

U.S. NAVAL BASE, PEARL HARBOR, ELECTRIC SHOP
(U.S. Naval Base, Pearl Harbor, Naval Shipyard, Facility No. 67A)
Sixth Street opposite 10-10 Pier
Pearl Harbor
Honolulu County
Hawaii

HABS HI-492

HI-492

HABS

HI-492

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, ELECTRIC SHOP (U.S. Naval Base, Pearl Harbor, Naval Shipyard) (Facility No. 67A)

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Location: Sixth Street opposite 10-10 pier
Pearl Harbor Naval Base
City and County of Honolulu, Hawaii

This building is at UTM coordinates 04.608290.2361670 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 67A is located within the Pearl Harbor National Historic Landmark. It is an annex to Facility 67(HABS HI-491), built nearly two decades earlier. It was constructed as part of the major buildup of permanent shop facilities at the Shipyard in contemplation of World War II in the Pacific. Facility 67A is a large, prominent structure designed by a noted industrial facility architect of the period, Albert Kahn, who also designed the still extant Facilities 155(HABS HI-496), 167(HABS HI-497), and 3A(HABS HI-445) at the Shipyard and Facilities 175, 176, and 86(HABS HI-374) at Ford Island. Former facilities included 4A(HABS HI-360) at the Shipyard and 472 at the Fleet Industrial Supply Center.

Description: Facility 67A is a large steel-framed, mainly two-story structure dominated by two contiguous, wide bridge crane bays, and a partial-length loft above with a roof monitor. There also is an adjacent narrower and lower two-story third bay on the east side with three wings extending outward from it to the east. Two-story wings to either side flank the three-story center wing.

The main part of the original building is arranged in a structural grid 12, 20'-0" bays long by two, 60'-0" bays and one 20'-0" bay wide, for an overall size of about 245' x 145'. The wings are in a 20'-0" square grid each extending three bays out by two bays wide bringing the overall width of the building to about 205'. A later high, one-story extension of the two crane bays added three more 20'-0" transverse bays at the north end, increasing the total length of the building to about 305'. Total floor area is about 93,000 square feet. The approximate overall building height over the center of the original crane bays, loft and monitor is 55' and 45' at most of the lower portions of the building.

All of the roof planes are barely pitched, with a slight gable at the ends of the monitor and the middle wing. There are lower half-gables over the ends of the outer portions of the main bays, and behind parapets at the third bay and outer wings.

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The foundation and main structural floor is concrete slab-on-grade, with structural columns supported by concrete pile caps over multiple concrete piles below each. Aside from columns defining structural bays, there are columns 20'-0" on-center between each of the main columns along the width of the north wall. A continuous footing between the exterior columns supports a concrete wall of waist height capped by an integral sill.

The structural slab is flat over the length of the building. Finish flooring in the crane bays and at the loft work area above typically is end-grain wood blocks inset flush with adjacent concrete aisle ways. The structural and finish floor elsewhere is concrete.

Columns, girders, beams, joists and purlins are standard flange-and-web structural steel sections. Connections of structural sections typically are riveted, with some bolted. This might indicate some pre-fabrication in the structural components, with the riveted portions being pre-assembled and the bolted portions assembled on site. There are no trusses. The transverse roof frame at each bay for the length of the building where the monitor occurs is a deep, assembled bent-beam resembling an upside-down, very-wide-rimmed pie tin in section supported by columns only at the outer wall line and at the mid point. Deep rails for the bridge crane in each of the two longitudinal bays on the main floor are supported off the structural building columns. The interior volume of the crane bays and the loft is unbroken across length and width other than by the line of center columns. Elsewhere, columns occur 20'-0" on-center in both directions.

The building presents a highly utilitarian appearance, but in a readily discernable Moderne-period design. Above the base wall is a curtain wall of three horizontal bands of ganged, industrial-type metal window units alternating with three bands of corrugated asbestos-cement siding, and all supported by girts, brackets and clips to the structure. In contrast to this dominant horizontality is a projected, vertically styled elevator/stair tower on the west-facing, principal façade of the building near the connection point to Facility 67.

This arrangement of alternating window and siding bands originally was essentially continuous around the three exposed sides of the building, including the wings and at corners, with a fourth window band around the monitor. The continuity of the arrangement later was broken with the extension of the north end of the building; only the lowest window band was continued there. The only other notable break is where the window bands approach the projecting elevator/stair tower. Except at the monitor beyond, the window bands stop short of the perpendicular wall where the tower projects out. On the west face of the tower, the window units are ganged in one narrow, continuous vertical band, providing natural light for the stairwell.

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The window units typically have multiple fixed lights surrounding multi-light, pivot sash in several different configurations, mainly with rack and pinion operating hardware. The window units at the second floor of each wing have fixed lights above and to either side of a two-light-high hopper sash over a single-light-high hopper sash. The original window units appear substantially intact except for replaced individual lights. On the interior, window bands at the second and third floor levels have a wainscot below them of vertically-oriented, interlocking narrow metal panels concealing the back side of the corrugated siding.

