NPS Form 10-900
(Rev. 10-90)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

201

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Northwestern Electric Company
Alberta Substation

other names/site number _____

2. Location

street & number 2701 - 2717 NE Alberta Street N/A not for publication
city or town Portland N/A vicinity
state Oregon code OR county Multnomah code 051 zip code 97211

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this [X] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property [X] meets [ ] does not meet the National Register Criteria. I recommend that this property be considered significant [ ] nationally [ ] statewide [X] locally. ([X] See continuation sheet for additional comments.)

January 16, 1998
Signature of certifying official DSHPO Date

Oregon State Historic Preservation Office
State or Federal agency and bureau

In my opinion, the property [ ] meets [ ] does not meet the National Register criteria. ([ ] See continuation sheet for additional comments.)

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

[X] entered in the National Register
[ ] See continuation sheet.
[ ] determined eligible for the National Register
[ ] See continuation sheet.
[ ] determined not eligible for the National Register
[ ] removed from the National Register
[ ] other (explain): _____

Signature of the Keeper Date of Action
3/5/98

Alberta Substation
Name of Property

Multnomah, OR
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- [X] private
- [ ] public-local
- [ ] public-State
- [ ] public-Federal

Category of Property
(Check only one box)

- [X] building
- [ ] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
1		buildings
		sites
		structures
		objects
1		Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

-0-

6. Function or Use

Historic Functions
(Enter categories from instructions)

INDUSTRY: Energy Facility

Current Functions
(Enter categories from instructions)

SOCIAL: Civic

WORK IN PROGRESS

7. Description

Architectural Classification
(Enter categories from instructions)

LATE 19TH AND 20TH CENTURY

REVIVALS: Mediterranean Revival

Materials
(Enter categories from instructions)

foundation Concrete

walls Concrete with stucco finish

roof Clay tile

other

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

Alberta Substation
Name of Property

Multnomah, OR
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- [X] **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] **B** Property is associated with the lives of persons significant in our past.
- [X] **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] **D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations
(Mark "X" in all the boxes that apply.)

Property is:

- [ ] **A** owned by a religious institution or used for religious purposes.
- [ ] **B** removed from its original location.
- [ ] **C** a birthplace or a grave.
- [ ] **D** a cemetery.
- [ ] **E** a reconstructed building, object,or structure.
- [ ] **F** a commemorative property.
- [ ] **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)
COMMUNITY PLANNING AND DEVELOPMENT
ARCHITECTURE AND ENGINEERING

Period of Significance
1931

Significant Dates
1931

Significant Person
(Complete if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
Harry Hills
Hansen Construction Company

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

Previous documentation on file (NPS):

___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # _____
___ recorded by Historic American Engineering Record # _____

Primary location of additional data

- [ ] State Historic Preservation Office
- [ ] Other State agency
- [ ] Federal agency
- [X] Local government
- [ ] University
- [X] Other

Name of repository
Oregon Historical Society / 1230 SW Park Ave. / Portland, OR 97204

Alberta Substation
Name of Property

Multnomah, OR
County and State

10. Geographical Data

Acreage of Property 0.14acres

Portland, Oregon - Washington 1:24000

UTM References
(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing
1	10	528375	5044930
2			
3			
4			

☐ See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Thayer Donham, Cielo Lutino, Liza Mickle

organization City of Portland Bureau of Planning date July 24, 1997

street & number 1120 SW 5th Avenue, Rm. 1002 telephone (503) 823-7700

city or town Portland state OR zip code 97204-1966

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.
A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO)

name Northeast Community Development Corporation

street & number 4114 N. Vancouver Avenue telephone (503) 282 - 5482

city or town Portland state OR zip code 97217

NORTHWESTERN ELECTRIC COMPANY ALBERTA SUBSTATION (1931)
2701-2717 NE Alberta Street
Portland, Multnomah County, Oregon

COMMENTS OF THE STATE HISTORIC PRESERVATION OFFICE

The Northwestern Electric Company Alberta Substation is a housed electrical substation that occupies a flag-shaped lot at the northeast corner of Alberta and NE 27th Avenue in the Concordia neighborhood of northeast Portland, Oregon. The neighborhood is predominately single family residential in character, and, while a certain amount of commercial development is found along the Alberta Street thoroughfare, it is clear that the substation was designed with the object of integrating the utility building into the residential setting.

The main volume is a single-story mass, 41 feet square in plan, constructed of cast-in-place concrete on a concrete slab foundation. It has a concrete slab roof and stucco finished exterior. Stylistic detailing of the 1931 utility building is in the Mediterranean vein. The Mediterranean style lent itself well to broad expanses of unrelieved wall plane. The modest, formally-arranged frameless penetrations are expressive of an equipment housing while at the same time they create the pictorial relief of dark, arcuated solids that is characteristic of the style. The building is nicely detailed on the street facades with a full classical entablature and low truncated hip roof covered with Mission tiles, and wide corner pilasters are linked at the necking by a continuous string course.

The main entrance is centered in the south facade, fronting NE Alberta and is flanked by additional pilasters dividing the front into three bays. The main entry and secondary entry, which is centered in the west facade, are Roman arched with keystoned archivolts. Single window bays flanking the entrances are attenuated, round-arched openings 8 1/2 feet tall and 3 1/2 feet wide. The openings are fitted with wrought iron balconets and with multilight steel industrial sash. There are also steel interior shutters.

The building was not built to the lot line, but has a narrow set back from the sidewalk on both street elevations for a modest seven-foot landscape strip. A fenced service yard extends at a right angle north of the east face, making of the property an L-shaped configuration. The inconspicuous massing and landscaped setback, including columnar conifers, are indicative of a

conscious effort to work in harmony with the single familiy residential neigihborhood street car suburb. The Concordia neighborhood was platted in the 1910s and was developed through the 1930s.

An entrance in the rear, or north elevation gives access to the former service yard extending 50 feet to the east and which is now enclosed by a chain link fence and a low concrete wall. The building is in fair condition, structurally, and shows signs of moisture infiltration and spalling. The interior was designed exclusively to house feeder equipment. There are no public spaces, and concrete walls and ceiling are unfinished. Concrete racks for electrical equipment are arranged laterally in banks of five in the south two thirds plus a longitudinal arrangement for circuit breakers on the north side. A narrow perimeter passageway provides access for maintenance purposes, and a small enclosed utility room and water closet complete the floor plan. The flat section of the roof is broken by a series of ventilators and light monitors.

Plans for the building were prepared by Harry Hills of the engineering department of Northwestern Electric Company. Hansen Construction Company was the general contractor. The substation was in continuous operation from the time equipment was installed in 1931 until its abandonment the 1980s, at which time the equipment was removed. In 1995, Pacific Power and Light Company donated the vacant building to the Northeast Community Development Corporation (NECDC). The current owner uses the building for storage. However, a plan for adaptive reuse for commercial or retail purposes is under consideration. On the north and east, on property falling outside the nominated area, two or three-story multi-family housing is proposed. The prospective development is looked on as supportive of neighborhood revitalization.

The premise of the nomination under Criterion C is that the substation is a rare example of architectural substation design within the city of Portland since, typically, substations were freestanding open-air features. Moreover, the building represents the corporate sensitivity to residential surroundings in its exterior finish in the Mediterranean style. Significance under Criterion A stems from the eventful history of electrical utilities in Portland and the fact that Northwestern Electric Company was the first company to successfully compete for a franchise to serve the city's electrical power needs and thereby break the monopoly of the Portland Railway Light and Power Company. Northwestern was incorporated in 1911 to supply power to a paper mill in Camas, Washington, on the north shore of the Columbia, from a hydroelectric power plant at White Salmon. In 1913, the company's bid for a 25-year franchise was accepted by the City of Portland, and the Pittock Block in downtown Portland became the location of a complementary steam heat generating station.

