NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

NATIONAL REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See Instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the Instructions. For additional space use continuation sheets (Form 10-900-a). Type all entries.

1. Name of Property

historic name	Nine Mile Hydroelectric Power Plant Historic District
other names/site number	N/A

2. Location

street & number	Charles Road near River Mile 58 on Spokane River					☐	not for publication
city, town	Nine Mile Falls					☒	vicinity
state	Washington	code	WA	county	Spokane	code 063	zip code 99026

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property		
		Contributing	Noncontributing	
☒ private	☐ building(s)	11	__	buildings
☐ public-local	☒ district	__	__	sites
☐ public-State	☐ site	1	__	structures
☐ public-Federal	☐ structure	__	__	objects
	☐ object	12	0	Total

Name of related multiple property listing:
Hydroelectric Power Plants in Washington State, 1880-1938

Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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 ☒ meets ☐ does not meet the National Register criteria.
☐ See continuation sheet.

Signature of certifying official — Date 10/26/90

Washington State Department of Community Development Office of Archaeology and Historic Preservation
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of commenting or other official — Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:
☒ entered in the National Register.
☐ See continuation sheet.
☐ determined eligible for the National Register. ☐ See continuation sheet.
☐ determined not eligible for the National Register.
☐ removed from the National Register.
☐ other, (explain:) _____

Entered in the National Register — 12/6/90

for Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Industry: energy facility	Industry: energy facility

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)	
other: industrial vernacular (dam, powerhouse)	foundation	concrete (powerhouse, dam)
Bungalow/Craftsman (houses)	walls	brick (powerhouse and houses)
		concrete (dam)
	roof	concrete (powerhouse);
		composition shingles (houses)
	other	river rock, stucco (houses)

Describe present and historic physical appearance.

The Nile Mile Hydroelectric Power Plant Historic District is located on the Spokane River 13 miles northwest of Spokane (16 miles downstream of Spokane's central business district). The river, which originates at Lake Coeur d'Alene in Idaho, passes through a narrow canyon at Nine Mile near river mile 58. The surrounding land is characterized by basaltic hills and open pine forests. The river flows through the site in a northwesterly direction toward its eventual confluence with the Columbia.

Setting: Although considered remote when construction began in 1906, the power plant is located in a region that today is characterized by small scale suburban development at the community of Nine Mile Falls. Vegetation in the immediate project site is characterized by cottonwoods, black locust, and willows, while the area upstream and downstream of the site is characterized by ponderosa pine.

The dam and powerhouse impound a reservoir which is surrounded by riparian vegetation. Riverside State Park adjoins most of the reservoir, and features a spectacular basalt formation called the "Bowl and Pitcher," located on the river upstream of the plant. The surface area of the reservoir (which is stabilized at elevation 1,600.6 feet mean sea level after seasonal high water) is 420 acres and its usable storage is 4,600 acre-feet. The reservoir is not included in the district.

Dam: The Nine Mile Hydroelectric project was begun in 1906 and completed in 1908. In developing the site, the power company diverted the Spokane River from its normal channel by constructing a concrete gravity dam across a rock canyon. The foundation and upstream wall of the powerhouse form the west side of the dam (at the deepest part of the river where the river bed makes a natural tail race), while the remaining dam proper is a 225 foot long concrete spillway across the east side (and shallower part) of the river.

The dam measures 58 feet high and 364 feet long overall, with an integrated powerhouse section that measures 139 feet long. The dam crest is at 1,596.6 feet elevation (mean sea level). A 64 foot head (or elevation drop) exists between the reservoir's normal full pool and the tail race (or powerhouse discharge canal). Water flows and elevations above and below the powerhouse normally change gradually as water is available from upstream projects and natural inflows, with the lowest flows occurring in the summer and the highest in the spring. Flows in excess of the plant's hydraulic capacity are passed through the river channel and over the Nine Mile dam.

The dam proper is 58 feet high and 67 feet wide at its base. During the storage season, ten foot flashboards are mounted on the spillway in order to increase the head as well as the dam's storage capacity. The dam is constructed of cyclopean masonry, which consists of large blocks of granite set in concrete. The upstream face of the dam is nearly vertical; the downstream face, or water shed, is S-shaped, giving the water a horizontal discharge about four feet above bedrock. An expansion joint separates the dam from the powerhouse. The dam is a contributing structure in the district.

