Appendix 5: Draft Cultural Landscape Inventory (CLI) (detached)

This detachment is available on the park's website located at http://www.nps.gov/mora and on the Planning, Environment and Public Comment (PEPC) website located at http://parkplanning.nps.gov/mora.

DRAFT

National Park Service Cultural Landscapes Inventory 2006





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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 Carbon River Road is a five-mile linear landscape that was designed by early NPS engineers as a pleasure drive along the Carbon River. The alignment of the road was selected to showcase the scenery associated with the landscape while also serving as a transportation corridor through a small segment of Mount Rainier National Park. The road begins at the northwest entrance to the park and continues east towards the Ipsut Creek Campground where it terminates. Along the route, the road provides access to several visitor destinations, which include the Chenuis Falls picnic area and various trailheads. Significantly, many visitors also utilize the Wonderland Trailhead, situated at the end of the Carbon River Road, to gain access to the Carbon Glacier and the 93-mile route around the mountain.

The Carbon River Road is a nationally significant historic designed landscape that is a rare example of an early national park scenic highway, and is an integral part of the early master plan for the park. The road is distinguished by its survey (1915) and construction date (1921-24), which serve to represent early National Park Service road engineering and building skills prior to the involvement of the Bureau of Public Roads. The period of significance for the Carbon River Road is from 1915-1941, reflecting the period when the NPS coordinated the design and construction of the road. Furthermore, this period represents CCC maintenance and development efforts along the road. The naturalistic character of the road is evident in its remaining landscape characteristics: spatial organization, circulation, 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.

Property Level and CLI Numbers

Inventory Unit Name: Carbon River Road



Property Level: Landscape

CLI Identification Number: 400022

Parent Landscape: 400022

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 Carbon River Road is a cultural landscape with no component landscapes.

Concurrence Status

Inventory Status: Incomplete

Completion Status Explanatory Narrative:

Carbon River Entrance Road is a contributing structure within the National Historic Landmark nomination for Mount Rainier National Park. The road is a discontiguous part of the NHL District.

Concurrence Status:

National Register Concurrence: Eligible -- Keeper

Date of Concurrence Determination: 02/18/1997

Geographic Information & Location Map

Inventory Unit Boundary Description:

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 road in either direction) and incorporating all of the historic structures associated with the roads construction, including ditches, swales, culverts, and retaining walls." Findings from this CLI suggest that the boundary described in the NHLD is sufficient for the Carbon River Road. However, it should be noted that two features exist along the road corridor that do not fall within these boundaries. Rather than changing the boundaries of the NHLD to include these features, they should be classified as discontiguous features within the district.

The boundary is defined in this CLI as 30 feet on either side of the centerline of the road for a distance of approximately 4.9 miles beginning at the Carbon River park boundary and terminating at the end of the parking area associated with the Ipsut Creek Campground. At two points along this corridor, the boundary includes discontiguous features. The first discontiguous feature includes remnants of CCC era log cribbing. Located on the north side of the Carbon River Road, near the Carbon River, this feature is situated behind the comfort station at the park entrance. The second discontiguous feature is also identified as CCC era log cribbing and is located on the north side of the road near Falls Creek and the site of Evan's Camp, approximately 1.8 miles from the park entrance.

State and County:

State: WA

County: Pierce County

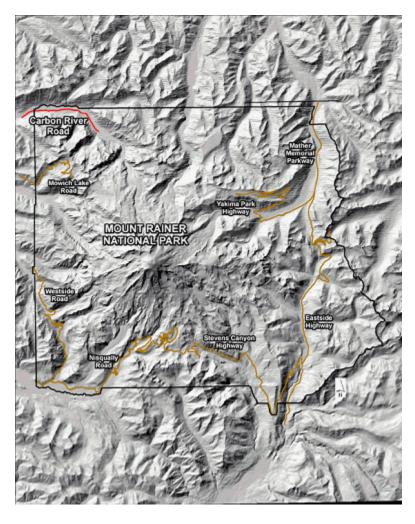
Mount Rainier National Park



Boundary UTMS:

