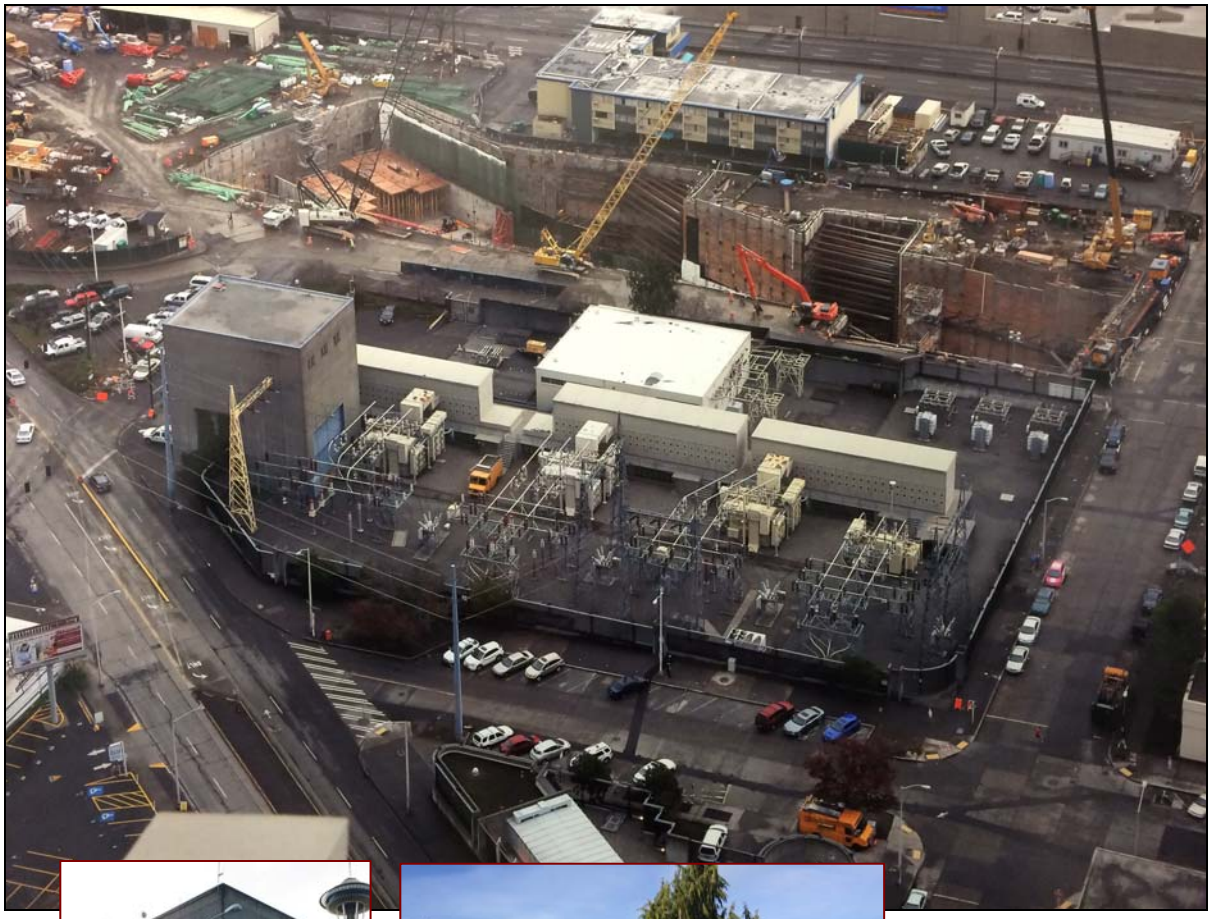
Landmark Nomination
Seattle City Light Broad Street Substation
319 6th Avenue North
Seattle



BOLA Architecture + Planning
Seattle

May 9, 2017

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Landmarks Nomination Form (1 page)

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Cover: A ca. 2016 aerial view of the site (SCL) and building photographs from December 28, 2016 (BOLA).

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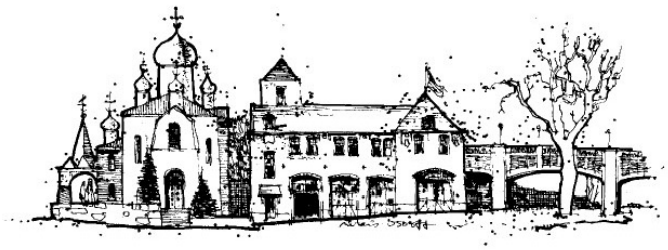

The City of Seattle

Landmarks Preservation Board

Mailing Address: PO Box 94649 Seattle WA 98124-4649
Street Address: 700 5th Ave Suite 1700

Landmark NOMINATION Application

Name: Broad Street Substation
Year Built: 1949-1951

Street and Number: 319 6th Avenue, Seattle 98109

Assessor's File No.: 1991200405
Legal Description: DT Denny's Park Addition Lots 4-5-6 and Vacated Alley adjacent and Triangular Piece of Property bounded on East by Alley, on Northwest by Lake Street, on South by Thomas Street, all in Block 61, together with Lots 1 through 12, Block 66 and Vacated Alley in Said Block (Vacated Ordinance #78141), less Streets.

Recorded in Book of Plats Volume 2, page 46.

Plat /Block/Lot: (See above)

Present Owner: Seattle City Light
Owner's Address: 700 5th Avenue, Suite 3200
PO Box 34023
Seattle, WA 98124

Present Use: Substation with Control Building and Crane Building Assembly
Original Owner: City of Seattle Lighting Department (later known as Seattle City Light)
Original Use: Substation with Control Building, Crane Tower, and Shops Building

Architect: Ivan M. Palmaw

Submitted by: Susan D. Boyle, AIA, Principal, BOLA Architecture + Planning
Address: 159 Western Avenue West, #486, Seattle, WA 98119
Phone: (206) 447-4749
on behalf of Seattle City Light
Maureen Barnes, Real Estate Manager & Rebecca Ossa, Historic Resource Specialist, Seattle City Light Environment, Land & Licensing Business Unit
P. O. Box 34023
Seattle, WA 98124-4023

Date: May 9, 2017

Reviewed (historic preservation officer): _____ Date: _____

Seattle City Light
Broad Street Substation, 319 6th Avenue North
Landmark Nomination

BOLA Architecture + Planning
May 9, 2017

1. INTRODUCTION

Background

This landmark nomination application for the Broad Street Substation was prepared at the request of the property owner, Seattle City Light and its prime engineering consultant, Electric Power Systems, Inc. The property is a full-block 89,295 square foot parcel, surrounded by walls or fencing that enclose the electrical equipment yard, paved service and parking areas, and two mid-20th century buildings that made up the original facility. These include a Control Building near the center of the site with its primary facade near the east property line on 6th Avenue N, and a Crane Building near the north and northwest property lines and Harrison and Broad Streets.

This nomination application has been developed for the Seattle Landmarks Preservation Board in response to the permitting process associated with a land transfer between the Seattle Department of Transportation (SDOT) and Seattle City Light (SCL).

Research

This nomination application includes data about the property, a historic context statement, and an architectural description. Research was undertaken in late 2016 and early 2017. The nomination document and a separate preliminary evaluation were prepared by Principal Susan Boyle, AIA, with research assistance by Preservation Planner Sonja Molchany and Planning Intern Meagan Scott. Valuable input about the substation functions was provided by the project manager Matt Boyd, of Electric Power Systems, Inc. Additional historic documents and photographs were provided by SCL Historic Resource Specialist/Architectural Historian Rebecca Ossa with assistance by Historic Preservation Intern Langston Guettinger.

Historical materials came from many sources. These included drawings and permit records from the microfilm library at Seattle Department of Construction and Inspections (SDCI); Department of Neighborhoods (DON) Historical Site Inventories and the 2001 "Context Report on City Owned Properties," and landmark nomination reports for nearby properties and other utility facilities; annual reports, comptrollers' files and record series documents about the Broad Street Substation, and digital photos and maps from Seattle Municipal Archives (SMA); property information from King County i-Map records; archival tax records from Puget Sound Regional Archives; historic photographs from the digital collections of the University of Washington Libraries Special Collections (UWLSC) and the Museum of History and Industry (MOHAI). Additional information was found in historic directories from the Seattle Public Library's Seattle Room, as well as historic *Seattle Times* newspaper articles; publications about SCL; essays from HistoryLink.org; and historic insurance and city maps.

Research included examination of the original drawings and permit records, property tax records, and historic maps and photographs. Several site visits were undertaken to observe and document the building's exterior and interior elements, site features, and its neighborhood context.

2. ARCHITECTURAL DESCRIPTION

The Setting and Urban Context

The property is situated on a full block site in a triangular area of the city roughly defined by Broad Street, Denny Way, Aurora Avenue North/Highway 99, and is two blocks north of the Denny Regrade neighborhood. This area is part of the Cascade neighborhood. Throughout the latter half of the 20th century, this area has split by the Battery Street Tunnel and on-grade portions of Aurora Avenue N/Highway 99, while the balance of the Cascade neighborhood has extended throughout South Lake Union on the east of the highway (**Figures 1-2**).

The area is currently undergoing dramatic changes in response to SDOT and WSDOT's Alaskan Way Viaduct Replacement Project. The tunnel's north portal will be situated directly east and northeast of the substation property. As of March 2017, the diagonal portion of Broad Street has been removed, and the intersection of Taylor and Harrison Streets changed into a traditional square-shaped intersection.

The existing character of the area near the Broad Street Substation includes wide roadways carrying heavy traffic (**Figure 3**). By 2019, this character likely will be altered by the closure of Broad Street and reconnection of the east-west and north-south street grid along Taylor and Harrison Streets, and on 6th Avenue N. The existing fence enclosing the Broad Street Substation Annex will remain, as it includes an artwork installation, which is part of the City's art collection (ESA, March 27, 2014, pp. 3).

The surrounding blocks contain a mix of structures, including hotels, offices, apartments, and condominium buildings, as well as some remaining surface parking lots. Most of the two- to three-story buildings date from the 1950s and early 1960s. Representative of these are two office buildings at 203 and 221 6th Avenue N (1959 and 1962, respectively), and the four-story Travelodge Hotel at 200 6th Avenue N (1959). Some buildings from this mid-century era have been demolished to allow for construction of larger and taller multi-family residential and hotel developments, such as the nine-story Hyatt Place Hotel at 110 6th Avenue N (2008), and the Hyatt House Hotel at 201 5th Avenue N (2015). These new hotels and residential buildings have responded to the zoning in the area, SM-85 (Seattle Mixed, with a maximum height of 85' (**Figures 4-10**).

Forty years ago, an urban inventory of the Denny Regrade neighborhood, sponsored by Historic Seattle, identified the Crane Tower, at 526 Harrison Street, as "Significant to the city – warrant further evaluation for designation as historic landmark" (Nyberg and Steinbrueck, 1975). The survey did not identify the other building components on the subject property as having any significance. It did cite four other buildings in the vicinity as significant to the city. These included two apartment buildings from the early 20th century – the 1915 Hermosa Apartments at 2700 4th Avenue and 1916 Cedar Apartments at 320 Cedar Street, as well as the Seattle Parks Department Headquarters at Denny Way and Dexter Avenue N, and the former Post-Intelligencer Building at 521 Wall Street (both from 1948). Presently, there are several designated City of Seattle landmarks in the vicinity including the following properties within three blocks of the substation:

- Seattle-First National Bank, 6th and Denny, (1950, designated in 2006, presently a drugstore)
- "Seattle, Chief of Suquamish" (1912, in Tillicum Place at 5th Avenue, Denny Way and Cedar Street, designated in 1984)
- The Space Needle (1962, designated in 1998)
- The Seattle Monorail on the Seattle Center grounds (1962, designated in 2003)

The Site

The Broad Street Substation property consists of a full block containing slightly over two acres. Largely rectangular in shape, it is angled at the northwest corner and reflects the original alignment of Broad Street. Overall dimensions are approximately 360' along the east property line and 6th Avenue N; 232' along the south and Thomas Street; 260' along the west on Taylor Avenue; and 146' along the north and Harrison Street. Broad Street's alignment impacts the shape of the site at the northwest where the property line measures approximately 133' in length. Paved sidewalks of varied widths and perimeter fencing and walls surround the site (**Figure 1**). Landscaping on the site is very limited, underscoring its utilitarian qualities. A few trees and shrubs are situated in planting beds along the northeast corner site, and others along with ground covers within the narrow setback between the sidewalk of 6th Avenue N and east facade the Control Building. This landscaping frames the main entry to this building (**Figures 11-14 & 16**).

The area on which the substation was built was relatively level, but it was partially excavated for building construction and installation of equipment. As a result, it is presently set several feet below the grades of surrounding sidewalks on the south and portions of the east and west sides. Most of the switchyard is covered with gravel, with exception of vestigial rail lines, which originally extended through the crane tower and onto the site to move the heavy transformers and other equipment, along with paving and equipment pads. These areas originally included a 22' by 70' concrete pad with switchgear near the southeast corner of the site, and another pad below the 22' by 287' switchgear pad near the center of the site. (**Figure 15, 17-19 & 21**).

There are two buildings on the site, both constructed on poured-in-place concrete: the Control Building (**Figures 23-28**) and the Crane Building (**Figures 31-34**). The Control Building is centrally located and placed along the east property line on 6th Avenue N. The Crane Building, which includes separate functional areas (Crane Tower Assembling Room, Office, Shop, and Oil Pump Room), is situated along or near the north property line and Harrison Street. Two driveways are provided on the east side of the site – one leading to a loading dock in the east side of Control Building, and one for vehicles leading through a wide metal gate to the small northeast parking lot. Vehicular access to parts of the switchyard is provided through the large doors in the north and south ends of the Crane Tower (**Figure 40**).

Within the present Broad Street Substation yard, there is an array of electrical distribution equipment and support structures for transmission lines. Among these is a prominent linear, metal-clad structure that extends south from the Crane Building, which covers the switchgear. The switchgear includes the sub-grade service and cable access tunnel for three sections of the switchgear equipment. Raised concrete walkways with pipe railings run along the east and west sides of the switchgear equipment, which is covered with beige-colored metal panels (**Figures 20-22**).

To the west of the Crane Tower is a riveted and welded steel lattice-type tower, approximately 62' tall, with a 10'-square base that is braced by a horizontal crosspiece – a truss frame – extending from the upper west facade of the building (**Figure 32**). This yellow colored steel support structure, identified in drawings as a dead-end tower, carries the 115kV dead-end distribution cable, part of the substation's high voltage and operating equipment. Cables also extend below grade around this tower and other electrical equipment, while others are supported on truss-like steel frames within the switchyard known as overhead busses. (One electrical engineer has described a typical switchyard as having as much going on below-grade, in terms of electrical distribution, as above-grade.)

Original perimeters featured a low cast-in-place concrete wall topped with metal poles and chain link panels along portions of the north, south, and west, along with tall concrete walls that extended north and south from the Control Building and at the northwest corner. Security fencing has been placed

around the site where it was otherwise open along perimeter sidewalks. In 1982, wall sections were built with concrete blocks and concrete along the south and east sides, cast to create a checkered pattern. Seattle artist Carolyn Law was commissioned through the City of Seattle's Public Art Program to revise the fencing in the 1984 (**Figures 13-14**). Law's design resulted in additional coated chain link fence panels, set in areas to create a moiré pattern, which are supported by a tubular steel framing system set upon the earlier concrete and block walls. The same type of decorative fencing also encloses parts of the nearby, off-site Annex property on the block to the east.

The Control Building

The Control Building is an 8,966 gross square foot, rectangular structure with overall dimensions of 61'-4" by 73'-7". (Building areas are derived from King County Property Records.) It contains two equally sized stories, with a basement and main floor. Constructed with cast-in-place concrete, it has a flat roof and an overall height, from grade to rooftop, of approximately 19', topped by a 1'-6" flat parapet. Property records site the floor heights within the building as 8' at the basement and 10' at the main floor.

Some features of the east facade of the Control Building express its Moderne design style, while its secondary facades and interior are largely utilitarian (**Figures 23-28).** The exterior is characterized by simple massing and flat roof, smooth concrete walls and the curved recess and fluting at the main entry on the east facade. In addition, the perimeter concrete walls are detailed into 3'-4" tall horizontal bands, separated by deep reveals that emphasize the building's horizontal proportions and its sense of solidity, while also serving as control joints. The topmost horizontal band is shorter, 1'-6" in height, defining the flat parapet.

The building's current exterior finish – painted concrete – provides a level of refinement to it in contrast to the present unfinished concrete of other buildings on the site. The 1949 specifications for the substation called for the buildings to receive primer and two finish coats. Historic photos appear to indicate that the concrete walls of the Crane Building were left unfinished, and one photo from late 2005 shows it as such (**Figure 91**).

The primary east facade of the Control Building faces onto 6th Avenue N. The main entry, situated in the northern part of the wall, is emphasized by a wide set of stairs that rise approximately 7' and lead to a small landing. The stair is fitted with aluminum standards supporting aluminum pipe rails that curve outward at the top to envelop the walls. Curved and fluted pilasters create a deep recess, which contains paired entry doors. Above these robust elements the wall is flat and smooth, bearing signage in large letters reading, "City Light" and "Broad Street Substation" in a lower row. A multi-paned transom window is provided above the above 7'-tall entry doors. The painted steel doors, which are set into steel jambs in the 10'-tall by 8'-wide opening, are detailed with recessed panels, three aligned squares on each one. A loading dock fitted with an exterior pumper and metal door is provided in the east facade to the south of the entry, along with a non-original secondary entry with flush door accessed by a metal stair (**Figures 23 & 24**).

The east facade is the public face of the building, with main entry serving as its strongest stylistic element. It contrasts to the three secondary facades, which face onto the switchyard, and are more utilitarian and evidence changes in response to functional needs. The north facade retains an original single clerestory window at the first floor along with a small window at the basement, while other original larger windows have been removed and their openings infilled (**Figures 25 and 26**). The south facade is simple and unadorned, with few features except for attached electrical equipment (**Figure 27**). The west facade also retains an original clerestory window in the northern section of the wall, along with a single louvered exhaust and a large, 18' by 8'-2" window opening in the southern section (**Figure 28**).

Small, flat roofed, reinforced concrete marquees were shown on original elevation drawings, to be placed above the steel panel-type exterior doors and transoms on both the north and west facades. The design was revised, however, to provide welded steel frames with corrugated roofing panels in a shed configuration. An original access ladder fitted on the building's north facade, which was made up only by horizontal steel pipe sections attached to the wall, has been replaced with a safer, conventional wall-mounted ladder. A concrete stair and landing are situated on the north, while on the west a ramp leads to the raised concrete walkway that runs between the Control Building and the linear switchgear.

The interior of the Control Building appears utilitarian (**Figures 29-30**). The basement houses a battery storage room and a heat exchanger room in the basement, separated by a pumice block wall. Each of these rooms is accessed by an intervening door between them and a single interior stair, in addition to an exterior stair on the south side. Window openings into the basement are limited to several on the north facade, which are set in single and grouped arrangements and aligned with those in the room above. On the west side, an opening leads directly into the tunnel below near the switchgear structure.

The main (first) floor contains an entry hall at the northeast corner, accessed by the main entry, along with several service spaces and the stair to the basement. The southern half of the main floor was designed as a Rectifier Room with switch panels and foundations for three rectifers, and it is positioned directly above the Heat Exchanger Room in the floor below. This space is presently accessible via a slight ramp. The Control Room and Relay Room share the northern half of the main floor. These spaces, along with the Entry Hall, still function as originally designed. The Control Room is sized for two operators, and it has more finished than the other spaces, with its ceiling furred and clad with acoustical tiles. Floors and walls are painted concrete. Windows in the north, south, and west walls provide illumination and visual access to the surrounding yards, along with perimeter doors on the north and west elevations. (See floor plan drawings for the Control Building at the end of the Report.)

The Crane Building

This original 14,836 square foot, cast-in-place reinforced concrete building is made up of several distinct sections: the Crane Tower, Office, Shop, and Oil Pump Room (**Figure 31**).

Crane Tower
The Crane Tower (also known originally an "Untanking Tower" and an "Assembling Room" and currently as a Crane Bay), a 60' by 46' structure, is the most prominent one on the site due to its size, scale and placement near the north property line in close proximately to Harrison Street. This single-volume, 11,040 gross square foot, 66'-tall structure to the west of the Office, Shop and Oil Pump Room was designed originally to allow for the on-site repairs of heavy electrical equipment, such as transformers, and it contains an upper and lower crane on crane ways, which are supported by concrete pilasters (**Figure 41**).

Exterior facades of the Crane Tower feature joint lines set on 8' to 8'-7" centers that create an overall grid pattern on the wall surfaces, and windows of various sizes that provide ample natural illumination to the interior. These include 4'-10" square windows, set into the uppermost 8'-band, with placed five on the east facade, and three each on the north and south facades. (Rack and pinion operators within the building move these pivoting windows.) In addition, there are two tall, 20' by 7'-2" rectangular shaped window assemblies on the east and the west facades. These tall windows are made up by corrugated wire glass set into steel frames (**Figures 32-33**).

The north facade of the Crane Tower faces toward Broad and Harrison Streets. Because of the angle of the streets and shape of the substation property, the building footprint meets the angled property line at the northwest corner along Broad Street, while being setback 28' from Harrison Street. This primary

facade features a large opening, 24'-6" in width and 21'-6" in height, with sectional vertical lift steel doors set within a 10" cast concrete surround, which extends to a height of 32'. The surround projects outward at an angle as it rises from the grade, extending forward from the wall plane by 3'-6" at its head. Within it and above the door there are large bronze letters reading "CITY LIGHT" and "Broad Street Substation."

The west facade of the Crane Tower features a decorative element in the cast concrete wall approximately 9' from the south end/edge. Cited in original drawings as "rustication," it consists of seven, 8'-square panels, which aligned vertically. (See drawings at the end of the report.) Attached at the center of one of the uppermost squares is a crosspiece support for the nearby dead end lattice type tower. Both the decorative detail and the angled entry door surround are characteristics of the Moderne style.

The Crane Tower interior is a single volume, which appears largely utilitarian in character. Deep concrete beams and pilasters support two crane ways for cranes of 100 and 50 ton capacities. In addition, there is a concrete walkway with pipe railing that runs along the building's upper perimeter walls. It is accessed by a wall-mounted steel ladder on the north wall. A single hooded opening in the east wall contains a 10' by 14' steel rolling door that leads into the adjacent shop area (**Figures 40-44**). An original rail line remains in the floor slab. This track originally allowed for the movement of equipment into the building and through another tall, two-leaf, vertical lift steel two leaf door in an opening on the south wall, which leads directly to the switchyard.

Office, Shop and Oil Pump Room

Situated along the east side and slightly in front of the Crane Tower is the one and two-story structure containing the Office, Shop, and Oil Pump Room. In contrast with the Crane Tower, these are far lower in scale. The Office and Shop area make up 3,496 gross square feet, and an approximate 38' by 46'-6", which contains a mezzanine as well as multi-level workshop and separate office, service, and storage areas. To the east of it is the small, 15' by 20' Oil Pump Room (**Figures 34, 37-39**). To the south is the covered switchgear equipment.

The Shop, Office, and Oil Pump Room are of varied heights. On the west, abutting the Crane Tower, there is the single-story Office, which currently serves as a lunchroom. It features overall dimensions of 13'-8" by 28'-7" and a curved northwest wall, made up by an 8' radius, that is setback 8" from the taller two-story Shop. Wall-mounted metal lettering identifies the original address, 565 Harrison Street (cited as 501 on the orignal drawings). (**Figure 35**). The main entry door is set within a deep recessed in the west wall, and consists of a metal panel type with nearly flush stiles and rails (**Figure 36**). This northwest wall contains a large bank of windows.

The taller, rectangular mass to the east of the Office is the Shop space. A tall 17' volume, it is fitted with a mezzanine against its east wall. This mass expresses the primary workshop function its scale is emphasized by a large, centrally located, 12'-7" by 21'-10" tripartite window assembly in the primary north facade. Originally filled with multi-paned industrial steel sash windows, it presently holds aluminum framed windows with double-glazing, which were designed and installed in 2012 to emulate the original multi-light window pattern (**Figure 45**). The large windows are separated by concrete mullions, which create narrow tall windows on the sides of a wider center window.

The east facade of the Shop contains two horizontal bands of windows, set at the mezzanine level, which were also replaced in 2012, along with a smaller single window and a glazed steel panel-type door at the grade level. This door and a similar, adjacent entry door to the Oil Pump Room are sheltered by a semi-circular shaped, flat-roof, cast concrete marquee a radius of 8'-6". The position and shape of this marquee seems to reflect the stepped roofline and curvilinear wall on the west side of the building (**Figures 38-39**).

The Oil Pump Room is situated on the east end of the Crane Building. Originally designed to house oil, this small concrete room of 300 square feet has overall dimensions of approximately 14'-7" by 23'-4". Its primary north facade features a 5'-diameter circular opening, which originally held a multi-paned steel window. The opening was recently infilled with a solid panel featuring the City of Seattle logo (**Figure 37**). The east facade of this structure has few stylistic features. From a vantage point in the nearby service yard, two original wall-mounted metal access stairs are visible. These stairs – made of flat stock and featuring half-round upper railings – rise from grade to the Oil Pump Room roof and from there to the roof of the Shop area. Sheet metal coping along the top of the shallow parapet wall is also visible (**Figure 38**).

The south facade of the Shop is partially obscured by the switchgear enclosure, while the south facade of the Oil Pump Room is visible. This facade contains a large, rectangular window and steel panel entry door with upper glazing (**Figure 39**).

Originally designed as a workshop, The Shop presently contains office and drawing areas, along with the original, tool storage areas, and toilet room spaces below the mezzanine. Finishes within the Shop and Oil Pump Room are utilitarian, with painted concrete walls and ceiling, and concrete floor slabs. Light fixtures are not original, with exception of a "schoolhouse" ceiling fixture in the Oil Pump Room (**Figures 45 & 46**). Within the taller interior space of the Shop there are steps along the south wall leading down to where the floor slab drops 4.5' below grade to a lower landing. An exit door off the landing in the south wall leads to walkways and the cable-way, the long bank of switchgears structure that extends into the yard to the south (**Figures 48 & 49**). The metal-clad 13kV switchgear equipment is a long, 27' by 72' and 10' tall element in the switchyard.

The entry to the Oil Pump Room opens onto an upper landing of an interior steel stair, which leads down 7'-6" to the below-grade floor level. Oil tanks were originally placed below, covered by grated opening. The room presently contains large steel pipes. It no longer functions as an oil pumping facility and serves as a storage space (**Figure 50**).

The placement of the Oil Pump Room, Shop and Office mass appears to overlap that of the Crane Tower in a sculptural composition. Set on the north property line, along the sidewalk and in front of the tower, the two smaller sections act to mediate the tower scale. Moderne style design features of this assembly are evident in this stepped massing, flat roof and circular window; curved wall and marquee and railing details; and the smooth finished concrete walls, which feature deep cast joint lines that create the gridded surface pattern.

Changes through Time

Beginning in the 1950s new equipment was added and functional modifications were made to the new Broad Street Substation. Two 1,500 kilowatt rectifier units were installed in 1951, which went into service the following year. These rectifiers converted conventional alternating current (AC) to the direct current (DC) used to power Seattle Transit System's electric trolley buses. Other modernization efforts were soon undertaken to supply DC to the Transit System with higher efficiency and reduced conversion costs. Such efforts continued until the trolleys were replaced by diesel-fueled busses in 1963. (The rectifiers were removed in ca. 1970.) City Light documents dating from 1955 also indicate that an additional network was proposed for the Broad Street Substation in late 1955, with a third receiving bank of transformers (Seattle Municipal Archives, Clerk's Office Comptroller File 228121).

A low-bid citation in January 1957 refers to "a $77,969 contract for expansion of facilities" at the Broad Street Substation, but specifics are not included in the article (*Seattle Times*, January 17, 1957, p. 19). At the end of 1957, an underground high-voltage distribution system went into operation in the downtown,

including a new transformer bank at the Broad Street facility. Part of the downtown load, previously supplied by the Union Street and Central Substations, was transferred to the Broad Street facility. Pacific Telephone & Telegraph equipment installed to support the shift to seven-digit dialing was the first load added to the new network (*Seattle Times*, December 11, 1957, p. 58).

In the early 1960s the Broad Street Substation served as the main power source for the Century 21 Exhibition, with power provided through new underground tunnels. Publications from the era extolled the reliability of the city's power system for exhibits at the Worlds Fair (Seattle City Light, "City Light ….and Century 21," ca. 1962).

As part of a "clean up program" for the Fair, an ornamental concrete masonry unit screen wall was approved for the substation by the Seattle Arts Commission. The six foot-tall, 589'-long fence around the substation replaced the original woven wire fence at a cost of approximately $10,000 (*Seattle Times*, February 1, 1962, p. 28; March 1, 1962, p. 2). Changes were made to the 26 kV switchgear equipment, and concrete encased duct work was added to the substation in ca. 1963, including extensions of the system underground as far as Republic Street, Dexter, and 3rd Avenues (Comptroller Files 247830 and 248175). City Light requested $700,000 for equipment at the Broad Street Substation as part of the city's budget for 1962-1967, and in the 1960s, underground high-voltage cables were installed to connect the Beacon Hill Terminus, with the recently constructed East Pine and existing Broad Street Substations.

In 1984-1985, new fencing designed with a decorative pattern by Seattle artist Carolyn Law was installed on the property and around the nearby substation Annex site on the block to the west (**Figure 87**).

Permit records available from SDCI microfiche files and drawings from SCL files cite some other changes to the Broad Street Substation in the last decades of the 20th century:

June 1969	"Yard Wall Railing"
October 31, 1977	"Interior alterations to existing substation per plans"
January 29, 1982	"Concrete Block Yard Wall"
October 4, 1984	"Install hear exchanger"
June 3, 1983	"Electrical permit for tenant improvement"
July 20, 1984	"Fence at perimeter per plans"
August 28, 1995	"Electrical permit for installation of heat & AC circuits & sign circuits on roof"

SCL records cite a project in 2005, "Broad Street Restoration and Facilities Improvement Project," the scope of which remains unknown. While the Control Building exterior was not painted in 2001, on-site personnel have noted that in ca 2012 its exterior was repainted.

Presently, the substation borders a portion of Broad Street, which has been slated for closure due to the Alaskan Way Viaduct Project by WSDOT. City Light proposes to install new equipment at the substation, known as a series or line inductor. (An inductor is an electrical component, usually a wire coil, which resists changes in electric current passing through it, acting somewhat like a valve in a pipe. When a current flows through it, energy is stored temporarily in a field in the coil. Series inductors are used to control and balance electrical loads traveling through the regional grid. The new inductor will help balance the regional transmission system by controlling electrical impedance on particular lines to prevent overloading … expansion of the site and the existing security wall and fence will accommodate the new inductor (ESA, March 27, 2014, pp. 2.24-2.31).

3. HISTORIC CONTEXT AND SIGNIFICANCE

Development of the Surrounding Neighborhood

The Broad Street Substation is located on a full block in an area of the city defined by the Seattle Center Grounds on the west, and transportation systems, including Mercer Street on the north and Aurora Avenue N/Highway 99, on the east. The site is two blocks north of Denny Way, a major arterial that extends nearly from the city's waterfront up through Capitol Hill and the Central Area. In parts of the city, such as this one, the street defines a shift in the urban grid, which extends from the curve of the Elliott Bay Harbor. The present grid and streets (including Denny Way), tends to define the area, which makes up the westernmost portion of the Cascade neighborhood. The lower Queen Anne Hill neighborhood is situated to the north and west.

The surrounding area has been shaped consistently over time by major infrastructure projects. Historically, it was part of the multi-phase regrading of Denny Hill (**Figure 51**). The concept for this effort emerged in 1898 as a vision to make Seattle's steep hills and streets more level and encourage development. The first phase, which dramatically lowered the area along 1st Avenue from Pine Street to Denny Way, was completed in January 1899. Directed by Seattle's visionary City Engineer, Reginald Heber (R.H.) Thomson (1856-1949), the regrade was intended to encourage development through the construction of straight, level roads and water systems in the city.

