

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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RECEIVED MAR 23 1976

DATE ENTERED OCT 22 1976

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

W.H.
Stevens Pass Historic District

AND/OR COMMON

same

2 LOCATION

STREET & NUMBER

W of Barner US 2

CITY, TOWN

Barner
Stevens Pass

NOT FOR PUBLICATION

CONGRESSIONAL DISTRICT

Chelan King #2 and #4
Lloyd Meeds

STATE

Washington

X VICINITY OF

CODE

53

COUNTY

See #10

Mike McCormack
CODE

3 CLASSIFICATION

CATEGORY

- X DISTRICT
- BUILDING(S)
- STRUCTURE
- SITE
- OBJECT

OWNERSHIP

- PUBLIC
 - PRIVATE
 - X BOTH
- PUBLIC ACQUISITION**
- IN PROCESS
 - BEING CONSIDERED

STATUS

- OCCUPIED
 - X UNOCCUPIED
 - WORK IN PROGRESS
- ACCESSIBLE**
- YES: RESTRICTED
 - X YES: UNRESTRICTED
 - NO

PRESENT USE

- X AGRICULTURE
 - COMMERCIAL
 - EDUCATIONAL
 - ENTERTAINMENT
 - GOVERNMENT
 - INDUSTRIAL
 - MILITARY
- MUSEUM
 - PARK
 - PRIVATE RESIDENCE
 - RELIGIOUS
 - SCIENTIFIC
 - X TRANSPORTATION
 - OTHER:

4 OWNER OF PROPERTY

NAME

Multiple

STREET & NUMBER

CITY, TOWN

STATE

VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

County Courthouse

STREET & NUMBER

CITY, TOWN

STATE

See #10

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

Washington State Inventory of Historic Places

DATE

1974

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR
SURVEY RECORDS

Washington State Parks & Recreation Commission

CITY, TOWN

Olympia

STATE

Washington

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input checked="" type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The efforts of the Great Northern Railway to develop its deep water western terminus in Puget Sound led to several decades of construction in Stevens Pass, a gap in the Cascade Range at an elevation slightly in excess of 4000 feet about 45 miles east of Seattle. The ingenious constructions- an elaborate switchback system later replaced by a tunnel which was itself replaced by a second tunnel - underscore the importance of the railroad as a major force in commerce and communication as well as the talents of the engineers who developed the right of way.

an area within
The Stevens Pass Historic District is/a large rectangle 3.2 miles by 10.2 miles and extends from the Martin Creek Tunnel on the western slope of the crest to the eastern portal of the present Cascade Tunnel above Nason Creek on the eastern slope. The area is ruggedly mountainous and the terrain is covered with timber and granitic outcroppings. The region is unpopulated except for a Forest Service guard station and small businesses associated with highway traffic and the skiing area at the summit. The nominated area is situated in portions of Township 26 North, Ranges 12, 13 and 14 East of the Willamette Meridian.

Following surveys made in 1890 and 1891, the route over Stevens Pass followed a complex set of switchbacks established on benches cut into the mountainside and over timber trestles spanning small valleys. Three lettered switchbacks were built on the eastern slope and five on the steeper western slope; the approach grade to each was a maximum of 2.2% although the grade increased within the switchback system itself to a maximum of 3.5% on the east and 4.0% on the west. Trains traversing the route entered a spur about 1000 feet long at the end of each switchback, the track was switched and the train moved out again to the next leg, a tedious process of going forward and then in reverse until the Cascade Range was crossed.

The switchback route was never satisfactory - 13 miles of track were laid to connect two points three miles apart - and heavy snows and slides made the passage slow and not practical for extended use. As traffic increased, a tunnel was planned to bypass the difficult terrain crossed by the switchbacks and construction began in 1897.

The tunnel as completed in 1900 was 13,283 feet long with a 1.7% grade descending to the west. The eastern portal was at elevation 3347 and the western at elevation 3123. Both portals were finished with a concrete facing which consisted of a pilaster flanking the tunnel mouth proper and rising to a pyramidal cap; a simple low arch was placed between the pilasters and retaining walls were placed at an angle to either side. The entire length of the tunnel was lined with concrete.

