National Park Service
Cultural Landscapes Inventory
2006

Westside Road
Mount Rainier National Park

National Park Service
U.S. Department of the Interior

Pacific West
Regional Office

Cultural Resource
Programs

CULTURAL LANDSCAPES INVENTORY (CLI) PROGRAM

2011 Condition Assessment Update for:

Westside Road
Mount Rainier National Park

Mount Rainier National Park concurs with the condition assessment update for Westside Road as identified below:

CONDITION ASSESSMENT: **POOR**

Good: indicates the landscape shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The landscape's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the landscape shows clear evidence of minor disturbance and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without appropriate corrective action, the cumulative effect of the deterioration of many of the landscape characteristics will cause the landscape to degrade to a poor condition.

Poor: indicates the landscape shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining cultural and natural values.

Superintendent, Mount Rainier National Park — Date 9/12/11

acting

Please return to:
Vida Germano
Cultural Landscapes Inventory Coordinator
National Park Service, Pacific West Region
333 Bush Street, Suite 500
San Francisco, CA 94104-2828
415-623-2367 (office)
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National Park Service
Cultural Landscape Inventory
2006

Westside Road
Mount Rainier National Park

Mount Rainier National Park concurs with the findings of the CLI, including the management category and condition assessment as identified below:

MANAGEMENT CATEGORY: **A: Must be preserved and maintained**

CONDITION ASSESSMENT: **Poor**

David V. Hildebrand 9/6/06

Superintendent, Mount Rainier National Park Date

Please return to:

Erica Owens
Historical Landscape Architect
National Park Service
Pacific West Regional Office
909 First Avenue
Seattle, WA 98104-1060

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
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September 29, 2006

Ms. Erica Owens
CLI Co-Coordinator
National Park Service
Pacific West Regional Office
909 First Avenue, Floor 5
Seattle, Washington 98104

In future correspondence please refer to:
Log: 092906-36-NPS
Property: Westside Road - Mount Rainier National Landmark District
Re: Determined Eligible

Dear Ms. Owens:

Thank you for contacting our office. I have reviewed the materials you provided to our office and concur with your professional opinion that the 6 previously unevaluated structures are contributing to the Westside Road at Mt. Rainier. This brings the total contributing features on the Westside Road to eleven. I wanted to compliment to you on your Cultural Landscape Inventory of the road. The documentation is well written, well-researched and was a pleasure to read.

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Thank you for the opportunity to review and comment. Should you have any questions, please feel free to contact me.

Sincerely,

Michael Houser
Architectural Historian
(360) 586-3076
Michael.Houser@dahp.wa.gov

WESTSIDE ROAD
MOUNT RAINIER NATIONAL PARK

Washington SHPO Consensus Determination of Eligibility

Section 110 Actions Requested:

1) SHPO concurrence that the Setting, as identified in the CLI, contributes to the significance of Westside Road. (See the Analysis and Evaluation section of the CLI for discussions related to spatial organization, circulation, topography, views and vistas, vegetation, and natural systems and features.)
2) SHPO concurrence with the boundary adjustment for the Westside Road that includes all historic features associated with the road including the last 2.8-mile segment of the road. (See the Boundary Description in the CLI.)
3) SHPO concurrence with the list of contributing and non-contributing structures. (See chart below.)

1) I concur __X__, I do not concur _____ that the setting as described in the CLI contributes to the significance of the Westside Road.

2) I concur __X__, I do not concur _____ with the boundary established for the Westside Road as described in the Cultural Landscape Inventory (CLI).

3) The following structures are already listed on the National Register of Historic Places as contributing features of the Mount Rainier National Historic Landmark District:

LCS number	Structure Name	NRIS Number
330716	Westside Road	97000344
006710	St. Andrews Patrol Cabin	97000344
030079	South Puyallup River Bridge	97000344
030078	St. Andrews Creek Bridge and Stone Stairs	97000344
030246	Marine Memorial (contributes to the larger NHLD, but not to the Westside Road specifically)	97000344

Based on the information provided in the CLI, the following previously unevaluated structures have been identified as **contributing** to the Westside Road:

LCS number	Structure Name	Date Built	Concur	Do not Concur
330721	Westside Road Retaining Walls and Guardwalls (17)	1926-34	NCH	
373781	Westside Road Culverts (53)	1926-34	NCH	
473842	Tahoma Vista Comfort Station	ca. 1930	NCH	
473881	Tahoma Vista Stone seating clusters (3)	ca. 1930	NCH	
539608	Tahoma Vista Fountain	ca. 1930	NCH	
544664	Round Pass stone steps and wall	ca. 1930	NCH	

Based on the information provided in the CLI, the following previously unevaluated structures have been identified as **not contributing** to the Westside Road because they were built after the end of the period of significance:

LCS number	Structure Name	Date Built	Concur	Do not Concur
NA	Non-historic Retaining Wall (1)	post-1934	✓	
NA	Non-historic Culverts (21)	post-1934	✓	
NA	Concrete Box Culvert	post-1934	✓	
NA	Texas Culvert	post-1934	✓	
NA	Denman Falls Trail Bridge	post-1934	✓	
NA	Denman Falls Fence Reconstruction	post-1934	✓	
NA	Rock Barriers (3)	post-1934	✓	
NA	Log Curb at Marine Memorial	post-1934	✓	
NA	Non-historic metal gates (3)	post-1934	✓	
NA	Non-historic signs	post-1934	✓	

Reasons/comments why any 'Do Not Concur' blocks were checked:

FOR Washington State Historic Preservation Officer — Date 9.28.06

Please return forms to the attention of:
Erica Owens
Cultural Landscape Inventory Coordinator - Seattle
National Park Service
Pacific West Regional Office-Seattle
909 1st Ave, Floor 5
Seattle, WA 98104
(206) 220-4128
erica_owens@nps.gov

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Inventory Unit Summary & Site Plan

Inventory Summary

The Cultural Landscapes Inventory Overview:

CLI General Information:

Cultural Landscapes Inventory – General Information

The Cultural Landscapes Inventory (CLI) is a database containing information on the historically significant landscapes within the National Park System. This evaluated inventory identifies and documents each landscape's location, size, physical development, condition, landscape characteristics, character-defining features, as well as other valuable information useful to park management. Cultural landscapes become approved inventory records when all required data fields are entered, the park superintendent concurs with the information, and the landscape is determined eligible for the National Register of Historic Places through a consultation process or is otherwise managed as a cultural resource through a public planning process.

The CLI, like the List of Classified Structures (LCS), assists the National Park Service (NPS) in its efforts to fulfill the identification and management requirements associated with Section 110(a) of the National Historic Preservation Act, National Park Service Management Policies (2001), and Director's Order #28: Cultural Resource Management. Since launching the CLI nationwide, the NPS, in response to the Government Performance and Results Act (GPRA), is required to report information that respond to NPS strategic plan accomplishments. Two goals are associated with the CLI: 1) increasing the number of certified cultural landscapes (1b2B); and 2) bringing certified cultural landscapes into good condition (1a7). The CLI maintained by Park Historic Structures and Cultural Landscapes Program, WASO, is the official source of cultural landscape information.

Implementation of the CLI is coordinated and approved at the regional level. Each region annually updates a strategic plan that prioritizes work based on a variety of park and regional needs that include planning and construction projects or associated compliance requirements that lack cultural landscape documentation. When the inventory unit record is complete and concurrence with the findings is obtained from the superintendent and the State Historic Preservation Office, the regional CLI coordinator certifies the record and transmits it to the national CLI Coordinator for approval. Only records approved by the national CLI coordinator are included on the CLI for official reporting purposes.

Relationship between the CLI and a Cultural Landscape Report (CLR)

The CLI and the CLR are related efforts in the sense that both document the history,

significance, and integrity of park cultural landscapes. However, the scope of the CLI is limited by the need to achieve concurrence with the park superintendent resolve eligibility questions when a National Register nomination does not exist or the nomination inadequately addresses the eligibility of the landscape characteristics. Ideally, a park's CLI work (which many include multiple inventory units) precedes a CLR because the baseline information in the CLI not only assists with priority setting when more than one CLR is needed it also assists with determining more accurate scopes of work.

In contrast, the CLR is the primary treatment document for significant park landscapes. It, therefore, requires an additional level of research and documentation both to evaluate the historic and the existing condition of the landscape in order to recommend preservation treatment that meets the Secretary of Interior's Standards for the treatment of historic properties.

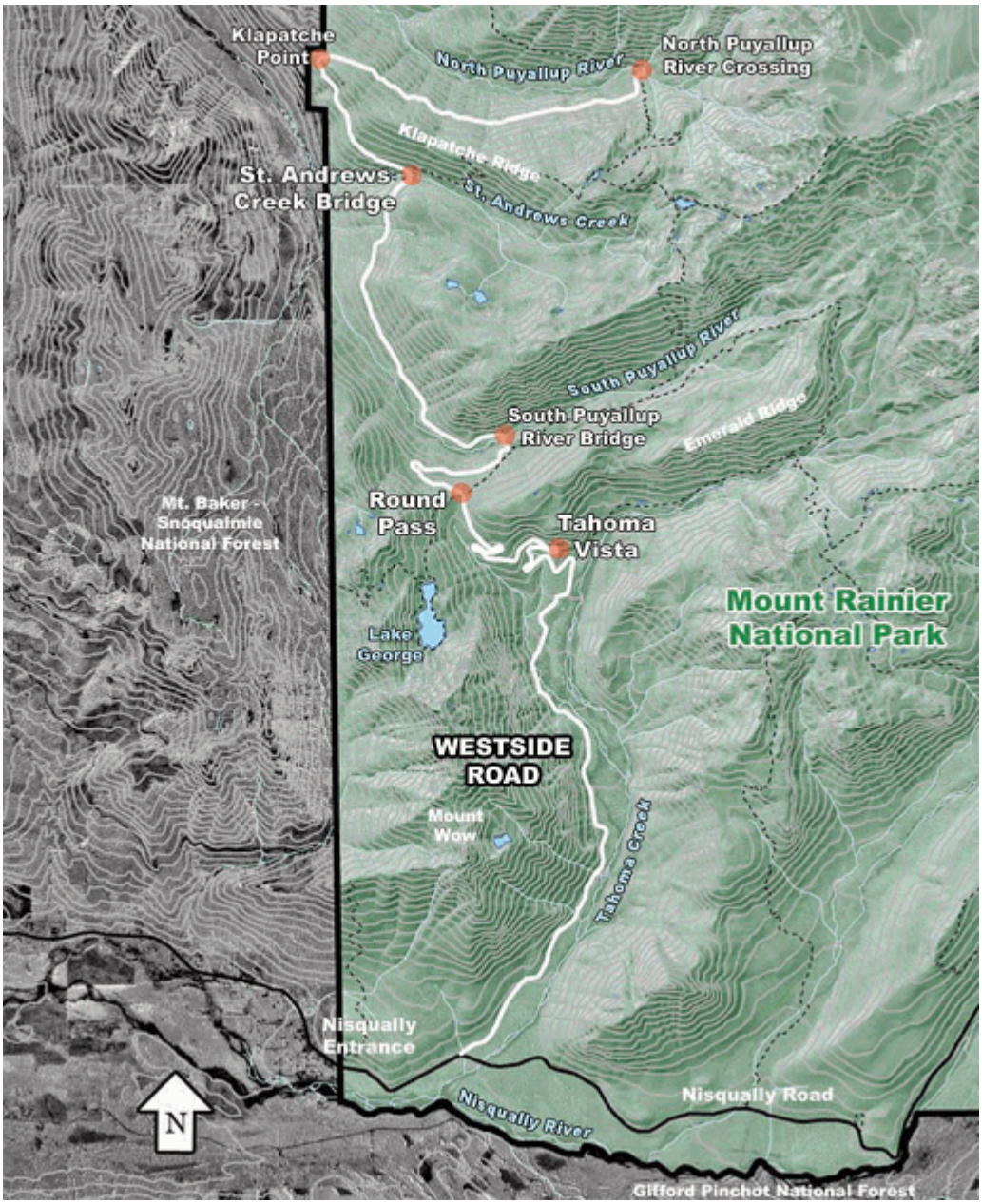
The scope of work for a CLR, when the CLI has not been done, should include production of the CLI record. Depending on its age and scope, existing CLR's are considered the primary source for the history, statement of significance, and descriptions of contributing resources that are necessary to complete a CLI record.

Inventory Unit Description:

The Westside Road is a 15.2-mile linear landscape that was designed by landscape architects and civil engineers as a scenic drive through public land. The alignment of the Westside Road was carefully chosen to showcase the spectacular scenery while carrying vehicles through the western areas of Mount Rainier National Park. The road begins at its intersection with the Nisqually Road approximately one mile from the southwest entrance to the park. It then follows the Tahoma Creek valley north before climbing around the tip of Emerald Ridge, through the South Puyallup River and St. Andrews Creek valleys, and around the tip of Klapatche Ridge before descending to the base of the mountain at its termination point at the North Puyallup River. The road also provides access to numerous other attractions along the route including Tahoma Vista, Round Pass, the St. Andrews Creek Bridge, and various trailheads.

The Westside Road is a nationally significant historic designed landscape that is part of a rare example of an early national park scenic highway, and is an integral part of the early master plan for the park. The highway is distinguished by outstanding engineering achievements and features of naturalistic design. The period of significance for the Westside Road is from 1926-1934, reflecting the period when the NPS coordinated the design and construction of the road. The naturalistic character of the road is evident in its remaining landscape characteristics: spatial organization, circulation, buildings and structures, small scale features, topography, views and vistas, vegetation, natural systems and features, and archaeological sites. These patterns and their surviving features continue to exist as originally planned, conveying the integrity of the road as a scenic highway.

Site Plan



Westside Road Site Plan (MORA, 2005).

Property Level and CLI Numbers

Inventory Unit Name:	Westside Road
Property Level:	Landscape

CLI Identification Number: 400031

Parent Landscape: 400031

Park Information

Park Name and Alpha Code: Mount Rainier National Park -MORA

Park Organization Code: 9450

Park Administrative Unit: Mount Rainier National Park

CLI Hierarchy Description

The Westside Road is a cultural landscape with no component landscapes.

Concurrence Status

Inventory Status: Complete

Completion Status Explanatory Narrative:

Fieldwork for the Westside Road CLI was completed in Summer 2005 by Justin Dykstra and Erica Owens. The report and all graphics were completed by Justin Dykstra in 2005. Data was entered into the database by Amy Hoke and Erica Owens in 2006.

Concurrence Status:

Park Superintendent Concurrence:	Yes
Park Superintendent Date of Concurrence:	09/06/2006
National Register Concurrence:	Eligible -- SHPO Consensus Determination
Date of Concurrence Determination:	09/28/2006

Geographic Information & Location Map

Inventory Unit Boundary Description: (see next page)

Boundary Justification

The boundary for all historic roads is defined in the 1997 National Historic Landmark District (NHLD) nomination as "a corridor 60 feet wide (30 feet from the centerline of the roads in either direction) and incorporating all of the historic structures associated with road construction, including ditches, swales, culverts, and retaining walls." Findings from this CLI suggest that the boundary described in the NHLD nomination requires expansion to sufficiently encompass all the features associated with the road (see boundary description below). The NHLD nomination did not include the final 2.8-mile segment of the road from Klapatche Point to its terminus at the North Puyallup River, whereas this CLI recommends including the last portion of the road.

The CLI recommends the boundary be widened from a 60-foot corridor to a 200-foor corridor (100 feet from the centerline of the roads in either direction) to include all the constructed features along the road. This corridor widens at three areas to include developments at the Puyallup River Crossing (historic parking area), Round Pass (parking area and viewing platform), and Tahoma Vista (comfort station and viewing platform, a rustic water fountain, and rock benches).

This CLI also recommends that the last 2.8-mile segment of the historic road alignment (now managed as a trail) from Klapatche Point to its terminus at the North Puyallup River be included in the cultural landscape. Although a few rock slides, washouts, and the growth of vegetation have impacted the design and workmanship of the roadbed since the period of significance, it follows the road's original alignment, contains a number of intact features that date to the period of significance, and exhibits a high degree of craftsmanship, such as rock cuts, guardwalls and retaining walls, and a viewing platform at its terminus. For these reasons, this final segment of the road has been found to be a significant part of the Westside Road cultural landscape.

Wilderness Boundary

The last 2.8-mile segment of the road falls within the park's designated wilderness boundary. This section of the trail is currently maintained as a trail and helps to preserve some aspects of the historic character of the road. As a result, the extension of the cultural landscape into the wilderness area should not impact current management practices of this portion of the cultural landscape.

Boundary Description

The boundary is defined in this CLI as 100 feet on either side of the centerline of the road for a distance of 15.2 miles beginning at its intersection with the North Puyallup River and terminating at its intersection with Nisqually Road. At three points along this corridor, the boundary widens to include developments at the North Puyallup River Crossing, Round Pass, and Tahoma Vista. At the North Puyallup River Crossing, the boundary widens for approximately 200 feet to include the viewing platform and historic parking area. At Round Pass, the boundary widens for approximately 200 feet to include the parking area west of the centerline and for another 200 feet to the east of the centerline to include the viewing platform At Tahoma Vista, the road widens to 200 feet east of the centerline to include the viewing platform and comfort station.

State and County:

State: WA

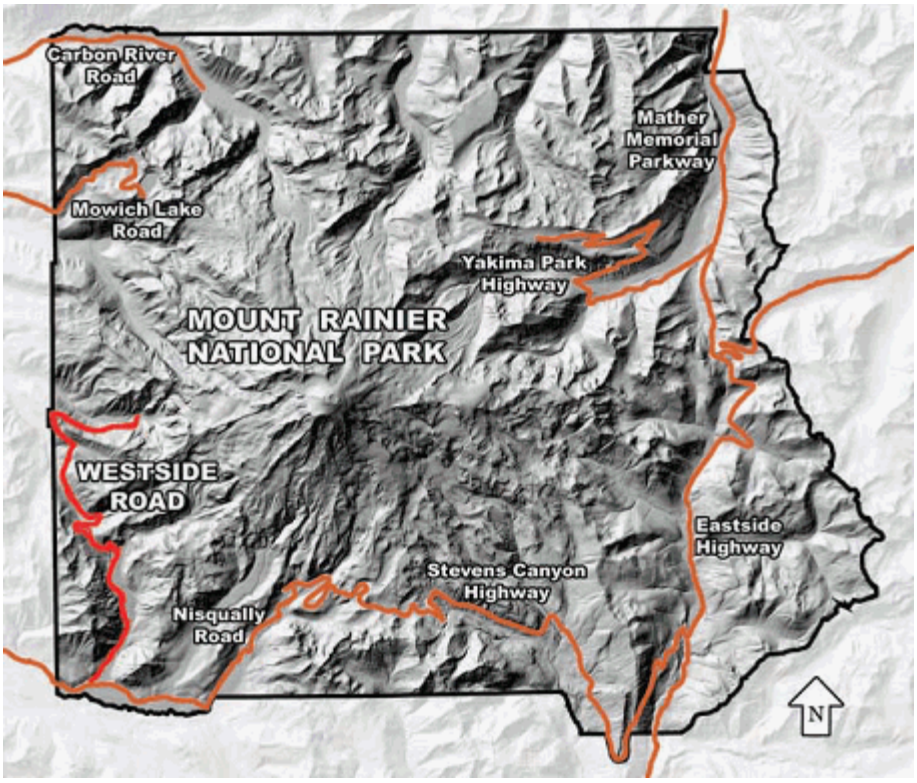
County: Pierce County

Size (Acres): 368.00

Boundary UTMS:

Source	Type of Point	Datum	UTM Zone	UTM Easting	UTM Northing
GPS-Differentially Corrected	Line	NAD 27	10	585,870	5,179,569
GPS-Differentially Corrected	Line	NAD 27	10	585,470	5,182,790
GPS-Differentially Corrected	Line	NAD 27	10	583,575	5,183,906
GPS-Differentially Corrected	Line	NAD 27	10	584,628	5,183,243
GPS-Differentially Corrected	Line	NAD 27	10	583,680	5,184,475
GPS-Differentially Corrected	Line	NAD 27	10	582,985	5,186,054
GPS-Differentially Corrected	Line	NAD 27	10	583,533	5,187,338
GPS-Differentially Corrected	Line	NAD 27	10	582,501	5,188,707
GPS-Differentially Corrected	Line	NAD 27	10	586,312	5,188,539

Location Map:



The Westside Road is located in the southwestern portion of Mount Rainier National Park (MORA 2005).

GIS File Description: The GIS files contain landscape feature data pertinent to the Cultural Landscape Inventory for the Westside Road. The features are located using a linear referencing system. This process utilized field survey and historic resource information from the CLI to produce a single dataset in a tabular format. The dataset was spatially mapped in GIS software (ArcGIS 9.0) using the "Route Events" wizard tool. In addition, each feature was given a unique identity number, noted in miles, beginning with mile point (MP) 00.000 at the south end of the road where it intersects with the Nisqually Road. The end point is at the North Puyallup River crossing where the road intersects with the Eastside Highway, MP 15.20. These GIS files are located at MORA.

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 02/18/1997

Management Category Explanatory Narrative:

The Westside Road meets this management category because it is nationally significant as defined by National Historic Landmarks Program criteria.

Agreements, Legal Interest, and Access

Management Agreement:

Type of Agreement:

NPS Legal Interest:

Type of Interest: Fee Simple

Public Access:

Type of Access: Other Restrictions

Explanatory Narrative:

The road is closed in winter and during periods of unsafe driving conditions.

Adjacent Lands Information

Do Adjacent Lands Contribute? No

National Register Information

Existing National Register Status

National Register Landscape Documentation:

Entered Inadequately Documented

National Register Explanatory Narrative:

The Westside Road and its associated features and surrounding landscape were described in the 1997 National Register nomination and designated a National Landmark District in 1997. However, the National Register nomination did not adequately document the landscape characteristics and features along the road. This CLI expands the description of the road's setting, provides greater detail, and reevaluates the boundary, including the last three miles that are now managed as a trail.

Existing NRIS Information:

NRIS Number:	97000344
Primary Certification Date:	02/18/1997
NRIS Number:	91000188
Primary Certification:	Listed In The National Register
Primary Certification Date:	03/13/1991
	Date Received/Pending Nomination - 1/29/1991
Name in National Register:	St. Andrews Patrol Cabin
Other Names:	N-104
NRIS Number:	91000198
Primary Certification:	Listed In The National Register
Primary Certification Date:	03/13/1991
	Date Received/Pending Nomination - 1/29/1991
Name in National Register:	South Puyallup River Bridge
NRIS Number:	91000199
Primary Certification:	Listed In The National Register
Primary Certification Date:	03/13/1991
	Date Received/Pending Nomination - 1/29/1991
Name in National Register:	St. Andrews Creek Bridge
NRIS Number:	91000205
Primary Certification:	Listed In The National Register
Primary Certification Date:	03/13/1991
	Date Received/Pending Nomination - 1/29/1991
Name in National Register:	Tahoma Vista Comfort Station
Other Names:	N-110

National Register Eligibility

National Register Concurrence:	Eligible -- SHPO Consensus Determination
Contributing/Individual:	Contributing
National Register Classification:	District

Significance Level: National

Significance Criteria: A - Associated with events significant to broad patterns of our history
C - Embodies distinctive construction, work of master, or high artistic values

Period of Significance:

Time Period: AD 1926 - 1934

Historic Context Theme: Creating Social Institutions and Movements

Subtheme: Recreation

Facet: General Recreation

Time Period: AD 1926 - 1934

Historic Context Theme: Expressing Cultural Values

Subtheme: Landscape Architecture

Facet: Development Of Transportation And Land Tenure Systems

Other Facet: The Automobile Age and Suburban Development

Area of Significance:

Area of Significance Category	Area of Significance Subcategory
Landscape Architecture	None
Engineering	None
Architecture	None

Statement of Significance:

The Westside Road is a cultural landscape within the Mount Rainier National Historic Landmark District (NHLD). Designated in 1997, the NHLD is nationally significant for its association with the events of early National Park Service (NPS) master planning (criterion A) and the design style of naturalistic landscape architecture (criterion C) perpetuated by the NPS in the period between World Wars I and II. The NHLD "encompasses almost all the roads, historic developed areas, and historic backcountry structures in the park. The district is a discontiguous district with a continuous core that follows the park road system as a corridor" (Mount Rainier National Park NHLD Nomination, 1997). The period of significance for the Mount Rainier National Park NHLD is 1906-1957, broadly incorporating the earliest and latest rustic period developments in the park.