Larger original doors are metal rolling types faced with window and siding bands aligned with and matching those in the adjacent curtain walls. This is an important characteristic feature seen in buildings designed by the architect. Both the original elevator in the main façade tower and another later added on the other side of the building, have doors and interior gates, which are split horizontally and operate up and down. The original interior stairwell and similar doors, largely extant, are metal, with two-over-two lights above the lock rail and a recessed flat metal panel below.

The roof has close eaves and bituminous built up roofing over heavy wood, beveled-edge painted planking exposed on the underside.

Facility 67A appears to have been constructed substantially in accord with the original design drawings. Aside from the three-transverse-bay extension already noted, only minor additions, changes and replacements have been made over the years. None of them have seriously altered the building's original historic character and integrity.

Historical Context:

The specific need and location for an annex to house electrical work associated with the machine shop function in the contiguous Facility 67 were defined in a letter dated 29 April 1940. Due to the rushed pace of the effort to prepare for the coming war, the original design drawings were completed in less than two months by Albert Kahn, Inc. for the Bureau of Yards & Docks. They are dated June 22, 1940, the same date as Kahn's drawings for Facility 155. Kahn, whose office was in Detroit, designed major buildings for Ford as well as the Navy. The original and dominant part of Facility 67A was constructed in 1941.

According to a letter dated 15 December 1941 concerning damage to various structures in consequence of the December 7th attack and referring to Facility 67, "twenty-five sheets of corrugated *asbestos* siding [emphasis added] fractured, causing missile hazards in falling from relatively high elevation, indicating that this material has very little value in resistance to shock." Since Facility 67 has corrugated *metal* siding and is believed always to have had, it is more likely that the letter failed to distinguish between Facility 67 and 67A, the latter, in fact, having corrugated asbestos cement siding as noted. The

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damage was attributed to the concussive effect of the torpedo attack on the nearby *USS Helena* or the firing of the *Helena's* five-inch guns.

Facility 67A's use later evolved into a machine shop annex to Facility 67. Drawings for the extension of the building noted and alterations to both Facility 67 and 67A were developed for the Pacific Division of the Naval Facilities Engineering Command by The H K Ferguson Company of Houston and dated January 15, 1976. This work was completed in 1978.

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

Sources:

Almy, Capt. E.D., Cmdr. J.J. Manning, and Lt. Cmdr. Philip Lemler
1940 Letter Report dated 29 April 1940 to the Secretary of the Navy on Development of Fourteenth Naval District. In National Archives, San Bruno, RG 181, 14th ND, District Staff Hdqtrs., General Correspondence [Formerly Classified] 1936-1944, Box 1, Folder 1-1(1) Developments.

Public Works Officer, U. S. Navy Yard, Pearl Harbor, T. H.
1941 Report of Air Raid by Japanese on December 7, 1941 dated 15 December 1941.

Nakahara, Kenneth
1980 Historic Resources Inventory Form for Bldg #67A. Prepared by Pearl Harbor Naval Shipyard, Facilities Planning & Programming for State Historic Preservation Office.

National Archives II, Still Photo Collection
Photos in group RG71CA.

NAVFACPAC: Plan Files.
Drawings for Facility 67A.

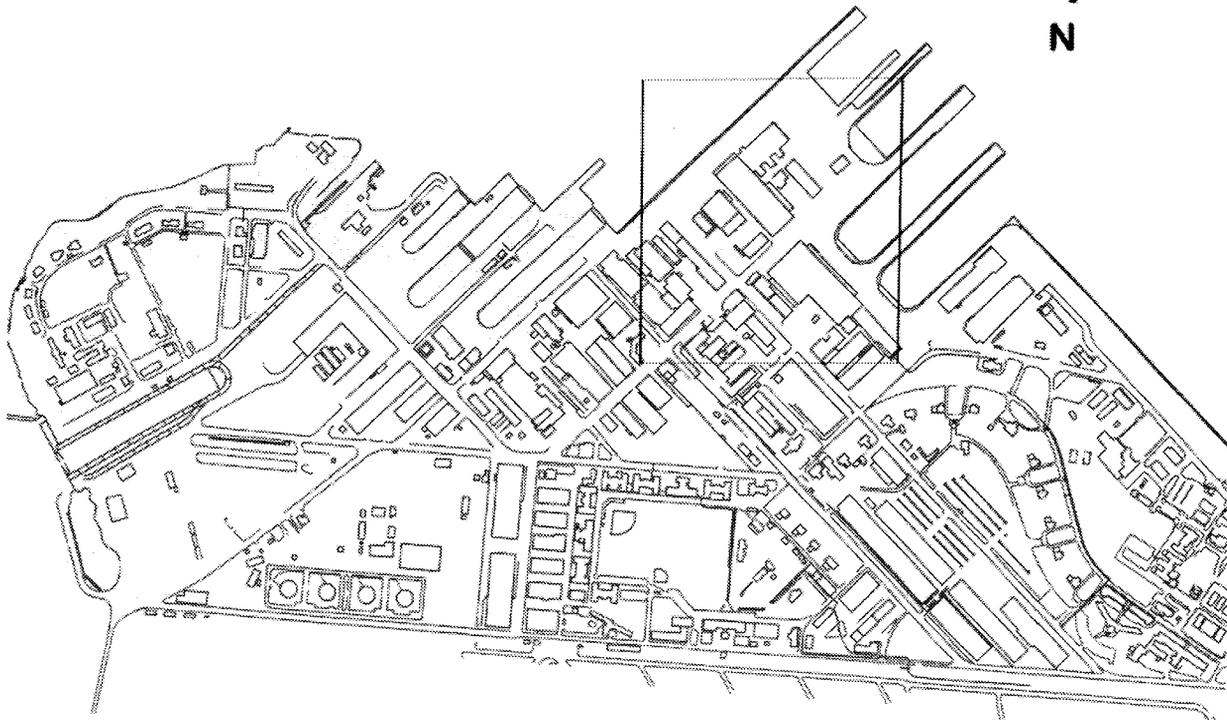
Project Information:

