6" roof slab in the seventh bay. The roof slabs of the seven elevator/stair towers also are fortified to a 3'-0" thickness. Generally octagonal machine gun emplacements with 1' thick walls and partial roof sit atop each tower. All of these structural fortifications are extant, although certain special features such as bombproof doors were removed ca. 2001 during renovations.

Facility 167 as constructed was at some variance with the original design drawings, mainly in the elimination of one storage floor and the added major fortifications for the command center and gun emplacements. No individually significant subsequent architectural changes have been made although considerable original storage space has been converted to office space over the years. The infill of former windows and doors, and the addition of metal window shades and exterior piping and ducting have detracted from its original appearance but the building's essential original historic character remains intact and the facility retains high integrity.

Historical Context:

The effort to prepare for the expected war with Japan became increasingly urgent in the two years or so before it actually began. Until that time, most buildings were constructed for permanent use, if sometimes on a rushed basis and with some change from their original conception. Among these was Facility 167. Albert Kahn, Inc. Architects and Engineers, also the architect for other important buildings at Pearl Harbor, completed the original design drawings in mid-1941 for the Bureau of Yards & Docks. They are dated June 18, 1941. Kahn, whose office is in Detroit, designed major buildings for Ford as well as the Navy.

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Although Facility 167 already was under construction, apparently following the December 7 attack it was decided to move the base command center from Facility 1 to a new, heavily fortified facility in the new general storage building. This required extensive design changes but they were worked out and drawn up within two months in plans dated February 10, 1942. These plans also reflect a decision to reduce the building to five stories from the originally designed six except at the east end where the general office space was planned. That too was changed within three months with the decision to construct the whole building with only five stories, as shown in plans dated May 16, 1942, by omitting a lower storage floor. With the addition of machine gun emplacements shown in June 30, 1942 plans the building proceeded to completion essentially as it now exists and reportedly was occupied by the end of the year.

Sources:

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- Fogel, Frederick F.
1980 Historic Resources Inventory Form for Bldg #155. Prepared by Pearl Harbor Naval Shipyard, Facilities Planning & Programming for State Historic Preservation Office.
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c.1945 *Yard Supply* report. An anonymous typescript report in the Robert Walden collection. Located at University of Hawaii Hamilton Library, Hawaii and Pacific section.
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Photos in group RG71CA.
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Drawings for Facility 167.
- U.S. Navy, Bureau of Yards and Docks
1947 *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps 1940-1946*. Volume I & II. United States Government Printing Office: Washington, D.C.
- Wisniewski, Richard A.
n.d. *Pearl Harbor and the USS Arizona Memorial: a Pictorial History*. Pacific Basin Enterprises: Honolulu, Hawaii.

Project Information:

Photo documentation and recordation of this facility by the Navy has been done in response to ongoing alterations of the structure. Photo documentation of historic facilities by the Navy assists in expediting planned undertakings by having the documentation prepared prior to

