United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number ______ Page ______

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 97001077 Date Listed: 9/11/97

Seattle Municipal Light & Power Plant	King	WA
Property Name	County	State

N/A
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Signature of the Keeper	9/11/97 Date of Action

Amended Items in Nomination:

Description:

Building No. 21-City Cabin should be identified as a noncontributing resource. [The building, although of historic interest, was moved into the district in 1960 after the period of significance and retains no historic connections to the power plant site or the Cedar Falls community.]

Resource Count:

The count should be revised to add one noncontributing building and delete one contributing building. [see notation above]

Significance:

The period of significance is revised to read: 1904-1932. [While planning for the site began as early as 1902, the period of significance may not predate the earliest extant resource.]

Archeology: Historic/Non-aboriginal is added as an area of significance under Criterion D. The appropriate Cultural Affiliation is Euro-American.

This information was confirmed with L. McCroskey of the WA SHPO.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

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

OMB No. 1024-0018

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

1077

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name Seattle Municipal Light and Power Plant

other names/site number Cedar Falls Historic District

2. Location

street & number 20030 Cedar Falls Road SE not for publication ___

city or town North Bend vicinity ___

state Washington code WA county King code 033

zip code 98045

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ✓ 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. (___ See continuation sheet for additional comments.)

[signature] Acting SHPO 7.9.97
Signature of certifying official Date

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
 X 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] 9/11/97
Signature of Keeper Date of Action

5. Classification

Ownership of Property
___ private
_X_ public-local
___ public-State
___ public-Federal

Category of Property
___ building(s)
_X_ district
___ site
___ structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
_12__	_4__	buildings
_7__	____	sites
_5__	____	structures
_2__	__2_	objects
_26___	__6_	total

Name of related multiple property listing
____

Number of contributing resources previously listed in the National Register ________

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat:	Sub:
__INDUSTRY:	__energy facility
__GOVERNMENT:	__public works
	__government office
__DOMESTIC	__institutional housing_

Current Functions (Enter categories from instructions)

Cat:	Sub:
__INDUSTRY:	__energy facility
__GOVERNMENT:	__government office
	__public works
__LANDSCAPE	__conservation area

7. Description

Architectural Classification (Enter categories from instructions)

__OTHER: industrial vernacular

Materials (Enter categories from instructions)

foundation __concrete
roof ________metal: various
walls ________concrete
________wood: weatherboard
other ______________________

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

8. Statement of Significance

Applicable National Register Criteria

__X__ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

__X__ 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.

_X__ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations

____ 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)

_____POLITICS/GOVERNMENT____

_____ENGINEERING______________

_____COMMUNITY PLANNING_____

Period of Significance

____1902 - 1932____________

Significant Dates _1904___
_1914___
_1921___
_ 1929___

Significant Person (Complete if Criterion B is marked above)

____Thomson, Reginald H.__________

____Ross, James Delmage___________

Cultural Affiliation

____N/A____________________________

Architect/Builder

___City of Seattle Engineering Dept._____

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

9. Major Bibliographical References

(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
_X_ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # ___________
_X_ recorded by Historic American Engineering Record # __WA-15___

Primary Location of Additional Data
___ State Historic Preservation Office
___ Other State agency
___ Federal agency
_X_ Local government
___ University
___ Other
Name of repository: __Seattle City Light; SWD, Watershed Management Division______

10. Geographical Data

Acreage of Property ___approx. 88________

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

	Zone	Easting	Northing		Zone	Easting	Northing
1	__	______	_______	3	__	______	_______
2	__	______	_______	4	__	______	_______

_X__ 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____Florence K. Lentz______________________________________

organization_______Cultural Resource Consulting______ date___ September, 1996______

street & number____P.O. Box 898___________ telephone__(509) 925-3944_________

city or town___Ellensburg_______________ state_WA__ zip code __98926______

Additional Documentation

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 ____

street & number ______________________________ telephone ______________

city or town ______________________________ state _____ zip code ________

7. Narrative Description

Descriptive Summary

The Cedar Falls Historic District, originally known as the Seattle Municipal Light and Power Plant, is situated on the upper Cedar River in the foothills of the Cascade Mountains of western Washington. The property consists of a complex of early 20th-century industrial structures, hydroelectric generating equipment, and support features, including the remnants of a planned community built to house City employees and their families. The plant and townsite are still owned and operated by the City of Seattle, the former by Seattle City Light and the latter by the Seattle Water Department. A mixture of 32 historic and non-historic resources are encompassed within the boundaries of the district. All are closely associated with the earliest development of Seattle's publicly-owned power system, with the plant's operation and improvement over time, and/or with the administration of the City's domestic water supply system.

The boundaries of the proposed historic district extend in a linear fashion along the Cedar River from the Cedar Falls townsite and power station to the masonry dam some two miles upstream. The configuration of the district reflects the location of the facility's primary extant components - the 1914 masonry dam, the 1920s hydro-generating station, and the company town which supported it. The district also includes the long-distance water conveyance features integral to the design of a high-head system. In general, the boundaries are tightly drawn to encompass only those core contributing features that demonstrate the system's past and present industrial function. These resources together convey most convincingly the district's overall integrity of design, materials, workmanship, setting, location, feeling, and association.

Some contributing resources at the power station and the townsite are remnants of important earlier features. Within their immediate context, these sites have the potential to yield information about former buildings, structures, or landscape features. Examples of such sites are the original penstock piers, the old powerhouse foundations, and tree-lined delineations of former streets in town.

Non-contributing features included within the proposed district boundaries are those which, though their function may be consistent with the historic use of the site, post-date the historic period. These include a few features at the power plant, and more recent Seattle Water Department administrative buildings at the townsite.

Excluded from the historic district is the original 1904 timber crib dam, located one and one-half miles above the masonry dam at the outlet of Chester Morse Lake. Over the years, the crib dam was frequently altered. Much of its fabric has been removed, and it now lies submerged beneath the combined waters of Masonry Pool and Chester Morse Lake. The reservoir itself is likewise not encompassed within the district.

For the present, historic district boundaries also exclude several early dam construction camp sites, where no above-ground structures remain standing. These include: the original Camp One site south of the Crib Dam, long submerged under Masonry Pool; the secondary site of Camp One north of the crib dam, determined not eligible for National Register listing in 1986; and the site of Camp Two at the north end of the Masonry Dam, not yet evaluated for archaeological importance. The relationship of these sites to the Cedar Falls hydroelectric works is, however, discussed in this text. Also omitted from the proposed historic district, for practical reasons, is the 37-mile transmission line from the power station to the city of Seattle.

Natural Features

The Cedar Falls Historic District lies within the City of Seattle's Cedar River Watershed, in Sections 3, 4, 10, and 11, Township 22 N., Range 8 E. The watershed extends from the crest of the Cascade range northwestward to the diversion dam and intake facility at Landsburg, encompassing an area of approximately 90,000 acres. Two-thirds of the water supply of the Greater Seattle area comes from the watershed, which is heavily restricted to protect water quality. The Cedar River itself flows generally to the west for nearly fifty miles to its confluence with the southern end of Lake Washington at Renton. A major feature of the upper watershed is Chester Morse Lake, originally called Cedar Lake. Its natural level was raised by eighteen feet in 1903 upon construction of the timber crib dam, the first component of the hydroelectric works (Schalk and Larson 1986, 1-3; *SLD Annual Report* 1911, 31).

Fed by the waters of the Cedar and Rex Rivers, Chester Morse Lake lies in a glacial-sculpted valley. At its lower end, the lake now joins the waters of Masonry Pool, a secondary reservoir formed by construction of the masonry dam in 1914. From the reservoir's average pool elevation of 1545 feet, the Cedar River drops some 600 feet through a narrow, rock-walled canyon. Here upper and lower waterfalls have formed a barrier to anadromous fish species. This sharp drop in elevation allowed the development of the high-head hydroelectric works, and influenced the siting of the power plant in the valley below the falls. Numerous streams enter the Cedar River as it flows through the rolling hills and gentle slopes of the lower watershed, en route to the water supply diversion dam at Landsburg eleven miles downriver from the falls (Getz 1987, 7; *SLD Annual Report* 1911, 31).

Coniferous forests are the chief vegetation type within the watershed today, with species native to the western Cascades, such as western hemlock, Douglas fir, western red cedar, and red alder. Huckleberries and other plant food resources are present. Much of the area was logged prior to 1924 and this, combined with forest fires, has left a patchwork of tree stands varying in age from 30 to 100 years in age. Today, Rocky Mountain elk and black-tailed deer forage in the upper watershed. Movement of anadromous fish up the Cedar River, once possible as far as the falls, is obstructed by the dam at Landsburg (Schalk and Larson 1986, 3-4).

Land Use on the Cedar River: Pre-history through 1945

Aboriginal Land Use

Accounts by explorers, miners, and homesteaders document intensive Native American use of the Cedar River Watershed for travel, trading, and resource gathering. Indigenous peoples, including the Snoqualmie, Yakama, and possibly the Wenatchi, Muckleshoot, and Duwamish, frequented the watershed at various times of the year. Two areas appear to have received particularly heavy use - Rattlesnake Prairie and Cedar Lake (Lewarch 1979, 11).

Rattlesnake Prairie, now immersed under the small lake of the same name in close proximity to the power station, served as a corridor between the Cedar and Snoqualmie River drainages. The prairie was widely used as a trail and camping area during pre-historic and early historic times. The site played an even more significant role as habitat for camas tubers, one of the most important vegetable foodstuffs of Northwest Coast natives (Lewarch 1979, 11-12).

Cedar Lake was host to hunting, fishing, and gathering camps of the Snoqualmie people. Trout and other fresh-water fish were taken using various techniques, and huckleberries and other plant foods gathered in season. The abundance of resources, the flat lands for campsites, and the relative accessibility of the lake to the Yakama from east of the mountains, provided a strategic location for human interaction and trade. Ethnographic literature reports the existence of seasonal camps and drying racks along the shores of the lake as late as the 1940s (Lewarch 1979, 12-1-13).

The Cedar River corridor was widely used as a route for trans-Cascade travel, both by the Snoqualmie and the Yakama. Early survey records depict numerous "old Indian trails" along the river and its various tributary streams, up the western slopes and across Yakima and Meadow Passes. Favored camping locations along these routes are thought to have been frequently re-used (Lewarch 1979, 14).

Extensive archaeological investigations within the watershed in recent years have further identified the presence of significant prehistoric resources around Chester Morse Lake and other nearby locations. The time span demonstrated by these sites may cover up to 9000 years of the prehistoric record. A number of the sites have been determined eligible for listing in the National Register, owing to their high potential for yielding information on aboriginal land use in the Cascade foothills (Schalk and Larson,1986, 13).

Early Euro-American Land Use

In the second half of the 19th century, new land uses were introduced by Euro-Americans to the Cedar River valley. Among these activities were exploration, mining, military expeditions, homesteading, logging, and railroading. Key to the area's development was its proximity to population centers in the Puget Sound lowlands. The exploitation of the watershed was shaped by the entrepreneurial aims of business interests in Seattle and, ultimately, by the City of Seattle and its program of municipal ownership (Lewarch 1979, 17).

The first incursions of Euro-Americans into the watershed were for purposes of developing transportation links with eastern Washington. From the 1840s through the mid-1850s, feasible routes over the Cascades were sought in the context of the early fur trade, the development of railroads and wagon roads, and strategic maneuvers during the Indian Wars. Many of these explorations resulted in the "discovery" of places utilized for centuries by Native Americans in the area: Rattlesnake Prairie, Cedar Lake, and the Cedar River Pack Trail, which led from the Prairie up the headwaters of the Cedar to Yakima and Meadow Passes. (Getz 1987, 22).

The discovery of vast coal deposits in the foothills east of Seattle led to the construction of the first railroad into the Cedar River Valley. In 1882-83, the Columbia and Puget Sound Railroad reached the lower portion of the watershed near the settlement of Franklin. Later, it was extended to the coal mines at Cedar Mountain, and to the Denny-Renton Clay and Coal Company at the company town of Taylor (Lewarch 1979, 20-21). Ceramic production at Taylor, dependent upon the presence of both coal and clay beds, flourished from 1895 to 1946. The kilns turned out terra-cotta, tile, facing brick, hollow building blocks, sewer pipe, and other construction materials for a rapidly expanding market in Seattle. Prospectors staked numerous mineral claims in the upper watershed in the 1880s and '90s, but coal mining played a far more significant economic role in the area's history. (Getz 1987, 38-42,70).

Homesteading in the Cedar River Watershed occurred with increasing frequency beginning in the 1890s. Improved access into the area, coupled with the growing knowledge of its geography and resources, lured settlers first to the rolling landscape of the lower Cedar. Many claims were not recorded, as squatting on railroad or corporate timber lands in that setting was tolerated. GLO survey maps of the 1890s show single cabins and clearings along the river, from the falls to about two miles downstream, in the general vicinity of the future site of the power plant at Cedar Falls. These included the Frank Brackett cabin, the Nathan Pumphrey cabin, the Graham cabin, the John Fleming cabin, and other unidentified dwellings (Getz 1987, 22, 30-31).

In the upper watershed, around Cedar Lake, homesteading occurred at a later date and remained fairly scattered and primitive. Isolated cabins were erected along streams, following a pattern determined by the lay of the land and by pre-existing trails from Rattlesnake Prairie. Few were improved after construction, and most were quickly abandoned. Among the settlers at the west end of the lake were Felix Damburat, A. Barger, Maggie Thrasher, and K. Wells. Damburat's homestead, which appears on a 1893 GLO map, became a familiar stop-over for travelers in the area.

In 1901, Damburat sold his land to the City of Seattle, but stayed on through 1902-04 to board the workers building the timber crib dam for the hydroelectric works. Still more settlers staked their claims, though briefly, at the upper end of the lake and along the Rex River. W. Chester Morse, Water Superintendent for the City of Seattle from 1938 to 1949, built a hunting cabin in the late 1890s on a broad meadow near the Rex River (Getz 1987, 32-36).

Logging activity flourished in the watershed from the mid-1890s into the 1940s, made profitable by the extension of railroad spurs into the forest. The Kent

Lumber Company Mill on the Cedar River was one of the largest in the area. The company town which supported the mill, known as Barneston, was home to a large number of Asian-American workers. Across the river was Selleck, milltown of the Pacific States Lumber Company. Besides these two substantial company towns, there were eighteen logging camps situated throughout the watershed at various times. Typically the camps consisted of bunkhouses, cookhouses, equipment sheds, and other wooden outbuildings. (Lewarch 1979, 23-24). Logging above Cedar Falls coincided with the construction of the new masonry dam in 1913, as timber to be inundated was salvaged and contracts were let in the upper watershed. After 1945, logging camps in the watershed were discontinued altogether to protect water quality (Getz 1987, 61).

The last major development to occur in the watershed, close to the municipal power plant at Cedar Falls, was construction of the Chicago, Milwaukee, and St. Paul Railroad. The railroad's right-of-way, granted in perpetuity by ordinance in 1906, extended from the City's water supply intake at Landsburg eleven miles east to Cedar Falls. Adjacent to Seattle's hydroelectric plant and its fledgling company town, the railroad established a division point called Moncton, built a passenger depot, and developed a rail yard complete with a substation for its electrified line. Soon afterward, the station itself came to be known as Cedar Falls (Getz 1987, 46-47).