Photo documentation and recordation of this facility by the Navy has been done in response to ongoing renovations 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 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. 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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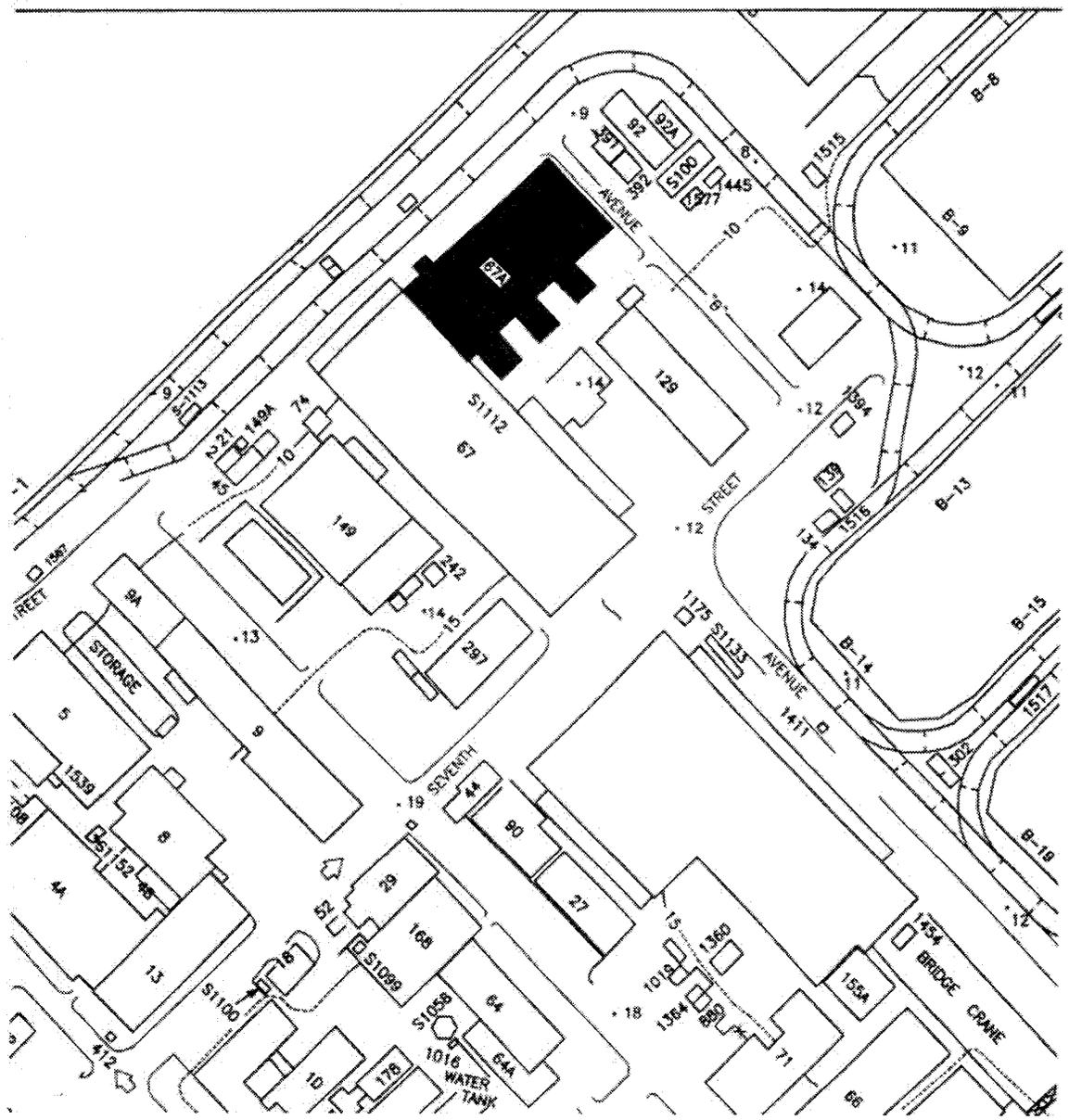
Shipyard Map