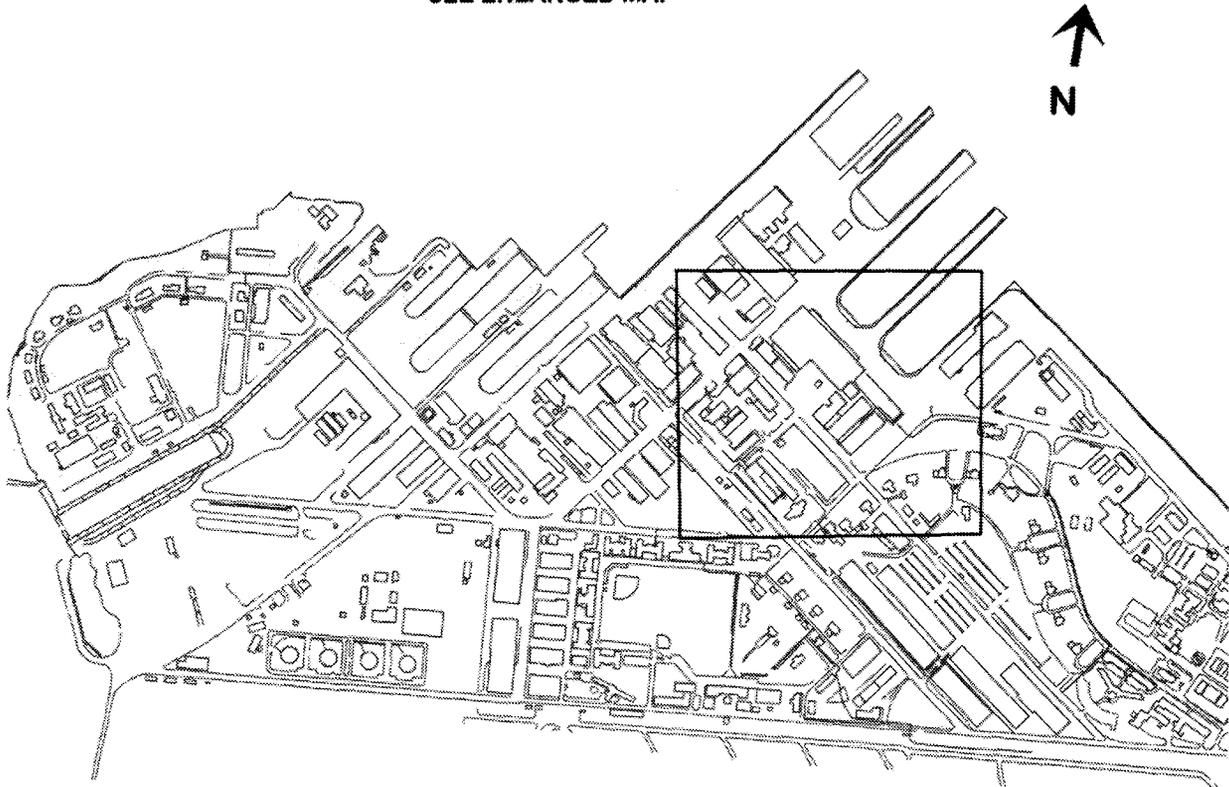
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taking actions. Also, photo documentation assists the Navy in gaining more information about its historic facilities to assist in making proactive management decisions. This project is being supervised by Jeffrey Dodge Historical Architect NAVFAC Hawaii. The photographic documentation was undertaken by David Franzen, photographer. Douglas P. Luna, AIA/Architect, consultant to 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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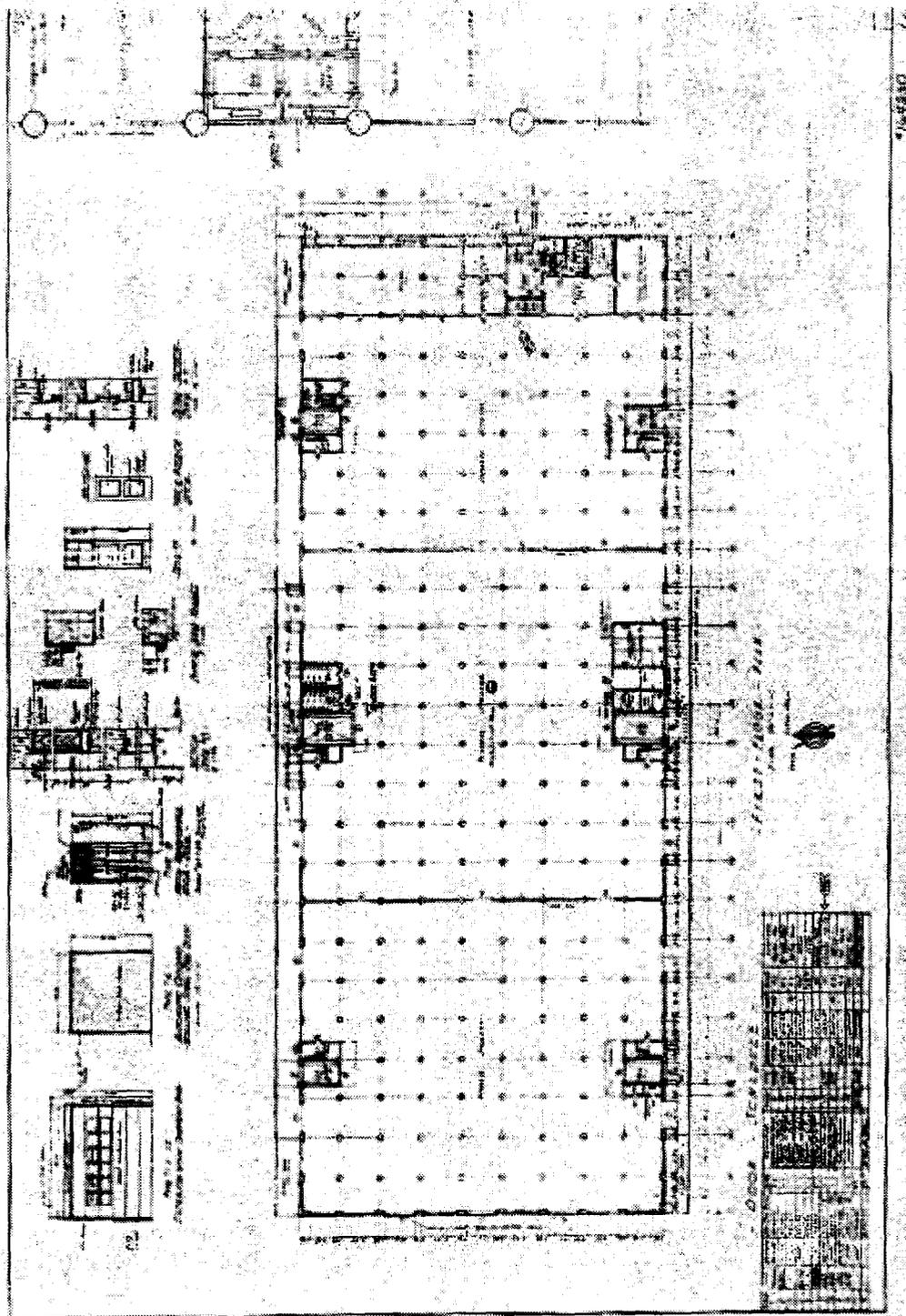
Shipyard Map