Northwestern commenced supplying electrical service to East Portland in 1913. The Concordia neighborhood was developed during streetcar suburb expansion of the 1920s. Construction of a substation to serve the area between NE Killingsworth and NE Going and NE 15th and NE 33rd Avenues, an area which includes the southwest sector of the Concordia neighborhood, is significant as a response to strong upbuilding in the platted areas on the east side of the Willamette River. Construction of the Alberta Substation in 1931 was made possible by the company's boosting its hydroelectric power with the construction of Ariel Dam on the Lewis River in the same year. In 1938, Northwestern became the first private utility to purchase power from the Bonneville Power Authority, thus paving the way for the interchange of surplus power between utilities. The load capacity for distribution at the Alberta Substation was four thousand volts

In 1925, Northwestern had become a subsidiary of American Power and Light Company, which in turn was taken over by Pacific Power and Light Company in 1930. In 1947, Northwestern Electric Company and Pacific Power and Light Company merged as Pacific Power and Light.

The 1931 Alberta Substation is a one story, Mediterranean Revival style utility building with a square plan and a combined low-pitched hip and flat roof. The walls are constructed of cast-in-place concrete and are finished with stucco. The foundation and roof are concrete slab. Exterior details such as the tiled hipped roof, wide overhanging eaves, decorative cornice, and arched openings reflect the Mediterranean Revival style and provide a good example of the use of materials, construction, and artistic quality during the period of significance. The interior of the building is strictly industrial in character. The substation is located in the commercial area of Concordia, a predominantly residential neighborhood in northeast Portland. It occupies a 6,000 square foot sloped corner lot at NE Alberta Street and 27th Avenue and is set behind a modest strip of cultivated lawn. The property is in fair condition, has had little alteration, and retains its original stylistic features and materials. Its style, type of construction, and association with Portland's urban development are significant to the character of the neighborhood and city.

SETTING

The Alberta Substation is located at the northeast corner of NE 27th Avenue and Alberta Street. It is situated in the southwest sector of Concordia, a predominantly single-family residential neighborhood. Historically, the Concordia neighborhood signifies a transitional development period. With most of the area platted between 1910 and 1919, Concordia began as a streetcar suburb that experienced a shift in development as the automobile became the primary mode of transportation.

An important thoroughfare during the Streetcar Era, NE Alberta Street continues to be a locus of commercial activity in the Concordia neighborhood. As a result, most of the structures lining NE Alberta Street are commercial in nature with some single- and multi-family housing. The street enjoys a healthy amount of automobile and foot traffic. NE 27th Avenue and Alberta Street are also significant transit streets. Two of the four neighborhood bus lines intersect at this corner. In contrast, the area immediately to the north and south of the substation is residential in character.

SITE

The substation sits on the northeast corner lot of NE 27th Avenue and Alberta Street on a 6,000 square foot sloped parcel. According to the 1924 Sanborn Fire Insurance Map, a residence was originally located on the eastern portion of the property. The remaining lot continued to be undeveloped with no existing structures. By 1931, the Sanborn Fire Insurance Map records the existing electrical substation. A transformer pad was also evident on the east property boundary, where a residence was once located.

Today, the building occupies the entirety of Lot 9 and the west half of Lot 10. The building is square in shape and faces front to NE Alberta Street. It is generally set back from the property line seven feet.

EXTERIOR

The Alberta Substation measures 41' x 41' and is approximately 25' tall. Facing south on Alberta Street, the substation's primary facade is symmetrical and divided into three bays. The large central bay encompasses the front door, and the two narrower side bays are punctuated by tall, arched windows. Plain concrete pilasters at the corners and on either side of the entrance articulate the bays. The front entrance is elevated, set off by a concrete knee wall and several concrete steps. The west facade presents a similar appearance, with a central doorway flanked by two focal windows identical to the windows on the front facade. The entrance on this facade is not flanked by pilasters. It is less elevated, featuring a low concrete knee wall and two steps. The north facade, effectively the rear of the building, is punctuated by a recessed door that provides access to the former service yard, which is enclosed by a nine foot high

chain link fence and a reinforced concrete wall. A proposed north wing, shown on the original plan with dotted lines, was never constructed.

All walls, beams, and slabs, including the flat roof structure, are cast-in-place concrete. The walls rest on a concrete foundation that projects slightly from the walls. The foundation graduates in height to compensate for the sloping lot, measuring three feet at its highest point on the front facade. In imitation of a classical portico, the foundation supports the pilasters, which rest on shallow, squared bases. The cement walls are finished with a thin layer of stucco, which has the color and texture of concrete.

The fenestration on the front (south) and side (west) elevations is characteristic of the Mediterranean Revival style. Tall casement windows are set in recessed round arches, with wrought-iron balconets at the base of the windows. Concrete lug sills support the windows and balconets. The east facade has no fenestration.

The steel frame industrial-type fixed windows, approximately eight and a half feet tall and three and a half feet wide, have eighteen lights arranged in six banks of three, divided by thin vertical muntins. Sash is steel rather than wood, and the glass is textured industrial grade. Vertical wood batten doors at the front and side entrances are set into recessed, round arch openings, crowned with keystones and framed with architrave molding.

A low hip roof covered with rounded red clay tile surrounds the front (south) and two side facades of the substation. At the rear of the building, where the former service yard was located, the hip roof terminates at the side bays. The center of the rear facade, corresponding to the center bay at the front of the building, has a flat, capped concrete roof that projects slightly above the hipped roof.

The hip roof shelters a projecting cornice embellished with double-curved ogee molding, a classical decorative element. Immediately below the cornice is a string course of bead molding which imitates the base of a frieze and ornaments the otherwise plain concrete wall surface. At the junction of wall and foundation is another course of decorative molding at the water table.

Early photos and current markings on the substation show that surface embellishments, in addition to the wrought iron balconets, included sconces on each side of the two principal entrances. The architect's drawing also showed plants in the balconets and extensive landscaping with narrow conifers.

The exterior of the substation is currently in fair condition, with relatively minor surface problems. The windows and doors have suffered some damage and have been boarded up for protection. Graffiti has been treated by painting portions of the stucco surface. Water infiltration is apparent in staining at the cornice, possibly as a result of damaged roof tiles. The cement foundation is spalling in places, and there is evidence of damage from plant material such as moss and lichen.

INTERIOR

The interior of the building is strictly industrial in character. According to *Northwestern Light*, a trade publication, the building was designed to house "five 840 KVA 2400 volt feeders," which could be "changed at any time to 4 150 volt Starr connections without changing the station feeder equipment."[1] Transformers were placed outdoors in the enclosed service yard.

[1] *Northwestern Light*, Sep. 1930, p. 3.

All walls, slabs, and partitions on the interior are reinforced concrete, which is unpainted and presents its original appearance, including marks left by the board forms. The interior is generally divided longitudinally from the front entrance into two sections, east and west. The west section is defined by a system of concrete racks, which were used to contain electrical equipment. The racks are arranged horizontally in five banks. Each bank contains three bays bounded by partition walls measuring approximately five feet deep and fifteen feet high. A vertical arrangement of concrete racks for circuit breakers spans the length of the building, roughly east of center, effectively walling off the two sections. Access is afforded around the perimeter via a narrow passageway, through a series of flat-arched openings in the concrete wall supports. At the east side of the building is an open area flanked by built-in storage units and panels for electrical equipment. A steel overhead track is located at the northeast corner. An enclosed utility room and water closet are located at the southeast corner. Panels and storage units are still in place. Overhead, the concrete roof slab, supported by longitudinal beams, is punctured by a series of ventilators and light monitors arranged above the concrete racks. All equipment, including light fixtures, has been removed.