SEE ENLARGED MAP



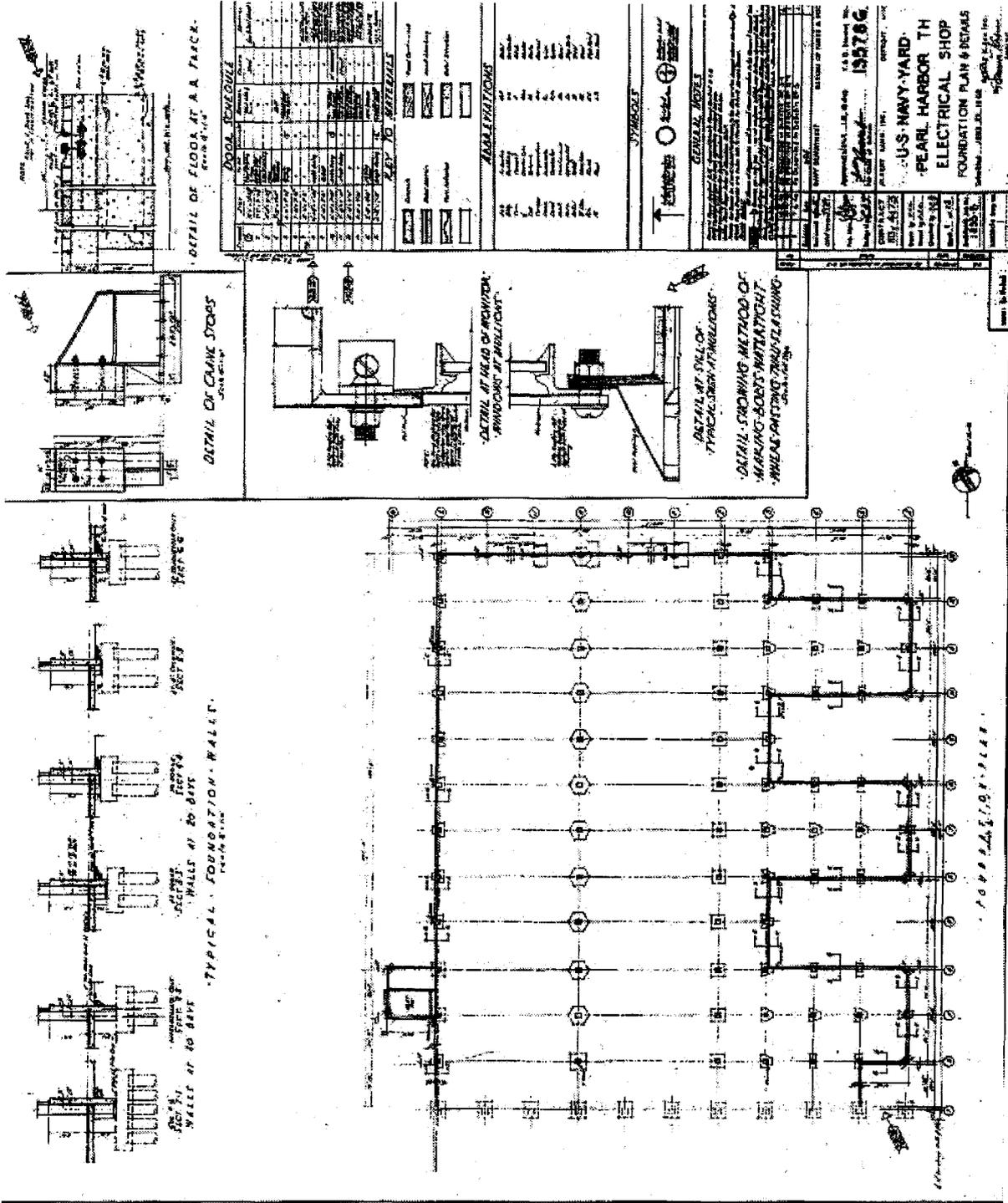
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Enlarged Area Map (reduced, not to scale)