Prior to the Wellington Disaster in 1910, the Stevens Pass route had been protected by 17 separate snowsheds with a total length of 7,593 feet. The structures had been added as needed since the line had opened in 1893; the object of these and later sheds was not to block slides from the track but rather to carry them over the right of way. Additions to the snowshed protection totaled construction of 5,411 feet aggregate length, located at 26 points from 29 miles east of the Cascade Tunnel to 9½ miles west. In addition, an impressive double-track reinforced concrete snowshed 3,900 feet long was erected on the site of Wellington itself. Believed to be the first such shed built, the structure was 30 feet high and about 35 feet wide, winding in a sinuous curve along the mountainside.

With the increase in traffic over the line made possible by the improvements, interruptions increased as heavier snows blocked exposed portions of the track. In 1913, the Great Northern Railway began another series of improvements, principally on the west slope of

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the Cascades between the small towns of Tye and Scenic. As a result of these endeavors, eight of the twelve miles of track between the Cascade Tunnel and Scenic were covered by tunnels or snowsheds. Included in this construction was the Windy Point Tunnel, some 1200 feet long, which permitted the double tracking of the line along an almost vertical cliff. A second tunnel of note in the route was the Martins Creek tunnel, located immediately west of Martin Creek. Tracks approached the tunnel portal on a bridge and the tunnel turned about 170° in a rising curve, the tracks crossing over Martin Creek again on a second bridge. The tunnel, built in 1911, was an unusual solution to a difficult problem and it was aptly called the Horseshoe Tunnel. The snowsheds added during this period were combination structures of wood and concrete. Reinforced or mass concrete was used for the back wall and timber formed the roof and supporting pillars; the largest shed constructed in this series was 4100 feet long.

The continued maintenance of the snowsheds was expensive and destructive wintertime slides were a matter of course. In addition, electrification of the line had begun in 1909 and a simplification of the route through the Cascade Range was a necessity. A replacement tunnel at a lower elevation was the solution proposed but it was not begun until 1925.

The second Cascade Tunnel, or New Cascade Tunnel, was 7.79 miles long and descended in a constant grade of 1.5% from Berne on the east to Scenic on the west. The western portal was at 2251 feet, some 870 feet below the western portal of the original tunnel, and eliminated the most troublesome portions of the circuitous rail line across the pass. The single track, concrete lined bore was completed late in 1928 and opened to traffic in January of 1929. Both portals are concrete faced with a minimum of architectural detail, although there are some similarities in the facades of both the old and the new tunnel. This tunnel remains in use today although it has been incorporated into the Burlington Northern Railway system.

Changes have occurred in all portions of the original route over Stevens Pass although substantial segments still survive unaltered with trackage removed. A substantial contributor to the changes in the area was the construction of a main highway which resulted in the destruction of several of the switchback sites on the west slope. Various parts of the right of way are eroded and filled with debris and vegetation but the line is quite easily traced almost throughout its entire length from Scenic to Berne.

All permanent structures on the right of way remain although the timber portions of the snowsheds have long since disappeared. The most conspicuous remainder is the long concrete snowshed on the site of Wellington; groundwater flows through it almost continuously in the spring and summer, it appears to be sound. Undergrowth has almost obscured the eastern entrance but it is still accessible. The original Cascade Tunnel also remains unaltered; several logs have been placed across the opening and a stream flows from it continuously, making a bog at the tunnel mouth. The tunnel is heavily overgrown and difficult of access. The Windy Point Tunnel, the Martin Creek Tunnel and a smaller unnamed bore also remain along the route.