The second phase of the regrading of Denny Hill occurred between 1903 and 1911, and it addressed the area between 2nd and 5th Avenues, from Pike to Cedar Streets, flattening and leveling as much as 80' of the original Denny Hill. In 1910, the City's Municipal Council Plans Commission hired planner Virgil Bogue to produce a comprehensive "civic vision" for the regraded area. Bogue, who had worked with the Olmsted Brothers, produced a grand Beaux-Arts scheme with radiating plazas lined by Neo Classical style buildings. This plan proposed a new civic area in the Regrade, but Seattle voters soundly rejected it in 1912, voting against it two to one. The third and final phase of regrading Denny Hill occurred between 1928 and 1930 (**Figures 52 & 53**). It reduced the hill's eastern slope, comprised of the area between 5th and Westlake Avenues and Virginia and Harrison Streets, including the subject property. The area that surrounds the Broad Street Substation was included in this last phase of the regrade project.

During the Great Depression and the immediate post-war period, development in the leveled area grew very slowly, with isolated apartments and commercial buildings, while the majority remained vacant. Light manufacturing, printing businesses, auto dealerships, warehouses, film exchanges, service garages, and gas stations were drawn to the area by relatively cheap land prices and its close proximity to the downtown.

Early zoning in the city's first land use regulations in 1923 called for multi-family residences in what was cited as the Second Residence zone, which included the Broad Street substation site. Despite this, the area remained largely undeveloped until the 1960s. Construction patterns illustrated in figure-ground maps from 1912-1920 show a pattern of modest growth and the presence of small, residential and commercial structures, while construction in ca. 1940-1960 and ca. 2000 indicates larger buildings.

The identification of the surroundings as a part of a distinct neighborhood became more tenuous after the early 1950s, when the Battery Street Tunnel and Aurora Avenue N (formerly 7th Avenue N, one block east of the subject property), were transformed in response to the construction of Highway 99. The highway was extended through the city along the Alaska Way Viaduct in the late 1940s, replacing 4th Avenue as the urban route through the city center. In 1952, the Battery Street tunnel was built beneath the Denny Regrade and southern portion of the South Lake Union area to connect Aurora Avenue N to the new viaduct for Highway 99 that ran along the city's central waterfront. The area north of Thomas

Street was bisected into east and west halves, with only Mercer Street extended via underpasses to provide access eastward below Aurora Avenue N into South Lake Union. Construction of Highway 99 essentially divided the historic neighborhood into separate east and west parts. Broad Street was also reconfigured, with an underpass below in 1962 (**Figures 54 - 56**).

Development of the nearby municipal bus maintenance site on blocks to the north of the Broad Street Substation, and construction of substation in 1951, resulted in closure of several streets north of Thomas Street, which impacted pedestrian and vehicular traffic and the post-war development of the area. Other public structures in the area included the Civic Auditorium, Armory, and Memorial Stadium, which were located several blocks to the northwest on Mercer Street. In the early 1960s, the Auditorium, Armory, and a former public school, playground, and fire station were aggregated and redeveloped as part of the fair grounds for the Century 21 Exposition. In response to the World's Fair, many parking lots, motels and other low-scale tourist-related facilities were built, particularly in the areas south of Denny Way. In the succeeding decades, vehicle traffic on Denny Way and nearby Broad and Mercer Streets continued to grow, and the Regrade/Belltown area became increasingly attractive for dense residential development.

Construction by institutions in the last decade has also impacted the character of the surrounding neighborhood. Walls and fences that had acted as a barrier around the Seattle Center grounds were removed in the 1990s, and the Museum of Pop Culture was built at 325 5th Avenue N, one block west of the substation, in 2000. The Gates Foundation acquired the parking lot property on the block directly north of the substation, and created its multi-building campus in 2011. This area of the city will see considerable changes in the near future with the completion of the new SR 99 Tunnel and revisions to extend Harrison and Thomas Streets eastward and reassembly of the ground plane to the South Lake Union area. (See context views, **Figures 4-10**).

Historic Overview of Seattle City Light

> [Note: the history of Seattle City Light and the development of municipal, publicly-owned utilities is a rich subject, which is described in detail in many publications as well as in another report, the "National Register of Historic Places Nomination, Skagit River and Newhalem Creek Hydroelectric Projects, Whatcom County, Washington." This subject was addressed also in a historic survey sponsored by the City of Seattle Department of Neighborhoods. The survey, by Cathy Wickwire, is summarized in the "Survey Report: Comprehensive Inventory of City-Owned Historic Resources, Seattle, Washington," May 20, 2001." Much of the following overview has been derived from these reports.]

Seattle's 1869 charter authorized the municipal government to provide street lighting, and its first coal gas-powered streetlights were lit on December 31, 1873. The first electric light bulb arrived eight years later in 1881, but only as an artifact. Their use had to wait another five years until representatives from the Edison Electric Light Company demonstrated illumination by light bulb in the city (Wilma & Crowley, p. 8). Conditions quickly changed, however, as electricity came into common use in the late 19th century. In 1886, the Seattle Electric Light Company acquired a permit for street lighting, and several years later Seattle became the fourth city in the world to establish an electric "street railway" system. Newly developed alternating current also enabled the transmission of power over long distances. This technology and numerous inventions and patents led to the manufacture of electric cars, appliances, telegraphs, and "wireless telegraphy" around the turn of the century. Such inventions – particularly domestic appliances, the telegraph and telephone, and electric motors – were quickly embraced by the marketplace.

By the early 1890, there were four electric light companies, two light and power transmission machinery firms, and an electric railway machinery and supply company listed in the local *Polk Directory*. These

included Edison General Electric. Two of the local firms merged to form the Union Electric Company in Seattle, which soon dominated the local market, while many small operators established local steam plants, some located in downtown building basements. Many mergers and reorganizations followed, and by 1900 Stone & Webster, in conjunction with prominent Seattle resident Jacob Furth, consolidated operations of virtually all the existing lighting, traction, and related subsidiary businesses in Seattle (nearly 20 locally-based utility companies) as the Seattle Electric Company. In 1902, this company acquired a 50-year franchise to operate a private electric utility system within the City of Seattle. The Seattle Electric Company, predecessor of Puget Sound Power & Light, also obtained a franchise from the city for the street railway system, gaining the firm exclusive rights to operate the system. Despite opposition and concerns about private utility monopolies and Seattle Electric Company, the consolidated system was improved and extended under the new management.

However, populist political sentiment and support for a municipal utility system was growing. In 1902, Seattle residents approved a $590,000 bond issue to develop a hydroelectric facility on the Cedar River, inaugurating public power. In 1905, under the direction of James Delmage (J. D.) Ross (1872–1939) and City Engineer R.H. Thomson, Seattle built its first Cedar River plant, some 30 miles southeast of the city, and began to generate power from the first municipally-owned hydroelectric project in the country. The downtown distribution station was located near Yesler Way and 7th Avenue.

On April 1, 1910, a City Charter amendment created a separate Light and Power Department, led by J. D. Ross, beginning in 1911. The benefits of hydro power (electricity from the energy of falling water) over steam power production were apparent to customers who received low rates from the new department. By the end of that year, the City's two-year-old project of installing ornamental street lighting was completed, with the illumination of downtown and neighborhood streets throughout Seattle (Crowley, "Seattle Voters"). The Lighting Department offered Seattle residents, businesses, and industries low electric rates, and its competition with Seattle Electric Company resulted in its low rates as well. However, until 1914, the City had only one plant and transmission line. As a result, it continued to struggle with service interruptions.

The Lighting Department constructed a Hydro House on the southeast edge of Lake Union in 1912 and the adjacent Lake Union Steam Plant incrementally in 1914, 1918, and 1921 as auxiliary facilities. It also completed a masonry dam on the Cedar River in 1914, and continued to search for another hydropower site. When the privately-owned Puget Sound Traction, Light & Power attempted to block the City of Seattle from developing such a site, the federal government revoked the private utility's access to the Skagit River in late 1917, allowing instead development of its hydro power by Seattle by 1924. The North Substation, at 8th Avenue NE and NE 75th Street, which opened in September 1924, was built to receive power from the Gorge Plant on the Skagit River. The South Receiving Substation was subsequently added to the system in 1937.

In the early years, the City of Seattle Lighting Department and Seattle Electric Company had a controlled connection between their systems, and at times they would share power distribution. This cooperation ended in 1912 when Stone & Webster merged its Seattle Electric Company with the Seattle-Tacoma Power Company (Snoqualmie Falls), Pacific Coast Power Company, Puget Sound Power Company, and Whatcom County Railway and Light Company. The new corporation – Puget Sound Traction, Light & Power – soon established regional electrical service throughout western Washington. Within the city limits, the relationship between the public and private power entities became one of bitter rivalry while consumers continued to benefit from low rates.

Both utilities promoted consumption of electrical power through displays and direct sales of appliances, as well as print and radio advertisements, and billboards. "By 1930, more Seattle residents cooked on electric ranges than did residents in any other large city in the nation. They consumed twice the

electricity for half the average cost. Across the United States, seven homes in 10 had electricity, but in Seattle, virtually every home was connected" (Wilma & Crowley, p. 52). Meanwhile, the battle over the public versus private provision and control of electric power in Seattle continued. In 1934, the Stone & Webster "cartel" was broken up by the federal government, and Puget Sound Power & Light was reorganized under a local board of directors. By this late date, Seattle's hydroelectric sites outside the city were assured. However, delays in resolving the conflict between public and private utilities extended throughout the Great Depression and World War II, to be finalized in the post-war period (Hirt, pp. 103-23, and pp. 316-7).

In the two decades following 1920, the increased number of residential accounts held by the Light Department reached nearly 40 percent, while the population increased less than 17 percent. In September 1936, the construction Skagit River Diablo Power Plant was finished with the completion of the Power House. This project resulted in an increased power output at the Gorge Powerhouse with the addition of 33,000 kW to its capacity. By this time the City's power generation had increased from 59 million kilowatts in 1917, to over 384 kW. This was followed by the construction of the Ross Power Plant, built in part with WPA funds. The Ross Dam was the third and largest dam on the river, and its completion in 1949 realized the original design vision of City Light's Skagit River Hydroelectric Project. (Skagit River NRHP, p. 46-48).

By 1940, Seattle was said to be "…the best lighted city, not only in America, but in the world. It is the world's most modernized city electrically, and the largest user of electric ranges of any city in this or any other country" (Schmidt, p. 35). To take advantage of the low-cost power, Seattle also converted its electric streetcar system to electric trolley buses in the 1940s. The Lighting Department even supplied 3,568 electric ranges and water heaters to the Seattle Housing Authority's Yesler Housing Project in ca. 1940 (Berner, 1999, p.46).

In 1943, the Seattle City Council resolved to buy Puget Sound Power & Light (PSP&L) properties when the company's urban franchise expired in 1952 (**Figure 57**). Seattle voters narrowly approved a proposition in November 1950, supporting municipal acquisition of private power assets within city limits and thereby unifying service under the Department of Lighting. In March 1951, the City agreed on a price for all Puget Sound Power & Light's Seattle properties, including its distribution system, but excluding the hydro plants. Under this agreement, Seattle acquired three transmission substations and ten distribution substations. Because of deferred maintenance, much of the old system was gradually dismantled and some replaced.

The early 1950s was a period of rapid growth for the City of Seattle and its electrical utility. After the end of the war, the Lighting Department had plans prepared for additional transmission lines, substations and equipment in anticipation of rising demands by new customers. These included the new Broad Street Substation, which would be connected by new 115,000-volt transmission lines to another new substation in Bothell, as well as to the older North Substation. The Bothell Substation was built to receive electricity from the existing Skagit River dams as well as the Ross Dam, which was then under construction. The Bothell Substation would transmit electricity at a lower voltage to the receiving stations in the city.

In 1951, Seattle completed a project at its Gorge Plant, with an additional 48,000-kilowatt generator, and from 1952 to 1954 installed three 90,000-kilowatt generators at Ross Dam. The Yesler Substation was retired on February 7, 1951, though the building on Yesler, between 6th and 7th Avenues, continued to serve as headquarters of the operating division. The Broad Street Substation and Bothell Substation were completed and put into service, with the subject station energized on November 8, 1951 (Wickwire, pp. 24-26).

The Duwamish Receiving Substation went into service October 28, 1955 to supply power to the south end of the city, and north of the city a substation was constructed in Shoreline. Between 1951 and 1955, equipment was also added at existing facilities and seven new rectifier substations were constructed. By 1956, the department also had customer offices in Ballard, University District, Lake City, West Seattle, Burien, and White Center, and a new downtown headquarters on 3rd Avenue (Wilma & Crowley, p. 79). In 1953 it was one of many utilities to initiate the "Live Better Electrically Program" to increase residential use of electricity (Winther, p. 1).

After Seattle assumed ownership of all electrical facilities in the city, it consolidated maintenance and built a new service center at 1300 N 97th Street (1956-58). In addition, seven receiving substations were built in the 1960s and early 1970s: Viewland-Hoffman, University, East Pine, Union, Massachusetts, Delridge and Creston-Nelson (Wickwire, p. 24-25). In the 1960s City Light built the Boundary Dam and powerhouse on the Pend Oreille River in northeast Washington, which joined its Cedar Falls, the Skagit River's Gorge, Diablo and Ross dams and powerhouses. These were later joined by new facilities on the Tolt River in 1995.

The utility continued to promote consumption, selling electrical appliances through showrooms with free repairs. As environmental concerns increased, it adjusted its policies, and in August 1973 began promoting conservation rather than consumption. In August 1978, it was renamed Seattle City Light. "A major drought hit the area in 1977, which was followed by additional droughts in the 1980s. Along with unprecedented demand from customers and increased environmental concern from residents, City Light redoubled its conservation efforts, launching a series of conservation programs that offered free home energy checks, financial incentives for weatherization, and installation of energy saving measures" (2011 Power Systems handbook, p. 1).

As of 2011, SCL is currently the nation's tenth largest publicly-owned power system, and is responsible for all electrical and streetlight services and residential and commercial / industrial conservation within the city (Seattle City Light, "Public Power: A Tradition"). It provides low-cost power to nearly 700,000 people in a 130 square mile area made up of Seattle and the neighboring municipalities of Burien, Lake Forest Park, Normandy Park, Renton, SeaTac, Shoreline, Tukwila, and parts of unincorporated King County (Seattle City Light, "2011-2016 Adopted Capital Improvement Program," n.p.).

Summary of Seattle City Light's Current Generation and Substation Facilities

Development by SCL has resulted in construction of its current six generation plants and fourteen major substations (as of 2017):

Generation Plants

1.	Cedar Falls Power House	Built 1904	2 generators, on line 1921
2.	Gorge Power House	Built 1924	4 generators, online 1924 (2), 1929, & 1951
3.	Diablo Power House	Built 1936	2 generators, online 1936 & 1937
4.	Ross Power House	Built 1952-1956	4 generators, online 1952, 1953, 1954 & 1956
5.	Boundary Power House	Built 1967	6 generators, online 1967, 1968 (3), 1986 (2)
6.	South Folk Tolt Power House	Built 1995	1 generator, 1995

Major Substations
Seattle City Light records, as of 2017, indicate the following buildings which include two designed by Architect Ivan M. Palmaw (including the Broad Street Substation). The other substation buildings dating from the 1950s were designed by in-house architects or engineers.

	Name	Built	Notes
1.	Canal	1924	Designed/built by Puget Sound Power and Light (aka Puget Power); purchased by SCL in 1951
2.	North	1924	Built by City Light, oldest substation in the system. Spanish-Mission Revival style (Source: DON Historic Sites Inventory form, 2000.)
3.	South	1937	Art Moderne, concrete building; federally funded, with style typical for PWA and WPA buildings
4.	Bothell	1951	Moderne (Palmaw), concrete Control Building; outside City Limits
5.	Broad	1951	Moderne (Palmaw), concrete buildings (both)
6.	Shoreline	1954	Moderne, concrete Control Building; outside City Limits
7.	Duwamish	1955	Moderne, concrete Control Building; outside City Limits
8.	East Pine	1967	Unique design (Bassetti), brick and concrete building
9.	University	1968	Concrete building
10.	Massachusetts	1969	Appears to have a concrete building
11.	Delridge	1971	Appears to have a concrete or metal building.
12.	Union	1973	Concrete building
13.	Viewland-Hoffman	1977	Concrete building; designed in-house
14.	Creston-Nelson	1981	Concrete building

The Original Designer and Contractor

Architect Ivan M. Palmaw
Ivan Michael Palmaw (1896–1979) was the original designer of the Broad Street Substation buildings and perimeter yard walls. Stamps and title blocks on original drawings cite the structural engineer, Powell & Woelber, Consulting Engineers, and mechanical engineers, Ben B. Lezin & James B. Notkin.

Recent research, including discoveries by City Light, indicates that Palmaw was one of the many architects practicing in the mid-20th century in the Seattle area whose early careers were impacted by the economic straits of the 1930s. Palmaw's application for a Washington State architectural license notes that he was born in St. Petersburg, Russia, and completed two years of study at the University of St. Petersburg before finishing military engineering school and becoming a major in the Russian Imperial Engineering Corps. After serving in World War I with the Imperial Russian Army, he was forced to leave the country during the Russian Revolution and joined his uncle, exiled former imperial architect of Russia, in Shanghai in 1920. Several years later he reportedly chose to study architecture with Carl Gould (Renton Historical Society).

In 1926, Palmaw immigrated to the United States, where he entered the University of Washington's architecture program. He graduated with a Bachelor of Architecture degree in 1929 and began working for a Seattle architect, Roy D. Rogers. According to his State of Washington license application, by 1931 Palmaw had worked on a palace, two hotels, a club house, an office building, six apartment houses, 26 residences, a barracks, and a transformer station. Palmaw noted that he was fully responsible for one apartment house and 17 residences, including architectural design, working drawings, and details, and structural, heating and venting, wiring and plumbing systems. His recent work at that time, completed at Rogers' office, included several houses in Seattle – the Thomas Balmer residence (3500 46th Avenue

NE,1930), Frank Burnett residence (2564 Constance Drive W, 1931), and the Horner residence (in Windermere, 1931) (Houser).

After leaving Rogers' office in 1937, Palmaw worked as a sole practitioner and also in partnership with architects Frank Baker and George Stewart. He designed St. Nicholas Russian Orthodox Cathedral at 1714 13th Avenue (1932-1937), St. Spiridon Orthodox Cathedral in the Cascade neighborhood (1936-1938), and the Renton Fire Station (1939-1942, present the Renton History Museum) (**Figures 57-60**).

Together the partnership of Palmaw and Stewart were responsible for other projects for the Seattle Lighting Department, including a housing project near the Ruby Dam in 1937 (of which two houses remain); Ross Lodge (designed by Stewart), and House No. 6 (attributed to Stewart with Palmaw as assistant) (*Architect and Engineer*, December 1938, p. 57. See also Skagit River and Newhalem Creek Hydroelectric Projects, National Register of Historic Places Nomination," February 11, 2011, section 7, p. 54 and 56, section 8, p. 30). In late 1938 Stewart was appointed as Associate Architect for the Bonneville Power Administration in Portland. By 1940 Palmaw was working as a sole practitioner. He went on to design City Light's Columbia and Magnolia Substations in 1941, First Hill Substation in 1947, and Bothell Substation in 1949 (Seattle City Light drawing collections.).

From 1957 until his retirement in 1969, Palmaw worked for architect Harry Powell & Associates on Mercer Island, where he resided. He does not appear to have been a member of the American Institute of Architects, as he is not listed in the *AIA Directory* of 1956 or 1962. Ivan Palmaw died in Seattle at age 83, in 1979.

General Contractor S.S. Mullen, Inc.
A 1949 newspaper article identifies general contractor S.S. Mullen, Inc. as the apparent low bidder for construction of the Broad Street Substation (*Seattle Times*, September 29, 1949, p. 30). The firm, owned by Stewart Smith Mullen, Jr. (1923–2014), began as a building contractor in Washington State and later evolved to work in construction of infrastructure and transportation projects as well, such as air fields, bridges, dams, and utilities. (*Seattle Times*, Mullen obituary, June 3, 2014).

The Moderne Style

Moderne design was initially popularized in the 1930s, and is often associated with the Art Deco style. Both are characterized by simplified classical decorative elements, combined with expressed rational structural systems, and they both represented a 20th century rejection of historicism and the movement towards Modernism. While somewhat similar, Art Deco and Modern styles differ in use of ornament and materials, and in proportions and massing. The former buildings are more often based on vertical orientation, featuring stepped massing, and the use of material such as stone and terra cotta, with treated surfaces, inlays, castings, and polychrome glazes, and ornamental fluting, horizontal bands, chevrons, or zigzags.

Moderne style buildings, in contrast to Art Deco buildings, emphasize horizontality and solidity. Their simple shapes, and rounded or curved surfaces project a muscularity and sense of permanence. They are treated with minimal or no ornament, except for string courses and other horizontal trim elements. They typically feature smooth finishes, flat roofs, pipe railings, round windows and corner window glazing, and sometimes use innovative materials such as glass block and aluminum (Whiffen, p. 235-241).

Aesthetic movements, such as French Cubism, Dutch de Stijl, and Italian Futurism had contributed to the emergence of Art Deco and Moderne styles throughout the world. [But with] the onset of the Great Depression, designers in the U.S. turned away from the exclusivity and luxury associated with the style in search of a more universal idiom: "what [American designers] created, largely in reaction to deco, was a

new machine art: honest, simple and functionally expressive – values basic alike to the house, the school, the streamlined train, the cigarette lighter, the toaster, the saucepan, or grand piano" (Grief, p. 16).

Moderne style design was popularized at American expositions, such as at the 1933-1934 Chicago Century of Progress and the 1939 World of Tomorrow New York's Fair, where smooth, sleek, objects, such as in the Chrysler "Airflow" car and the bullet-like K4S Pennsylvania and the Missouri Pacific Railroad locomotives, were exhibited within Moderne style buildings. Architectural historian David Gebhard coined the term "Streamline Moderne" in 1969, citing the influence of the Depression as helping to bring about the style and its variants – Streamline Moderne, Depression Modern, and Stripped Classicism. This period has been described as restless, filled with angst and worry, and some these sensibilities carried through the World War II and Cold War eras.

In Seattle, as elsewhere, many design practitioners who had previously worked with revival styles began designing Art Deco and Moderne style buildings in the 1930s and 1940s. In addition to City Light facilities the Moderne style is embodied in some industrial buildings in south Seattle, along East Marginal Way, in the Interbay area on Elliott Avenue, and south Queen Anne Hill (**Figures 63 & 64**). Other commercial and institutional examples include:

- The Nakamura Federal Courthouse (1932), 700 Stewart Street
- Seattle Art Museum in Volunteer Park (1932), 1400 E Prospect Street
- Fire Station No. 41 (1934, a federal WPA program), 2416 34th Avenue W (**Figure 62**)
- Coca-Cola Bottling Plant / Seattle University (1939), 911 14th Avenue E
- The original downtown Woolworth's / Ross store (1940, designed from a company prototype)
- Puget Sound News Building (1948), 621 2nd Avenue N
- Canada Dry Bottling Plant / Seattle University Bookstore (1948, modified), 831 12th Avenue

The buildings of Broad Street Substation embody some features of the Moderne style, and they share formal characteristics with other major substations constructed by Seattle City Light, including the Bothell (1951), Shoreline (1954), and Duwamish (1955), which are located outside of the city limits, and the earlier South Substation (1937), which is within the city. In the 1930s through the mid-1950s, the Moderne style was adapted by City Light and other utilities for control and service centers, generation and transmission facilities, and substations, including major, distribution/receiving, rectifier and customer substations. Other structures and buildings that represent this style include City Light's Diablo Powerhouse and Dam (1930 and 1936); Rectifier Substations – University (1941, 1952), Avalon (1951), South and North (1952 and 1954), Leary (1954), Olympic (1954), and Roxbury (1956); and the Magnolia Substation (1944); in addition to former Columbia Substation(1942) on 39th Avenue S, which was adapted as an office building, and the former First Hill Substation (1949, demolished 1996) (**Figures 65-70**). All of these buildings represent a mid-20th century movement away from revival style used in many earlier power generation facilities.

The Broad Street Substation buildings clearly represent mid-20th century poured-in-place concrete construction technology with smooth and unfinished perimeter walls and flat roofs. Largely devoid of decorative elements, they rely instead on massing and geometric aspects of their plans for expression, including curvilinear walls and projecting canopies, along with the proportional devices of window and door openings. The structures provided fire and explosion resistance, and a sense of permanence and mass. Consistent with Moderne style designs, the buildings seem to emerge from aesthetics of social realism, to emphasize the strength of industry and robust productivity. The unadorned and smooth-finished concrete and industrial steel sash windows were typically used with industrial applications where the buildings literally and figuratively represented power and durability

Typical Substation Functions

The function of an electrical substation is to transform from high voltage to low voltage or the reverse, provide switching and control to manage the system ("grid") power flow, and to switch, regulate and distribute the output power feeders at the desired voltage(s). "A substation serves the start or end-point of a transmission line, and is part of an overall generation and transmission system. All substations include switching mechanisms or circuit breakers that allow line elements to be energized or switched off for maintenance, or automatically, as the result of a fault. Substations are typically arrayed around a switchyard, a steel superstructure and buss-construct framing a series of large metal box-like transformers at ground level… Beyond their primary electrical role … substations often house additional functions that include a wide array of specialized buildings …[ranging from] a small manufactured control house all the way to a large, multiple structure installations that service multiple lines in association with maintenance and administration uses" (Kramer, pp. F.49-50).

A typical switchyard layout is essentially an arrangement of switchgear components in an ordered pattern governed by their function and rules of spatial separation (**Figures 71-75**). Some redundancy is typical to assure consistent delivery of power. Incoming supply may be on high-voltage overhead or underground transmission, but are often introduced to the substation as wires supported by metal or steel support structures. These supports, once made of wood, may be tubular steel or lattice types (made up by trusses in rectangular or tall, pyramidal-shaped support structures), or of reinforced concrete, set singly or in assemblies. From the supply transmission lines, the power is then switched and transformed to be distributed at the desired voltages. Conductors may be bare or insulated. Switchyards contain disconnect switches or circuit breakers to interrupt the current, along with transformers and other equipment to manage, control, and protect the power system. Once past the switchgear, the power is carried by outgoing feeders, or transmission lines, typically of a lower voltage. Indoor and outdoor substations may utilize gas-insulated switchgear at high voltages, or metal-enclosed switchgear at lower voltages, in order to minimize the space necessary for the substation and the associated electrical equipment.

A review of the Broad Street Substation switchyard installation suggests that it shares many of the same components with typical substations, along with variations in the arrangement and specific equipment types. All present day substation facilities are secured by perimeter fences or walls and grades are finished with gravel to minimize maintenance. Concrete support slabs are common within the yards. Basic control buildings have similar functions, and are often situated on grade, while some structures that enclose operational spaces may be set partially below grade. The yards are otherwise open and contain the functioning equipment with power lines connecting transmission towers to transformers, insulators and generators. Typical switchyard equipment includes power transformers, grounding transformers, synchronous condensers, oil circuit breakers, lightning arrestors, buses; disconnect switches, potential transformers, coupling capacitors (U.S. Department of Energy, p. 10-14). The sole variation with the Broad Street Substation, when compared to other installations, is the presence of the Crane Tower.

Construction and Use of the Broad Street Substation

The Broad Street Substation was constructed in 1949-1951 during a period of post-war growth in the city and the region. The city's population stood at 368,303 in 1940, but it rose by 27% to 467,591 in 1950, and by an additional 19%, to 557,097 in 1960. This population growth was accompanied by an even greater rise in demand for electric power resulting from residential, commercial, and industrial building needs, and the use of new electrical devices and equipment. The City responded to the rapid expansion of its customer base by increasing available power for sale, and building and maintaining its infrastructure and services for individual customers.

In June 1948, a *Seattle Times* article noted that "proposed establishment by City Light of a major substation building at Sixth Avenue North and Harrison Street today was taken under advisement for a week by the City Council's utilities committee" (June 3, 1948, p.11). By January 1949, a condemnation hearing was scheduled for the full-block property, which City Light wanted for the proposed new $1,000,000 substation. Clise Realty owned two of the six parcels of land that made up the block, having acquired them from King County at a tax title sale for $7,650 and $6,750. While the city had offered the Clise Real Estate Company $30,000 for the combined property, it wanted $40,000. (It is unclear whether the figures are per parcel or for both.) Condemnation verdicts in King County Superior Court set a total price of $167,200 for the full block, including affirming the $30,000 amount for Clise (*Seattle Times*, February 15, 1949, p. 15). Remarks in the assessor's note confirm this acquisition process by noting, "Taken for Municipal Light, cause no.398710.")

A small wood-frame house and outbuilding are visible in a 1939 aerial photo of the property, though Historic Kroll maps and county tax records indicate that the site was largely vacant when it was acquired by condemnation. (The pre-existing buildings were subsequently demolished for the new substation.)

Bids were opened for the substation project on September 28, 1949. At that time, the project was described as "long planned by City Light" (*Seattle Times*, September 29, 1949, p. 30) (**Figures 76 - 81**). Construction was completed in late 1951, along with the Bothell Substation around the same time. Both facilities make up part of the utility's long-range program to bring more electric power to Seattle. The Bothell facility received power from the Skagit River development at 230,000 volts and stepped it down to 115,000 volts for transmission to other substations in the city, including the Broad Street Substation (*Seattle Times*, September 19, 1951, p. 15).

The Broad Street Substation was cited as a $2,500,000 project when it was energized on November 8, 1951. Together, the Bothell and Broad Street facilities raised the receiving capacity by up to 125,000 kilowatts to serve the area south of the Lake Washington Ship Canal and north of the downtown central business district. The Canal Substation, built near Ross Park in the Fremont/Ballard area, and originally a Puget Power facility, was acquired by the city in 1952 and then connected into the Broad Street Substation. Other power generating sources came on line to take advantage of the distribution network's improvements within Seattle. Mercury arc rectifiers, which were associated with the City's trackless trolley system, were installed at the substation to replace older rotary equipment, and control operations of the facility were partially automated (Wickwire, 2001). In late October 1956, a new transformer was added to double the capacity of the substation (*Seattle Times*, October 30, 1956, p. 23) (**Figures 83 - 85).**

(See also historic views of the substation buildings, **Figures 82 and 86 - 91**).

4. PROPERTY DATA

Historic / Current Name:	Broad Street Substation
Address:	319 6th Avenue North (identified also 565 Harrison Street) Seattle, WA 98109
Site Location:	The block is situated to the southeast of Broad Street, east of Taylor Avenue North and west of 6th Avenue North, between Harrison and Thomas Street; one block east of the Seattle Center and one to two blocks west of Aurora Avenue North/Highway 99.
Tax Parcel Number:	1991200405
Legal Description:	DT Denny's Park Addition Lots 4-5-6 and Vacated Alley adjacent and Triangular Piece of Property bounded on East by Alley, on Northwest by Lake Street, on South by Thomas Street, all in Block 61, together with Lots 1 through 12, Block 66 and Vacated Alley in Said Block (Vacated Ordinance #78141), less Streets.
Original Construction Date:	1949-1951
Original / Present Use:	Substation with Crane Building, and Control Building
Original Designer:	Ivan Michael Palmaw, Architect, Seattle
Original Contractor:	S.S. Mullen, Inc., Seattle
Site Area:	89,295 square feet (2.05 acres)
Building Sizes:	Control Building: 8,966 gross square feet. Crane Building: 14,836 gross square feet Crane Tower 11,040 gross square feet; Office and Shop, 3,496 gross square feet; Oil Pump Room, 300 gross square feet Total buildings 23,892 gross square feet (Site area and building sizes from King County i-Map property record.)
Original Owner:	City of Seattle Department of Lighting (Seattle City Light after 1978)
Present Owner:	Seattle City Light
Owner's Representatives:	Maureen Barnes, Real Estate Manager & Rebecca Ossa, Historic Resource Specialist, Seattle City Light Environment, Land & Licensing Business Unit P. O. Box 34023 Seattle, WA 98124-4023
Owner's Project Manager	Bikas Pande Seattle City Light Seattle Municipal Tower, #3200, 700 5th Avenue Seattle, Washington 98104
Owner's Prime Consultant:	Matt Boyd, PE, Project Manager Electric Power Systems, Inc. 3305 Arctic Blvd., Suite 201 Anchorage, Alaska 99503

5. SEATTLE'S LANDMARK PROCESS

Note: This information is provided for interested parties and individuals who are not familiar with the local landmark process.