City of Seattle Operations on the Cedar: Water and Power

Water Department Impacts

The City of Seattle's initial interest in the Cedar River was as a possible source of municipal water supply. Early survey and design work had no physical impact in the watershed until 1898, when the first parcel of land was acquired in Section 19, T22N, R7E, for the purpose of building a diversion dam and intake facility. The following year, City engineers began construction of these headworks at Landsburg, about eleven miles downstream from the proposed historic district. Municipal water from the Cedar River was first delivered to the citizens of Seattle through pipeline no. 1in 1901.

The presence of the Milwaukee Road Railroad, with its potential contaminant and fire hazard problems, encouraged the City of Seattle to institute a vigorous policy of comprehensive land acquisition throughout the watershed. Condemnation surveys were conducted from 1909 through 1912. The City of Seattle owned 37,982 acres of land in the watershed by 1912 (Getz 16, 47). In 1913, administration of the watershed - including land acquisition, forest management, and enforcement of sanitary regulations - was transferred by charter amendment from the Department of Public Works to the Superintendent of Water. Since that time, the Water Department has followed a strict program of continued land procurement, logging and reforestation, removal of above-ground structures no longer in active use, and restriction of public access (Getz 1987, 47-48).

City Light Impacts

Working in tandem with watershed management from the very beginning, has been the City of Seattle's development of the Cedar River as a source of municipal hydroelectric power. Seattle City Light continues today to operate and manage the power station at Cedar Falls, the dams, and Chester Morse Lake reservoir. The physical evidence of City Light's operations on the Cedar are the primary components of the proposed historic district.

Timber Crib Dam and Camp One: In June of 1902, City Engineer R.H. Thomson and others from his office located the site for a timber crib dam, the first of many components of the municipal hydroelectric works on the Cedar. City records and engineering reviews of the period describe the project.

Finding that the cost of shipping milled lumber to the construction site would be exorbitant, Thomson determined to build his own sawmill at the mouth of Cedar Lake. When complete, the mill produced lumber for the dam, the wood stave penstock, the power plant, and cottages for the workers (Thomson 1950, 100). Although the exact location of the sawmill remains unknown, Camp One appears on a c.1912 section map south of the river, and slightly southwest of the crib dam. Five structures are depicted, along with a road and bridge over the river leading north to the county road.

The crib dam itself was a rock-filled timber structure, 250' in width, sited about three-quarters of a mile below the outlet of Cedar Lake. There was a spillway at the center of the dam, and control gates for the penstock in one wing. The intake screens consisted of wooden bars. The Municipal Plant's *Fourth Annual Report* of 1908 described the headworks as consisting of:

> ...the dam and weir, gates, saw mill and dwellings for keeper, and pressure pipe to the power station three and one half miles down the river. This pipe consists of 15,374 feet of wooden stave pipe 48 inches in diameter, and 1001 feet of steel pipe 48 inches in diameter.

By the end of 1913, City Light reported that three or four more feet in lake elevation was obtained by the use of flashboards.

In 1914, the site of Camp One was inundated by the rising water of Masonry Pool. It was relocated north of the river where it was rebuilt and continued to serve as housing for Water Department personnel and seasonal help into the 1930s. A tree nursery was established by the Water Department just to the north in the early 1920s. The significance of this second Camp One site to City Light was the construction of a pumping station there on the shore of Masonry Pool. Through the 1920s, the pump sluiced adjacent soil and clay deposits onto the floor of the pool in an effort to control seepage - an effort that was ultimately unsuccessful.

The timber crib dam was recently used as a coffer during a major masonry dam improvement project in the 1980s. A new overflow dike was built immediately downstream, and the crib dam was breached. Because of these and earlier alterations, the crib dam has been determined ineligible for National Register listing. No above-ground structures remain at either of the Camp One sites, and they too have been determined not eligible for National Register listing (SWD Cultural Resource Collection Site Files: Camp I).

Power Plant and City Light Camp: Construction of the power plant below Cedar Falls occurred during the same years as work on the crib dam. A combination of early maps, photographs, and departmental annual reports trace the physical evolution of both the power station and the construction camp that grew up around it.

The site for the power plant was cleared and grubbed in 1902. In its original configuration, the plant consisted of a timber-framed powerhouse seven bays in width, oriented parallel to the river. Its gabled roof featured two raised vents. Behind the powerhouse was a concrete and stone transformer house, fitted with nine 2300 to 34700-volt step-up transformers arranged in banks of three each. Directly to the rear of the transformer house, at a higher elevation, stood a sizable concrete and stone switch house. A wood-framed workshop was erected just northwest of the powerhouse, and on the hill above the plant, was an oil house designed for gravity feed to the transformers.

Under the direction of Electrical Engineer J.D. Ross, workers installed two hydro-generating units, both 2400 horse-power Pelton impulse wheels, direct-connected to Allis-Chalmers 2300 volt, 3 phase generators. The power station was further equipped with elevated exterior walkways between buildings, and a standard gauge railway leading from the interior of the powerhouse all the way to North Bend. A single three-wire transmission line led from the plant, across the river, and west to Seattle.

Improvements and changes were begun at the power station almost immediately, as the demand for electricity in the city grew. By the end of 1908, the City reported the construction of a second penstock pipeline, the installation of two new Francis inflow turbines, two larger Westinghouse 4000-kilowatt generators, and a second transmission line from Cedar Falls to Seattle. To house the new machinery and apparatus, the timber powerhouse was enlarged in three quick increments to dimensions of 50 by 200 feet. Also completed by the end of 1908 was a second switch house, this one of stone. Around 1915, workers made another addition to the complex in the form of a small, wood-frame bungalow to serve as the plant office.

In its earliest form, the construction camp which supported the power station was rudimentary but functional. The little community was designed to be in many respects self-sufficient. A City Engineer's map dated January, 1908, depicts a kitchen and mess hall, a bunkhouse, two workers' cottages and a foreman's house, along with various outbuildings, including a cooler, meat house, and large chicken house. Alongside the tracks leading to the powerhouse is a "general store house" with what appears to be a long shed-roofed front porch. Two more elaborate dwellings, undoubtedly designed to serve as the first permanent employee residences, are situated a short distance from the workers' compound. These houses were, according to the map, equipped with running water and electricity, and featured exterior amenities such as fencing, walkways, wood sheds, chicken yards, and stables. Their placement set back from but facing the river suggests the beginnings of a plan for the future layout of a tidy residential enclave. By the close of 1908, two more six-room cottages had been built, presumably of equal quality.

Masonry Dam and Camp Two: As the community around the power station took shape, a construction camp was established in 1911 on the north side of the river at the site of the new masonry dam. The project was well-documented in contemporary engineering literature, and the evolution of Camp Two, as it came to be called, was more thoroughly recorded in photographs and maps than the earlier Camp One.

The Camp Two settlement grew to house around two hundred men during the height of construction activity. There was a sawmill, millpond, and lumber yard; a hospital, cookhouse, and sizable bunkhouse; as well as a number of individual worker cottages and outbuildings. One of the most substantial buildings was a two-story office and commissary. An aerial tramway was extended from the center of camp to a loading station upstream from a temporary coffer dam, built to de-water the construction site.

The masonry dam itself, four years in the making, was built to more fully harness the power potential of the Cedar River. Designed to a height of 215 feet and a width of nearly 1000 feet, the dam was intended to raise the reservoir level to 1590 feet above sea level. The dam's construction employed cyclopean masonry, consisting of boulders, rocks, and gravel from nearby gravel beds and spillway excavation. Plans called for a service spillway measuring 40 feet at the base, allowing a discharge of 10,000 cubic feet of water per second, with a maximum level of five feet below the dam's crest at heaviest flood stages. The service spillway was not completed as designed; instead, a smaller spillway notch was created near the center of the dam, a feature which would later prove inadequate.

After completion of the masonry dam, Camp Two remained in service into the 1930s, housing both City Light employees and loggers. Many of its buildings were burned in a serious forest fire of 1922. No above-ground structures remain at Camp Two today, and an emergency air strip overlays a portion of the site. Although an adjacent dump site has been determined ineligible for the National Register, the remainder of Camp Two has not yet been evaluated for potential historic archaeological significance (SWD Cultural Resource Collection : Camp II).

Related System Improvements: In conjunction with the masonry dam, a number of additions and alterations were made to the hydroelectric facility in the 1910s and '20s, both at the headworks, and at the power station. These changes are generally well-documented in period photographs, City Light reports, and engineering literature.

At the dam's south end, an underground concrete-lined power tunnel was cut through down to a lower gate house 1500 feet further downstream. At first, the tunnel was fed by the existing penstocks from the crib dam, and only in times of high water supplied directly from water held in the Masonry Pool behind the new dam. By the end of 1929, that situation had changed, and all water operating the hydro-generating equipment in the powerhouse came directly from the masonry dam. At the lower gate house, hydraulic-operated gate valves controlled the flow from the tunnel into two penstocks. These were carried across the Cedar River Gorge by an open-spandrel concrete arch bridge, measuring 187 feet in length and 24 feet in width. The two penstocks from that point forward followed a separate grade, one of them carried on a steel trestle viaduct over Canyon Creek.

Problems arising from seepage along the north bank of Masonry Pool delayed the installation of the new machinery at the power station until the 1920s. In the meanwhile, City Light erected the first segment of a new reinforced concrete powerhouse at the far south end of the existing wooden powerhouse. This initial four-bay section was intended to house the No. 5 hydro-generating unit, installed in 1921. The second phase of the concrete powerhouse was completed in 1928, continuing the rhythm of concrete pier and high fanlight fenestration to a full eight bays. Unit No. 6 was put on line in 1929.

The updating of machinery and electrical apparatus at the plant triggered other significant changes to its physical layout. The original switch house was removed, replaced by an outdoor step-up transformer and switching yards, situated on the hill above the powerhouse. Workers demolished the old wood-framed machine shop, and rebuilt No. 1 transmission line with aluminum steel conductors. About 1930, the earliest old wooden penstocks rotted out and were not replaced, because the first four small generating units at Cedar Falls had become unnecessary to the City's overall power production. As a result, the old machinery was completely dismantled in 1932, and the original timber-framed powerhouse razed. Units no. 1 and 2 were shipped to Ketchikan, Alaska, and Units No. 3 and 4 to South America. In place of the old power plant, a concrete shop and storage building was put up - it now features the incised "City Light" sign above its front door. That structure appears on a 1957 map labeled "'warehouse and office."

In the 1950s, a one-story machine shop/garage was appended to the northwest end of the powerhouse. Modifications leading to partial automation of the plant began in 1956, and were completed in 1961. Various improvements at that time included relocation of the outdoor transformer and switch yards to a lower level in front of the plant, replacement of the last remaining wood stave penstocks with steel pipes, and coating of the penstocks with cement mortar. Construction of a new 119,000-volt transmission line was completed. Other older components of the power station were removed, including the bungalow office, a workers' bunkhouse on the hill above the plant, and lightening arrestors at the far northwest end of the site. The power station has remained largely unchanged since the early 1960s.

Cedar Falls: As the power station was modified to keep up with production demand and technology, the community around the plant stabilized and developed its own identity. Later maps and photographs illustrate the continuing evolution of the townsite, as it lost its construction camp character in the 1910s and '20s, and emerged as a well-maintained residential village.

In 1911, City Light's Annual Report noted that:

> The city has provided four modern houses for its employees at the power station, and two more are in process of building. Sanitation is carefully observed and all sewage is carried away from Cedar River to the Snoqualmie watershed.

Around 1912, the bunkhouse was replaced with two bungalow-styled dormitories, and the kitchen and mess hall with a gambrel-roofed boarding house. Sturdy dwellings facing the river were erected along a "Y"-shaped street configuration. One branch of the "Y" led southeast to the power plant. The other branch led west toward the railroad, then turned and crossed the river over a Howe truss bridge. Later, that stretch of the river was rechanneled, and a second bridge rebuilt near the entrance to the power station.

The City of Seattle expended the necessary funds to make Cedar Falls an attractive place to live and work. The picturesque little community, manicured by day and brightly lit at night, served as an advertisement for City Light. Unlike the City Light town of Newhalem on the Skagit, there was no obvious "Silk Stocking Row" at Cedar Falls. Houses were varied, but democratic in design. Photographs from the 1912-1915 era show a double row of maple saplings carefully planted along the front lawns and parking strips of the "Y", even prior to paving of the streets. In later years these trees matured to form a canopy of green that defined the residential area. Cedar Falls was provided with five-globe cluster street light standards of the type used in the commercial districts of Seattle. In the early years, while horses remained the residents' chief mode of transportation to the nearest town at North Bend, there were several stables in town. Later, these were replaced with detached garages for family cars. Along the main street into town, a wood-framed gymnasium with a pool room, kitchen, and swimming pool was built in the late 1910s. Near the gym were community gardens, and across the open area in front of the gym, a community tennis court.

Many City Light families remained at Cedar Falls in the employ of the power plant for twenty or thirty years and more. Fred Harman, Chief Operator of the plant, his wife Marguerite, and their family were among these long-time residents. At the time of their marriage in 1917, Fred had been with the plant for about eight years, so City Light constructed a house for the newlyweds to their own specifications. The house was designed by City Architect D.R. Huntington, and featured a stone foundation and chimney, multi-paned window sash, and a composition roof with wood battens. Despite his position at the plant, Fred Harman's house was similar in scale and detail to others in the community.

Little physical change took place in the company town from the late 1920s to the early 1960s. A wood-frame bungalow was built for Seattle Water Department forester Allen Thompson in 1929 on the main road into town. Although this dwelling foreshadowed a change in the make-up of the community, its form and style were entirely compatible with existing City Light residences of that period. Some eighteen houses remained standing in the mid-1950s, as did the gymnasium, service buildings, and tennis court.

The physical character of the community first began to change in 1954 when the Seattle Water Department erected its watershed headquarters and garage buildings at the entrance to town. Throughout the early 1960s, as City Light reduced the number of its on-site employees, houses and outbuildings were systematically removed. In 1963, the "City Cabin" - a 1913 log shelter for fire patrols and timber cruisers, first located in the upper watershed - was reassembled in Cedar Falls to serve as an interpretive display. Alongside City Cabin, the Water Department put up six wooden kiosks with porcelain enamel interpretive signs in the 1980s to accommodate ever-increasing numbers of visitors to the watershed.

Today, only three residences and two larger garage structures survive from the City Light era at Cedar Falls. The Seattle Water Department occupies and manages the townsite, with the present exception of the plant operator's house (see Resource #27 below). Nonetheless, the overall setting, elements of original circulation patterns, and early landscape features remain intact. Through its ongoing function as the center of operations for the Cedar River Watershed, the Cedar Falls townsite continues to visually convey its original associations as a municipal company town.

Description of Existing Resources

Described below are the 32 specific contributing and non-contributing resources within the Cedar Falls Historic District, beginning at its easternmost, upstream end at the masonry dam. Features are organized by geographic location and function within the system.

A. Headworks and Water Conveyance System

CONTRIBUTING RESOURCES

#1 Masonry Dam **1912-14**
Contributing Resource: Structure
Original Function: Dam
Current Function: Same

Cyclopean masonry gravity dam, 980 feet across, 230 feet above riverbed, 195 feet thick at its base. Crest at 1600 feet above sea level, features molded panel concrete walls and walkway. Lower service spillway at 1555 feet operated to limit normal maximum pool elevation. Planned higher spillway at 1590 feet never completed owing to seepage defects in the Masonry Pool reservoir. Recent safety modifications in late 1980s provided new emergency spillway at north end of dam. Existing service spillway notch raised by 2.4 feet, and flood-control gate with hoist installed. Upstream face resurfaced with reinforced concrete.