The tall, arched windows on the south and west sides have protective steel shutters on the interior. These are operable and in good condition. The steel frame industrial-type fixed windows, approximately eight and a half feet tall and three and a half feet wide, have 18 lights arranged in six banks of three, divided by thin vertical muntins. Sash is steel rather than wood, and the glass is textured industrial grade. Vertical wood batten doors at the front and side entrances also have protective steel shutters on the interior.

HISTORY OF THE BUILDING

Bureau of Building records for the city of Portland hold a plumbing permit submitted by Northwestern Electric Company on October 15, 1930, to construct a one story electrical substation with one water closet, one basin, two rain drains, and four floor drains. Actual construction contracts for the substation were awarded in September to Hansen Construction Company, general contractors. Plumbing work was contracted to Dave S. Williams of P&H Company. All plans for the station were prepared by Northwestern Electric's engineering department, with Harry Hills producing the architectural work. The installation of electrical equipment began in January 1931, with the completion of the building soon after. Construction costs totaled $50,000.

The substation was described as "an attractive reinforced concrete structure of Spanish design, having large circular windows, a decorative cornice and tile roof."[2] It remained in operation until the mid- to late 1980s when the electrical equipment was removed and the building left vacant.

No records survive concerning the architect, Harry Hills.

MAJOR ALTERATIONS

The first alteration that the substation underwent was the addition in 1968 of a nine foot high chain link fence at its rear, surrounding the northern half of the parcel. At an unknown date, the structure adjacent to the substation on the eastern portion of Lot 9 was demolished and its remains left on the property. In the mid- to late 1980s, the electrical equipment was removed from the property and the substation building left vacant. Since that time, the building has either been used as storage space or left vacant. In 1995, its owners, Pacific Power & Light Company (PP&L), donated the property to Northeast Community Development Corporation (NECDC). NECDC has continued to utilize the building as storage space.

[2] *ibid.*

The Concordia neighborhood, particularly the commercial corridor of NE Alberta Street, is currently enjoying an economic resuscitation after experiencing a period of urban blight in the mid-1960s. The historic Oddfellows Lodge (built in 1925) at NE 19th Avenue and Alberta Street is undergoing an expensive face-lift to reopen as the Alberta Station. It will house art and music studios, ballroom-sized dance floors, and airy storefronts. The Kennedy School at 5736 NE 33rd Avenue, itself a National Register property, has also experienced adaptive reuse and will open as a McMenamin's brewpub. Adaptive reuse for the Alberta Substation would support current neighborhood development and contribute as a productive asset.

STATEMENT OF SIGNIFICANCE

The Alberta Substation, constructed in 1931, is a product of the development of electrical use in the city of Portland, Oregon. Contextually, it relates to the history of Northwestern Electric Company*, the first active competitor for electric service in the city. Northwestern built the substation as a response to the growth in Portland's northeast quadrant which required greater power generating resources. As a result, the Alberta Substation is locally significant under Criterion A in the area of Community Planning and Development for its contribution to the growth of electrical use in the city from 1931 to 1947. The Alberta Substation is additionally significant under Criterion C in the area of Architecture and Engineering as an increasingly rare example of substation design, since contemporary substations are not usually housed within structures but tend to be open air, free-standing constructions. The period of significance marks the substation's date of construction.

DEVELOPMENT OF ELECTRICAL USE: 1879 - 1907

Portland, Oregon was first introduced to electric lighting via the *State of California* steamship on May 25, 1879. A crowd of almost five hundred visited the steamship to see the six carbon arc lights placed on board. The lights drew electricity from a small steam engine.[1] The effect it created was deemed "superior to gas as gas is superior to coal oil."[2]

Also in 1879, Thomas Alva Edison successfully produced an electric lamp by using a carbon filament in a vacuum. He also managed to perfect the direct current dynamo and the 110-220-volt, 3-wire distribution system.[3] These developments were followed closely by Edison's friend, Henry Villard, who was primarily known in the Pacific Northwest for his role as a builder of the Northern Pacific Railway. Villard eventually secured exclusive rights for Edison products in the northwestern states.[4] His first project consisted of ordering dynamos and incandescent lamps for the steamer *Columbia*, then under construction in the east for the Oregon Railroad and Navigation Company. The *Columbia* arrived in Portland the next summer in 1880, and a marine exhibit was installed to allow citizens to view the novel invention. Thousands visited the vessel whenever it was in port, and soon private citizens were conducting their own experiments in hopes of replicating Edison's success.

George W. Weidler was one Portland resident who was able to construct his own dynamo. In September 1880, he built one to light his sawmill on the west bank of the Willamette River, across from the city of Albina. Weidler then extended that circuit to light other arc lamps at the Ainsworth Dock and the Clarendon Hotel on First and F (Flanders) Streets. His achievements were noted by other merchants who began to ask for the same service. Weidler quickly capitalized on those requests and became the first citizen to commercially market street lighting. In 1884, Weidler formed the United States Electric Light and Power Company along with three other associates, turning electricity into a profitable market commodity.[5]

In an effort to expand electricity's market appeal, other inventors and entrepreneurs began developing electric appliances, but it was some time before these devices caught on commercially. Electric rates were still high, and most early appliances were not efficient. The most significant factor, though, was that until as late as 1905, most utilities only supplied electricity to their service areas at night. Consequently, consumers' and businesses' principal use of

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* Hereafter referred to as Northwestern.
[1] Heritage Investment Corporation, Station "L" Ensemble National Register Nomination, Apr. 1985: sec. 8, p. 3.
[2] "Early Days of Electricity in Portland," *Oregon Historical Quarterly*, Vol. 42, Dec. 1941: 281.
[3] George A. McMath, Jefferson Substation National Register Nomination, Sep. 1985: sec. 8, p. 1.
[4] John Dierdorff, *How Edison's Lamp Helped Light the West: The Story of Pacific Power & Light Company and Its Pioneer Forebears* (Portland, OR: Pacific Power & Light Company, 1971) 3.
[5] *Op. cit.*, p. 2.

electric power was lighting.[6] Utilities in urban settings such as Portland could not be satisfied with such a limited use of electricity and rapidly developed a niche for it in the field of transportation. Unlike utilities that served rural areas, the domestic focus on the sale of home appliances was superseded by the certain profits to be gained by the electrification of the street railways.

The opportunity to convert horse and steam power to electricity arrived in 1889. The Willamette Falls Electric Company, incorporated in 1888, ran an electric current from its headquarters in Oregon City to Portland in June of that year. At 13 miles, it was the first long distance transmission of electric energy for commercial purposes in America. That achievement prompted the creation of Portland's first streetcar line, which traveled from downtown and crossed the Steel Bridge to the east side of the Willamette River.[7]

The popularity of the streetcars had an immediate impact on the Willamette Falls Electric Company because of the required increase in the output of electricity. Unfortunately, the company could not meet that demand on its own, and in 1892 another company, Portland General Electric (PGE), was organized to handle the expanded service. Other utilities such as the Portland City and Oregon Railway Company (formed in 1901) began appearing on the scene as the demand for electricity continued to grow.

The demands placed on the utilities was a telling indicator of the city's phenomenal growth. Portland enjoyed a population increase beginning in the 1880s that was exponentially heightened by its consolidation with the two east side cities of Albina and East Portland in 1892. In fact, between 1891 and 1915, Portland's population increased 300 percent and its land area by 150 percent.[8]

The numerous utilities that arose to provide for the electricity needs of the city's growing citizenry were gradually consolidated into one holding company between 1905 and 1907. The Portland Railway Light and Power Company (PRL&P), incorporated in 1906, subsumed not only PGE but also the Portland Railway Company; Citizens' Light and Traction Company of Salem; the Vancouver Light and Traction Company; the Union Light and Power Company of Silverton, Mt. Angel, and Woodburn; Oregon Water Power and Railway Company; and the Oregon City Locks (owned by PGE). Although the history of utilities can be described as one constant merger[9], at the time this was the largest ever witnessed in the Pacific Northwest. The cumulative value of the companies involved totaled $30 million, a vast sum in those days. The *Oregonian* reported: "Every mile of electric railway and every horsepower of electric energy generated within a 50-mile radius of Portland have been brought under the same ownership and will be operated by one management."[10] Portland had its first monopoly in PRL&P.