Source	Type of Point	<u>Datum</u>	<u>UTM</u> Zone	<u>UTM</u> Easting	<u>UTM</u> Northing
USGS Map 1:62,500	Line	NAD 83	10	582,428	5,205,164
USGS Map 1:62,500	Line	NAD 83	10	583,851	5,205,169
USGS Map 1:62,500	Line	NAD 83	10	585,486	5,205,347
USGS Map 1:62,500	Line	NAD 83	10	586,848	5,205,257
USGS Map 1:62,500	Line	NAD 83	10	587,787	5,204,929
USGS Map 1:62,500	Line	NAD 83	10	588,905	5,203,243

Location Map:



Map of Mount Rainier National Park showing the location of the Carbon River Road within the park (PWRO).



GIS File Description:

The GIS files contain landscape feature data pertinent to the Cultural Landscape Inventory for the Carbon River 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 west end of the road where it meets the park boundary. The end point is just beyond the Ipsut Creek Campground at the Wonderland Trailhead parking area at MP 4.9. These GIS files are located at MORA.



Management Information

General	Management	Information
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Management Category: Must be Preserved and Maintained

Management Category Date: 02/18/1997

Management Category Explanatory Narrative:

The Carbon River Entrance Road meets this management category because it is an inventory unit that is nationally significant as defined by National Historic Landmark criteria.

Agreements, Legal Interest, and Access

Management Agreement:

Expiration Date: NA

NPS Legal Interest:

Type of Interest: Fee Simple

Public Access:

Type of Access: Other Restrictions

Explanatory Narrative:

The road is subject to flooding and may close when necessary.

Adjacent Lands Information

Do Adjacent Lands Contribute?



National Register Information

Existing National Register Status

National Register Landscape Documentation:

Entered Inadequately Documented

National Register Explanatory Narrative:

The Ipsut Creek Patrol Cabin, located at the eastern end of the Carbon River Road, was nominated to the National Register of Historic Places as part of a mulitiple property nomination in 1991. The Carbon River Road, however, was not included in the nomination.

In 1997, the Carbon River Road and its associated features were described in the 1997 National Historic Landmark District nomination. 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 as well as provides greater detail of the road's history and extant landscape features.

NRIS Number: 91000181

Primary Certification: Listed In The National Register

Primary Certification Date: 03/13/1991

Other Certifications and Date: Date Received/Pending Nomination - 1/29/1991

Name in National Register: Ipsut Creek Patrol Cabin

Other Names: C-250

National Register Eligibility

National Register Concurrence: Eligible -- Keeper

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 1915 - 1941

Historic Context Theme: Creating Social Institutions and Movements

Subtheme: Recreation

Facet: General Recreation

Time Period: AD 1915 - 1941

Historic Context Theme: Expressing Cultural Values

Subtheme: Landscape Architecture

Facet: Development Of Transportation And Land Tenure Systems

Time Period: AD 1915 - 1941

Historic Context Theme: Expressing Cultural Values

Subtheme: Landscape Architecture

Facet: The 1930's: Era Of Public Works

Area of Significance:

Area of Significance Category Area of Significance Subcategory

Landscape Architecture None
Engineering None
Architecture None

Statement of Significance:

The Carbon River Road is a cultural landscape within the Mount Rainier National Historical Landmark District (NHLD). Designated in 1997, the NHLD is nationally significant for its association with the American Park Movement and early National Park Service (NPS) master planning efforts (criterion A). Additionally, the NHLD is significant for its association with a naturalistic landscape design and engineering style (criterion C), which was perpetuated by the NPS between the First and Second World Wars. The period of significance for the NHLD spans the years 1906-1957, reflecting an intensive period of rustic development in the park. As part of the NHLD, the Carbon River Road is significant for its association with the national park system's most complete example of master planning. It is also significant for its landscape engineering as a scenic park road.