Local Landmarks

Designated historic landmarks are those properties that have been recognized locally, regionally, or nationally as important resources to the community, city, state, or nation. Official recognition may be provided by listing in the State or National Registers of Historic Places or locally by the City's designation of the property as a historic landmark. The City of Seattle's landmarks process is a multi-part proceeding of three sequential steps involving the Landmarks Preservation Board:

1) submission of a nomination and its review and approval by the Board

2) a designation by the Board

3) negotiation of controls and incentives by the property owner and the Board staff

A final step in Seattle's landmarks process is approval of the designation by an ordinance passed by the City Council. All of these steps occur with public hearings to allow input from the property owner, applicant, the public, and other interested parties. Seattle's landmarks process is quasi-judicial, with the Board ruling rather than serving as an advisory body to another commission, department, or agency.

Under this ordinance, more than 450 individual properties have become designated landmarks in the City of Seattle. Landmark properties in Seattle include individual buildings and structures, building assemblies, landscapes, objects, publicly-owned schools, parks, office buildings, boulevards, and industrial properties. Several hundred other properties are designated by their presence within one of the City's eight special review districts or historic districts, which include the Harvard-Belmont, Ballard Avenue, Pioneer Square, Columbia City, Pike Place Market, Fort Lawton, and Sand Point Naval Air Station Historic Districts, and the International Special Review District.

Designation Criteria

The City of Seattle's Landmarks Preservation Ordinance (SMC 25.12.350) requires a property to be more than 25 years old and to "have significant character, interest or value, as part of the development, heritage or cultural characteristics of the City, State or Nation." The language calling for significant character has been described as a standard of integrity. Integrity is a term used to indicate that sufficient original building fabric is present to convey the historical and architectural significance of the property. Seattle's landmarks ordinance also requires a property meet one or more of six designation criteria:

Criterion A. *It is the location of, or is associated in a significant way with, an historic event with a significant effect upon the community, City, state, or nation.*

Criterion B. *It is associated in a significant way with the life of a person important in the history of the City, state, or nation.*

Criterion C. *It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, City, state or nation.*

Criterion D. *It embodies the distinctive visible characteristics of an architectural style, or period, or of a method of construction*

Criterion E. *It is an outstanding work of a designer or builder.*

Criterion F. *Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the City and contributes to the distinctive quality or identity of such neighborhood or the City.*

In Seattle, a landmark nomination may be prepared by a property owner, the City's Department of Neighborhoods (DON) Historic Preservation Program, or by an interested party or individual. The ordinance requires that if the nomination is adequate in terms of its information and documentation, the Landmarks Preservation Board must consider it.

There is no local ordinance that requires an owner to nominate its property. Such a step may occur if an owner proposes substantial development requiring a Master Use Permit (MUP). Since July 1995, SDCI and DON have had an agreement that calls for a review of potentially eligible landmarks as a part of the MUP process for sizable commercial and multi-family projects. This interagency agreement is described in DON Client Assistance Memo (CAM) 3000. Seattle's SEPA policies also require consideration of the historic significance of buildings over 50 years old that may be eligible for landmark designation.

In contrast to some other jurisdictions, the City's landmark process does not require owner consent. Seattle's designation ordinance does not include consideration of future changes to a property, the merits of a development proposal, or continuance of any specific occupancy, as these are separate land use issues.

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7. ILLUSTRATIONS

SITE PLAN & VICINITY MAPS

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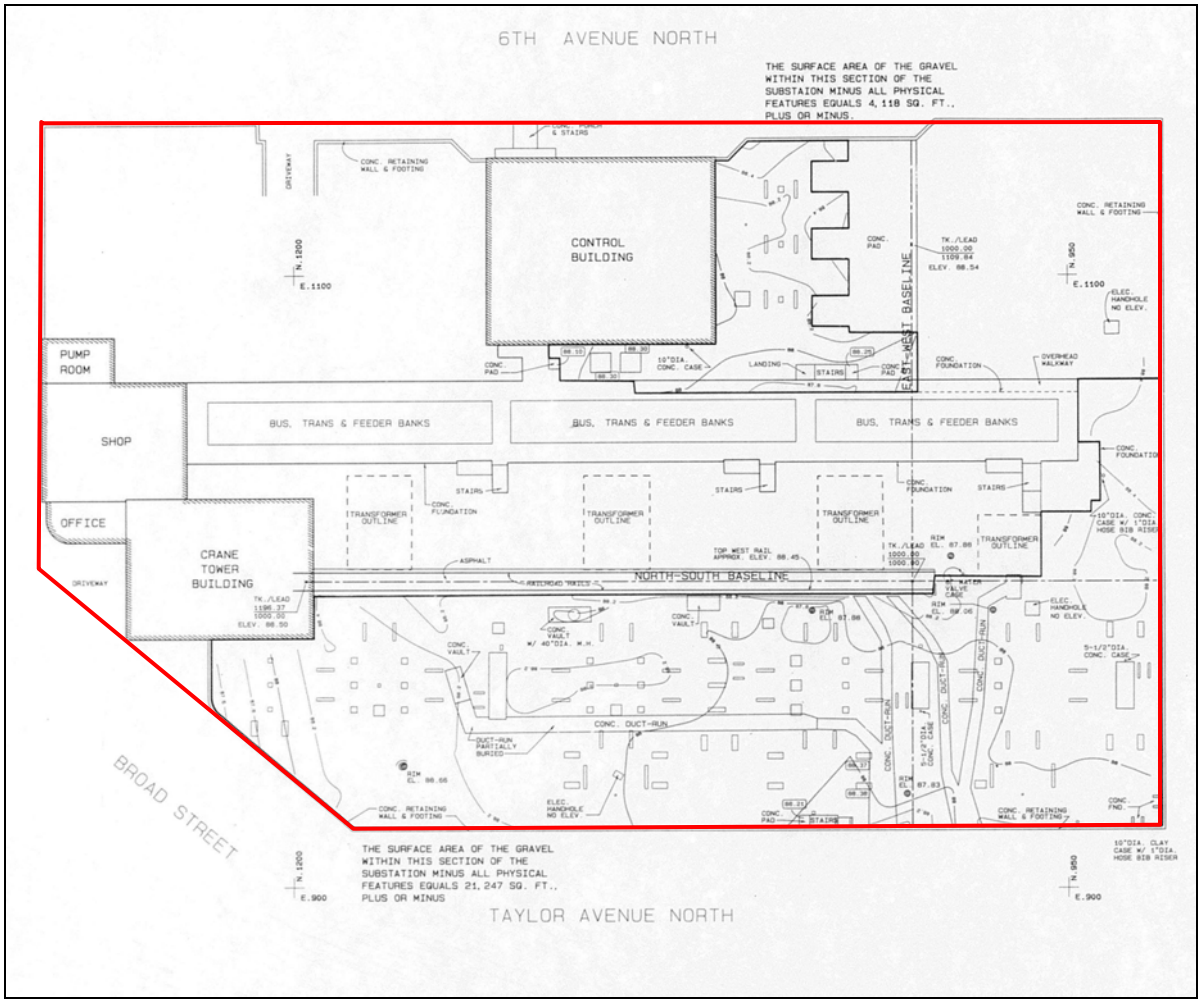


Figure 1. Above, a 1991 site topographic survey of the Broad Street Substation (Seattle City Light, Drawing D-30656), with property lines added. North is oriented to the left. The Control Building is situated near the east property line and 6th Avenue N, and the Crane Building on and near the north and northwest property lines, along Harrison and Broad Streets. This plan also shows the switchyard and equipment and indicates the parking lot at the northeast corner.

Note: The subject property is a portion of the larger legal parcel; this portion is Lots 1-12 of the D.T. Denny's Park Addition, including the alley vacation.

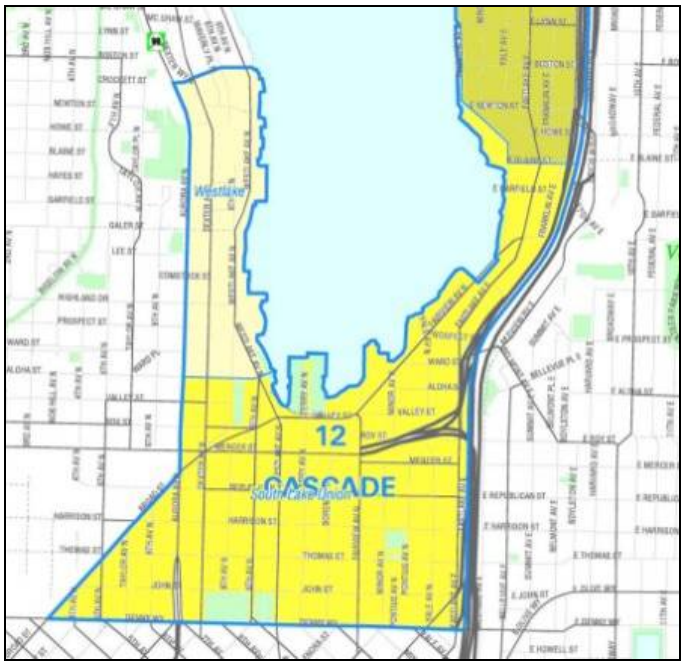
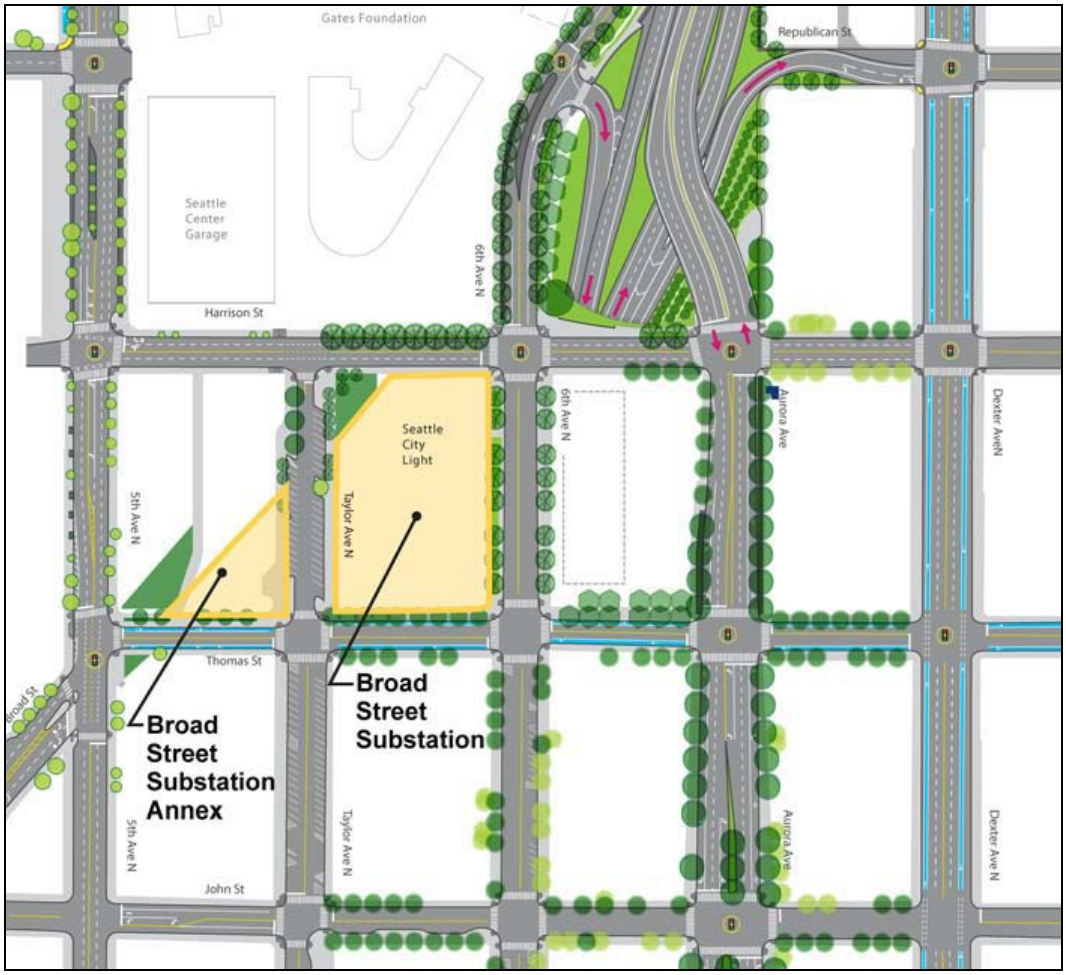


Figure 2. Left, a current vicinity map identifying the surrounding Cascade neighborhood, identified by the City of Seattle for its historic name (Seattle City Clerk's Office Geographic Indexing Atlas).

Figure 3. Below, a recent vicinity map showing the subject substation and in relation to ongoing tunnel construction (SDOT, 2013, Denny Substation Project Draft EIS, March 27, 2014, p. 2.30, Figure 2.16).



CURRENT CONTEXT VIEWS

Figures 4 & 5. Above, office buildings in the block to the north, at 203 6th Avenue N, dating from 1959 (left), and 221 6th Avenue N, from 1962 (right). These buildings represent the types of simple, low-scale, Modern style commercial buildings constructed in the area during the mid-century era of the World's Fair. (Photos of nearby mid-20th century buildings from King County i-Map except as noted).

Figure 6. Below left, a Modern style motel at 225 Aurora Avenue N, dating from 1959. **Figure 7.** Below right, view looking north on Taylor Avenue N with a portion of the substation visible (right) and the Gates Foundation campus in the background (BOLA Architecture + Planning, January 30, 2017).

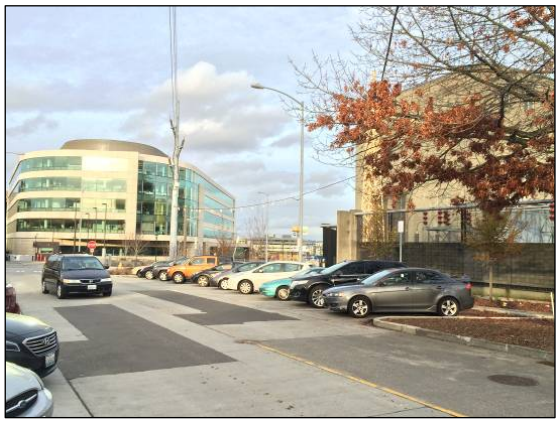


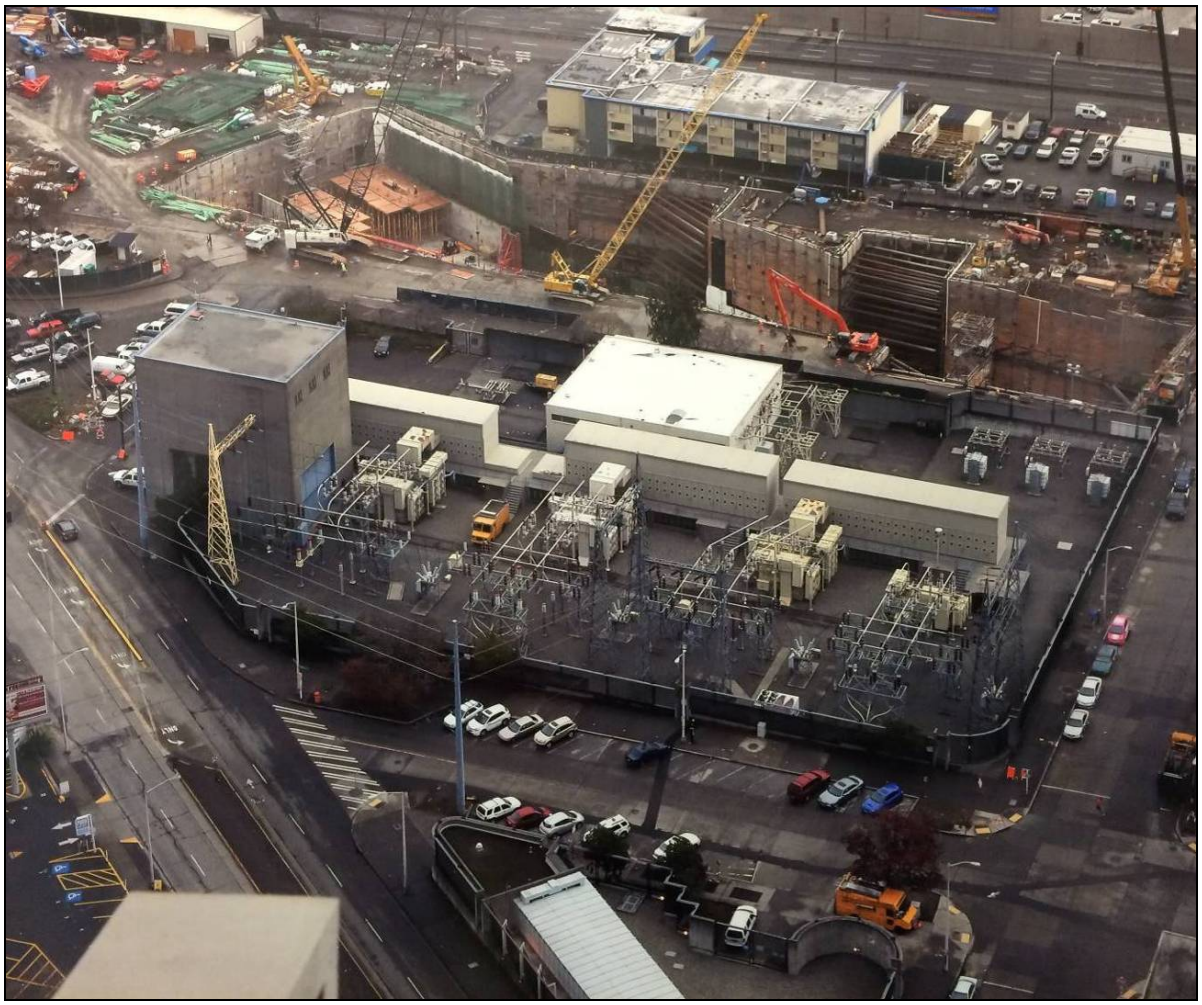
Figure 8. Directly below, view looking northwest at the substation's southeast corner from Taylor Street from 6th Avenue N (2016, Google).

Figure 9. Above, a view looking north on 6th Avenue N, from Denny Way (2013).

Figure 10. Below, view looking northwest at the viaduct tunnel structure from Taylor Avenue (Google, 2016).

CURRENT VIEWS – THE SUBSTATION SITE

Figure 11. Below, aerial view looking northeast at the site, ca 2016 (photo courtesy Seattle City Light). The ongoing construction of the Viaduct tunnel is visible in the neighboring block, along with a portion of Broad Street, visible as the angled street in the lower left. The Crane Tower is the tall building to the left. The Control Building is identifiable by its white color roofing.



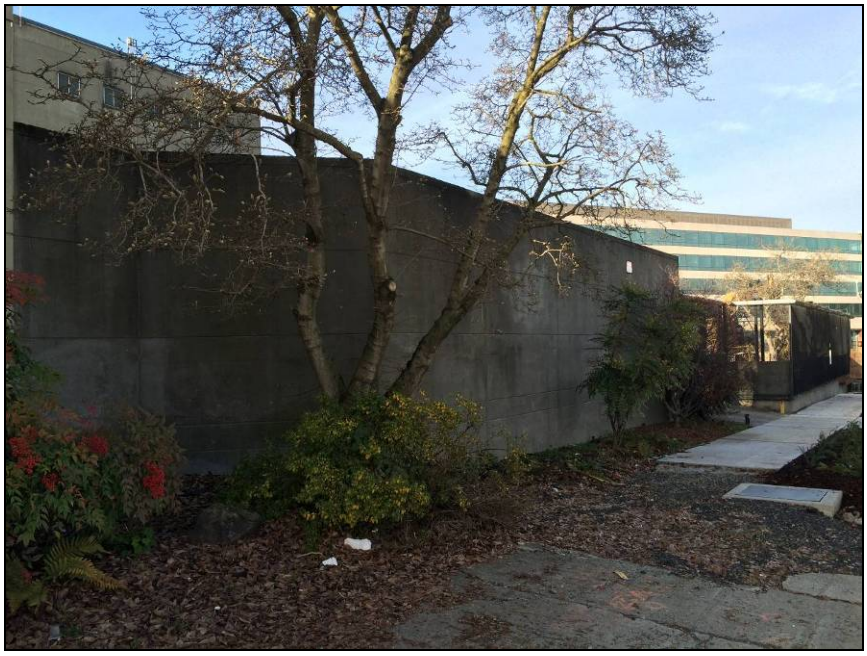


Figure 12. Above, looking northwest along the perimeter wall located to the east of the Control Building along 6th Avenue N. Landscape materials are placed within the property setback.

Figure 13. Below, looking northwest at the metal framed vehicle gate and perimeter fence located north of the Control Building, along 6th Avenue N. The inner edge of the sidewalk delineates the property line at this locaiton.

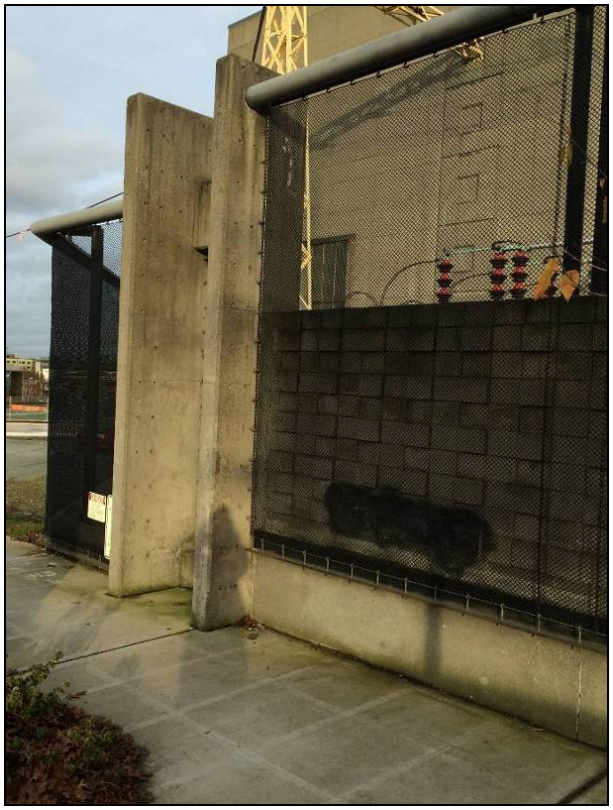


Figure 14. Above, looking northeast on 5th Avenue N at the concrete fin walls and metal pipe and steel chain link fence near the northwest corner of the site.

Figure 15. Below, looking southeast from the switchyard at the security walls and fencing on the perimeter east and south property lines.

Figure 16. Above left, view looking northwest in the switchard at the concrete perimter walls.

Figure 17. Above right, looking west from within the switchyard at lattice-type cable supports

Figure 18. Below, looking southwest in the switchyard at busses and vent fans on the side of the transformers and switchgear equipment.

Figure 19. Above, looking west from within the switchyard at busses with insulators with the Space Needle in the background.

Figure 20. Above left, looking northwest on the platform that runs on the west side of the switchgear, with the switchyard to the left, and the top of the Crane Tower's south facade in the background.

Figure 21. Above right, looking south in the tunnel running along the east side of switchgear.

Figure 22. Below, looking south on the raised platform on the west side of the switchgear with some of the concrete block perimeter wall and fencing visible in the background.

CURRENT VIEWS – THE CONTROL BUILDING

Figure 23. Above, looking northwest at the east facade and aportion of the north facade of Control Building. The fencing in the foreground is temporary.

Figure 24. Below, looking northwest at stairs and primary entry on the east facade. (See **Figure 91.** for a comparble, older view.)

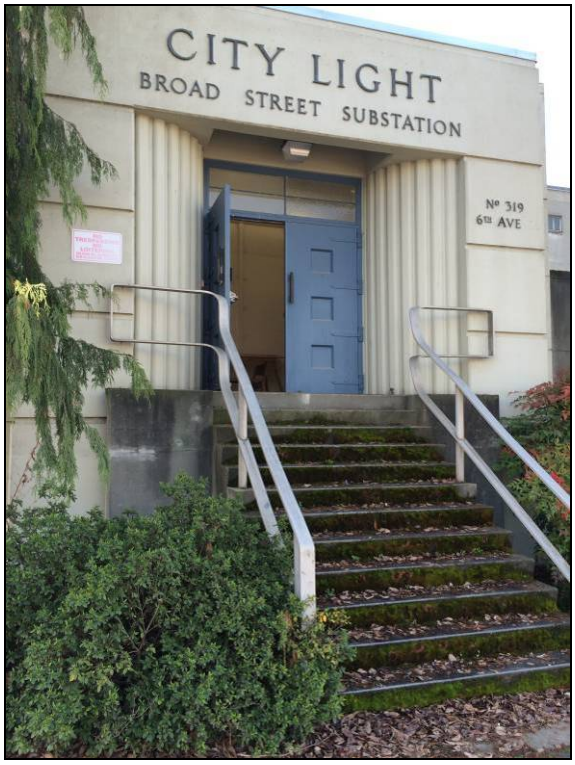


Figure 25. Above, looking south in the parking area, within the site, at the north facade of the Control Building.

Figure 26. Below, oblique view of the Control Building's north facade.

Figure 27. Above, view looking northeast at the Control Building's south facade.

Figure 28. Below, looking north at the west corner of the Control Building and raised walkway along the east side of the switchgear equipment.

Figure 29. Above, the first floor Control Room in the Control Building.

Figure 30. Below, the northern space in the basement of the Control Building.

CURRENT VIEWS – THE CRANE BUIIDLING

Figure 31. Above, looking souteast from the intersection of 5th Avenue N and Harrison Street at the north facades of the Crane Building, made up by the Tower (right) along with the Office, Shop and Oil Pump Room to the east of it(left). The yellow stacks and building in the background are part of the neighboring Viaduct Tunnel project, currently under construction.

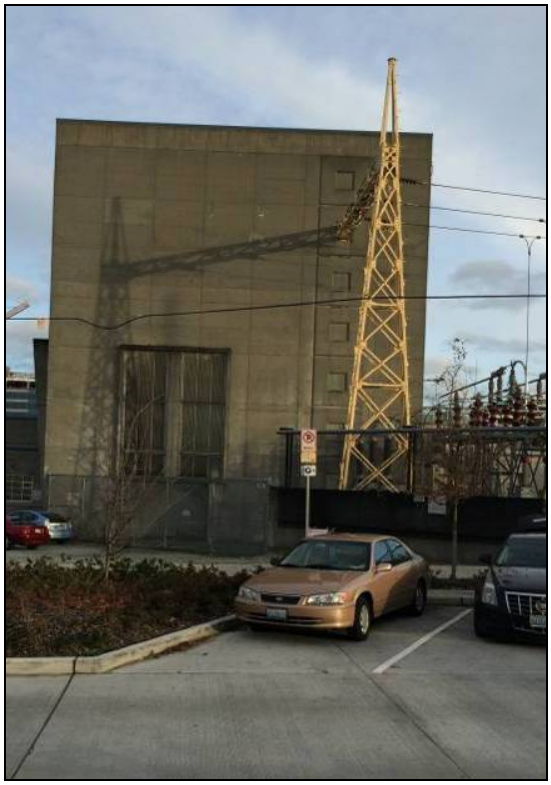


Figure 32. Above left, looking east at the lattice-tower and west facade of the Crane Tower.

Figure 33. Above right, looking southwest at the north facade of the Shop, with the Crane Tower to the west (right) in the background, and a portion of the Oil Pump Room to the east (left).

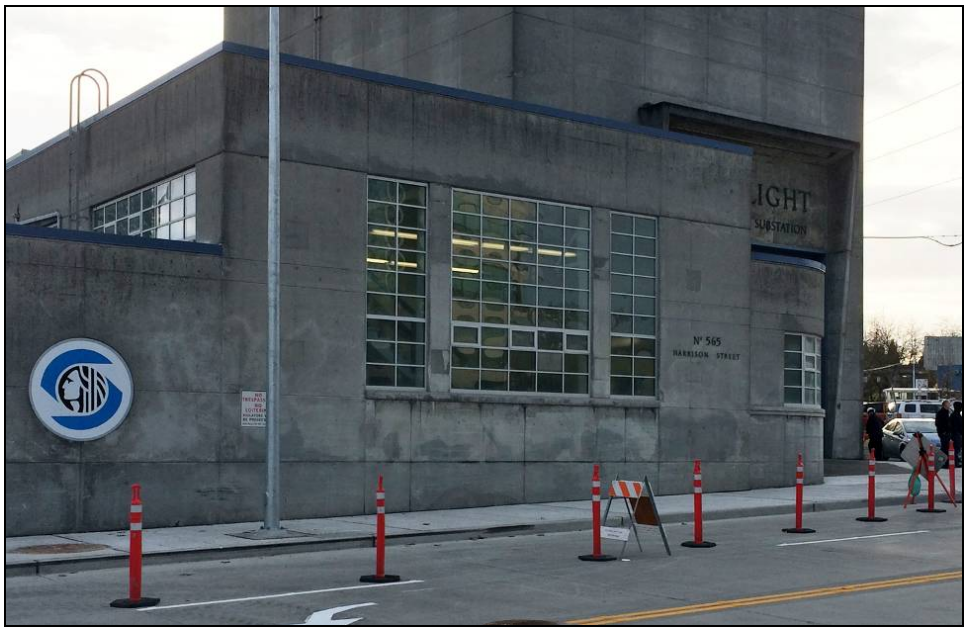


Figure 34. Above, looking southwest at the north facade of the Shop.

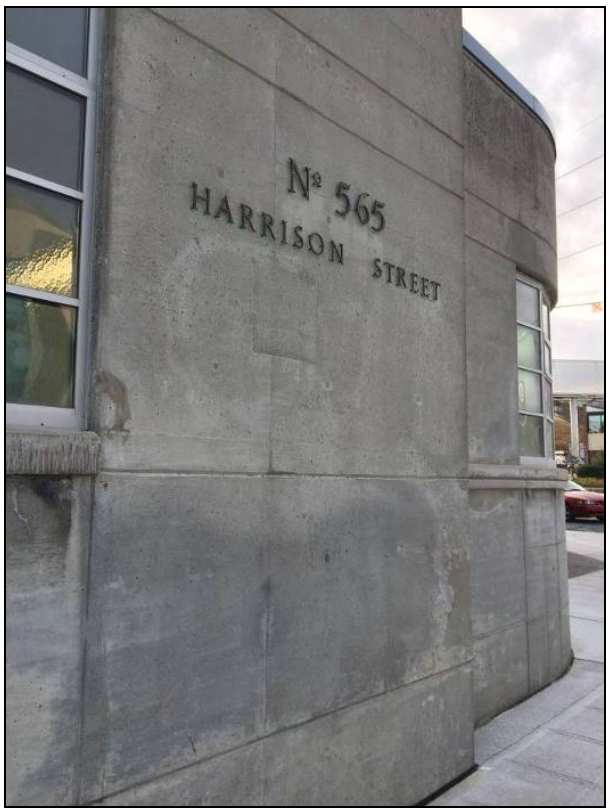


Figure 35. Left, detail view of the sign and concrete wall finish, north facade of the Shop. The curved wall in the background encloses the original Office.

