

CUSHMAN NO. 1 HYDROELECTRIC POWER PLANT, INCLINED
TRAM AND TRAM HOUSE
Spanning the North Fork of Skokomish River
Hoodsport vicinity
Mason County
Washington

HAER WA-26-D
HAER WA-26-D

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC WEST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
333 Bush Street
San Francisco, CA 94104

HISTORIC AMERICAN ENGINEERING RECORD

CUSHMAN NO. 1 HYDROELECTRIC POWER PLANT, INCLINED TRAM AND TRAM HOUSE

HAER No. WA-26-D

Location: East Bank of Lake Cushman at the North Fork of the Skokomish River, Mason County, Washington
USGS Topographic Quad: Hoodspout
Township 22 North, Range 4 West, Section 5

GPS Coordinates: Latitude: 47° 25'401 N, Longitude: 123° 13'191 W
This coordinate represents the center of the Cushman No. 1 tram house building. Obtained October 17, 2012, using Google Earth (© 2012). The coordinate's datum is North American Datum 1983.

Present Owner: City of Tacoma, Department of Public Utilities, Light Division (doing business as Tacoma Power)

Present Use: Hydroelectric Power Production

Significance: Cushman No. 1 Hydroelectric Power Plant represents a significant achievement in power production for the City of Tacoma. Constructed in response to unprecedented increases in power demands in the city, the Cushman No. 1 Development led to further industrial and commercial expansion. Cushman No. 1 is a notable example of medium-head hydroelectric technology from the mid-1920s. Moreover, its construction was an engineering feat, located in steep, nearly inaccessible terrain prone to flooding; the tram and tram house provided access to the steep canyon for construction activities.

Date: Constructed 1923–1925

Builder: Tacoma City Light

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I. PROJECT DESCRIPTION

The City of Tacoma, Department of Public Utilities, Light Division (doing business as Tacoma Power) owns and operates the Cushman Hydroelectric Project (the Project). The Project is operated under a 50-year Federal Energy Regulatory Commission (FERC) license (FERC Project No. 460), which was granted on July 15, 2010, following over 20 years of negotiations with federal, state, local, and tribal entities. The Cushman Hydroelectric Project comprises two historic districts listed in the National Register of Historic Places (NRHP) in 1988, specifically the Cushman No. 1 Hydroelectric Plant Historic District and the Cushman No. 2 Hydroelectric Plant Historic District. At the time of this writing, the two districts are being combined into one historic district known as the Cushman Hydroelectric Project Historic District; the district, as revised, encompasses the Cushman Nos. 1 and 2 Developments and a segment of the Potlatch (Cushman) Transmission Line.

The Cushman Hydroelectric Project plays an integral role in the City of Tacoma's infrastructure and economic development. The Cushman No. 1 Hydroelectric Power Plant or, more accurately, the Cushman No. 1 Development, includes buildings and structures from the initial building campaign of the Project, 1923–1925. The Cushman No. 1 Development impounds Lake Cushman, and includes the Cushman No. 1 dam and valve house (HAER No. WA-26-B), the Cushman No. 1 powerhouse (HAER No. WA-26-C), the inclined tram and tram house (HAER No. WA-26-D), the water conveyance system (HAER No. WA-26-E), and the Potlatch (Cushman) transmission line (HAER No. WA-26-F). The original spillway (HAER No. WA-26-A) was removed and replaced with a modern spillway in 1991.

As part of FERC relicensing, Article 414 requires a floating surface collector (FSC) and net transition structure (NTS) be installed at the Cushman No. 1 Development, to facilitate downstream fish passage. Construction of the FSC and NTS is considered an undertaking under Section 106 of the National Historic Preservation Act of 1966 (as amended), and constituted an unavoidable adverse effect on a historic property. To minimize the adverse effect, Tacoma Power consulted with an architectural historian during project design phases; combined the Cushman Nos. 1 and 2 Hydroelectric Power Plant historic districts into one Cushman Hydroelectric Project historic district via a NRHP nomination update; and completed this Historic American Engineering Record (HAER) documentation to addend the 1989 recordation of the Cushman No. 1 spillway. As such, the Cushman No. 1 inclined tram and tram house is hereby recorded in accordance with HAER Level II documentation.

II. HISTORIC CONTEXT

Though little information remains on the specific details related to the construction of the actual tram and tram house, it is known to be one of the first structures completed for the Cushman No. 1 Development. Completion of the tram enabled construction of the Cushman No. 1 powerhouse to proceed. With both electric and manual operations, the tram could “carry a piece of machinery weighing up to 30 tons up or down the precipitous sides of the canyon.”¹ In

¹ “Powerhouse Nestles in Side of Canyon,” *Tacoma Daily Ledger*, February 28, 1926, 9.

later years, the tram has continuously served as a reliable method of access to the powerhouse and the base of the Cushman No. 1 dam.

III. PHYSICAL DESCRIPTION

The inclined tram runs on a 450-foot-long tramway at a 38-degree incline from the top of the canyon to the Cushman No. 1 powerhouse. Some original cast-concrete lampposts remain along the west side of the tram rails, though most if not all of the original glass globes have been replaced with plastic globes similar in style.

The electrical and operating equipment for the tram is located at the top of the incline in a rectangular concrete building known as the tram house. The tram house is two stories tall with a flat roof and projecting cornice, and features operable multi-light, metal-sash windows at all elevations. There are two original metal doors at the north elevation and one at the south elevation.

IV. CONSTRUCTION AND MAINTENANCE

Aside from maintenance over the life of the tram and tram house, no major alterations are known. However, north of the historic tram is the modern tram, constructed in 1987. The modern tram comprises an aluminum and plastic tram shelter and the aerial tram. The aerial tram is supported via steel cables on steel poles, and was installed as an alternative to the inclined tram. Though the modern tram was initially constructed to, over time, replace the historic tram, it has proved to be more mechanically intensive than the original and, as of this report, is no longer in use.

V. REFERENCES

Tacoma Daily Ledger. Washington State Library. Olympia, Washington.