As part of the NHLD, the Westside Road is significant for its association with the national park system's most complete and significant example of park master planning. It is also significant for its naturalistic landscape engineering as a scenic park highway. The NHLD nomination lists the construction dates for the road as 1926-1934 and is used as the period of significance for the purposes of this CLI. This CLI recommends the boundary for the Westside Road be expanded from what is

described in the NHLD nomination. See the "Boundary Description" section for more detail.

Criterion A
In association with the events of the American Park Movement and early NPS master planning, the Westside Road is significant as an integral part of the master plan for Mount Rainier National Park, as first developed in the late 1920s. The Westside Road was the first road project within the park to be undertaken after the Memorandum of Agreement (MOA) was signed by the NPS and Bureau of Public Roads (BPR) in 1926, establishing the framework for inter-bureau cooperation on national park road construction. The MOA included standard specifications for road construction that adopted the naturalistic style for landscape engineering.

The concept of the Westside Road had its origins in early plans for a comprehensive road system within the park. In the first two decades of the twentieth century, Army Corps of Engineers Chief Engineer Hiram Chittenden and Assistant Engineer Eugene Ricksecker developed and advocated a plan that would circle Mount Rainier with roads, greatly increasing automobile accessibility within the park. The plan, dubbed the 'Around-the-Mountain Road' concept, was based on Chittenden's similar plan for Yellowstone's Grand Loop. By 1913, preliminary surveys located the "Around-the-Mountain Road" route along an 80- to 100-mile irregular loop just below the glacier line. Although budget constraints and rugged terrain on the north and west slopes of the mountain prevented the realization of the plan as it was originally conceived, this early plan laid the groundwork for the comprehensive master planning of the 1920s.

During the subsequent phase of master planning, the concept of the 'Around-the-Mountain Road' was abandoned in favor of a partial loop road system that relied more heavily on regional roads outside of the park to create a loop around the mountain. The master plan developed during this time envisioned the infrastructure of the park as a system of scenic highways and developed areas, to be known as "rustic park villages," which would accommodate visitors while limiting their vehicular access within the park. The Westside Road was conceived as a part of that system, connecting Longmire and Paradise in the south with the Carbon River and Mowich Lake areas in the northwest. Construction of the Westside Road began in 1926.

The success of the design was due in large part to NPS Director Stephen T. Mather's collaboration with the Bureau of Public Roads in the 1920s. The culmination of these collaborations led to the Memorandum of Agreement (MOA) being signed by the NPS and BPR in 1926, establishing the framework for inter-bureau cooperation on national park road construction. The road was the first in the system on which the NPS and BPR collaborated on the design and construction, and was the project through which NPS standard specifications for road construction, which would later be applied to park roads throughout the park system, were developed, tested and refined. The MOA called for park superintendents and NPS landscape engineers to determine the road alignment and road character, so that park roads could be designed in the naturalistic style of "landscape engineering," advocated by Mather. BPR was to perform the surveys, prepare construction drawings, and manage construction of park roads. This collaboration, together with the role the Westside Road played in early NPS master planning, imparts particular significance under criterion A.

Criterion C
In association with significant design and construction, the Westside Road is an outstanding example of National Park Service landscape design, embodying the complimentary styles of rustic architecture and naturalistic landscape architecture. Based on eighteenth-century picturesque and nineteenth-century naturalistic design theories, the rustic and naturalistic styles were used extensively in NPS architecture and landscape architecture of the 1920s and 1930s. Designers in these styles aimed to harmonize artifice and nature by minimizing the visual impact of constructed developments, while accentuating the picturesque qualities of nature. Indigenous rock, lumber, and native plants were the basic materials for these styles, so that park architecture and landscape architecture would appear as natural extensions of the living landscape. Forms of the rustic and naturalistic styles were intended to be subordinate to the natural environment, and were to exhibit a hand-crafted or primitive appearance. This design era coincides with the most significant period of development within NPS history, a time when the NPS created what is now recognized as the hallmark style for developments within natural areas, in order to preserve their scenic beauty.

The design of the Westside Road exhibits many characteristics of the naturalistic and rustic design styles, including the minimization of cut and fill, the "naturalization" of road shoulders, rock cuts and fill slopes, the dressing of exposed culverts with stone headwalls to render them inconspicuous, and naturalistic construction details for retaining walls, guardwalls, and guardrails. Notable structures and features found along the road include the Tahoma Vista and Round Pass minor developed areas, stone veneered, concrete spandrel bridges at South Puyallup River and St. Andrews Creek, stone retaining walls and crenulated guardwalls. The high standards set by the NPS in the construction of the road included salvaging local stone during grading operations for future construction of structures and surfaces. As a result, stone features such as the guardrails matched the color and texture of rock cuts in their vicinity. The curvilinear alignment and numerous vista turnouts slowed traffic and highlighted spectacular views of Mount Rainier and the surrounding Cascades scenery.

Today, as an integral part of the extant master plan from 1928, the Westside Road remains largely unchanged and is an intact example of an early national park scenic highway constructed using the first national NPS standards for road building. The road retains the following aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The road's naturalistic character is evident in its remaining landscape characteristics and features, namely in the road's spatial organization, its pattern of response to natural systems and features, land use, circulation, buildings and structures, small scale features, views and vistas, topography, and archeological sites. These patterns and their surviving features, such as stone guardwalls, retaining walls, narrow curvilinear alignment, and vista turnouts exist as originally planned, and convey the integrity of the road as a scenic highway. As one of few remaining unpaved historic scenic parkways within the national park system, the Westside Road retains the original historic character of the early park roads. It remains an excellent example of what early park roads were like before the application of modern materials such as asphalt and bitumen changed the character of these rustic routes. Also unlike many other park roads, the majority of the Westside Road retains the original configuration of its cross section, never having been widened or upgraded to more modern specifications. For these reasons, the Westside Road is an outstanding example of early rustic period park roads.

National Historic Landmark Information

National Historic Landmark Status:	Yes
Date Determined Landmark:	02/18/1997
Landmark Theme:	National Park Service landscape architecture, and National Park Service master planning

World Heritage Site Information

World Heritage Site Status?:	No

Chronology & Physical History

Cultural Landscape Type and Use

Cultural Landscape Type: Designed

Current and Historic Use/Function:

Primary Historic Function: Automobile

Primary Current Use: Road-Related-Other

Other Use/Function	Other Type of Use or Function
Automobile	Both Current And Historic
Outdoor Recreation-Other	Both Current And Historic

Current and Historic Names:

Name	Type of Name
West Side Road	Historic
West Side Highway	Historic
Westside Road	Both Current And Historic

Ethnographic Study Conducted: Yes-Restricted Information

Associated Group:

Name of Group: Cowlitz (Tainapan)

Type of Association: Both Current And Historic

Name of Group: Muckleshoot

Type of Association: Both Current And Historic

Name of Group: Nisqually

Type of Association: Both Current And Historic

Name of Group: Puyallup

Type of Association: Both Current And Historic

Name of Group: Yakama

Type of Association: Both Current And Historic

Ethnographic Significance Description:

Documented in "Ethnographic Guide to teh Archeology of Mount Rainier National park" by Allan H. Smith, 1964 and "Review and Assessment of the Ethnographic Literature of Mount Rainier National Park, Volumes 1 and 2" by Astrida R. Blukis Onat, 1999.

Chronology:

Year	Event	Annotation
AD 1899	Established	Mount Rainier was established as a national park.
AD 1907	Planned	U.S. Army Corps of Engineers Chief Engineer, Major Hiram H. Chittenden suggested an "Around-the-Mountain Road' be built just below the glacier line to encourage development and, tourism, and aid in the administration of the park.
AD 1908	Established	Mount Rainier was the first national park to allow automobiles and the first to charge an entrance fee.
AD 1916	Planned	The first survey for the Westside Road was conducted under the direction of the Department of the Interior (DOI).
AD 1925 - 1922	Planned	A second survey was undertaken by NPS Associate Engineer Victor A. Endersby. The new route included a one-thousand-foot tunnel between the two forks of the Mowich River and several alternative routes through the roughest terrain.
AD 1925	Planned	After informally accepting the responsibility for the construction of park roads, a third more detailed survey was conducted by the Bureau of Public Roads (BPR). NPS landscape architects field-checked the surveyed route to ensure minimal negative impact to the park landscape.
AD 1926	Established	The NPS and the BPR formally entered into a Memorandum of Agreement in which they agreed to cooperate in the planning and construction of park roads. The agreement gave responsibility for all surveys, engineering and construction supervision to the BPR, while allowing the NPS to retain design control and give final approval of all projects.
AD 1926	Designed	May: Plans for construction were drawn up following an inspection of the proposed route by NPS Chief Landscape Architect Thomas C. Vint and BPR Location Engineer C.R. Short..

AD 1926	Designed	June: The original specifications for the road were based on a 16-foot forest highway standard that was changed to a new standard of 18 feet. This specified an additional 2 feet to the width of cuts but allowed the fill sections to remain the same.
AD 1926 - 1928	Built	Road construction officially began in 1926. Clearing and grubbing was started by Joplin & Eldon of Portland, Oregon between the Nisqually Road and the Puyallup River (Project 2-A), but their work suffered from multiple delays and was not completed until the fall of 1928.
AD 1927	Planned	A new survey was conducted for the northern section of the road. It laid out a route from Mowich Lake to the west boundary of the park instead of connecting to Carbon River Road as was originally planned.
AD 1927 - 1928	Built	Lidral Construction Company of Seattle, WA cleared and grubbed three miles from the South Puyallup River to just beyond Klapatche Point (Project 2-B1).
AD 1928	Established	U.S. National Park Service (NPS) Director Horace Albright informed Superintendent Owen A. Tomlinson that development of the northern third of the park would be restricted to foot and bridle trails, ending the concept of the 'around-the-mountain' road.
AD 1928	Planned	Mount Rainier became the first national park to complete a master plan guiding the development of all roads, concessionaire services, and administrative facilities. Included in the plan was the route for the Westside Road that exited the park west of Mowich Lake and included a spur road into Spray Park.
AD 1928	Built	Clearing, grubbing, grading, and draining of the road from Klapatche Ridge to North Puyallup River (Project 2B2-C1) was started by Alvin C. Greenwood of Portland, Oregon.
AD 1928	Built	With clearing and grubbing completed from the Nisqually Road to the South Puyallup River (Project 2-A), Joplin & Eldon began laying crushed stone for the road surface.
AD 1929	Built	Summer: Joplin & Eldon constructed a temporary bridge across the South Puyallup River.

AD 1929	Built	November: Joplin & Eldon completed work on the Round Pass section of the road.
AD 1930	Built	The southern nine-mile-section from the intersection with the Nisqually Road to Round Pass was completed and opened for public use.
AD 1930	Built	Clearing of a 3.2-mile section between Klapatche Ridge and Sunset Park (Project 2-C2) was started by C.R. Johnson of Portland Oregon.
AD 1930	Altered	November: Fire escaped a brush pile on C.R. Johnson's grading project and burned 3,500 acres including all of Sunset Park through Puyallup Canyon to the North Mowich River valley.
AD 1931	Graded	August: Grading of the North Puyallup section of road (Project 2-C1) was completed by Elich & Company.
AD 1931	Graded	August: Grading of the four-mile section between Round Pass and Klapatche Ridge (Project 2-B) was completed by Alvin C. Greenwood of Portland, Oregon.
AD 1931 - 1932	Graded	Grading on 1.23 miles from Round Pass to the South Puyallup River, and surfacing and guardrail construction on 6.135 miles from Round Pass to the North Puyallup crossing (Project 2-B, C1) was started by Myers and Goulter of Seattle, WA. The grading project was delayed by rockslides, however, and the surfacing project was not completed until September 28, 1932.
AD 1932	Built	Stone guardrails at Klapatche Point, St. Andrews Creek Bridge, the North Puyallup Bridge area and elsewhere were constructed. Also, two sets of stone steps at St. Andrews Creek Bridge and masonry headwalls for many culverts were completed.
AD 1932	Altered	Large amounts of rock for stonework and road surfacing were quarried from Klapatche Point, reducing the road curve from 40 percent to 18 percent.
AD 1933	Built	Pierce County completed a road to the park boundary near Mowich Lake, at the time considered the northern segment of the Westside Road.

AD 1933	Established	May: Two Civilian Conservation Corps (CCC) camps were established along the route by the Emergency Conservation Works (ECW) program. Camp N.P.1 was located along the southern section of the road near Tahoma Creek and camp N.P.4 was located adjacent to the St. Andrews Creek Bridge.
AD 1933 - 1942	Maintained	CCC workers assisted with roadside cleanup and maintenance for the Westside Road. Work included cleaning ditches and blasting rock outcroppings left during construction, removing slides, building up shoulders, cleaning out culverts, and removing debris and vegetation along the road.
AD 1933	Altered	CCC workers from N.P.4 cut out and opened up a vista at the site of the South Puyallup River Bridge.
AD 1933	Built	CCC workers from N.P.4 constructed a temporary bridge across the North Puyallup River.
AD 1933 - 1934	Built	N.P.4 constructed a loop trail from St. Andrews Creek Bridge to Denman Falls.
AD 1933 - 1934	Built	A rustic wood and concrete bridge was built across the North Puyallup River. A parking area for 30 cars was also constructed on the north side of the river.
AD 1933	Damaged	Rockslides and washouts north of the St. Andrews Creek Bridge blocked the road.
AD 1933 - 1934	Altered	Winter: Clearing along the road, the reduction of slopes in deep cuts, and the addition of material to fill sections occurred.
AD 1934	Maintained	Summer: Due to lack of maintenance funds, the road was not opened beyond Round Pass. Repair work and cleanup was carried out by the ECW workers and the road beyond Round Pass was opened later in the summer.
AD 1934	Built	July: The North Puyallup River Bridge was completed.

AD 1934	Built	The Westside Road construction project was completed on August 28. Segment of the road from Round Pass to the north side of the North Puyallup River was soon opened to the public.
AD 1935	Established	April: Park Landscape architect E.A. Davidson wrote to Chief Landscape Architect Vint arguing for abandoning the construction of the remaining sections of the proposed route connecting the two legs of the Westside Highway.
AD 1936	Altered	The road was treated with palliative oil to reduce dust.
AD 1936	Maintained	CCC workers repainted the North Puyallup River Bridge.
AD 1939	Damaged	Spring: A large portion of the cliff near the North Puyallup River Bridge broke off, damaging a segment of stone guardrail and blocking part of the road.
AD 1939	Altered	July: The road was repaired using CCC equipment.
AD 1940	Damaged	Fall: A large slide covered the road and blocked the stream channel at Fish Creek.
AD 1941	Maintained	November: The road received another application of palliative oil to alleviate dusty conditions.
AD 1946	Established	December: A military airplane carrying 32 marines en route from San Diego, CA to Seattle, WA crashed on the South Tahoma Glacier.
AD 1947	Memorialized	A memorial to the marines who died in the 1946 crash was erected on the existing platform at Round Pass. The memorial consisted of a large boulder inlaid with a bronze plaque bearing the names of those who died.
AD 1947	Established	November: NPS Director Newton B. Drury approved a park boundary adjustment to include Klapatche Point within the park.
AD 1948	Damaged	Avalanche damaged the rustic wood and concrete bridge at the North Puyallup River crossing making it impassible for automobiles.

AD 1952	Damaged	Another avalanche further damaged the rustic wood and concrete bridge at the North Puyallup River crossing. It was never repaired.
AD 1956	Established	The Mission 66 program for Mount Rainier included repairs, resurfacing, and other improvements for the Westside Road, but did not include any further plans for connecting the road to Mowich Lake.
AD 1961	Established	August: NPS Regional Landscape Architect Harold G. Fowler, reported that the road was in need of maintenance to open up culverts to protect the road, and that maintenance was needed toward the end of the road to remove slides. He also reported that in this area the masonry walls were leaning and would likely require extensive repairs if not some replacement.
AD 1967	Damaged	August: The first of many glacial outbursts from the South Tahoma Glacier caused a flash flood that devastated the Tahoma Creek campground. The campground was later converted into a picnic area.
AD 1970 - 1971	Damaged	Flooding from two glacial outbursts damaged sections of the road.
AD 1972 - 1973	Destroyed	The remaining structure of the North Puyallup River Bridge was dynamited due to safety concerns.
AD 1986 - 1987	Damaged	A series of glacial outburst floods damaged sections of the road and wiped out the Tahoma Creek picnic area, access road, and restrooms. They also resulted in a wall of boulders blocking the stream channel. This diverted all of Tahoma Creek's flow to the westernmost side of the valley, bringing it in direct adjacency to the roadway.
AD 1988	Altered	The road was closed at Klapatche Point and converted into a trail.
AD 1988	Damaged	A pair of floods deposited mud on the road from the former picnic area to just above Fish Creek. The second event again diverted the flow of Tahoma Creek back into its former channel on the eastern side of the valley.
AD 1988	Damaged	October: Heavy rains and flooding caused two sections of the road near Dry Creek to collapse.

AD 1989	Damaged	Winter: Fourteen inches of rain fell in five days. The resulting floods damaged roads and bridges throughout the park including washing out sections of the Westside Road at and above Fish Creek. The road is again closed at Fish Creek.
AD 1993	Altered	Following public review of the General Managment Plan, the preferred alternative for the Westside Road was implemented. The road was closed to private vehicles beyond Fish Creek. Visitors could take shuttles, hike, or ride bucycles along the road under this alternative.
AD 1997	Established	The Mount Rainier National Historic Landmark District (NHLD) was established. The designation included the Westside Road from its intersection with the Nisqually Road to Klapatche Point, but omitted the segment from Klapatche Point to the North Puyallup River crossing.

Physical History:

Prehistory – 1906

Although there is no archaeological evidence of a north-south route existing in this area prior to the construction of the Westside Highway, archaeological evidence found elsewhere in the park does suggest that certain areas along the road would have been used seasonally from 3500 or more years ago by Native American peoples, who moved to higher elevations during the summer season to hunt game and gather food (Diaz, personal interview, 2005). Since many of the resource rich subalpine meadows on the southwest and western slopes of the mountain are easily accessible from the route of the Westside Road, it is almost certain that Native Americans did make intensive seasonal use of this area prior to European settlement.

One recent example of use by Native Americans is the story of Sal-to-lick, an American Indian chief's known as Indian Henry, who tried in vain to keep his secret hunting ground hidden from European settlers. Sal-to-lick's hunting ground, now know as Indian Henry's Hunting Ground, is located to the east of the Westside Road in the subalpine meadows on the southwestern flank of the mountain. The trail to this popular area of the park is generally located in the same area as Sal-to-lick's original trail (Greg Burtchard, interview by author, MORA, 2005), and is accessed from the Westside Road.

Early Road Development, 1907-1925

The idea for a road along the western side of the park connecting the southwest and northwest corners was first conceived in 1907. That year Major Hiram M. Chittenden of the U.S. Army Corps of Engineers first suggested what would come to be called the 'Around-the-Mountain Road.' The impetus for the creation of this grand road was to encourage park development and tourism, as well as aid in the administration of the park (Quinn 1992 "The West Side Road": 2). At the time the idea was conceived, there were very few roads in the area with which to access the park's interior and none that would allow circumnavigation of the park. The only existing road in the park was the Nisqually Road, which entered the park at its southwest corner and terminated at the subalpine meadows of Paradise on the southern slopes of the mountain. The 'Around-the-Mountain Road' was intended to provide visitors with the opportunity to access what were then remote areas on the east, north and west sides of the park. It was also promoted as what Superintendent W.H. Peters claimed would be "the world's most scenic and spectacular highway" (Thompson, 1981: 203).

Due to the park's adjacency to the major metropolitan Seattle-Tacoma region, it quickly developed into a day-trip destination for citizens of this area seeking to escape the increasingly dense, urban conditions in which they lived. For this reason, automobile access has long been of great importance in the development and management of the park. The 'Around-the-Mountain Road,' tailored after the Grand Loop in Yellowstone, would have allowed motorists to view many of the natural wonders of the area from the comfort and safety of their automobile. It also would have made it possible for motorists from the Seattle-Tacoma area to leave their home in the morning, travel via the old Mountain Highway that ran between Tacoma and the park, complete the scenic loop drive around the mountain, and return to their

homes in the evening. This concept was later abandoned due to the development of connecting roads outside the park, a gradual shift to a focus on eastside development, and changing attitudes concerning what was considered the appropriate amount of development that should occur within the national parks (Catton, 1996: 229).

The first survey of a route along the west side of the park was undertaken in 1916 under the direction of the Department of the Interior (DOI), which had assumed responsibility for park road design and construction from the U.S. Army Corps of Engineers. The following year this responsibility would be turned over to the Engineering Division of the newly created National Park Service (NPS). The route laid out in this early survey closely followed the alignment of the lower circuit of the original Wonderland Trail. The road's connection to the original Wonderland Trail can be seen at the St. Andrews backcountry patrol cabin that sits adjacent to the road at St. Andrews Creek. The cabin originally served the Wonderland Trail and was not relocated following the construction of the road across much of the old trail route. The surveyed route branched off from the recently completed Nisqually Road near the park's southwest entrance. It then followed Tahoma Creek north before climbing Emerald Ridge to Round Pass. The surveyed route then descended the opposite face of Emerald Ridge to the South and North Puyallup river drainages, and passed through Sunset Park to Mowich Lake before climbing over Ipsut Pass, and finally descending into the Carbon River basin. Here it was to connect with another park road along the Carbon River, a site that had become a popular destination for tourists from the Seattle-Tacoma area early in the park's history. The proposed road was forty miles in length and followed a maximum grade of 6 percent. The project was given an estimated cost of $600,000, or $15,000 per mile. Upon completion of their work, the surveyors suggested the road should be built over three seasons and be constructed from both ends (Quinn 1992 "The West Side Road": 2). No funds were appropriated for road construction at that time, and the ambitious plan, which also included a proposal for a separate route across the northern stretches of the park, was indefinitely postponed.

No further advancements toward the development of the Westside Road were made for a number of years following the initial survey. During this time, the State of Washington began to upgrade the system of roads outside the park, then called State Route 5 or the National Park Highway System. The first of the improvements was to the old Mountain Highway connecting Tacoma to the park's southwest entrance through the gateway town of Ashford. It was soon followed by improvements to the state road through Fairfax connecting to the Carbon River Road in the northwest corner of the park (Thompson, 1981: 207). Following construction and improvement of state roads to the southwest and northwest corners of the park, public pressure began to build for the construction of a connecting road within the park, a road that had long been promised by park promoters to state and county officials and to the citizens of the State of Washington. In June of 1922, park Superintendent Peters wrote to NPS Director Stephen T. Mather asking him to permit work to begin on the "West Side Highway," as it was then called. He argued that it was "of the utmost importance" to complete the project in order for park administration to keep faith with the surrounding communities, who had spent nearly $7 million in the development of approach roads to the park (Quinn 1992 "The West Side Road": 3).