Figure 36. Left, detail view of the recessed entry and entry to the office within the Shop, west facade.

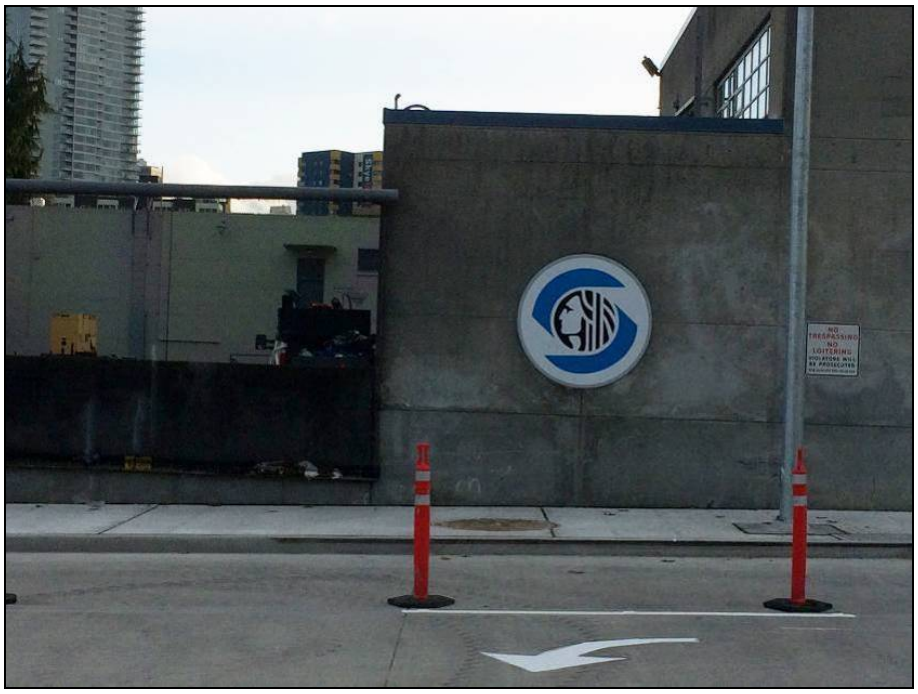


Figure 37. Above, looking south at the north facade of the Oil Pump Room. The circular logo was originally a window.

Figure 38. Below, looking west at the east facades of the Shop and Pump Room. Note the original wall-mounted steel access ladders and window openings and recently installed aluminum frame windows.

Figure 39. Above, detail view of the southeast canopy and entry doors to the Shop and Pump Room (east and north facades).

Figure 40. Below, looking south through the main vehicle entry into the interior of the Crane Tower. Portions of the original rail track remain in the floor slab.

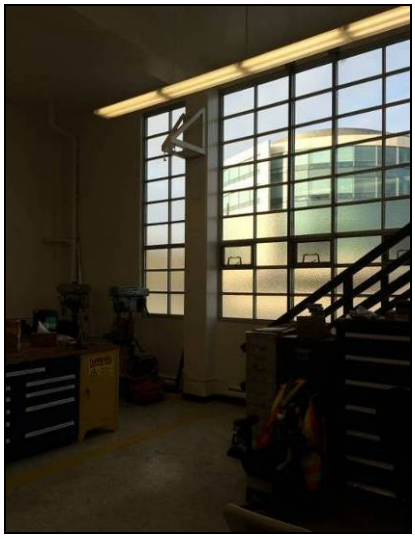
Figure 41. Above, interior of the Crane Tower, looking up at the upper south wall and the two craneways, and the catwalk around the upper portions of the east, west, and south walls.

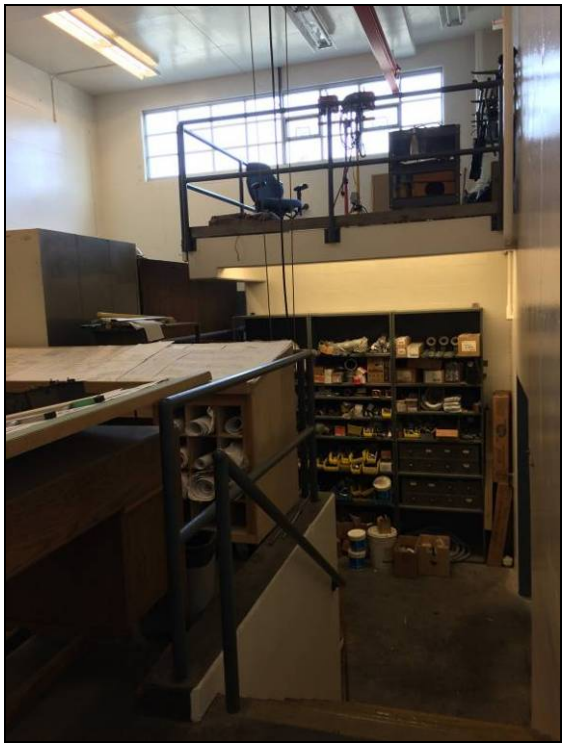
Figure 42. Below, interior of the Crane Tower, looking up toward the southeast corner at the craneways.

Figure 43. Above left, looking southeast at the windows in the east wall of the Crane Tower.

Figure 44. Above right, looking northeast at the door that opens into the Shop and a portion of the catwalk on the east wall of the Crane Tower.

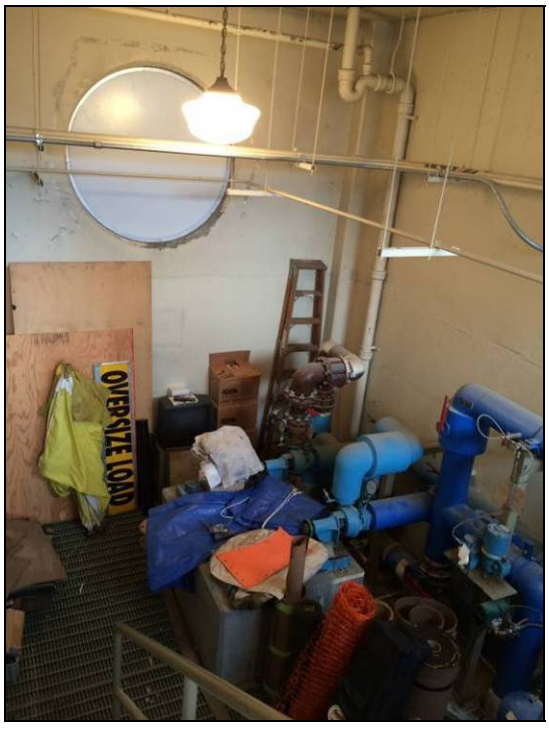
Figures 45 & 46. Below, interior view of the Shop. Left, view looking northwest at the central area. Right, looking southeast in the east mezzanine.





Figures 48 & 49. Above, interiors of the Shop. Left, looking south toward the lower landing. Right, interior doors in the south wall of the Shop, which access the switchgear tunnel to the south.

Figure 50. Below, looking northeast from the entryand landing into in the former Oil Pump Room. This room is vacant and used for storage. The circular opening, once a window, has been infilled.



HISTORIC MAPS & CONTEXT PHOTOS

Figure 51. Below, three figure-ground studies, based on the Kroll maps from (left to right) 1912-1920, 1940-1960 and ca. 2000 illustrate impacts of nearby roads and the Seattle Center, and the increasingly large-scale developments in the area near Denny Way. The Broad Street Substation block is circled.

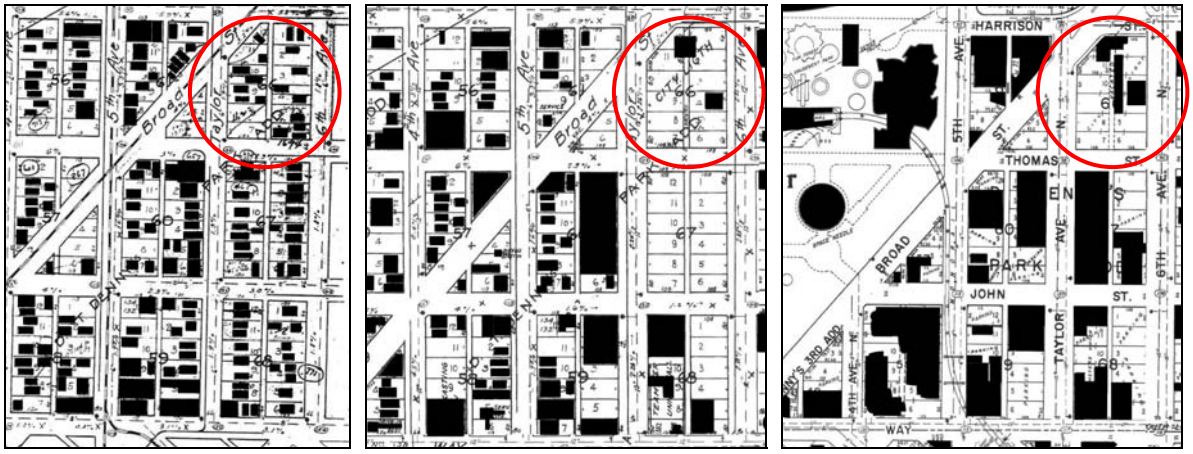
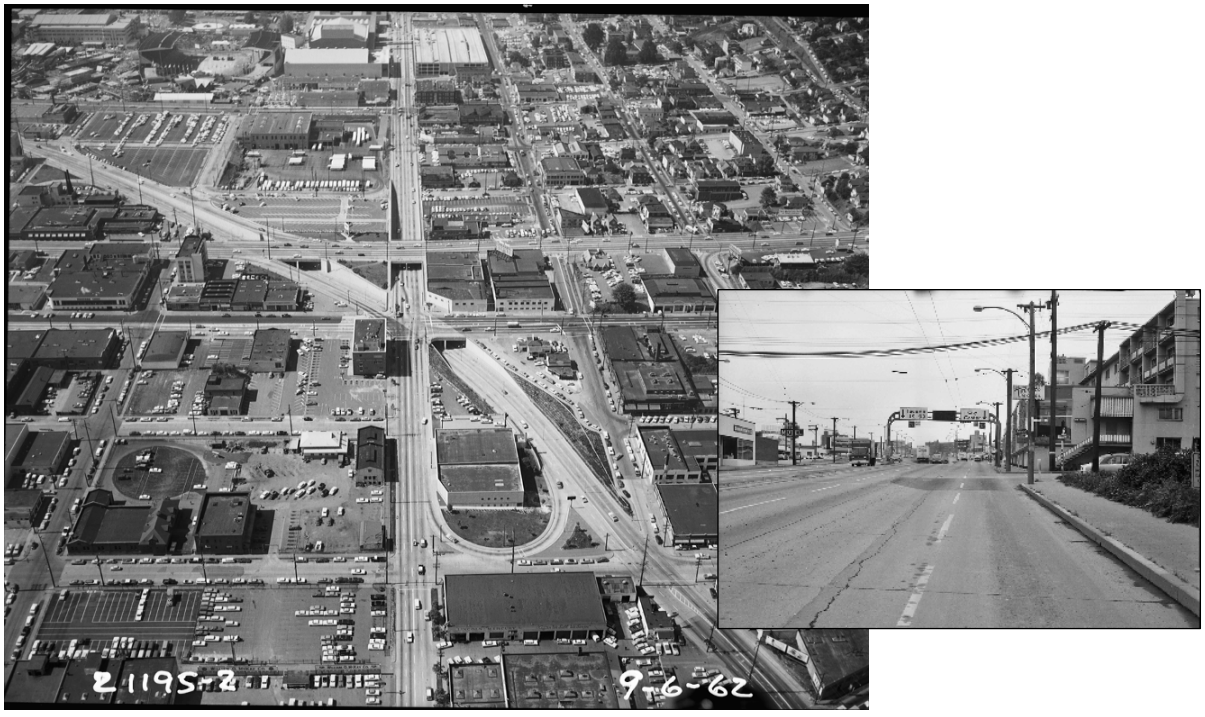


Figure 52. Left, regrading at Taylor and John Streets and Denny Way in 1931 [Seattle Municipal Archives (SMA), 4771].

Figure 53. Left, a view in 1935 looking north from Westlake Avenue and 5th and 6th Avenues [Museum of History & Industry (MOHAI), 1983.10.4433.1].

Figure 54. Above, 1950 aerial view northwest from Denny Way and 9th Avenue N with the substation visible in the upper right (SMA, 76153).

Figure 55. Below left, a late 1962 view, looking west from Westlake Avenue N showing the surrounding area. (The site is not visible.) (SMA, 734842). **Figure 56**. Inset, below, looking north on Aurora Avenue in 1961 (SMA 66697)



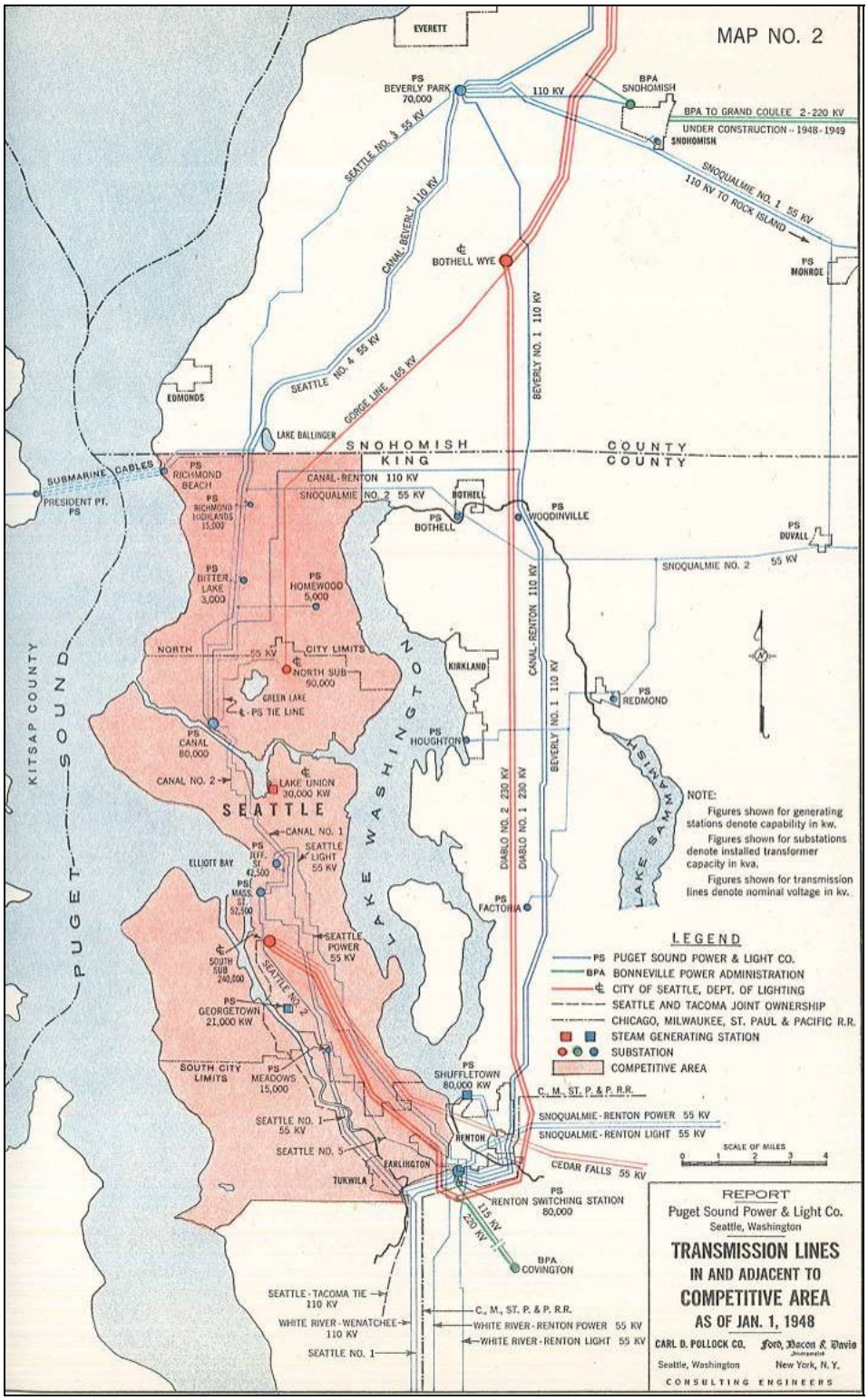
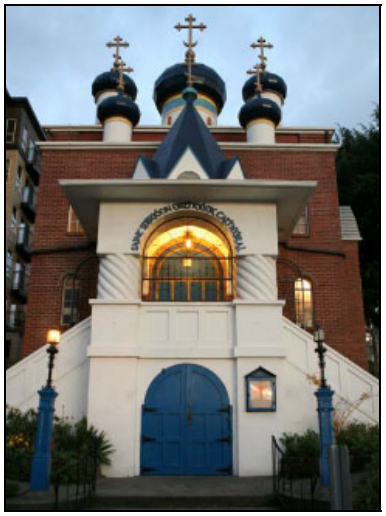
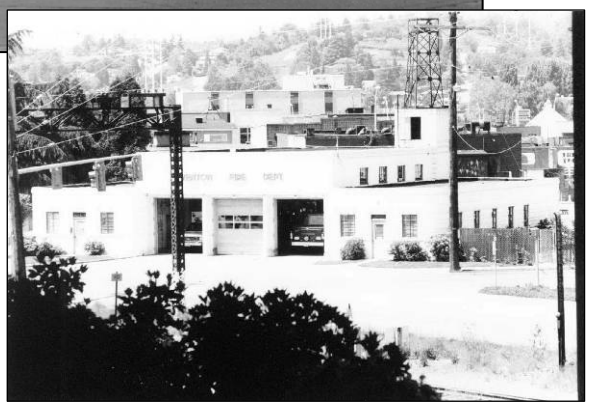


Figure 57. Above, a 1948 map of transmission lines into Seattle showing the area of competition between the Seattle Lighting Department and Puget Sound Power and Light in color.

OTHER BUILDINGS BY ARCHITECT IVAN PALMAW



Figures 58 & 59. Above, two Russian Orthodox Cathedrals designed by Ivan Palmaw. Left, St. Spiridon Cathedral, 1310 Harrison Street (DAHP, n.d.). Right, St. Nicholas Cathedral, 1714 13th Avenue (Joe Mabel, Wikicommons, 2008). Both are designated Seattle landmarks.



Figures 60 & 61. Above, the Streamline Moderne style Renton Fire Station, a poured concrete structure built with WPA funds in 1940-1942 (Above photo, Dorpat, DorpatSherrardLanmont). It served as a fire station until 1978 and was adapted for use as the Renton Historical Museum in 1984, which recently restored the building. Right, the station in 1978 (Renton Historical Society, 1984.002.1680).

MODERNE STYLE BUILDINGS & SUBSTATIONS

Figure 62. Above, Seattle Fire Station No. 41 (WPA, 1934), a designated landmark (Google, 2015).

Figures 63 & 64. Above, views of the former Puget Sound News Building at 621 2nd Avenue North (King County, Department of Assessment, i-Map, 2014).

Figure 65. Below, the Shoreline Substation, northeast facade (Seattle City Light, DSC-0415).

Figure 66. Above, the Bothell Substation, southeast facade of the Control Building, which was designed also by Ivan Palmaw in 1949 (Seattle City Light, DSC-0365). Note the grid pattern concrete, small circular window and larger corner window.

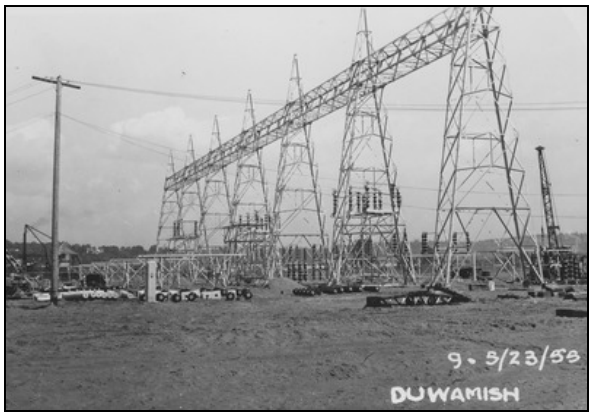
Figure 67. Below, the Duwamish Substation, and the north facade of the Control Building (Seattle City Light, DSC-0450).

Figure 68. Above, an aerial view of the South Receiving Station (SMA).

Figure 69. Left, the south facade of the South Receiving Station on 4th Avenue South near Spokane Street (Seattle City Light, DSC-0458).

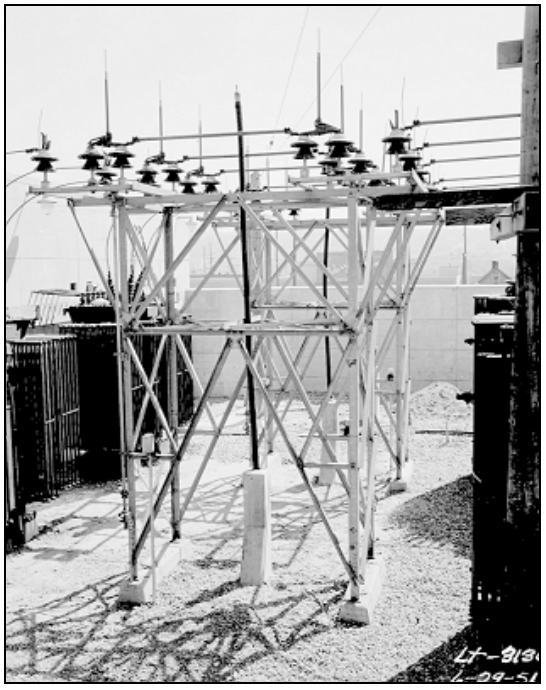
Figure 70. Left, the former First Hill Substation, with its Art Moderne style building and walls, on January 5, 1952 (demolished 1996). This property has been acquired by Seattle University (SMA, item 23345).

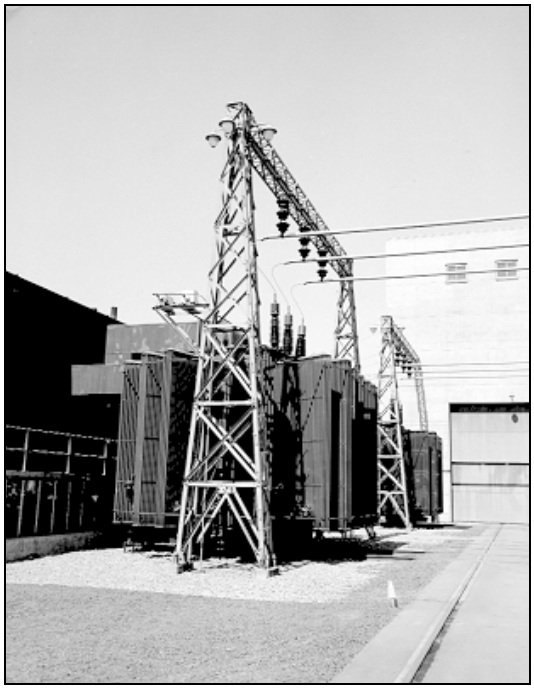
TYPICAL ELECTRICAL SWITCHYARDS



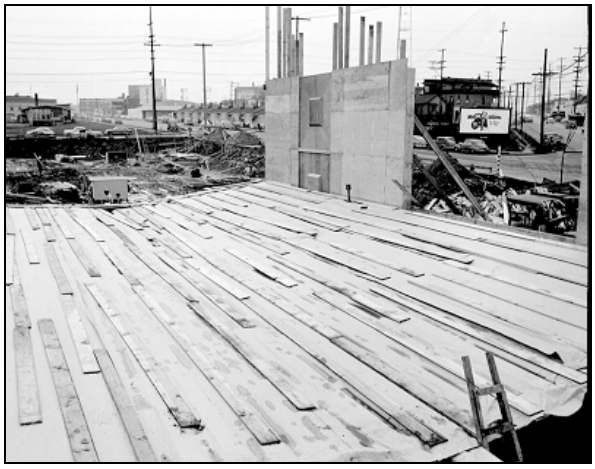
Figures 71 - 73. These photos of nearby substation illustrate their relative consistency as switchyard design became based more on manufactured components rather than customized or shop-built elements, such as transformers. Above left, the Bothell Substation bus fork, October 7, 1964 (SMA 168190), and right, the Duwamish Substation on May 23, 1955 (SMA 172931). Below, the Roxbury Substation in 1956 (SMA 173647).

Figures 74 & 75. Below left, typical electrical bus structure, June 1951 (SMA 23020). Below right, the Broad Street switchyard, 1952 (SMA 24199).





CONSTRUCTION OF THE BROAD STEEET SUBSTATION

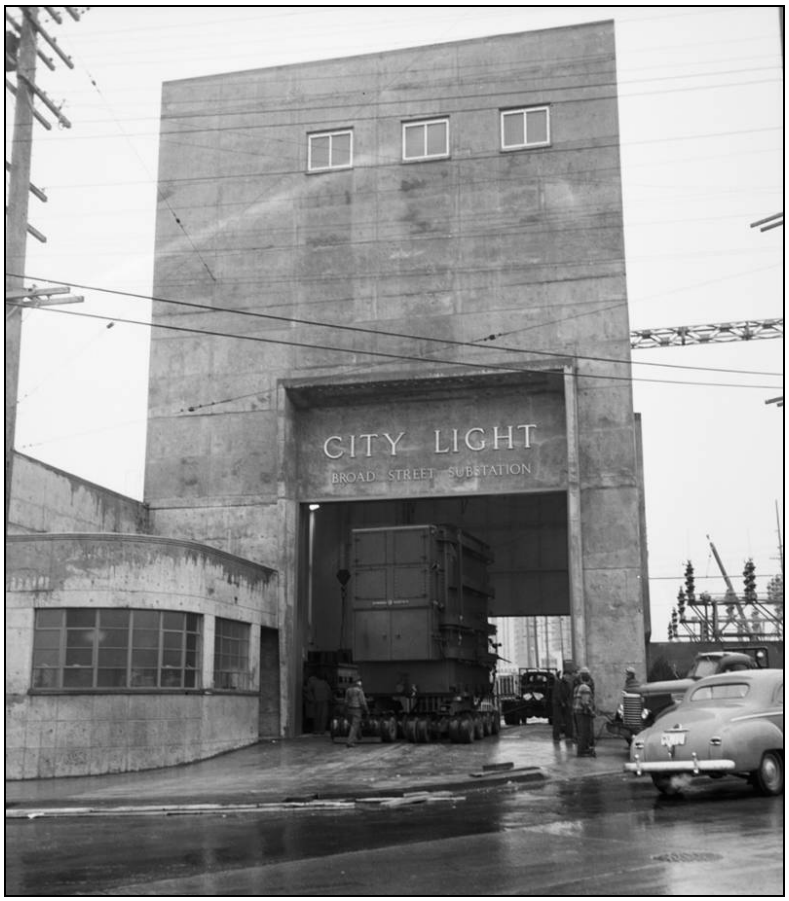


Figures 76 & 77. Above, construction in November 1949 (Left, SMA 20781, and right, SMA 20794).

Figure 78. Below left looking northwest at the concrete perimeter walls of the Shop and Oil Pump Room on the same date (SMA 20986).

Figure 79. Below left, a view of the tunnel below the switchgear, May 11, 1950 (SMA 27757).

Figure 80. Above, looking north at the south facade of the Crane Tower, August 3, 1950 (SMA 22342). **Figure 81**. Below, the north facade during a transformer installation, 1950 (SMA 23393).



HISTORIC VIEWS OF THE SUBSTATION

Figure 82. Above, looking northeast at the substation from the corner of 5th Avenue N and Taylor Street in late 1951, showing original low concrete wall and woven wire fences (SMA 23341).

Figure 83. Below switchyard equipment in 1952 (SMA 24199).

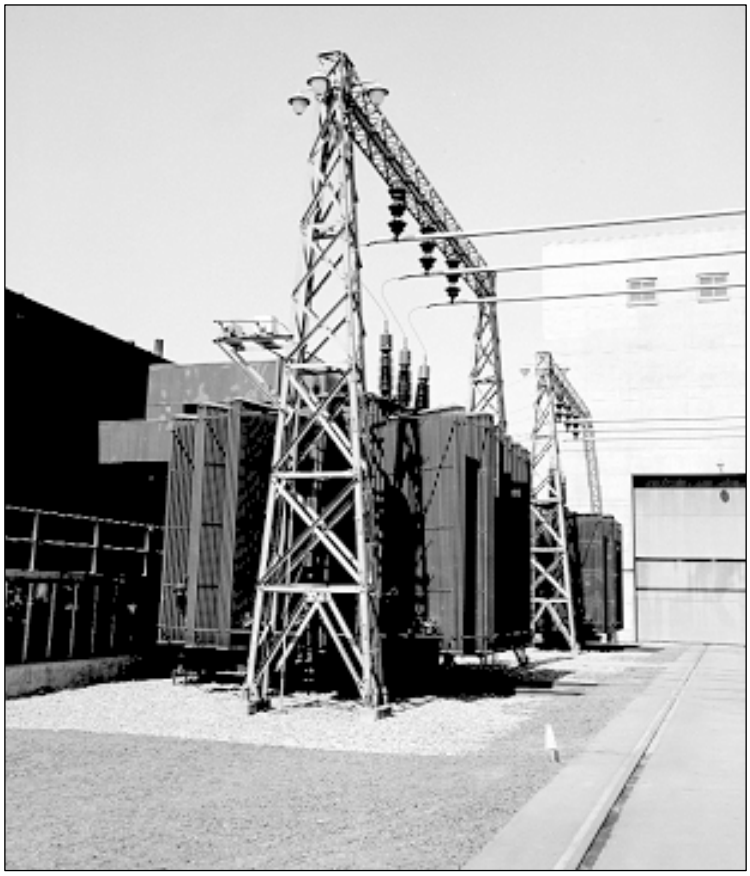


Figure 84. Above left, placement of a transformer on site on April 2, 1951 (SMA 24801).

Figure 85. Above right, repair work on a transformer core within the Crane Tower, June 11, 1956 (Seattle City Light, SMA 173463).