Powerhouse: The powerhouse measures approximately 116 feet (north-south) by 139 feet (east-west). The three story structure measures about 120 feet high. Like the spillway, the upstream wall of the powerhouse is constructed of concrete and cyclopean masonry. It is approximately 16 feet thick and is supported by buttress walls. The buttress walls also form dividing barriers for the tail water. The buttresses are 12 feet thick, and the spaces between them are 15 feet wide. Between the buttresses are the turbine chambers and the transformer rooms, and between them, extending from the turbine chamber floor to the tail race, are two sets of draft tubes built in a solid mass of concrete. The three remaining walls of the powerhouse are brick resting on a concrete foundation. The east wall of the powerhouse is supported by a stepped concrete buttress wall.

Essentially utilitarian in appearance, the north side of the powerhouse is punctuated by two stories of multi-pane wood sash arched windows set in segmental bays. Keystones adorn the arched hoods of the taller upper story windows, and a concrete stringcourse unites the hoods across the facade. The flat roof of the building is constructed of a steel frame and concrete, and is articulated by a projecting concrete cornice supported by brackets.

See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:
☐ nationally ☐ statewide ☒ locally

Applicable National Register Criteria ☒ A ☐ B ☐ C ☐ D

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Industry	1906-1940	1906-1908
Transportation		1919; 1925; 1928; 1929
	Cultural Affiliation N/A	

Significant Person	Architect/Builder
N/A	Sanderson and Porter (William F. Zimmerman, consulting engineer)

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

Closely associated with the development of electric interurban railroads in the Inland Empire, the Nine Mile Hydroelectric Power Plant Historic District is an early and well preserved example of a power plant specifically developed in conjunction with a transportation network. The plant was built in 1906-1908 in a remote canyon on the Spokane River, and includes a powerhouse which is structurally integral with the dam. When complete, the plant provided power for the Spokane and Inland Empire Railway system, a network that provided freight and passenger service along 250 miles of track radiating from Spokane south to the Palouse wheat district and east to Coeur d'Alene, Idaho. In addition, the plant supplied surplus power to small communities along the route. In 1925, the plant was purchased by Washington Water Power Company, which a few years later constructed a small workers' community at the site, composed of ten brick bungalows in the Craftsman and English Cottage styles. The site is among the best preserved hydroelectric plants in the state, and one of the most significant extant properties associated with interurban railroads in Washington. The district meets the registration requirements established for the property type in the Hydroelectric Power Plants in Washington State multiple property documentation form.

Historical Background and Significance: In the early 20th century, Spokane was the rapidly growing center of the Inland Empire, an area that encompassed the mining districts of northern Idaho and southern British Columbia as well as the rich timber and farm lands of eastern Washington. The region was served by several transcontinental rail lines, and, by 1903, was the hub of a growing system of electric interurban lines consolidated by the Spokane and Inland Empire Railroad System Company.

Spokane's growth at the turn of the century was shaped by electric streetcars and interurban lines. The city's abundance of hydroelectric power fueled a network of electrified transit that eventually laced the area. In 1889, the Ross Park Electric Street Railway Company ran the first line out to the new residential area of the same name, north of the river. Other lines soon followed--to Browne's Addition, Cook's Addition, and Twickenham (later Natatorium) Park.

By the turn of the century the city's various electric streetcar lines were controlled by the Washington Water Power Company. But by 1903, mining entrepreneur J. P. Graves had organized the Spokane Traction Company, and soon thereafter the Spokane Terminal Company, the Coeur d'Alene Railway Company, and Graves began by building a traction system to serve Browner's Addition, and expanded to the north side of the city (Blewett, p.12) the Spokane and Inland Railway Company, forming an interconnected system of interurban railroads that traversed the region. By 1904, the company was operating an electric line to Coeur d'Alene, Idaho. In 1905, the Spokane and Inland Railway began to build an electrical railroad 76 miles south to Colfax and 92 miles south to Moscow, Idaho (a destination reached in 1908). In 1907, it was reported that the company by then consolidated as the Spokane and Inland Empire Railway System, operated over 200 miles of track radiating from Spokane. (Pacific Builder and Engineer, November 23, 1907, p. 15.) And by 1912, the lines reputedly extended 250 miles (History of the City of Spokane and Spokane County, 1912).