It appears that NPS management was convinced. In July 1922, a second survey for the

Westside Road was begun. It was conducted by NPS Associate Engineer Victor A. Endersby. The construction of park roads was, at the time, the responsibility of the NPS Engineering Division, which was headed by Chief Engineer George Goodwin. The survey began at the proposed road's northern end where it was to connect with the Carbon River Road. When it was finally completed in October of 1922, the survey resulted in a new route that followed Ipsut Creek for eight miles to Ipsut Pass, utilizing a series of switchbacks and a steep grade to make the 5,050-foot ascent. It then dropped to Mowich Lake and climbed along Eagle Cliff to Spray Park, before heading southwest to a crossing of the South Mowich River. This section of the proposed route included a 1,000-foot tunnel at Division Rock to make the connection between the North and South forks of the Mowich River. From the South Mowich River crossing, the route headed northeast along the ridge between the river and Rushingwater Creek, before turning south to a crossing of the North Puyallup River where it headed west along the north flank of Klapatche Ridge to Klapatche Point. Here it turned southward, crossing St. Andrews Creek and climbing over Round Pass before entering the Tahoma Creek valley, which it followed to its connection with the Nisqually Road near the park's southwest entrance. The survey included several alternate alignments through some of the most difficult terrain (Quinn 1992 "The West Side Road": 3).

While a new route for the proposed road had been surveyed, no funds had yet been appropriated to the construction of the Westside Road. Funds for construction finally became available in 1924 when the National Park Highway Law was passed. The bill authorized the construction of nine miles of the new road beginning at its intersection with the Nisqually Road and ending where the road was to cross the South Puyallup River (Thompson, 1981: 207). Once the route and the funding were in place, it seemed that all was ready to begin construction of the road, but a shift in the organization responsible for road development in the parks would cause further delays.

The difficulty of constructing a road in the rough terrain of the northern and western sections of the park and the NPS' desire for the construction to have minimal negative impact on the scenic beauty of the park both served to highlight the antiquated methods of road construction being employed by the NPS Engineering Division in the 1920s (Catton, 1996: 231). The inadequacies of the NPS Engineering Division were further exemplified by the design and construction of the Carbon River Road, which had been improperly located and began to experience difficulties with washouts and flooding as soon as it was constructed. It was at this time that the BPR began to assume responsibility for the development and construction of roads within the national parks. NPS Director Mather was instrumental in bringing the BPR into the road development program. He was first exposed to their work when he inspected a road the BPR had just completed near Jackson Hole, Wyoming. He was apparently so impressed by what he saw that he asked the BPR's regional director to provide an engineer to oversee the surveys and construction for the Going-to-the-Sun Road being built in Glacier National Park. The engineer provided by BPR was Frank A Kittredge, who would later become NPS Chief Engineer and go on to play a large part in the development and management of the national park system in the years to come. Mather was sufficiently impressed by Kittredge's performance at Glacier that he soon asked the BPR to take on the entire NPS road development program (Quinn 1992 "Roads and Bridges": 27). The BPR agreed and a new era

in park road development was set to begin.

After informally accepting responsibility for the park road development program, the BPR was asked to conduct a third survey for the route of the Westside Road. The new survey, completed early that fall, recommended a route running north along Tahoma Creek from the intersection with the Nisqually Road before climbing Emerald Ridge to Round Pass. It then passed through the drainage basins of the North and South Puyallup rivers and over a series of several more ridges to Mowich Lake. The BPR's survey did not include the section of the road passing over Ipsut Pass between Mowich Lake and Carbon River, a section that had been included in the previous surveys. On August 12, 1925, at a budget conference in the Winthrop Hotel in Tacoma, WA, road supporters (including Rainier National Park Advisory Board representatives Asahel Curtis and Herbert Evison) convinced Superintendent Tomlinson, NPS Chief Landscape Architect Thomas C. Vint, and a group of NPS engineers, including the soon-to-resign Chief Engineer George Goodwin, to dedicate almost 60 percent of the nearly $1 million road development budget for the next three years to the construction of the Westside Road (Catton, 1996: 230). It was at this point that real progress toward the construction of the Westside Road began.

Later that August, Vint, Asahel Curtis, BPR Location Engineer C.R. Short, and BPR Assistant District Engineer J.A. Elliot traveled along and inspected the proposed route. Vint reported his findings on August 20, 1925. In his report, he advised against continuation of the road through Ipsut Pass to Carbon River. He argued that the rugged topography of Ipsut Pass would make any road through the area too expensive and impractical to build. He also claimed the project would be "an extremely visible example of extravagant road construction" causing unnecessary damage to the park's natural resources and scenic beauty, and suggested a new survey be conducted to find an alternate route for the northern section of the road (Quinn 1992 "Roads and Bridges": 38). Vint did, however, give his approval of the southern leg of the proposed route, finding it to be more than adequate in regards to scenic value and preservation of landscape features. Upon receiving Vint's suggestion, Superintendent Tomlinson shifted all funding for the northern section of the route on August 24, 1925 to the construction of the southern leg, pending a possible relocation of the northern segment beyond Mowich Lake (Quinn 1992 "The West Side Road": 4). Following the less-than-outstanding results of the Carbon River Road project and relinquishing the responsibility for park road development to the BPR, George Goodwin resigned his post as NPS Chief Engineer at the end of the summer (Catton, 1996: 231). He would later be replaced as Chief Engineer by Frank A. Kittredge, whose performance at Glacier National Park had so impressed Director Mather the previous year.

By the beginning of the road construction season in the summer of 1926, a new plan had developed for the northern leg of the route which would exit the park west of Mowich Lake, as was the suggestion of BPR District Engineer C.H. Purcell, rather than connecting with the Carbon River Road as was previously planned. Development of park roads on the east side as well as state roads being planned and constructed outside the park at this time began to lessen the need for connecting roads within the park itself. These developments, in addition to the difficulties of constructing a road over Ipsut Pass, were sufficient enough to prompt NPS

planners to abandon the proposed northern connection to the Carbon River Road. What subsequently developed was a focus not on a loop road within the park, but a plan for a smaller west side loop by which motorists from the Seattle-Tacoma area could enter the park at its northwest or southwest corner, travel the length of the west side of the park, exit at the opposite corner, and return to their homes via the state routes through Ashford or Fairfax. Although the initial plans for a loop road within the park had been altered and the idea was beginning to lose widespread support, the concept was not yet abandoned by many road supporters and a number of prominent NPS officials, including Superintendent Tomlinson.

Also by this time, the NPS and the BPR had formally entered into a Memorandum of Agreement (MOA) to cooperate in the development, design and construction of national park roads. Under this agreement, the BPR was given the responsibility of conducting surveys, engineering the roads, and overseeing construction. The NPS, following the suggestion of Forest Service officials who had been working in cooperation with the BPR for several years, retained all design control and final approval of all work. The DOI continued to control the appropriation of all road related funds (Quinn 1992 "Roads and Bridges": 27). The agreement gave NPS landscape architects complete control and final approval of the naturalistic design of park roads. In this way, the NPS Engineering and Landscape Engineering divisions worked in close concert with BPR officials in the development of roads within the national parks.

Following formalization of the MOA, Vint and BPR Location Engineer Short again traveled along and inspected the southern leg of the proposed route in May 1926. During this trip, they found that several burned areas and scenic vistas along the route would provide needed variety to what could have been a monotonous drive through dense lowland forest. Upon completion of their inspection, Vint suggested parking areas and minor developments at several locations including Tahoma Vista, Round Pass, and a number of other scenic viewpoints (Quinn 1992 "The West Side Road": 4). It was at this time that plans for the construction of the southern leg of the Westside Road were first drawn. A new survey for the northern leg of the route was also completed during this time. The new route ran west from Mowich Lake down Elizabeth Ridge, to a crossing of Meadow Creek, and through Mountain Meadows before extending to the park boundary to connect to a state road out of Fairfax, Washington, the same state road that connected with the Carbon River Road. In this way, the plan preserved the possibility of completing the loop road system around the mountain, which had long been the vision of NPS officials.

Westside Road under Construction, 1926-1934

The fist bids for the construction of the Westside Road were opened at the Portland, Oregon office of the BPR on June 29, 1926. Project 2-A, as it was titled, included clearing, grubbing, grading, draining and surfacing the section of the road from its intersection with the Nisqually Road to where it would cross the South Puyallup River. The contract was later awarded to the construction company of Joplin & Eldon of Portland, Oregon, who submitted the low bid of $306,094. NPS officials noted that this was $113,000 below the engineer's estimate for the cost of the project, and predicted trouble ahead. Before construction could begin, the original specifications for the road, which were based on an old Forest Highway Standard of a 16-foot roadbed, were expanded to the new 18-foot standard roadbed. This specified an additional two

feet be added to width of cuts, but allowed the fill section to remain the same (Quinn 1992 "The West Side Road": 4-5).

The Joplin & Eldon began work on August 10, 1926. They soon sublet their clearing work to the firm of Alman & Lickman, who, after a month of work, decided the job was not going to be profitable and abandoned the project. This forced Joplin & Eldon to again sublet the work to another firm, that of De Long & Company. This organizational change caused a delay of an additional month, and Joplin & Eldon were forced to use men from their own crews to supplement and hasten the work of De Long & Company. Although the firms did make enough progress on the clearing work to allow excavation work to begin that November, the onset of inclement winter weather soon caused a halt in work for the season. Despite the progress made late that year, by the end of the construction season the project was already significantly behind schedule (Quinn 1992 "Roads and Bridges": 39).

Soon after work began for the 1927 construction season, the BPR engineers in charge of overseeing the road's construction found Joplin & Eldon to be a difficult company with which to work. BPR engineers reported a host of complaints concerning the shortcomings of the firm and the difficulties they were having in getting Joplin & Eldon to cooperate with them or to respond to their requests. One specific complaint was that Joplin & Eldon failed to provide adequate hauling equipment to transfer excess material from cut areas to be used in the fill operations, causing significant delays. The firm also seemed unable or unwilling to follow a set schedule, often jumping from one section of road construction to another in a seemingly arbitrary, unplanned and unannounced manner. This caused the BPR engineers, who were working ahead of the construction crew setting stakes for grading and alignment, to scramble from one job site to another in response to the firm's sporadic work schedule, often forcing them to set and reset stakes a number of times before the firm actually commenced work in the area (Short 1930: no pagination). By the end of the 1927 construction season, Joplin & Eldon were a full three and one-half months behind schedule. Their poor performance led NPS officials to consider annulling their contract and resubmitting the project for bids, but ultimately the firm was allowed to continue their work as planned (Quinn 1992 "The West Side Road": 5).

A second contract for the construction of the Westside Road was put out for bid that summer. The contract, project 2-B1 was for clearing and grubbing a three mile section from the South Puyallup River crossing to just past Klapatche Point. It was awarded on August 11, 1927 to Lidral Construction from Seattle, Washington, who had submitted the low bid of $14,300 (Quinn 1992 "The West Side Road": 5). This total was once again significantly less than the engineer's estimate, but the contract was awarded and the company set to work on September 9, 1927. Unlike the Joplin & Eldon project, the clearing and grubbing was accomplished on schedule and Lidral Construction completed the work on their section in less than a year, finishing in August 1928.

Progress was also made during the summer of 1927 on locating a final route for the northern leg of the road. BPR engineers resurveyed the section of the road between Mowich Lake and Mountain Meadows. The new route would follow Meadow Creek from the western border of the park to its headwaters before making a wide loop and descending the ridge to Mowich

Lake. This route was inspected and approved by Vint, and the new route was soon accepted and incorporated into the project. The first contract for the construction of this new section of the road from Mowich Lake to the park boundary, titled Project 2-E, was let in the fall, but work was postponed due to the failure of the state to provide a connecting road from Fairfax to the park boundary (Quinn 1992 "Roads and Bridges": 39). In September of 1927, Short surveyed a possible route for a spur road into Spray Park, which was at the time being considered as a possible destination point for the northern segment the Westside Road and a potential site for the development of a large hotel. The spur road that Short proposed would have terminated in a large loop overlooking Mist Park and the Carbon River Valley.

Early in 1928, NPS Director Horace Albright informed Superintendent Tomlinson that the approximate northern third of Mount Rainier National Park would be set aside for wilderness and scientific research, and would include no more development than necessary for foot and bridle trails. This event marked the end of the 'Around-the-Mountain Road' concept. Later that year, Mount Rainier became the first national park to develop a comprehensive master plan, a document intended to guide the development of all roads, concessionaire services and administrative facilities in the park (Carr 1998: 230-231). The plans for the Westside Road played a prominent role in this first master plan. It included the newly surveyed segment from Mowich Lake to the park boundary as well as the spur road into Sunset Park, where a significant amount of development was planned to occur.

The region experienced a stretch of good weather early in 1928, and Joplin & Eldon attempted to get an early jump on the construction season in an effort to make up for lost time on their contract. They received authorization and set to work on February 20, 1928. Almost immediately, nearly three feet of snow fell and inclement weather continued long into the spring. This caused Joplin & Eldon to postpone construction efforts for quite some time. The firm could not resume construction until May of that year. Their failed attempt to begin construction, and the resulting delay caused the company to suffer a significant financial loss.

A contract for grading and draining a four-mile section between the South Puyallup River and Klapatche Ridge, titled Project 2-B, was put out for bid. It was subsequently awarded on June 13, 1928 to the firm of Alvin C. Greenwood out of Portland, OR, who had submitted the low bid of $216,924 (Quinn 1992 "The West Side Road": 6). This effort was to follow the clearing and grubbing being done by Lidral Construction, which was occurring in that same area. Later that summer, the firm was also awarded another contract, Project 2-B2/C1, which included clearing and grubbing a small section around Klapatche Point, as well as clearing, grubbing, grading, and draining a section from near Klapatche Point to the North Puyallup River crossing.

In October of 1928, all funds appropriated for the construction of the Westside Road had been exhausted, and NPS officials announced that no new funds would be allocated or disbursed until new appropriations could be made the following year. Joplin & Eldon, who had suffered a financial setback following their failed attempt to get an early start that year, announced that they were unable to continue work on the road with their own funds. They soon called a halt to the construction work and dismissed their crews, pending new appropriation of funds. The firm of Alvin C. Greenwood continued to work throughout the rest of the season, funding the project

at their own expense.

When the new appropriations for park road construction for the 1929 season were finally made, $240,000 was allocated to the Westside Road project (Quinn 1992 “The West Side Road”: 6). This amount did not include any funds for the construction of the northern segment of the road, as the state had not yet completed a connecting road from Fairfax to the park boundary. Joplin & Eldon resumed work on June 21, 1929, and soon set about the task of constructing a temporary log bridge at the South Puyallup River crossing. On November 20, 1929, Joplin & Eldon had completed construction of the section of the road from its intersection with the Nisqually Road to just beyond the South Puyallup River. Although the removal and restoration of their work camps took some additional time, this segment of the road was now finished, and nine miles from the Nisqually Road to Round Pass were opened to the public the following season on July 4, 1930. Upon the road’s opening, Superintendent Tomlinson reported that it had been oiled and was in “perfect condition” (Quinn 1992 “Roads and Bridges”: 41). This section of the road included minor developed areas at Tahoma Vista, which consisted of a series of rustic stone walls and a constructed viewing area complete with a large stone fountain and several stone groupings to provide seating and a comfort station, and at Round Pass, where NPS landscape architects had located a large observation platform offering exceptional views of the mountain and the Tahoma Glaciers as well as other visitor facilities.

On June 27, 1930, bidding opened for the grading of a 0.9-mile section between Klapatche Ridge and the North Puyallup River, Project 2-C1, and was subsequently awarded to the firm of Elich & Company of Seattle, WA. The grading in this section involved working in extremely steep topography in which the road crossed several shear cliff faces, resulting difficult and often dangerous working conditions. For this reason, the contract for the grading of this 0.9-mile section of road was awarded for the large sum of $144,586.20. Another contract, Project 2-C2 was awarded at this time for clearing a 3.2-mile section of the road from the North Puyallup River crossing north toward Sunset Park. The contract was awarded to the firm of C.R. Johnson of Portland, OR, which submitted the low bid of $20,445 (Quinn 1992 “Roads and Bridges”: 41).

On July 15, 1930, following the opening of the southern leg of the route to the general public, two contracts for the construction of bridges across the South Puyallup River and St. Andrews Creek were awarded to firm of W.T. Butler of Seattle, WA. The firm had submitted the low bid of $36,580 for the construction of the two stone-veneered, concrete spandrel bridges, which were modeled after others already in place on the Nisqually Road. Unlike most other stone bridges built within the park, the contractor refused to use stone quarried within the park itself when constructing the St. Andrews Creek Bridge. Insisting he could acquire the stone for less expense from an outside source, the contractor purchased the stone from a quarry located near Index, WA, located north of the park. When they were completed on August, 1931, the final cost of the two bridges totaled $41,985.94 (Quinn 1992 “The West Side Road”: 7). Two other contracts were completed in August of 1931. The first was Elich & Company’s 0.9mile grading project, which was completed on August 10, 1931. The second was Alvin C. Greenwoods grading of the four-mile section from just north of the South Puyallup River crossing to Klapatche Ridge, which was inspected by Superintendent Tomlinson on August 15,

and accepted on August 23, 1931.

On November 7, 1930, fire escaped a burning brush pile somewhere along C.R. Johnson's clearing project between the North Puyallup River and Sunset Park. The fire burned nearly all of Sunset Park and crossed over the ridges to the north, burning portions of the South Mowich River valley, and to the south, consuming portions of the North Puyallup River valley as well. A combination of rain and snow that night extinguished the flames, but not before 3,500 acres of dense forest within the park had burned. This event was likely influential in turning the tide of public opinion against the Westside Road project, and the effects from the fire are still evident in these areas to this day.

Early in 1931, a contract for re-grading a section of the road from Round Pass to the South Puyallup River, Project 2-A, and a contract for surfacing and guardwall construction along the 6.1-mile section from Round Pass to the North Puyallup River, Project 2-B/C1, was awarded to the firm of Myers and Goulter of Seattle, WA, which submitted the low bid of $161,705 (Quinn 1992 "The West Side Road": 7). The firm began work on the project on May 18, 1931. Myers and Goulter soon sublet a portion of their surfacing work to the firm of Fred G. Redmon. The firm's grading work was delayed for a period during the 1931 season due to rockslides, but quickly resumed following the cleanup of the debris.

On July 6, 1932, Myers and Goulter sublet the majority of their stonework to the mason Carl Youngquist, who soon set to work with a crew of three additional masons, three helpers, two quarry men, a mortar mixer, and a single man hauling rock. Youngquist and his crew constructed stone guardwalls at Klapatche Point, around St. Andrews Creek Bridge, at the North Puyallup parking area, and elsewhere along the route. They also constructed two sets of stone steps leading from the St. Andrews Creek Bridge to the edge of the stream, as well as stone headwalls for many of the culverts found along the road. Much of the stone that was used in this work was quarried from a large rock cut at Klapatche Point, a site that also provided much of the stone that was crushed and used to surface the roadway. Excavation at this point ultimately reduced the curve necessary to circumvent the ridge from a 40 percent curve to one of only 18 percent. The location of the quarry at this high point in the road allowed for the material to be transported downhill in both directions, easing the strain on hauling equipment used for the project. A large turnout was created at Klapatche Point in order to allow motorists to stop and enjoy the sweeping views of the Puyallup River valley, Puget Sound and the Olympic Mountains to the northwest. The mountain could also be viewed from this point at the time of the road's construction due to the area having been largely burned over in a forest fire that predated the construction of the road, a condition that was perpetuated throughout the 1940s due to the clearing of the slope above Klapatche Point to serve as a fire break from the surrounding Forest Service lands. Klapatche Point was originally located outside the boundaries of the park, requiring the NPS to obtain a special use permit from the Forest Service to construct and maintain the road outside the boundary. The entire project from the Nisqually Road to the north bank of the North Puyallup River was completed in September of 1932, including the sublet stonework, which was completed on September 15, and the sublet surfacing work, which was completed and ready for inspection on September 28.

By the beginning of the 1933 season, Pierce County had completed a road extending from Fairfax to the park boundary, where it was to meet with the park road running west from Mowich Lake. Although clearing had begun on this section of the route, the remaining work would not be completed until 1935, and the road would not be opened to the public for many years after that. No work on the section of the road between Mowich Lake and Sunset Park had been or ever would be attempted, although the plans to connect the two segments of the road would not be officially abandoned until 1940.

In May of 1933, two of the seven main Civilian Conservation Corps (CCC camps that were created in Mount Rainier National Park were located along the southern leg of the Westside Road. CCC camp N.P.1 was located along Tahoma Creek near the road's intersection with the Nisqually Road. The second camp, CCC camp N.P.4 was located on the south bank of St. Andrews Creek adjacent to the recently completed St. Andrews Creek Bridge. Throughout their tenure in the park, CCC workers assisted with much of the finishing work and ongoing maintenance of the Westside Road. Their finishing work included cleaning ditches and blasting out rock outcroppings left during the construction of the road, removing the many rock slides that consistently plagued the route throughout its construction and beyond, building up the shoulders of the roadway, cleaning out culverts, and removing additional debris and vegetation along the road. During the 1933 season, CCC crews from N.P.4 were responsible for clearing out vegetation and opening up a vista to the mountain from the site of the South Puyallup River Bridge, constructing a temporary bridge across the North Puyallup River, and constructing a loop trail from the St. Andrews Creek Bridge to an observation point overlooking Denman Falls. Both camps were also responsible for the construction and improvement of the many miles of trails found on the west side of the park.

Also in 1933, Contractor Carl Bjork, who had submitted the low bid of $34,687, was awarded the contract to construct a semi-permanent log stringer bridge at the site of the North Puyallup River crossing (Quinn 1992 "Roads and Bridges": 42). The unique rustic bridge consisted of a log stringer deck with full-log guardrails set atop concrete support pillars wrapped in log cribbing. The contract also included the construction of a large parking area for 30 cars on the north side of the river to supplement the existing parking area on the south bank. The entire project was completed and ready for inspection on July 28, 1934.

On August 28, 1934, all projects on the southern leg of the route were completed and the road was opened to the north bank of the North Puyallup River, although additional landscaping work continued to occur through the efforts of CCC workers from both camps. Visitors immediately began traveling the route following its opening, and the west side of the park soon became a very popular area, attracting large numbers of visitors every year.

Historic photo showing construction of Tahoma Vista developed area, 1928 (MORA Archives).

Historic photo showing NPS routed-wood sign, ca. 1934 (MORA Archives).

Historic photo showing the use of roadside vegetation to create a framed view of the Hanging Glacier along the North Puyallup segment, ca. 1934 (MORA Archives).

Historic photo showing the South Puyallup River Bridge, ca. 1934 (MORA Archives).

Historic photo showing a large turnout, rock barrier, box culvert, and rustic log bridge, on the north bank of the North Puyallup River ca. 1934 (MORA Archives).

Historic photo showing a stone retaining wall and large rock cut along the North Puyallup segment, ca. 1934 (MORA Archives).

Historic photo showing a stone seating cluster at Tahoma Vista, ca. 1930 (MORA Archives).

Historic photo showing the St. Andrews Creek Bridge under construction, ca. 1931 (MORA Archives).