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Of the town of Wellington and its successor, Tye, little remains. What was left of the structures after the massive avalanche in 1910 was removed when the concrete snowshed was built. The track was realigned and thrown some 50 to 80 feet into the mountainside and the spoil was moved over the Wellington site. Concrete foundations remain today, but their position indicates that they were part of later construction at Tye. The Great Northern recovered substantial amounts of equipment from the valley of the Tye River where the avalanche halted and a surprising amount of debris is visible near the river today although the area is extremely rugged and almost unpassable.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input checked="" type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input checked="" type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input checked="" type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input checked="" type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input checked="" type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Probably no other development has shaped the United States to the same degree as the coming of the railroad; western settlement, increased commerce and rapid transportation were but a few of the contributions. Now supplemented by many other forms which have in large part left the railroads as a carrier of goods, the former significance of railroads is often indicated only by the once ubiquitous small town depot, an increasingly rare survivor in a time that has little use for it. But the railroads have left other marks of their passing that are far more enduring and more representative of the ingenuity and engineering skill that brought them into being. The efforts of the Great Northern Railway to build and improve its route across Stevens Pass in the Cascade Range, a construction project spanning almost four decades, clearly indicates the tremendous value attached to a major railroad line and the amount of physical effort needed to make it a functioning unit.

Washington state was a late-comer to the national railroad fever. No real western trans-continental terminus was established until 1883 and that route followed the only practical but not the most desirable path, down the Columbia River and then north to Puget Sound. A more direct course to salt water harbors was through the center of the state but no satisfactory gap appeared in the formidable Cascade Range, a high and difficult range stretching from Canada to the Columbia. The Northern Pacific would complete a tunnel at Stampede Pass through the central part of the mountains in 1887 but that seemed the only place possible. In 1890 and 91, not long after his memorable discovery of Marias Pass in the Rocky Mountains, engineer John F. Stevens explored the Cascade slopes and produced a plan that would transport the tracks of the Great Northern Railway over the Cascades to a useful terminus. His survey provided one of the most complex routes ever used by a major standard gauge railway corporation.

The difficult series of loops and switchbacks was ready for service early in 1893 and was used until 1900 although the arrangement was never satisfactory. Each train required an engine at the front and one at the rear, permitting the train to zig-zag up and over the mountain range. The trains would move along the leg of a switchback and then onto a spur at the end of the switchback; the rear engine would then move forward onto the next leg of the switchback and so on until the entire 13 miles was crossed. One Great Northern patron claimed that "from one end of the continent to the other, man cannot find another such piece of eccentric railroading". Winter snows made the route hazardous and sometimes trains were trapped by slides on the switchbacks for several days at a time. Rotary snowplows were used for up to seven months each year and the railroad regularly employed hundreds of snow shovelers to aid in keeping the tracks clear. By 1897, traffic along the line warranted the construction of a tunnel which would bypass the switchbacks.

The first Cascade Tunnel was laid out using direct measurement rather than the system of triangles typical of tunnel construction. Transit points were established on peaks at

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Anderson, Eva G. Rails Across the Cascades. Wenatchee: Wenatchee World Publishing Company, 1952 (?)

Hult, Ruby El. Northwest Disaster: Avalanche and Fire. Portland: Binford & Mort, 1960.

(see continuation sheet)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY ~~20,889~~ 13,000 acres (revised 8/19/76)

UTM REFERENCES See Continuation Sheet

A	ZONE	EASTING	NORTHING	B	ZONE	EASTING	NORTHING
C	ZONE	EASTING	NORTHING	D	ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

an area within
The Stevens Pass Historic District is/a large rectangle 3.2 miles by 10.2 miles and extends from the Martin Creek Tunnel on the western slope of the crest to the eastern portal of the present Cascade Tunnel above Nason Creek on the eastern slope. The nominated area is situated in portions of Township 26 North, Ranges 12, 13 and 14 East of the Willamette Meridian.

(see attached sheet)

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
Washington	53	King	
Washington	53	Chelan	

11 FORM PREPARED BY

NAME / TITLE

David M. Hansen, Chief of Office of Archaeology and Historic Preservation

ORGANIZATION

Washington State Parks and Recreation Commission

DATE

STREET & NUMBER

Post Office Box 1128

TELEPHONE

CITY OR TOWN

Olympia

STATE

Washington 98504

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

Arthur M. Sheolnik

TITLE

State Historic Preservation Officer

DATE

March 4, 1976

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I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Acting

DIRECTOR, OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION

ATTEST:

KEEPER OF THE NATIONAL REGISTER

DATE

10/22/96

DATE

10/15/76

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opposite ends of the line of excavation. Additional points were located at each portal and from these positions the center line was projected into the tunnel.