Located in the northwest corner of Mount Rainier National Park, the 4.9-mile Carbon River Road was constructed between 1921-1924. Extending from the west park boundary, the road gradually progresses east towards the Ipsut Creek Campground where it terminates. Historically, the road extended approximately three additional miles to Cataract Creek, near the snout of the Carbon Glacier; however, this segment of road was abandoned due to maintenance related issues associated with flood damage. The period of significance for the Carbon River Road begins in 1915 when the alignment of



the road was staked out in a field survey. The period extends to 1941, when CCC laborers disassembled their camp in the Carbon River District. This period of significance reflects an integral period of development in which NPS officials planned, surveyed and constructed the road. Furthermore, this period includes CCC landscaping, maintenance and repair activities along the Carbon River Road.

Criterion A

In association with the events of the American Park Movement and early NPS master planning, the construction of the Carbon River Road played an important role in the master planning process at Mount Rainier National Park as first developed in 1920s.

While the Carbon River Road was surveyed and built prior to the development of the first master plan in 1928, it still played a significant role in park planning from an early date. The concept of the Carbon River Road had its origins in early 20th century plans created by NPS Engineer Hiram Chittenden and Assistant Engineer Eugene Ricksecker. These plans included the development of a series of roads that would circumnavigate the mountain, just below the glacier line. This development, referred to as the "Around-the Mountain-Road" plan, was proposed as a viable planning strategy for the park during the 1910s and early 1920s.

As construction of the Carbon River Road was undertaken in the early 1920s, Park Superintendent O.A. Tomlinson and NPS Director, Stephen Mather continued to promote the "Around-the-Mountain-Road" concept. To supplement this idea, park officials envisioned the development of a West Side Road that would connect with the Carbon River Road. Significantly, this road would serve to link Longmire and Paradise in the southern portion of the park to the Carbon River and Mowich Lake areas in the north. Additional development plans were also proposed by park officials at this time, which included the construction of a road that would link the Carbon Road to the Storbo Road or the McClellan Pass Highway. As a result, this road would serve to connect the northwest side of the park to the northeast side, thereby completing another link in the "Around-the-Mountain-Road".

Ultimately, budget constraints and rugged topography prevented the completion of the West Side Road. Additionally, the "Around-the-Mountain-Road" plan was abandoned in favor of a partial loop system that relied more heavily on roads outside of the park. As a result, the Carbon River Road remains a spur road, never being linked to a connecting highway. Regardless, the Carbon River Road's association with NPS master planning efforts and the "Around-the-Mountain-Road" plan imparts significance under criterion A.

Criterion C

In association with significant design and construction, the Carbon River Road serves as an intact example of an early national park road. Built prior to the 1926 Memorandum of Agreement (MOA) between the NPS and the Bureau of Public Roads (BPR), the road serves to illustrate the capabilities of early NPS engineers in road construction and design. Ultimately, the result of this early work by the NPS was the development of a primitive road, built before the advent of professional road engineering techniques. Regardless, the particular significance of the road is its early survey and construction date,



which reflects a succinct period of road development by the NPS.

As the Carbon River Corridor became a popular destination for visitors from surrounding communities during the 1910s, there was a growing need for the development of a road in the northwest corner of the park. As a result of the efforts made by local interest groups seeking gain from a road in this location, the Carbon River Road survey was completed in 1915. At this time, road-building activities were within the jurisdiction of the Department of the Interior (DOI). However, a year later, in 1916, the National Park Service inherited the responsibility of road construction within parks. Not surprisingly, the newly formed NPS, while taking the responsibility of road construction in this location seriously, had very little money to allocate towards the project. As a result, construction of the Carbon River Road was delayed for several years. Ultimately, road-building activities did not commence until 1921 and were not completed until 1924, nearly ten years after the initial survey.