Maintaining the Westside Road, 1935-Present

By 1935, only 21 miles of the planned 43-mile route had been completed, including 15 miles from the Nisqually Road to the North Puyallup River and six miles from the western border near Fairfax to Mowich Lake. Only the southern leg was opened to the public. Throughout the design and construction of the Westside Road, there had always been some opposition to the project, especially from those who valued the park primarily as a wilderness retreat. On April 18, 1935, Park Landscape Architect E.A. Davidson became the first NPS official to offer a statement opposing the continuation of the project. In a letter to NPS Chief Landscape Architect Vint, Davidson stated that he felt that the two points where the existing stub roads terminated, Mowich Lake and the North Puyallup River crossing, were more than adequate destination points for the roads. He even went so far as to refer to the point at the North Puyallup River crossing just below the Hanging Glacier as "the most spectacular [point]…reached by any park road" (Quinn 1992 "The West Side Road": 8). Davidson went on in support of the cessation of further road construction as follows:

Let us save at least the Mowich valleys from the inevitable destruction and desecration incidental to highway construction, along this side of Mt. Rainier Park…As a matter of preservation of Park values, and economy, it is recommended that the program of connecting

the West Side Highway [sic] be abandoned. (Quinn 1992 "Roads and Bridges": 43)

While the project would not be officially abandoned for some years, no funds were allocated to new construction on the Westside Road the following year or ever again. The northern leg of the route that terminated at Mowich Lake was not opened for two decades following the completion of the road, but did finally opened in 1955. NPS officials feared that opening the road to Mowich Lake would cause a demand for additional visitor facilities, an expense they were not willing to accept, and that the resulting heavy use of the area would destroy its natural resources and scenic beauty. The road was only opened after it had become clear that the demand would not be as great as previously believed and that damage to the resources in the area could be kept to a manageable level. The road eventually came to be known as the Mowich Lake Road, leaving only the southern leg to retain the title of Westside Road.

Proponents of the road continued to voice their opinion for several years following the cessation of construction activities, but public and official opinion continued to sway toward wilderness conservation and landscape preservation values. However, on December 11, 1937, Superintendent Tomlinson wrote to NPS Director Arno Cammerer urging the completion of the Westside Road. He argued that less damage would be done to the park landscape and natural resources by allowing motorists to continue driving on a through road, rather than to force them to stop on two dead-end routes. Neither his arguments nor those of any of the others supporting the completion of the proposed route appear to have had any effect on the ultimate outcome. In the 1938 master plan, the Westside Road was still described as an incomplete project awaiting further construction, but mention is made of a "growing sentiment questioning the wisdom or advisability of completing a connection along the west side of the park" (NPS, 1938 Master Plan: no page). On September 9, 1938, U.S. Secretary of the Interior Harold Ickes wrote Director Cammerer informing him that upon completion of the Stevens Canyon Highway no additional road construction would be authorized within the park. This decision is reflected in the 1940 version of the park master plan that states, "Because sentiment questioned the wisdom of completing this West Side Highway [sic], plans have been abandoned for any further construction on it" (NPS, 1940 Mount Rainier Master Plan: no page). It also reiterated E.A. Davidson's earlier argument that the existing termination points were "worthy objectives" for the existing stub roads alone. Thus, by the end of 1938, the pursuit of a connection between the southwest and northwest corners of the park had ended and the two sections of the original Westside Road were now considered as separate park roads, the Mowich Lake road in the north and the Westside Road in the south.

Following its completion, the Westside Road required ongoing and often extensive maintenance to keep it open. The northern third of the route beyond St. Andrews Bridge and the area around Fish Creek were often the sites of large rock slides that blocked the road. In the spring of 1939, a large section of the cliff near the North Puyallup River crossing broke off and slid onto the road, damaging a section of the stone guardwall in that area. In the fall of 1940, a large slide from the slopes of Mt. Wow covered the road and blocked the stream channel at Fish Creek, three miles up from the intersection with the Nisqually Road. Approximately 8,000 cubic yards of material was removed from this single slide in order to re-open the road to traffic. On at least one occasion, due to a lack of maintenance funds, the road was only

opened to Round Pass for the entire summer season. The dusty conditions of the unpaved rustic road presented another problem. After receiving many complaints from motorists, the road was treated with palliative oil to reduce the amount of dust, first in 1936 and again in 1941.

On December 10, 1946, three military transport planes carrying marines en route from San Diego, California to Seattle, Washington encountered inclement weather as they passed across the Washington-Oregon state border. Two of the three pilots decided to turn back, but the other chose to continue on to Seattle. Near Mount Hood, the pilot was forced to rely solely on radar for navigation, as visibility had been reduced to nearly zero. Later that evening, park visitors reported hearing a struggling plane in the Longmire area. The plane ultimately crashed on the South Tahoma Glacier, killing all 32 marines on board. The wreckage was eventually found by Ranger Bill Butler after an extensive search throughout the area. Neither the wreckage nor the bodies of those aboard were ever recovered, due to the inherent danger of any recovery effort conducted on the glacier. The following year, a memorial to the lost marines was erected and set atop the existing observation platform at Round Pass, where friends and family could look out on the mountain and the glacier where the marines had come to rest. The memorial consisted of a large glacial boulder inlaid with a bronze plaque bearing the story and date of the tragedy, as well as the names of those that lost their lives that night. A memorial service and dedication ceremony was held at the site of the stone memorial on August 24, 1947 (Hatcher, 2000: A14).

On November 18, 1947, NPS Director Newton B. Drury approved the addition of the area around Klapatche Point to officially become part of the park. It had previously been made available to the park through a special use permit from the Forest Service. Early in 1948 and again in 1952, avalanches in the North Puyallup area damaged the rustic log stringer bridge, making it impassible for automobile traffic. The bridge was never repaired, and in the early 1970s, the NPS dynamited the remnants of the once unique bridge. These remnants can still be seen lying in the riverbed below the point where the bridge once stood.

The Mission 66 program for Mount Rainier focused in large part on upgrading the transportation system within the park to accommodate the increasingly large numbers of motorists visiting the park each year, with a particular emphasis on distributing visitor use throughout the park in order to alleviate problems with overuse in specific popular areas. The program included repairs, resurfacing, and other improvements for both the Westside Road and the Mowich Lake road, but no suggestions for any further construction were made. The Westside Road received an interpretive overlay as part of the Mission 66 agenda. Several interpretive installations were designed for sites along the road, allowing the Westside Road to play a part in conveying the history of the park and interpreting its many natural features.

Maintenance of the Westside Road continued to be a major issue throughout its history. On August 9, 1961, NPS Regional Landscape Architect Harold G. Fowler, in a memorandum written to the Regional Chief of Operations for Region Four, reported on the condition of the road following a mid-July field trip over the route. He stated that the road was in need of maintenance to open up culverts to protect the road from failure, and that heavy maintenance was needed along the northern segment of the road to remove slides that were blocking the

drainage ditches. He also noted that the masonry guardwalls in this area were already leaning and would likely require extensive repairs, if not some replacement of the features (NPS, Memorandum, 1961: no page).

In 1967, the first of many glacial outbursts that would plague the road throughout the coming decades washed down from the South Tahoma Glacier. The event devastated the Tahoma Creek Campground, a site that was later converted into a picnic area, and damaged sections of the road near Tahoma Creek and Fish Creek, approximately three miles from its intersection with the Nisqually Road. Glacial outbursts occurred again in 1970 and 1971, damaging sections of the road on both occurrences and requiring significant amounts of repair work to make the road passable after each event.

In the early 1970s, as the ecological and wilderness movements were reaching their zenith, the NPS began to consider closing many of the park roads to limit use of the park and convert the lands through which the roads ran into wilderness areas. The NPS considered closing the Carbon River Road and the Mowich Road at the park boundary, as well as the Westside Road at Round Pass or even as far back as Fish Creek (Thompson, 1981: 209). These planned road closures were part of Mount Rainier's backcountry management plan, which was a response to the Wilderness Act of 1964, and were aimed at reducing the decimation of the park's backcountry that was occurring through overuse. This purpose was reflected in the 1975 master plan and in the park's original proposal to Congress for areas to be officially designated as wilderness within the park. Before this plan could be implemented, a lawsuit was filed against the park by Larry Penberthy, a resident of Seattle, over the proposed limitations on park use (Catton, 1996: 579). Although the courts eventually ruled in favor of the park, the lawsuit brought on an onslaught of public criticism of the proposed restrictions, ultimately causing the plan to be significantly scaled back. In 1977 NPS Regional Director Russell Dickensen recommended that the roads remain open, and the proposed closures were never implemented (Thompson, 1981: 209). It was not until November 16, 1988 that the wilderness proposal for Mt. Rainier was enacted by Congress and 216,855 acres of the park, or approximately 95 percent of the total acreage (Catton, 1996: 588), were legally designated as wilderness areas. The section of the Westside Road between Klapatche Point and the North Puyallup River was included in this designation and this segment of the road was immediately closed to all traffic, although it had already been limited exclusively to administrative use for some time prior to the final closure. The road beyond Klapatche Point was subsequently converted into a trail and the parking areas on the north and south side of the river were eventually converted into backcountry campsites.

In 1986, following a fifteen-year hiatus, another outburst from the South Tahoma Glacier caused a flash flood and again damaged sections of the road. Throughout the following five years, glacial outburst floods occurred periodically, many causing significant amounts of damage to the road which requiring expensive and difficult repairs. In 1987, a series of outbursts decimated the Tahoma Creek picnic area, restroom facilities, access road, and trailhead, all of which were constructed sometime after the period of significance of the road. It also resulted in a wall of boulders blocking the stream channel and diverting the flow to the west side of the valley, bringing it directly adjacent to the roadway. Again on July 14 and July

25, 1988, a pair of outburst floods occurred, depositing mud on the road from the former picnic area to just above Fish Creek. The second of the two floods caused the creek to return to its previous channel on the east side of the valley, but it would not remain there for long. In October of 1988, heavy rains, possibly combined with additional outburst floods, caused two sections of the road near Dry Creek to collapse. In May of the following year, park administration prepared an Environmental Assessment (EA) for the Westside Road, exploring the issues related to the floods and listing two possible options. The two options put forth were: (1) No Action/Temporary Protection of the Westside Road; and (2) Abandon Road North of Fish Creek, which would include converting the remainder of the road into a trail and officially designating it as part of the park's wilderness area (Catton, 1996: 597). The first option was chosen and the road was reopened following repairs.

The road did not remain open for long. During the period from November, 1989 through January, 1990, the park experienced an unusual amount of precipitation, including one occasion in which 14 inches of rain fell in five days. The resulting floods damaged roads and bridges throughout the park, including washing out sections of the Westside Road at and above Fish Creek. The road was subsequently once again closed just below Fish Creek. On December 3, 1992, park administration released another EA for the Westside Road, this time including five alternatives. The alternatives put forth included permanently closing the road at Dry Creek, repairing the road on its current alignment each year as needed, the 'preferred alternative' of temporary closure at Dry Creek for the foreseeable future pending a final decision on the issue, and two different options for realignment of the road to circumvent the troubled area (NPS, EA for the Westside Road, 1992: no page). The EA was then published as the "Westside Road Alternatives" and put on public review for a period of 30 days. During this time very few comments were received regarding the issue, and in the end the NPS implemented the preferred alternative, temporarily closing the road until the issue could be investigated further and a final decision be reached. The road remains closed at Dry Creek just below the Fish Creek crossing to this day, although some repairs to the damaged road did occur and the road is open to Klapatche Point exclusively for administrative use.

In 1997, the Westside Road was included in the National Historic Landmark District (NHLD) designation for Mount Rainier National Park. The NHLD nominations noted that the current route generally follows the original alignment of the road and that most of the major structures associated with the road are original and remain unchanged. The nomination also states that for these reasons the road is considered to retain integrity to the period of significance (NHLD Nomination, Carr, 1997: 10).

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The Westside Road is an example of an early National Park Service scenic highway, and an integral part of the extant early master plan for the park. The road is distinguished by outstanding engineering achievements and features of naturalistic design. The period of significance spans the years 1926-1934, reflecting the period when the NPS coordinated the design and construction of the road, and from which the extant landscape characteristics and features date. The historic character of the road is evident in the remaining landscape characteristics and features: spatial organization, circulation, buildings and structures, small scale features, topography, views and vistas, vegetation, natural systems and features, and archeological sites. Although portions of the road have been closed to public traffic since the 1990s, many of the landscape characteristics remain much as they were originally planned and implemented, and continue to convey the significance of the road.

Spatial Organization: The sequential experience visitors encounter as they travel through the road landscape is one of a long, curvilinear travel corridor exhibiting soft tangential curves punctuated, where natural features and conditions deem necessary, by tighter radial curves, built features, or developed areas. Despite the changes that have occurred to the roadway due to the action of natural processes such as vegetation growth and flooding and the conversion of part of the road into a trail, the road follows the same original alignment.

Circulation: The major circulation patterns and features of the Westside Road have changed little since the road was completed in 1934. Remaining circulation features include the cross section, design speed, turnouts, trailheads, and trails associated with the road. The width may have increased through the gradual accumulation of material in some sections and others have been impacted by the actions of natural processes over time, but the majority of circulation features still remain.

Buildings and Structures: The historic structures located along the Westside Road were designed and constructed in the rustic style, which emphasized the blending of built works into their setting. The attention to detail and adherence to naturalistic design principles is still evident throughout the road. Contributing buildings and structures include stone guardwalls, stone retaining walls, two stone bridges, a comfort station, a patrol cabin, and rock barriers.

Small Scale Features: Small scale features reflect the great attention to detail that was given by NPS landscape architects in the design and construction of the road and provide a cohesive aesthetic background to the more prominent rustic features. Remaining features include mortared stone culvert headwalls, a stone water fountain, stone seating, and a fence. Noncontributing features include nonhistoric signs, gates, and gabions.

Topography: The manipulation of natural topography occurred along the entire length of the road and is still evident throughout. Even in the flattest areas, the creation of a smooth roadbed required a large amount of alteration to the natural topography. In areas of steep slope and rugged topography, the amount of alteration required increased significantly, resulting in large-scale changes to the natural

landscape surrounding the road. Manipulation to topography is particularly evident in the rock cuts, engineered waterfalls, cut and fill, berms, observation platforms and ditches.

Views and Vistas: The extraordinary views along the Westside Road were thoughtfully incorporated into the road design by NPS landscape architects. Along the length of the highway, the visitor is exposed to views of peaks, canyons, rock formations, waterfalls, creeks, a range of vegetation types, developed areas, and bridges. Sixteen views and vistas are identified as historic features that contribute to the road.

Vegetation: Vegetation was employed by NPS landscape architects in many different ways. Native plants were often used in a supporting role as screens to block an undesirable element from sight, as naturalistic remediation tools with which to reverse the negative effects of road construction, or as framing devices to define and accentuate particular views. Single or grouped specimens were often preserved during road construction in order to become natural attractions along the route.

Natural Systems and Features: The response to natural systems is evident in all aspects of the design of the Westside Road. The alignment of the road was determined by the location of specific exceptional natural features that NPS landscape architects wanted to provide access to. It was also determined by other natural factors such as the large and small scale topography of the area, the composition of bedrock and soils along the route, and the location of opportune areas at which to cross major hydrologic boundaries. Almost every historic feature along the route was in some way a conscious response to natural systems and features. NPS landscape architects took their inspiration from nature and sought to emulate natural forms and characteristics in their designs and blend all construction into the landscape.

Archeological Sites: Seven archaeological sites which date to the historic period were identified during the inventory process. These include two CCC camps, the former North Puyallup Bridge site and the associated parking area and road trace north of the river, the former Tahoma Creek campground and picnic area, and segments of a former guard wall.

In the landscape characteristic descriptions, features are often given unique identity numbers noted in miles. The mile point system along the Westside Road begins at MP 0.00 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Integrity
The Westside Road retains all seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. The road reflects the spatial organization, physical components, and historic associations that it attained during the period of significance, 1926-1934. The Westside Road, as evaluated in the summer of 2005 with clear evidence of deterioration to segments of the roadbed, guardwalls, and culverts due to natural forces and lack of maintenance. However, the overwhelming majority of the resources still remain and the integrity of the landscape is intact.

Location: The road's location along the southwestern side of Mount Rainier's peak has not been changed since the period of significance.

Design: The layout of the road, and especially the intentional integration into the natural surrounding, is unchanged since the period of significance. Additionally, the associated features of the road including buildings, structures, circulation features, and small-scale features still convey historic design patterns and intentions of the NPS landscape architects from the period of significance.

Setting: The physical environment has seen few changes since the period of significance. Along the length of the highway, the visitor is exposed to spectacular scenery and built features, including peaks, canyons, rock formations, waterfalls, creeks, a range of vegetation types, developed areas and bridges.

Materials: Materials such as native stone, wood, and plants were used during the period of significance, following rustic design principles. Built features such as the Tahoma Vista comfort station, culvert stone headwalls, retaining walls, bridges, and guardwalls still reflect the use of these native materials.

Workmanship: The high level of workmanship produced by the contracted construction crews and CCC crews is evident in all aspects of the road, from the construction of mortared stone features, to the use of native vegetation along the roadbed, and the construction of the comfort station.

Feeling: The feeling of the Westside Road is still conveyed through the retention of much of the historic fabric of the road. The highway was designed by NPS landscape architects following the principles of naturalistic landscape design and engineering. Under this philosophy, built works and natural features were integrated to create a unified overall design in which the road and its associated features were intended to appear, to the greatest extent possible, as natural extensions of the living landscape, not as unnatural intrusions. The naturalistic and rustic feeling of the road is still evident in the remaining landscape characteristics: spatial organization, circulation, buildings and structures, topography, vegetation, small scale features and response to natural systems.

Association: The road's association with the park's early Master Plan, which were designed and implemented in the 1930s, is still evident.

Landscape Characteristic:

Spatial Organization

Introduction
The spatial organization of Westside Road is best described in terms of its experiential characteristics which were of highest priority in the overall design. Guided by naturalistic landscape principles, the sequential experience visitors encounter as they travel through the road landscape is one of a long, curvilinear travel corridor exhibiting soft tangential curves punctuated, where natural features and conditions deem necessary, by tighter radial curves, built features or developed areas. The spatial organization of the Westside Road can be divided into four distinct character segments that define the designed progression and experience encountered along the road.

Tahoma Creek Segment: MP 0.0-4.3
The Tahoma Creek segment of the Westside Road begins at its intersection with the Nisqually Road and ends where the road begins to climb out of the Tahoma Creek valley to make its ascent to the tip of Emerald Ridge. This entire segment is located at the edge of the Tahoma Creek floodplain, running north along the western edge of the valley at the foot of Mount Wow. This location in dense, lowland forest between the base of the eastern slopes of Mount Wow and the Tahoma Creek floodplain is the primary factor in defining the spatial character of this segment. Throughout much of this segment, from its intersection with the Nisqually Road until the Fish Creek crossing at mile point (MP) 3.5, the slope to the west of the road rises quickly, a condition that is broken periodically by the many drainages carrying runoff from Mount Wow to Tahoma Creek. In these locations short fill through sections were created to traverse the small ravines. Several rock cuts are found along this segment where the road crosses small ridges extending east from the foot of Mount Wow. The rising slope to the west is contrasted by the creek valley on the eastern side, which gently falls away before leveling out at the flood plain of Tahoma Creek. The dense, mature lowland forest surrounding this segment creates an impenetrable visual barrier, allowing only limited visual access of the surrounding landscape and providing no views of Mount Rainier or other natural features in the area. The horizontal alignment of the road is organized into a series of soft tangential curves following the footprint of Mount Wow. Throughout this segment, the road is in constant ascent, climbing the Tahoma Creek drainage at a grade between one and 6 1/2 percent where the adjacent topography deems necessary.

At the Dry Creek crossing at MP 3.0, the road enters an area that exhibits the effects of decades of natural disturbances, particularly the repeated flooding of Tahoma Creek caused by outbursts from the South Tahoma Glacier. As a result of the periodic flood events, the dense forest canopy which remained consistent throughout the first three miles opens up to reveal views of Mount Rainier, Mount Wow and the surrounding landscape. This characteristic of periodic openings along the road caused by natural disturbances has existed since its construction. NPS Chief Landscape Architect Thomas C. Vint, after returning from a field trip across the proposed route of the Westside Road in 1926, noted that several burned over areas and scenic vistas provided needed visual variety from the dense forested condition found along much of the road. After crossing Fish Creek, the road turns east for a short stretch before again turning to the north and climbing out of the Tahoma Creek valley. The road has been closed since 1990 at MP 3.2 just beyond the Dry Creek crossing.

Emerald Ridge Segment: MP 4.3-8.3
Here the road begins its ascent to the tip of Emerald Ridge. Soon after exiting the Tahoma Creek valley the road includes the first radial curve along the route. This marks the beginning of a series of switchbacks that were created by the road's designers to make the steep ascent of the south side of Emerald Ridge. Near the midpoint of the climb, the first of the road's developed areas is encountered. Tahoma Vista at MP 05.320 is a turnout and viewing area constructed within and around a tight radial curve. The site consists of a central teardrop shaped parking area around which the road is aligned, as well as a smaller turnout at the

shoulder of the road. These spaces provide parking for a constructed viewing platform, which radiates out from the bottom of the parking area. When originally constructed, visitors could enjoy a nearly 360-degree view of the western reaches of the park from anywhere on the platform. Associated features include a rustic comfort station, stone seating clusters, a fountain, several rustic guardwalls, signage and a system of trails linking these together. Vegetation has partially obscured the historic view, contributed to damage and deterioration of the stone guardwalls and stone seating clusters, and the accessibility of the trail to the men's comfort station entrance.

Two more switchbacks and tight radial curves are located between Tahoma Vista and the point at which the road crosses the peak of Emerald Ridge at Round Pass. Round Pass is the second of the road's developed areas at MP 06.8. The Round Pass developed area sits at the crest of Emerald Ridge. The site consists of a large rectangular parking area intended to provide access to the popular trail to Lake George and Gobbler's Knob, as well as the Round Pass trail, which connects to the Wonderland Trail. It is also the site of two turnouts that provide parking for the second observation platform constructed along the route. The observation platform looks out over the Tahoma Glaciers and Mount Rainier, and in 1947 became the location of a stone memorial to a group of marines whose transport plane went down on the South Tahoma Glacier. The platform is bordered on two sides by a rustic stone retaining wall and is accessed by a set of stone steps. Round Pass was the site of extensive planting and manipulation of vegetation. A small structure, which was likely intended as a concessionaire's facility, a log guardrail, and possibly a stone fountain were constructed here, but no longer exist. It is also the current location of a noncontributing bike rack and portable pit toilet. Unmanaged vegetation has encroached upon the historic view.

Beyond Round Pass the road begins its descent down the north face of Emerald Ridge to its crossing of the South Puyallup River. A single switchback is employed here to traverse the northern slope. The vertical alignment of both the ascent and descent of Emerald Ridge ranges between three and six percent, but a large part of the road is consistent at a six percent grade. Throughout this segment the road lies within a dense old-growth forest, but the density and resulting sense of enclosure is highly variable and several clearings provide views of the adjacent ridges and valleys. Several turnouts are also located along this segment of the road, providing access to the numerous trailheads found in this area, or located at the outward edge of radial curves where visitors may obtain glimpses of the surrounding landscape through the mature forest. This segment ends just beyond the South Puyallup River Bridge, where Civilian Conservation Corps crews once cleared a vista of Mount Rainier. This historic vista is now largely obscured due to the growth of vegetation along the riverbanks adjacent to the bridge.

South Puyallup Segment: MP 8.3-12.2
This segment generally follows the course of the South Puyallup River along the eastern slopes of the river valley ending at Klapatche Point near the tip of Klapatche Ridge. This is the straightest segment of the Westside Road, containing only very slight tangential curves. The road hugs the western slopes of the ridge separating the North and South Puyallup Rivers

throughout the length of this segment. This produces a spatial effect opposite that of the Tahoma Creek section in which the land rises quickly on the east side of the road and falls away steeply to the west. The vertical alignment of this segment is also very slight, varying very little from its initial elevation of 3,600 feet. The greatest variation in vertical alignment occurs where the road descends to the St. Andrews Creek Bridge. The St. Andrews Creek crossing at MP10.930 is the location of the road's third developed area. A large parking area is located here to provide access to the Denman Falls loop trail and the St. Andrews Creek trail, as well as to two sets of steps descending from the bridge deck to a viewpoint at the creek below. A large clearing at the southeast corner of the bridge marks the former location of CCC Camp N.P.4, which occupied the site between 1933 and 1941.