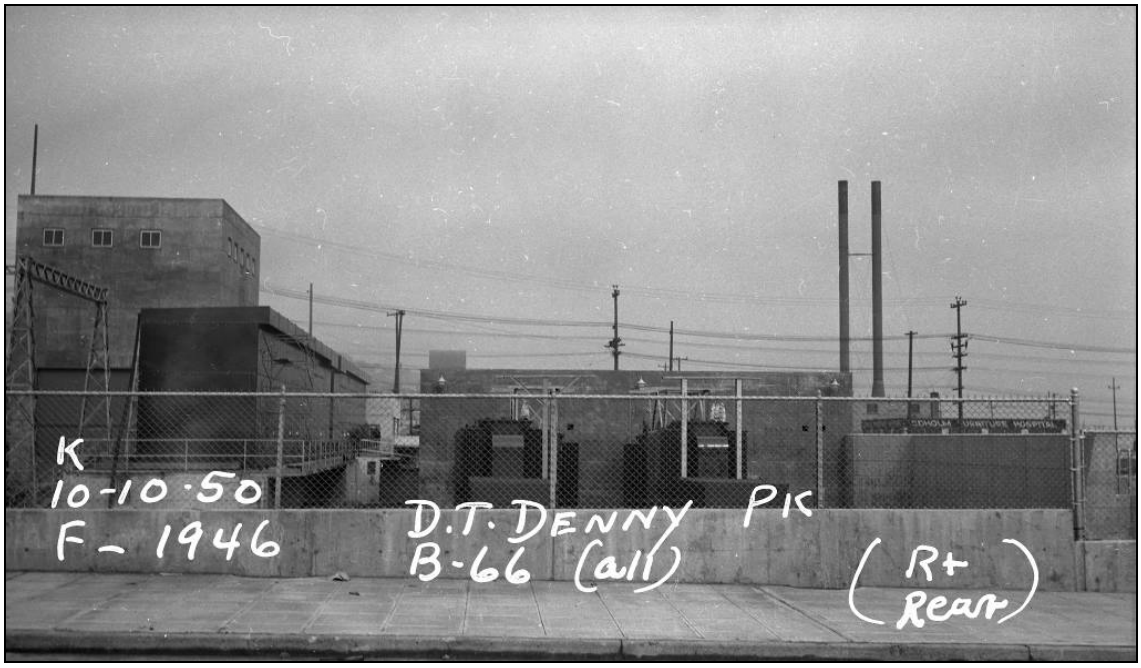
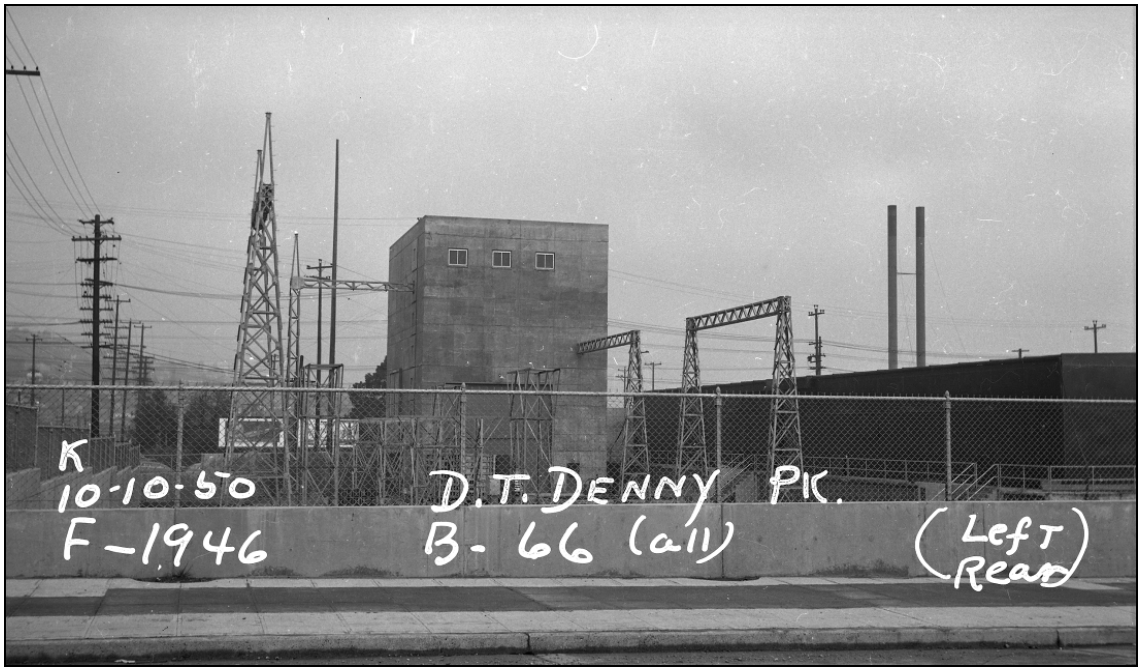


Figure 86. Above, a view in 1950 looking north into the site, with the Control Building's south facade visible in the center behind equipment.

Figure 87. Below, view looking north from Thomas Street through the switchyard at the south and west facades of the Crane Tower in 1950. Note the earlier wood power poles along 5th Avenue N, left (King County Assessor property records, Puget Sound Municipal Archives, both photos).



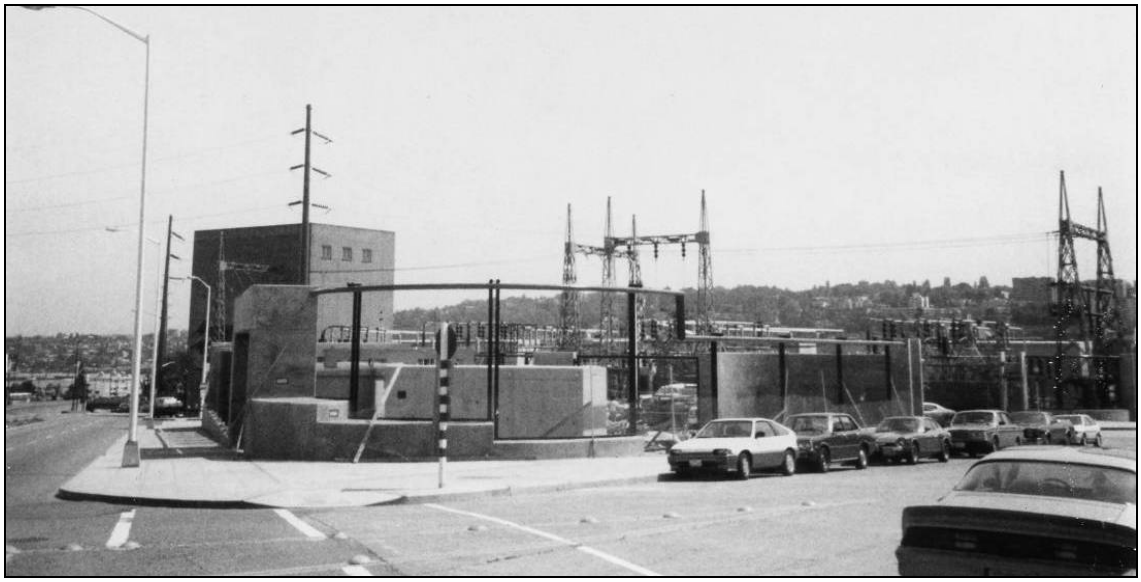


Figure 88. Above, looking southeast at the property in 1984 after installation of new fence by artist Carolyn Law as part of the City's Public Art Program (King County Assessor property record card).

Figure 89. Below, looking southeast at the Office, Shop and Pump Room sections of the Crane Building, showing the original steel sash windows and circular window (Wickwire, DON Inventory Form, October 2000).

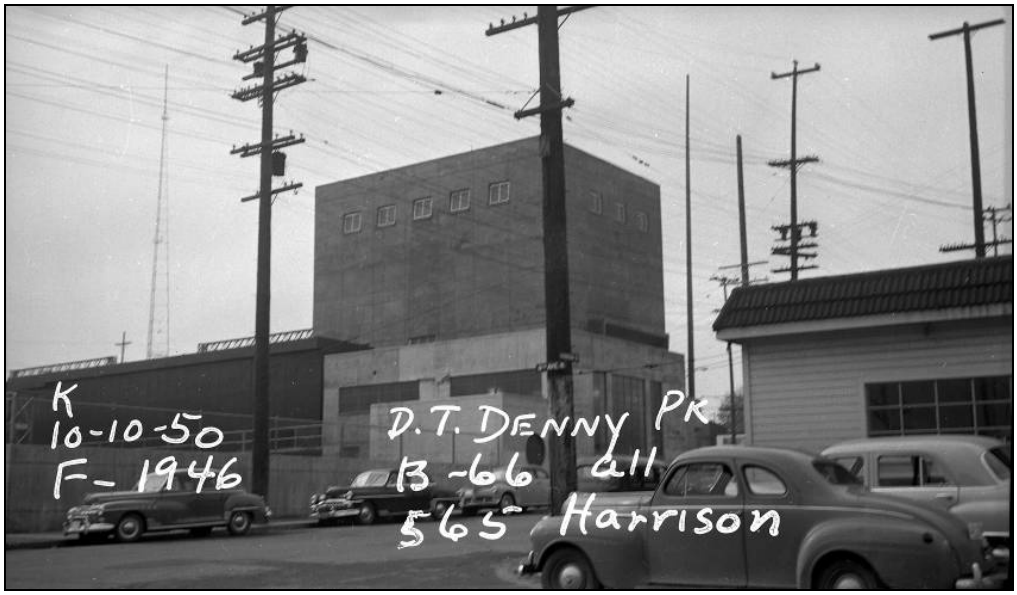
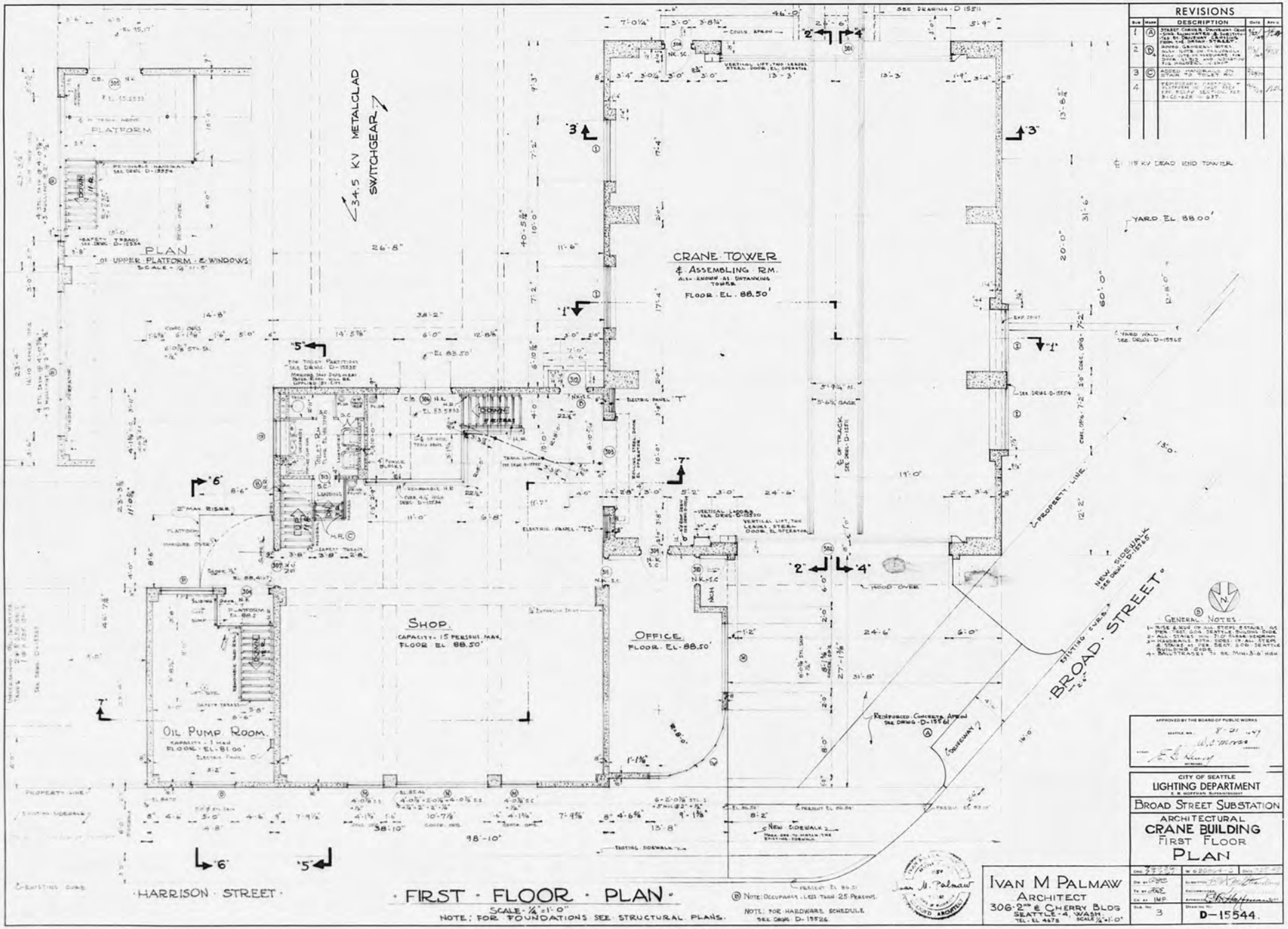


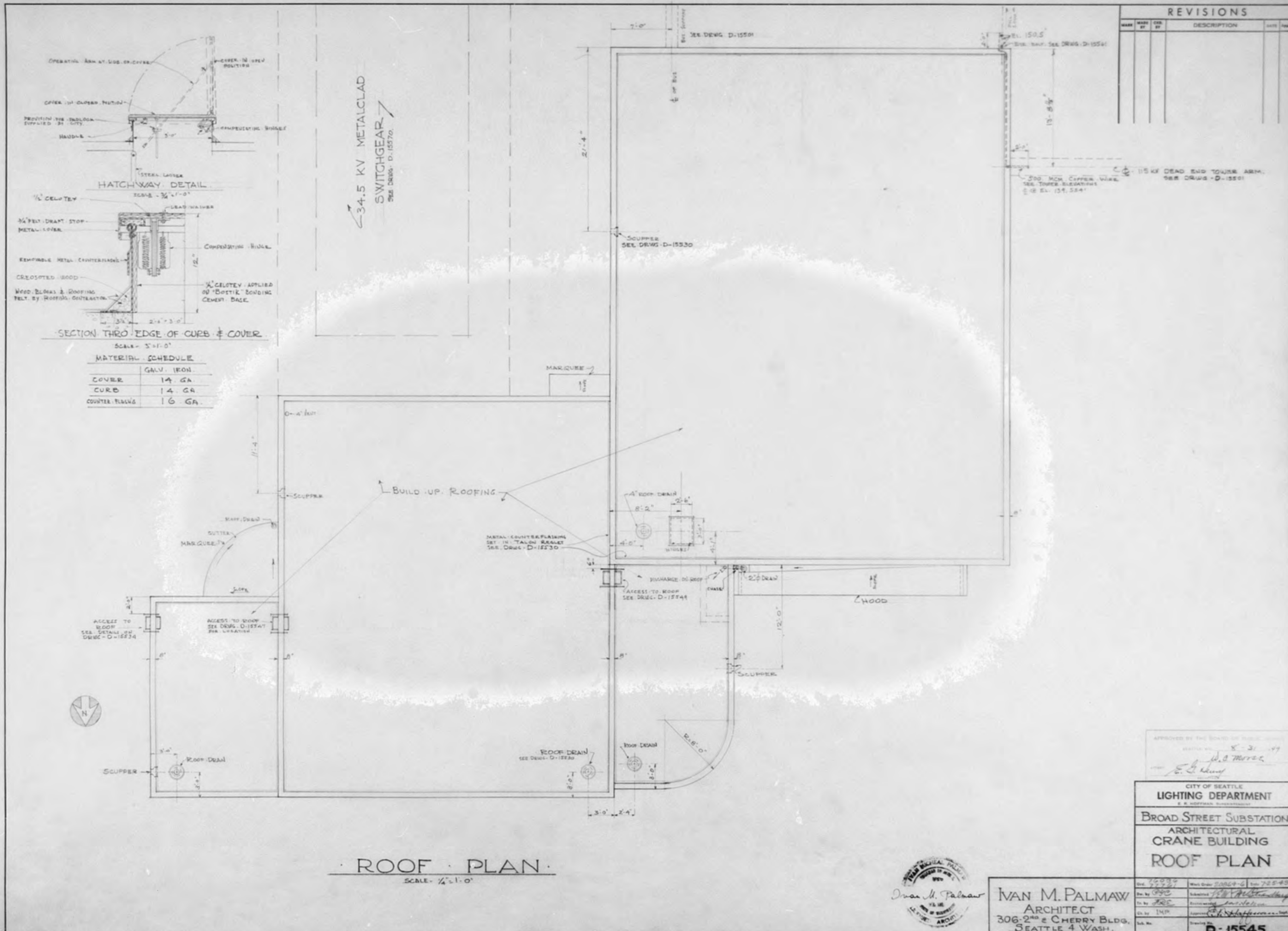
Figure 90. Above, looking southwest in 1950 at the Oil Pump Room and Shop, with Crane Tower behind them (King County Assessor's property record card).

Figure 91. Below, primary entry, east façade of the Control Building, December 2001 (SMA 123776). The building's concrete perimeter walls were not painted at this time.

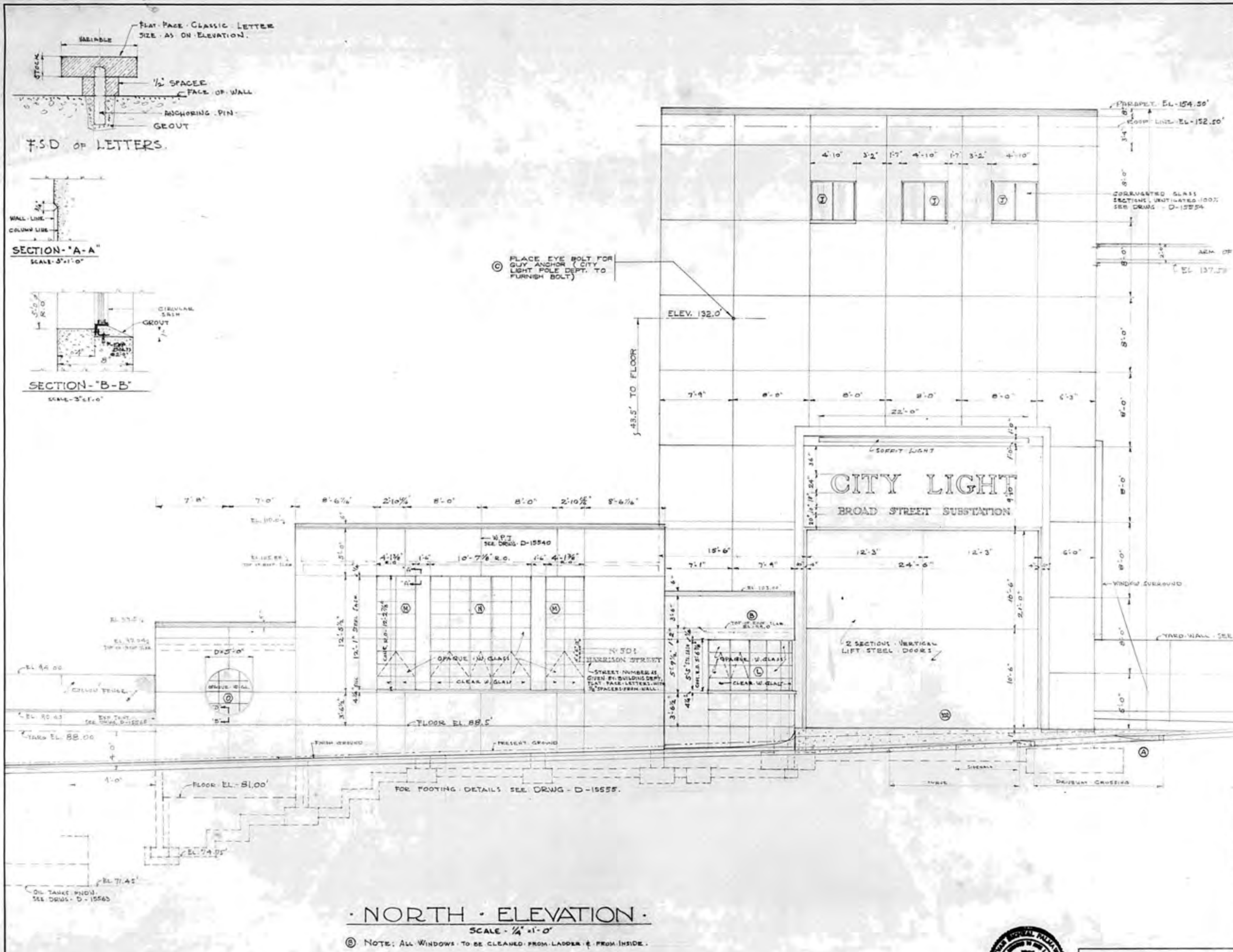
DRAWINGS

Select original drawings of the Broad Street Substation, from Seattle City Light collections, are provided on the following pages.


REVISIONS
DESCRIPTION
34.5 KV METALCLAD SWITCHGEAR
PLATFORM
PLAN
OF UPPER PLATFORM & WINDOWS
SCALE - ¼" = 1'-0"
CRANE TOWER
& ASSEMBLING RM.
ALSO KNOWN AS UNTANKING TOWER
FLOOR EL. 88.50'
115 KV DEAD END TOWER
YARD EL. 88.00'
SHOP
CAPACITY - 15 PERSONS MAX.
FLOOR EL. 88.50'
OFFICE
FLOOR EL. 88.50'
OIL PUMP ROOM
CAPACITY - 1 MAN
FLOOR EL. 81.00'
HOOD OVER
PROPERTY LINE
NEW SIDEWALK
EXISTING CURB
BROAD STREET
HARRISON STREET
FIRST FLOOR PLAN
SCALE - ¼" = 1'-0"
NOTE: FOR FOUNDATIONS SEE STRUCTURAL PLANS.
NOTE: OCCUPANCY LESS THAN 25 PERSONS.
NOTE: FOR HARDWARE SCHEDULE SEE DRWG. D-15526
GENERAL NOTES
1- RISE & RUN OF ALL STEPS, STAIRS, AS PER TEXT SOR SEATTLE BUILDING CODE.
2- ALL STAIRS WILL HAVE 7'10" CLEAR HEADROOM.
3- HANDRAILS BOTH SIDES OF ALL STAIRS & STAIRS AS PER DEPT. SOR SEATTLE BUILDING CODE.
4- BALUSTRADES TO BE MIN. 3'-0" HIGH
APPROVED BY THE BOARD OF PUBLIC WORKS
CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
FIRST FLOOR
PLAN
IVAN M PALMAW
ARCHITECT
306-2ND E CHERRY BLDG
SEATTLE-4, WASH.
TEL: EL 4478
SCALE ¼"-1'-0"
D-15544.
SERIAL NO. 12177.



REVISIONS
DESCRIPTION
HATCHWAY DETAIL
SECTION THRO EDGE OF CURB & COVER
MATERIAL SCHEDULE
GALV. IRON
COVER 14 GA.
CURB 14 GA.
COUNTER FLASHG 16 GA.
34.5 KV METALCLAD SWITCHGEAR
SEE DRWG. D-15570
SEE DRWG. D-15501
SCUPPER
SEE DRWG. D-15530
MARQUEE
BUILD UP ROOFING
4" ROOF DRAIN
ACCESS TO ROOF
HOOD
ROOF DRAIN
115 KV DEAD END TOWER ARM
SEE DRWG. D-15501
ROOF PLAN
SCALE - 1/4" = 1'-0"
APPROVED BY THE BOARD OF PUBLIC WORKS
8-31-49
CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
ROOF PLAN
IVAN M. PALMAW
ARCHITECT
306-2ND & CHERRY BLDG.
SEATTLE 4 WASH.
TEL EL 4678
Work Order 20864-6
D-15545
SERIAL Nº - 12178



FLAT FACE CLASSIC LETTER SIZE AS ON ELEVATION.
VARIABLE
1/2" SPACER
FACE OF WALL
ANCHORING PIN
GROUT
F.S.D OF LETTERS.
WALL LINE
COLUMN LINE
SECTION - "A-A"
SCALE - 3" = 1'-0"
CIRCULAR SASH
GROUT
SECTION - "B-B"
SCALE - 3" = 1'-0"
PLACE EYE BOLT FOR GUY ANCHOR (CITY LIGHT POLE DEPT. TO FURNISH BOLT)
ELEV. 132.0'
43.5' TO FLOOR
PARAPET EL - 154.50'
ROOF LINE EL - 152.50'
CORRUGATED GLASS SECTIONS, UNITINATED 100% SEE DRWG - D-15554
ARM OF DEAD END TOWER SEE SHEET D-15561
22'-0"
SOFFIT LIGHT
CITY LIGHT
BROAD STREET SUBSTATION
W.P.T. SEE DRWG. D-15540
10'-7 1/8" R.O.
OPAQUE W. GLASS
CLEAR W. GLASS
No 501 HARRISON STREET
STREET NUMBER AS GIVEN BY BUILDING DEPT. FLAT FACE LETTERS WITH 3/8" SPACERS FROM WALL.
2 SECTIONS VERTICAL LIFT STEEL DOORS
WINDOW SURROUND
YARD WALL SEE DRWG - D-15565
FLOOR EL 88.5'
FINISH GROUND
PRESENT GROUND
FLOOR EL - 81.00'
FOR FOOTING DETAILS SEE DRWG - D-15555.
EL. 74.95'
EL. 71.45'
OIL TANKS FNDN. SEE DRWG - D - 15563
DRIVEWAY CROSSING
YARD EL 88.00

· NORTH · ELEVATION ·

SCALE - 1/4" = 1'-0"

(B) NOTE: ALL WINDOWS TO BE CLEANED FROM LADDER & FROM INSIDE.

REVISIONS

No.	Mark	Description	Date	Appr.
1	(A)	[illegible]	[illegible]	[illegible]
2	(B)	[illegible]	[illegible]	[illegible]
3	(C)	ADDED GUY ANCHOR TO FACE OF CRANE TOWER	[illegible]	[illegible]

APPROVED BY THE BOARD OF PUBLIC WORKS

SEATTLE, WN., 8-31-49

D. C. Morse, CHAIRMAN

ATTEST: E. G. Henry, SECRETARY

CITY OF SEATTLE

LIGHTING DEPARTMENT

E. R. HOFFMAN, SUPERINTENDENT

BROAD STREET SUBSTATION

ARCHITECTURAL

CRANE BUILDING

NORTH

ELEVATION

IVAN M. PALMAW

ARCHITECT

306-2ND & CHERRY BLDG

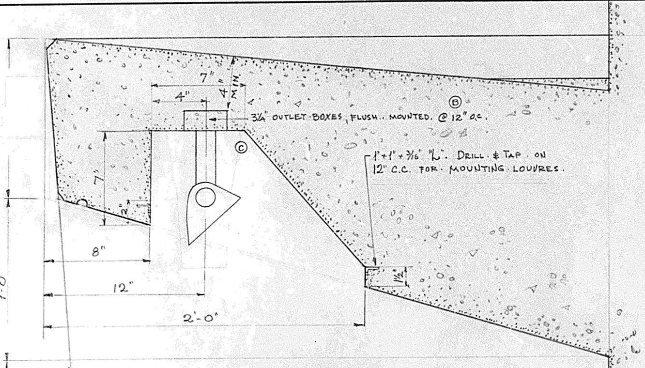
SEATTLE-4, WASH

TEL. EL 4678

SCALE 1/4" = 1'-0"

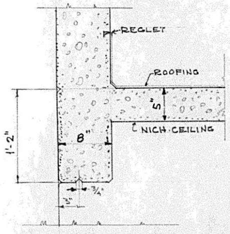
ORD. 76056 77761	W.O. 23864-6	DATE 7-25-49
DR. BY BSG	SUBMITTED	
TR. BY FP	RECOMMENDED	
CK. BY IMP	APPROVED	
SUB. No. 3	DRAWING No. D-15546	

SERIAL NO. 12179



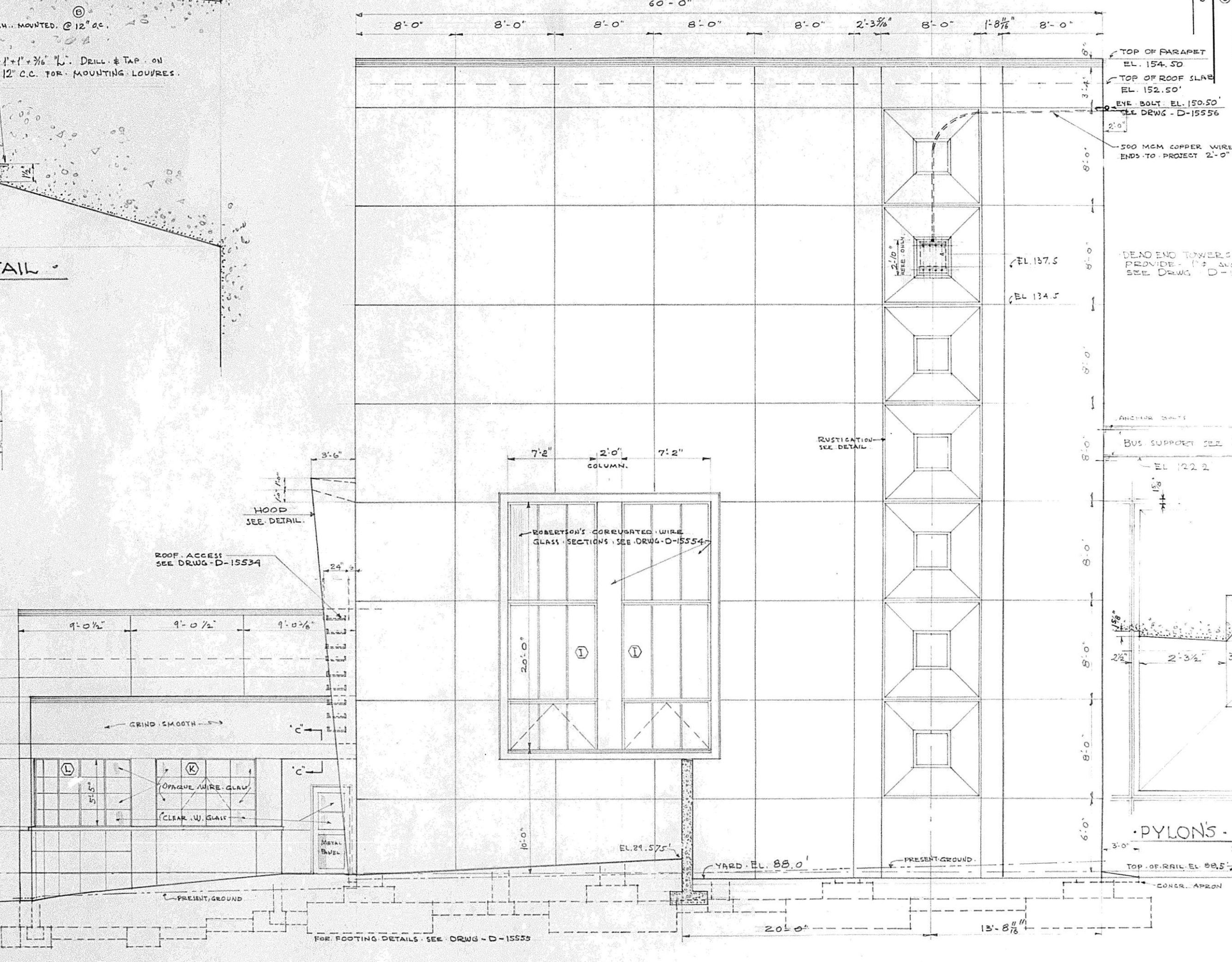
· HOOD · DETAIL ·

SCALE - 3" = 1'-0"



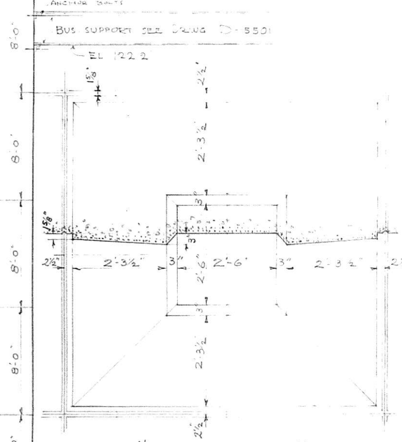
SECTION - "C-C"

SCALE - 1½" = 1'-0"


60'-0"
TOP OF PARAPET EL. 154.50
TOP OF ROOF SLAB EL. 152.50'
EYE BOLT EL. 150.50' SEE DRWG - D-15556
500 MCM COPPER WIRE ENDS TO PROJECT 2'-0"
EL. 137.5
EL. 134.5
RUSTICATION SEE DETAIL
HOOD SEE DETAIL
ROOF ACCESS SEE DRWG - D-15534
ROBERTSON'S CORRUGATED WIRE GLASS SECTIONS SEE DRWG - D-15554
COLUMN.
TOP OF SHOP PARAPET EL. 110.00'
TOP OF SHOP ROOF SLAB EL. 105.88'
TOP OF OFFICE PARAPET EL. 103.00'
TOP OF OFFICE ROOF SLAB EL. 99.00'
GRIND SMOOTH
OPAQUE WIRE GLASS
CLEAR W. GLASS
METAL PANEL
FLOOR EL. 88.50'
YARD EL. 88.0'
PRESENT GROUND
TOP OF RAIL EL. 88.5'
CONCR. APRON
FOR FOOTING DETAILS SEE DRWG - D-15555