Actual excavation began in August of 1897 and was completed in October, 1900. The material to be worked was difficult; the formation was of medium hard, light gray granite but largely seamed and prone to disintegration when exposed to the air. Additionally, the seams were often filled with loose particles of rock and talc and occasionally a water-course. Early progress was less than a foot per day and hampered at the western portal by soft ground, gravel and boulders in the approaches. Work trains were electric and power houses were erected near each portal for operating the trains and lighting the tunnel and camps. Eight electric motors were in use, each capable of hauling 16 to 20 cubic yard capacity dump cars at 10 miles per hour; six of the motors were built at the construction site machine shop. A crew of 600-800 men was continuously employed and during the excavation phase, worked in three eight-hour shifts.

With the completion of the tunnel, the most dangerous part of the line over the Cascades was eliminated but the route could still be treacherous. Snowslides derailed trains and rotary plows, the steep grades meant fatal speeds at least on one occasion and poor ventilation in the tunnel itself suffocated several train crewmen and overcame others. Conductors moved through passenger cars closing all windows and transoms prior to entering the tunnel but in 1909 an improvement was made when the tunnel was electrified and electric motors pulled hooded steam engines from one portal to another. The greatest disaster was yet to come and its occurrence would spur the Great Northern on to more thorough improvements in its Stevens Pass right-of-way.

The winter of 1909 had been unusually stormy and heavy snows and blizzards continued in the Cascades late in the season. Beginning February 21, 1910, new storms covered the mountains and continued through February 23 when Cascade Division Superintendent James H. O'Neill ordered two trains waiting at Leavenworth, a small town east of the pass, forward to cross the summit. Following a rotary plow, Train No. 25, a passenger train originating in Spokane, and Train No. 27, a mail train, made their way west through the thickening weather. Early in the morning, a slide at Windy Point forced the two trains to halt at Cascade, a small railroad town at the east portal of the Cascade Tunnel and the only place east of the tunnel where food was available for the passengers and crew. After a day's wait, the slide was cleared and the trains were dug out of the snow and headed into the tunnel, drifting through since power for the electric locomotive was out. After waiting inside the west portal for the tracks to be freed of the growing heaps of snow, the two trains entered passing tracks at the town of Wellington.

The railroad yard at Wellington was a narrow bench above a steep drop off and Tye Creek; behind it, Windy Mountain rose some 2000 feet. The snow continued and one by one the four rotary snowplows were put out of commission or trapped by slides. The passengers grew increasingly restive: the weather was not improving and a slide had swept away the cookhouse at Cascade with a cost of two lives. They asked that the trains be either withdrawn into the tunnel or moved forward into the protection of a snowshed.

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Superintendent O'Neill denied, for the tunnel was cold, damp and poorly ventilated and the snowshed could not cover the entire train; they were safest where they were.

By February 27 with the weather still bad, the tracks hopelessly blocked and the telegraph out, O'Neill determined to walk out to Scenic to get help. He and a small group of others walked the 3½ miles through massive slides and slid 800 feet down the mountainside. While he was renewing rescue efforts, the snowshovelers quit after being refused higher wages.

The weather had turned warmer and early in the morning of March 1, there was a violent thunder storm accompanied by torrential rains. A little after 1 a.m., according to a survivor, a vast section of the snowy cap of Windy Mountain broke loose and crashed down the mountainside, overwhelming both trains, sweeping over them and carrying them into the valley below. All that had stood on the tracks and the tracks themselves had been swept into the ravine, leaving the hillside swept bare. Rescue efforts were quickly organized and eventually 150 workers were on the scene; 96 persons had died and but 22 survived, making the avalanche one of the worst railroad disasters in the nation's history. A coroner's jury later found the Great Northern guilty of contributory negligence because more was not done to physically protect the trains, not enough coal was available and lack of a suitable wage forced many laborers to leave. The company eventually went to the State Supreme Court where the decision was reversed and the case dismissed.