The lines served more than just workday commuters living in streetcar suburbs, or weekend pleasure seekers passing an afternoon at a park. The long southern route, for example, passed through the fertile Palouse wheat belt, serving Waverly, Rosalia, Oakesdale, and Palouse. The line reached all the principal towns in Whitman County, providing essential freight services for the region's farmers. According to the company, the average haul from a farmer's fields to the nearest interurban stop was a few hours. Within Spokane, Graves built warehouses conveniently located near the freight stations of the major transcontinental lines to handle the freight of these farms, and he built a passenger terminal in the commercial heart of the city. (Pacific Builder and Engineer, November 23, 1907, p. 15.)

See continuation sheet

9. Major Bibliographical References

"Hydro-Electric Power Plant of the Inland Empire System," Electric Railway Journal, Vol.32, no. 19 (October 10, 1908), pp. 898-902.

"Washington Water Power Co. Acquires Nine-Mile Plant," Journal of Electricity, Vol. 55, No. 4 (August 15, 1925).

August Wolf, "Spokane and Inland Railway System," Pacific Builder and Engineer (March 23, 1907), pp. 4-6.

"Spokane and the Inland Empire," Pacific Builder and Engineer (November 23, 1907), pp.13.

Charles Flagg, "The Inland Empire System," Pacific Builder and Engineer (November 23, 1907), p. 15.

"Nine Mile Hydroelectric Development Proposals," Washington Water Power Co., (Spokane, 1989).

History of City of Spokane and Spokane County. S. J. Clark, 1912, Spokane.

Steve Blewett, A History of the Washington Water Power Company, 1889-1989: Building on a Century of Service (Spokane 1989).

☐ See continuation sheet

Previous documentation on file (NPS):

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

Primary location of additional data:

- ☐ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

Specify repository:

10. Geographical Data

Acreage of property 9

UTM References

	Zone	Easting	Northing
A	11	459130	5291440
B	11	459380	5291210
C	11	459120	5291200
D			

☐ See continuation sheet

Verbal Boundary Description

See attached map, drawn to scale of 1" = 100'

☐ See continuation sheet

Boundary Justification

The nominated property includes the Nine Mile Hydroelectric dam, powerhouse, and adjacent workers' cottages which were historically associated with the plant during its period of significance.

☐ See continuation sheet

11. Form Prepared By

Name/title L. Garfield; L. Soderberg
organization Office of Archaeology and Historic Preservation date August 1, 1990
street & number 111 West 21st telephone (206) 586-2901
city or town Olympia state Washington zip code 98504

*U.S.GPO:1988-0-223-918

There are four gates in the upstream wall of the powerhouse through which water is diverted to the turbine chambers. Each gate covers an opening that measures 14 feet wide by 20 feet high. To protect the turbines from debris, a set of heavy iron trash racks are placed across the building through which all water must pass before it reaches the head gates.

Interior: The gates open to turbine chambers that contain 42 inch Francis turbines mounted on horizontal shafts. The turbines are arranged in pairs, with a central discharge draft tube for each pair. They were manufactured by the Holyoke Machine Company and are direct connected to Westinghouse AC revolving field generators (3,000 KW; 3,750 kva; 2,200 volt; 3-phase; 60 cycle).

The exciters (110 KW, 250 volts) are placed at the end of the shafts. The original transformers were three-phased, oil-insulated, and water-cooled, with a rating identical to the generators. In the 1950s, the original transformers were replaced by a new control relay panel. In addition, all but one of the marble slabs behind the regulators were removed.

The interior plan of the powerhouse includes turbine chambers, accessible from the gantry floor through a large iron door. The transformer rooms occupy the space between the buttress walls. The gantry floor extends the full length of the power house. At the west end of the gantry room are large doors to the driveway.