SEE ENLARGED MAP



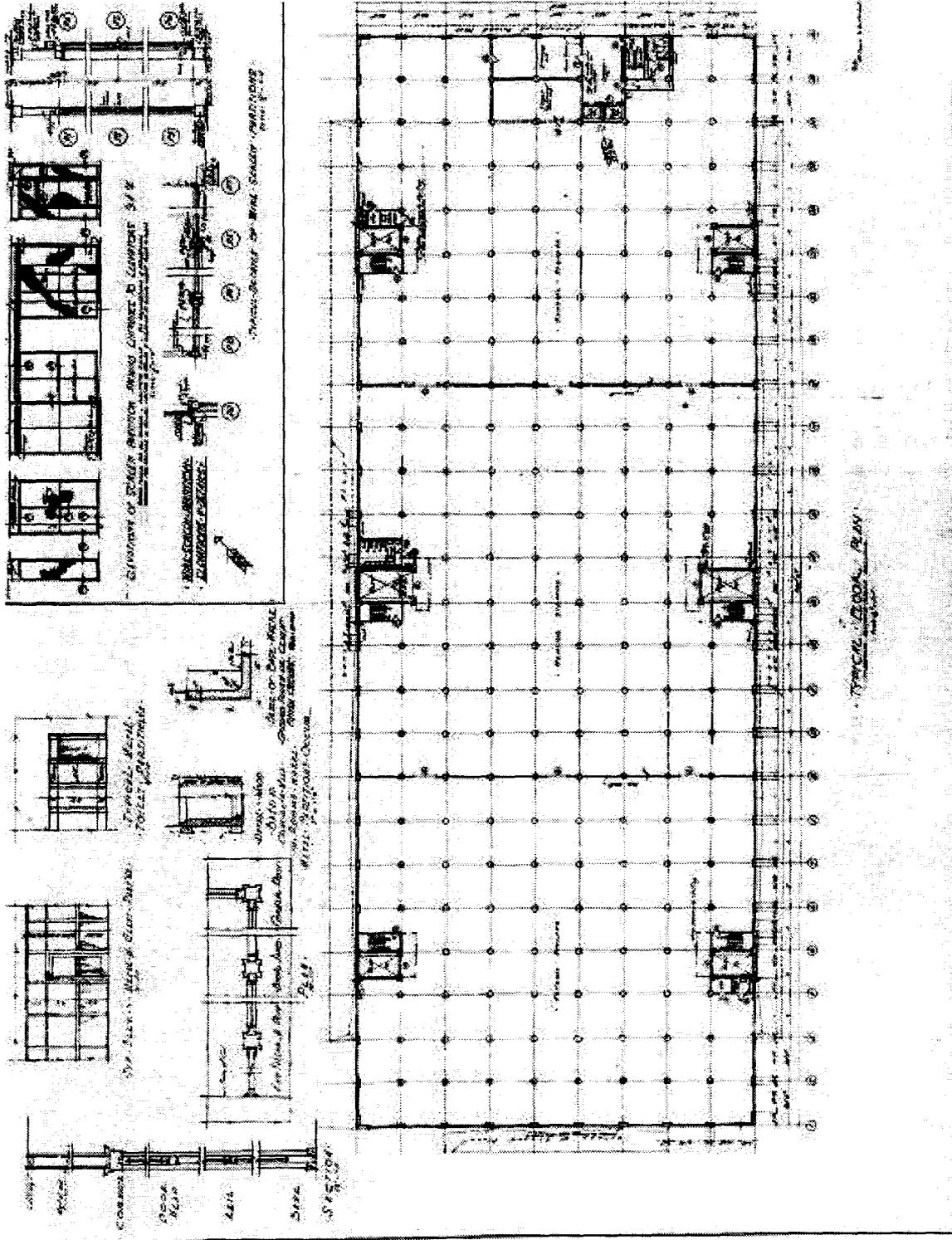
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First Floor Plan and Door Details (Drawing No. 164230, dated 7/7/1941) (reduced, not to scale)