After crossing St. Andrews Creek, the road begins to make its ascent to Klapatche Point. As it climbs, the route passes several extremely rugged rock cuts, culminating in the largest cut in this segment, which is located inside the curve at the tip of the ridge. The rock in this area is made of a highly stratified shale-like material, resulting in very jagged, uneven rock faces. The vegetation between St. Andrews Creek and Klapatche Point begins as very dense forest, the typical condition along the route. As the road travels toward the point, the vegetation gradually thins, first allowing short glimpses of the South Puyallup River valley and the peaks beyond, before completely opening up to the west just before reaching the tip of Klapatche Ridge.

The Klapatche Point developed area originally consisted of a large rock cut, a large bell-shaped turnout, a stone guardwall, and a panoramic view including Mount Rainier, the North and South Puyallup river valleys, the Puget Sound communities and the peaks of the Olympics. Vegetation was absent in this area at the time of construction due to an earlier forest fire, and this condition was perpetuated through the use of the area as a fire break throughout the 1940s. This site has now become the location of a trailhead accessing the North Puyallup segment of the road, which has been converted into a trail. Deterioration of the stone guardwall, loss of a good portion of the panoramic view due to the unmanaged growth of vegetation, and the incursion of vegetation into the turnout, are contemporary threats to the area.

North Puyallup Segment: MP 12.2-15.20
Beyond Klapatche Point, the road turns toward the east, traveling directly toward the mountain. This road alignment soon reveals a view of Mount Rainier to the east, which will continue to be visible throughout the length of the segment as the road approaches the mountain. The horizontal alignment of this segment is also very straight, containing only very slight tangential curves. The road descends at a steady five percent grade until approximately the three-quarter point of the segment, when it begins to ascend at a grade ranging from four to six percent. The road climbs to the point where it once crossed the North Puyallup River. Views of the North Puyallup River valley, the river itself and the ridges beyond are consistently revealed along the route through breaks in the dense forest vegetation. The road passes several large, dramatic rock cuts as it crosses the northern slopes of Klapatche Ridge. The steepest topography encountered by the Westside Road is within this segment, a condition that required very tall, long rock cuts to traverse the steep cliffs and rugged topography of the area.

When the route finally reaches the North Puyallup River, the last of the developed areas along the road and a point that NPS Landscape Architect E.A. Davidson called “the most spectacular reached by any park road,” the visitor is confronted with a view of the Hanging Glacier, a vertical face of ice created by the Puyallup Glacier as it creeps out between two peaks far above. This is also the site of two large remnant parking areas on either side of the river, and the remnants of the North Puyallup River Bridge. Road construction ended here during the period of significance and was never continued. Despite having been closed to all traffic since 1988, the spatial organization of this segment retains much of its original character, including following the original alignment and containing many of the original designed views and other features that were created during the design and construction of the road. The site is in the process of reforestation and backcountry campsites now occupy areas on both sides of the river.

Conclusion
Despite the changes that have occurred to the roadway due to the action of natural processes such as vegetation growth and flooding, and the conversion of part of the road into a trail, the spatial organization of the Westside Road contributes to the integrity and significance of the landscape. The road follows the same original alignment and allows visitors to enjoy many of the same views of the surrounding landscape that existed at the time of the road’s completion in 1934.

Circulation

The Westside Road was originally conceived and implemented as a scenic park highway and a destination for park visitors. While typical highways are designed to accommodate more traffic at higher speeds, the Westside Road was intended to meet the needs of visitors stopping at developed areas and trailheads while also viewing scenery throughout the park. The primary function of the highway was captured by the NPS "Park Road Standards" in 1984, which contains the following statement:

“Park Roads are for leisurely driving only. If you are in a hurry, you might do well to take another route now, and come back when you have more time.”

The major circulation patterns and features of the Westside Road, which include the cross section, design speed, turnouts, trailheads, and trails, have changed little since the road was completed in 1934.

Cross Sections
The Westside Road was constructed with a set of standard cross sections developed for the project and which were adapted for different conditions found along the route. The road traverses extremely rugged and variable topography on the west side of the park, resulting in a cross section that is highly variable beyond the shoulders of the road. Each individual segment required a slightly different design response, which is reflected in the different applications of the typical cross sections.

Despite the variations required by the rugged topography within the park, the cross section of the road is defined by common elements that remain consistent within each type. In some areas, the road was constructed across steep cliff sections, requiring near vertical rock cuts on the cut side of the roadway. In other areas, the road was constructed through steep areas of glacial till. Along the steep North Puyallup section, long stretches of retaining wall, varying in height from 5 to 20 feet, were constructed. Less common but still typical are elevated segments of the highway, known as "fill-through" segments used to traverse the numerous small drainages found along the slopes of the mountains and ridges in the park. In these sections, the road was constructed completely on fill, creating a cross section that falls away on either side of the roadway.

The typical cross section of the Westside Road features a 14- to 18-foot unpaved roadway, consisting of two 7- to 9-foot travel lanes. The typical fill side shoulder has a 3-foot edge with a typical slope of ¾ inches per foot and a vegetated fill slope below with a variable grade. The typical cut shoulder has a 2- to 3-foot width, depending on the local topography, with a typical slope of ¾ inches per foot. The combined width of the travel lanes and the shoulders results in a typical width of 19 to 24 feet. Areas of moderate topography are typically wider than areas of rugged topography. The cut side contains a ditch designed to direct runoff and reduce erosion to the roadbed. The angle of the cut slope is variable and responds to the native topography. There is one stretch along the North Puyallup segment where the cross section of the road deviates from its typical configuration. For 0.22 miles, along a particularly steep slope, the road converges into a single lane. Here the roadbed is reduced from its typical 19- to 24-foot width to approximately 12 to 14 feet. It is apparent, due to the location of a historic stone guardwall adjacent to this section, that this was part of the original design and construction of the road .

One section has been significantly altered due to numerous floods caused by outbursts from the South Tahoma Glacier. This section, from MP 3.5 to 4.3, has been washed out on several occasions and has not been reconstructed following historic specifications. The section of the road from MP 14.0 to 14.6 has also undergone significant alterations due to the effects of natural processes occurring in this area. In this section, the roadbed is basically unrecognizable beneath years of rockslides and erosion. The alterations made to these two short segments of the road have had a negative impact on the condition of these sections of the road, however, the other 13.8 miles of the road still retain their historic cross sections.

Design Speed
The design speed of the road typically ranges from 20-35 miles per hour (mph). A 20 mph section is located along the North Puyallup segment on the northern slopes of Klapatche Ridge ,while 35 mph is the standard speed throughout the rest of the route. Much of the rest of the road is characterized by gentle tangential curves and short, straight sections punctuated by tighter radial curves at the numerous switchbacks along the route.

Exceptions to the general speed limit occur in relation to switchbacks and developed areas.

The slower speed limit of 15 mph along the northern section of the road is related to the road's adjacency to extremely steep slopes, the reduced width of the cross section and the one-way portion within this segment. Switchbacks are located on the south and north slopes of Emerald Ridge. Here traffic is slowed in the interest of safety. The varying design speeds induced by road alignment, varying sight line distances, and elevation change have not changed since the historic period.

Turnouts

Turnouts located along the Westside Road provide the visitor with the opportunity to stop their vehicle in order to explore the park on foot, to allow other vehicles to pass, or merely to spend some additional time enjoying an exceptional view. National Park Service landscape architects typically located turnouts in association with other features of the road landscape in order to provide parking and access to those features. Historic turnouts along the Westside Road are associated with other natural and designed features of the road such as developed areas, bridges, trailheads, views, and rock cuts.

There are 20 turnouts located along the Westside Road. Of these, 14 are historic turnouts that were created during the construction of the road. While it is almost certain that additional turnouts did exist during the historic period, some of these have likely become overgrown with vegetation due to the minimal use and maintenance of the road and have become indistinguishable from the general roadbed. Those that remain are the most prominent and largest of the historic turnouts, particularly those associated with developed areas and scenic viewpoints. Nine of the 14 historic turnouts are associated with the developed areas of the Westside Road. These are typically large in size, with an average length of 200 feet and an average width of 60 feet. Turnouts are found in a number of different configurations from the typical bell-shaped turnout located at the shoulder of the road to rectangular or even teardrop-shaped parking areas. Turnouts associated with views and parking for historic trailheads are typically bell-shaped with an average length of 120 feet long and a depth of 24 feet. The edges of the historic turnouts are often lined by stone guardwalls. The historic turnouts of the Westside Road are all found beyond MP 3.2 where the road is now closed. Due to the minimal use of these turnouts, many now have vegetation growing within them.

The nonhistoric turnouts found along the road are primarily the result of visitors improperly using areas along the shoulder for parking. Five of the six nonhistoric turnouts are located below MP 3.2 where the road is now closed. The other nonhistoric turnout is located across the road from the contemporary trailhead for the Tahoma Creek trail, which was relocated after the historic trailhead and much of the lower portion of the trail was destroyed by a series of floods.

Although the existing historic turnouts may not reflect the full number of original turnouts created along the road, they do represent the most prominent and important of the historic turnouts. Those that remain are associated with the major features of the road and are an integral part of the road's circulation.

Trailheads

The Westside Road has a high concentration of trails and trailheads due to the work of the two CCC camps located along the route. Much of the work of the CCC crews, particularly those from camp N.P.4, involved constructing and maintaining trails within the park. The trails leading away from the road were often concealed with naturalistic plantings and approached the road at an angle in an effort to separate the trail from the road.

Trailheads located along the Westside Road provide access to the numerous trails found along the route, ranging in length and difficulty from the 0.4-mile Denman Falls loop trail found at the St. Andrews Creek to the much longer and more difficult trails such as the 7-mile trail between the Tahoma Creek trailhead and the South Puyallup River Bridge. Many of the trails leading away from the trailheads connect to the Wonderland Trail circling Mount Rainier.

There are eight trailheads located along the Westside Road, six of which are historic and retain their original location and configuration. The other two noncontributing trailheads are located at the new terminus of the Tahoma Creek trail. The majority of the trailheads date back to the construction of the road.

Trails and Steps

Trails were created to provide access to other built features and amenities as well as natural features located along the roadway. The trails that are included in this inventory were designed in conjunction with the road and still exist as component parts of the larger site design in the developed areas along the road. Although the trails served the utilitarian purpose of connecting separate elements within the road landscape, they were designed and constructed with the same high level of craftsmanship and attention to detail as the other more prominent built features.

A relatively short set of trails provide access to the comfort station at Tahoma Vista; separate paths to the women's and men's entrances. The trail to the women's entrance faces toward the road, providing easy access to the facility. The men's entrance is located opposite that of the women's and faces away from the road. The trail leading to the men's entrance climbs up the hill above the comfort station before descending to the level of the entrance. The trail to the men's entrance includes several sets of stone steps, consisting of three to four steps per set. Each individual step was typically constructed of single stones and seldom consists of more than two large stones per riser.

Other trails that are a part of the Westside Road cultural landscape are found within the St. Andrews Creek developed area. A 0.4-mile loop trail providing access to a viewpoint overlooking Denman Falls was constructed in the area around St. Andrews Creek Bridge by CCC workers during the 1933-1934 construction seasons. The trail connects with the stone stairway at the southwest end of the bridge and with a turnout located just north of the bridge. The loop includes a nonhistoric, but compatible rustic wood bridge and sections of the trail are

supported by drylaid stone retaining walls constructed on both sides of the creek. Another short trail provides a connection between the road and the St. Andrews Patrol Cabin located a few hundred feet from the bridge along the north bank of St. Andrews Creek. This trail winds from the northeast end of the bridge east to the patrol cabin.

Two of the most unique rustic features associated with the Westside Road are a pair of stone stairways located at the southwest and northeast ends of the St. Andrews Creek Bridge. They provide access to viewpoints where visitors can see the bridge from a point below it at the creek's edge. These stairs are typically constructed of a single stone for each step, and are typically 1 foot tall, 1.5 to 2.5 feet deep, and 4 feet wide. The stairs are edged with large un-hewn stones arranged vertically to provide a cheek wall. Both sets of stairways were constructed by Carl Bjork and his crew near the end of the historic period.

Another trail associated with the Westside Road cultural landscape is found at Round Pass. The trail consists of a set of eight large rustic stone steps flanked by stone cheek walls with a contemporary steel-pipe handrail. These steps provide access to an observation platform that overlooks Mount Rainier and the South Tahoma Glacier. Each step is typically constructed of two large stones. The steps rise a total of five feet from bottom to top step, bringing visitors up from the level of the road to the elevated platform.

Intersections
There is one major intersection on the Westside Road. It is located at the southern end of the route where it meets the Nisqually Road about one mile east of the southwest park entrance. This intersection was originally built with a wye-shaped configuration. The intersection has since been reconfigured into a contemporary tee-intersection as part of the rehabilitation of the Nisqually Road in the late 1980s. A large berm now occupies what would have been the northeast inside corner of the historic wye intersection, and the road has been realigned through part of what was a central island. The intersection has lost integrity and does not contribute to the significance of the Westside Road.

Conclusion
Despite changes to the road, on the whole it retains its historic character. The typical cross section of the road follows the standards set in the early construction drawings for the highway. The unpaved gravel surface had an integral part of the historic design and construction of the road enormous and impacts the character and experience of the road landscape. The width may have increased through the gradual accumulation of material in some sections, and others have been impacted by the actions of natural processes over time, but the road as a whole remains virtually the same. Many of the turnouts have retained their form and are still associated with viewpoints and trailheads. The major components of circulation contribute to the significance and integrity of the Westside Road.

See the circulation chart in the Supplemental Information section of the Appendix, which includes feature locations.

Character-defining Features:

Feature: Turnouts (15)

Feature Identification Number: 112972

Type of Feature Contribution: Contributing

Feature: Trails (5)

Feature Identification Number: 112974

Type of Feature Contribution: Contributing

Feature: Trailheads (6)

Feature Identification Number: 112976

Type of Feature Contribution: Contributing

Feature: Stone steps at Round Pass

Feature Identification Number: 112978

Type of Feature Contribution: Contributing

Feature: Stone steps at St. Andrew's Creek Bridge

Feature Identification Number: 112980

Type of Feature Contribution: Contributing

Feature: Intersection (1)

Feature Identification Number: 112982

Type of Feature Contribution: Non Contributing

Feature: Turnouts (6)

Feature Identification Number: 112984

Type of Feature Contribution: Non Contributing

Feature: Trailheads (2)

Feature Identification Number: 112986

Type of Feature Contribution: Non Contributing

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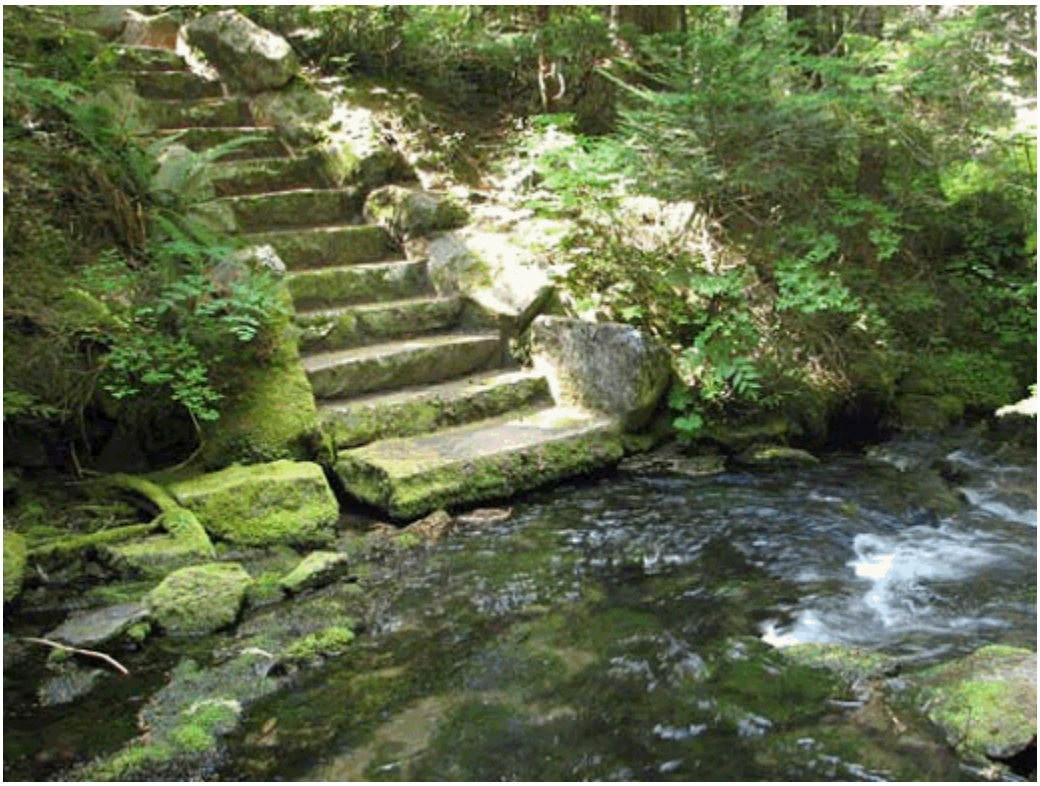
Contemporary photo showing road bench near Klapatche Point. Note the stone guardwall to the left and right of the tree closest to the road and jagged rock cut, 2005 (MORA).



Contemporary photo showing the stone steps beside the St. Andrews Creek Bridge, 2005 (MORA).

Buildings and Structures

Introduction

Structures built during the historic period in conjunction with the construction of the Westside Highway are an integral part of the cultural landscape, revealing the naturalistic and rustic design philosophy of the road. The structures along the road corridor were designed by landscape architects to minimize the visual impact of the structures and accentuate the picturesque qualities of the natural surroundings. Use of native materials, along with strict design principles and construction standards, ensured the structures blended with the scenery, matching the color and character of natural rock outcrops and surrounding terrain. The consistency in design and materials among the different structures along the road creates a visual unity and helps define the character of the road landscape.

Guardwalls

There are 13 guardwalls found along the Westside Road, all of which were designed by the NPS and built between 1926 and 1934. The guardwalls were located in areas with steep slopes, along the northern segments of the road where the route crosses areas of rugged topography. The guardwalls were classified as masonry Type 1 and 2, according to specifications developed in the 1920s by the Landscape Architecture Division in the NPS regional office located in San Francisco, California.

Four of the 13 historic guardwalls along the road are missing entire sections, ranging in length from 10 to 495 feet. This is due in part to natural processes, but also to an effort that was made to salvage the stones from walls that were thought to be in imminent danger of being lost down the adjacent slopes. These stones are now stockpiled at Tahoma Vista and could possibly be reconstructed, although the preferred method for dismantling a historic stone wall, which includes photo and written documentation and the numbering of individual stones, were not followed and the reconstruction of these walls will likely be difficult.

One Type 1A guardwall is located between the roadway and the parking area on the south side of the North Puyallup River. One hundred and seventy-five feet in length, it exhibits the typical dimensions for Type 1A guardwalls specified by the NPS Division of Landscape Architecture drawings, which are 2 feet tall and 18 inches wide. Seven Type 2A guardwalls, distinguished by their crenellated design, are found along the road. They also exhibit the typical dimensions specified by the NPS Landscape Architecture Division in their original drawings, 2 feet in height at the merlons, 18 inches in height at the crenels, and 18 inches in depth. Each merlon is typically 5.5 feet in length, which is divided into a central horizontal section of 4 feet 6 inches and two diagonal sections to each side measuring 6 inches each in length. The merlons are typically divided by 12-foot-flat crenel sections. There are also six Type 2B guardwalls located along the road. These walls are similar in shape and size to the Type 2A walls but also include a granite curb along the inside face of the wall. The ends of the guardwalls are often flared in an attempt to blend the features with their surroundings.

The guardwalls found along the Westside Road exhibit two different construction methods based on the type of stone used. The first method is typical for the construction of rustic retaining walls with stones spanning the entire width of the wall. This results in a wall with a solid stone cap broken only by thin mortared joints running front to back along the length of the wall. This construction method exists in the guardwalls adjacent to the St. Andrews Creek Bridge, around Klapatche Point, and throughout the North Puyallup segment. The other construction method uses a shale-like stone found in abundance along the route. This stone naturally fractures into thin sheets, prohibiting the use of a single large stone to span the width of the wall. To obtain the massive appearance dictated by the NPS standard specifications, contractors laid the stone as two vertical layers, front and back, with a core of cement mortar. While these walls exhibit the massive appearance of typical rustic guardwalls when viewing a cross section, the lack of a solid cap and the exposed mortar core visible at the top of the walls belies the fact that they were built using thin layers or veneer, rather than solid stone. All of the guardwalls on the Westside Road were built using semi-hewn stones with an average size of 2 to 4 feet. The walls were also constructed with the stones arranged randomly, following NPS specifications which prohibited the convergence of four corners at any single point.

Retaining Walls

Fifteen of the guardwalls of the Westside Road were constructed atop mortared stone retaining walls. The tallest retaining walls are located in the area with the most rugged topography along the North Puyallup segment and range from approximately 3 to 25 feet in height. The walls are

constructed of cut stones laid in a random pattern and slightly battered. Most of the walls are missing stones and almost all are in need of repointing.

Four retaining walls without associated guardwalls are found along the route. The first is a 134-foot mortared stone wall surrounding an observation platform at Round Pass. This wall was constructed using semi-hewn, granite stones set in a random pattern. The other retaining walls are all found within the St. Andrews Creek developed area, likely constructed by the CCC crews stationed nearby. The first is a 40-foot-long mortared retaining wall which sits across St. Andrews Creek from the set of stone steps on the west side of the bridge. From the base of the bridge it follows the creek to the west, curving away back into the slope along its length. This wall serves both the functional purpose of retaining the slope adjacent to the bridge and the aesthetic purpose of creating a rustic, picturesque scene to be viewed from the base of the stone steps. It is constructed of large, irregularly shaped, semi-hewn granite stones and is slightly battered. The wall is becoming overgrown with woody vegetation, and is becoming undercut by the stream.

The other historic stone retaining walls associated with the Westside Road are a pair of dry laid stone retaining walls found along the loop trail to Denman Falls, within the St. Andrews Creek developed area. These walls were constructed to create a trail along the edge of the creek. They are located on either side of the stream and flank each end of a small bridge. The retaining walls also function as the abutments for the small rustic bridge. Each section of wall is approximately 30 to 40 feet in length and is constructed of stone quarried from a rock outcropping on the southern side of the creek. The naturalistic effect of these walls is so successful that they appear virtually invisible in their setting. The walls are have held up very well considering their highly unstable location at the edge of a glacially fed creek; however, the walls are showing signs of deterioration and have some dislodged stones. Despite their condition, these walls remain an outstanding example of naturalistic landscape architecture and are a significant part of the Westside Road cultural landscape.

Bridges
Two rustic stone bridges are located along the Westside Road. Both were constructed by the firm of W.T. Butler Company of Seattle, Washington. A third bridge was originally designed and constructed across the North Puyallup River but has since been damaged by rockslides and was removed due to safety concerns.

South Puyallup River Bridge: MP 08.200
The South Puyallup River Bridge is an excellent example of rustic bridge design. The bridge combines the modern structure of a reinforced concrete-filled, spandrel arch with a native stone cladding, Type 1B and 1D guardwalls, and abutment walls. Type 1B walls have flat top surfaces (no crenellations) and a narrow granite curb along the inside face of the wall. Type 1 D walls also have flat top surfaces, but have a sidewalk and curb along the inside face of the wall. The bridge was constructed from 1930-1931 under the same contract and by the same contractor as the St. Andrews Creek Bridge. The bridge is located just below a small waterfall

and sits atop a rock lined gorge above the South Puyallup River.