· WEST · ELEVATION ·

SCALE - ¼" = 1'-0"



· PYLON'S · RUSTICATION'S · DETAIL ·

SCALE - ¾" = 1'-0"

REVISIONS

SUB	MARK	MADE BY	CKD. BY	DESCRIPTION	DATE	App'd.
1	(A)	IMP		REVISED · FINISH · GROUND · IN · FRONT OF · OFFICE · TO · SUIT · REVISION SUB. -1, MARK - A. ON DRWG - 15544	9/28/49	
2	(B)	KRW		CHANGED HOOD LT. SPACING	3/24/50	
3	(C)	BAH	CLS	CHANGEOUT SIGN LIGHTING	4/20/88	MS

APPROVED BY THE BOARD OF PUBLIC WORKS
SEATTLE 8-31 1949
W. C. Morse, CHAIRMAN
ATTEST E. G. Henry, SECRETARY

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

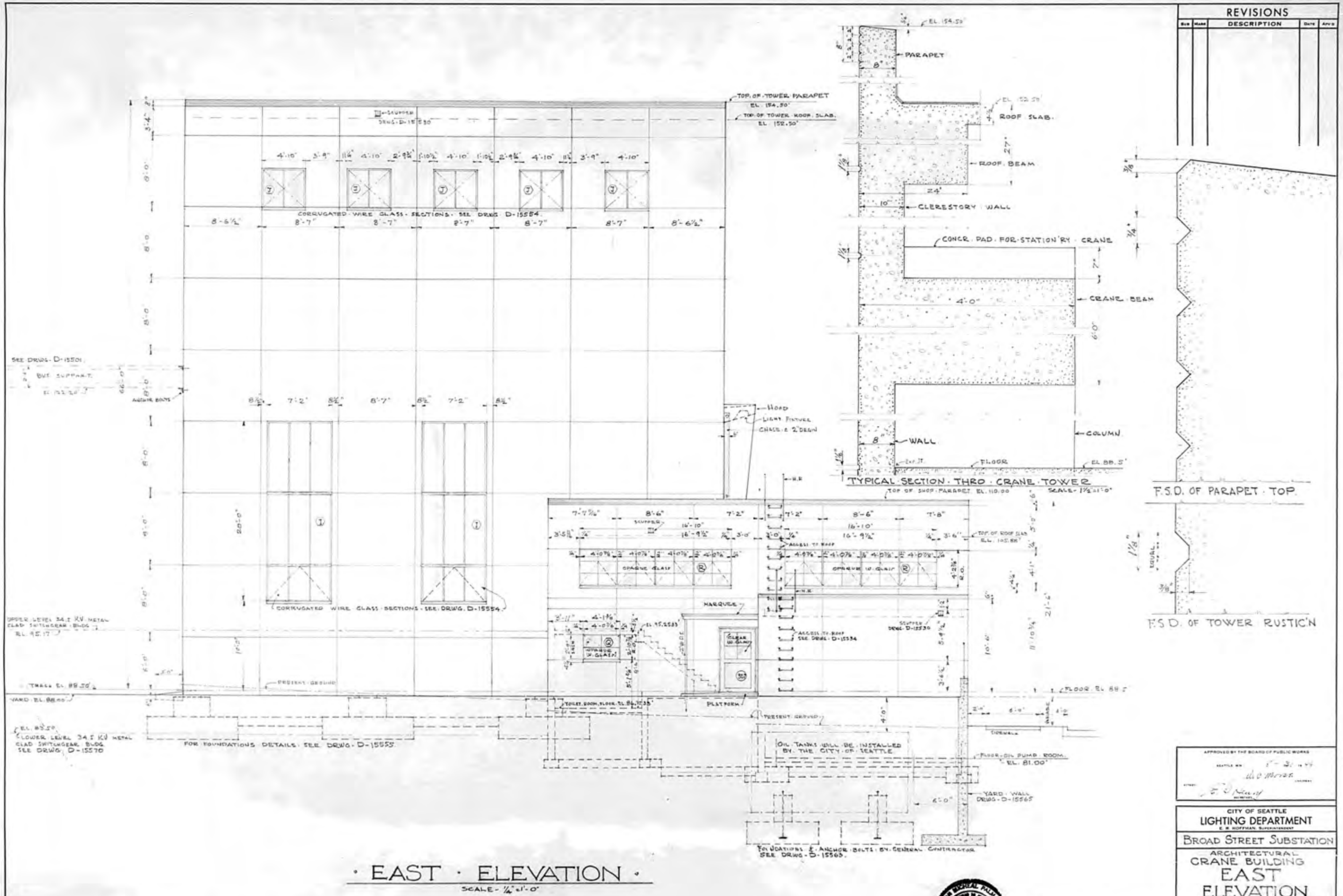
BROAD STREET SUBSTATION

ARCHITECTURAL
CRANE BUILDING
WEST ELEVATION

IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY · BLDG.
SEATTLE · 4 · WASH.
TEL. EL. 4678

Ord.	76036 77761	Work Order 20864-6	Date 7-25-49
Dw. by	BCG	Submitted	
Tr. by	YP	Recommended	
Ck. by	IMP	Approved	Supt.
Sub. No.	3	Drawing No.	D-15549

SERIAL No. 12182


TOP OF TOWER PARAPET EL. 154.50'
TOP OF TOWER ROOF SLAB EL. 152.50'
CORRUGATED WIRE GLASS SECTIONS SEE DRWG. D-15554
CORRUGATED WIRE GLASS SECTIONS SEE DRWG. D-15554
SEE DRWG. D-15501
ANCHOR BOLTS
HOOD
LIGHT FIXTURE
OPAQUE GLASS
OPAQUE W. GLASS
MARQUEE
CLEAR W. GLASS
ACCESS TO ROOF SEE DRWG. D-15534
PRESENT GROUND
PLATFORM
FLOOR EL. 88.5
FOR FOUNDATIONS DETAILS SEE DRWG. D-15555
OIL TANKS WILL BE INSTALLED BY THE CITY OF SEATTLE
FLOOR OIL PUMP ROOM EL. 81.00'
YARD WALL DRWG. D-15565
FOUNDATIONS & ANCHOR BOLTS BY GENERAL CONTRACTOR SEE DRWG. D-15565
PARAPET
ROOF SLAB
ROOF BEAM
CLERESTORY WALL
CONCR. PAD FOR STATION'RY CRANE
CRANE BEAM
WALL
COLUMN
FLOOR
EL. 88.5'
TYPICAL SECTION THRO CRANE TOWER
SCALE - 1½"=1'-0"
F.S.D. OF PARAPET TOP
F.S.D. OF TOWER RUSTIC'N

EAST · ELEVATION

SCALE - ¼"=1'-0"

REVISIONS				
SUB	MARK	DESCRIPTION	DATE	APP'D

APPROVED BY THE BOARD OF PUBLIC WORKS

CITY OF SEATTLE
LIGHTING DEPARTMENT

BROAD STREET SUBSTATION

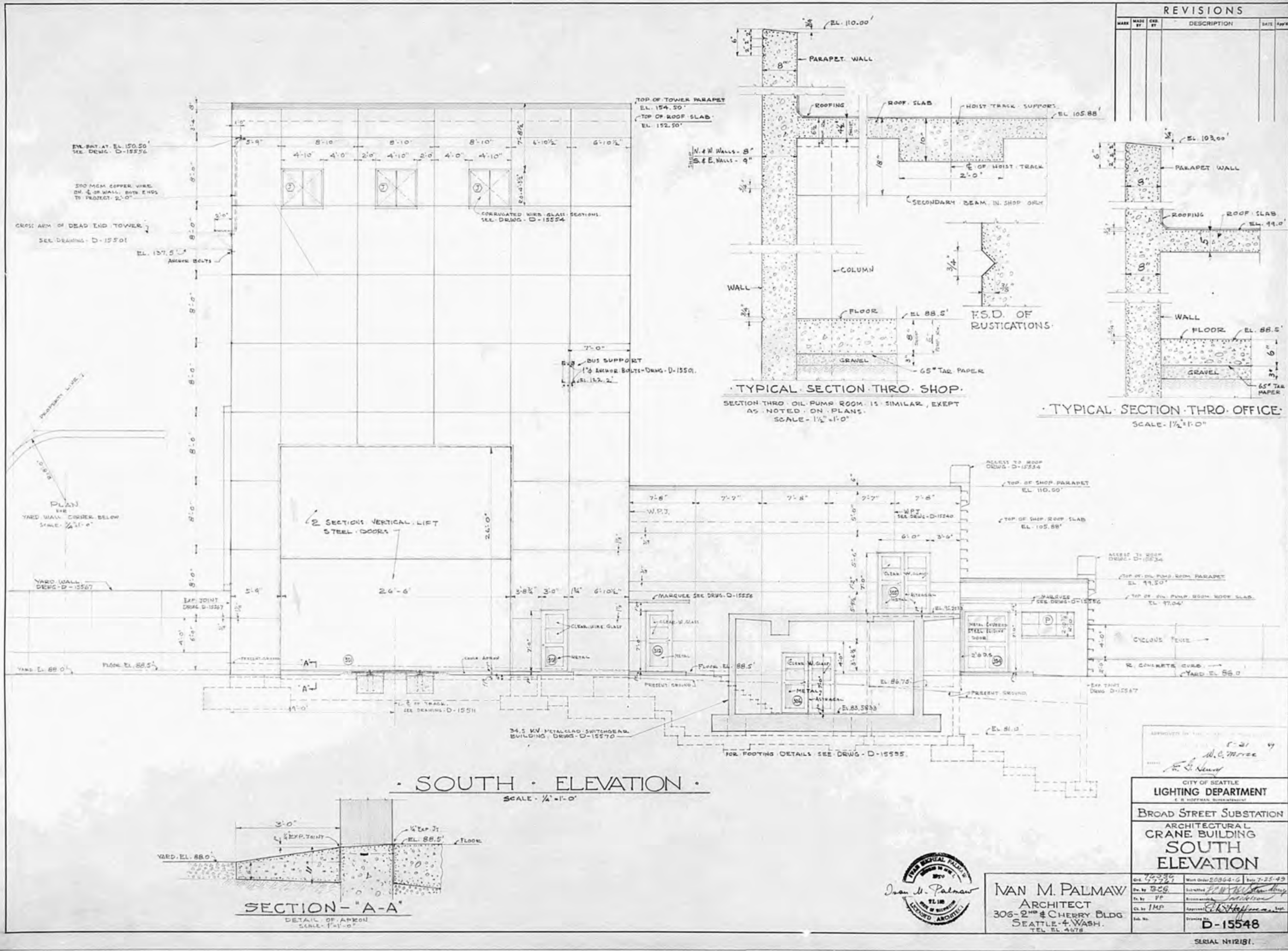
ARCHITECTURAL
CRANE BUILDING
EAST
ELEVATION

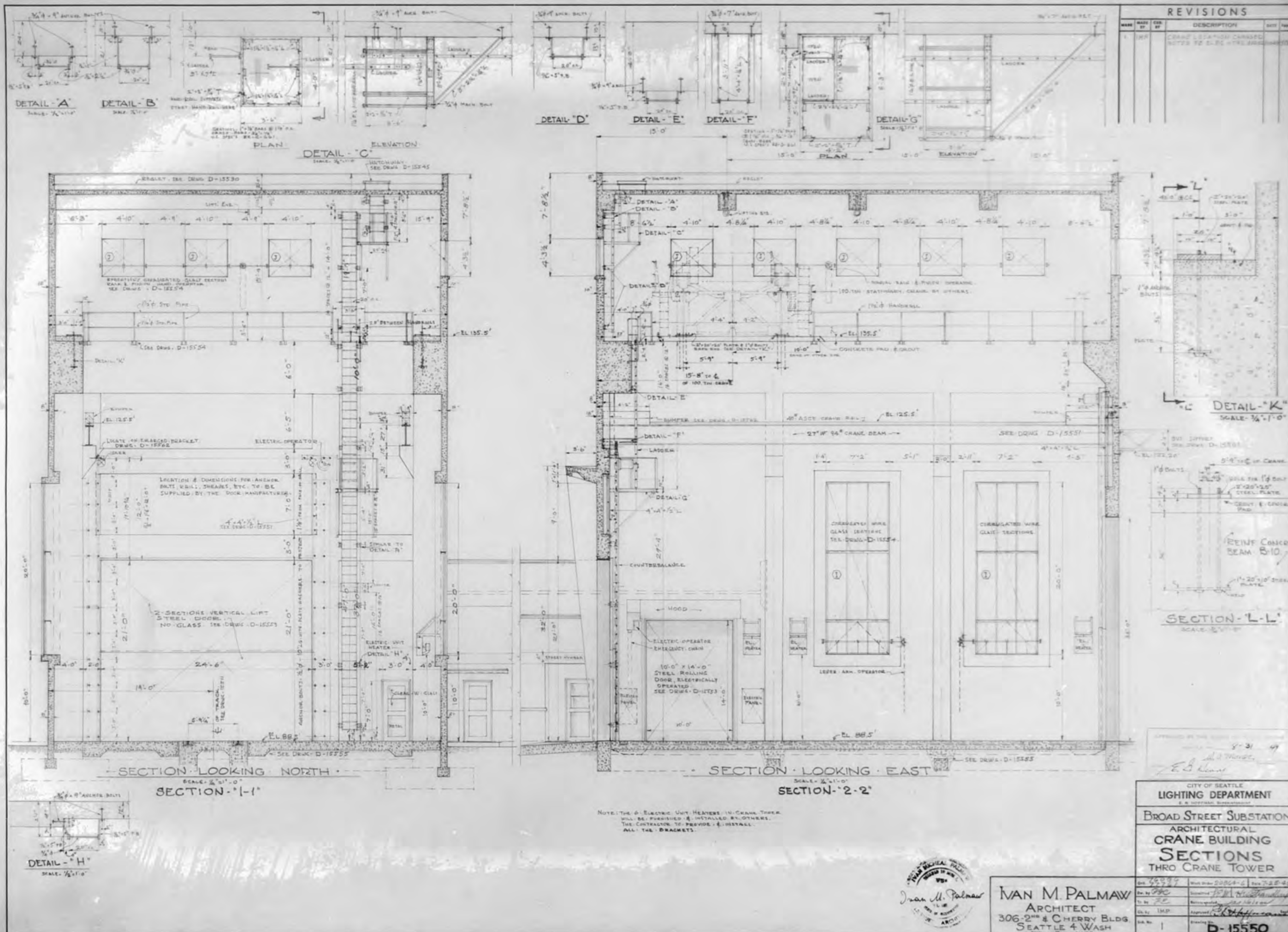
IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY BLDG
SEATTLE - 4, WASH.
TEL. EL. 4678

SCALE ¼"=1'-0"

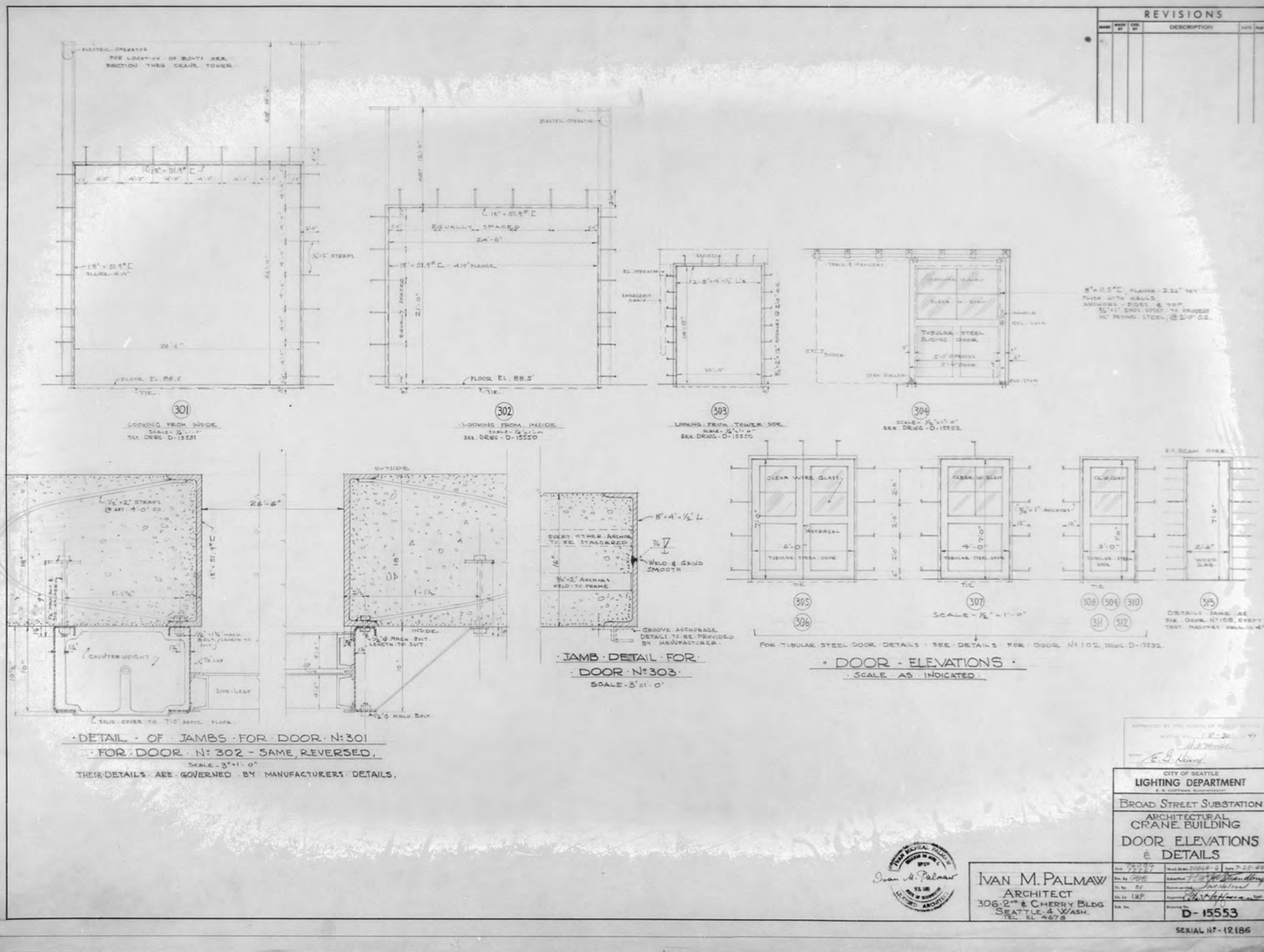
D-15547

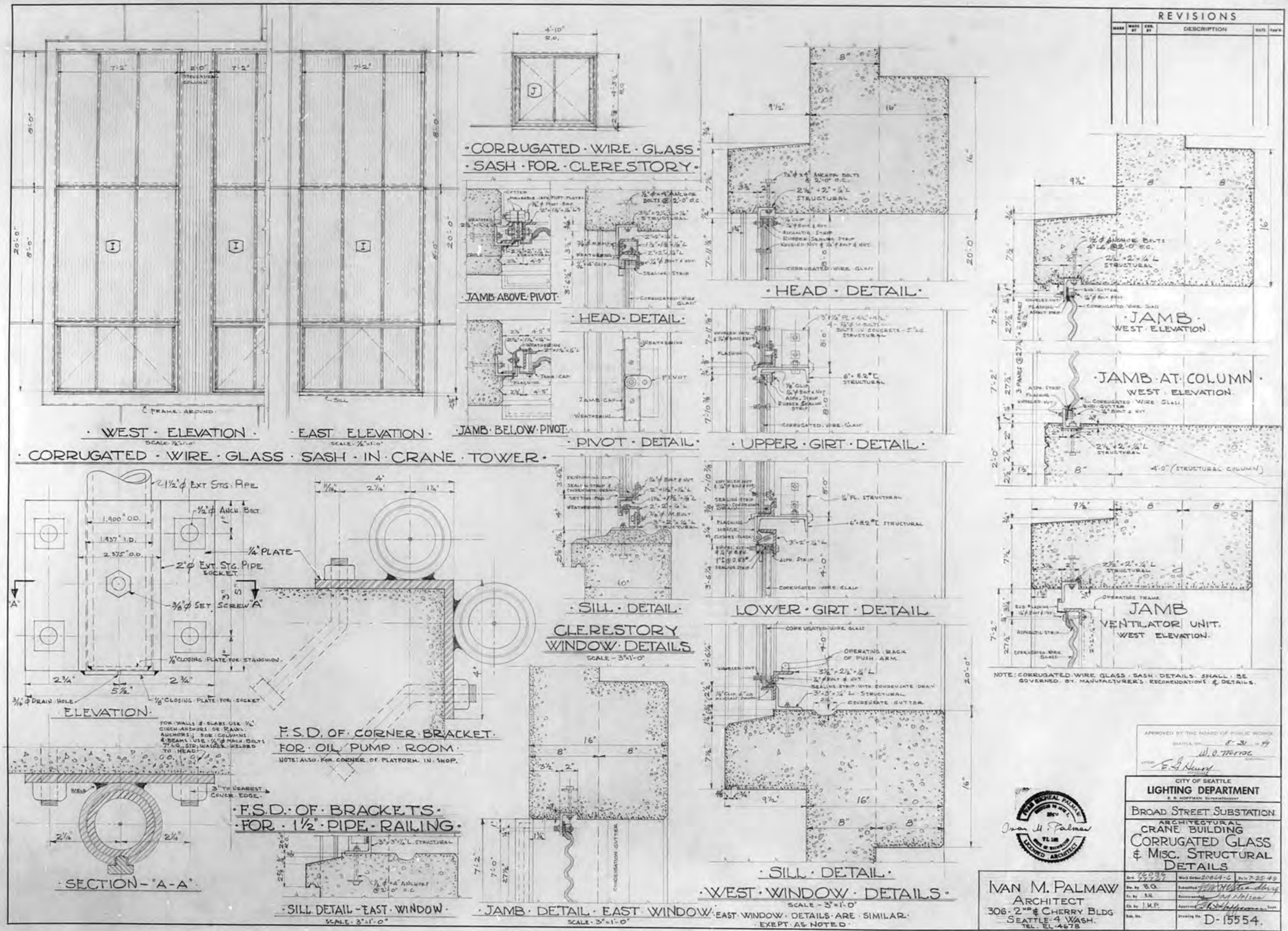
SERIAL NO. 12180.


REVISIONS
MARK
MADE BY
CKD. BY
DESCRIPTION
DATE
APP'D.
EL. 110.00'
PARAPET WALL
ROOFING
ROOF SLAB
HOIST TRACK SUPPORT
EL. 105.88'
N. & W. WALLS - 8"
S. & E. WALLS - 9"
℄ OF HOIST TRACK
SECONDARY BEAM IN SHOP ONLY
COLUMN
WALL
FLOOR
EL. 88.5'
GRAVEL
65# TAR PAPER
F.S.D. OF RUSTICATIONS
·TYPICAL· SECTION THRO· SHOP·
SECTION THRO OIL PUMP ROOM IS SIMILAR, EXEPT AS NOTED ON PLANS.
SCALE - 1½"=1'-0"
EL. 103.00'
PARAPET WALL
ROOFING
ROOF SLAB
EL. 99.0'
WALL
FLOOR
EL. 88.5'
GRAVEL
65# TAR PAPER
·TYPICAL· SECTION ·THRO· OFFICE·
SCALE - 1½"=1'-0"
TOP OF TOWER PARAPET EL. 154.50'
TOP OF ROOF SLAB EL. 152.50'
EYE BOLT AT EL. 150.50' SEE DRWG. D-15556
500 MCM COPPER WIRE ON ℄ OF WALL. BOTH ENDS TO PROJECT 2'-0"
CROSS ARM OF DEAD END TOWER SEE DRAWING D-15501
EL. 137.5'
ANCHOR BOLTS
CORRUGATED WIRE GLASS SECTIONS. SEE DRWG. D-15554
BUS SUPPORT
1⅛" ANCHOR BOLTS - DRWG. D-15501.
EL. 142.2'
PROPERTY LINE
PLAN OF YARD WALL CORNER BELOW SCALE - ⅛"=1'-0"
2 SECTIONS VERTICAL LIFT STEEL DOORS
YARD WALL DRWG. D-15567
EXP. JOINT DRWG. D-15567
YARD EL. 88.0'
FLOOR EL. 88.5'
℄ OF TRACK SEE DRAWING D-15511
34.5 KV. METALCLAD SWITCHGEAR BUILDING DRWG. D-15570
MARQUEE SEE DRWG. D-15556
CLEAR WIRE GLASS
METAL
W.P.J.
W.P.J. SEE DRWG. D-15540
ACCESS TO ROOF DRWG. D-15554
TOP OF SHOP PARAPET EL. 110.00'
TOP OF SHOP ROOF SLAB EL. 105.88'
TOP OF OIL PUMP ROOM PARAPET EL. 99.50'
TOP OF OIL PUMP ROOM ROOF SLAB EL. 97.04'
METAL COVERED STEEL ROLLING DOOR
CYCLONE FENCE
R. CONCRETE CURB
YARD EL. 86.0
PRESENT GROUND
EL. 86.75
EL. 83.5833
EL. 81.0
FOR FOOTING DETAILS SEE DRWG. D-15595.
·SOUTH · ELEVATION·
SCALE - ¼"=1'-0"
YARD EL. 88.0'
½" EXP. JOINT
¼" EXP. JT.
EL. 88.5'
FLOOR
SECTION - "A-A"
DETAIL OF APRON
SCALE - 1"=1'-0"
IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY BLDG
SEATTLE - 4, WASH.
TEL. EL. 4678
CITY OF SEATTLE
LIGHTING DEPARTMENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
SOUTH
ELEVATION
D-15548
SERIAL No 12181.



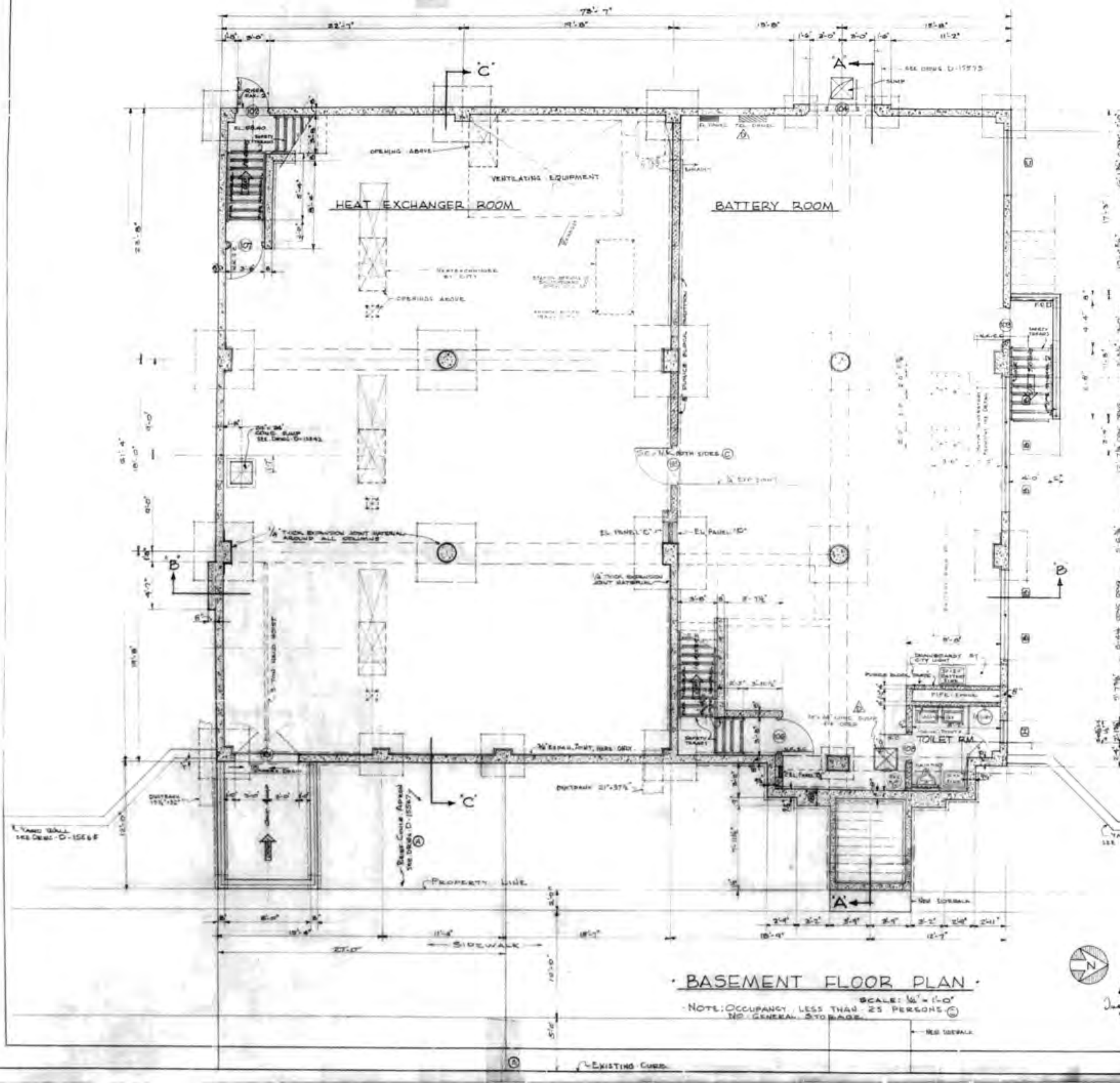
REVISIONS
DETAIL "A"
DETAIL "B"
PLAN
ELEVATION
DETAIL "C"
DETAIL "D"
DETAIL "E"
DETAIL "F"
DETAIL "G"
PLAN
ELEVATION
DETAIL "K"
SCALE 3/4"=1'-0"
SECTION "L-L"
SECTION LOOKING NORTH
SECTION "1-1"
SECTION LOOKING EAST
SECTION "2-2"
DETAIL "H"
EL. 135.5'
EL. 125.5'
EL. 88.5'
CITY OF SEATTLE
LIGHTING DEPARTMENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
SECTIONS
THRO CRANE TOWER
IVAN M. PALMAW
ARCHITECT
306-2ND & CHERRY BLDG.
SEATTLE 4 WASH
TEL - EL - 4678
D-15550
SERIAL Nº - 12183


REVISIONS
DESCRIPTION
LOOKING FROM INSIDE
SEE DRWG. D-15551
LOOKING FROM INSIDE
SEE DRWG. D-15550
LOOKING FROM TOWER SIDE
SEE DRWG. D-15550
SEE DRWG. D-15552
FLOOR EL. 88.5'
TUBULAR STEEL SLIDING DOOR
CLEAR WIRE GLASS
TUBULAR STEEL DOOR
SCALE - 1/2" = 1'-0"
JAMB · DETAIL · FOR · DOOR · Nº 303 ·
SCALE - 3" = 1'-0"
WELD & GRIND SMOOTH
GROOVE ANCHORAGE DETAILS TO BE PROVIDED BY MANUFACTURER.
EVERY OTHER ANCHOR TO BE STAGGERED
FOR TUBULAR STEEL DOOR DETAILS · SEE DETAILS · FOR · DOOR · Nº 102, DRWG. D-15532.
· DOOR · ELEVATIONS ·
· SCALE · AS · INDICATED ·
· DETAIL · OF · JAMBS · FOR · DOOR · Nº 301
· FOR · DOOR · Nº 302 - SAME, REVERSED.
SCALE - 3" = 1'-0"
THESE DETAILS ARE GOVERNED BY MANUFACTURERS DETAILS.
COUNTERWEIGHT
DOOR LEAF
OUTSIDE
INSIDE
CITY OF SEATTLE
LIGHTING DEPARTMENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
DOOR ELEVATIONS & DETAILS
IVAN M. PALMAW
ARCHITECT
306-2ND & CHERRY BLDG
SEATTLE-4 WASH.
TEL. EL. 4678
Work Order 20864-6
Date 7-25-49
D-15553
SERIAL Nº-12186


REVISIONS
MARK
DESCRIPTION
DATE
CORRUGATED · WIRE · GLASS · SASH · FOR · CLERESTORY
4'-10" R.O.
JAMB ABOVE PIVOT
JAMB BELOW PIVOT
HEAD · DETAIL
PIVOT · DETAIL
SILL · DETAIL
CLERESTORY WINDOW DETAILS
SCALE - 3"=1'-0"
· WEST · ELEVATION ·
SCALE - ½"=1'-0"
· EAST · ELEVATION ·
SCALE - ½"=1'-0"
· CORRUGATED · WIRE · GLASS · SASH · IN · CRANE · TOWER ·
C FRAME AROUND
STRUCTURAL COLUMN
HEAD · DETAIL
UPPER · GIRT · DETAIL
LOWER · GIRT · DETAIL
SILL · DETAIL
· WEST · WINDOW · DETAILS ·
SCALE - 3"=1'-0"
EAST · WINDOW · DETAILS · ARE · SIMILAR · EXEPT · AS · NOTED
CORRUGATED WIRE GLASS
2½" × 2" × ¼" L STRUCTURAL
6" × 8.2# ⊏ STRUCTURAL
· JAMB · WEST · ELEVATION ·
· JAMB · AT · COLUMN · WEST · ELEVATION ·
4'-0" (STRUCTURAL COLUMN)
JAMB VENTILATOR UNIT. WEST ELEVATION.
NOTE: CORRUGATED · WIRE · GLASS · SASH · DETAILS · SHALL · BE GOVERNED · BY · MANUFACTURER'S · RECOMENDATIONS · & · DETAILS.
1½"⌀ EXT STG. PIPE
½"⌀ ANCH. BOLT
1.900" O.D.
1.937" I.D.
2.375" O.D.
¼" PLATE
2"⌀ EXT. STG. PIPE SOCKET
⅜"⌀ SET SCREW "A"
⅛" CLOSING PLATE FOR STANCHION
3/16"⌀ DRAIN HOLE
⅛" CLOSING PLATE FOR SOCKET
ELEVATION
FOR WALLS & SLABS USE ½" CINCH ANCHORS OR RAWL ANCHORS; FOR COLUMNS & BEAMS USE ½"⌀ MACH. BOLTS 7" LG. STD. WASHER WELDED TO HEAD.
3" TO NEAREST CONCR. EDGE.
· SECTION - "A-A" ·
F.S.D. OF CORNER BRACKET · FOR · OIL · PUMP · ROOM ·
NOTE: ALSO FOR CORNER OF PLATFORM IN SHOP.
· F.S.D. · OF · BRACKETS · · FOR · 1½" · PIPE · RAILING ·
· SILL DETAIL - EAST · WINDOW ·
SCALE - 3"=1'-0"
· JAMB · DETAIL · EAST · WINDOW ·
SCALE - 3"=1'-0"
CONDENSATION GUTTER
APPROVED BY THE BOARD OF PUBLIC WORKS
8-31-49
CITY OF SEATTLE
LIGHTING DEPARTMENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CRANE BUILDING
CORRUGATED GLASS & MISC. STRUCTURAL DETAILS
Work Order 20654-C
Dr. by B.O.
Tr. by S.R.
Ch. by J.M.P.
Drawing No. D-15554.
IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY BLDG.
SEATTLE 4 WASH.
TEL. EL 4678
SERIAL Nº 12187.