Aligned as a narrow gravel thoroughfare, the Carbon River Road follows a curvilinear path, winding through old-growth forest along the Carbon River. Implementing few engineered structures into its design, the road was constructed using wagon road technology, rather than modern engineering. The road, also defined by a crowned prism and small turnouts, was constructed on a floodplain. Park planners and engineers designed the road to blend in with the landscape with the utmost sensitivity to its natural surroundings. Careful attention was paid to construct the road near the Carbon Riverbed, instead of on a bench. Regardless of the sensitivity that was applied when considering the construction and design of the road, several contemporary road-engineering tenets were overlooked. Perhaps the most costly mistake that was made included the alignment of the road in a floodplain. Engineers may also have made another mistake, which included not taking into account the ability of the river to change its course. Since the road was completed in 1924, numerous floods have destroyed several portions of the Carbon River Road. It is likely that this damage could have been avoided if different construction and engineering techniques had been implemented during the 1920s.

While historically the road was of relatively archaic design, several rustic engineered structures were situated along the corridor, which included bridges, culverts and other flood revetment devices. Due to the road's close proximity to the Carbon River, engineers were forced to develop a system of bridges and culverts along the road corridor. Generally, rustic bridges were constructed at every creek crossing and cedar culverts were installed to drain the road in numerous locations. Furthermore, log cribbing and riprap were positioned along the road in the 1930s by CCC crews to armor the riverbanks near the road. Regardless of the efforts made by the park, the low elevation route with respect to the floodplain and the lack of sophistication in engineering left the road vulnerable to flooding from the start. Presently, many of these features are non-extant, having been replaced by corrugated steel culverts.

Today, the Carbon River Road retains integrity and as serves as a fine example of an early NPS designed road. Furthermore, the road reflects the spatial organization, physical components, and historic associations that it attained during the period of significance, 1915-1941. Significantly, the roads linear alignment continues to echo planning decisions made in the mid 1910s and early 1920s by early park officials and planners, such as Superintendents DeWitt Raeburn & William H. Peters and NPS Chief Engineer, George Goodwin. The spatial organization of the Carbon River Road, also remains intact, and



includes several historic nodes of development, which are located near the entrance, utility and maintenance area and the campground. Finally, the road as a transportation and recreation corridor remains intact. Visitors continue to utilize the Carbon River Road as a pleasure drive, taking advantage of the accessibility of the Carbon River Valley, a temperate rainforest environment defined by specimen trees and the Carbon Glacier.

While it is clear that segments of the Carbon River Road illustrate evidence of deterioration due to natural forces associated with flooding, the overwhelming majority of the resources remain and the integrity of the landscape is intact. As one of the few remaining unpaved historic scenic parkways within the National Park System, the Carbon River Road retains the original historic character of early park roads. Furthermore, 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 roads. Finally, unlike many other park roads, the majority of the Carbon River Road retains the original configuration of its cross section, never having been upgraded to modern specifications. For these reasons, the Carbon River Road is significant as an example of early NPS road survey and construction.

Mational	Historia	Landmark	Information
National	HISTORIC	ı andmark	Intormation

National Historic Landmark Status: Yes

02/18/1997 **Date Determined Landmark:**

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: Automobile

Other Use/Function Other Type of Use or Function

Campground/Picnic Area Both Current And Historic

Current and Historic Names:

Name Type of Name

Carbon River Entrance Road Current

Carbon River Road Historic

Carbon Road 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 the Archaeology 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 1854 - 1855	Land Transfer	Through the treaties of Medicine Creek and Point Elliot, Native American lands in the Carbon River Corridor were ceded to the federal government.
AD 1876	Established	Circa 1876, coal was discovered on the banks of the Carbon River.
AD 1877	Built	Northern Pacific Railroad (NPR) spur line was constructed from Tacoma to coal deposits at Wilkeson, northwest of Mount Rainier.
AD 1881 - 1884	Built	A series of trails were constructed in the Carbon River area under the supervision of Bailey T. Willis, an NPR employee and geologist.
AD 1893	Established	The Pacific Forest Reserve was established within the Department of the Interior. The reserve included most of the land that would later become Mount Rainier National Park.
AD 1895 - 1906	Established	Homesteader W.L. Evans established a 300-acre claim on lands within the Carbon River Corridor. In 1906, Evans died and the General Land Office (GLO) informed the Secretary of the Interior that Evan's family had no legal right to inherit the land, thereby terminating Evans homestead claim within the park
AD 1899	Established	Mount Rainier National Park was established.
	Expanded	NPR branch rail line extended from Carbonado to Fairfax.
AD 1900	Mined	Circa 1900, the Hephizibah Mining Company established six mining claims and a mill site on the south side of the Carbon River.
AD 1907	Built	The Washington Mining and Milling Company constructed approximately three miles of wagon road along the south bank of the Carbon River. The road started in the park, near the mine's 38 claims, and ended in Montezuma, which was situated near the Northern Pacific Railroad.