#2 Controlling Gate House **1914**
Contributing Resource: Building
Original Function: Head gate operation
Current Function: Same

Also known as the upper gate house, a reinforced concrete building measuring 33 by 24 feet. Flat roof with decorative cornice relief and metal fascia, double-hung six-over-six light windows symmetrically placed. Interior retains three sluice gate valve mechanisms that control water to the power tunnel.

#3 Power Tunnel **1912-1914**
Contributing Resource: Structure
Original Function: Water conveyance to penstocks
Current Function: Same

Underground rock tunnel lined with concrete, 1500 feet in length and 11 feet in diameter, leads from masonry dam to penstocks at lower gate house. Originally fed by 78" pipe from crib dam; fed from Masonry Pool through gates in times of high water only. By 1929, all water entered from Masonry Pool.

#4 Penstock Valve House **1914**
Contributing Resource: Building
Original Function: Valve gate operation to penstocks
Current Function: Same

Also known as the Lower Gate House, a reinforced concrete structure measuring 30 x 22 feet. Low cornice relief below pitched gable roof, modified from original flat configuration. Now clad with green standing seam metal. Fixed sash and pivot type windows with multi-lights. Interior houses three "Big Gate" valves at juncture between power tunnel and penstocks.

#5 Open Spandrel Concrete Arch Bridge **1914**
Contributing Resource: Structure
Original Function: Span Cedar River gorge
Current Function: Same

Designed to carry three penstocks over gorge. Measures 187 feet in length, and 24 feet in width. Presently carries two steel riveted penstocks with wire catwalk in between.

#6 Penstocks and Supports **1920s, late 1950s**
Contributing Resource: Structure
Original Function: Water conveyance to powerhouse
Current Function: Same

Two riveted steel penstocks, each 78" in diameter, coated with cement mortar. Penstock material replaced in late 1950s. Carried 7500 feet over two separate routes established for Units 5 and 6, installed 1921 and 1929 respectively. Above-grade conveyance using steel trestle (penstock no. 5) over Canyon Creek, concrete saddles and thrust blocks.

#7 Early Penstock Piers **1904-1908**
Contributing Resource: Site
Original Function: Early penstock support
Current Function: Ruins

Abandoned concrete piers, exact number unknown, used to carry original or early wood-stave penstock from crib dam to powerhouse. Visible remnants in floor of Cedar River gorge.

B. Power Station

CONTRIBUTING RESOURCES

#8 Timber-frame Powerhouse Foundations **1904**
Contributing Resource: Site
Original Function: Housed Units No. 1-4
Current Function: Ruins

Granite and concrete foundation remnants, now exposed along northeast edge of plant parking lot, indicate rear wall of former timber-frame powerhouse. Brick arches mark terminus of original head race at juncture with turbines.

#9 Concrete Powerhouse **1921-1928**
Contributing Resource: Building
Original Function: Housed units no. 5 and 6
Current Function: Same

Reinforced concrete pilaster frame, two and one-half stories, 129 x 44 feet in plan. Flat roof supported by riveted steel trusses. Generating room has industrial window sash with fanlights at second story level. Series of small pivot windows below cornice, incised decorative panels below each group of three. Northwest end wall clad with corrugated metal, for potential future expansion. Two minor additions to front and rear facades.

Interior features 50-foot ceiling and 40-ton crane to move machinery. Generating equipment consists of units 5 and 6, Francis reaction turbines of 20,000 horsepower, built by Pelton Water Wheel Co., connected to 15,000-kilowatt maximum capacity Westinghouse generators. Other features of note: station control board, original operator's "pulpit" above generator floor, and second story catwalk.

#10 Concrete Transformer House **1904**
Contributing Resource: Building
Original Function: Housed transformers
Current Function: Storage

Only remaining structure from original 1904 power station complex. Rubble concrete construction, 73 by 13 feet in dimension. Steeply pitched metal gabled roof altered from the original flat configuration. Industrial steel sash windows are infill replacing original garage-type openings. Steel plate door and hinges. Interior retains concrete compartments that housed three banks of three transformers each. Evidence of conduit holes remain at eaves.

#11 Stone Switch House **1908**
Contributing Resource: Building
Original Function: Housed high-tension switches
Current Function: Storage

Stone with cement mortar, 18 x 33 feet in plan, flat roof with broad overhang. Segmental arched window openings with stone voussoirs, wooden sills, and four-over-four light, multi-paned window sash. Steel plate doors. Holes for conduit along upper walls. Interior retains two concrete compartments. Built as a second, "fireproof" switch house during first phase of plant improvements.

#12 "City Light Building" **1932**
Contributing Resource: Building
Original Function: Shop and storage, later office
Current Function: Conference room, lunch room, restrooms

Stone and concrete utility building, measuring approximately 18 x 55 feet, with steeply pitched gable roof clad with corrugated metal. Industrial steel window sash at front, wood double-hung window sash at rear now being replaced in kind. Heavy steel plate doors and hinges. Building post-dates wooden powerhouse (demolished 1932).

#13 Transformer Yard Foundation **C.1920**
Contributing Resource: Site
Original Function: Transformer yard
Current Function: Ruins

Second location of transformers - removed from original concrete transformer house to hillside. Foundation remains substantial, including concrete abutment and retaining wall, slab flooring with individual transformer compartments, decorative finials along concrete railing.

#14 Switch Yard Foundation **c.1920**
Contributing Resource: Site
Original Function: High-tension switches
Current Function: Ruins

Third location of switching function - removed from 1908 stone house and established near site of original switch house on hill. Concrete slab sole remaining feature.

#15 Three Early Penstocks **1908**
Contributing Resource: Structure
Original Function: Served unit nos. 3 and 4
Current Function: Fire protection

Remains of three riveted steel penstocks, 4 feet in diameter, extending one-quarter mile from behind powerhouse to connection with current penstocks on hill.

NON-CONTRIBUTING RESOURCES

#16 Machine Shop **1950s**
Non-contributing Resource: Building
Original Function: Machine shop/garage
Current Function: Same

One-story concrete addition to powerhouse, 44 by 48 feet in dimension. Large scale garage entrance on northwest side. Located on site of early wood-frame powerhouse.

#17 Switch and Transformer Yards 1960s, early 1980s
Non-contributing Resource: Object
Original Function: High-tension switch and transformer connection to transmission lines
Current Function: Same

Transformer and switch functions moved down from hillside locations in late 1950s or early 1960s. Now prominently cited at entry to power station and in front of powerhouse.

C. Cedar Falls Townsite

CONTRIBUTING RESOURCES

#18 Allen Thompson House (House no.7) 1929
Contributing Resource: Building
Original Function: Water Department Forester's residence
Current Function: SWD offices

Built for SWD Forester Allen Thompson and his wife Theodora, the only dwelling in Cedar Falls designed specifically for an employee of the Seattle Water Department. One and one-half story wood-frame bungalow with lateral gable roof, dormer, and raised gabled porch at center. Lapped wood siding and wood shingle roof. Projecting brackets at gable ends, and exposed rafter tails at eaves. Some original multi-pane over single light window sash remain, picture window replacements at front. Early detached garage at street and playhouse at rear. Interior now converted to office space.

#19 Heavy Timber Garage **c. 1920**
Contributing Resource: Building
Original Function: Equipment garage
Current Function: SWD road and grounds storage

Open three-bay, timber frame garage with truncated gabled roof. Decorative bracing at eaves. Vertical siding and fixed four-light window sash. Relocated here for use by SWD, from original City Light site perpendicular to entry road across from gymnasium.

#20 Warehouse / Stable **c. 1910**
Contributing Resource: Building
Original Function: Stable / warehouse
Current Function: SWD saw repair shop

Gable-roofed shed now enclosed, clad with vertical siding. Appears in a c.1935 aerial photo parallel to tennis court, part of City Light service/garage area. Labeled on 1957 map as warehouse with rack. Relocated to present site by SWD, and converted to saw repair shop.

#21 City Cabin **1913**
Contributing Resource: Building
Original Function: Fire patrol cabin
Current Function: Visitor exhibit

Constructed in upper watershed to serve as a shelter for district fire patrols and timber cruisers, relocated to Cedar Falls in 1963 as interpretive display. One room log cabin with split cedar shake roof and gabled overhang.

#22 Street Light Standards **c.1930**
Contributing Resource: Object
Original Function: Street illumination
Current Function: Same

Replaced earlier single globe fixtures. Design based on City Light fixtures erected on commercial streets in Seattle, from about 1910. Standards cast iron, opal glass globes. Some standards relocated to main entry road after residences along "Y" removed in early 1960s.

#23 Tennis Court **late 1910s**
Contributing Resource: Object
Original Function: Community recreation
Current Function: No use

Built in conjunction with gymnasium across street for community use. Surrounded with chain link fencing.

#24 Circulation Pattern **1904-1932**
Contributing Resource: Site
Original Function: Street layout
Current Function: Same, partial ruin

Original circulation pattern set by topography, river, power station site, and railroad lines. Later definition provided by double rows of broad-leaf maples, sidewalks, light standards, water mains and hydrants, and residential growth. Main configuration a "Y" shape, with service and communal areas along entry, residences along branches of "Y," and power station at far corner of river flat. Southwest branch of "Y" now overgrown with alder and understory, maples still defining street and yard edges.

#25 Howe Truss Bridge Remnant **c.1915**
Contributing Resource: Site
Original Function: Cedar Falls Road crossing over Cedar
Current Function: Ruin

Vehicular and pedestrian bridge on main patrol road into lower watershed. Appears on early maps of townsite, dismantled c. 1930 when river channel rerouted. Rubble in dry channel includes structural timbers.

#26 Fred Harman House (House no. 5) **1917**
Contributing Resource: Building
Original Function: Plant Superintendent's residence
Current Function: SWD offices

Designed by City Architect D.R. Huntington for Fred Harman, power plant Superintendent from 1912 to 1951, and his wife Marguerite. Single story wood-frame bungalow, irregular in plan, with low pitched gable roofline, projecting bays and porches. Original open porch at westernmost corner enclosed in a later remodeling. Bracket detailing along eaves. Original composition roof with battens now metal-clad. Some multi-paned double-hung window sash still intact, others replaced with fixed single pane picture windows. Distinctive river rock chimney and foundation. Landscape features now include circular cement planter at side and curved cement pond at rear. Garage at rear now converted to small SWD fitness center. Interior partitions altered over time, but some original details and finishes intact.

#27 Charles Thompson / "City Light" House (House no. 2) **1922**
Contributing Resource: Building
Original Function: residence
Current Function: City Light Plant Operator's residence, now vacant

Home of power plant operator Charles Thompson, his wife Lyda and family, in the 1920s and '30s. One and one-half story wood-frame cottage with lateral gable roof, small shed-roofed dormer, recessed central entry, and projecting porch at side. Roof now metal-clad. Wide lapped wood siding. Picture window sash with transoms and sidelights. Garage at rear. Interior appears to have been remodeled in the 1940s with most original detail and finishes removed.

#28 Bridge Remnant at Power Plant **c. 1940**
Contributing Resource: Site
Original Function: Crossing over Cedar
Current Function: Ruin

Second crossing over Cedar from townsite, erected when river partially rechanneled to stop bank erosion. Metal uprights and one beam remain on river bank at power plant entrance.

NON-CONTRIBUTING RESOURCES

#29 Watershed Headquarters **1954**
Non-contributing Resource: Building
Original Function: Watershed administrative offices
Current Function: SWD watershed offices, shop, and equipment storage

Two-story concrete block and frame in Northwest Modern style, with numerous additions.

#30 Fueling Building **1954**
Non-contributing Resource: Building
Original Function: Garage
Current Function: SWD garage

Concrete block garage contemporary with watershed headquarters building. Flat roof, no detail. Garage doors at rear opening into shop yard.

#31 Metal Clad Garage **recent**
Non-contributing Resource: Building
Original Function: Storage
Current Function: SWD pump storage

Timber frame four-bay open shed with metal cladding. Moved to this location from outside Cedar Falls.

#32 Interpretive Displays **1980s**
Non-contributing Resource: Object
Original Function: Visitor exhibits
Current Function: Same

Series of five mounted display boards illustrating watershed history, under timber and shake shelters; section of wood-stave penstock. Situated adjacent to City Cabin in approximate location of former City Light service yard.

8. Statement of Significance

Summary

The Cedar Falls Historic District includes original and early features of the Seattle Municipal Light and Power Plant, first put into operation in 1904. The hydroelectric project at Cedar Falls, and the concurrent development of a municipal water supply system on the Cedar River, emerged from sweeping political, social, and civic reforms of the Progressive Era. This facility was the first publicly-owned electrical generating plant built for the City of Seattle, and one of the earliest in the country for a municipality of its size.

The Historic District is situated on the west slope of the Cascade Mountains, in the heart of the Cedar River Watershed, some forty miles distant from Seattle. The complex includes a headworks, a power station, and a planned community designed exclusively for permanent employees of Seattle City Light. For over ninety years, the utility has continued to produce electricity at Cedar Falls, while the townsite has served over the last forty years as headquarters for the Seattle Water Department's management of the watershed.

The developments on the Cedar River further represent a primary lifetime accomplishment of City Engineer Reginald H. Thomson, the man responsible for much of the infrastructure of the city of Seattle. The original installation at Cedar Falls, as well as most of the system's subsequent improvements, are attributable to electrical engineer James D. Ross, the visionary father of Seattle City Light. Both Thomson and Ross were pivotal figures in the "city-building" movement of the early 20th century.

The hydroelectric works at Cedar Falls are also technologically notable as one of the earliest high-head power installations in the western United States. The extant headworks and hydro-generating equipment represent forward-looking system improvements of the 1910s and '20s. Remnants of the plant's original configuration, together with surviving company townsite features, lend industrial-archaeological significance to the district as a whole.

Criterion A: Linkage with Patterns and Events in History

Seattle in the Progressive Era

The establishment of Seattle's municipally-owned electric power system and the founding of Seattle City Light occurred within a nationwide context of burgeoning urbanization and progressive reform. In the decades following the Civil War, rapid industrialization and rising population in American cities created an urgent demand for new public services. Growing cities struggled to provide fire and police protection, clean water and affordable power, convenient mass transit, health and sanitation services, decent streets, and parks for respite from increased density (Erigero 1991, 8-1).

At the same time, social and economic ills proliferated. Most larger cities faced problems of political corruption, labor exploitation, class discrimination, and the rise of natural monopolies. Efforts to meet these monumental challenges brought about the ambitious reforms and public works projects of the Progressive Era. In the first decade of the century, the State of Washington enacted legislation which supported this movement, including labor measures, women's suffrage, a pure food and drug act, and the initiative, referendum, and recall laws. Seattle, like other emerging cities on the west coast, aggressively entered the mainstream of progressive civic reform, in ways that continue even today to profoundly shape the city's quality of life (Erigero 1991, 8-2).

Seattle's population, in a brief thirty year period from 1880 to 1910, soared from 3500 to 237,000 (Dick 1975, 9). Major public improvements began in the early 1890s with the paving of streets, the installation of a sewer system, and the regrades of entire hills to create north-south arterials. Through a City initiative in 1904, citizens overwhelmingly endorsed the development of a comprehensive park system. Such advances engendered a great deal of civic pride, locally defined as "SEATTLE SPIRIT." The optimism of the day found expression in the staging of the Alaska-Yukon-Pacific Exposition of 1909, and in the resounding recall of corruption-tainted Mayor Hiram Gill in 1911 (Erigero 1991, 8-1 - 8-2).