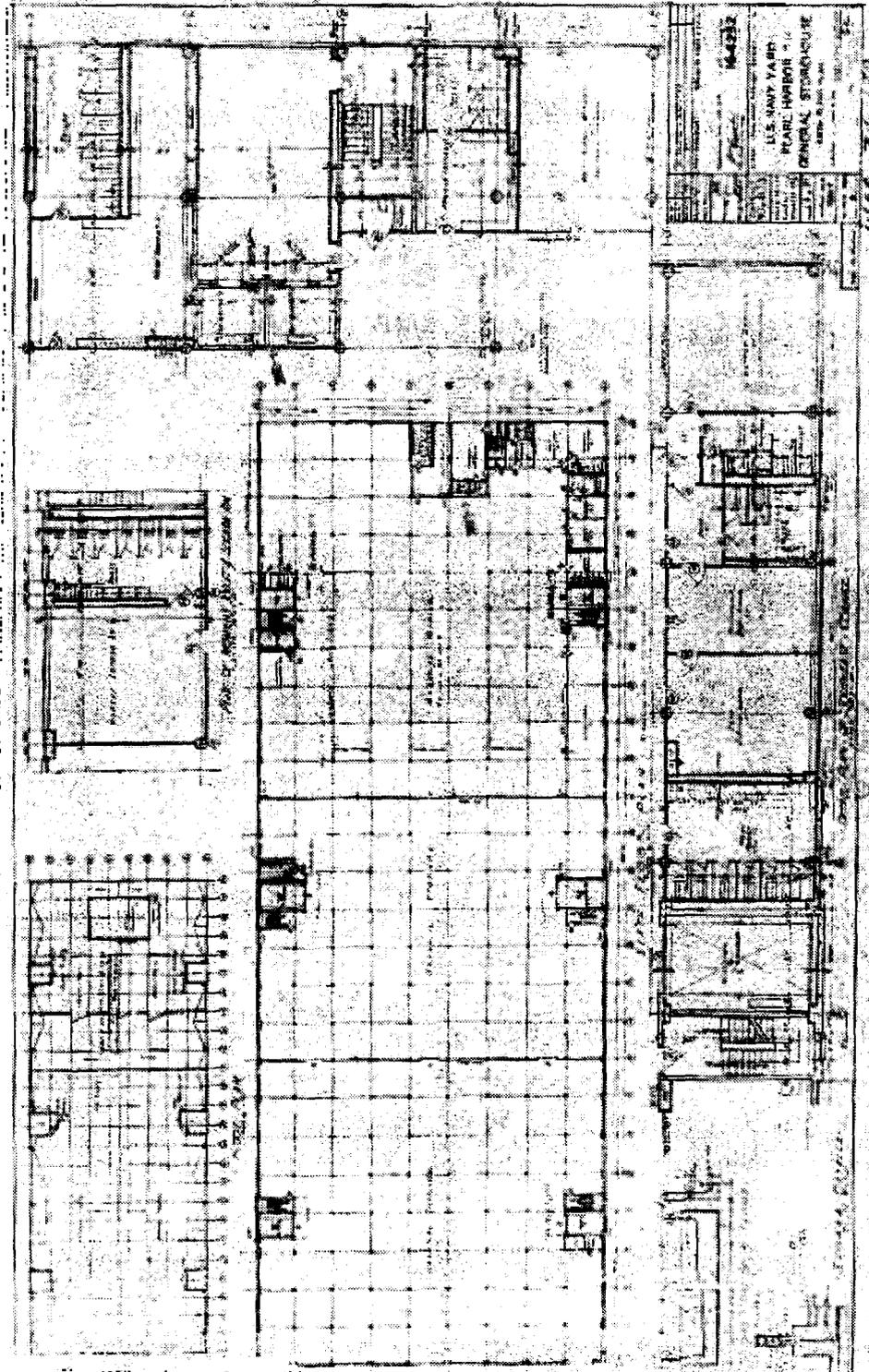
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Typical Floor Plan for Floors 2 through 5 (Drawing No. 164231, dated 8/25/1941) (reduced, not to scale)