The building is divided lengthwise by a solid brick wall between the gantry and the switch room. This wall also forms the downstream wall of the transformer room, and openings between this room and the switch room were provided for high-tension wires. The switch room is located over the generator room and extends the entire length of the building, as does the generator room. The powerhouse is a contributing building within the district. Originally, the power plant included a fish ladder to mitigate damage to anadromous fish runs. The ladder was located on the northeast side of the powerhouse, and is well illustrated by original design drawings and historic photographs. The ladder has been dismantled.

Other Structures: The grounds of the plant include ten small brick houses located along the tree-lined road that leads to the powerhouse from the southwest. Built by the Washington Water Power Company for their employees in 1928 (five houses on the southwest) and 1929 (five houses on the northeast), the homes are single story bungalows, built on rectangular plans with gable roofs, extended eaves, and ample front porches.

The houses, which exhibit several different exterior designs (and are similar in style to houses built at other sites by the company), reflect the Craftsman and English Cottage styles of the period. The houses share several characteristics in addition to their small scale and common use of brick. Each includes a low pitched side-gabled roof (sometimes with jerkinhead) which extends over the facade to shelter a front porch (usually of brick with brick piers, but sometimes including Craftsman materials like river rock or stucco); multi-pane wood sash casement windows (occasionally with round arch heads); shingled gable ends; and brick chimneys that rise against the exterior facade. Most of the houses also feature cross-gable bays that project on the facade, perpendicular to the side gabled main roof. The rear elevation of each house includes a small open porch to shelter the single-leaf back door. The interior floor plan of each house includes three bedrooms, bath, kitchen, and living room. The houses are well preserved on the exterior, although they are mostly unoccupied at this time. Each house also has a companion small frame garage in the rear. A canopy of mature shade trees defines the row, and contributes to the domestic character of the setting. The houses are contributing buildings in the district.

The following houses are located on the southwest side of Charles Road:

Cottage # 1 is a side gabled, one story brick structure with an open front porch. The porch roof is supported by wooden posts and brick piers and features a pediment to shelter an arched entry. A single leaf door, surmounted by a transom, is set within the arch. The house features multi-paned casement windows, shingles in the gable ends, and a small frame garage in the rear.

Cottage # 2 is a side gabled, one story brick structure with a cross gable bay projecting on the front facade. An open front porch, supported by wood posts and brick piers, spans the facade. The house is lighted by multi-paned casement windows. A small frame garage is located to the rear.

Cottage # 3 is a side gabled, one story brick structure with a cross gable projecting from the center of the facade. A large brick chimney rises alongside the cross gable. The open corner porch is composed of a river rock foundation and brick posts,

and the porch roof features exposed rafter tails in the Craftsman style. The gable ends are sided with shingles. The house is lighted by large multi-pane casement windows. A small frame garage is located to the rear.

Cottage # 4 is a side gabled, one story brick structure with a cross gable bay on the facade. The bay is lighted by a large arched casement window. The front porch features an arcade of concrete arches supporting a shed roof with exposed rafter tails. The gable ends are sided with shingles. A chimney rises against the front facade at the juncture of the bay and porch. A small frame garage is located to the rear.

Cottage # 5 is a side gabled, one story brick structure with a half-timbered cross gable bay on the facade, and an open porch with cobblestone foundation and wooden railing with turned balusters. The side gable ends are faced in shingles. A brick chimney rises alongside the projecting bay.

The following houses are located on the northeast side of Charles Road:
Cottage # 6 is a side gabled, one story brick structure with a central cross gable bay lighted by a large multi-paned casement window, and a side entry porch featuring a river rock foundation and brick posts. The gable ends are sided with shingles and the roof eaves are ornamented with exposed rafter tails. A brick chimney rises from the juncture of the bay and main house.

Cottage # 7 is a side gabled, one story brick structure with a cross gable bay on the side. The bay is lighted by a large arched casement window. Next to the bay, an open porch, supported by an arcade of concrete piers, spans the facade. The porch roof is underscored by exposed rafter tails. The side gable ends are faced in shingles. A small frame garage is located to the rear.