An outgrowth of Progressive Era thinking was the movement supporting municipal ownership of Seattle's water and power utilities. As early as 1889, consulting engineer Benezette Williams recommended the Cedar River as the supply source (Thomson 1950, 60). In 1895, Seattle citizens voted to fund the development of a publicly-owned water system on the Cedar (Thomson 1950, 35, 39, 69,85). The project was brought to fruition by City Engineer R.H. Thomson, who believed that "Clean water, and sufficient water, is the life-blood of the city." While Thomson's office handled the necessary surveys and design work in 1893 and '94, advocates of municipal ownership joined forces and actively promoted the project. Others in the community just as vocally supported the efforts of the Seattle Power Company, a private out-of-town corporation seeking to develop both the water and power resources of the river (Dick 1975, 14).

In 1895, Seattle discovered that, like the City of Spokane, it could issue bonds based on the future revenue of the water system, and moved to place such an ordinance on the ballot. In the campaign for passage of Ordinance 3990, anti-monopoly, local-control sentiment prevailed over the argument for free enterprise. City Council member Eugene Jordan presented a resolution which stated "...no city should be under tribute for its light, for its heat, and for its water, to any corporation" (Seattle Post-Intelligencer (Nov. 26, 1895).

Although the ordinance did not specifically call for power development, the campaign had openly introduced that possibility, through vigorous promotion of the idea of "city building." The notion of "city building" held that a reliable source of cheap and abundant power would draw new industry to the growing city like a magnet. In the spring of 1896, Seattle citizens ensured their future voice in the matter by approving a revised city charter. Section 14 of Article XXIX of the new charter required that the city council present the question of construction or purchase of a light and power system to the voters, at the first election following completion of the Cedar River water system (Dick 1975, 17, 26-27).

Ever since the early expansion of the electrical industry in the 1880s, municipal ownership of power systems in the United States had existed, but it was largely limited to small communities. By 1902, there were 671 publicly-owned plants in towns with populations numbering under 5000, but only six public plants in cities of 100,000 to 500,000 people. In Seattle, electricity was readily embraced in 1886, first for street lighting, then for electric railways, and finally for lighting the home. A myriad of small private concerns provided local service for a decade and a half (Dick 1975, 1-3, 8).

By 1900, most of the smaller providers had been consolidated to form the Seattle Electric Company, controlled by the Boston-based engineering and management firm of Stone and Webster. Notorious for their high rates and poor service, the Seattle Electric Company quickly became a symbol of monopolistic evil in the hands of a "foreign" syndicate.

Municipal Power Development on the Cedar River

When the question of the lighting plant was placed on the ballot in March, 1902, Seattle's citizens voted by a seven to one margin to proceed with municipal development of the system. The sentiment of the day - progressively optimistic and decidedly anti-corporate - was echoed by all the leading candidates in the general city election. The proposal was to build a dam on the Cedar River and, just below the lower falls, a power plant. People looked forward to the expansion of electrical service to the fast-growing suburbs, to improved and less costly public lighting, and to the promise of rate regulation by means of competition as an inducement to new industry. To accomplish all this, voters approved city indebtedness in the amount of $590,000 (Erigero 1991, 8-4; *SLD Annual Report* 1912-13, 14).

Construction proceeded under the supervision of the City Engineer's office. For the next few years, debate continued over whether the City should in fact enter into competition with the private sector for the residential and business light and power loads. This question was decided once and for all with the passage of a second bond issue in December of 1904 in the amount of $250,000 for facilities to supply private consumers, both residential and business (Dick 1975, 70-73). In the meanwhile, Thomson negotiated a contract with the Seattle Electric Company to purchase rights to all existing street lamps, poles, and wires. In January of 1905, the City began to furnish current to its own street-lighting system. Power became available to private customers nine months later (Thomson 1950, 101).

Within the first five years, the new utility proved beyond any doubt the efficiency of public ownership. Still under the aegis of the Seattle Lighting and Water Department, the city service realized expansion of the street lighting circuits, substantial rate reductions for residential customers, and healthy profits. It was during this period that J.D. Ross, electrical engineer in charge of the Cedar Falls facility, came to the attention of the public as the project's strongest proponent. In an article published in the Seattle Post Intelligencer, Ross painted a picture of the immense possibilities of public power, affirming "What a city needs for her industrial growth is plenty of power at reasonable rates, and if this is given by a municipality, or if a municipal plant can hold prices at a reasonable figure, as it does...then the object of the people in instituting such a concern is attained" (Seattle Post Intelligencer , February 15, 1905).

The demand for Cedar River hydroelectric power grew more rapidly than anyone had predicted. Almost immediately, it became necessary to expand the system's capacity. Between 1907 and 1909, J.D. Ross supervised construction of a second pipeline from the crib dam, the installation of two new hydro-generators, the addition of a new transmission line to the city, and expansion of the distribution system within the city. These improvements were funded by a series of bond issues. By 1910, the plant's capacity had increased from an initial 3500 kilowatts to 13,500 kilowatts. Seattle residents enjoyed one of the lowest electrical rates in the country - a maximum 8 1/2 cents per kilowatt hour. The street-lighting system, with a 600 percent candle-power increase over five years, prompted Seattle to proclaim itself "the best lighted city in America." The City now served over 15,000 customers, outpacing the Seattle Electric Company, and reported surplus revenues of $103,427 (*SLWD Annual Report* 1908, 1; Erigero 1991, 8.4).

Seattle City Light: Formation and Growth

The growth of the City's electrical power services, made possible by the Cedar Falls plant, created the need for a lighting department separate from the water department. By Charter amendment in April of 1910, citizens voted to establish the Seattle Lighting Department, later known as Seattle City Light. Mayor Hiram Gill appointed Richard Arms, a nine-year employee of the Seattle Electric Company, to head the new department (*SLD Biennial Report* 1912-13, 14; Dick 1965, 97).

Later in the year, as Gill's administration became embroiled in allegations of corruption and vice, critics charged that Superintendent Arms, in collusion with Gill, was sabotaging the success of City Light in favor of Stone and Webster interests. Arms was exonerated in a city council investigation, despite damaging testimony by both R.H. Thomson and J.D. Ross. Hiram Gill was, however, recalled by vote of the people in February of 1911. As Seattle's newly-elected mayor, George Dilling followed through on his campaign promise to appoint as "superintendent of lighting the best man I can find in the country." That man was J.D. Ross (Dick 1965, 97-108). With J.D. Ross at the helm, City Light entered a period of extraordinary growth under dynamic leadership.

The new superintendent's first challenge was to deal with the immediate reality of overloading at the Cedar Falls plant. The timber crib dam had always been considered temporary. Plans were already in place in 1910 to construct a larger, permanent dam that would raise Cedar Lake to an elevation of 1590 feet, increase its length to 5.23 miles, and conserve the entire run-off of the river for power purposes. The new reservoir, it was envisioned, would allow full development of the Cedar River plant's capacity to 45,000 kilowatts. In 1910, voters approved funding for the new masonry dam, to be erected at a site chosen by R.H. Thomson, one and one-half miles downstream from the crib dam in a narrow gorge. (Ross 1912, 65; *SLD Annual Report* 1923, 10; Dick 1965, 125).

A board of geologists and a special investigating committee of engineers urged a delay in construction until further testing of the site could take place, because the presence of glacial moraine made the suitability of the chosen site questionable. City Engineer A. Dimock, J.D. Ross, and other public works officials pushed ahead, however, stressing the loss of revenue and negative publicity if work on the new dam were halted (Erigero 1991, 8.7). Mayor George

Cotterill, engineer and ardent supporter of municipal ownership, concurred (Dick 1965, 128). In the meanwhile, to meet the overwhelming demand for new service, City Light sought additional power sites for future development, and put into service an auxiliary steam plant on Lake Union. The masonry dam at Cedar Falls was completed in November of 1914. By the spring of 1915, it was clear that the new reservoir, Masonry Pool, was leaking (*SLD Annual Report* 1923, 10).

The seepage from Masonry Pool flowed to the northwest, overflowing the banks of Rainy Season Lake on Rattlesnake Prairie, and slowly inundating the railroad town of Moncton. Opponents of City Light were quick to label the fiasco the "Cedar Dam Blunder," and pounced upon Ross, the utility, and leaders of the municipal ownership movement as irresponsible and far too eager to spend taxpayers' money. Various attempts were made to seal the north bank of the reservoir, all ultimately unsuccessful. To make matters worse, the north bank of Masonry Pool washed out during a test of the sealing in 1918. It sent a flood down the Boxley Creek valley to the Snoqualmie River, destroying tracks of the Milwaukee Railroad, the village of Edgewick, and sawmills of the North Bend Lumber Company (Dick 1965, 134-139).

The consequences of the "Cedar Dam Blunder" were far-reaching. The installation of the planned hydro-generating units at the Cedar Falls plant had to be delayed for seven years. The City was forced to acquire the property of Moncton residents and relocate them to the opposite shore of a much-enlarged Rattlesnake Lake. Damages from the Boxley Blowout amounted to over $361,000. In order to meet wartime demand, City Light was forced to add another generating unit to the Lake Union Steamplant, and to place this auxiliary facility in full time use. The steamplant was expensive to operate, requiring precious fuel oil needed for the war effort (*SLD Annual Report* 1929, 19; Getz 1987, 51; McWilliams 1955, 235; Dick 1965, 136).

Ironically, it was this situation, coupled with the looming shortage of city electrical power for wartime industry (owing in part to the Cedar Dam fiasco), that provided the ammunition Ross and city officials needed to secure the federal government's permission to apply for a permit to develop hydroelectric power on the Skagit River. The masonry dam and its leaky reservoir in this way indirectly assisted City Light in securing a far more substantial resource at the Skagit sites. With the Skagit projects, Seattle ensured the survival of its municipal utility and eventually became a regional yardstick against which electrical rates throughout the country were measured (Dick 1965, 136; Erigero 1991, 8.7-8.9).

Cedar Falls: Company Town

Company towns arose in the West in the late 19th century in response to the exploitation of natural resources by private enterprise. Logging, mining, and railroad construction activities in remote locations often gave rise to small communities built solely to support the operations of the company in ownership. Taylor and Barneston, two turn-of the-century company towns in the Cedar River Watershed, supported the Denny-Renton Clay and Coal Company, and the Kent Lumber Company, respectively. From the late 1900s to the early 1950s, over two-hundred private company towns flourished in western states from Arizona to Washington. Most have since then been sold, abandoned, or razed. The federal government erected company towns in the 1930s in conjunction with large scale dam and power projects. The great majority of these have also been released into the private sector or entirely removed (Erigero 1991, 8.22).

Municipally-owned company towns were less frequent and usually short-lived. They were generally built as construction camps for the development of public utility sites. Few retained any features after completion of the project, beyond a house or two for operators, and fewer still survive as company towns with continued municipal ownership. Cedar Falls, and the still-operational City Light communities of Newhalem and Diablo on the Skagit, are rare examples of their type (Erigero 1991, 8.22). Of these, the Skagit towns retain greater physical integrity, and remain entirely City Light owned and operated. The Cedar Falls community has been both functionally and visually impacted by its early 1950s transfer to the Seattle Water Department and its use as headquarters of the Cedar River Watershed. Nonetheless, enough remains to illustrate its central role in the operation of the power station at Cedar Falls, and its historic significance as the first of City Light's power plant communities.

The municipally-owned company town at Cedar Falls began as a construction camp and evolved to serve as a permanent community for employees of the power plant. Cottages for construction workers building the power station were put up on the site as early as 1902. By the end of 1908, there were four commodious dwellings in place with barns and outbuildings (*SLWD Annual Report* 1908, 1-4). In the 1910s and '20s, additional residences were erected, along with amenities - maple tree-lined streets with cluster lighting standards, a gymnasium with swimming pool, a tennis court, and a community garden. The town grew to become a tightly-knit social unit that was home to several generations of City Light families (Getz 1987, 50).

For several decades, the larger community served by the Cedar Falls Post Office actually encompassed several separate settlements or living areas, with names that changed over time. The company town at the power station, sometimes referred to by City Light employees simply as "camp," was the living area that is now included within the boundaries of the Cedar Falls Historic District. Another City Light settlement was Camp One, originally built to house workers at the timber crib dam site. Camp Two, a larger construction site for the masonry dam, survived as a small company town in and of itself, housing various City Light employees into the 1930s (Getz 1987, 50-53, 55-58; Marian Arlin 3/8/96).

When the Milwaukee Railroad pushed through the watershed in 1907, the village of Moncton sprang up on Rattlesnake Prairie, just one-half mile from the power station and its residential community. Moncton was made a division point on the line, and at its busy switch yard a brick substation, an oil tower, a sand drop tower, and a handsome wood-framed depot were built. Milwaukee Road employees inhabited Moncton until seepage from Masonry Pool caused the unexpected flood in 1915. After that, the City of Seattle platted land along the southeast shore of the newly-formed lake, and here railroad workers built cottages in a settlement which later came to be designated as Railroad Camp. (Getz 50-52).

The confusion of differing names was somewhat clarified in 1912, when J.D. Ross applied political pressure to the railroad to change the name of the division point at Moncton:

> The city power plant is situated near Moncton, a town on the Chicago, Milwaukee and Puget Sound Railway. The name of Moncton is not an appropriate one for a power plant and in order that a distinctive name might be obtained the department opened negotiations with the postmaster general and the [Railroad] to have the name changed to Cedar Falls. With the assistance of Congressman Wm. E. Hunphrey this change has been accomplished and will take effect April 1, 1912. It is the intention of the Lighting Department to construct a large illuminated sign after this change occurs, to advertise the city to transcontinental passengers (*SLD Annual Report* 1911, 35).

Thus the name "Cedar Falls" came to be associated with the larger community. In more recent decades, as Railroad Camp and Camps One and Two have faded away, the more substantial settlement around the power plant has been referred to exclusively as Cedar Falls.

From the 1910s through the 1940s, Cedar Falls functioned in many ways as a self-contained company town. The relative isolation brought the City Light families together socially, particularly during the long winter months. The community gymnasium was a valued resource, the site of many lively parties, potlucks, and dances. It also featured a pool room, and an indoor swimming pool visited daily by Cedar Falls children all summer long. The outdoor setting, too, offered many year-round attractions, from tennis in town, to berry-picking, ice-skating, hiking, and swimming in the lake. The community was not without links to urban areas - there was easy rail access to Seattle for a day's shopping and, after 1915, an improved road down the steep hill to the larger town of North Bend. With no grocery store in town, most women placed orders by telephone to North Bend. Groceries were delivered twice a week. Fresh milk arrived by train, and visiting vendors peddled meat and produce in season. (*Cedar Falls Remembered*... 1989, various pp.).

The earliest residents of the City Light community were bachelors involved in the construction, operation, and maintenance of the power plant. They resided in dormitories, and took their meals at the boarding house. In the mid-1910s, two female teachers came to town, and shortly thereafter a flurry of marriages took place. An increase in the number of families brought about the construction of substantial new houses, eventually about twenty in all. These houses were reserved exclusively for the use of City employees. There was segregation, in this sense, between City Light families and those who worked for the railroad. Railroad families, for instance, were not given free access to the Cedar Falls swimming pool (*Cedar Falls Remembered...* 1989, power plant-8, 36).

Perhaps the most socially unifying feature of the larger Cedar Falls community was the school. Children from Camp Two, the Railroad Camp, and the City Light community itself all attended the same elementary school, first located in a rudimentary one-room building at the old townsite of Moncton. In 1911, a much more substantial, two-story school was put up in a location close to the original. This school escaped the inundation of Moncton in 1915 by virtue of its elevation on higher ground at the edge of town, but soon afterward was destroyed by heavy wind and snow in the winter of 1918. A third school building was erected in 1919 on the east side of the lake. Over the years, school activities drew together parents from the various settlements, and even if the adults did not regularly mingle, the children did. In 1944-45, the Cedar Falls school was consolidated with the North Bend district, and children thereafter traveled down the hill by bus.