While PRL&P's huge business presence was welcomed by some residents, it was not without its critics. Progressivism, a political ideology gaining ground in the early twentieth century, contended that an unregulated monopoly could easily abuse the public trust. Its advocates held an initial mistrust of the large-scale business represented by PRL&P. Before PGE merged with PRL&P, its president, H. W. Goode, had placed a premium on good relations between the public and the utility. His lobbying efforts for the successful 1905 World Fair had made him a popular public figure who stood in stark contrast with Benage S. Josselyn, PRL&P's first president. Josselyn's disapproval of the relationship between labor unions and the municipal government had granted him a rather cool public reception.

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[6] Craig Wollner, *Electrifying Eden: Portland General Electric 1889-1965* (Portland, OR: OR Historical Society Press, 1990) 15.
[7] John T. Labbe, *Fares, Please!: Those Portland Trolley Years* (Caldwell, ID: Caxton Printers, Ltd., 1982) 66-67.
[8] E. Kimbark MacColl, *The Shaping of a City: Business and Politics in Portland, Oregon 1885 to 1915* (Portland, OR: Georgian Press, 1976) 111-12.
[9] John Head, telephone interview, 4 Apr. 1997. All interviews were conducted with employees of Pacificorp, the most recent incarnation of Pacific Power & Light Company (PP&L). Northwestern merged with PP&L in 1947.
[10] Wollner, p. 62.

When the contract for Portland's streetlighting came up for renewal in 1908, PRL&P's reputation as "a ham-handed, selfish giant" effected negotiations between the utility and the city council.[11] Unsurprisingly, other options besides the renewal of PRL&P's contract emerged. Mt. Hood Railway and Power guaranteed that it would be able to provide services to the city when the contract ran out on December 31, 1908. Still other council members enthusiastically proposed that services might be managed under municipal ownership. In the age of Bossism when public officials were repeatedly exposed for corrupt practices, the latter alternative seemed an equally dubious course of action. The *Oregon Journal* editorialized: "The objection to municipal ownership in the United States is based on a disbelief that there would be either competence or honesty in the management."[12] PRL&P continued to appeal their case, and, in one instance, employed devious means to knock out other competitors.[13] In the end, the city government capitulated to PRL&P's appeals and renewed their right to be the sole provider of electricity to Portland. To save face, the city advertised that it would accept competitive bids for the next renewal period. In 1913, Northwestern Electric Company was granted the contract. It became the first utility to actively compete for electric service to the city of Portland.

THE RISE OF NORTHWESTERN ELECTRIC: 1911 - 1947

The Northwestern Electric Company was incorporated on July 4, 1911. Its investors were owners of a paper mill located in Camas, Washington. The company's first task was to provide additional power for the paper mill. To accomplish that end, the company constructed a 15,000-kilowatt hydro plant at the White Salmon River, just upstream of its confluence with the Columbia River. Northwestern was essentially formed for manufacturing purposes.[14] It quickly became clear, however, that the company could be put to better use.

In 1912, Northwestern's backers began bidding for a 25 year franchise to operate in the city of Portland. Late that year their bid was accepted, putting them in direct competition with PRL&P, the pioneer utility. Northwestern immediately leased space in the basement of the new Pittock block to install a 7,000-kilowatt steam generating station. Powered by the excess energy from the Camas paper mill, it would be used for back-up power in the event of an emergency. Northwestern also built a complete central steam heating plant at the Pittock station to supply steam for Portland's downtown business district.[15] On December 23, 1913, Northwestern supplied electricity for the east side of the city.[16] The *Oregon Journal* wrote:

> This beginning of competition in the light and power field was ushered in with no ceremonies like the turning of a golden key or the uttering of any poetic quotations about "chaining the waters to work for man." The installation of the service began when a workman in greasy overalls yanked a lever and electricians started out in wagons to connect up the customers with the wires.[17]

Wilburt E. Coman, Northwestern's vice-president and general manager, judged their services to be "a pretty good Christmas present for the city of Portland."[18] Portions of the west side were serviced a week and a half later, although full service would not be achieved until March. By that time, 61 blocks of underground pipes would have been laid, and the Pittock station completed.[19]

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[11] *ibid.*, p. 74.
[12] *ibid.*
[13] *ibid.*, p. 77.
[14] Dierdorff, p. 90.
[15] "Northwestern Will Deliver Power to Portland in March" (*Oregon Journal*, 30 Dec. 1914): 9.
[16] "Electric Service of Northwestern Begins" (*Telegram*, 23 Dec. 1913): 1.
[17] "Competing Electric Company Turns On Juice on East Side" (*Oregon Journal*, 23 Dec. 1913): 9.
[18] *ibid.*
[19] "Northwestern Will Deliver Power to Portland in March"

Because the electricity Northwestern provided was essentially excess current from the paper mill, it could be—and was—sold at a much lower rate than PRL&P's. The older company's revenues were especially damaged by Northwestern's ability to serve Portland's downtown business district, the heart of PRL&P's service area, at reduced rates. Over half of PRL&P's business was lost in the single most concentrated sector of the city where maximum potential revenue could be obtained against each unit of service cost.[20] In addition, a major economic depression beginning in 1913 and lasting to 1915 hit the West Coast, slowing many businesses. In Portland, unemployment was at 20 percent. PRL&P also encountered an unexpected competitor at this time in the form of jitney automobiles. Jitney drivers would stay ahead of the electric streetcars and offer their services to any waiting passengers willing to chance a ride. The jitneys advertised fares lower than the streetcars and promised to get riders to their destinations faster.[21] Because the streetcars greatly contributed to PRL&P's revenues, the jitneys remained a threat until they became regulated by the city. Needless to say, the impact of the depression, coupled with Northwestern's and the jitneys' competition, had a negative effect on PRL&P.[22] When the economy finally stabilized, one-third of Portland's customers and businesses were serviced by Northwestern. That ratio held for many years.[23]

Northwestern grew with its profits. It built substations around the city, and in 1921 began planning for the 1925 exposition to be held in Portland. Northwestern wanted it to become an electrical fair on a larger scale than PGE had produced with the 1905 Lewis and Clark Exposition. In 1921, the company laid plans for the construction of a second power plant on the White Salmon River. It was to be located just below the plant already stationed there. The new plant would produce one-third the amount of power that the first plant generated.[24] This second plant was to assist "the 1925 expo...blaze forth in glory."[25]

Another benchmark for Northwestern came in 1925 when control of the company was acquired by the American Power and Light Company.[26] The latter company became, in turn, affiliated with Pacific Power and Light Company (PP&L) in 1930. Thus began Northwestern's connection with PP&L, ending with the merger of the two companies in 1947. A result of Northwestern's affiliation with PP&L was the completion of the Ariel Dam in 1931. It was located on the Lewis River, which joins the Columbia about 25 miles north of Portland. A 45,000-kilowatt generator was installed at the site. The increase in available power, along with Portland's continued population boom, probably prompted the construction of the Alberta Substation.

In 1938, Northwestern became the first private utility to purchase power from the Bonneville Power Authority, an entity of the federal government. In doing so, Northwestern allowed for the possible interchange of surplus power between other private utilities. Northwestern's later history proved to be one of steady, unremarkable growth until its merger with PP&L in 1947.