Building # 8 is a side gabled, one story brick structure with a central cross gable bay ornamented with half-timbering. A side porch features brick piers, river rock foundation, and wood railing with turned balusters. A brick chimney rises at the corner of the bay and the house. The gable ends are sided with shingles. A small garage is located to the rear.

Building # 9 is a side gabled, one story brick structure with central cross gable bay, lighted by large multi-paned casement windows. A corner porch is supported by brick posts and a river rock foundation. The gable end is faced in shingles. A brick chimney rises alongside the projecting bay. A small frame garage is located to the rear.

Building # 10 is a side gabled, one story brick structure with a central cross gable bay lighted by large multi-paned casement windows. A side entry porch features a solid brick railing and brick piers. The porch roof is ornamented with rafter tails. A brick chimney rises alongside the projecting bay. A small frame garage is located to the rear.

Also in the district are two utilitarian ancillary structures: a 30,000 gallon metal water tank, believed to date from about the 1920s, and a one story gabled storehouse of unknown age that appears to date from the period of significance.

Graves also directed the Spokane Power Development Company which acquired sites on the Spokane River to develop a power supply for the rail system. In 1906, the company began work on construction of a $1 million, 12,000 KW hydroelectric plant in a rock canyon northwest of Spokane at Nine Mile Bridge. (Pacific Builder and Engineer, November 23, 1907, p. 6)

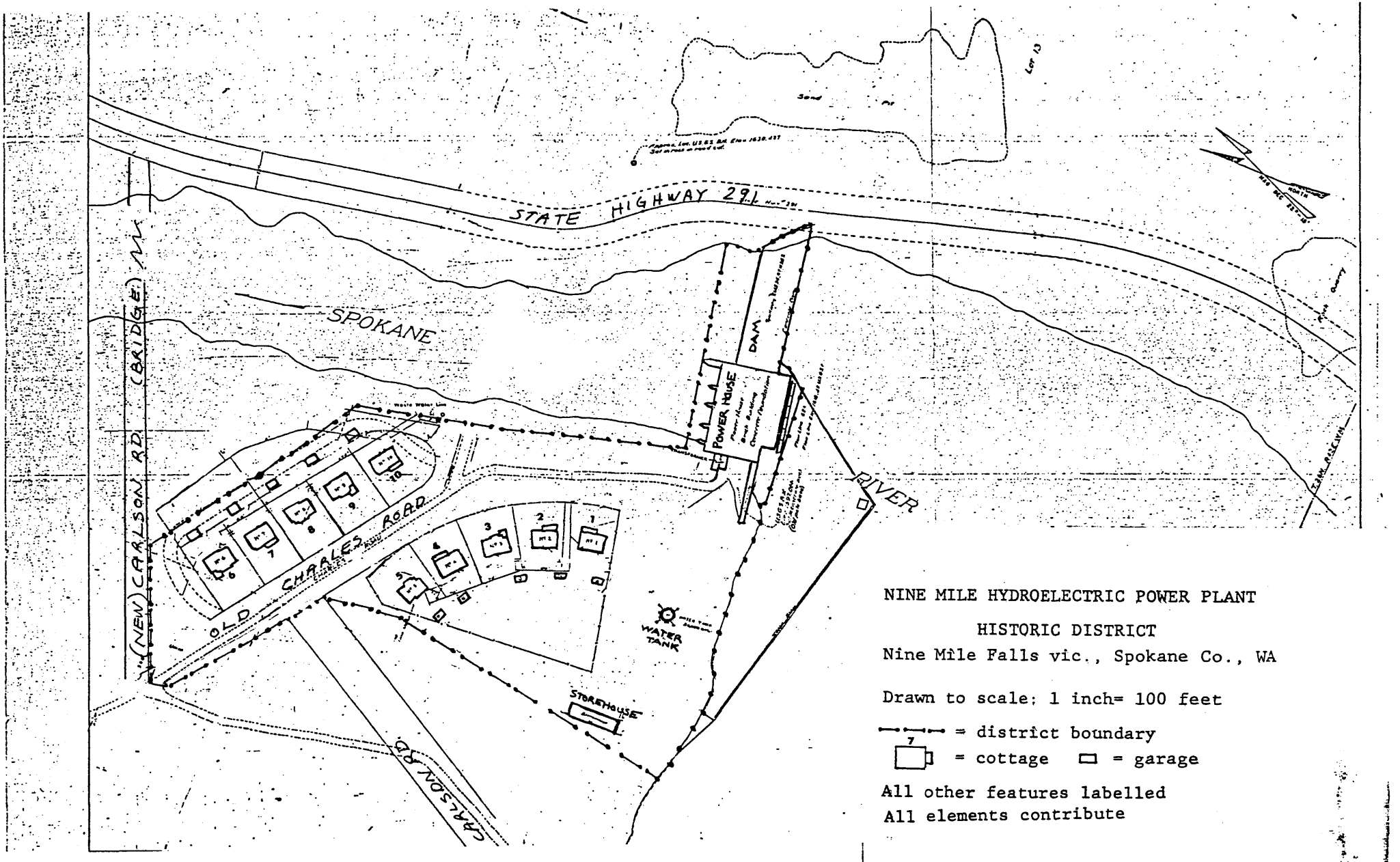
In order to develop the Nine Mile site, it was necessary to divert the Spokane River from its natural channel. This was accomplished by constructing a concrete gravity dam across a rock canyon in which the powerhouse itself served as part of the water-stop, apparently the only one of its kind in the state. The foundation and upstream wall of the powerhouse formed the west side of the dam, while the remainder of the dam was composed of a spillway reaching the eastern bank.