REVISIONS

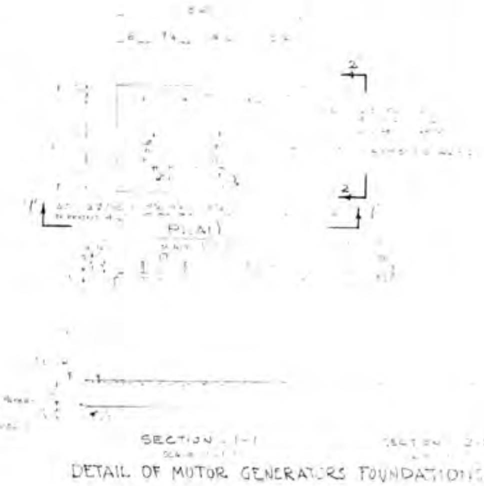
SUB	MARK	DESCRIPTION	DATE	APP'D
1	[illegible]	[illegible]	[illegible]	
2	[illegible]	[illegible]		
3	[illegible]	[illegible]		
4	[illegible]	[illegible]		
5	[illegible]			
6	©	[illegible]		



BASEMENT FLOOR PLAN

SCALE: 1/4" = 1'-0"

NOTE: OCCUPANCY LESS THAN 25 PERSONS ©
NO GENERAL STORAGE.



DETAIL OF MOTOR GENERATORS FOUNDATIONS

8-31-49
J.C. Morse
E. G. Henry

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

BROAD STREET SUBSTATION

ARCHITECTURAL
CONTROL BUILDING
BASEMENT PLAN

ORD. [illegible]	WORK ORDER 20064[illegible]	DATE 7-25-49
DR. BY P.Y.C.	SUBMITTED [illegible]	
TR. BY P.Y.C.	RECOMMENDED [illegible]	
CK. BY I.M.P.	APPROVED [illegible] SUPT.	
SUB. NO. 5	DRAWING NO. D-15525	

IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY BLDG
SEATTLE 4 WASH
TEL. EL 4678

Ivan M. Palmaw

SERIAL Nº 12158

REVISIONS

SUB	MARK	DESCRIPTION	DATE	APP'D
1	(A)	ADDED GENERAL NOTES, [illegible] HARDWARE FOR DOORS 205 & 206	[illegible]/41	[illegible]
2	(B)	CHANGED HOLES THRU FLOOR TO AGREE WITH DWGS D-14006 & D-15535	[illegible]/50	[illegible]
3	(C)	[illegible]	[illegible]/50	[illegible]
4	(D)	ADDED PUMICE ENCL. AROUND AIR DUCT IN RECT. RM.	[illegible]/50	[illegible]
5	(E)	REVISED ROOMS 105 & 207 TO ACCOMODATE NEW CONTROL PANELS	5/29/81	MS

EXIT HARDWARE SCHEDULE

SYMBOL	DESCRIPTION
P. B.	INDUSTRIAL PANIC BOLT
N. K.	NO KEY LOCK (FROM INSIDE)
S. C.	SELF CLOSING
C. B.	CREMONE BOLT

· SCHEDULE OF FINISHES ·

ROOM	SUB-FLOOR	FIN FLOOR	BASE	WALLS	CEILING	WINDOW, ETC.
RECTIFIER ROOM	REINF. CONC.	CEM.	NONE	EXT. LUMINAL	EXT. LUMINAL	OIL PAINT
RELAY ROOM	" "	"	"			
CONTROL ROOM	" "	"	"			
HALL	" "	" "	PAINT			
LOCKER ROOM	" "	"	"			
JANITOR	" "		"			
LAVATORY - 1ST FLR.	" "	"				
TOILET - BASEMENT	CONC. ON FILL	CEM. WITH COLOR. HRDNR.	"			
BATTERY ROOM	" " "	"				
HEAT EXCHANGER RM.	" " "	"	"			"
EXTERIOR WALLS	—	—	—	[illegible]		

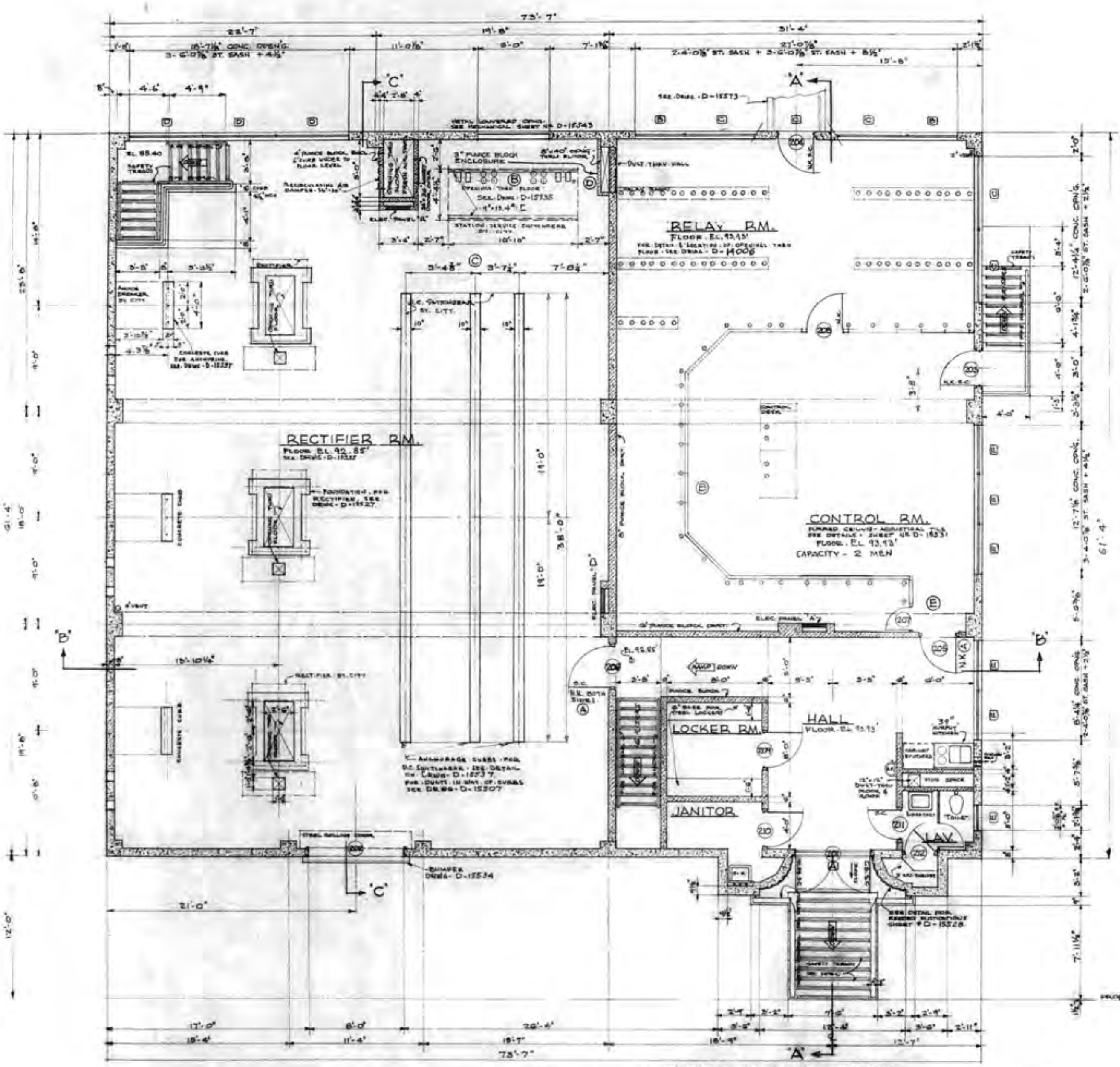
· DOOR SCHEDULE ·

MARK	SIZE	MATERIAL FRAME	MATERIAL DOOR	GLAZE	DESCRIPTION
101	1 PR. 6'-0" x 8'-1½" x 2½"	7" ⊏	STR. STEEL	NONE	∠ FRAME WELDED #14 GA. ST. PL.
102	3'-0" x 7'-0" x 1¾"	5" ⊏	TUBLR. ST.	CLR. WIRE GL.	STOCK TYPE - SEE DETAIL
103	" " "	"	" "	" "	
104	2'-8" x 6'-9" x 2"	4" ⊏	STR. STEEL	NONE	∠ FRAME WELDED #14 GA. ST. PL.
105	3'-6" x 7'-0" x 1¾"	7" ⊏	WD. SLAB	CLR. WIRE GL.	FIR SLAB
106	3'-0" x 7'-0" x 1¾"	PRESSED STEEL	KALAMEIN	" " "	KALAMEIN - SEE DETAIL
107	" " "	"	"	" " "	
108	2'-6" x 7'-0" x 1¾"	"	WD. SLAB	NONE	FIR SLAB
201	1 PR. 6'-4" x 7'-0" x 2"	5" ⊏	STR. STEEL	NONE	⊏ FRAME WELDED #14 GA. ST. PL.
202	8'-0" x 10'-0"	7" ⊏	ROLLING ST.	NONE	STEEL ROLLING DOOR
203	3'-0" x 7'-0" x 1¾"	5" ⊏	TUBLR. ST.	CLR. WIRE GL.	STOCK TYPE - TRANSOM OVER
204	" " "	"	" "	" " "	" "
205	3'-0" x 7'-0" x 1¾"	PRESSED STEEL	" "	PL. GLASS	" "
206	3'-6" x 7'-0" x 1¾"	"	WD. SLAB	CLR. WIRE GL.	FIR SLAB
207	2'-0" x 7'-0" x 1¾"	3" ⊏	" "	" " "	" "
208	" " "	"	" "	" " "	" "
209	" " "	PRESSED STEEL	" "	NONE	" "
210	" " "	"	" "	"	" "
211	2'-8" x 7'-0" x 1¾"	"	" "	"	" "
212	" — "	"	" "	"	" "

(E) → 205, 207

GENERAL NOTES.

(A)
1. RISE & RUN OF ALL STEPS & STAIRS AS PER SECT. 604, SEATTLE BLDG. CODE.
2. ALL STAIRS MIN. 7'-0" CLEAR HEADROOM.
3. HANDRAILS BOTH SIDES OF ALL STEPS & STAIRS AS PER SECT. 606 SEATTLE BLDG. CODE.
4. BALLUSTRADES TO BE MIN. 3'-6" HIGH.
5. ALL KALAMEIN DOORS ARE FIRE DOORS AS PER ORDINANCE.
6. "NON-SLIP SURFACE" ON RAMPS.



· FIRST FLOOR PLAN ·

SCALE: ⅛" = 1'-0"

· NOTE: OCCUPANCY LESS THAN 25 PERSONS. (A)

APPROVED BY THE BOARD OF PUBLIC WORKS
SEATTLE, WN. 8 - 31 1949
W. C. Morse, PRESIDENT
ATTEST: E. S. Henry, SECRETARY

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

BROAD STREET SUBSTATION

ARCHITECTURAL
CONTROL BUILDING
FIRST FLOOR PLAN

IVAN MICHEAL PALMAW — REGISTERED ARCHITECT — 1950 — STATE OF WASHINGTON

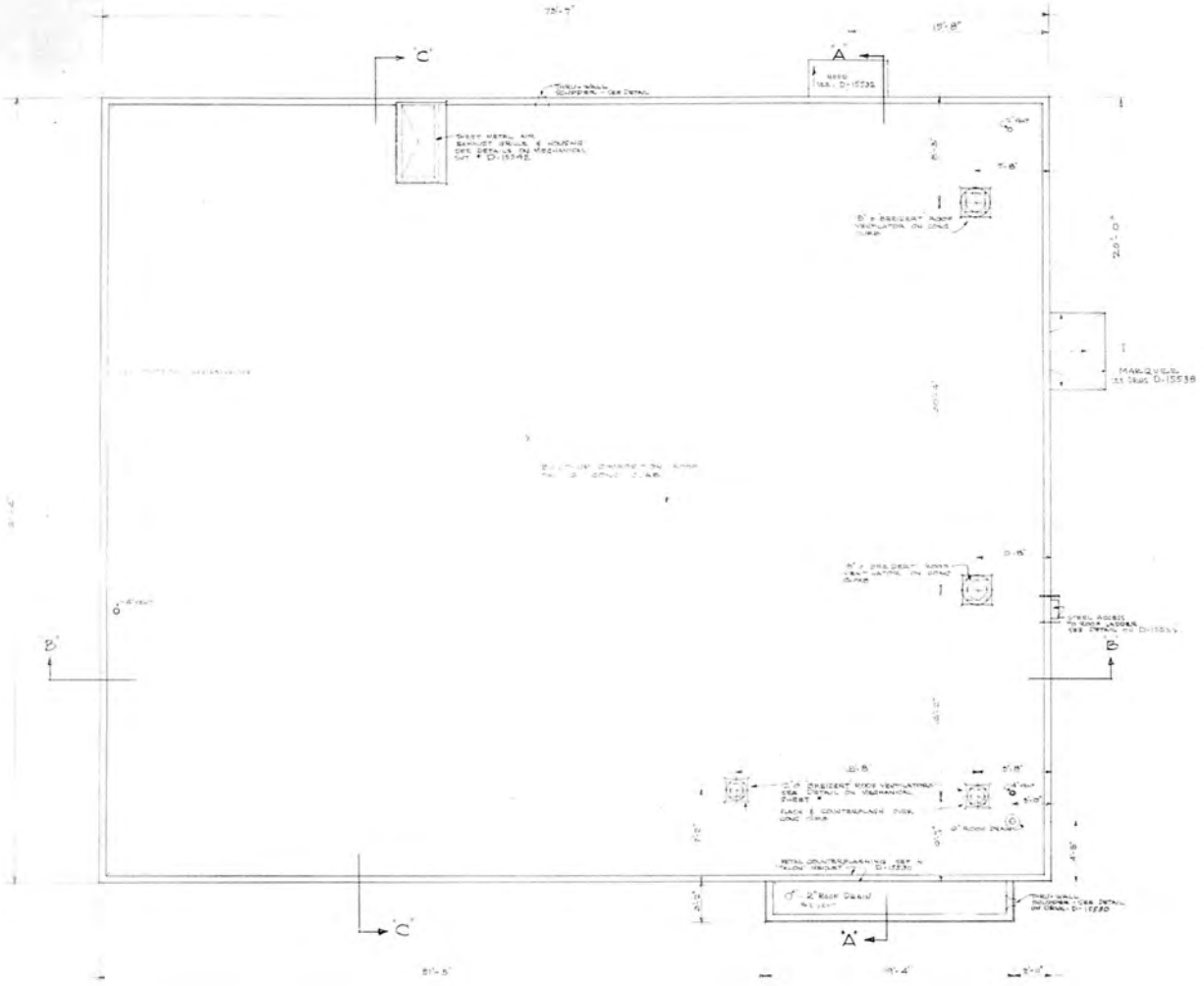
Ivan M. Palmaw

IVAN M PALMAW
ARCHITECT
306-2ND & CHERRY BLDG.
SEATTLE 4 WASH.
TEL. EL. 4678 SCALE ⅛" = 1'-0"

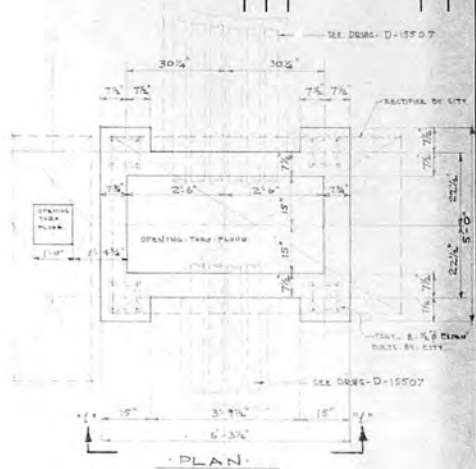
ORD. [illegible]	W. O. 20864-5	DATE 7-25-49
DR. BY P.G.C.	SUBMITTED [illegible]	
TR. BY P.G.C.	RECOMMENDED [illegible] Nelson	
CK. BY I.M.P.	APPROVED [illegible] Hoffman, SUPT.	
SUB. NO. 5	DRAWING NO. D-15526	

SERIAL NO. 12159

REVISIONS				
Sub	Mark	DESCRIPTION	Date	Appd



· ROOF PLAN ·
SCALE: 1/4" = 1'-0"



· PLAN ·
SCALE: 3/4" = 1'-0"

· SECTION - "1-1" ·
SCALE: 1/2" = 1'-0"

· DETAILS · OF · RECTIFIER · FOUNDATIONS.

APPROVED BY THE BOARD OF PUBLIC WORKS
SEATTLE WN. 1-31-49
M. O. Morse
SUPT. E. B. Henry

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. B. HOFFMAN, SUPERINTENDENT

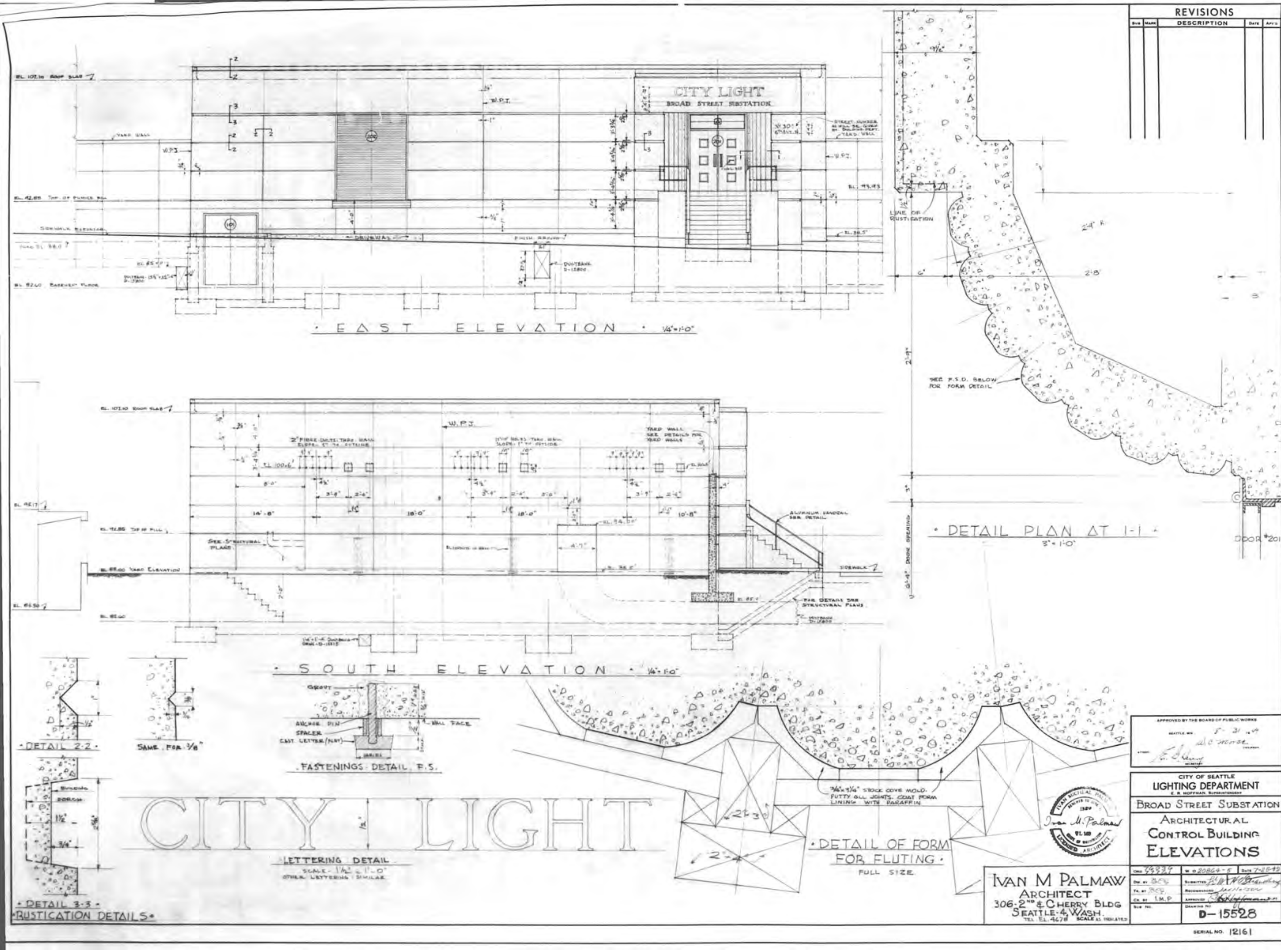
BROAD STREET SUBSTATION

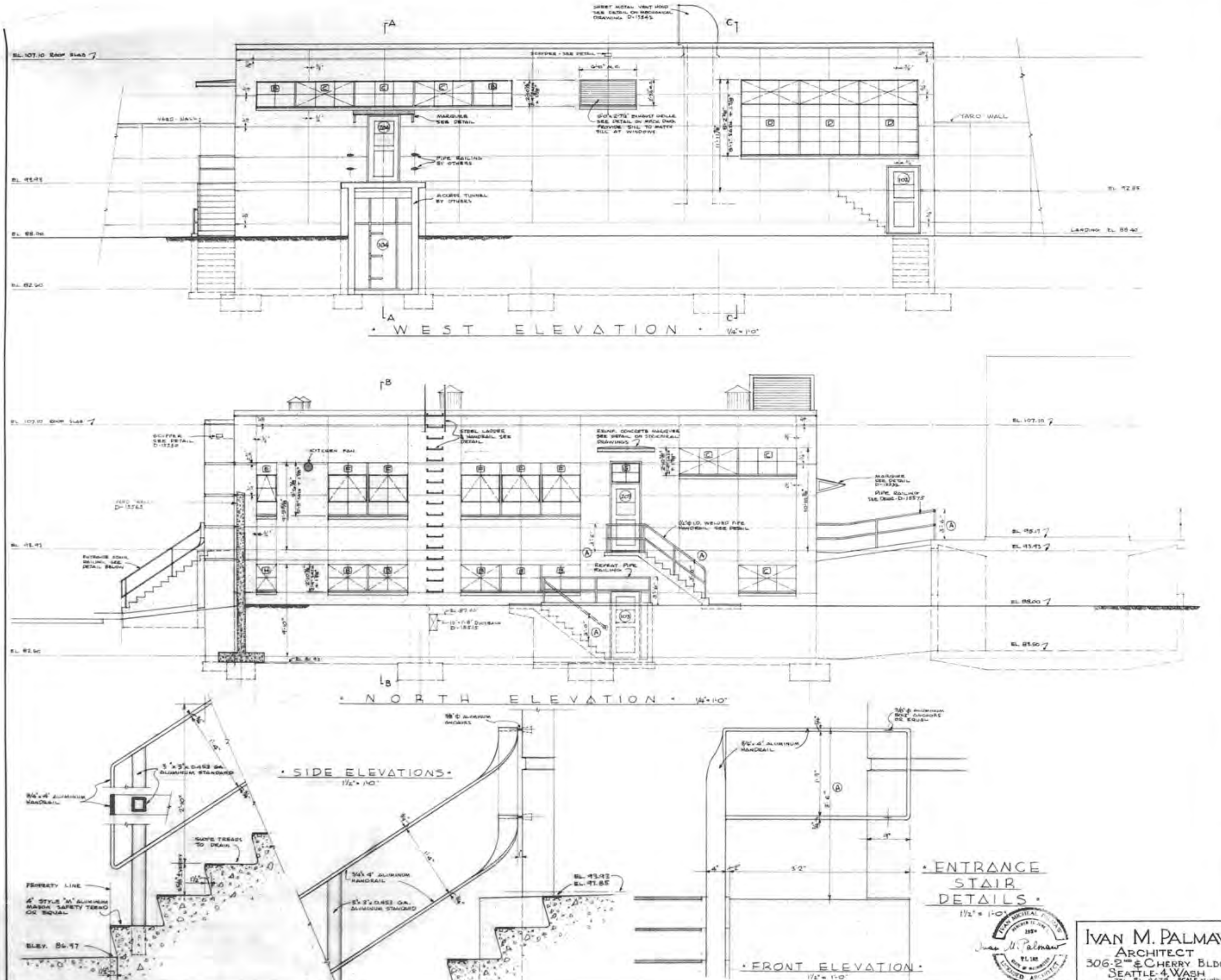
ARCHITECTURAL
CONTROL BUILDING
ROOF PLAN

Ord. 24339	W.O. 20864-5	Date 7-26-49
Dr. by PHS	Submitted	
Tr. by PHS	Recommended	
Ck. by M.P.	Approved	
Sub. No.	Drawing No. D-15527	

IVAN M PALMAW
ARCHITECT
306-2ND & CHERRY BLDG.
SEATTLE-4, WASH.
TEL. EL-4478
SCALE AS INDICATED

SERIAL NO. 12160


REVISIONS
DESCRIPTION
CITY LIGHT
BROAD STREET SUBSTATION
EAST ELEVATION 1/4"=1'-0"
SOUTH ELEVATION 1/4"=1'-0"
DETAIL PLAN AT 1-1
3"=1'-0"
DOOR #201
LINE OF RUSTICATION
SEE F.S.D. BELOW FOR FORM DETAIL
ALUMINUM HANDRAIL SEE DETAIL
FOR DETAILS SEE STRUCTURAL PLANS
SIDEWALK
DETAIL 2-2
SAME FOR 3/8"
GROUT
ANCHOR PIN
SPACER
CAST LETTER (FLAT)
WALL FACE
FASTENINGS DETAIL F.S.
DETAIL 3-3
RUSTICATION DETAILS
CITY LIGHT
LETTERING DETAIL
SCALE 1 1/2" = 1'-0"
OTHER LETTERING SIMILAR
3/4"x3/4" STOCK COVE MOLD. PUTTY ALL JOINTS. COAT FORM LINING WITH PARAFFIN
DETAIL OF FORM FOR FLUTING
FULL SIZE
APPROVED BY THE BOARD OF PUBLIC WORKS
CITY OF SEATTLE
LIGHTING DEPARTMENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CONTROL BUILDING
ELEVATIONS
IVAN M PALMAW
ARCHITECT
306-2ND & CHERRY BLDG
SEATTLE-4, WASH.
D-15528
SERIAL NO. 12161



SHEET METAL VENT HOOD SEE DETAIL ON MECHANICAL DRAWING D-13543
EL. 107.10 ROOF SLAB
SCUPPER - SEE DETAIL
YARD WALL
MARQUEE SEE DETAIL
PIPE RAILING BY OTHERS
ACCESS TUNNEL BY OTHERS
LANDING EL. 88.40
EL. 88.00
EL. 82.60
WEST ELEVATION
1/4" = 1'-0"
STEEL LADDER & HANDRAIL SEE DETAIL
KITCHEN FAN
REPEAT PIPE RAILING
EL. 107.10
EL. 88.00
EL. 85.00
NORTH ELEVATION
1/4" = 1'-0"
SIDE ELEVATIONS
1 1/2" = 1'-0"
3/4" x 4" ALUMINUM HANDRAIL
PROPERTY LINE
SLOPE TREADS TO DRAIN
ELEV. 84.97
EL. 93.93
EL. 93.85
ENTRANCE STAIR DETAILS
1 1/2" = 1'-0"
FRONT ELEVATION
1 1/2" = 1'-0"

IVAN M. PALMAW
ARCHITECT
306-2ND & CHERRY BLDG.
SEATTLE-4, WASH
TEL. EL. 4678 SCALE AS INDICATED

REVISIONS

SYM	MARK	DESCRIPTION	DATE	APP'D
1	(A)	CORRECTED DIMENSIONS FOR HANDRAILS & BALUSTRADE AS PER GENERAL NOTE #4 ON DRWG. D-15526	11/8/49	[illegible]

WINDOW SCHEDULE

ALL SASH SIZES INDICATED ARE TAKEN FROM CATALOGUE OF FENTRON STEEL CO. SEATTLE, WA. SASH TYPES ARE SERIES #400 COMMERCIAL PROJ. OR SERIES #600 PIVOTED. SEE ELEV. FOR OPERATION

NO.	WIDTH	HEIGHT	TYPE	GLASS	NOTES
A	6'-4"	1'-8 3/4"	[illegible]	OBSCURE WIRE GLASS	SPECIAL SASH
B	4'-0 3/4"	2'-4"	"	"	
C	6'-0 3/4"	2'-4"	"	"	
D	6'-0 3/4"	6'-1"	"	"	BOTTOM LIGHTS TO BE CLEAR WIRE GLASS
E	2'-0 3/4"	5'-5"	"	"	
F	4'-0 3/4"	5'-5"	-	"	BOTTOM LIGHTS TO BE CLEAR WIRE GLASS
G	3'-6"	2'-3 3/4"		"	SPECIAL SASH
H	2'-0 3/4"	2'-4"	-	"	