Officials of the railway were quite aware of the stigma of the calamity. Wellington was rebuilt under the name of Tye with buildings relocated to safer positions and new buildings were erected to care for trainmen, laborers and equipment engaged in snow removal. The entire Stevens Pass route was improved and on the site of Wellington itself, the long concrete snowshed was erected and spanned two tracks. Other timber snowsheds were built and in 1911, the Martin Creek Tunnel was added. The Martin Creek Tunnel was the most unusual but most obscure of all the construction in Stevens Pass. It eliminated an early switchback on the east bank of Martin Creek above the small railroad town of Corea by turning about 170° in the face of the mountainside, reversing the direction of the track and increasing its elevation. No similar railway tunnel is known in the United States although the St. Gotthard railway, traversing the central portion of the Swiss Alps with a maximum gradient of 2.7%, has several. Pianotondo Kerrand Travi Kerrperform the same function in that system although they were in use some 30 years before the Martin Creek bore. Curiously, contemporary engineering journals give only scant mention to the tunnel and none note its unusual design.

Snowslides and drifts continued to be a problem and particularly heavy snows in the winter of 1912-13 brought about a new series of efforts to improve the line. Concentrating on the line between Tye and Scenic, railway crews built more snowsheds and more tunnels and in several places began double-tracking the line. The bulk of the work was pushed to completion in the spring and summer of 1913 to prepare the route for the coming winter; some 6,000 rail cars of material were used in the construction and as many as 70 carloads were handled daily. The work trains were fitted into the existing commercial traffic without significant interruption. At one time, seven work trains and 1800 men were

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concentrated in a distance of eight miles, an epic feat requiring close cooperation between private contractors and the railroad. It was within this construction phase that the Windy Point Tunnel was built. The tunnel improved the alignment of the track, shortened the line, reduced the cost of the permanent double-track location and provided complete protection against snowslides in a very hazardous location. The tunnel was excavated wholly from the western end although two adits were driven from the slope of the old cut to the center line of the tunnel. Wall plate drifts were driven in both directions from the westernmost adit while from the second adit the drifts were driven eastward only. The tunnel was timber lined although the section was made large enough to provide for a future concrete lining. The tunnel was originally taken out for one track only and excavation for the full width was taken out during the winter of 1913-14. Work began on the excavation May 5, 1913 and the tunnel was complete December 15 and the track operational by December 17.

In the same construction period, work on snowshed improvements was also pushed forward; the structures were timber or concrete and timber, the single reinforced concrete shed built in 1910 proving too expensive to repeat throughout the line. Both single track and double track sheds were built and involved the creation of seven construction camps. Because the terrain and ground conditions differed widely from place to place, plans could only be of a general nature and the type of shed depended largely on the foundation created. As a consequence, most of the timber framing was done in the cramped space of the site, a slow and expensive process. The grade was steep and supply cars being unloaded were chained to the tracks to reduce the possibility of runaways.

The electrification of the Stevens Pass line was contemplated about 1910 but the right-of-way would require substantial improvement to make the proposal a success - although heavily protected by snowsheds and tunnels, slides were a perpetual threat and the route too indirect to be completely successful. Several routes were surveyed in 1916-17 and incorporated tunnels six to 17 miles in length; John F. Stevens, the designer of the original switchback route, was a consultant to the project and he recommended the construction of the present Cascade Tunnel. Work began in 1925 and the tunnel officially opened on January 12, 1929. Parallel to the projected route of the tunnel and 52 feet south, a pioneer tunnel was excavated and from it adits were drifted about every 1500 feet into the site of the main tunnel, providing a large number of working faces. The pioneer tunnel provided access for compressed air, electric lines and supplies as well as providing a substantial drain for the considerable volumes of water encountered. Excavated material was also wasted through the tunnel. In addition, a shaft was sunk from Mill Creek, about 2½ miles west of the projected eastern portal, through 662 feet of rock to the level of the tunnel providing two additional faces for excavation. With the many working faces, many men were put to work and at one time, more than 1700 were on the payroll simultaneously.

Considerable ceremony accompanied the opening of the new Cascade Tunnel. A national radio hook-up connected some 36 stations and portions of the broadcast came from New York, Washington, Philadelphia and San Francisco as well as the Cascades, the entire

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production synchronized with the schedule of the Great Northern's "Oriental Limited" on its maiden trip through the 7.79 mile shaft. As the train headed westward into the tunnel, a New York contralto broadcast dedicatory songs, followed later by popular music from San Francisco; at the western portal, more than 600 guests attended a banquet in the dining hall of the construction camp at Scenic.