Begun in July 1906, the design and construction of the plant was undertaken by Sanderson and Porter of New York, with William F. Zimmerman serving as consulting engineer. F. M. Sylvester was engaged by Sanderson and Porter to act as local manager and construction supervisor. When completed in 1908, the plant was connected by a high tension transmission line to the company's distribution center (known as the Frequency Changing Station) in Spokane, which in turn delivered direct current to the streetcar system within the city. At the same time, it converted a portion of the power to alternating current for transmission to a series of substations located along the railroad's routes. The substations converted power back to direct current to operate the railroad lines outside Spokane, and also delivered power to neighboring communities. (Pacific Builder and Engineer, 23 February, 1907, p. 6; Electric Railway Journal, October 10, 1908)

When the Nine Mile plant began supplying power to the Spokane and Inland Empire Division of the Inland Empire System in July, 1908, the division included 130 miles of track, with cars and locomotives fed by a catenary supported trolley distributing single-phase current. The new plant also furnished power for lighting in several communities along the route, beginning that year with Rosalia. (Electric Railway Journal, October 10, 1908)

Although Graves divested his interest in the company in 1911, the Spokane and Inland Empire Railroad continued to operate the plant until 1919 when the company went into receivership. The Spokane and Eastern-Inland Railway and Power Company assumed operations of the electric interurban system afterward. But in 1925, the Nine Mile plant was purchased by Washington Water Power Company which continued to sell power to the electric railroads and commercial customers. It was the sixth power plant owned by the company on the Spokane River at that time. (Journal of Electricity, August 15, 1925) Soon after Washington Water Power purchased the Nine Mile complex, it constructed ten small brick homes along a tree lined road leading to the power plant in order to provide housing for its personnel at the remote location. Homes on the southwest side of the road were built in 1928, and those on the northeast side in 1929. Like the hydroelectric plant itself, these houses retain considerable exterior integrity today, and collectively the complex is among the best preserved historic power sites in the state.

The Inland Empire interurban system died out by World War II with the dominance of automobile and truck transportation. But the power plant at Nine Mile--together with a few other extant resources like the Frequency Changing Station in Spokane (National Register, 1979) and the Cheney Interurban Depot (associated with the Washington Water Power line to Medical Lake and Cheney, listed in the National Register in 1979)--still reflects that important transportation technology.