The bridge is 90 feet long with a width of 34 feet, 8 inches. It is built to allow the road to pass over it following a broad radial curve. It is also considerably super-elevated, rising significantly from inside to outside edge. The main arch of the bridge has a 42-foot span and rises 10 feet, 5 inches above the spring line. No alterations have occurred to the structure since its construction. Despite the road's closure at Dry Creek in 1990, park maintenance crews continue to maintain the area around the bridge.

St. Andrews Creek Bridge: MP 10.923
The St. Andrews Creek Bridge is a superb and unique example of a rustic style bridge within Mount Rainier National Park. The bridge design combines the modern structure of a reinforced concrete-filled, spandrel arch with a native stone cladding, Type 1B and 1D guardwalls, and abutment walls. The bridge was constructed from 1930-1931 under the same contract as the South Puyallup River Bridge. Unlike most other stone clad rustic bridges in the park, the contractor did not construct the bridge using locally available materials, insisting he could acquire the stone for less cost by purchasing it from an outside source rather than quarrying it within the park. The stone used in the construction was obtained from a quarry near Index, Washington, to the north of the park.

The bridge is 115 feet long and 34 feet, 4 inches in width. It is designed to allow the road to pass over it following a broad radial curve and is considerably super-elevated, rising significantly from inside to outside edge. Instead of the long elliptical arch design exhibited by the other bridges in the park, the St. Andrews Creek Bridge was designed and constructed with a tight radial semicircular arch with a span of only 26 feet. The bridge also differs from most others within the park in that it was constructed using a single filled arch instead of a reinforced concrete-filled spandrel arch. The bridge has not undergone any alterations since its construction. It is an excellent example of the rustic design found along the road and contributes to the significance of the Westside Road.

Denman Falls Trail Bridge: MP 10.931
The Denman Falls trail bridge is located along the Denman Falls loop trail within the St. Andrews Creek developed area. It spans St. Andrews Creek and sits atop two dry laid stone retaining walls built by CCC workers during the original construction of the road. The bridge is a contemporary compatible replacement of the historic bridge that was originally constructed in this location.

Comfort Station
There is a single comfort station on the Westside Road located within the Tahoma Vista developed area, built in 1931 by the National Park Service. The comfort station was designed and constructed in the rustic style and built of whole-log structural timbers, half-log siding and rough-hewn native stone. The rustic structure is sited with its greatest length lying parallel to the slope, which minimized the amount of cut and fill required to construct the comfort station

within the steep topography. The structure is bilaterally symmetrical with half of the floor plan devoted to men's use and the other to women's facilities. A concrete enclosed septic tank is located approximately 50 to 75 feet downhill from the structure.

Description from the Historic Building Inventory, Mount Rainier National Park (1983):
The Tahoma Vista comfort station is a stone, log, and timber frame; 1 story; rectangular plan; medium-pitched, cedar shingle, gable roof with projecting eaves and verges; vertical half log veneer and coursed rubble masonry exterior; front center entrances at each end; pivot windows; exposed ceilings; wood tongue and groove finish from ceiling to sill level; stucco applied to stone from sill to floor; concrete floor; concrete foundation. It remains largely unaltered. Only the exposed, decorative whole log ridge beam has been removed. The comfort station measures 14 feet x 30 feet.

St. Andrews Patrol Cabin and Pit Toilet: MP 9.390
One of the park's original backcountry patrol cabins is located within the St. Andrews Creek minor developed area. The cabin was constructed in 1922 when it was located along the original route of the lower circuit of the Wonderland Trail, which eventually became much of the final route of the Westside Road. It is a rustic log, one-room structure. A rustic wood pit toilet structure is located behind the patrol cabin. The patrol cabin was built four years before construction of the Westside Road began, but after the initial planning and first survey of the Westside Road had been completed. When CCC camp N.P.4 was located in the same area in 1933, the cabin was soon accompanied by several other structures and became part of the large worker camp. When the camp was ultimately dismantled, the cabin was left standing in its original location. Because of the close relationship of the patrol cabin to the early design, development, and construction of the road, it is a contributing feature of the Westside Road cultural landscape.

Description from the Historic Building Inventory, Mount Rainier National Park (1983):
St. Andrews Patrol Cabin is a log frame, one-story, one-room (and loft), rectangular cabin; steeply-pitched cedar shake gable roof extends over log post and beam front porch; stove pipe on gable ridge; whole log purlins with whittled ends; whole log walls with wood slab chinking; saddle notch cornering with quarter split ends; vertical board front door; varnished interior walls; 1-inch x 10-inch plank ceiling sheathing; 1.5-inch x 1.5-inch: tongue and groove wood floor; concrete pier and log foundation. The cabin measures 14 feet x 19 feet with a floor size of 279 square feet. The open porch in 5 feet x 16 feet, extending the entire width of the front façade with roughly hewn whole log columns and rough board decking. The deck is elevated off the ground 10-12 inches.

Rock Barriers
There are three rock barriers located along the Westside Road, none of which existed during the period of significance. These nonhistoric rock barriers have been installed to block access to former roadways or to discourage parking in certain areas. The first rock barrier is located atop the contemporary berm which was installed within the historic footprint of the original

wye-intersection where the Westside Road meets the Nisqually Road. The second rock barrier was put in place to block the historic access road to CCC camp N.P.1 along the banks of Tahoma Creek. The last rock barrier was put in place to block access to the final segment of the Westside Road beyond Klapatche Point following the closure of this section of the road in 1988.

Conclusion
Today, many of the original structures remain, including several guardwalls and retaining walls, bridges, a comfort station and rock barriers. Together, these structures help convey the design intent and aesthetic character of the historic highway and contribute to the significance of the cultural landscape.

See the buildings and structures chart in the Supplemental Information section of the Appendix, which includes feature locations.

Character-defining Features:

Feature: Tahoma Vista Comfort Station

Feature Identification Number: 112988

Type of Feature Contribution: Contributing

Feature: South Puyallup Bridge

Feature Identification Number: 112990

Type of Feature Contribution: Contributing

Feature: St. Andrews Creek Bridge

Feature Identification Number: 112992

Type of Feature Contribution: Contributing

Feature: St. Andrews Patrol Cabin

Feature Identification Number: 112994

Type of Feature Contribution: Contributing

Feature: Guardwalls (6)

Feature Identification Number: 112996

Type of Feature Contribution: Contributing

Feature: Guardwalls w/ retaining walls (7)

Feature Identification Number: 112998

Type of Feature Contribution: Contributing

Feature: Retaining walls (4)

Feature Identification Number: 113000

Type of Feature Contribution: Contributing

Feature: Denman Falls Trail Bridge

Feature Identification Number: 113002

Type of Feature Contribution: Non Contributing

Feature: Retaining wall (1)

Feature Identification Number: 113004

Type of Feature Contribution: Non Contributing

Feature: Rock barriers (3)

Feature Identification Number: 113006

Type of Feature Contribution: Non Contributing

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Contemporary photo showing the South Puyallup River Bridge, 2005 (MORA).

Contemporary photo showing the South Puyallup River Bridge, 2004 (MORA).

Contemporary photo showing the St. Andrews Creek patrol cabin, 2005 (MORA).

Contemporary photo showing a type 2B stone guardwall at Tahoma Vista, 2004 (MORA).

Contemporary photo showing a retaining wall at Tahoma Vista, 2004 (MORA).

Small Scale Features

Introduction

Small scale features associated with the Westside Road play a large role in the function and

aesthetic cohesiveness of the road landscape. National Park Service landscape architects designed these small scale features to exhibit the same rustic character, including the high level of craftsmanship and attention to detail as the more prominent features of the road landscape. Features such as culverts, water fountains, seating, and fences tie the other major built features of the road together, providing a cohesive aesthetic background to the more prominent rustic features. As a whole, the small scale features that were constructed of wood have succumbed to the effects of time and are no longer extant within the road landscape; however, many of the original rustic small scale features still exist along the route. The features that remain are primarily those that were constructed of stone, which is much more durable to wear and weathering. These features as a whole retain a high degree of integrity and contribute to the significance of the Westside Road

Culverts

Culverts are the most plentiful of the historic features found along the road. Although culverts serve a utilitarian purpose, they were given special treatment by rustic designers. National Park Service landscape architects specified stone masonry headwalls to be constructed around the inlets to the culverts along park roads. These headwalls served the dual role of blending the feature into the surrounding environment as well as providing protection for the exposed end of the culvert pipe. The typical historic culvert consists of an 18- to 30-inch corrugated galvanized steel pipe, a mortared or dry laid stone headwall ranging in size from 2 x 4 feet to 4 x 6 feet or larger, and an outlet concealed through the use of rubble placed around the opening.

There are currently 80 culverts along the length of the road, with 54 dating to the period of significance. This number does not reflect the total number of culverts which would have existed along the road during the historic period as some culverts have been replaced and others have been buried beneath rock falls. Historic culverts with stone headwalls are found throughout the first three segments of the road from the intersection with the Nisqually Road to Klapatche Point. Beyond Klapatche Point the historic culverts have been largely lost to natural processes or due to the lack of maintenance on this section of the road.

As culverts have deteriorated and failed over the years, many rustic style headwalls have been replaced with simple unadorned contemporary headwalls. Since the road closed in 1990, the ditches on the cut side of the road have filled in to varying degrees, a process that has also served to further reduce the number of historic culverts and headwalls that can be located along the road.

Seating

Rustic seating features were designed by NPS landscape architects as accessories within developed areas along the route of the Westside Road. Seating was located where visitors were likely to leave their automobiles and spend a length of time in a particular location, whether to take in an exceptional view, merely to rest, or to enjoy a picnic with their family or friends. There are three historic seating features located within the Tahoma Vista developed area, set within the observation platform constructed in this location. They are all similar in

design and vary little from one to another. These features consist of a central large, irregularly shaped boulder surrounded by three to four smaller, rectangular, flat-topped seating stones. All stones, including the central boulders exhibit signs of having been worked by masons and are highly refined features. These three stone groupings are scattered across the length of the observation platform in a random arrangement. Stones from one grouping have been displaced by the growth of a Douglas fir.

Water Fountains

One historic water fountain is found along the Westside Road. It is located at the Tahoma Vista developed area and is an exceptional and unique example of rustic design. Construction drawings indicate that a similar fountain was to be located within the Round Pass developed area but was seemingly never constructed. The Tahoma Vista water fountain was designed and constructed of mortared stone, which hid the elements necessary to provide flowing water. A central fountain structure is surrounded by a 3 x 9 x 14-foot stone wall that creates a basin in which the water pooled after flowing from within the fountain. The central fountain feature is anvil shaped. Water flowed through the center of the 5-foot-tall stone feature, spilling out in two directions onto fan-shaped stones before falling into the pool below. According to the design drawings and historic photos, small pockets in the central fountain structure were originally planted with native species such as sword fern and salal to enhance the fountain's naturalistic character. This exceptional rustic feature still exists in its original configuration.

Non-contributing Features

Fences

One fence exists along the Westside Road. It surrounds the Denman Falls overlook within the St. Andrews Creek developed area. The fence was designed and constructed in the rustic style and consists of full log posts and rough hewn wood rails. The members are connected primarily through the use of wood joinery. One exceptionally rustic aspect of the fence is the use of an existing stump in place of one of the posts. The fence has almost certainly been replaced over the years, but each replacement has adhered to the original rustic style. This is a non-contributing, but compatible feature.

Monument

A single monument is located along the Westside Road. It is set atop the viewing platform at Round Pass. The monument is a memorial to a group of 32 marines who were killed when their transport plane crashed on the South Tahoma Glacier during inclement weather in 1946. The monument was designed and constructed in the rustic style and consists of a large un-hewn glacial boulder inlaid with a bronze plaque bearing the names of the men who lost their lives. Since the monument was constructed in 1947, 13 years after the end of the period of significance for the road, it does not contribute to the road's significance. However, the date of its construction falls within the period of significance for the Mount Rainier National Park National Historic Landmark District (NHLD), therefore it does contribute to the overall NHLD and is listed as a contributing feature in the nomination.

Gates
Three contemporary gates are located along the Westside Road. The first gate is located near the intersection with the Nisqually Road. The other two existing gates are temporary structures installed following the closure of the road just beyond Dry Creek in 1990.

Signs
No historic signs exist along the Westside Road. During the historic period, signs were used sparingly, and consisted of small, treated wood plaques with routed and painted lettering. As these features deteriorated, they were replaced by contemporary metal or fiberglass signs.

Gabions
Gabions consisting of metal mesh surrounding a mix of stones are located in several locations along the road. These features are contemporary additions to the road. They were constructed in an attempt to control erosion on the highly unstable loose glacial till cut slopes along the road. These features detract from the historic character of the road and are noncontributing and incompatible features of the Westside Road cultural landscape.

Curbs
There is a single stretch of curb located along the Westside Road. It consists of a series of rough-hewn logs set on the observation platform at Round Pass. They are not part of the original design and construction of the platform or of the Marine memorial also located here. The log curb begins at the top edge of the stone steps and stretches around the stone memorial. It was likely installed to define a small area for visitor use in order to limit the amount of maintenance that was necessary. The curb is a noncontributing and non-compatible feature and does not contribute to the significance of the Westside Road.

Conclusion
Small scale features were constructed with adherence to the naturalistic design philosophy that prevailed throughout the Westside Road. As a collection, these remaining features reflect the historic period and contribute to the significance of the site.

See the small-scale features chart in the Supplemental Information section of the Appendix, which includes feature locations.

Character-defining Features:

Feature: 30” Culvert (3)

Feature Identification Number: 113008

Type of Feature Contribution: Contributing

Feature: 18”-24” Culverts (50)

Feature Identification Number: 113010

Type of Feature Contribution: Contributing

Feature: Tahoma Vista Stone seating/clusters (3)

Feature Identification Number: 113012

Type of Feature Contribution: Contributing

Feature: Tahoma Vista Fountain

Feature Identification Number: 113014

Type of Feature Contribution: Contributing

Feature: 18”-24” Culverts (17)

Feature Identification Number: 113016

Type of Feature Contribution: Non Contributing

Feature: 30”-36” Culverts (3)

Feature Identification Number: 113018

Type of Feature Contribution: Non Contributing

Feature: 10’ Culvert

Feature Identification Number: 113020

Type of Feature Contribution: Non Contributing

Feature: Concrete Box Culvert

Feature Identification Number: 113022

Type of Feature Contribution: Non Contributing

Feature: Texas Culvert

Feature Identification Number: 113024

Type of Feature Contribution: Non Contributing

Feature: Signs

Feature Identification Number: 113026

Type of Feature Contribution: Contributing

Feature: Gates (3)

Feature Identification Number: 113028

Type of Feature Contribution: Non Contributing

Feature: Marine Monument

Feature Identification Number: 113030

Type of Feature Contribution: Non Contributing

Feature: Log Curb at Marine Memorial

Feature Identification Number: 113032

Type of Feature Contribution: Non Contributing

Feature: Denman Falls Fence Reconstruction

Feature Identification Number: 113034

Type of Feature Contribution: Non Contributing

Feature: Culverts (2)

Feature Identification Number: 113036

Type of Feature Contribution: Undetermined

Contemporary photo showing a culvert with a stone headwall, 2005 (MORA).

Contemporary photo showing the rustic water fountain at Tahoma Vista, 2005 (MORA).

Topography

Introduction

The construction of the Westside Road required a significant amount of topographic manipulation which is still evident along the entire length of the road. Although great care was taken to minimize disturbance to the surrounding landscape, the road traversed severe topographic areas and required inclusion of rock cuts, cut and fill, berms, and ditches. Even in the flattest areas required alteration to the natural topography. And, as part of a touring road, the designers included observation platforms. These features survive today and contribute to the historic character of the Westside Road.

Rock Cuts

Rock cuts are sculpted rock faces of varying heights created through the construction of a road bed through steep, rocky terrain, typically involving a near-vertical cut on the interior, uphill side of the road. In keeping with the principles of naturalistic landscape architecture, NPS landscape architects specified several measures to be undertaken in order to ensure that the artificial rock cuts blended seamlessly with their natural environment. Rock cuts were not made perfectly vertical, but were battered at an angle, or blasted to leave overhanging ledges, to simulate a natural rock outcropping. Masons were directed work the faces of the cuts in order to hide the drill scars that remained after the initial blasting and cutting process. Pockets for vegetation were also created in the construction of the rock cuts to aid in the blending

effect. The top edges of the rock cuts were typically tapered into the natural slope and re-vegetated in order to further enhance the naturalistic properties of the cuts. The rock cuts can be classified into two primary types, vertical and battered. Vertical rock cuts are often composed of two or more levels or tiers of nearly vertical rock cuts. Battered cuts lean back away from the road significantly from bottom to top edge. Vertical rock cuts dominate those found on the Westside Road.

The rock cuts along the road can be divided into three general segments based upon the type of bedrock and character of the topography encountered in different areas. The rock cuts found in the Tahoma Creek segment are made through ridges of andesite reaching out from the base of Mount Wow. These charcoal colored vertical and battered cuts vary in size from 20 to 65 feet in height and 95 to 335 feet in length. They often step back away from the road creating a tiered effect. The rock cuts that occur within the Emerald Ridge and South Puyallup segments typically consist of easily fractured, shale-like bedrock. These cuts are characterized by extremely jagged, uneven faces. These cuts vary in height from 15 to 30 feet and in length from 60 to 1,390 feet. The highest concentration of rock cuts is found along the North Puyallup segment. The rock cuts in this segment are up to 60 feet tall and vary in length from 90 to 870 feet. Many of the eight rock cuts in this segment were made through columnar andesite. These cuts exhibit rows of hexagonal columns formed as lava from a prehistoric eruption cooled and contracted at the edge of the valley.

There are two locations along the route where natural streams coincide with the location of rock cuts. In these instances, crafted sculpted stream channels were constructed in order to create a pleasing aesthetic and auditory experience for visitors traveling along the road. These engineered waterfalls are among the most naturalistic of the historic features found along the road. The most carefully crafted and elaborate of the engineered waterfalls is located within the North Puyallup segment. A single stream is split into two small channels at a point just above the 15- to 18-foot cut. One channel flows to the peak of a small outcropping before falling to a lower battered section of the cut. Here, workers carved several rough horizontal ledges into the rock in order to cause the water to splash as it descends. This was done for both visual and audio effect. The other channel flows over the top of a rugged convex section of the cut, spreading out over the rock bulge and cascading across the face of the cut. This complexity and attention to detail is typical of the engineered waterfalls created during the rustic period.

Cuts and Fills & Berms

Cuts and fills, integral to the geometry of an engineered road, are found along the entire length of the Westside Road. A typical cross section of the road features a cut-side travel lane that is carved into the adjacent slope. The material gained from the cut was then used to create the fill-side travel lane. To the greatest extent possible, the designers and builders of the road attempted to equalize the amount of cut with the amount of fill material. Where the excavation of large rock cuts resulted in an excess of fill material, the surplus was often piled to create berms or used to create turnouts on the fill side of the road. The berms were then planted with

native vegetation and were used as a naturalistic design element along the road. The majority of the berms found along the Westside Road are located within the Tahoma Creek segment, where less material was required to create the fill travel lane in the less rugged topography of the lowlands. The many drainages and ridges reaching out from the base of Mount Wow required the construction of fill-through sections within this area as well. In these sections the road was built entirely on material brought in from other sections, creating an earthen bridge. The fill-through sections allowed the road to maintain a consistent grade while also maintaining the soft gentle curving alignment the road designers desired.

Ditches

Ditches are an integral feature of an engineered road. Ditches were included in the design and construction of the Westside Road and were intended to direct runoff. They work in conjunction with the numerous culverts and box culverts along the route to protect the roadbed from the damaging effects of runoff and erosion. The typical ditch constructed along the Westside Road measured 3 feet in width with a minimum depth of 8 inches, but the depth varied according to what was necessary to facilitate the movement of runoff through a given location. The ditches gradually increased in depth and carrying capacity as they extended from one culvert to the next. This was done in order to provide adequate flow capacity for the accumulation of runoff that would occur along the length of each segment. In this way, the ditches were highly variable along the route. The small dimensions of the ditches were part of the naturalistic design of the road. They were intended to have as little visual impact as possible and were designed to blend in with their natural surroundings.

Ditches were typically located on the cut side of the road. Exceptions to this occur at cut-through segments, which include ditches on both sides of the road, and at fill-through segments, where ditches were not a necessary element. There was approximately 79,150 linear feet of ditch created during the construction of the Westside Road. These original ditches are, in large part, still extant along the road in their original locations. Exceptions to this occur within the segment that has been impacted by glacial outburst floods from MP 3.50 to 4.30. Ditches do exist in the original location of the historic ditches in this segment, but they are significantly larger, contemporary features and were not constructed following the historic specifications. From MP 14.00 to 14.60 the ditches have been filled in by rockslides, tree-fall and the buildup of sediment and debris as well as at several other points along the North Puyallup segment and at few locations elsewhere along the route. Most of the ditches along the road have been accumulating sediment and debris throughout the past fifteen years in the absence of basic cyclical maintenance of the road, and are in need of cleaning to protect the road from washout.

Observation Platforms

Two artificial observation platforms are located along the Westside Road. These large man-made features were constructed to take advantage of particularly spectacular views of the mountain and the surrounding landscape. The first of these platforms is located at Tahoma Vista. National Park Service landscape architects designed a finger-like platform reaching out

and away from the road as part of a larger design plan for the area, which included other amenities such as parking, a comfort station, seating, and a water fountain. The platform was built on a natural ridge but required a massive amount of manipulation of the natural topography in order to create its large flat surface. When completed, the observation platform offered a nearly 360-degree view of the west side of the park including Mount Rainier, the Tahoma Creek valley, Mount Wow and the lesser peaks in the area. While the view has been largely obscured by the growth of vegetation, the platform remains unchanged.

The second observation platform is located at the Round Pass developed area. A report from one of the early surveys of the route mentions this location as a possible viewpoint to Mount Rainier and the South Tahoma Glacier. The 40 x 100-foot flat rectangular platform is referred to as the "observationary" in historic photographs of the feature. The platform rises 5 feet above the level of the road and is accessed by a set of rustic stone steps. It is surrounded on two sides by a rustic stone retaining wall. The feature later became the site of a memorial honoring a group of marines whose transport plane crashed on the South Tahoma Glacier during inclement weather in the fall of 1946.

Conclusion
The road still follows the same alignment as when it was opened. The manipulation of topography along Westside Road is evidenced in the constructed features of rock cuts, cut/fill and berms, ditches, and observation platforms. These topographic features retain integrity and contribute to the significance of the Westside Road.

See the topography chart in the Supplemental Information section of the Appendix, which includes feature locations.