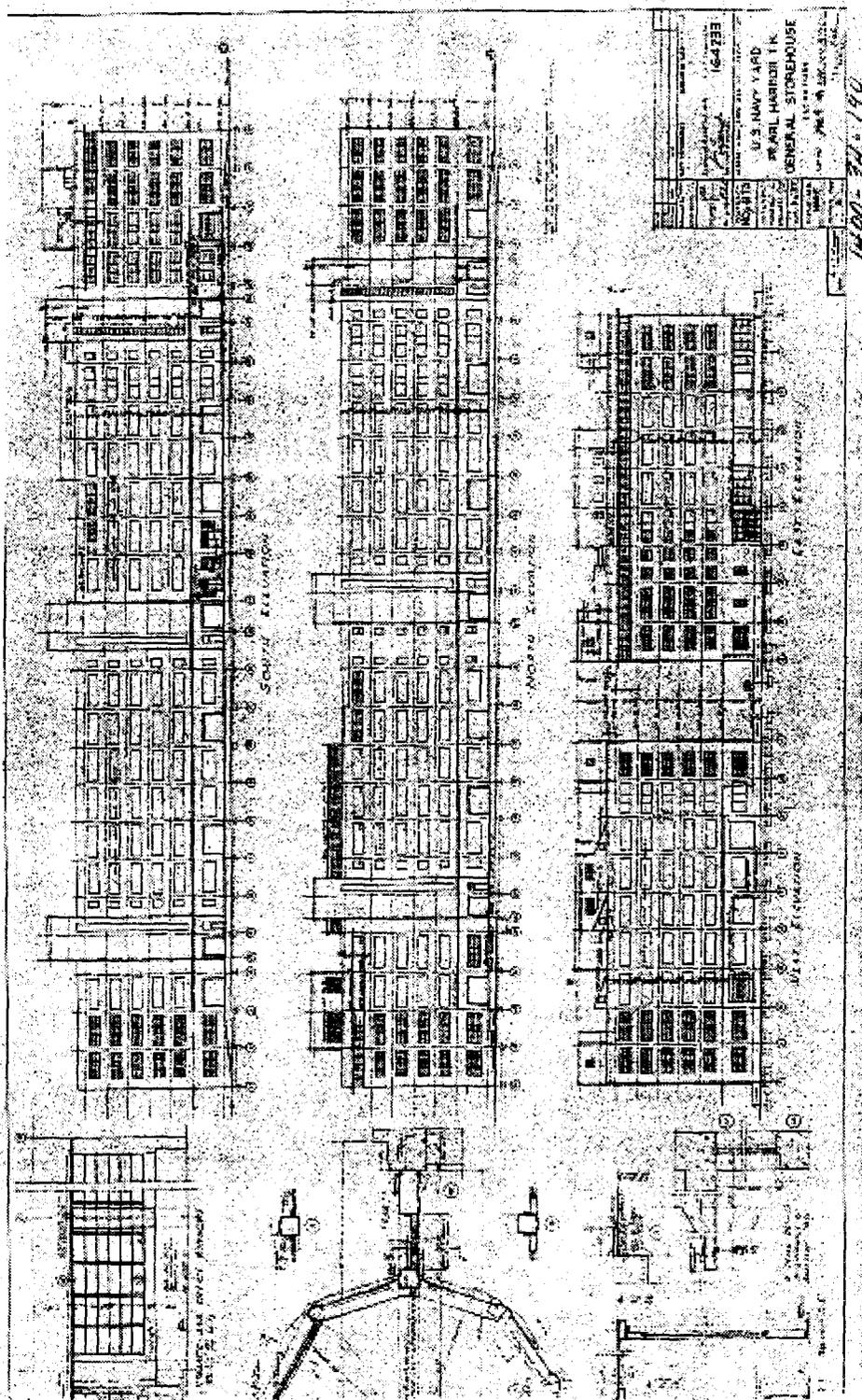
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Sixth Floor Plan and Roof Plan (Drawing No. 164232, dated 7/7/1941) (reduced, not to scale)