CONCORDIA AND PORTLAND'S EARLY SUBURBS: 1890 - 1940

The rising dominance of the electric streetcars in the 1890s drastically influenced the city's physical development, since they allowed for the possibility of commuting. Before streetcars were installed, most people lived close to the city's business district to avoid the long, muddy walks to and from work that would have been necessary if one lived elsewhere and did not own a horse.[27] The streetcars permitted people to live farther from their workplaces, thereby changing the pattern of the city's residential and commercial growth.

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[20] Wollner, p. 131.
[21] Labbe, p. 132.
[22] *Op. cit.*, p. 97.
[23] Dierdorff, p. 91.
[24] "New plant will insure 'juice' for 1925 expo" (*Oregon Journal*, 28 Jul. 1921): 16.
[25] "Power Concern Plans to Care for Fair Need" (*Telegram*, 27 Jul. 1921): sec. 2, p. 9.
[26] "Northwestern Electric Bought for American Pacific & Light Company" (*Oregon Journal*, 6 Mar. 1925): 1.
[27] Wollner, p. 15.

The advent of the streetcars in 1889 heralded an unprecedented period of growth for the city, particularly its east side. Between 1890 and 1920, developers platted thousands of acres on the Willamette's east side in the zone between one and a half and six miles from the central business district.[28] In the decade between 1900 and 1910 alone, building lots tripled or quadrupled in price, again on the city's east side. In fact, by 1906 population on the east side had surpassed its west side counterpart. During the decade, the east side's population would rise from 32,000 to 120,000. By the time of the 1920 census, that figure had risen to 185,000 residents in Portland's east side.[29]

This growth caused two great building periods in the city: 1905-1913 and 1922-1928. In 1910, at the height of the first building boom, 3,000 structures were constructed on the east side, in comparison with 132 on the west side.[30] The second building boom in the 1920s produced 25,000 new homes in the city.[31] The majority of single-family homes were constructed in newer neighborhoods that had been platted at the time of the 1905 Lewis and Clark Exposition but which had not been filled. Vacant lots in east side neighborhoods such as St. Johns, Richmond, Eastmoreland, Piedmont, Kenton, and Concordia were filled in with block after block of Bungalow style homes. All of these neighborhoods were located three to six miles from the downtown business core, which could be conveniently reached via a half hour trolley ride.[32]

By the mid-1920s though, streetcar use began to decline.[33] The automobile was quickly gaining ground as the preferred mode of transportation in the United States. Portland in particular was more dependent than the average city on the automobile for personal transportation. For example, in 1930 Multnomah County had one car for every four residents, while the ratio was one for five nationwide. Portlanders used this improved mobility as an incentive to move to new houses at the edge of the city. Sprawling growth absorbing more than 50 square miles of rural land meant increased utility costs for water and power lines. The use of electricity was becoming less and less related to transportation uses as the streetcar's popularity waned.[34]

Concordia in northeast Portland was one neighborhood caught in the transition from streetcar suburb to an area dictated by automobile use. The transition was most evident in the commercial sector of the neighborhood. Because cars afforded greater personal mobility, consumers were no longer restricted to do their shopping and business in the retail and commercial strips that developed along streetcar lines. Shoppers could travel to other commercial districts not within their neighborhood. Since Concordia developed at a later date than other streetcar suburbs, it smoothly navigated the shift to greater automobile use. A study of the 1924 Sanborn Fire Insurance Map shows three auto-related businesses in the area surrounding the substation.

Another asset for Concordia was its predominantly residential character. Most of the neighborhood was platted between 1910 and 1919. Around 40 percent of its housing stock was built before 1920, while 35 percent was constructed before 1940.[35] As the city flourished during the early 1920s because of a thriving timber industry, its newly prosperous immigrants and their families moved away from older, close-in neighborhoods such as Eliot and Boise. They relocated to new, middle class housing in Concordia or Arbor Lodge.[36] So, when the automobile became more prominent in the

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[28] Carl Abbott, *Portland: Planning, Politics, and Growth in a Twentieth-Century City* (Lincoln: Univ. of Nebraska Press, 1983) 27.
[29] *ibid.*, p. 55.
[30] *ibid.*
[31] Portland Bureau of Planning, *Portland Historical Context Statement* (Portland, OR: Bureau of Planning, Sept. 1992) 53.
[32] *Op. cit.*, pp. 27, 121.
[33] Heritage Investment Corporation, sec. 8, p. 7.
[34] *Op. cit.*, pp. 93 - 94.
[35] Portland Bureau of Planning, *The Albina Community Neighborhoods*, Vol. 2 of *The Albina Community Plan Background Document* (Portland, OR: Bureau of Planning, Feb. 1991) 53, 70.
[36] Portland Bureau of Planning, *Portland Historical Context Statement*, p. 53.

city's landscape, a predominantly residential neighborhood such as Concordia bore the transition better than neighborhoods with more commercial streets.

For the electric utility business, Concordia's rapid growth necessitated the construction of a new substation in 1931 to service the area. The number of new homes in the neighborhood illustrated the domestic uses for which electric power was used versus its previous applicability to transportation uses during the Streetcar Era. The Alberta Substation serviced the southwestern portion of the Concordia neighborhood and eastern portions of the Vernon and Sabin neighborhoods. The boundaries of the service area were as follows: to the north, NE Killingsworth Street; to the east, NE 33rd Avenue; to the south, NE Going Street; and to the west, NE 15th Avenue.[37] The Alberta Substation remained in service from its inception in 1931 until the mid- to late 1980s when its load capacity distribution (4KV) was phased out by PP&L. In 1995, PP&L donated the substation to the Northeast Community Development Corporation.

ARCHITECTURE AND ENGINEERING

The modern electric substation of today tends to be constructed as an open air, free standing structure. Today's substations are rarely contained in enclosed buildings, mainly because of the high costs of construction.[38] For example, an enclosed substation built in Lansing, Michigan and designed in-house was completed at a cost of $2.45 million.[39] Engineers prefer less expensive, "low profile" substations, defined as electrical equipment surrounded by a chain link fence.[40] That goal is easily attained in rural areas, where harmonizing with the surroundings is not a primary concern as it might be in dense urban areas. In the latter case, engineers are more sensitive to aesthetic issues and might add decorative covering to the site in the form of shrubs or a wall.[41] A fully enclosed substation thus becomes an increasingly rare phenomenon in the engineering field of electric utilities. In fact, there are only ten architecturally housed substations that have been identified as historic resources in Portland. Nine of the ten were identified during the 1984 Citywide Historic Resource Inventory. Of the ten, four are located in the north/northeast sector of the city. Only two--Substation D and the Alberta Substation—are located in the inner northeast quadrant of the city. Given the historical development of substation design, the Alberta Substation stands as an excellent example of the early physical form of substations for northeast Portland.

The Alberta Substation is also a good example of the architectural trend of designing institutional buildings in the Mediterranean and Spanish Colonial Revival styles in the period between 1910 and 1935. In the late nineteenth century, architects such as Richard Morris Hunt and other leaders of the American Renaissance movement trained in the Beaux Arts academic tradition began to popularize assorted historic period styles. Other architects also became interested in demonstrating their abilities to apply correct historic details to new buildings, thus beginning the Revival period in American architecture.[42]

In Oregon, the Mediterranean and Spanish Colonial Revival styles could often be found in public buildings.[43] Besides the Alberta Substation, there are two other notable buildings in those styles in the Albina area. The Albina Branch Library, an officially designated Portland Historic Landmark, was designed by regionally famed architect, Ellis Fuller Lawrence, in 1912 in the Spanish Renaissance Revival style. The John D. Kennedy Elementary School, a recent addition to the National Register, was also constructed in the Mediterranean Revival style. Built in 1915 and designed by architect F. A. Naramore, the John D. Kennedy Elementary School, located at NE 33rd Avenue and Simpson Street,

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[37] Alec Johnsen, telephone interview, 10 Jul. 1997.
[38] Joe Bell, telephone interview, 17 Jul. 1997.
[39] "Substation winners blend engineering and operations with aesthetics," *Electric Light & Power*, Vol. 69, July 1991: 16.
[40] *Op. cit.*
[41] Dean Miller, telephone interview, 15 Jul. 1997.
[42] *Oregon Style: Architecture from 1840 to the 1950s*, ed. Pamela S. Meidell (Portland, OR: Professional Book Center, Inc., 1983) 153.
[43] *ibid.*, p. 161.

by architect F. A. Naramore, the John D. Kennedy Elementary School, located at NE 33rd Avenue and Simpson Street, is also a nearby neighbor of the Alberta Substation. The Alberta Substation, built in 1931, is a later example of the popularity of the Revival styles.