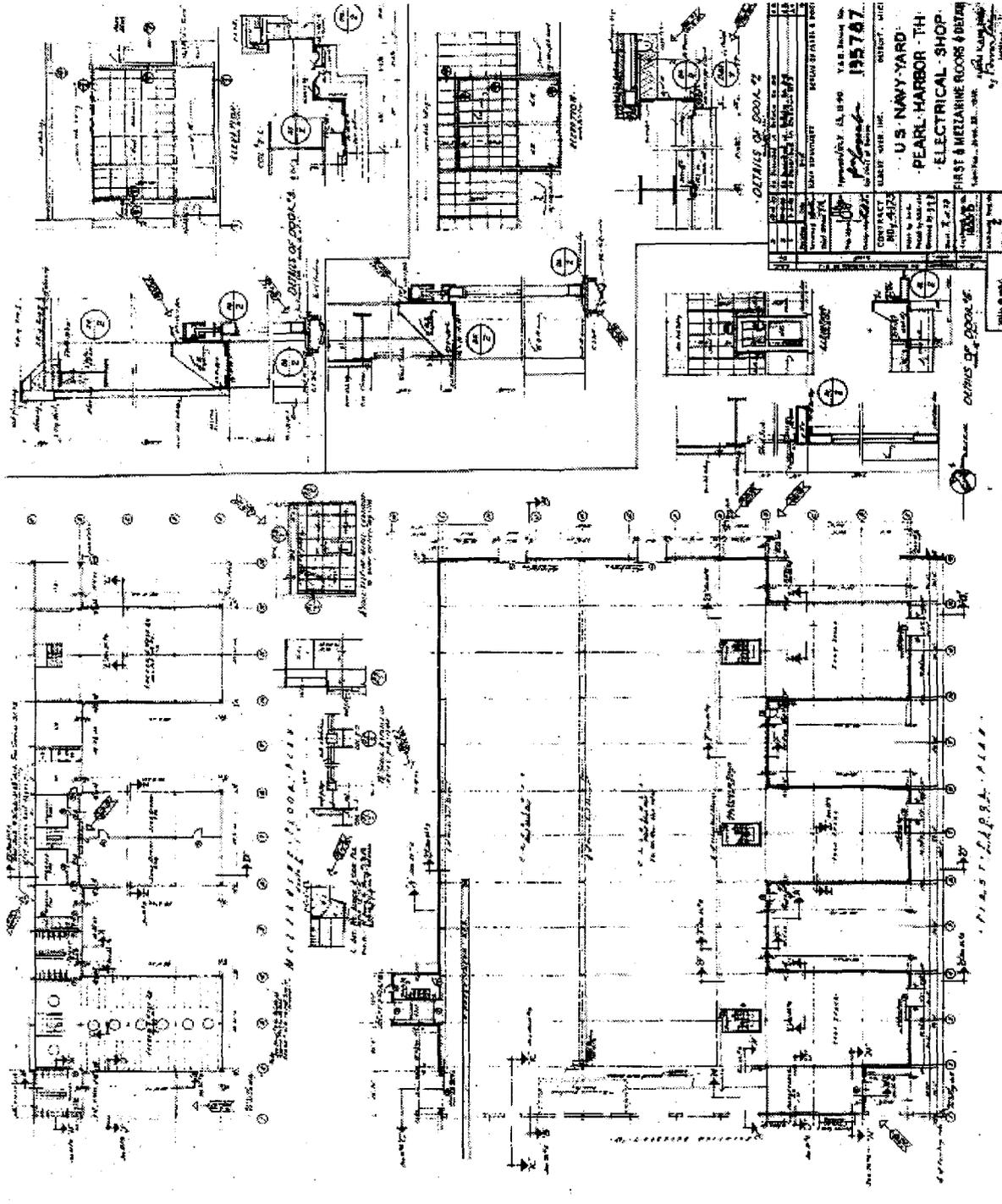
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Foundation Plan and Details (Drawing No. 135786, dated 7/13/1940) (reduced, not to scale)