AD 1907 - 1909	Built	Money was allotted for the construction of a trail on the northern side of the Carbon River.
AD 1908 - 1909	Built	A logging railroad was constructed from Fairfax to the Forest Reserve.
AD 1911	Built	The first Carbon River Ranger Cabin was constructed near the Green Lake Trailhead at Ranger Creek.
AD 1913	Abandoned	The Washington Mining and Milling Company closed their operations near the Carbon River.
AD 1914 - 1915	Expanded	Numerous trail repairs and the construction of a foot bridge near the Carbon River Ranger Station at Ranger Creek was undertaken.
AD 1915	Planned	A survey party conducted a location survey for an automobile road along the Carbon River Valley. "The line followed close to water level up the south bank of the stream to Cataract Creek near the snout of the glacier, a distance of 8 miles" (HAER 1992, 3).
AD 1916	Planned	First survey of the West Side Road.
AD 1921	Built	Construction of the first five and one half miles of the Carbon River Road was completed by contractors White, Brown and Leahy.
AD 1922 - 1924	Built	The construction of an additional two and one half miles of road from Ipsut Creek to Cataract Creek, near the snout of the glacier, was completed.
AD 1922	Planned	Second survey of the West Side Road was completed.
AD 1925	Built	Flood waters severely damaged the Carbon River Road, forcing park officials to install extensive revetments near the Carbon River.
	Built	The Pierce County park access road was completed.



AD 1933 - 1941	Altered	Civilian Conservation Corps (CCC) was invovled in road maintenance and flood control as well as the construction of buildings and structures.
AD 1933	Established	CCC established camp at the Ipsut Creek Campground. Crews enlarged the campground and constructed temporary buildings. Futhermore, they engaged in activities resulting in the removal of fire hazards and underbrush from area.
	Built	CCC workers constructed a new public campground near Six Mile Creek (Cataract Creek) for park visitors to enjoy.
AD 1933 - 1934	Built	CCC crews improved several features associated with the Carbon River entrance. These improvements included the construction of a "rustic style" log arch, the enlargment of a parking area and the planting of ferns and shrubs.
AD 1933 - 1935	Built	Log cribbing was constructed in several locations along the Carbon River by the CCC.
AD 1933	Built	Cataract Creek Shelter Cabin constructed by CCC crews.
	Built	The Ipsut Creek Patrol Cabin was constructed by CCC crews.
AD 1934	Destroyed	Floods destroy a 3,000 foot section of the Carbon River Road near Cataract Creek. As a result of the damage, the road above Ipsut Creek was closed.
	Altered	Circa 1934, the CCC continued to improve areas associated with the Carbon River Entrance. Several marshy areas were drained and a service drive was installed at the rear of the Carbon River Ranger Cabin.
AD 1941	Abandoned	The CCC spike camp, situated in the Ipsut Creek Campground, was dismantled.
AD 1942	Altered	The extreme eastern portion of the Carbon River Road, above Ipsut Creek, was closed to automobiles and
		designated as a truck trail.