The Alberta Substation becomes more conspicuous as an architectural work in a comparative analysis of the architectural styles represented by the historic substations in the city of Portland. Eighty percent of the historic substations surveyed during the 1984 citywide inventory were constructed between 1906 and 1911. Almost all of that number were designed in some variation of the Utilitarian style, either Brick or Reinforced Concrete. None were built in the Mediterranean style. The Alberta Substation was the first electrical utility building articulated in the Mediterranean style and at the much later date of 1931. No other substation of that design would be built until 1949 when the Division Street Substation was constructed in southeast Portland. As a point of comparison, however, the only two Mediterranean style housed electrical substations in Portland are located in different quadrants of the city: the Alberta Substation in the northeast and the Division Street Substation in the southeast. The Alberta Substation thus merits significance for both architectural rarity and engineering design.

SUMMARY

As a product of the development of electric use in the city, the Alberta Substation deserves further recognition as a significant contributor to Portland's history. Constructed by the Northwestern Electric Company, the substation stands as a representative of the first active competitor for electric service in the city against Portland's first monopoly, the Portland Railway Light and Power Company (PRL&P). It also illustrates the population growth in the city's northeast sector—especially the Concordia neighborhood—and marks the switch in the use of electricity from transportation to domestic uses. The Alberta Substation is also historically relevant from an engineering design standpoint as well as an architectural viewpoint. It signifies a physical form that is becoming increasingly rare for substations and illustrates the popularity of the Mediterranean Revival style for public buildings from 1910 to 1935. Given these multiple contexts, the Alberta Substation clearly reveals itself as an integral component to a study of Portland's history. Thus, it meets Criterion A in the area of Community Planning and Development and Criterion C for Architecture and Engineering.

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* All interviews were conducted with employees of Pacificorp, the most recent incarnation of Pacific Power & Light Company (PP&L). Northwestern Electric Company merged with PP&L in 1947.

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VERBAL BOUNDARY DESCRIPTION

The Alberta Substation is located in Township 1 North, Range 1 East, Section 24, Willamette Meridian, Multnomah County. Specifically, it is legally described as Lot 9 and the west half of Lot 10, Block 14 in the Ina Park Addition to the City of Portland, Oregon.

BOUNDARY JUSTIFICATION

The boundary is the legally recorded boundary lines for the building for which National Register status is being requested.

United States Department of the Interior
National Park Service

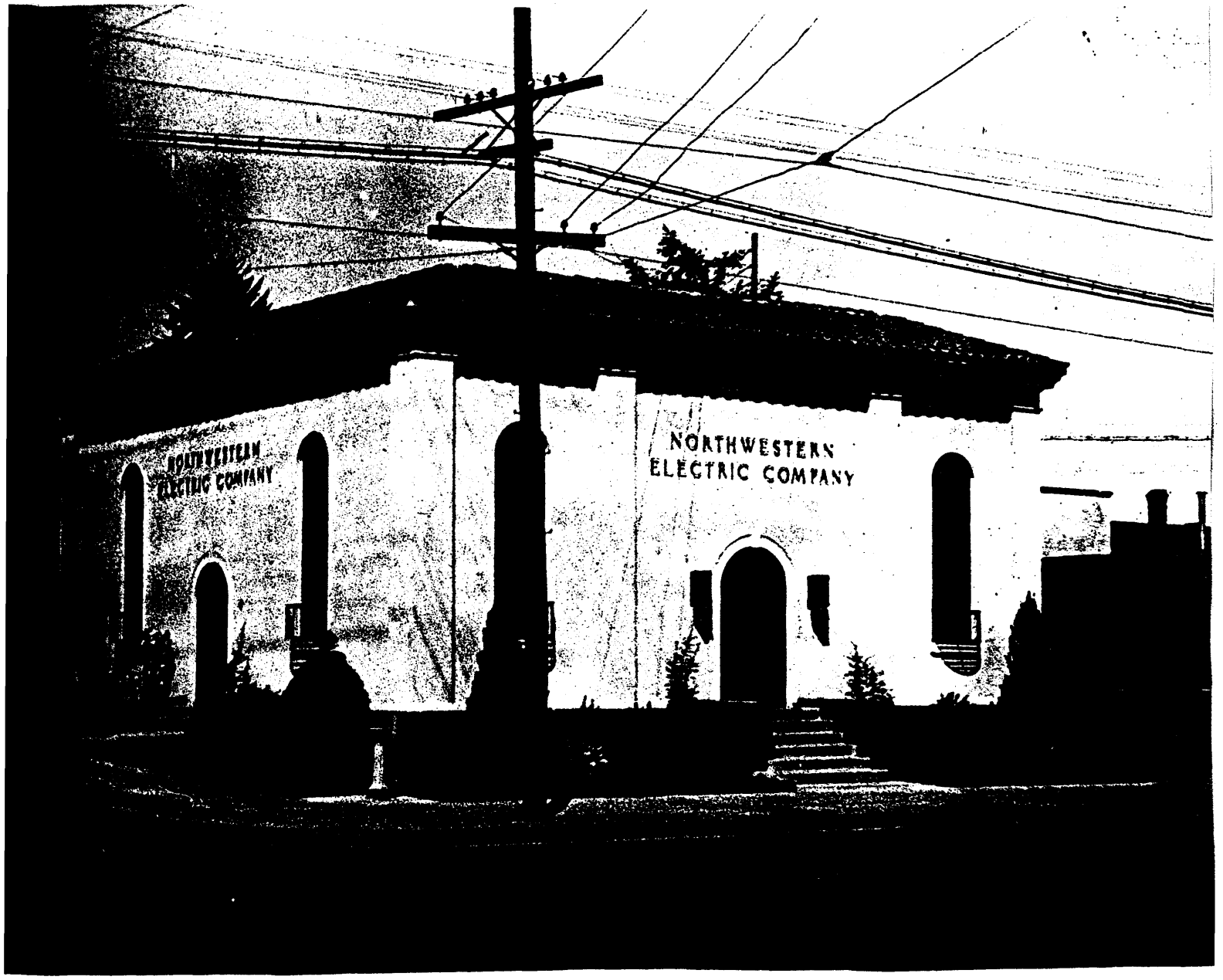
National Register of Historic Places Continuation Sheet

Section number 12 **Page** 1

Alberta Substation
Name of Property

Multnomah, OR
County and State

ADDITIONAL DOCUMENTATION: From Pacificorp's corporate records, courtesy John Head. Dated June 1, 1931.



ADDITIONAL DOCUMENTATION: From Pacificorp's corporate records, courtesy John Head. Dated October 1930.

NORTHWESTERN LIGHT

New Alberta Sub-Station

Spanish type architecture is a feature of the new $50,000 sub-station of the Northwestern Electric Company at East 27th and Alberta streets. Work on the building was started last week by the Hansen Construction Company, general contractors.