APPROVED BY THE BOARD OF PUBLIC WORKS
SEATTLE, WN. 8-31 1949
A. B. Moore, CHAIRMAN
ATTEST: E. E. Henry, SECRETARY

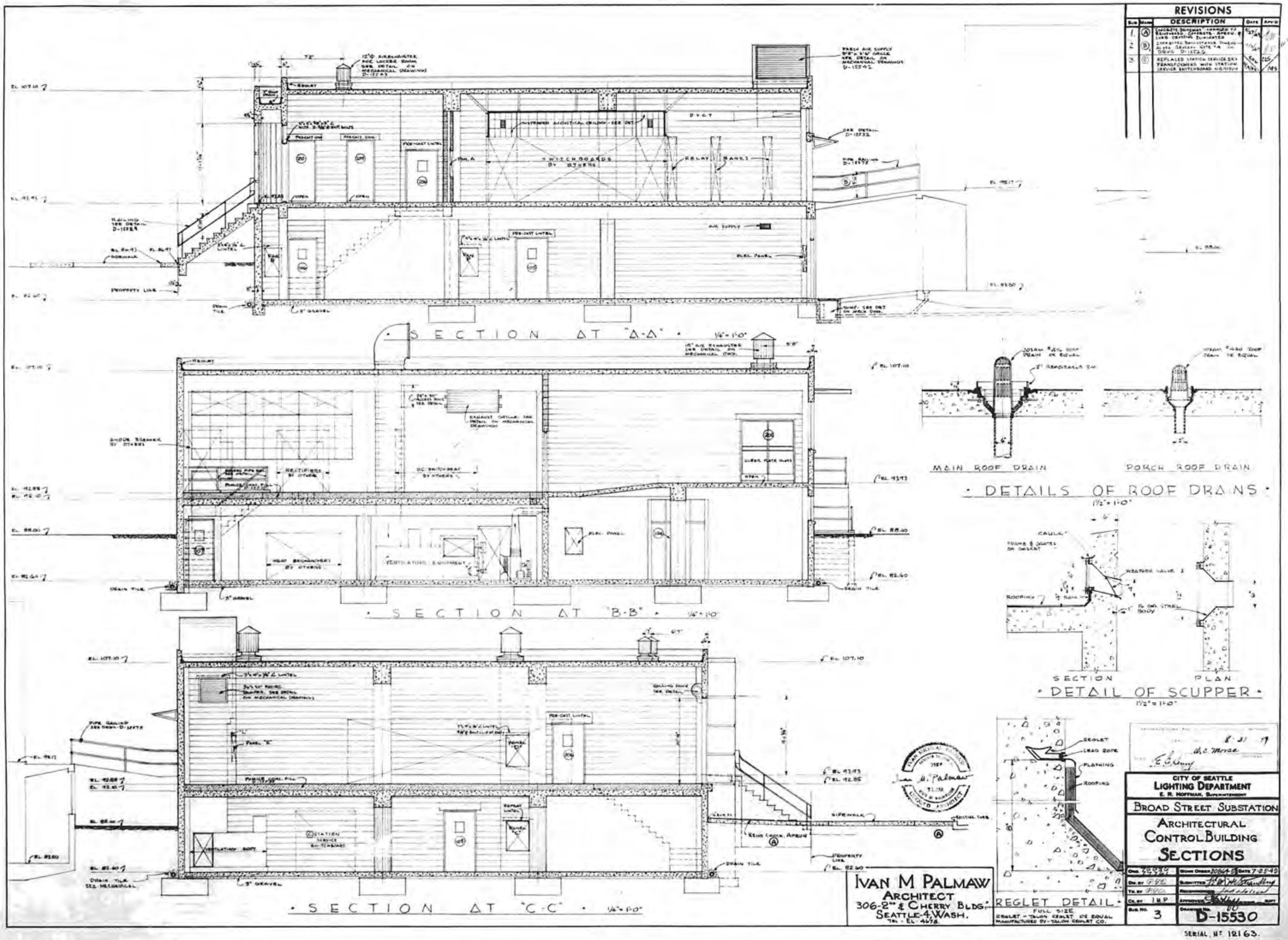
CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

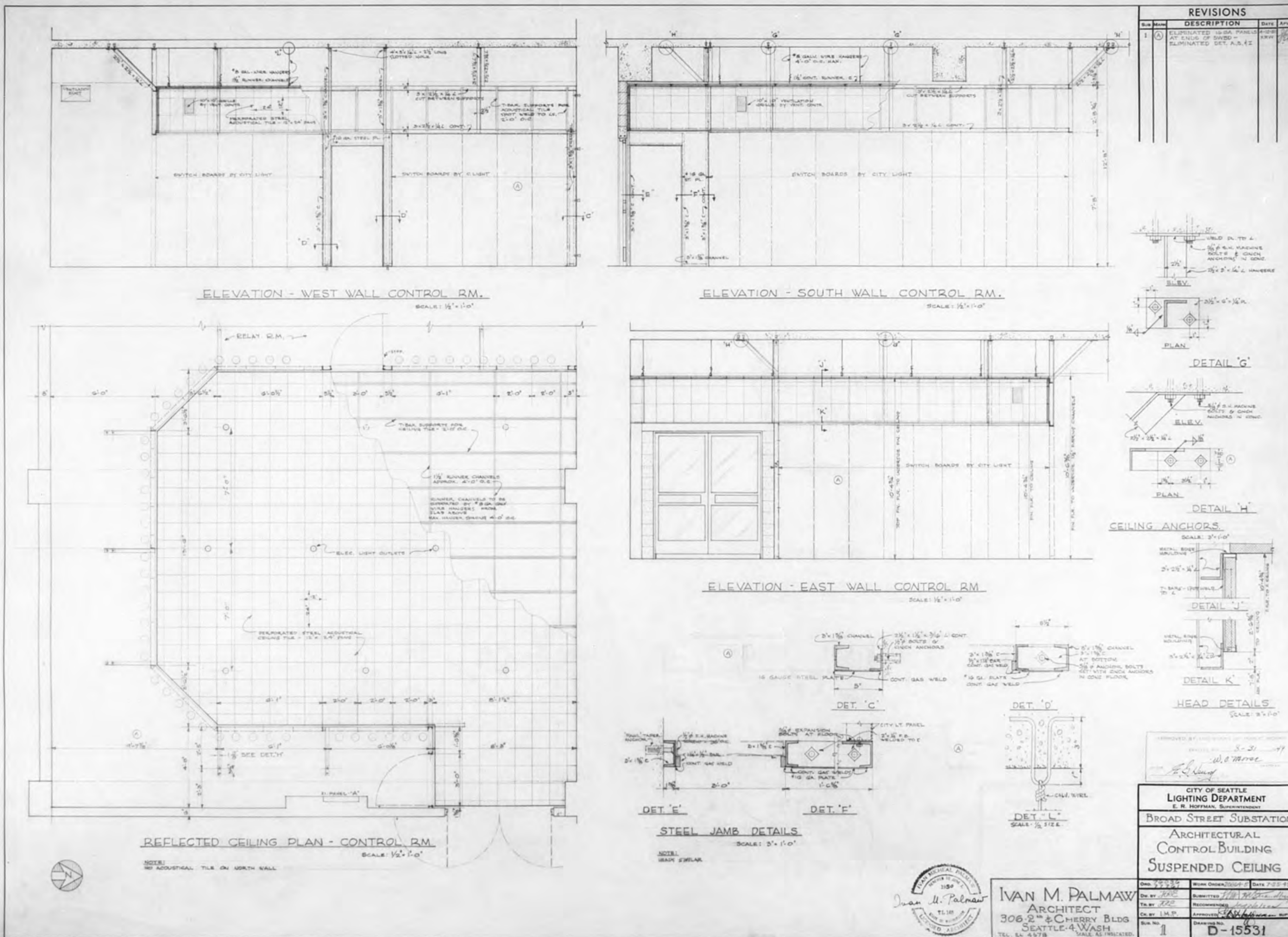
BROAD STREET SUBSTATION

ARCHITECTURAL CONTROL BUILDING ELEVATIONS

ORD. 76556 / 77726	W.O. 20864-5	DATE 7-25-49
DR. BY BCS	SUBMITTED [illegible]	
TR. BY BCS	RECOMMENDED [illegible]	
CK. BY I.M.P.	APPROVED [illegible] SUPT.	
SHEET NO. 1	DRAWING NO. D-15529	

SERIAL NO. 12162


REVISIONS
SUB. / MARK / DESCRIPTION / DATE / APP'D
3. (C) REPLACED STATION SERVICE DRY TRANSFORMERS WITH STATION SERVICE SWITCHBOARD
SECTION AT "A-A" 1/4" = 1'-0"
SWITCHBOARDS BY OTHERS
RELAY BANKS
DUCT
AIR SUPPLY
ELEC. PANEL
PROPERTY LINE
DRAIN TILE
3" GRAVEL
SECTION AT "B-B" 1/4" = 1'-0"
RECTIFIERS BY OTHERS
DC SWITCHGEAR BY OTHERS
HEAT EXCHANGERS BY OTHERS
VENTILATING EQUIPMENT
ELEC. PANEL
SECTION AT "C-C" 1/4" = 1'-0"
STATION SERVICE SWITCHBOARD
SIDEWALK
MAIN ROOF DRAIN
PORCH ROOF DRAIN
DETAILS OF ROOF DRAINS
1 1/2" = 1'-0"
CAULK
ROOFING
WEATHER VALVE
SECTION
PLAN
DETAIL OF SCUPPER
1 1/2" = 1'-0"
REGLET
LEAD ROPE
FLASHING
ROOFING
REGLET DETAIL
FULL SIZE
REGLET - TALON REGLET OR EQUAL MANUFACTURED BY TALON REGLET CO.
IVAN M PALMAW
ARCHITECT
306-2nd & CHERRY BLDG.
SEATTLE-4, WASH.
TEL. EL 4678
8-31-49
W. C. Morse
CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT
BROAD STREET SUBSTATION
ARCHITECTURAL
CONTROL BUILDING
SECTIONS
WORK ORDER 20864-5
DATE 7-25-49
CK. BY IMP
SUB. NO. 3
DRAWING NO. D-15530
SERIAL Nº 12163.


REVISIONS
DESCRIPTION
ELIMINATED 16 GA. PANELS AT ENDS OF SWBD - ELIMINATED DET. A, B, & I
ELEVATION - WEST WALL CONTROL RM.
SCALE: 1/2" = 1'-0"
SWITCH BOARDS BY CITY LIGHT
SWITCH BOARDS BY C. LIGHT
ELEVATION - SOUTH WALL CONTROL RM.
SCALE: 1/2" = 1'-0"
SWITCH BOARDS BY CITY LIGHT
ELEVATION - EAST WALL CONTROL RM.
SCALE: 1/2" = 1'-0"
SWITCH BOARDS BY CITY LIGHT
REFLECTED CEILING PLAN - CONTROL RM.
SCALE: 1/2" = 1'-0"
RELAY RM.
ELEC. LIGHT OUTLETS
NOTE:
NO ACOUSTICAL TILE ON NORTH WALL
DETAIL "G"
DETAIL "H"
ELEV.
PLAN
CEILING ANCHORS
SCALE: 3" = 1'-0"
DETAIL "J"
DETAIL "K"
HEAD DETAILS
SCALE: 3" = 1'-0"
DET. "C"
DET. "D"
DET. "E"
DET. "F"
STEEL JAMB DETAILS
SCALE: 3" = 1'-0"
NOTE:
HEAD SIMILAR
DET. "L"
SCALE - 1/2 SIZE
GALV. WIRE

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

BROAD STREET SUBSTATION

ARCHITECTURAL
CONTROL BUILDING
SUSPENDED CEILING

IVAN M. PALMAW
ARCHITECT
306 2nd & CHERRY BLDG
SEATTLE 4 WASH
TEL. EL 4578
SCALE AS INDICATED.

DATE 7-25-49
CK. BY I.M.P.
SUB. NO. 1
DRAWING NO. D-15531

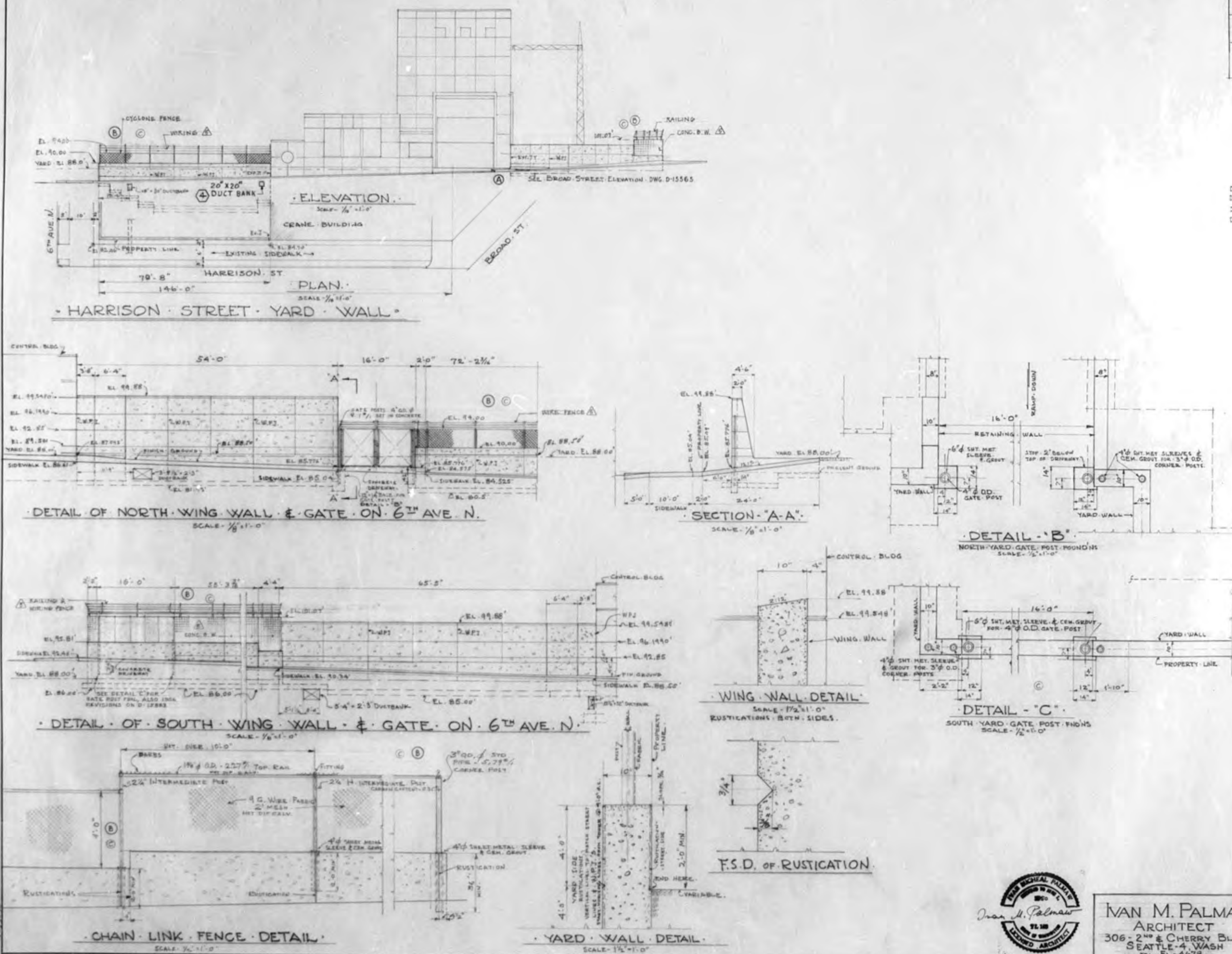
SERIAL Nº 12164

REVISIONS

SUB.	MARK	MADE BY	CKD. BY	DESCRIPTION	DATE	App'd.
1	(A)	[illegible]		[illegible] D-15544.	[illegible]	[illegible]
2	(B)	J.J.		FENCE REVISED TO NEW ELEVATIONS AS SHOWN.	3/26/58	[illegible]
3	(C)	RVR		FENCE RETURNED TO STATUS OF REV. 1, EXCEPT S.E. CORNER, REVISED TO 1956 CONSTRUCTION	[illegible]	[illegible]
				MICRO FILMED AUG 23 1965		
4	(4)	JMW	WJT	ADDED DUCT BANK TO WALL ELEVATION AT HARRISON ST.	5/4/70	J.J.
5	(5)	LO		ADDED CONC. B WALL TO WALL ELEVATION AT SOUTH END OF 6TH/AVE. RAILING ON TOP AS BUILTS	10/27/82	

REFERENCES

D-15565 YARD WALL ELEVATIONS ARCHITECTURAL
D-15567 YARD WALL ELEVATIONS STRUCTURAL
D 21218 CONC. BLOCK YARD WALL
D25427 YARD WALL RAILING



ELEVATION
SCALE - 1/16" = 1'-0"
CRANE BUILDING
HARRISON ST
BROAD ST
PLAN
SCALE - 1/16" = 1'-0"
HARRISON STREET YARD WALL
DETAIL OF NORTH WING WALL & GATE ON 6TH AVE N.
SCALE - 1/8" = 1'-0"
SECTION "A-A"
SCALE - 1/8" = 1'-0"
DETAIL "B"
NORTH YARD GATE POST FOUND'NS
SCALE - 1/2" = 1'-0"
DETAIL OF SOUTH WING WALL & GATE ON 6TH AVE. N.
SCALE - 1/8" = 1'-0"
WING WALL DETAIL
SCALE - 1 1/2" = 1'-0"
RUSTICATIONS BOTH SIDES.
DETAIL "C"
SOUTH YARD GATE POST FND'NS
SCALE - 1/2" = 1'-0"
CHAIN LINK FENCE DETAIL
SCALE - 3/4" = 1'-0"
YARD WALL DETAIL
SCALE - 1 1/2" = 1'-0"
F.S.D. OF RUSTICATION

APPROVED BY THE BOARD OF PUBLIC WORKS
SEATTLE, WN. 8-31 1949
W. C. Morse
ATTEST E. G. Nevy

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

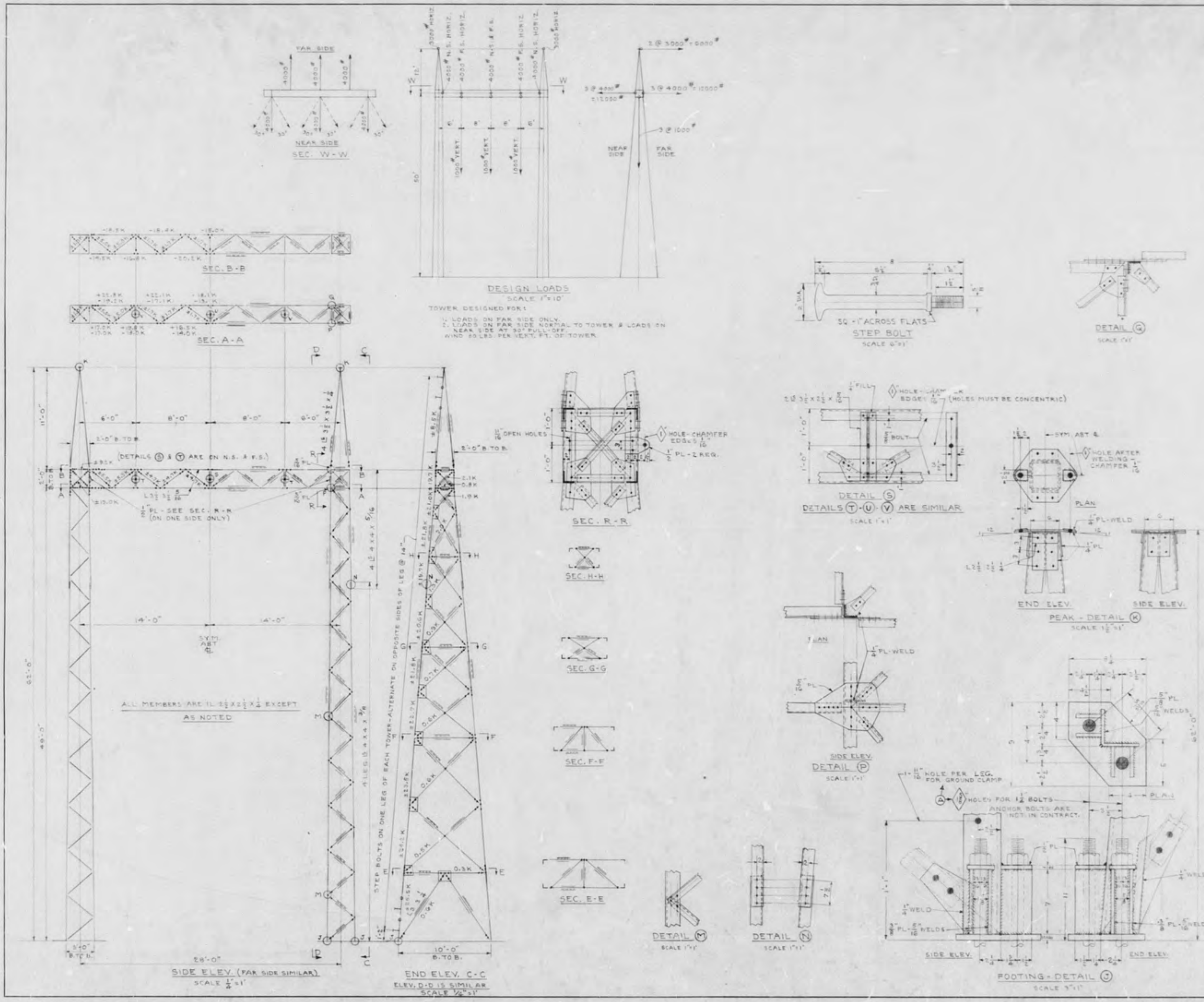
BROAD STREET SUBSTATION

ARCHITECTURAL
YARD WALLS DETAILS

IVAN M. PALMAW
ARCHITECT
306 - 2ND & CHERRY BLDG
SEATTLE-4, WASH
TEL. EL-4678.

Ord. 76056 77761		Work Order 20864-6	Date 7-25-49
Dr. by FRE		Submitted [illegible]	
Tr. by [illegible]		Recommended [illegible]	
Ch. by IMP.		Approved E. R. Hoffman Supt.	
Sub. No. 5		Drawing No. D-15566	

SERIAL Nº 12199.



REVISIONS
DESCRIPTION
CHANGED HOLES IN BASE PLATE TO 1 1/8" DIAM.
FAR SIDE
NEAR SIDE
SEC. W-W
DESIGN LOADS
SCALE 1"=10'
TOWER DESIGNED FOR:
1. LOADS ON FAR SIDE ONLY.
2. LOADS ON FAR SIDE NORMAL TO TOWER & LOADS ON NEAR SIDE AT 30° PULL-OFF.
WIND 20 LBS. PER VERT. FT. OF TOWER.
SEC. B-B
SEC. A-A
STEP BOLT
SCALE 6"=1'
DETAIL Q
SEC. R-R
DETAIL S
DETAILS T-U-V ARE SIMILAR
SCALE 1"=1'
PEAK - DETAIL K
END ELEV.
SIDE ELEV.
APPROXIMATE WT. 10,500 LBS.
SEC. H-H
SEC. G-G
SEC. F-F
SEC. E-E
DETAIL P
ALL MEMBERS ARE 1L 2 1/2 x 2 1/2 x 1/4 EXCEPT AS NOTED
STEP BOLTS ON ONE LEG OF EACH TOWER-ALTERNATE ON OPPOSITE SIDES OF LEG @ 14"
SIDE ELEV. (FAR SIDE SIMILAR)
SCALE 1/4"=1'
END ELEV. C-C
ELEV. D-D IS SIMILAR
SCALE 1/4"=1'
DETAIL M
DETAIL N
ANCHOR BOLTS ARE NOT IN CONTRACT.
FOOTING - DETAIL J
SCALE 3"=1'
ALL HOLES 11/16" FOR 5/8" BOLTS EXCEPT AS NOTED. NUMBER OF BOLTS AS SHOWN.
BOLT SPACING - NORMAL 2 1/2" - MIN. 1 7/8".
EDGE & END DIST. - NORMAL 1 1/4" - MIN. 7/8"
HOT-DIP GALVANIZE ALL STEEL.
GUSSET PL 1/4" EXCEPT AS NOTED.
SEE "SPECIFICATION FOR FABRICATED STEEL STRUCTURES" BY THE CITY OF SEATTLE, DEPT. OF LIGHTING.
FOUNDATION DWG. C-4479

CITY OF SEATTLE
LIGHTING DEPARTMENT
E. R. HOFFMAN, SUPERINTENDENT

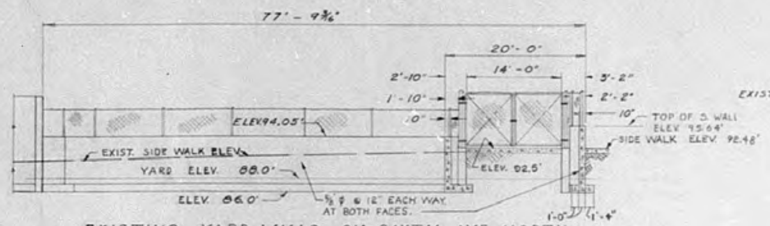
BROAD ST. SUBSTATION

115 KV. DEAD END TOWER

ORD.	WORK ORDER	DATE 7-17-48
DR. BY HCB	SUBMITTED	
TR. BY	RECOMMENDED	
CK. BY C.W.N.	APPROVED	SUPT.
SUB. NO. 1	DRAWING NO. D-14004	

SER. NO. 11697

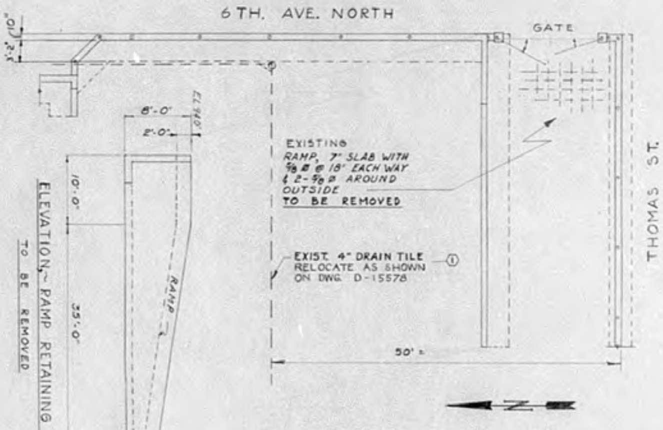
REVISIONS					
MARK	MADE BY	CKD. BY	DESCRIPTION	DATE	APP'D
(1)			ADDED NOTE & VENT. PIPES.		



EXISTING YARD WALLS ON SIXTH AVE NORTH

ELEVATION ~ LOOK'G EAST

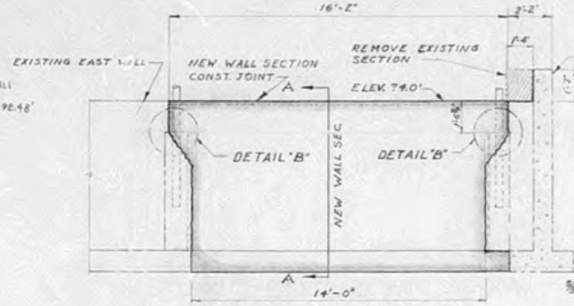
SCALE ⅛" - 1'-0"



PLAN

SCALE ⅛" - 1'-0"

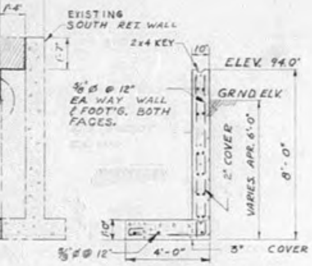
EXISTING YARD, WALLS & RAMP



ELEVATION~NEW YARD WALL

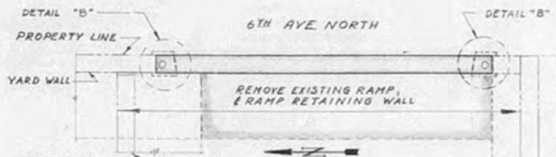
DETAIL 'A'

SCALE ⅜" - 1'-0"



SECTION A-A

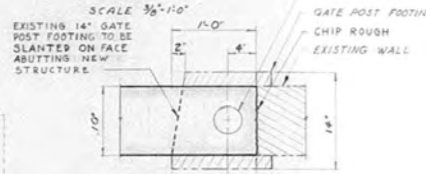
SCALE ⅜" - 1'-0"



DETAIL 'A'

PLAN~NEW YARD WALL

SCALE ⅜" = 1'-0"



PLAN, DETAIL "B"

SCALE 1½" - 1'-0"

ELEVATION, DETAIL "B"

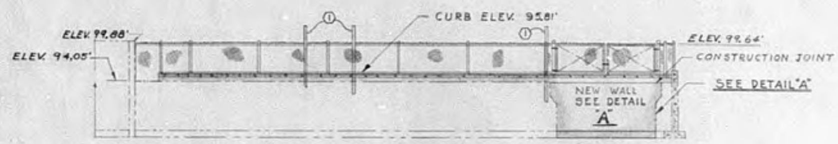
SCALE 1½" - 1'-0"

NOTES:

1. ALL CONCRETE SHALL BE CLASS 5.5 (5.5 SACKS/YRD.) PER SEATTLE BLDG. CODE, SEC. 427 AND SEC. 2-891.0 CITY OF SEATTLE STD PLANS & SPECS.
2. REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM-A-305 SST INTERMEDIATE GRADE STEEL ALL BENDS & HOOKS PER. ACI STD.
3. MIN. COVER FOR REINFORCING BARS SHALL BE AS PROVIDED IN THE SEATTLE BLD. CODE.

REFERENCE DRAWING

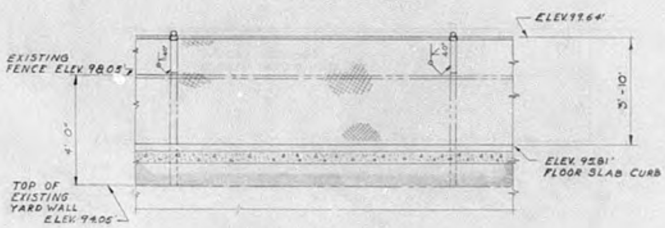
1. D-15879 PLAN & ELEV., FRAMING PLAN



NEW YARD WALL ON SIXTH AVE. NORTH

ELEVATION ~ LOOK'G EAST

SCALE ⅛" - 1'-0"



RELOCATE WIRE FABRIC & EXISTING TOP RAIL TO NEW ELEV.

WELD EXTENSIONS TO EXISTING FENCE POSTS.

EXIST. GATE TO BE REWORKED TO GIVE MIN. 2" CLEARANCE AT NEW CURB.

TYPICAL NEW FENCE DETAIL

SCALE ½" = 1'-0"

DDD 5/6/98 BCL/AK

APPROVED BY THE BOARD OF PUBLIC WORKS

SEATTLE, WN. NOV 28 1956

ENDORSEMENTS

10/24/56 mwg

10/10/12 PES

CITY OF SEATTLE

LIGHTING DEPARTMENT

BROAD ST. SUBSTATION

13 KV. SWITCHGEAR STRUCTURE

ARCHITECTURAL

YARD DRAINAGE DETAILS

RETAINING WALL DETAILS

FENCE & GATE DETAILS

DW. BY K.S.P.

CK. BY G.W.B.

WORK ORDER 64391-1

DRAWING NO. D-15883

SCALE: AS NOTED

SERIAL NO.