AD 1947	Damaged	A portion of the Carbon River Road, above Ipsut Creek, was washed out as a result of heavy rains. The last mile of the road was impassable.
AD 1948	Altered	Last three miles of the Carbon River Road, above Ipsut Creek, were widened. At this time, it was reported that the road was "used by the public for its entire length" (Chief Ranger's Report, August 1948).
	Altered	Numerous buildings and structures were improved. At the Carbon River Ranger Station, the porch was replaced and new mud sills and stingers were used. Additionally, three bridges were re-decked between the entrance and Ipsut Creek.
AD 1950	Damaged	Carbon River Road closed above Ipsut Creek due to river encroachment near Cataract Creek.
AD 1951	Damaged	Flood washed out 200 feet of the Carbon River Road near the Chenuis Falls Turnout.
AD 1952	Altered	The Carbon River Road above Ipsut Creek opened for .8 mile and a turn-around area was constructed.
AD 1955	Damaged	Flood washed out two portions of the Carbon River Road.
AD 1956	Altered	Crews began repairing the Carbon River Road as a result of prior flood damage. In addition, several changes were made to the road. These included minor modifications to the alignment, raising the road from two to five feet and the installation of culverts. Also at this time, log bridges at Falls Creek, Ranger Creek, the Chenuis Crossing and Ipsut Creek were replaced with corrugated multi-plate culverts.
AD 1959	Damaged	Flood washed out 800 feet of the Carbon River Road near the Falls Creek crossing—with some places washing out ten feet below the surface. Flood also destroyed parts of the road near the Chenuis crossing and near the Ipsut Creek campground with several culverts washing away.
AD 1962	Destroyed	Carbon River Ranger Cabin, located near the park entrance, was destroyed by fire.



AD 1964	Built	Concrete footings were poured in preparation to receive a "transa-house" at the Carbon Entrance.
AD 1972	Planned	Park planners proposed to prohibit automobile access to the Carbon River Road and Mowich Lake Entrance Road. Ultimately, the Carbon River Road remained open.
AD 1979 - 1980	Built	Emergency Relief Project funds supported the construction of a concrete bridge over Ipsut Creek.
AD 1985	Altered	Bids were taken for repair work associated with the Carbon River Road. Work included the reconstruction of parking areas and the installation of log barriers as well as surfacing of the road with crushed aggregate.
AD 1990	Damaged	A turnout at Chenuis Falls was destroyed by flood waters.
AD 1996 - 1998	Damaged	Carbon River Road closed as a result of significant flood damage, which occurred near the Falls Creek picnic area.
AD 1998	Established	The Carbon River Road was reopened after several years of closure.
AD 1999	Damaged	The road closed for a brief period of time due to flood damge.
AD 2002 - 2006	Planned	Park officials work towards acquiring nearly 800 acres of land along the Carbon River Corridor.



Physical History:

Carbon River Road

Prehistory – 1900 (Exploration and Early Development)

Overview

Mount Rainier National Park

The Carbon River Road, located in the northwest of Mount Rainier National Park, is a gravel road approximately five miles in length. From the park entrance at 1880 feet in elevation, the road gradually climbs east towards the Ipsut Creek Campground where the road terminates at 2360 feet. Historically, the road extended approximately three more miles to Cataract Creek. Although the road was originally surveyed in 1915 and constructed in early 1920s, its history extends back to the region's exploration and mining activities in the 19th century. Today, the Carbon River Road continues to provide visitors' access to the only temperate rainforest in the park as well as to the Wonderland Trail and the Carbon Glacier.

Prehistory

Prior to the arrival of Euro American settlers, ancestors of the modern-day Puyallup and Muckleshoot tribes inhabited the Carbon River corridor of the park (Carbon River Corridor Charette 2004, 10). These groups held land in the region until 1854-1855, when the treaties of Medicine Creek and Point Elliot relinquished Native American rights of these lands to the Federal government (Carbon River Corridor Charette 2004, 11). During this time, the Carbon River region was the site of several conflicts associated with the Puget Sound Indian Wars (Carbon River Corridor Charette 2004, 11).

Discovery and Exploration

In 1876, coal was discovered on the banks of a river near the northwest corner of the contemporary boundaries of the park. Due to its association with coal, the river was later named the Carbon River (Meany 1916, 305). After the discovery of coal, Euro American entrepreneurs penetrated the Carbon River region in search of prosperity. In order to transport the coal, a Northern Pacific Railroad (NPR) spur line was constructed from Tacoma to local coal deposits near Wilkeson, northwest of Mount Rainier in 1877 (Carbon River Corridor Charette 2004, 11). By 1881, the Carbon River region had attracted the attention of Bailey T. Willis, an NPR employee. NPR had hired Willis as a geologist to search for mineral resources in the area. However, after exploring the corridor he became more interested in the development of the Carbon River area for tourism.