NINE MILE HYDROELECTRIC POWER PLANT

HISTORIC DISTRICT

Nine Mile Falls vic., Spokane Co., WA

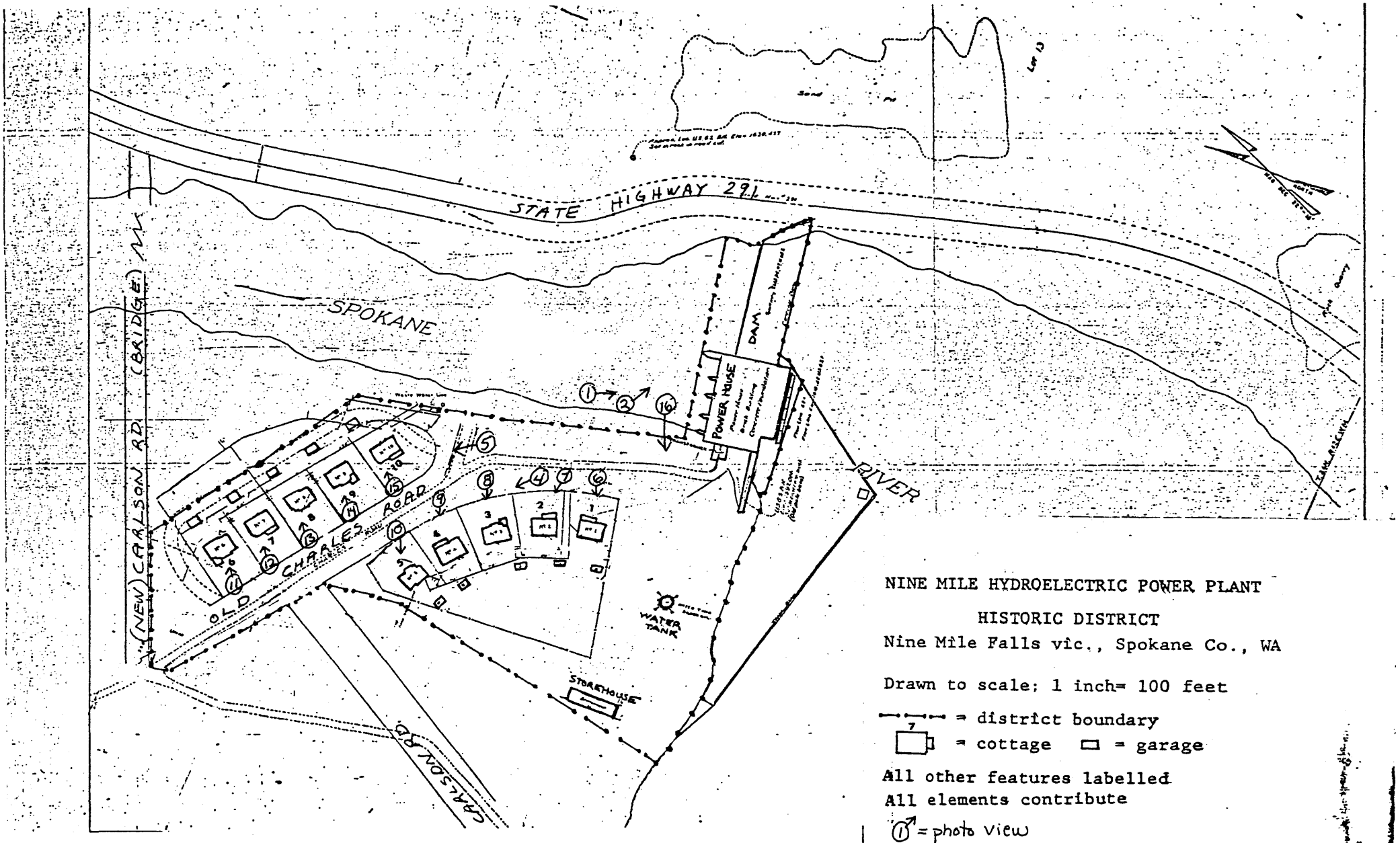
Drawn to scale; 1 inch= 100 feet

= district boundary

= cottage = garage

All other features labelled

All elements contribute



NINE MILE HYDROELECTRIC POWER PLANT

HISTORIC DISTRICT

Nine Mile Falls vic., Spokane Co., WA

Drawn to scale: 1 inch= 100 feet

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All other features labelled

All elements contribute

= photo view