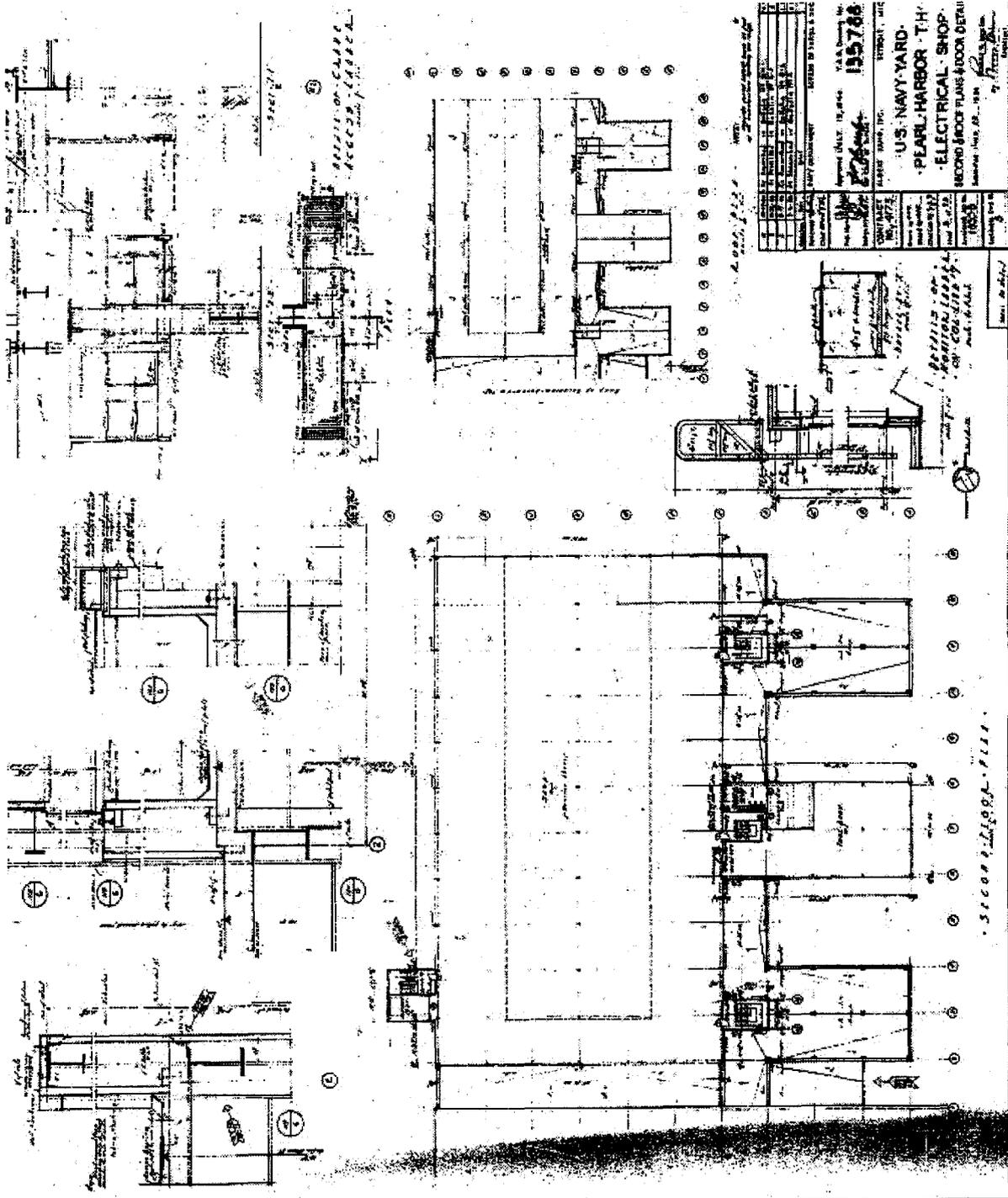
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First and Mezzanine Floor Plans and Details (Drawing No. 135787, dated 7/13/1940)
(reduced, not to scale)



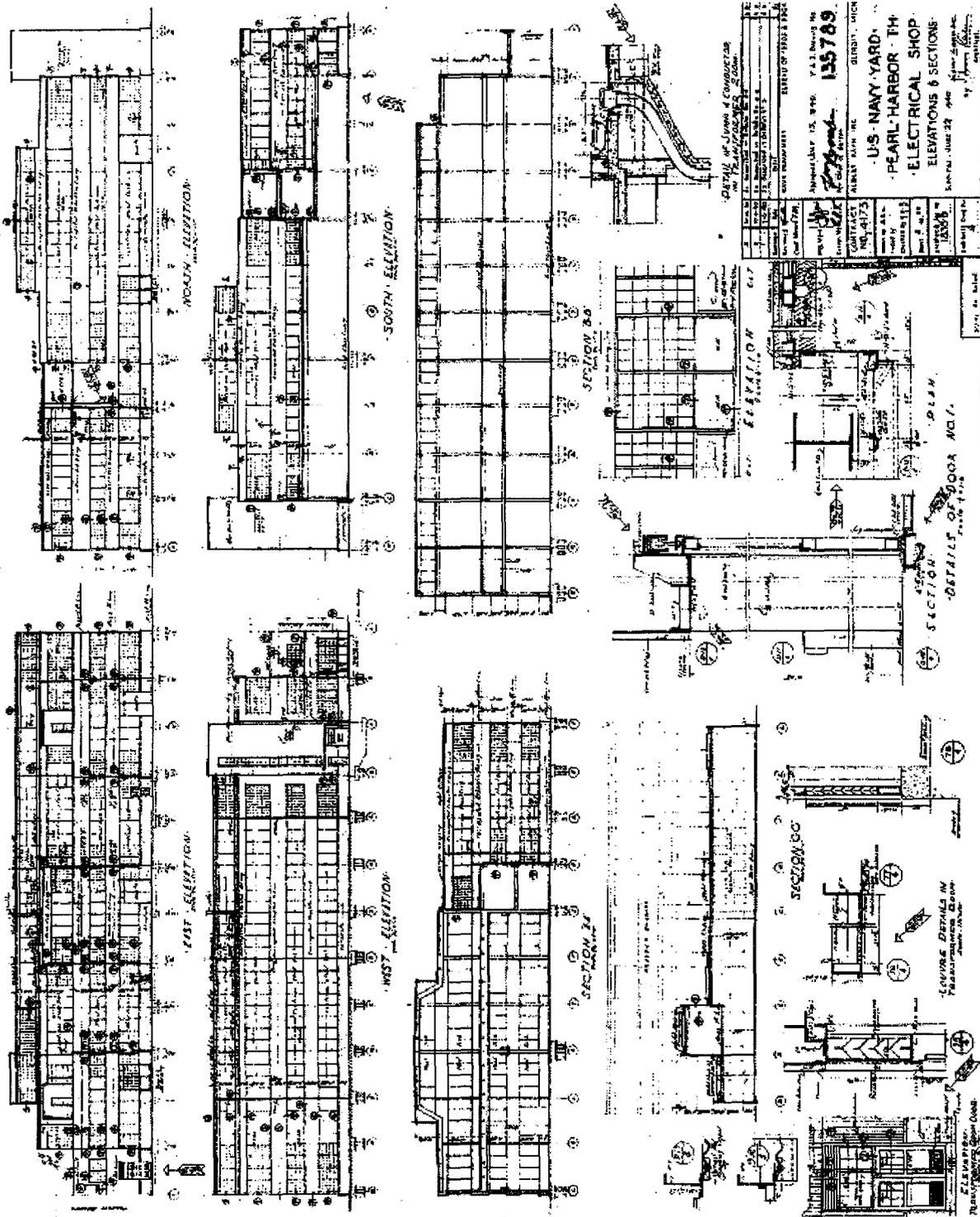
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Second Floor and Roof Plans and Door Details (Drawing No. 135788, dated 7/13/1940)
(reduced, not to scale)