United States Department of the Interior
National Park Service

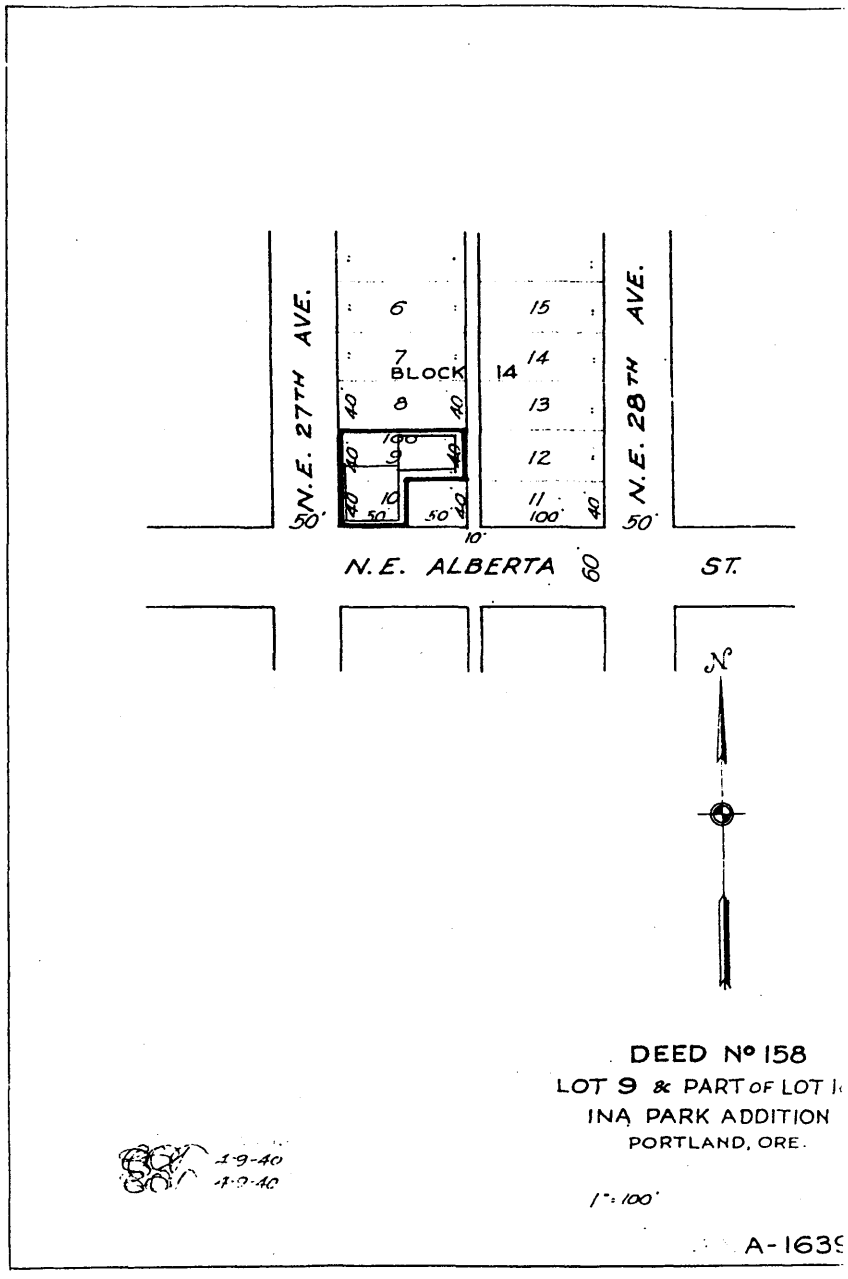
National Register of Historic Places Continuation Sheet