Character-defining Features:

Feature: Rock cuts (21)

Feature Identification Number: 112964

Type of Feature Contribution: Contributing

Feature: Engineered creeks/waterfalls (2)

Feature Identification Number: 112966

Type of Feature Contribution: Contributing

Feature: Round Pass Observation platform

Feature Identification Number: 112968

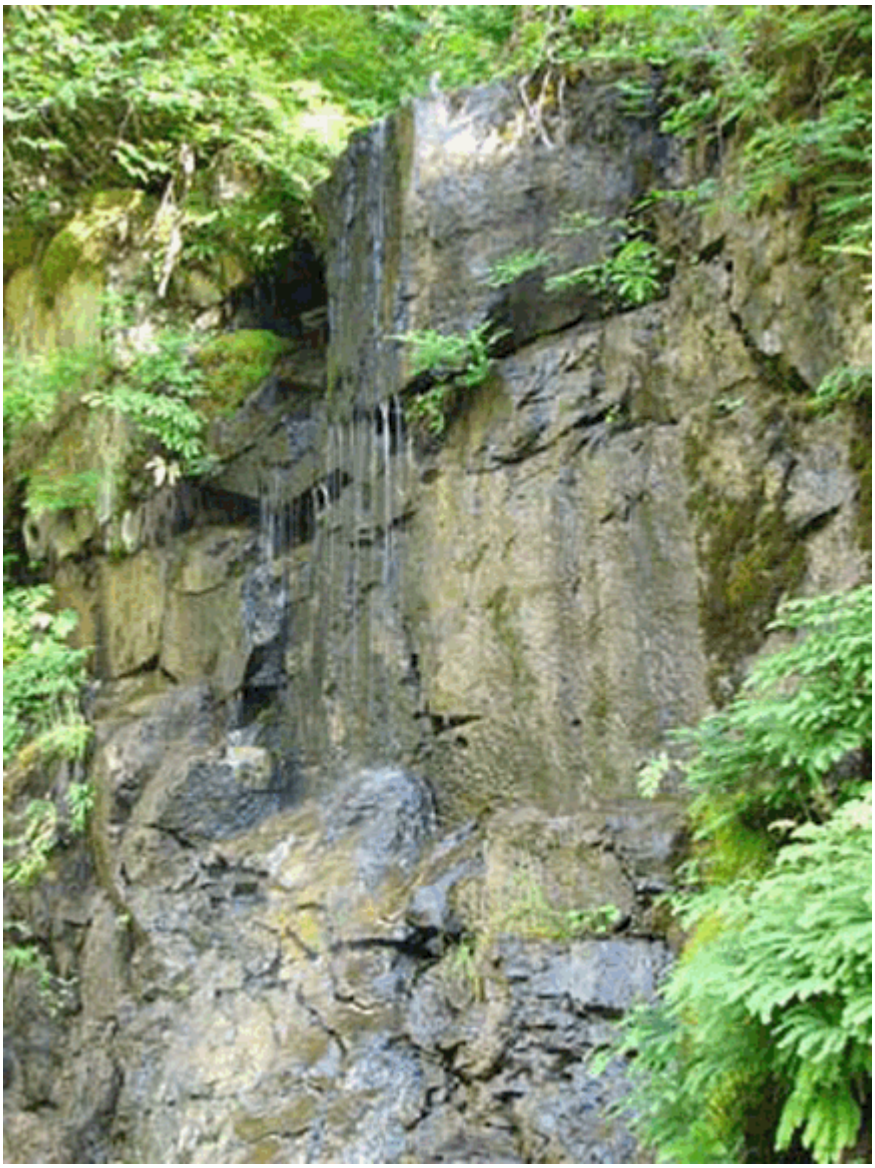
Type of Feature Contribution: Contributing

Feature: Tahoma Vista Platform

Feature Identification Number: 112970

Type of Feature Contribution: Contributing

Contemporary photo showing a battered rock cut along the Tahoma Creek segment, 2005 (MORA).



Contemporary photo showing an engineered waterfall along the North Puyallup Segment, 2005 (MORA).

Views and Vistas

Introduction

The extraordinary views enjoyed by visitors to the Westside Road were created by NPS landscape architects in the 1920s and 1930s through their thoughtful design for the road, particularly in its alignment. Along the length of the highway, the visitor is exposed to spectacular scenery and built features, including peaks, canyons, rock formations, waterfalls, creeks, a range of vegetation types, developed areas and bridges. The desire to access or create views along the route was of paramount importance in the design and construction of the road. In reports following inspections of the proposed route, NPS landscape architects often

noted the location and quality of views that could potentially be incorporated into the design, even creating annotated photographs of the views and locations on many occasions.

Sixteen views and vistas are identified that help to convey the historic character of the Westside Road. This likely does not represent the total number of views that were created or enhanced by NPS landscape architects during the design and construction of the Westside Road, or that in some way exerted an influence on the design of the road and its associated features. The views included in this inventory represent the most prominent of the remaining views.

Views found along the route are defined as either framed vistas or panoramic views. A framed vista is a one in which the visitor's sight line is directed toward a specific location or feature, framed by vegetation and often dependent upon a stationary viewer. Panoramic views are open, sweeping views of the surrounding landscape. Views and vistas are often associated with other features such as turnouts, trails and observation platforms.

Tahoma Creek Segment: MP 0.0-4.3
This segment was historically nearly absent of any designed views of the surrounding landscape. It is characterized by filtered views into the surrounding dense lowland forest. Views ahead of the traveler down the road corridor are limited by the curvilinear alignment of the road. On one occasion the road alignment creates a framed vista of the summit of Mount Rainier directly ahead of the northbound traveler.

Emerald Ridge Segment: MP 4.3-8.3
This segment is characterized by the two major constructed viewpoints found along the road. The first is at Tahoma Vista. NPS landscape architects designed an observation platform at this location, which is set on a natural promontory. The platform reaches out from Emerald Ridge and historically allowed a nearly 360-degree view of the landscape when it was constructed. Visitors were able to view Mount Rainier, Mount Wow, the Tahoma Creek valley and the lesser peaks in the area from this vantage point. The once wide-open, panoramic view has been significantly altered due to the unmanaged growth of the vegetation in and around the platform. What remain are view of Mount Rainier from a location near the end of the platform and an obstructed view of Mount Wow from another location nearer the center of the platform.

The second major viewpoint is found at Round Pass, where NPS landscape architects designed a rectangular viewing platform that offered views of Mount Rainier and the South Tahoma Glacier when it was originally constructed. This view has also been significantly altered by the unmanaged growth of vegetation around the platform. The view of the South Tahoma Glacier has been completely obscured and the once open view of the mountain has now been reduced to a framed vista of the upper reaches of Mount Rainier.

Three other historic views exist within this segment. The first can be found at a historic turnout on the southern slopes of Emerald Ridge. The view is visible from both a turnout and through

the alignment of the road for southbound travelers. The view would have historically offered filtered panoramic views of Mount Rainier, Mount Wow and the surrounding landscape. What remains is a framed vista of Mount Rainier. The rest of the original view has been obscured by the unmanaged growth of vegetation in the area. The final two contributing views in this segment are found at the South Puyallup River Bridge. The first is a close view of a small waterfall on the upstream side of the bridge. It can only be seen by visitors standing at the edge of the bridge. This framed vista is largely intact, but has been partially obscured by the growth of vegetation. The last view is a framed vista of Mount Rainier from the bridge. This view was originally created by CCC workers in 1933. It is now completely obscured by vegetation.

South Puyallup Segment: MP 8.3-12.2
The historic views in this segment consist of a cluster views created within the St. Andrews Creek developed area and a series of views of the Puyallup River valleys, the Puget Sound communities, and the far distant Olympics from locations at and approaching Klapatche Point. Three historic views are located within the St. Andrews Creek developed area.. Two of these views are found at the base of two sets of stairs that radiate from opposite ends of the bridge. These steps bring visitors to points beneath the bridge where they may enjoy a view of the bridge and St. Andrews Creek running beneath it. The other view in this area is found at the viewpoint overlooking Denman Falls on the Denman Falls loop trail. The viewpoint is set at the edge of a bluff directly adjacent to Denman Falls. From this point visitors are able to see not only the falls but a filtered panoramic view of Mount Wow and the South Puyallup River valley stretching away to the south and west. The view of the falls remains largely open and the view of the surrounding landscape is largely intact, but both are being encroached upon by the unmanaged growth of vegetation in the area.

The last of the contributing views in this segment are a series of views seen when approaching Klapatche Point and from the turnout located there. The view includes the confluence of the North and South Puyallup River valleys, the Puget Sound communities, and, on an exceptionally clear day, the peaks of the Olympics. The view gradually reveals itself as a visitor travels northbound toward Klapatche Point. A visitor is at first only given promissory glimpses of the view through the vegetation to the side of the road. These glimpses gradually expose greater portions of the panoramic view before it is finally revealed in its entirety just before reaching Klapatche Point. At Klapatchee Pont, there is space for parking edged by a rock guardwall. The view from the turnout at Klapatche Point once offered visitors a sweeping panoramic view of the South Puyallup River valley, its confluence with the North Puyallup River, the Puget Sound communities and the Olympics to the northwest, as well as a view to the north and east which included the North Puyallup River valley and Mount Rainier. National Park Service landscape architects were able to create this expansive view due to the area having been burned prior to the road's design and construction. The view was maintained through the 1940s through the use of the area around the point as a fire break. The view of the North Puyallup River valley and Mount Rainier has since been obscured by the growth of vegetation in the area.

North Puyallup Segment: MP 12.2-15.20
This segment is characterized by a dominant view of Mount Rainier that is revealed as the visitor passes Klapatche Point and remains visible for nearly the entire length of the segment as it approaches the foot of the mountain. The final view within this segment, and what was originally the view from the final terminus of the road, is located at the former North Puyallup River Crossing developed area. This spectacular view includes the Hanging Glacier, a vertical face of ice created by the Puyallup Glacier creeping out between two peaks, as well as a number of large waterfalls, several small peaks, and the headwaters of the North Puyallup River. Two parking areas allowed for parking vehicles and viewing the scenery from a small viewing area with a rock guardwall.

Conclusion
The unmanaged growth of vegetation near the roadway has in many cases partially obscured and in some cases completely blocked historic views. In other places washouts and debris flows have created views that did not exist during the historic period. These are noncontributing features and have not been included in this inventory. As a whole, those views that remain from the historic period retain integrity and help to convey the historic character of the Westside Road.

See the views and vistas chart in the Supplemental Information section of the Appendix, which includes viewpoint locations.

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Contemporary photo showing the view from the former site of the North Puyallup River Bridge, 2005 (MORA).

Vegetation

Introduction

The naturalistic style of landscape architecture placed great importance on integrating built features into the natural environment around them, and the use of vegetation played a primary role in the execution of this ideal. Vegetation was employed by NPS landscape architects in many different ways to achieve the desired effect. Vegetation was also seen as a character defining feature through both forest associations and specimen trees. Overall, the vegetation of the Westside Road cultural landscape retains a high degree of integrity and contributes to the historic character of the road.

Design Element

The use of vegetation was included in the design and construction of almost every feature. Trails were screened from view with plantings. Turnouts were lined with trees, grasses or groundcovers and were often anchored or marked with single specimen trees. Buildings and structures were blended into their surroundings through foundation plantings of native species. Cut and fill slopes were naturalized through the preservation or planting of trees, shrubs, grasses or even moss. Vegetation was used to create space, mark special features and locations, and to create an aesthetically pleasing experience. Single or grouped specimens were often planted or preserved during road construction in order to become natural attractions along the route.

Vegetation is unique among landscape characteristics as it inherently changes over time. NPS landscape architects designed and constructed the road with the knowledge that their vision would not come to fruition for many years. Only after enough time had past to allow the vegetation planted along the route to mature would the road landscape become truly naturalized and appear as the designers intended.

Character Defining
Vegetation plays a primary role in defining the character and experience of the Westside Road. The vegetation lining the road corridor affects the lighting, sight lines, atmosphere and the overall character of the road. The species composition, age, color, texture, density and form of the vegetation are all important in defining the character of the road.

Vegetation associated with the Westside Road consists of two categories: forest associations and specimen trees. Forest association refers to the type of vegetation community through which the road was constructed and to which the NPS landscape architects responded in their original designs. Specimen trees are specific individual plants or groups that were planted or preserved during the construction of the road and which still survive today.

The montane forest that surrounds the Westside Road is characterized by stretches of towering conifers with mature and closed-canopy conditions punctuated by open areas created by local conditions or past disturbances. The primary condition on the road is one of dappled light, high levels of moisture and a highly enclosed spatial feeling. Tall conifers serve both to define the edges of the road corridor as well as to frame views of Mount Rainier and the surrounding landscape. Shrubs and ground cover species provide intricacy and color to the road landscape, first erupting into bloom in the spring and summer before developing colorful fruits and berries in the late summer and fall. The leaves of many deciduous shrubs change color in the fall, transforming into a variety of yellows, oranges and reds before finally dropping their leaves for the winter.

The composition of the plant community through which the road travels is essentially the same as was present during the design and construction of the road. Not only the plant species themselves, but also the characteristics of light, enclosure and periodic openings caused by conditions and disturbances continue to define the character of the road landscape.

Trees were often preserved or planted during the construction of the road. The preservation of large-tree specimens directly adjacent to the roadway was fundamental in creating the atmosphere and character that NPS landscape architects desired for the rustic road. These preserved specimens are typically found on the fill side shoulder of the road, since the removal of material did not allow for the preservation of species on the cut slope. The large, mature trees induce a feeling of immersion within the natural world, create a sense of age and rusticity, and influence the scale of the road landscape, towering over the built works that are constructed around them. These specimens are still evident along the route today, evident in

their size, age, and proximity to the road edge, and are integral elements in defining the experience and character of the Westside Road. Many trees over 100 years old grow immediately adjacent to the road bed.

Specimen trees were used to mark built elements within the landscape. Trees were often planted or preserved immediately adjacent to turnouts and developed areas along the route in order to announce their location. They were also commonly planted at the corners of buildings and structures to anchor and blend them into the landscape. Tree species include Douglas fir (Pseudotsuga menziesii), western hemlock (Tsuga heterophylla), western red cedar (Thuja plicata) and Pacific silver fir (Abies amabilis).

Conclusion
The lack of maintenance activities for the past 15 years has allowed much of the intended character of the vegetation along the Westside Road to be obscured through unregulated growth. Today many of the historic features that were intended to be highlighted or blended into their surroundings through the use of vegetation have been all but lost in the unmanaged growth that has occurred. While this has had a substantial negative impact on the character and aesthetics of the rustic cultural landscape, it is a reversible change that may be mitigated through careful vegetation management.

It can be assumed that hundreds or possibly thousands of the original preserved and planted trees, shrubs and other vegetation types are still in existence along the route. The element of change over time, inherent of vegetation, requires the constant care and manipulation of the plants in order to maintain the desired aesthetic and experiential effect. It should be assumed that not only specific specimens but also the design uses and general characteristics of the vegetation along the road, such as its location directly adjacent to the roadway and around turnouts and other features, are also contributing details of the Westside Road cultural landscape and should be preserved. It is important to focus not only on specific specimens but also on the design uses, general character, and the relationship between vegetation and other historic features. These attributes are still evident, although somewhat obscured, along the Westside Road, and the historic character of the vegetation should be managed in the future. Overall, the historic characteristic of vegetation, including forest association, specimens and groupings, retain a high degree of integrity and contribute to the significance of the Westside Road.

See the vegetation chart in the Supplemental Information section of the Appendix, which includes specimen tree locations.

Natural Systems and Features

The entire design of the Westside Road is in essence a human response to natural systems and features. At its most basic level, the alignment of the road was determined by the location of specific exceptional natural features and the desire of the NPS landscape architects to align the road near these features. It was also determined by other natural factors such as the large and small scale topography of the area, the composition of bedrock and soils along the route, the location of opportune areas at which to cross major hydrologic boundaries, and a host of other

factors. The unpredictability of these factors at the time of road construction often required the road's designers and builders to modify their plans in the field as they encountered different conditions and circumstances.

At the scale of the individual feature, almost every historic feature along the route was in some way a conscious response to natural systems and features. For example, rock cuts were located in areas of extremely steep slopes that consisted of consolidated bedrock and occur throughout the entire length of the Westside Road.

The native plant community was also a design feature of the road. The entire length of the Westside Road lies within a single type of vegetation community, the montane forest. This vegetation community is dominated by an overstory mix of large conifers such as western hemlock (Tsuga heterophylla), Douglas-fir (Pseudotsuga menziesii), western red cedar (Thuja plicata), Pacific silver fir (Abies amabilis), and yellow-cedar (Chamaecyparis nootkatensis). The middle-story primarily consists of deciduous shrubs including vine maple (Acer circinatum), red alder (Alnus rubra), Rocky mountain maple (Acer glabrum), and Sitka alder (Alnus crispa ssp. sinuata). The understory is an extremely diverse mix of both evergreen and deciduous shrubs, herbs and forbs. The exact composition of species in any given location is dependent upon many factors including slope, aspect, soil composition, moisture levels, elevation and past disturbances. This results in a degree of variation along the route even within the single plant community. This characteristic of variability existed at the time of the road's design and construction and continues to define the character and experience of the road to this day.

Turnouts were often located where the natural topography of the area allowed designers to create a viewpoint from which to view the surrounding landscape. Developed areas were typically designed and constructed around specific natural features in order to allow visitors to explore them in greater detail and to come in contact with the park's natural resources. Bridges were located where it was necessary and possible to cross rivers or streams. Even small scale features such as culverts were located where the adjacent natural topography deemed them necessary. Every decision made by NPS landscape architects and BPR engineers in the design and construction of the road was in some respect a response to natural systems and features.

Even the basic aesthetic and resulting character of rustic park roads was a response to the natural features. NPS landscape architects, working in the naturalistic style of landscape architecture, took their inspiration from nature and sought to emulate the natural forms and characteristics in their designs. This is evident in the use of curvilinear forms, the great effort given to the preservation of roadside vegetation, the desire to minimize construction scars and to naturalize the road landscape after construction.

Conclusion

Changes to the road since the period of significance, such as the incursion of vegetation into the roadway, washouts, rockslides and the enlargement of the shoulder in the lower section of the

road due to the gradual accumulation of material, have had some negative impact on the historic character of the road. In spite of these changes, the road as a whole retains its historic character and landscape scale in relation to natural systems, and many of its original structures, patterns and other features still exhibit their intended relationship and connection to the natural world around them. Response to natural systems and features in the design and construction of the Westside Road retains a high degree of integrity and contributes to the significance of the road.

Archeological Sites

Introduction
Archeological sites inventoried by the CLI include the location of ruins, traces, or deposited artifacts in the landscape that are associated with the period of significance and are evidenced by the presence of either surface or substance features. Seven archaeological sites that date to the historic period were documented during the inventory process. Four of these are remnant features that have been lost since the construction of the road, all of which are found within the North Puyallup segment. Two others are remnants of the CCC camps which were located along the route and whose crews spent much time and effort finishing and maintaining the road. The last is the former location of a campground and picnic area were once located along the route. Because of their close association with the historic design and construction of the road, these archaeological sites contribute to the significance of the Westside Road.

Former CCC Camp N.P.1 Road Trace: MP 00.915
This archaeological site, visible leading away to the east from the edge of the road, is a road trace leading to the former location of CCC camp N.P.1 along the banks of Tahoma Creek. The former roadway is currently blocked by a contemporary rock barrier.

Former Tahoma Creek Campground and Picnic Area: MP 04.125
The former site of the Tahoma Creek Campground, devastated by a glacial outburst flood in 1967, is a potential archeological site. The campground was set between the Westside Road and Tahoma Creek on the banks of the creek. It included rustic features such as stone cook stoves and picnic tables. After the devastation of the campground, it was converted into the Tahoma Creek picnic area, which was destroyed by another glacial outburst flood in 1987.

Former CCC Camp N.P.4: MP 10.910
This archaeological site is the former site of CCC camp N.P.4. It is visible directly adjacent to the St. Andrews Creek Bridge on the south side of the stream. The site was the location of several large buildings and structures including bunkhouses, garages and offices between 1933 and 1941. A large clearing in the otherwise dense forest along with the tall stumps of large felled trees provide evidence of the once bustling camp.

Former Stone Guardwall: MP 12.800
This archaeological site is the former location of a rustic stone guardwall which once stood beside the road at the edge of the slope. Cut stones are visible down the fill slope from this location. The location of the foundation of the wall is also visible. Other walls may have been lost elsewhere along the route, but there is currently no record of their existence or location.

Former North Puyallup River Bridge: MP 15.000
A wood and concrete rustic bridge once stood where the road crossed the North Puyallup River at the terminus of the road. This bridge was unique among rustic park bridges in the use of a log stringer deck and concrete support columns wrapped in log cribbing. This once outstanding rustic feature was twice damaged by rockslides and was ultimately dynamited due to safety concerns. The remains of the bridge are visible lying in the North Puyallup River below its former location. The bridge abutments still stand on either side of the river.

Former North Puyallup Parking Area: MP 15.100
This parking area was historically surrounded by a rustic stone guardwall. Portions have since been lost to erosion and the growth of vegetation, although sections of the guardwall and retaining walls still remain, stretching to the north and west from the remnants of the North Puyallup River Bridge abutments. The turnout originally had a large stone-faced box culvert that has also been lost.

Former Cleared Segment 2-C2 Road Trace: MP 15.200
This archaeological site consists of a short segment of engineered roadbed running north from the former site of the North Puyallup River Bridge, as well as over three miles of cleared roadway running from this site to an unidentified location near Golden Lakes. Before construction on the Westside Road was brought to a halt, the firm of C.R. Johnson of Portland, Oregon had finished clearing a 3.2-mile segment between the North Puyallup River and Golden Lakes. Evidence of this is seen in the cut stumps which remain along the intended route of the Westside Road.

Condition

Condition Assessment and Impacts

Condition Assessment: Poor

Assessment Date: 09/01/2005

Stabilization Measures:

Vegetation Removal
The removal of large woody vegetation is necessary to stabilize the areas and features that are being negatively impacted by the incursion of vegetation. Vegetation that has been allowed to grow within the roadbed, ditches or the historic footprint of other features such as turnouts and observation platforms should be cut flush with the ground. This should be repeated on an annual or semi-annual basis to prevent excessive regrowth. The majority of the vegetation may be cut using mechanized means, but vegetation growing in close adjacency to historic features such as stone walls should be removed by hand to avoid damaging the features. This vegetation should be cut by hand and their root wads should not be pulled from the ground. The removal of vegetation and the re-establishment of the roadbed should occur within the historic specifications which provide for a 14- to 18 -foot travel surface with 2- to 3-foot shoulders, resulting in a 19 to 24-foot roadbed.

Ditch Restoration
The ditches along the road, which have acquired a large amount of soil and debris in the absence of regular maintenance activities, need to be re-established in order to permit the proper drainage of the road and to prevent further deterioration of the roadbed. This process will include the cutting and pulling of large woody vegetation within the ditches and the re-establishment of their original profile. The location of culverts with stone headwalls should be marked before vegetation removal begins. The removal of vegetation adjacent to historic features should be done by hand with care taken not to damage the features. Care should also be given to protecting stone headwalls during the cleaning and re-establishment of the ditches. The ditches should be restored to the historic specifications, which provide for a 3-foot wide channel with a minimum depth of 8 inches.

Culvert Cleaning
The cleaning and repair of culverts will also be required in order to permit the proper drainage of the road and to prevent further deterioration of the roadbed. This process will involve the hand removal of vegetation adjacent to the stone headwall of the culvert. The repair of the culverts will often also require the excavation of the headwall, many of which have been partially obscured by the buildup of sediment and debris. The stone headwalls of the culverts are important for the proper function of the culverts as they serve to protect the otherwise exposed end of the culvert and to anchor it in place. For this reason, as well as to preserve the integrity of these historic features, the headwalls that have been damaged should be repaired. The culvert pipes should also be cleaned out using an appropriate method. Again, care should be taken to ensure the protection of the historic components of the culverts

North Puyallup Segment: MP 12.2-15.20
This segment is characterized by a dominant view of Mount Rainier that is revealed as the visitor passes Klapatche Point and remains visible for nearly the entire length of the segment as it approaches the foot of the mountain. The final view within this segment, and what was originally the view from the final terminus of the road, is located at the former North Puyallup River Crossing developed area. This spectacular view includes the Hanging Glacier, a vertical face of ice created by the Puyallup Glacier creeping out between two peaks, as well as a number of large waterfalls, several small peaks, and the headwaters of the North Puyallup River. Two parking areas allowed for parking vehicles and viewing the scenery from a small viewing area with a rock guardwall.