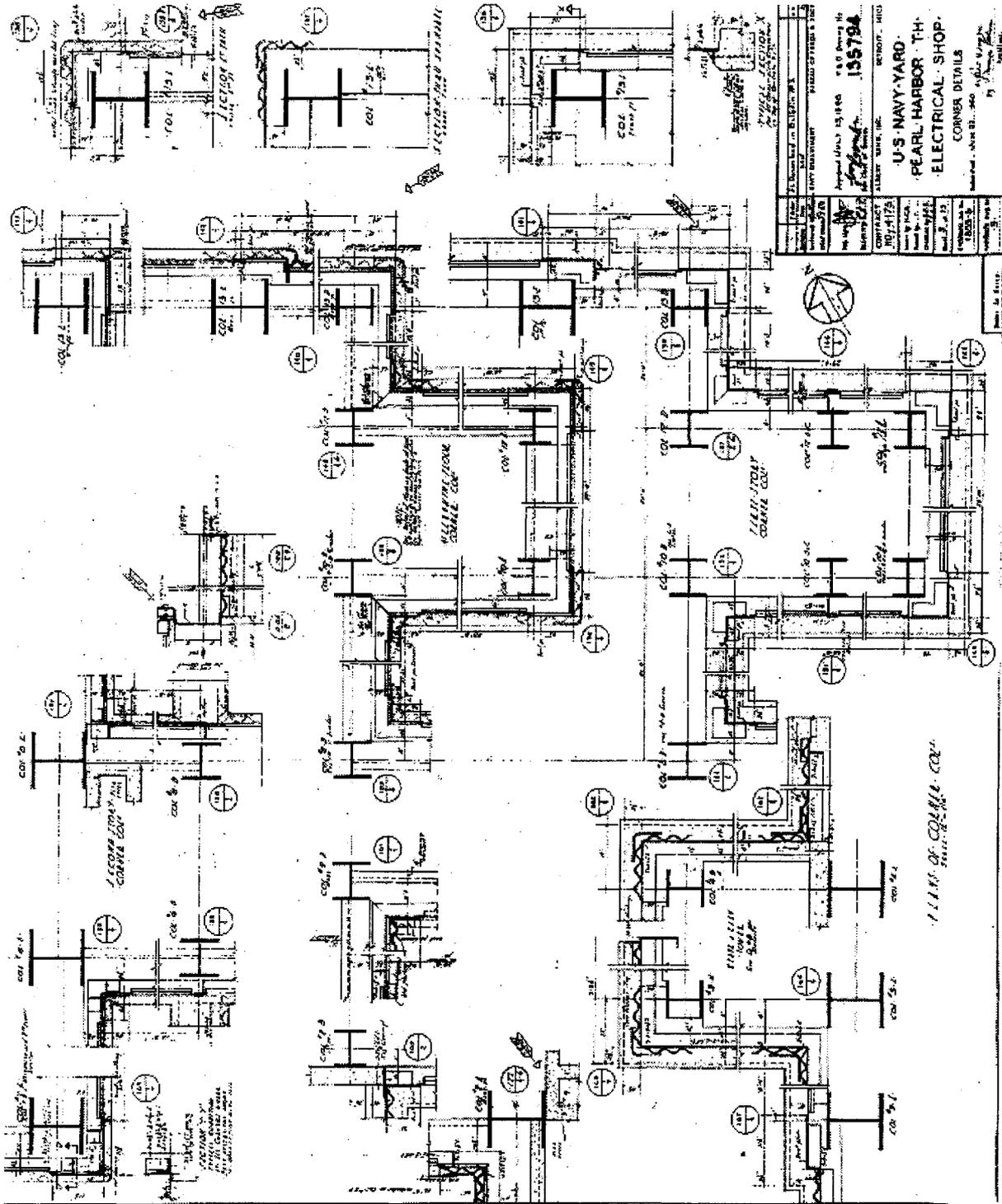
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Elevations and Sections (Drawing No. 135789, dated 7/13/1940) (reduced, not to scale)