Among City Light families at Cedar Falls, there was apparently a high level of job satisfaction and little turn-over. Many had deliberately chosen the peaceful rural setting as a good place to raise children. The pay was decent, vacations guaranteed, and the added incentive of rent-free housing, with a limitless supply of electricity, was not to be overlooked (*Cedar Falls as Remembered...*1989, power plant-1, 4, 15-16). The sequence of Chief Operators at the power plant were: Ed Reinig (1904- 1912), Fred Harman (1912-1951), Folke Forsander, Orland Look, Ray Creed, and Les Bell (1981-1996).

Responsibility for operation of the entire Cedar River Watershed was transferred by ordinance to the Superintendent of Water in 1913. The surrounding watershed environment impacted the daily lives of Cedar Falls residents, making itself felt in strict sanitation rules, restricted access to the river, annual typhoid shots, regulated logging activity, and vigilant forest fire suppression. Until around 1920, only City Light personnel were housed in the watershed. John Patrick Murphy, a Health Department employee, was assigned a house at Cedar Falls by at least 1922, and he remained for ten years or so. Murphy's job was to patrol the watershed, ensuring compliance with sanitation regulations.

In the mid-1920s, the Water Department adopted a program of forest management and fire protection in the watershed. Allen E. Thompson was hired as the department's first Forester in 1925. Thompson was put in charge of carrying out the reforestation plan on logged over lands. In 1929, Thompson and his wife relocated from Camp One to a home newly-built for them at Cedar Falls in the City Light community. Here they remained for 27 years. The Thompsons' arrival in town signaled the beginning of a shared presence between both the Seattle Water and Lighting Departments at Cedar Falls. (*Cedar Falls as Remembered*...1989, 33-38).

In 1954, the City of Seattle made Cedar Falls its base of operations for watershed management. Across the street from the house built for Forester Allen Thompson, the Water Department erected its complex of office and shop structures. Later, several garages and sheds previously used by City Light were relocated to the rear of the office building, creating a maintenance yard. By 1961, the power plant was partially automated and the number of on-site employees required was greatly reduced. City Light made plans to surplus the buildings at Cedar Falls, either through sale, transfer, or demolition (Getz 1987, 52; Harvey and Shoemaker 1986, 10).

A 1962 map of the town, drawn by watershed director Joe Monahan, indicates that four dwellings were then occupied by the Water Department, only two by City Light, and the rest were being offered for sale or surplus. Most of the residences were demolished by 1965, as was the gymnasium, and two more taken down in the early 1980s.

As management of the townsite shifted from one municipal entity to another, the nature of Cedar Falls as a community changed. Its residential character was replaced with a daytime operations function. This role has been enhanced in more recent years by outdoor interpretive exhibits open to the public. Yet visually and functionally, the company town character of Cedar Falls remains distinctly tangible, even today.

Criterion B: Association with Significant Persons

Reginald Heber Thomson

Reginald H. Thomson, Seattle City Engineer from 1892 until 1911, was in large measure responsible for the construction of the Seattle Municipal Light and Power Plant at Cedar Falls. As early as 1893, Thomson called attention to the need for a publicly-owned hydroelectric plant to provide the city with economical street lighting. R.H. Thomson was instrumental in securing the necessary state legislation, and in amending the City Charter to provide for the public mandate to develop such a system (*SLD Biennial Report* 1912-1913, 14). Other major public works remain in and around Seattle as testimony to the enormously productive career of R.H. Thomson. The first Seattle municipal hydroelectric facility at Cedar Falls can certainly be considered one of his most significant achievements.

According to Seattle historian Clarence Bagley, "few men have made such concrete and valuable contribution to Seattle's upbuilding and improvement as has Reginald Heber Thomson." Raised in Hanover, Indiana, Thomson completed his education with courses in civil engineering, geology and chemistry at Hanover College in 1877. In 1881, he arrived in Seattle where he formed a partnership with F.H. Whitworth and the two engaged in railroad engineering, mining and city street work. Thomson became City Surveyor and drew up plans for the city's sewer system in 1885. Three years later, he accepted a position as locating engineer for the Seattle, Lake Shore & Eastern Railway and surveyed its line from Lake Washington over Snoqualmie Pass. In Spokane, Thomson located and constructed the terminals of the line, including two bridges over the Spokane River (Bagley 1929, Vol.2, 96-97).

In May of 1892, newly-elected Seattle Mayor J.T. Ronald assembled a new Board of Public Works and appointed R.H. Thomson to serve as City Engineer. In that position, Thomson directed or encouraged the completion of all the basic components of the city's infrastructure, including installation of the sewer system, layout of streets and scenic boulevards, construction of the Lake Washington Ship Canal, and establishment of the Port Commission (Bagley 1929, Vol.2, 97). Thomson is perhaps best remembered, however, for building the Cedar River Water Supply System. With the help of his assistant George Cotterill, Thomson struggled against great opposition to design and promote the concept of a 1.25 million dollar gravity water system. Upon public approval of the project in 1895, Thomson himself successfully supervised construction of the system between 1896 and 1901 (McWilliams 1955, 56-57).

Influenced by Thomson's success with the new water system, Seattle citizens voted by a wide margin in January of 1902 to develop the hydroelectric power potential of the Cedar River. The City Engineer's office again supervised the entire project, from the crib dam at Cedar Lake to the central substation at Seventh and Yesler in Seattle (McWilliams 1955, 155). Thomson himself was actively involved in designing, locating, and constructing various components of the system. On the evening of October 14, 1904, City Engineer R.H.Thomson was on hand with Mayor Ballinger at the Cedar Falls power plant to turn on the generators that, for the first time, would light up the streets and homes of Seattle with municipal power (*SLWD Annual Report* 1908, 1).

James Delmadge Ross

Seattle Light Department history credits James Delmadge Ross as the designing, constructing, and operating electrical engineer for the Municipal Light and Power Plant at Cedar Falls from its inception to 1911 (*SLD Biennial Report* 1912-1913, 9). Ross is most often remembered as the father of Seattle City Light, and served as its Superintendent from 1911 to 1939. His later association with the Skagit River Hydroelectric Project is considered the pivotal accomplishment of his long career. The Cedar River project was, however, the first of his many professional achievements in the field, and the first of his life-long contributions to the City of Seattle.

"J.D." Ross was a self-trained engineer, born in Chatham, Ontario to a Scottish nurseryman and his Irish wife. As a boy, Ross was fascinated with the study of electricity and, through experiments performed in his home workshop, he gained a thorough understanding of the subject. In 1891, he graduated from Chatham Collegiate Institute, afterwards devoting six years to teaching. A sense of adventure drew him to the Northwest Territories where he prospected and explored, until 1900 when he arrived in Seattle. Here for the first time, Ross was able to find work in the field of electricity. He began his own private electrical contracting business and quickly came to the attention of city officials (Bagley 1929, Vol. 3, 73-74).

In May of 1902, the City Council appointed J.D. Ross to serve as "field assistant and chief of construction," under Thomson, for the proposed municipal system on the Cedar River. According to Thomson's memoirs, Ross was chosen for the job by L.B. Youngs, then Superintendent of Water and Light. His role was "to handle electrical installations which Mr. Young felt that he, himself, could not handle". The extent of Ross's actual involvement with the design phase of the project is not clear, in that Thomson's office had submitted a detailed plan for the system to the City Council in January of 1902, six months prior to his hiring (Thomson 1950, 98-101). In his official capacity as Electrical Engineer, Ross did in fact supervise the assembly of generation and transmission systems at the power station. Ross, too, was on hand for the ceremonial start-up of the generators at Cedar Falls on October 14, 1904 (Bagley Vol. 3, 74).

Over the next seven years, Ross supervised expansion of the plant's capacity from 3,500 kilowatts to 13,500 kilowatts and designed its next major phase of expansion (*SLD Biennial Report* 1912-1913, 24-28). From as early as 1905, he became the project's greatest defender against detractors aligned with the private utilities. Ross was bitterly criticized in the wake of the masonry dam and Boxley Blowout fiascoes in the mid-1910s. Despite relentless opposition, Ross managed through interviews, departmental reports, and journal and newspaper articles, to offer the Seattle Municipal Light and Power Plant system as proof of the sound economic logic of public ownership (Erigero 1991, 8-6 - 8-7, 8.33).

In 1911, Mayor George Dilling chose Ross for Superintendent of the newly-formed Department of Lighting. Ross served in this capacity, with a brief departure in 1931, until his death in 1939. Under his leadership, Seattle City Light gained world-wide renown as a strikingly successful example of municipal utility ownership. Seattle customers enjoyed the lowest electrical rates in the country, and lived in "the best lighted city in America" (*SLD Biennial Report* 1912-12, 37). It was the vision, energy, and political muscle of J.D. Ross that made possible the monumental Skagit River Hydroelectric Project of the 1920s and '30s. Ross himself was a nationally-recognized figure in municipal-power circles, and a regular contributor to *The Journal of Public Ownership*. Later in his career, he was associated with the Federal Power Commission, the Securities and Exchange Commission, and the Bonneville Power Project on the Columbia (Erigero 1991, 8.31 - 8.33).

Criterion C: Distinctive Physical Characteristics

Significant System Components

The Seattle Municipal Light and Power Plant is one of the earliest high-head, low-volume plants in the American West. Early hydroelectric installations in the eastern United States typically operated with a high volume of water, and minimal drop in elevation. Physiographic conditions in the western states, however, required the development of new technology designed to use water dropping over 200 feet. By the turn of the century, the physical character of power plants in the mountainous West had begun to reflect the application of this new design (Soderberg 1986, F-2).

The initial configuration of the system at Cedar Falls was a pure example of such a design. Its salient features included a timber crib dam impounding the waters of Cedar Lake, a 49-inch wood stave penstock conveying water to the power house 3 1/2 miles distant and 610 feet lower in elevation, a 65-foot standpipe to regulate pressure, two Pelton impulse wheels designed to operate under high head, two 1500-kw Allis-Chalmers generators, transformers and high-tension switching on the site, and a three-wire transmission line extending 41 miles to the substation in downtown Seattle (Heine 1904, 387-388; *SWLD Annual Report* 1908, 3).

By 1909, two 8000-hp Francis inflow turbines had been installed, supplied by a second penstock. At the time of their installation, the turbines were among the first in America to be installed on so high a head. Contemporary descriptions of the system noted the difficulty of surge regulation owing to the length of the penstock, the high head, and distance of the standpipes from the powerhouse. The successful solution was to equip the new Francis turbines with the latest Lombard type N governors and relief valves that opened automatically under certain pressure in the penstock (Electrical World 1912, 1183-1184; *SLD Annual Report* 1911, 43).

Another technical feature of the early power station mentioned repeatedly in descriptive articles of the day was the station control board. The Vermont marble board was designed by J.D. Ross himself. It occupied an elevated central position in the original powerhouse, and was arranged in such a way as to prevent operator error. On the face of the board, a diagram of the entire station was presented using contrasting metal finishes: the water wheels and generator machinery in gun metal, the D.C. exciter system in nickel, the 2300-volt circuits in brass, and the 60,000-volt circuits in copper. Meters and synchronizing instruments were grouped above and in front of the control board, on vertical panels of blue Alaska marble (*SLD Annual Report* 1911, 49; Electrical World 1912, 1184). This board was apparently redesigned to greater advantage by Chief Operator Fred Harman in later years (Marian Arlin, 2/96; Arlin Photo Collection).

The extant reinforced concrete powerhouse and its generating equipment are representative of technological improvements made to meet Seattle's increasing energy demands in the post-war years. Two large capacity Francis reaction turbines, built by Pelton, were installed in 1921 and 1929. They were direct-connected to Westinghouse generators rated at 14,200 K.V.A. Although these new hydro-generating units (nos. 5 and 6) were not of the latest vertical shaft design, like those installed at Gorge Power Plant on the Skagit, they built upon the success of the earlier four units at Cedar Falls (Soderburg 1986, F-5). In conjunction with the masonry dam, and the new power tunnel and penstocks, the capacity of the plant was raised to 40,000 kilowatts on a 40% load factor (*SLD Annual Reports* 1923, 12-13; 1929, 19).

Impact of the Masonry Dam Design

The masonry dam was built in 1912-14 to exploit the full power potential of the Cedar River by impounding the entire run-off of the upper watershed. Its construction required 180,000 cubic yards of cyclopean masonry, 15 percent of which consisted of large boulders, or aggregate. This method was a standard design of the period (Harvey and Shoemaker 1986, 8,11). The siting of the dam in the presence of glacial moraine, however, was to have far-reaching implications for the future of the development and operation of the Cedar Falls facility.

The uncorrectable design flaw prevented filling of the reservoir to full pool (1,590 feet), and limited its use in subsequent years to between 20 and 60 feet below capacity (*CF Improvement Project EIS* 1986, 1-4). Installation of the new hydro-generating equipment at Cedar Falls was delayed for nearly ten years while the seepage problem was studied (*SLD Annual Report* 1929, 10). In the short term, the resultant flooding of the town of Moncton and the Boxley Blowout seriously wounded the municipal ownership movement in Seattle. In the longer term, the city's shortage of electric power (due in part to the Cedar River fiasco) indirectly encouraged the federal government's approval of Seattle's plans to develop the Skagit River Hydroelectric Project (Erigero 1991, 8-7 - 8-8).

Physical Layout Implications

Both the original and existing layouts of the power station at Cedar Falls reflect to some extent the incremental development of municipally-owned hydroelectric facilities. As opposed to private installations, where an initially large capital outlay often resulted in a more cohesive design, the work at Cedar Falls was funded in stages, by public bond issues. Economy and taxpayer satisfaction were primary considerations (Soderburg 1986, F-3). The original timber powerhouse was built in sections, with three additions made in 1908 alone *SLWD Annual Report* 1908, 1a). A series of free-standing fireproof structures of stone and concrete were put up over time to house high-tension switches, lightning arresters, and transformers. A separate office bungalow was built on the site. In 1921, one-half of the reinforced concrete powerhouse was erected to house the new hydro-generator unit no. 5. The building was doubled in size in 1928 to accommodate unit no.6. The layout of the facility further evolved over time, as step-up transformers and switching stations were moved to outdoor locations.

Another factor which played a role in the initial design of the Cedar Falls power station was a progressive concern for fire safety. In a 1904 article describing the new Seattle Municipal Light and Power Plant then under construction, Electrical World and Engineer noted:

> At the same time that it is ideal to have all parts of a generating plant in sight at all times, experience has proven that this may result in the loss of the entire plant. The rapidity with which burning oil spreads and its intense heat, combined with the fact that water merely spreads it, makes it almost uncontrollable when once started. Being "between the devil and the deep sea," it was decided to first reduce the risk of fire and then make everything as convenient as possible under the circumstances. To this end a separate high-tension switching and lightning arrester house was designed...(Heine 1904, 388).

A third significant aspect of design within the larger Cedar Falls Historic District is the layout of the municipally-owned company town, readable through key character-defining features that still survive. The majority of structures associated with the City Light era at Cedar Falls have been removed, and some Seattle Water Department structures have been constructed in intervening years. Vegetation is considerably denser now than in the town's heyday. Nonetheless, remaining townsite features together still convey an overall sense of past time and place. These include the following contributing features as represented by Resources # 18 through 28: circulation patterns, street light standards, broad-leaf maple street trees, three individual residences, outbuildings, concrete garden features, and bridge remnants. As a planned community that remains still visually discernible, the townsite adds an important design dimension to the historic district, despite the erosion of its pre-1950 architectural fabric.