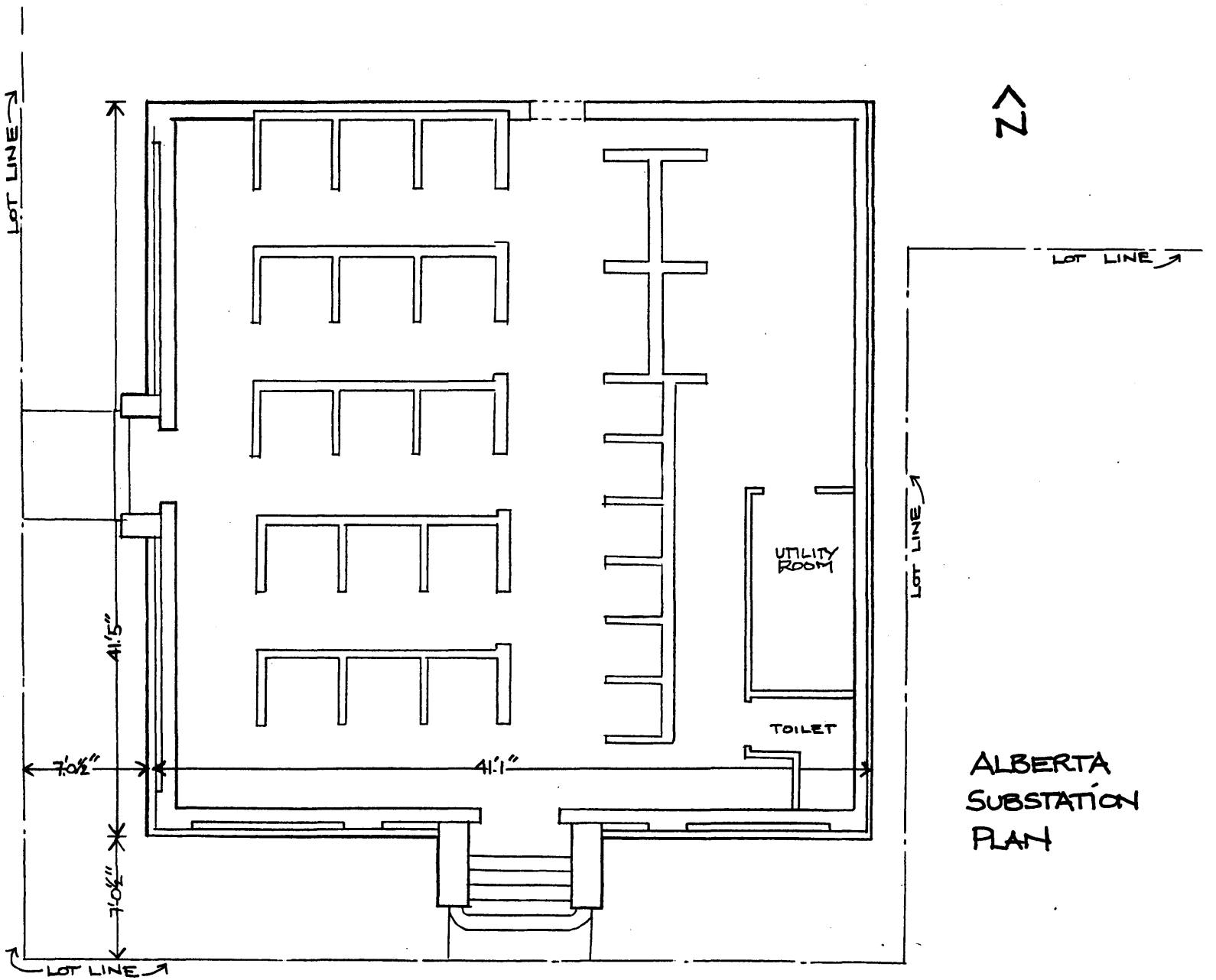
Section number 12 **Page** 3

Alberta Substation
Name of Property

Multnomah, OR
County and State

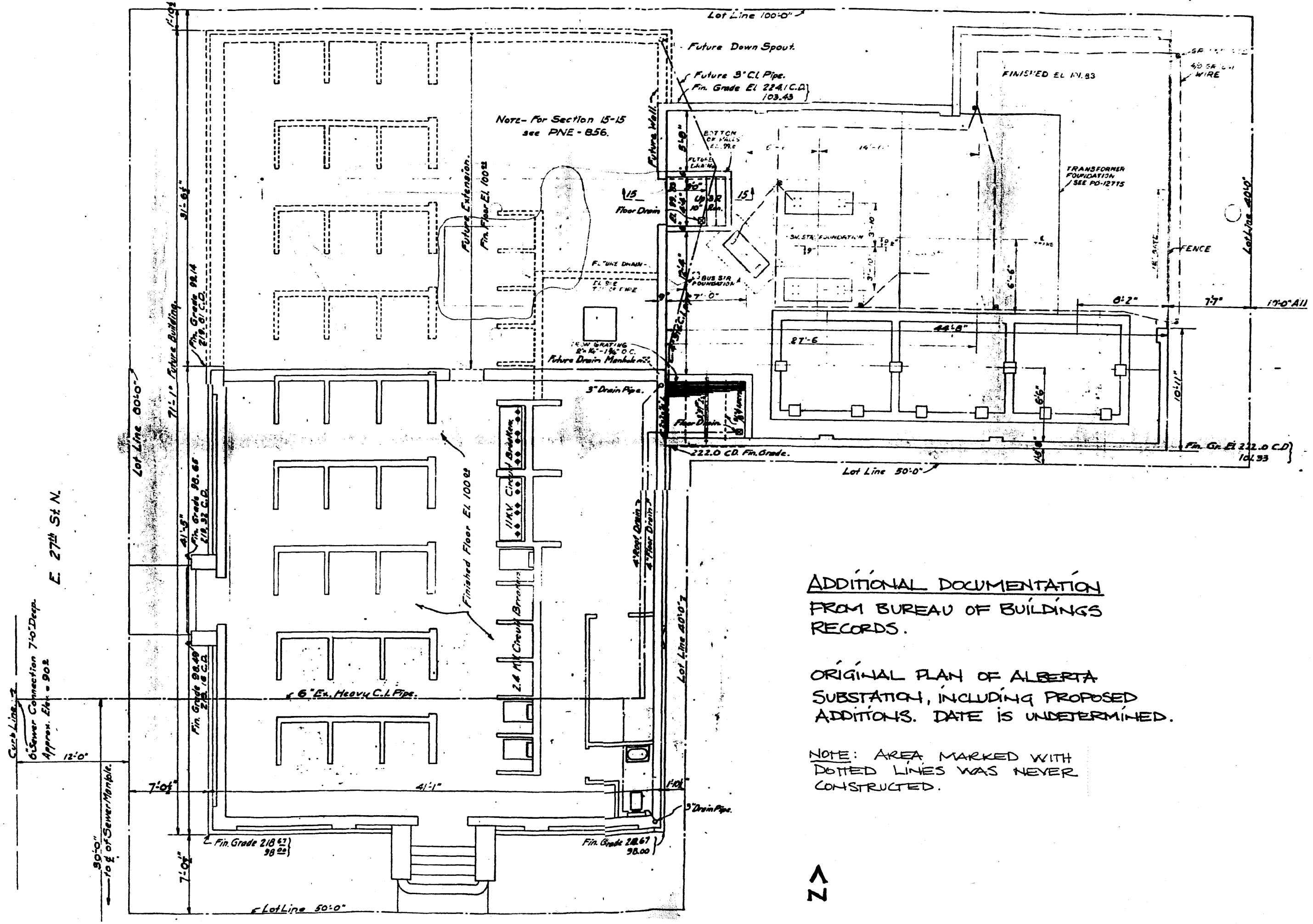
ADDITIONAL DOCUMENTATION: From Pacificorp's corporate records, courtesy John Head. Dated April 9, 1940.





ALBERTA SUBSTATION PLAN

L.MICKLE 7/97

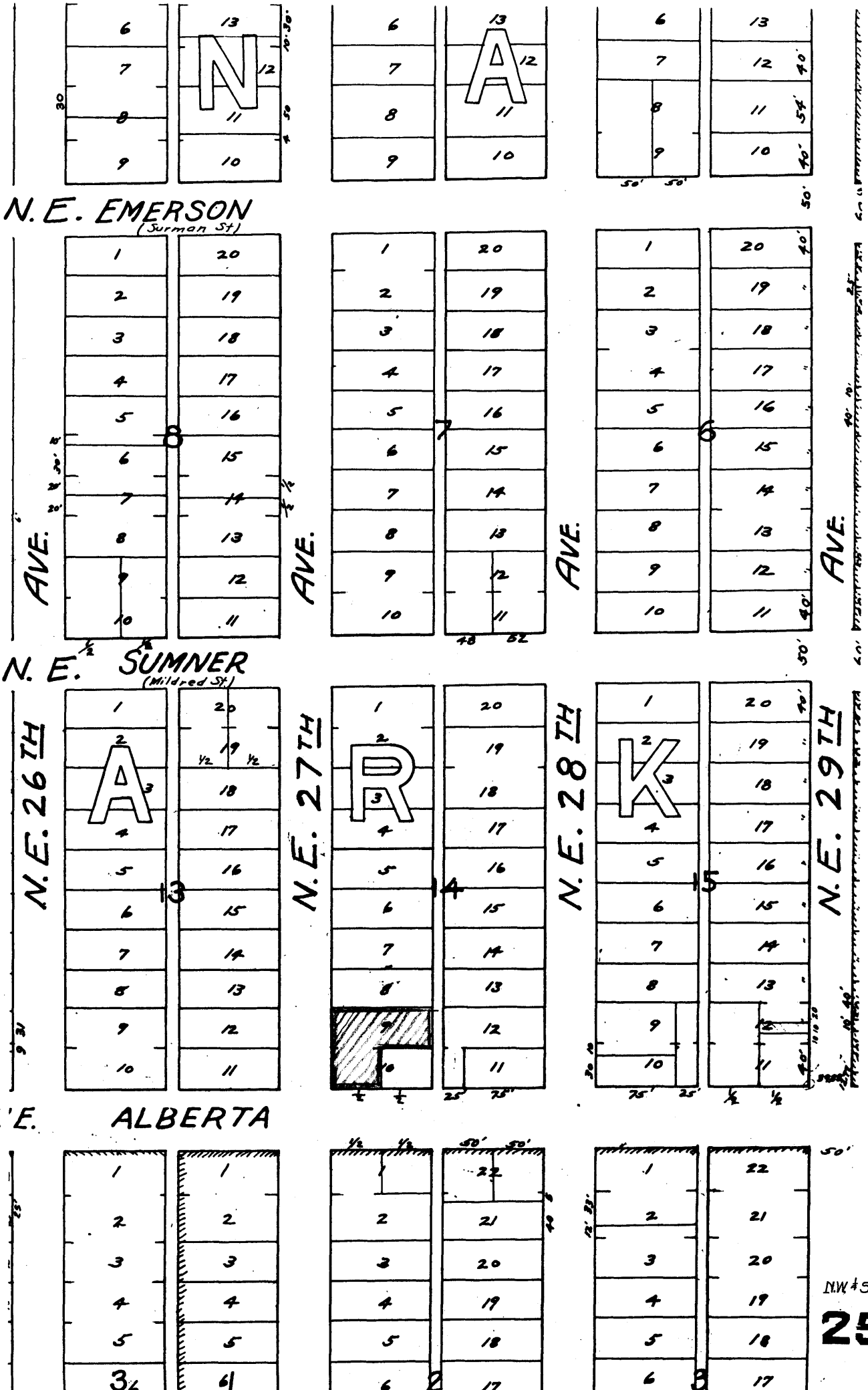


ADDITIONAL DOCUMENTATION

FROM BUREAU OF BUILDINGS RECORDS.

ORIGINAL PLAN OF ALBERTA SUBSTATION, INCLUDING PROPOSED ADDITIONS. DATE IS UNDETERMINED.

NOTE: AREA MARKED WITH DOTTED LINES WAS NEVER CONSTRUCTED.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