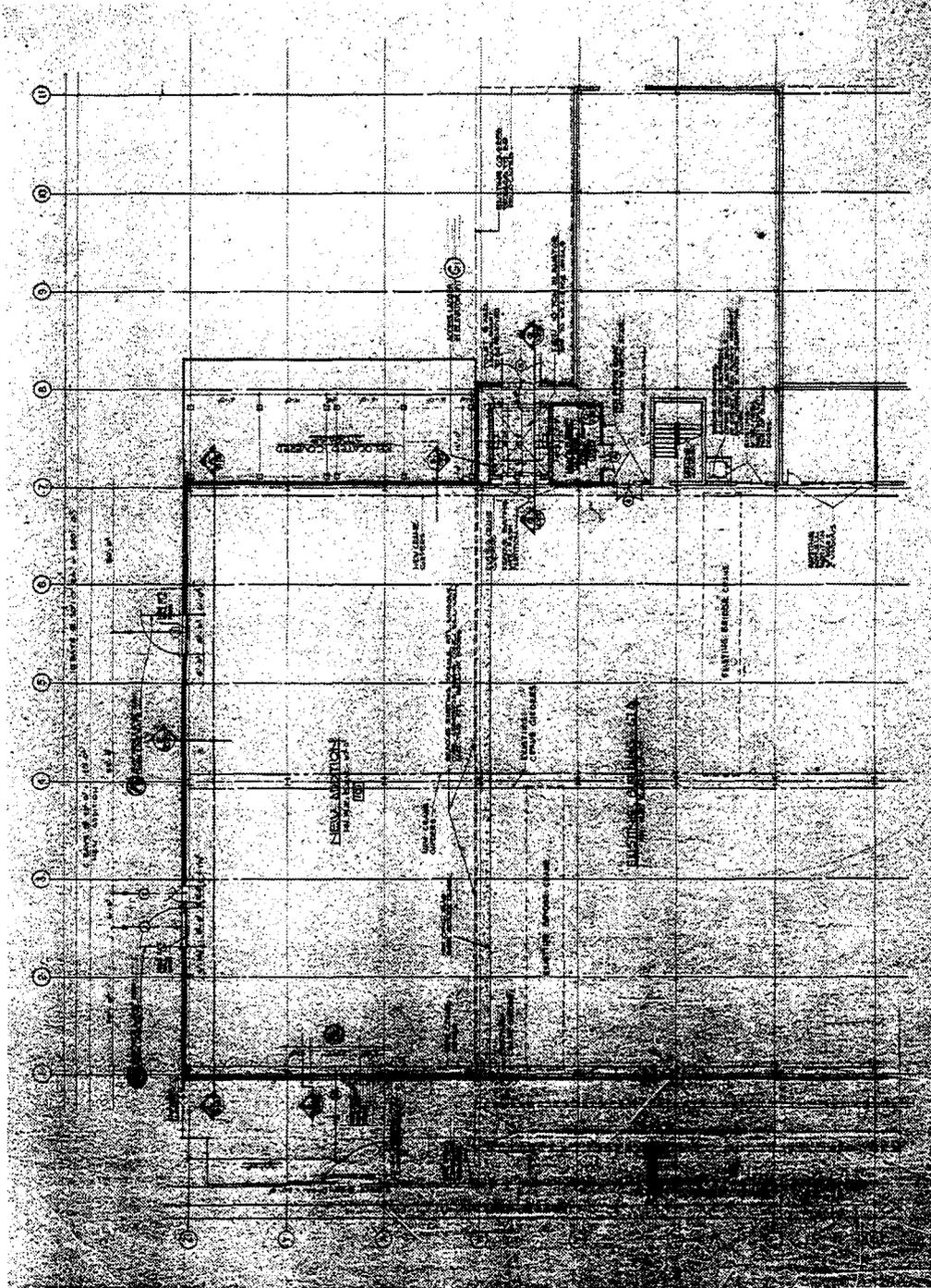
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Corner Details (Drawing No. 135794, dated 7/13/1940) (reduced, not to scale)



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Modernization - First Floor Plan- Area No. 1 (Drawing No. 7008410, dated 1/15/1976)
(reduced, not to scale)



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Modernization – Exterior Elevations (Drawing No. 7008418, dated 1/15/1976) (reduced, not to scale)