Criterion D: Potential to Yield Important Information

The technological evolution of the headworks and power station at Cedar Falls resulted in the removal, relocation, and replacement of a number of system features which, only a few years earlier, had represented state-of-the art components. Other factors which drove the modification of the plant pertained to politics, funding, the continuing reservoir seepage problem and, by the late 1920s, the rise of the Skagit River Hydroelectric Project as the primary source of Seattle's municipal power. Remnant features within the district help to demonstrate the nature of the physical change which occurred there in the historic period from 1902 through 1932. These features include Resource #7, early penstock piers; Resource #8, timber-frame powerhouse foundations, and Resources #13-15, transformer and switch yard foundations, and three early penstocks.

At the Cedar Falls townsite, major change occurred with the transformation of the community from a residential City Light enclave supporting the operation of the power plant, to an administrative headquarters for the Cedar River Watershed. This shift in function brought about systematic removal of the town's historic fabric. Many features have been entirely erased and offer no potential for further knowledge. Others, however, retain enough integrity to illustrate, with further research and interpretation, lost elements of the community. These include Resource #18, the street layout as delineated by surviving maple trees, fire hydrants, and other clues; and Resources #20 and 21, bridge remnants in two locations on the Cedar River and its former channel. All three of these resources are of particular value in explaining the community's historic circulation patterns.

CAPTIONS FOR FIGURES AND PHOTOGRAPHS

Figure	Description
1	Cedar Falls Historic District Location Map, showing proposed district boundaries, key contributing resources, and related vicinity features - 1996.
2	Cedar Falls Power Station, showing contributing and non-contributing resources - 1996.
3	Cedar Falls Townsite, showing contributing and non-contributing resources - 1996.
4	Map of Early Headworks, showing timber crib dam, Camp One, original pipeline, and road to Camp Two - c. 1912.
5	Map of Power Station and Company Town at Cedar Falls, labeled "Municipal Light and Power Plant - Improvements at Generating Station" - January, 1908.
6	Map of Cedar Falls Townsite, drawn by watershed director Joe Monahan - January, 1957.
7	Elevation Drawing of Cedar Falls House #5, for Chief Operator Fred Harman, by City Architect D.R. Huntington, showing south and west elevations - 1917.
7a	Harman House Elevations, north and east - 1917.
7b	Harman House Ground Floor Plan - 1917.

Photo **Description**

Photos 1 - 10 and 12-14 are copies made from Seattle Water Department slides in the Cultural Resources Collection at the Cedar River Watershed. Original images originated from a variety of sources, many from the Snoqualmie Valley Museum in North Bend. All dates shown are approximate, and photographers are unknown. Photo 11 is a copy of a framed photograph now hanging in the Cedar Falls Powerhouse.

1 Timber crib dam with single wooden penstock - view to the south - c.1905.

2 Downstream face of masonry dam with original spillway notch - view to southeast - post-1914.

3 Winter view of Camp Two, with Rattlesnake Ridge in background - view to the northwest - c.1913.

4 Interior view of controlling gate house apparatus - view east - post-1914.

5 Concrete power tunnel under construction - c.1913.

6 East abutment of open spandrel concrete arch bridge and penstock gate house - view to the southeast - September, 1920.

7 View from Rattlesnake Mountain to the southeast, showing logged-off area to Chester Morse Lake. Features left to right are Railroad Camp, Cedar Falls depot, Milwaukee Road right-of-way, Cedar Falls townsite with large gymnasium, houses and landscaping, Power station and penstocks on hillside - c.1920.

8 View of power station from hill, facing north. Enlarged timber frame powerhouse, original switch house and frame workshop still in place, "City Light House" not yet in place - late 1910s.

9 Reinforced concrete powerhouse under construction - view to the north - 1921.

10 Interior of timber frame powerhouse with four hydro-generating units in place - post-1908.

11 View of powerhouse in transitional phase, between completion of concrete powerhouse and demolition of timber frame powerhouse. Electric sign atop powerhouse reads "Seattle's City Light Plant" - view across river to northeast - 1929-1932. .

12 Birdseye view of Cedar Falls townsite along west branch of "Y," showing two dormitories, gambrel-roofed boarding house, sidewalks, and maple saplings - view to the southeast - c.1912.

13 Two of the earliest residences at Cedar Falls - view to the northwest - c.1912.

14 Cedar Falls depot, with electric City Light sign in background - view to the northeast - c.1920.

Photos 15 through 74 were all taken in February, 1996, by Florence K. Lentz. Negatives on file with the Environment and Safety Division, Seattle City Light.

15 Upstream face of masonry dam - view southwest.

16 Controlling gate house (upper gate house) on crest of masonry dam - view north.

17 Controlling gate house on masonry dam - view south.

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18 Interior apparatus, controlling gate house - view northeast.

19 Downstream face of masonry dam - view north.

20 Downstream face of masonry dam, original spillway in operation - view north.

21 New (late 1980s) emergency spillway, downstream face of masonry dam - view south.

22 Steel penstocks nos. 5 and 6 crossing open spandrel concrete arch bridge to penstock valve house - view southeast.

23 Penstock valve house (lower gate house) - view southeast.

24 Three "Big Gate" valves, interior of penstock valve house - view northeast.

25 Steel trestle carrying penstock no. 5 over Canyon Creek - view to northwest.

26 Remnant concrete piers for earlier wood stave penstock - view south.

27 Stepped concrete abutments carrying penstock no. 6 down to powerhouse - view to east.

28 Trench with penstock no. 5 dropping down hill to powerhouse - view to east.

29 Older penstocks overlay present-day penstock at rear of powerhouse - view to east.

30 Penstocks entering the concrete powerhouse at rear - view to west.

31 Concrete powerhouse with 1950s machine shop in foreground - view to southeast.

32 Concrete powerhouse, main entrance to 1921 component - view to east.

33 Primary facade of concrete powerhouse, facing 1928 extension - view to southeast.

34 Tailraces entering Cedar River, concrete powerhouse - view southeast.

35 Rear of concrete powerhouse showing corrugated metal siding at northwest end - view to southeast.

36 Interior of powerhouse overlooking generator floor - view to southeast.

37 Unit no. 5 Westinghouse generator, control booth along rear wall - view to east.

38 Unit no. 6 Francis reaction turbine - view to northwest.

39 Unit no.5 from catwalk above - view to southwest.

40 Station control board, and operator's control booth above - view to northeast.

41 Interior of powerhouse machine shop - view southeast.

42	View of power station from behind powerhouse, "City Light" building at center, concrete transformer house to right - view northwest.
43	Original concrete transformer house - view east.
44	Interior, concrete transformer house - view southeast.
45	"City Light" building built for shop and storage - view east.
46	Interior "City Light" building currently undergoing remodel - view southeast.
47	Remnant foundation of timber frame powerhouse showing brick arched penstock entrances - view to north.
48	Concrete foundation remnant of transformer yard - view east.
49	Transformer yard platform looking toward rear of powerhouse - view south.
50	Switch yard platform - view east.
51	Stone switch house showing conduit holes for electrical leads below the eaves - view north.
52	Stone switch house, concrete transformer house, "City Light" building, and powerhouse - view southeast.
53	Entry to power station, with five-globe light standard and switch yard in middle ground - view southeast.
54	Entrance to Cedar Falls townsite - view southwest.
55	Allen Thompson House, garage to left - view northeast.

56 Seattle Water Department / Cedar River Watershed headquarters building - view west.

57 SWD fueling building - view southeast.

58 Heavy timber garage - view west.

59 Saw repair shop - view south.

60 City Cabin - view north.

61 SWD interpretive displays - view southwest.

62 Main street of Cedar Falls, gymnasium site to left, five-globe light standards in place - view southwest.

63 Community tennis court - view west.

64 Street remnant lined with broad-leaf maples - view southwest.

65 Street remnant (west branch of "Y") lined with maples - view northwest.

66 Howe truss bridge remnant at end of west branch of "Y" - view southwest.

67 Streetscape along east branch of "Y" looking toward power station, showing five-globe light standards, maples, street, sidewalk, and houses - view southeast.

68 Harman House, with circular concrete flower bed - view southeast.

69 Harman House - view northeast.

70 Harman House back yard and garage, showing concrete pond at center - view east.

71 "City Light House" / Charles Thompson House - view northeast.

72 Charles Thompson House and garages to rear - view northwest.

73 Various residential garages - view southeast.

74 Bridge remnant at power station - view southwest.

9. Major Bibliographical Sources

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Archival Collections

Cedar River Watershed Cultural Resource / History Map Collection.

Cedar River Watershed Cultural Resource Inventory Site Files.

Cedar River Watershed Cultural Resource Slide Collection.

10. Geographical Data

UTM References

The historic district is included within an irregular geometric figure defined by the following UTM reference points:

Point	Zone	Easting	Northing
A	10	591550	5252550
B	10	591840	5252680
C	10	591990	5252320
D	10	592560	5252540
E	10	593080	5252360
F	10	594130	5251710
G	10	594240	5251400
H	10	592640	5252040
I	10	591980	5252230

Verbal Boundary Description

Beginning at the north end of the masonry dam, thence south at a distance of 50 feet along the downstream face of the dam to the north shore of the Cedar River, thence generally northwest along the shore of the river to the penstock valve house, thence around the north side of the penstock valve house at a distance of 20 feet to the concrete arch bridge and penstocks, thence generally northwest along the route of penstock no. 5 at a distance of 20 feet to the northeast edge of the old transformer yard foundation behind the powerhouse.

Thence northwest along said edge to the northeast corner of the old switch yard foundation, thence north to the easternmost corner of the Allen Thompson House garage, thence northeast across Cedar Falls Road to the western edge of the employees' parking lot entrance, thence generally northwest along said edge to the No. 10 Road, thence generally west along the south edge of said road to a point due north of the Howe truss bridge remnant in the former channel of the Cedar River, thence generally east and southeast along the centerline of said channel to its intersection with the Cedar River, thence south along the east bank of the Cedar River to the bridge remnant at the power station, continuing south along said bank to a point opposite the southernmost corner of the powerhouse, thence northeast along the southern end of the powerhouse at a distance of 20 feet to its juncture with penstock no. 6.

Thence east and southeast along the route of said penstock at a distance of 20 feet to the concrete arch bridge and penstock valve house, thence around the south side of the penstock valve house at a distance of 20 feet to its juncture with the undergound power tunnel, thence generally east along the route of said tunnel at a distance of 20 feet to the intake on the south end of the masonry dam, thence northwest along the upstream face of the dam at a distance of 50 feet, to point of beginning.

Boundary Justification

The Cedar Falls Historic District boundary tightly encompasses all major components of the hydroelectric works, both past and present, which are still operational today. These include: the headworks at the masonry dam, the water conveyance system, the power station itself, and the townsite of the former support community of Cedar Falls. The boundary at Cedar Falls takes in all extant, contributing resources of the City Light era, as well as the visible remnants of key elements that no longer survive. Boundary lines reflect either man-made edges such as roads or pipelines, or natural edges such as the river bank and former river channel. Where such edges are not apparent, the boundary line directly connects resource to resource, as between the power station and the Allen Thompson House garage.

Excluded from the historic district are the reservoirs of Masonry Pool and Chester Morse Lake, the configuration of which was shaped by existing natural features. The only primary historic feature of the hydroelectric works not included within the boundary is the timber crib dam, now breached and inundated, and lacking in physical integrity.