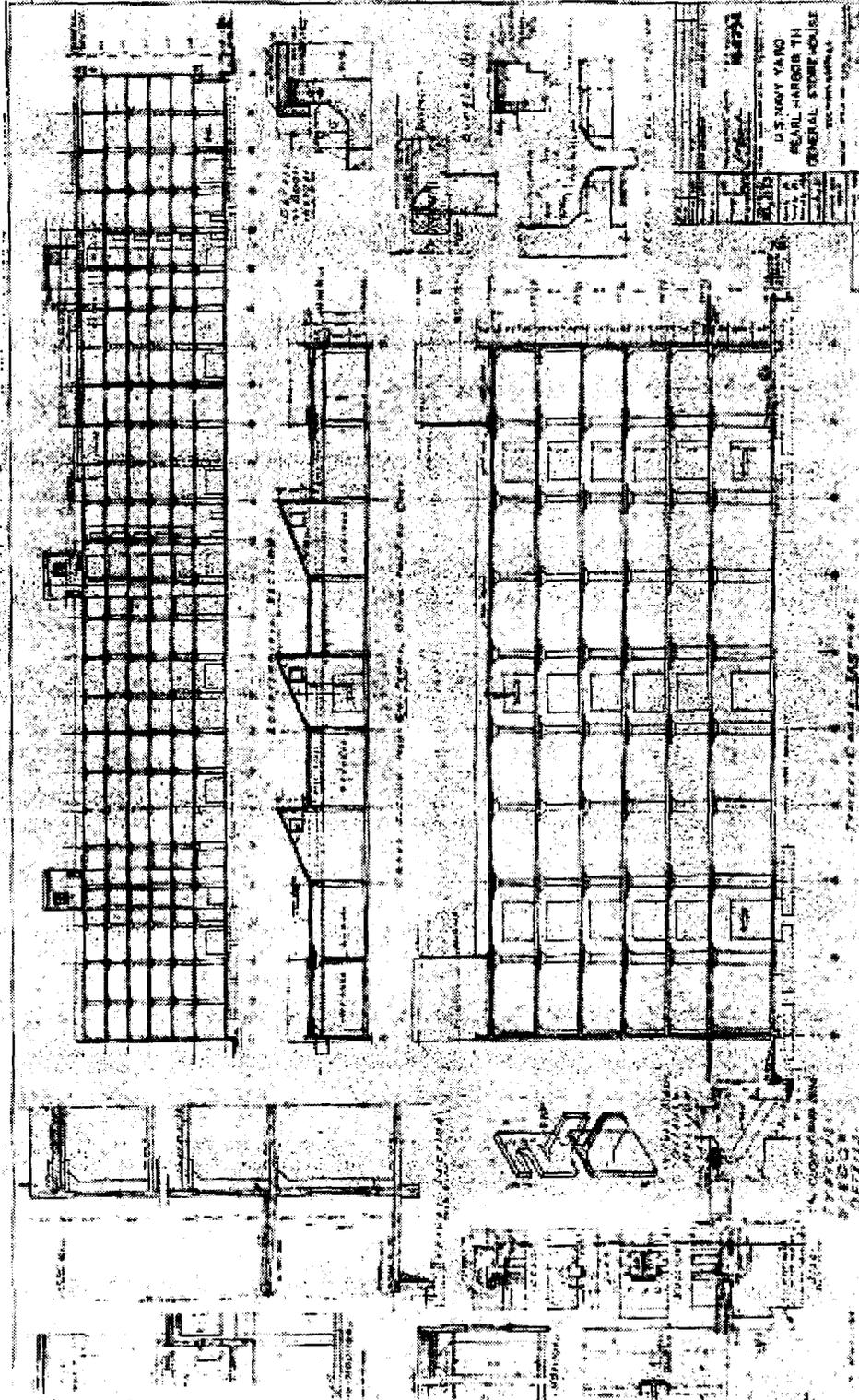
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Exterior Elevations (Drawing No. 164233, dated 6/18/1941) (reduced, not to scale)