Probably no one was so firmly connected with James J. Hill's route over Stevens Pass than John Frank Stevens, after whom the pass is named. Stevens was born in 1853 and raised on a farm in Maine. Like many engineers of the time, he had no formal education but went to work for the railroad, first surveying in Maine and then moving west, working as a rodman in Minneapolis and a section hand in Texas. Before going to work for Hill in 1889, he had laid out the lines for half a dozen western railroads including the Canadian Pacific. He had gained an enviable reputation by dint of competent hard work and in his travels "he had been treed by wolves, chased by Indians, struck down by Mexican fevers, marooned by blizzards, given up for lost on more than one occasion (and) had developed a robust physique that seemed impervious to climate". The Great Northern was recognized as the best engineered railroad in the country and to Stevens must go much of the credit. In 1905 he was appointed by Theodore Roosevelt as Chief Engineer to the "graveyard of reputations", the Panama Canal, which he pulled out of inaction and placed on the road to completion. He went back to work for Hill in 1909 and then worked as a consulting engineer in New York. In 1917, he was asked by Woodrow Wilson to go to Russia as head of the American Railway Commission; at the request of the Russians, he stayed as an adviser until 1922. In 1927, he was elected president of the American Society of Civil Engineers and in 1937, at the age of 83, he flew to the Panama Canal in a Pan American clipper. He died on June 2, 1943.

The efforts of the Great Northern Railway to develop its route over Stevens Pass demonstrate the importance of the railroad as a mode of transportation and commerce. In addition, the several designs and alterations in the right-of-way are indicators of the application of engineering skill throughout four decades. The surviving elements of the system remain as testament to the early importance of the railroad and, in the case of the great concrete snowshed at Wellington, a permanent monument to one of the nation's largest railroad disasters.

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"Tunnels". Sandström, Gosta. New York: Holt, Rinehart and Winston, 1963.

"Concrete and Timber Snowsheds on the Great Northern Railway". Engineering News, Vol. 36 No. 24 (December 15, 1910).

"Tunnels and Snowsheds in the Cascades: Great Northern Railways". Engineering News, Vol. 71 No. 23 (June 4, 1914).

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- A. 10/651500/5289850 *Chiwaukum Mts. Quad.*
- B. 10/649920/5289470 *Stevens Pass Quad.*
- C. 10/640640/5285830
- D. 10/635600/5283820 *Scenic Quad.*
- E. 10/633600/5288910
- F. 10/636080/5289900
- G. 10/640500/5291670
- H. 10/649050/5295060 *Labyrinth Quad.*
- I. 10/649830/5293090
- J. 10/651300/5290275 *Chiwaukum Mts. Quad.*

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Checked SGO 9/2/76

Stevens Pass Historic District

A line commencing at the common corner of Sections 13, 14, 23 and 24, Township 26 North Range 12 East (Wilamette Meridian) and continuing to the common corner of Sections 19, 20, 29 and 30, Township 26 North Range 13 East, then to the common corner of Sections 20, 21, 28 and 29, Township 26 North Range 13 East, then to the geographic center of Section 16, Township 26 North Range 13 East, then to the common corner of Sections 9, 10, 15 and 16, Township 26 North Range 13 East, then to a point 3300 feet North of the common corner of Sections 1, 2, 11 and 12, Township 26 North Range 13 East, then to a point 1500 feet East of the intersection of the lines dividing Townships 26 and 27 North and Ranges 14 and 15 East, then to a point 500 feet West of the common corner of Sections 4, 5, 8 and 9, Township 26 North Range 15 East, then to the intersection of U. S. Route 2 with the line dividing Sections 8 and 9, Township 26 North Range 15 East, then to a point 600 feet South of the common corner of Sections 28, 29, 32 and 33 Township 26 North Range 13 East, then to a point 4000 feet east of the common corner of Sections 25, 26, 35 and 36 Township 26 North Range 12 East, then return to a point of beginning.