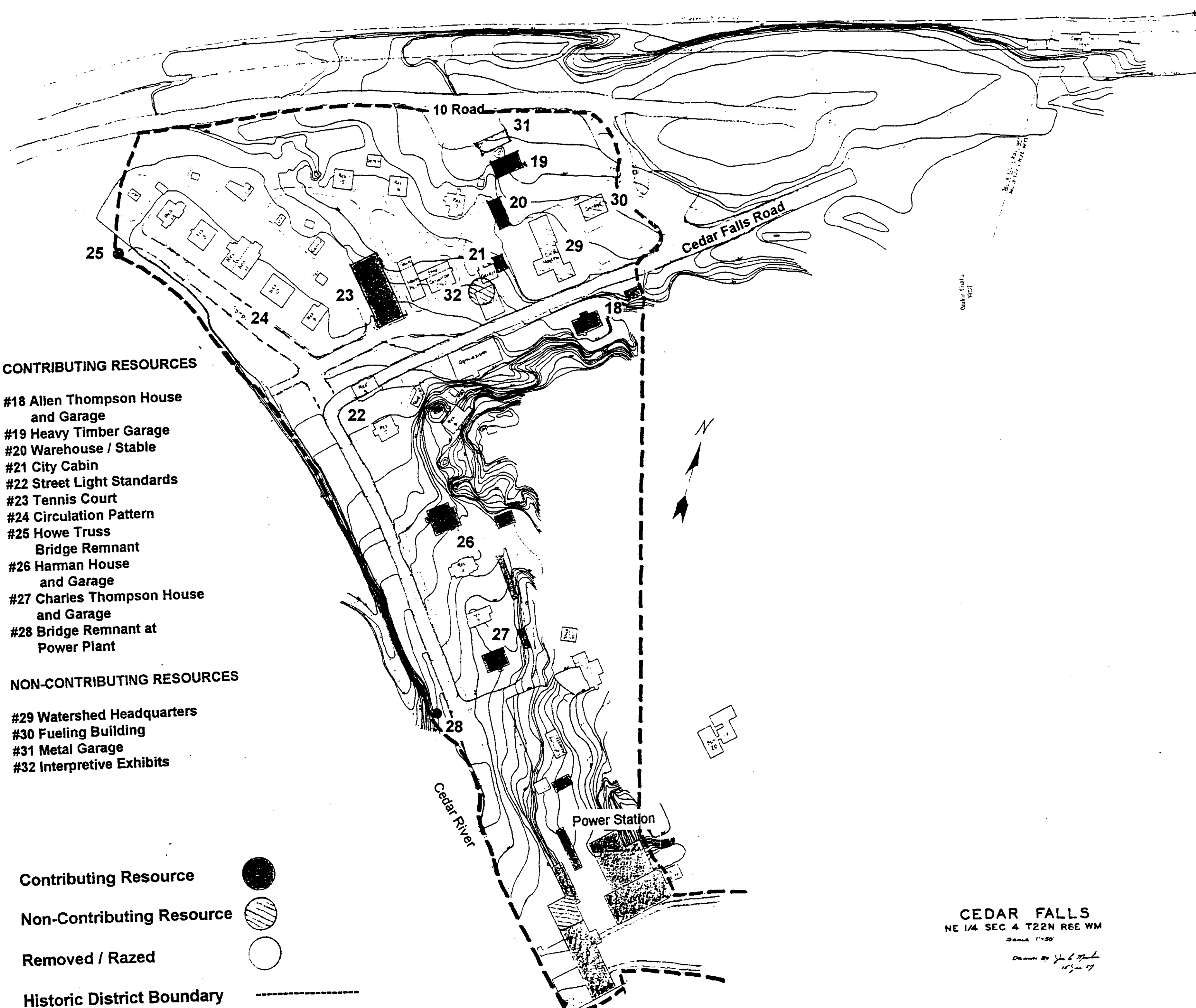


FIGURE 3 - CEDAR FALLS TOWNSITE

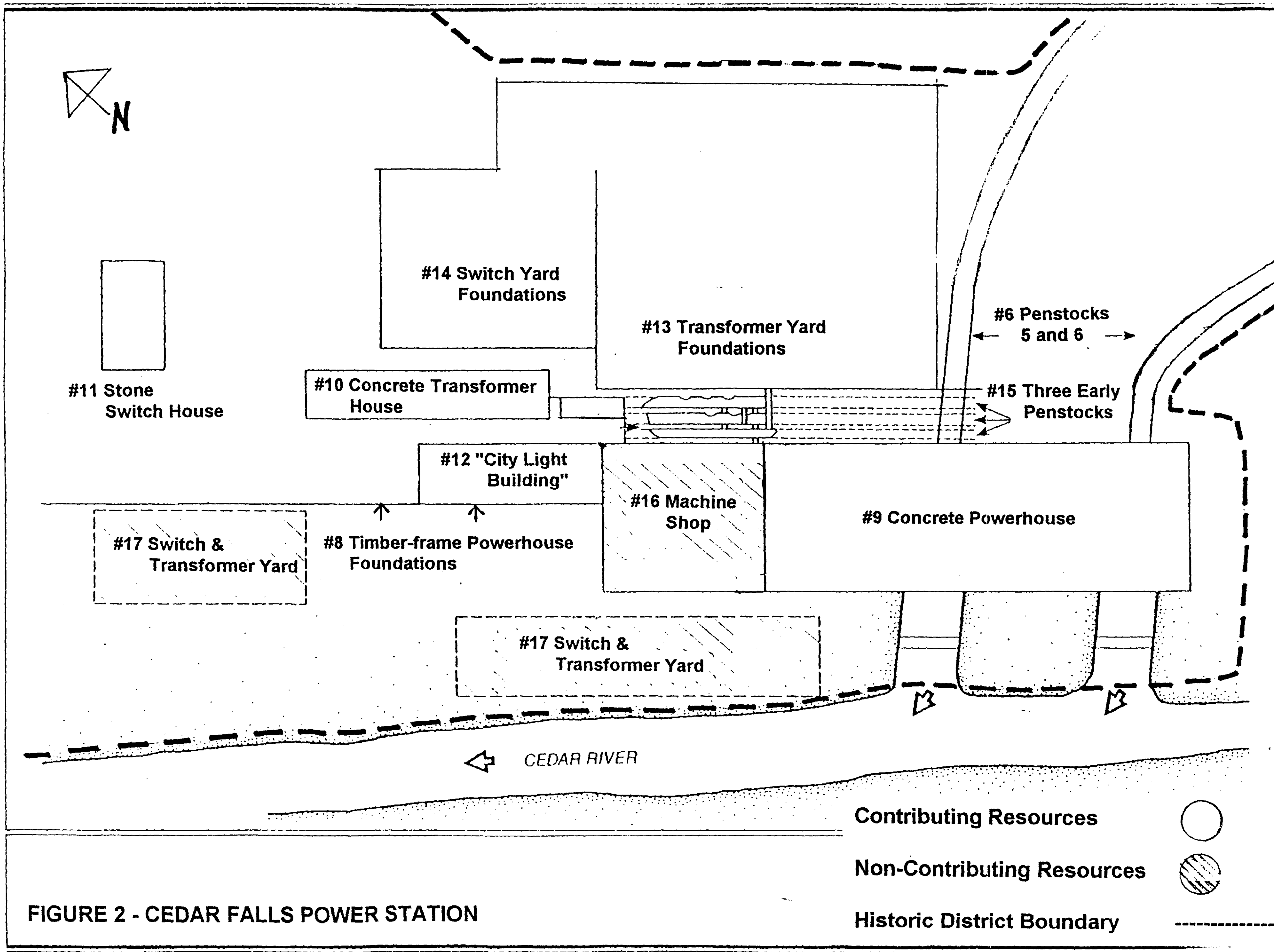
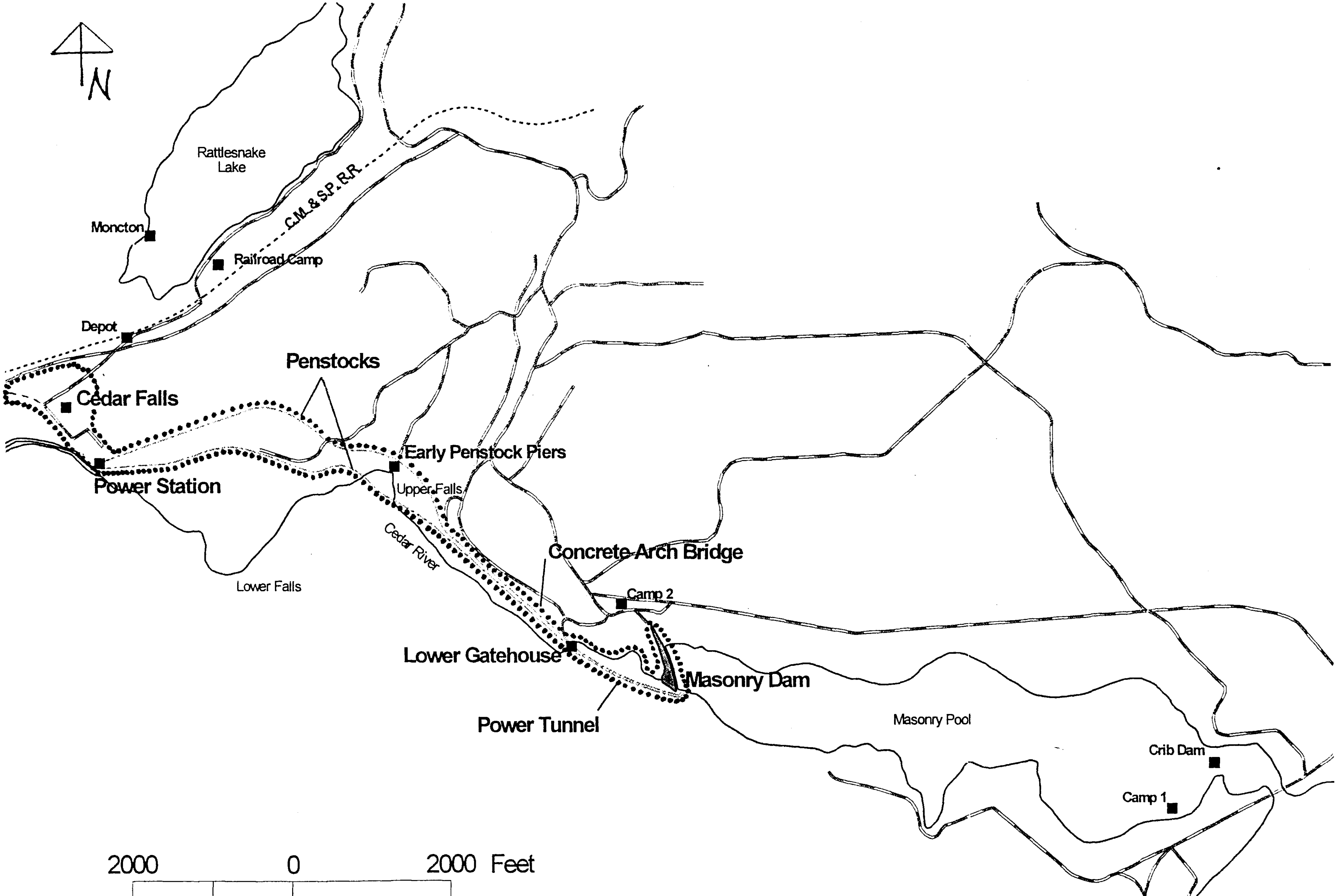


FIGURE 2 - CEDAR FALLS POWER STATION



Historic District Boundary ---------------

FIGURE 1 -
CEDAR FALLS HISTORIC DISTRICT LOCATION MAP

Sec. 12.