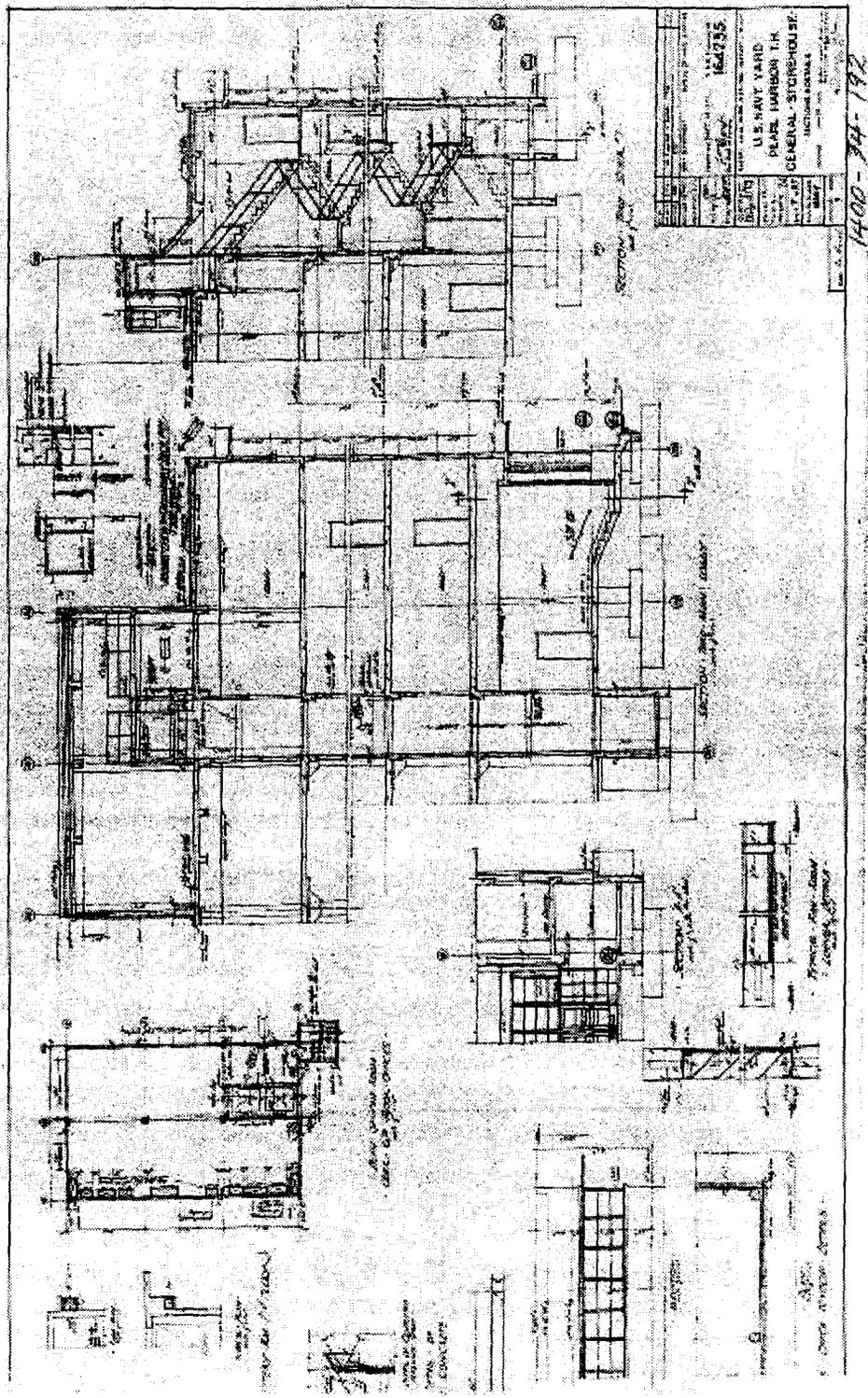
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Sections and Details (Drawing No. 164234, dated 6/18/1941) (reduced, not to scale)



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Sections thru Main Lobby and Stair #7, Plan of Fan Room and Details (Drawing No. 164235, dated 7/7/1941) (reduced, not to scale)



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Plans, Details, and Sections of Stairs and Freight Elevator (Drawing No. 164236, dated 7/7/1941) (reduced, not to scale)