Conclusion
The unmanaged growth of vegetation near the roadway has in many cases partially obscured and in some cases completely blocked historic views. In other places washouts and debris flows have created views that did not exist during the historic period. These are noncontributing features and have not been included in this inventory. As a whole, those views that remain from the historic period retain integrity and help to convey the historic character of the Westside Road.

See the views and vistas chart in the Supplemental Information section of the Appendix, which includes viewpoint locations.

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External or Internal: Internal

Impact Description: The deferral of regular, cyclical maintenance activities on approximately the upper 12 miles of the road has had, and continues to have a significant negative impact on the condition of the road and its associated features. The absence of regular maintenance activities such as brushing of roadside vegetation, cleaning of ditches and the grading of the roadbed has allowed a significant amount of vegetation incursion throughout the roadway. The stone features of the road are also in need of having their mortar joints re-pointed. The stone features of the road should be cleaned of debris, lichen, moss or buildup of other material in order to prevent further deterioration.

Type of Impact: Erosion

External or Internal: Internal

Impact Description: There is a significant amount of erosion occurring to cut slopes in many locations along the route. This problem is a result of the loose consistency of the glacial till in which the road was constructed, and the steep angle at which the cut slope was constructed. The inherent instability of the slope has prohibited proper revegetation and resulted in a bare exposed slope adjacent to the roadway. These scars in the landscape detract from the historic character of the site and should be stabilized through revegetation using native plant species.

Type of Impact: Exposure To Elements

External or Internal: Internal

Impact Description: Exposure to the elements is a natural condition for features located in a natural setting, but in the absence of regular maintenance activities this can lead to deterioration of the features. The stone features of the Westside Road, including the walls and bridges, are being negatively impacted by exposure to the elements. The mortar on most of the historic stone features has deteriorated and is in need of re-pointing. The deterioration has led to stones on many features becoming dislodged and separating from the rest of the feature.

Type of Impact: Flooding

External or Internal: Internal

Impact Description: Glacial outburst floods from the South Tahoma Glacier have repeatedly caused extensive damage to the lower section of the road since the 1960s. The most recent of these events resulted in damage to an approximately one-half mile segment of the road from MP 3.7-4.2.

Type of Impact: Improper Drainage

External or Internal: Internal

Impact Description: The lack of maintenance activities over the past 15 years has led to a significant buildup of soil and debris in and around the ditches and culverts, in many cases entirely filling ditches or completely blocking culverts. Due to the failure of the primary drainage system, runoff now crosses the roadbed in several locations causing significant erosion.

Type of Impact: Removal/Replacement

External or Internal: Internal

Impact Description: The improper removal of portions of several guardwalls along the road has negatively impacted their condition and integrity. Stones from these walls have been collected and stockpiled in order to prevent them from being lost over the fill slope. However, the preferred method for dismantling historic stone walls, including photo documentation and numbering the individual stones, was not followed and the reconstruction of these walls will be difficult. The removal of any additional stones should be avoided.

Type of Impact: Structural Deterioration

External or Internal: Internal

Impact Description: The stone walls along the road are the primary features being impacted by structural deterioration. The mortar in these features has been deteriorating and their joints are in need of re-pointing. This is particularly important on many of the walls which were not constructed with a single capstone spanning the entire width of the wall. The deterioration of the mortar joints on the top of the walls allows moisture to enter the interior of the feature, causing a significant amount of structural deterioration. The joints should be repointed and maintained in order to prevent further deterioration.

Type of Impact: Vegetation/Invasive Plants

External or Internal: Internal

Impact Description: The unmanaged growth of vegetation has had, and continues to have a significant negative impact on the condition and integrity of the road. The absence of maintenance activities such as brushing and grading has allowed the incursion of a large amount of vegetation into the roadbed and other spaces along the road. The growth of vegetation within the roadbed can cause instability and may lead to additional damage to the road. This vegetation should be removed in order to prevent further incursion and damage. When removing the vegetation, care should be taken to prevent damage to historic features.

Stabilization Costs

Landscape Stabilization Cost: 1,000,000.00

Cost Date: 07/15/2005

Level of Estimate: C - Similar Facilities

Cost Estimator: Park/FMSS

Landscape Stabilization Cost Explanatory Description:

Landscape stabilization costs are based upon the suggested procedures from the "Stabilization Measures" section. These figures are an estimate and the actual final cost of stabilization may vary.

Treatment

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Approved Treatment: Rehabilitation

Approved Treatment Document: General Management Plan

Document Date: 09/01/2001

Approved Treatment Costs

Landscape Treatment Cost: 0.00

Cost Date: 09/01/2001

Bibliography and Supplemental Information

Bibliography

Citation Author:	Burtchard, Greg
Citation Title:	Environment, Prehistory & Archaeology of Mount Rainier National Park, Washington
Year of Publication:	1998
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	NPS Libraries

Citation Author:	Carr, Ethan
Citation Title:	Wilderness by Design: Landscape Architecture & the National Park Service
Year of Publication:	1998
Citation Publisher:	University of Nebraska Press
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Citation Location:	NPS Libraries

Citation Author:	Carr, Ethan, Stephanie Toothman, Ph.D., and Susan Begley
Citation Title:	Mount Rainier National Park, National Historic Landmark District Nomination
Year of Publication:	1996
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Citation Location:	MORA Archives

Citation Author:	Catton, Theodore
Citation Title:	Wonderland, an Administrative History of Mount Rainier National Park
Year of Publication:	1996
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	NPS Libraries

Citation Author:	Diaz, Benjamin
Citation Title:	Personal Interview, Park Archeologist, Mount Rainier National Park
Year of Publication:	2005

Citation Author:	Hatcher, Candy
Citation Title:	The Ghosts of Rainier, Marines: The Mountain's Greatest Tragedy, March 30, 2000
Year of Publication:	2000
Citation Publisher:	Seattle Post-Intelligencer
Citation Type:	Narrative
Citation Location:	MORA Archives

Citation Author:	Hendee, John
Citation Title:	Public Response to the Mount Rainier National Park Draft Wilderness Proposal and Master Plan—Analysis and Summary
Year of Publication:	1974
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	National Park Service
Citation Title:	Master Plan, Mount Rainier National Park, Washington
Year of Publication:	1938
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	National Park Service
Citation Title:	Master Plan, Mount Rainier National Park, Washington
Year of Publication:	1940
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

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Citation Title:	Memorandum from NPS Regional Landscape Architect Harold G. Fowler to the Regional Chief of Operations for Region Four, August 9, 1961
Year of Publication:	1961
Citation Type:	Narrative
Citation Location:	MORA Archives

Citation Author:	National Park Service
Citation Title:	Department of the Interior Draft Environmental Statement Proposed Mount Rainier Wilderness, Mount Rainier National Park, Washington.
Year of Publication:	1973
Citation Type:	Narrative
Citation Location:	MORA Archives

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Year of Publication:	1976
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Citation Location:	MORA Archives

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Citation Title:	Park Road Standards
Year of Publication:	1984
Citation Type:	Narrative
Citation Location:	MORA Archives

Citation Author:	National Park Service
Citation Title:	Tahoma Creek Stream Diversion Environmental Assessment, Mount Rainier National Park, Washington.
Year of Publication:	1988
Citation Type:	Narrative
Citation Location:	MORA Archives

Citation Author:	National Park Service
Citation Title:	Environmental Assessment for Management of the Westside Road, Mount Rainier National Park, Washington
Year of Publication:	1992
Citation Type:	Narrative
Citation Location:	MORA Archives

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Year of Publication:	1992
Citation Type:	Narrative
Citation Location:	MORA Archives

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Year of Publication:	2000
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Quinn, Richard H.
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Year of Publication:	1992
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Quinn, Richard H.
Citation Title:	HAER: St. Andrews Creek Bridge, No. WA-51
Year of Publication:	1992
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Quinn, Richard H.
Citation Title:	HAER: South Puyallup River Bridge, No. WA-52
Year of Publication:	1992
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Quinn, Richard H.
Citation Title:	HAER: The West Side Road, No. WA-122
Year of Publication:	1992
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Short, C.R.
Citation Title:	Final Construction Report on West Side Highway, Southwest Entrance-Round Pass, Grading and Surfacing, Project 2-A, Mount Rainier National Park, Pierce County, State of Washington
Year of Publication:	1930
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Citation Author:	Thompson, Erwin N.
Citation Title:	Mount Rainier National Park, Washington, Historic Resource Study
Year of Publication:	1981
Citation Publisher:	National Park Service
Citation Type:	Both Graphic and Narrative
Citation Location:	MORA Archives

Supplemental Information

Title: Buildings and Structures Features Chart

Description: Data collected during CLI fieldwork in July 2005. In the features lists, each feature is given a unique identity number noted in miles. The mile point system along the Westside Road begins at MP 0.0 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Buildings and Structures Features Chart

FeatureID	Height:	Length:	Contributing:	Compatible:	FeatureName	Type
MP00.020		30	No	No	3 – Rock Barrier	Linear
MP00.910			No	Yes	3 – Rock Barrier	Random
MP05.200	24	525	Yes		3 – Guard wall	Type 2
MP05.210	2	535	Yes		3 – Guard wall	Type 2-B
MP05.350	12.5	33	Yes		3 – Building	Comfort Station
MP05.400	2	290	Yes		3 – Guard / retaining wall	Type 2
MP06.910	20	134	No	Yes	3 – Retaining wall	Stone
MP08.200	233	120	Yes		3 – Bridge	South Puyallup Bridge
MP10.600	2	516	Yes		3 – Guard wall	Type 2
MP10.923	22	115	Yes		3 – Bridge	St. Andrews Creek Bridge
MP10.923	7	40	Yes		3 – Retaining wall	Stone
MP10.930	3	30	Yes		3 – Retaining wall	Stone
MP10.931	4	30	No	Yes	3 – Bridge	Denman Falls trail bridge
MP10.932	3	30	Yes		3 – Retaining wall	Stone
MP10.941	30	100	Yes		3 – Guard wall	Type 2
MP10.953	15	20	Yes		3 – Structure	St. Andrews Patrol Cabin
MP11.190	15	578	Yes		3 – Guard / retaining wall	Type 2-B
MP12.000	2	921	Yes		3 – Guard wall	Type 2
MP12.200			No	No	3 – Rock Barrier	Linear
MP13.150	30	360	Yes		3 – Guard / retaining wall	Type 2-B
MP13.480	2	660	Yes		3 – Guard / retaining wall	Type 2
MP14.560	15	570	Yes		3 – Guard / retaining wall	Type 2
MP14.870	30	450	Yes		3 – Guard / retaining wall	Type 2
MP14.960	2	175	Yes		3 – Guard wall	Type 1
MP14.980	25	55	Yes		3 – Guard / retaining wall	Type 2-B

Title: Circulation Features Chart

Description: Data collected during CLI fieldwork in July 2005. In the features list, each feature is given a unique identity number noted by a mile point location number. The mile point

system along the Westside Road begins at MP 0.0 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Circulation Features Chart

FeatureID	FeatureName	Length:	Contributing:	Compatible:	Type:	Association:
MP00.000	2 – Intersection		No	No	Tee configuration	
MP00.025	2 – Turnout	120	No	No	Lens	Other
MP00.027	2 – Turnout	110	No	No	Lens	Other
MP00.500	2 – Turnout	60	No	No	Lens	Shoulder Widening
MP02.700	2 – Turnout	87	No	No	Lens	Shoulder Widening
MP03.080	2 – Turnout	121	No		Lens	Other
MP03.900	2 – Turnout	90	Yes		Amorphous	View
MP04.300	2 – Trailhead		No	No	Terminus	Turnout
MP04.301	2 – Turnout	45	No	No	Trapezoidal	Trail Head
MP04.500	2 – Turnout	120	Yes		Bell	View
MP05.205	2 – Turnout	280	Yes		Bell	Develop Area
MP05.215	2 – Turnout	184	Yes		Bell	Develop Area/View
MP05.351	2 – Trail		Yes			
MP06.800	2 – Trailhead		Yes		Terminus	Turnout
MP06.800	2 – Turnout	200	Yes		Parking area	Develop Area
MP06.810	2 – Trailhead		Yes		Terminus	Turnout
MP06.880	2 – Turnout	275	Yes		Amorphous	Develop Area
MP06.890	Stairs		Yes		Stairs	Round Pass
MP08.100	2 – Trailhead		Yes		Terminus	Turnout
MP08.200	2 – Turnout	70	Yes		Bell	Trail Head
MP10.900	2 – Trailhead		Yes		Terminus	Turnout
MP10.900	2 – Turnout	120	Yes		Bell	Develop Area
MP10.910	2 – Trailhead		Yes		Terminus	Other
MP10.911	2 – Trail		Yes			
MP10.920	2 – Trail		Yes			Bridge
MP10.920	2 – Trailhead		Yes		Terminus	Turnout
MP10.923	Stairs		Yes		Stairs	St. Andrews Creek Bridge
MP10.930	Stairs		Yes		Stairs	St. Andrews Creek Bridge
MP10.940	2 – Trail		Yes			Bridge
MP10.950	2 – Turnout	120	Yes		Bell	Develop Area
MP10.952	2 – Trail		Yes			
MP12.100	2 – Turnout	311	Yes		Bell	View
MP12.210	2 – Trailhead		No	No	Terminus	Stone Barrier
MP12.850	2 – Turnout	60	Yes		Bell	View
MP13.200	2 – Turnout	80	Yes		Bell	View
MP14.950	2 – Turnout	225	Yes		Parking area	Rock Cut
MP14.970	2 – Turnout	150	Yes		Bell	View
MP14.970	2 – Turnout	150	Yes		Bell	View

Title: Small Scale Features Chart

Description: Data collected during CLI fieldwork in July 2005. In the features lists, each feature is given a unique identity number noted in miles. The mile point system along the Westside Road begins at MP 0.0 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Small Scale Features Chart

FeatureID	Contributing:	Compatible:	FeatureName	Type
M0P8.300	Yes		8 – Culvert	24" Culvert
MP00.026	No	No	8 – Sign	Wood panel with plywood roof
MP00.030	Yes		8 – Culvert	24" Culvert
MP00.090	No	No	8 – Gate	Mission 66 style entrance gate
MP00.200	Yes		8 – Culvert	18" Culvert
MP00.250	No	No	8 – Culvert	18" Culvert
MP00.310	Yes		8 – Culvert	18" Culvert
MP00.450	Yes		8 – Culvert	18" Culvert
MP00.530	Yes		8 – Culvert	18" Culvert
MP00.700	Yes		8 – Culvert	18" Culvert
MP00.900	Yes		8 – Culvert	18" Culvert
MP01.000	No		8 – Culvert	18" Culvert
MP01.300	No	No	8 – Culvert	18" Culvert
MP01.400	No	No	8 – Culvert	30" Culvert
MP01.440	No	No	8 – Culvert	24" Culvert
MP01.510	No	No	8 – Culvert	18" Culvert
MP01.750	Yes		8 – Culvert	30" Culvert
MP01.860	No	No	8 – Culvert	24" Culvert
MP01.900	No	No	8 – Culvert	18" Culvert
MP02.150	Yes		8 – Culvert	18" Culvert
MP02.200	No	No	8 – Culvert	18" Culvert
MP02.300	Yes		8 – Culvert	18" Culvert
MP02.500	Yes		8 – Culvert	18" Culvert
MP02.700	No	Yes	8 – Culvert	18" Culvert
MP02.800	No	No	8 – Culvert	36" Culvert
MP03.100	No	No	8 – Culvert	Box culvert
MP03.200	No	No	8 – Gate	Jersey barriers with chain
MP03.450	No	No	8 – Gate	Jersey barriers with chain
MP03.500	No	No	8 – Culvert	10' Culvert
MP03.800	No	No	8 – Culvert	Texas Culvert
MP04.430	Yes		8 – Culvert	24" Culvert
MP04.490	Yes		8 – Culvert	18" Culvert
MP04.810	Yes		8 – Culvert	24" Culvert
MP05.150	Yes		8 – Culvert	18" Culvert
MP05.230	No	Yes	8 – Culvert	18" Culvert
MP05.300	Yes		8 – Seating	Stone seating cluster
MP05.310	Yes		8 – Fountain	Stone fountain
MP05.311	Yes		8 – Seating	Stone seating cluster
MP05.313	Yes		8 – Seating	Stone seating cluster

MP05.610	Yes		8 – Culvert	18" Culvert
MP05.760	Yes		8 – Culvert	18" Culvert
MP05.910	Yes		8 – Culvert	18" Culvert
MP06.440	Yes		8 – Culvert	18" Culvert
MP06.600	Yes		8 – Culvert	18" Culvert
MP06.920	No	Yes	8 – Curb	Log curb
MP06.930	No	Yes	8 – Monument	Marine Memorial
MP07.100	No	Yes	8 – Culvert	18" Culvert

FeatureID	Contributing:	Compatible:	FeatureName	Type
MP07.120	Yes		8 – Culvert	18" Culvert
MP07.130	Yes		8 – Culvert	18" Culvert
MP07.200	Yes		8 – Culvert	18" Culvert
MP07.300	Yes		8 – Culvert	18" Culvert
MP07.400	Yes		8 – Culvert	18" Culvert
MP07.450	Yes		8 – Culvert	18" Culvert
MP07.500	Yes		8 – Culvert	24" Culvert
MP07.530	Yes		8 – Culvert	24" Culvert
MP07.620	Yes		8 – Culvert	18" Culvert
MP07.670	Yes		8 – Culvert	18" Culvert
MP07.800	Yes		8 – Culvert	18" Culvert
MP07.900	No	No	8 – Culvert	18" Culvert
MP08.000	No	No	8 – Culvert	24" Culvert
MP09.050	Yes		8 – Culvert	18" Culvert
MP09.080			8 – Culvert	Unknown
MP09.090	Yes		8 – Culvert	18" Culvert
MP09.100	No	No	8 – Culvert	18" Culvert
MP09.150			8 – Culvert	18" Culvert
MP09.200	No	No	8 – Culvert	18" Culvert
MP09.300	Yes		8 – Culvert	18" Culvert
MP09.400	Yes		8 – Culvert	24" Culvert
MP09.450	Yes		8 – Culvert	24" Culvert
MP09.600	Yes		8 – Culvert	18" Culvert
MP09.690	No	No	8 – Culvert	18" Culvert
MP09.700	Yes		8 – Culvert	18" Culvert
MP09.750	Yes		8 – Culvert	18" Culvert
MP09.800	Yes		8 – Culvert	30" Culvert
MP10.000	No	No	8 – Culvert	18" Culvert
MP10.100	Yes		8 – Culvert	18" Culvert
MP10.150	Yes		8 – Culvert	18" Culvert
MP10.300	Yes		8 – Culvert	18" Culvert
MP10.500	Yes		8 – Culvert	30" Culvert
MP10.800	Yes		8 – Culvert	18" Culvert
MP10.909	No	No	8 – Sign	St. Andrews Patrol Cabin
MP10.936	Yes		8 – Fence	Split rail
MP11.050	Yes		8 – Culvert	18" Culvert
MP11.100	Yes		8 – Culvert	18" Culvert
MP11.200	Yes		8 – Culvert	18" Culvert
MP11.300	Yes		8 – Culvert	18" Culvert
MP11.500	Yes		8 – Culvert	18" Culvert

MP11.600	Yes		8 – Culvert	18" Culvert
MP11.700	Yes		8 – Culvert	18" Culvert
MP14.800	No	No	8 – Culvert	30" Culvert
MP14.890	Yes		8 – Culvert	18" Culvert

Title: Topography Features Chart

Description: Data collected during CLI fieldwork in July 2005. In the features lists, each feature is given a unique identity number noted in miles. The mile point system along the Westside Road begins at MP 0.0 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Topography Features Chart

FeatureID	Height:	Length:	Contributing:	Compatible:	FeatureName	Type
MP00.010	6	75	No	No	5 – Berm	Nisqually intersection
MP00.300	15		Yes		5 – Engineered creek	Large (> 12')
MP00.800	40	208	Yes		5 – Rock cut	Vertical
MP00.900	45	230	Yes		5 – Rock cut	Battered
MP01.600	25	114	Yes		5 – Rock cut	Vertical
MP01.800	20	94	Yes		5 – Rock cut	Vertical
MP01.900	35	294	Yes		5 – Rock cut	Battered
MP02.400	65	335	Yes		5 – Rock cut	Vertical
MP03.300	20	143	Yes		5 – Rock cut	Vertical
MP05.314		140	Yes		5 – Observation platform	Tahoma Vista
MP05.600	30	299	Yes		5 – Rock cut	Vertical
MP06.900	6	100	Yes		5 – Observation platform	Round Pass
MP07.300	15	69	Yes		5 – Rock cut	Vertical
MP10.700	20	60	Yes		5 – Rock cut	Vertical
MP11.200	35	244	Yes		5 – Rock cut	Vertical
MP11.250	15	105	Yes		5 – Rock cut	Vertical
MP11.900	30	1391	Yes		5 – Rock cut	Battered
MP12.400	20	570	Yes		5 – Rock cut	Vertical
MP12.810	20	90	Yes		5 – Rock cut	Vertical
MP12.900	30	270	Yes		5 – Rock cut	Vertical
MP13.160	45	100	Yes		5 – Rock cut	Vertical
MP13.500	50	420	Yes		5 – Rock cut	Vertical
MP14.570	60	870	Yes		5 – Rock cut	Vertical
MP14.700	20	285	Yes		5 – Rock cut	Vertical
MP14.710	15		Yes		5 – Engineered creek	Large (> 12')
MP14.850	20	330	Yes		5 – Rock cut	Vertical

Title: Views and Vistas Features Chart

Description: Data collected during CLI fieldwork in July 2005. In the features lists, each feature is given a unique identity number noted in miles. The mile point system along the Westside Road begins at MP 0.0 at the south end of the road where it intersects with the Nisqually Road and ends at the North Puyallup River where the road terminates at MP 15.20.

Views and Vistas Features Chart

FeatureID	Contributing:	Compatible:	FeatureName:	Type:	Association:
MP02.900	No	Yes	7 – Panoramic view	Moving Vehicle/ Stationary Vehicle	Travel Lane
MP03.100	No	Yes	7 – Panoramic view	Moving Vehicle/ Stationary Vehicle	Turnout
MP03.900	Yes		7 – Framed vista	Moving Vehicle	Alignment
MP04.550	Yes		7 – Panoramic view	Moving Vehicle/ Stationary Vehicle	Turnout/Alignment
MP05.312	Yes		7 – Panoramic view	Pedestrian/Vehicle	Observation Platform
MP06.910	Yes		7 – Framed vista	Pedestrian	Observation Platform
MP08.210	Yes		7 – Framed vista	Moving Vehicle/ Pedestrian	Bridge
MP08.211	Yes		7 – Framed vista	Pedestrian	Bridge
MP10.929	Yes		7 – Framed vista	Pedestrian	Bridge/Trail
MP10.935	Yes		7 – Panoramic view	Pedestrian	Prospect/Trail
MP10.939	Yes		7 – Framed vista	Pedestrian	Bridge/Trail
MP11.900	Yes		7 – Panoramic view	Moving Vehicle	Travel Lane
MP12.150	Yes		7 – Panoramic view	Stationary Vehicle	Turnout
MP12.350	Yes		7 – Panoramic view	Moving Vehicle	Alignment
MP12.870	Yes		7 – Panoramic view	Stationary Vehicle	Turnout
MP13.000	Yes		7 – Framed vista	Moving Vehicle	Alignment
MP13.210	Yes		7 – Panoramic view	Stationary Vehicle	Turnout
MP14.990	Yes		7 – Panoramic view	Stationary Vehicle	Turnout