T. 22 N., R. 8 E. W. M.

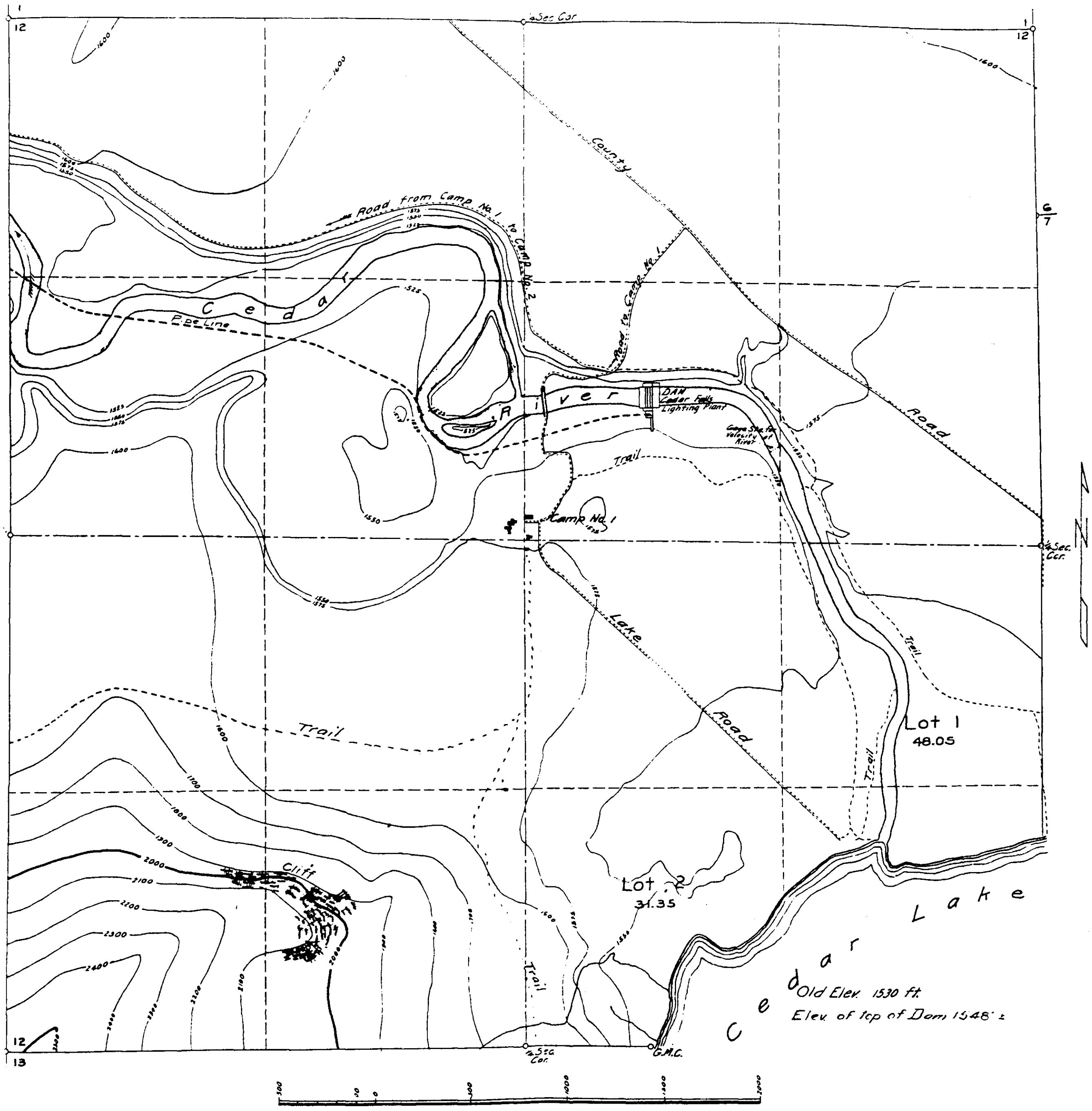


FIGURE 4 - MAP OF EARLY HEADWORKS - 1912

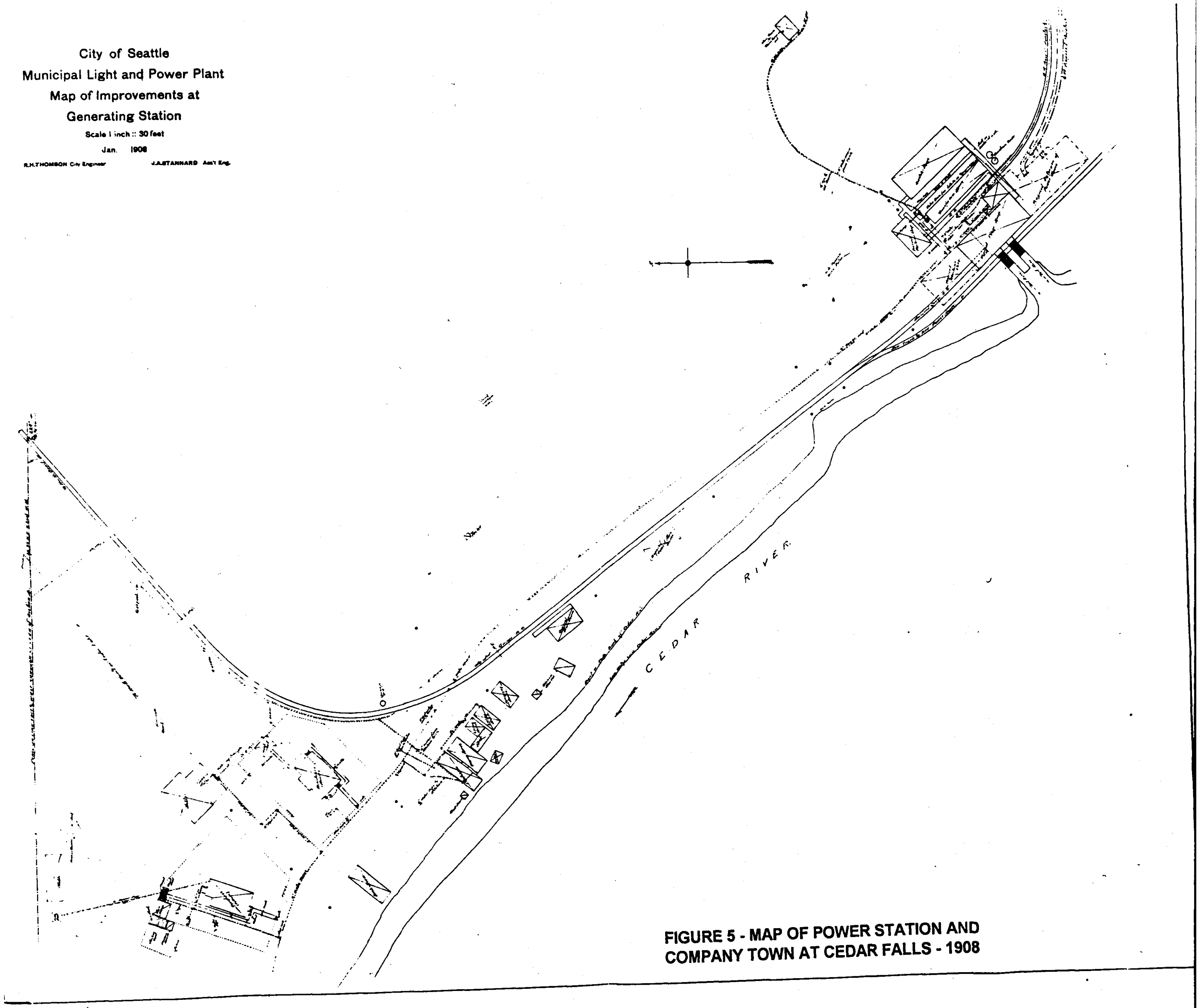


FIGURE 5 - MAP OF POWER STATION AND COMPANY TOWN AT CEDAR FALLS - 1908

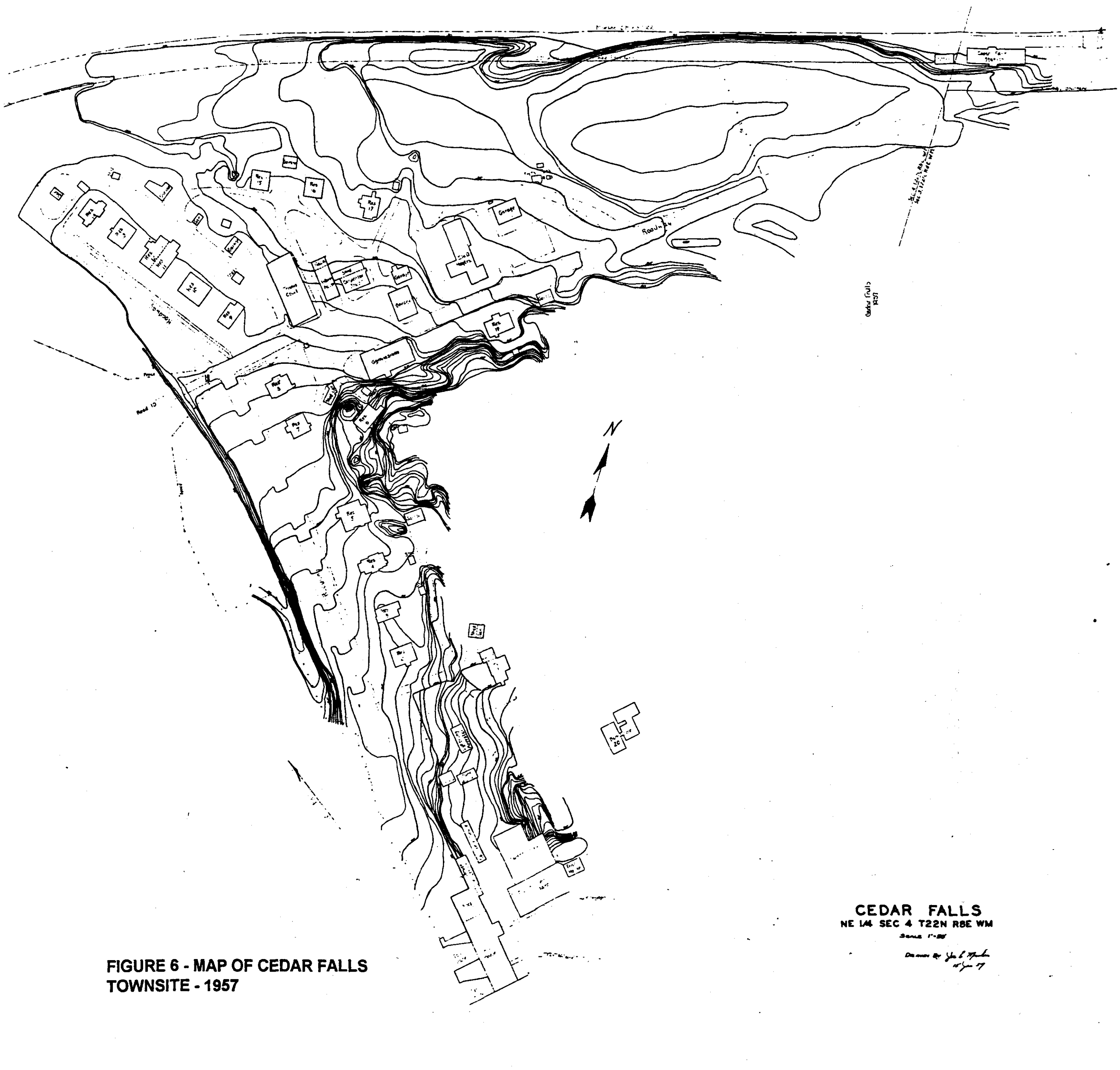


FIGURE 6 - MAP OF CEDAR FALLS TOWNSITE - 1957

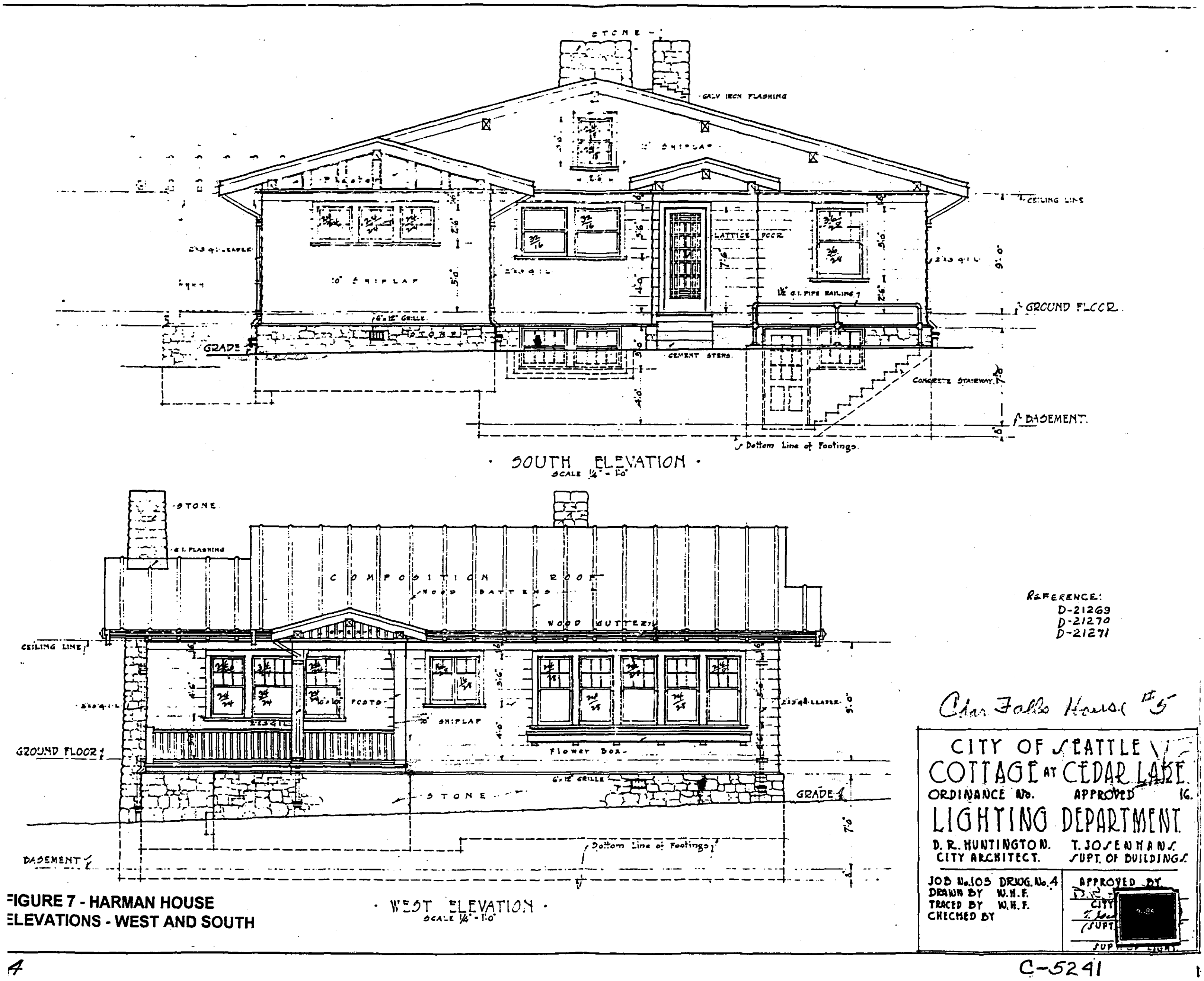
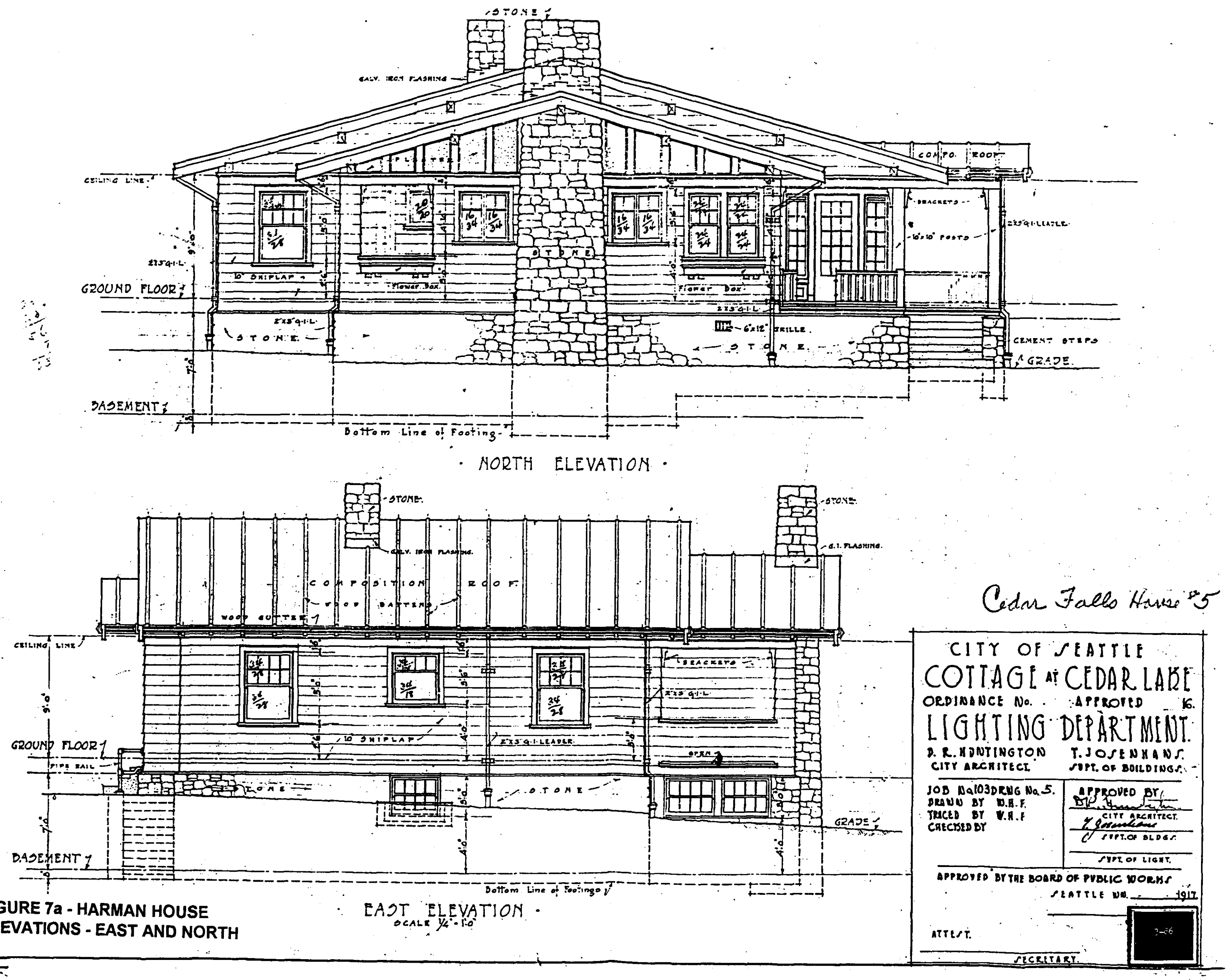


FIGURE 7 - HARMAN HOUSE
ELEVATIONS - WEST AND SOUTH



IGURE 7a - HARMAN HOUSE
LEVATIONS - EAST AND NORTH

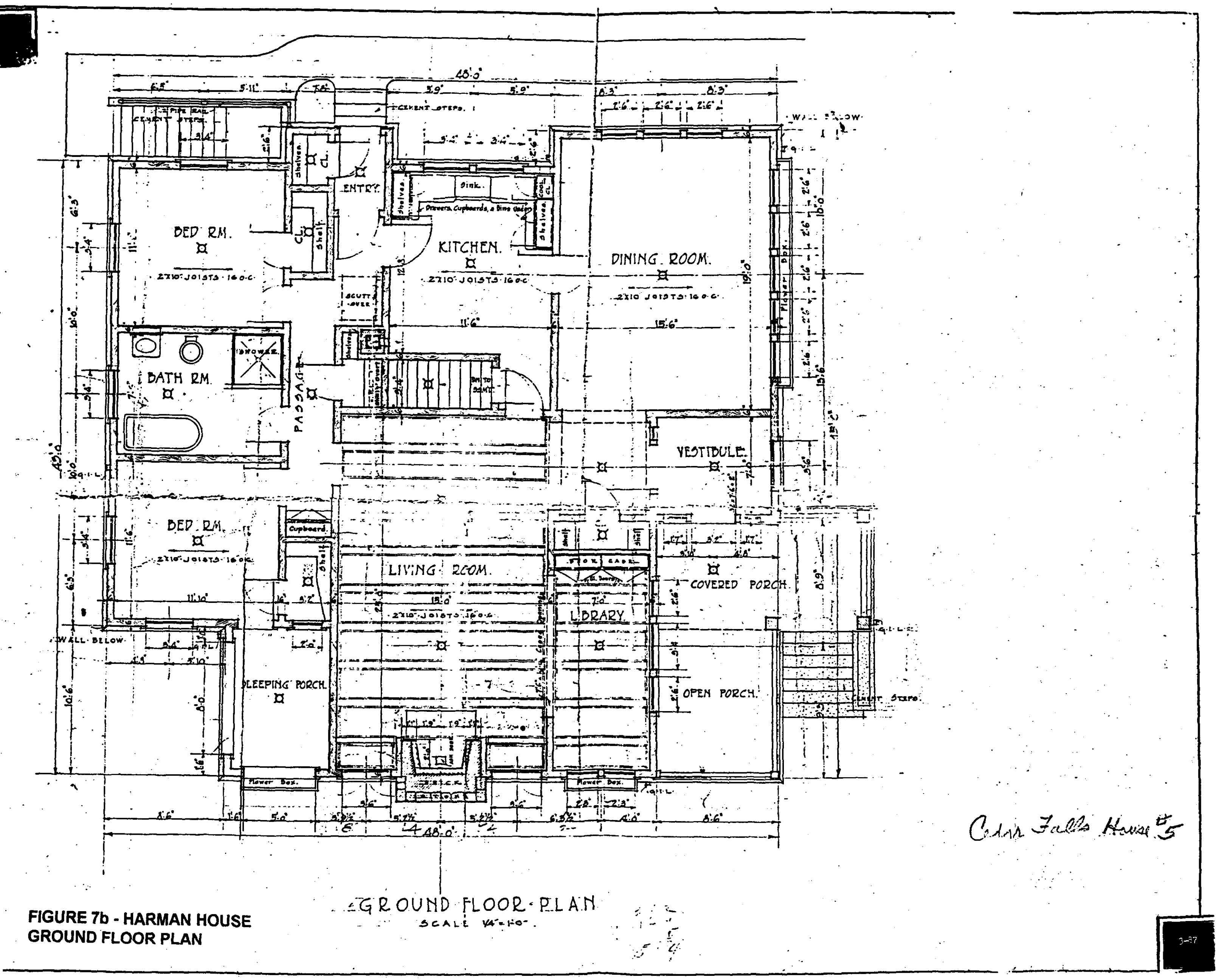


FIGURE 7b - HARMAN HOUSE GROUND FLOOR PLAN