In the early 1880s, Willis began to advocate for tourism development of the Carbon River corridor. He urged NPR officials to take advantage of the tourism opportunities in the area. Consequently, the NPR allowed Bailey to construct a trail from Wilkeson to Mount Rainier. At the trail's termination near the mountain, NPR officials envisioned a grand hotel that could be linked by rail to Carbonado. As part of this effort, Willis hired over seventy-five men to cut a six-foot wide trail from Gale Creek near the Wilkeson mine to the North Fork of the Puyallup River. Willis constructed a large log cabin at the end of the trail. This cabin served as Willis' headquarters and was known as 'Palace Camp'. During this period, locals also began to



capitalize on the development of the Carbon River corridor. George Driver started one of the first guide services into the area from Wilkeson (Bacher, n.d.). As a result of Willis' trail building efforts and promotion by private entrepreneurs, tourists began visiting the Carbon River drainage as early as the 1880s (Carr 1998, 208-209). Bailey Willis continued development and trail building in the Carbon River corridor for the next three and a half years. According to Nancy Irene Hall, author of Carbon River Coal Country, the hotel concept was close to being realized by the NPR; however, in April 1884, NPR discontinued funding of Willis' activities. Willis reportedly left the Carbon River a broken man. After his departure, Willis' trails quickly became overgrown with vegetation (Hall 1980, 112-116).

While Bailey Willis was engaged in exploration and trail building in the Carbon River area, Karl von Zittel and Viscount James Bryce visited the north side of Mount Rainier and were awed by the Carbon and Mowich glaciers. As a result, they wrote to Congress to recommend the designation of the area as a national park or reserve (HAER 1992, 2). Ten years later, in 1893, the Pacific Forest Reserve was established within the Department of the Interior (DOI). The reserve included most of the land that would later become Mount Rainier National Park (Carr 1998, 210). By presidential proclamation, Grover Cleveland carved Mount Rainier Forest Reserve out of the Pacific Forest Reserve in 1897. After a heated political campaign involving John Muir and other conservationists, Mount Rainier National Park was created in 1899 from lands of the Forest Reserve. By 1902, Grenville F. Allen was appointed the first full-time Mount Rainier Forest Reserve Supervisor in charge of both the reserve and the park. Rangers Alfred B. Conrad and William McCullough were assigned to cover the Nisqually and Carbon River districts from 1904 to 1906

(http://www.fs.fed.us/gpnf/forest-research/heritage/early2a.html#top).

Before designation of the national park, private development had continued in the Carbon River corridor. In June 1895, homesteader W.L. Evans established a 300-acre claim on lands that would become part of the park. His claim was a narrow parcel in the river floodplain, located about two miles inside of what in 1899 would become the park boundary. Evans constructed a small cabin, though it was destroyed by flooding the next year. Evans constructed another home at the same location in 1896, which was reported to be a 'good shake house'. Additional buildings on the property included a storehouse, a blacksmith shop, a woodshed and a root house, all constructed with split cedar boards and posts. Reportedly, approximately half of Evans 300 acres were suitable for cultivation and the other half was forested. Over the next nine years, Evans cleared three to four acres of land and had plowed half an acre. In 1905, park officials from the DOI inspected Evan's settlement, but made no recommendations concerning its future. A year later, in May 1906, Evans died. In June, the General Land Office (GLO) informed the Secretary of the Interior that Evan's family had no legal right to inherit the land, thereby terminating Evans homestead claim within the park (Thompson 1981, 116-117). Presumably, Evans did not legally "prove up" on his claim and receive a homestead patent. Today, the site of the Evans homestead is still discernible on the north side of the Carbon River Road between Falls and Ranger Creeks.

1901 – 1914 (Mining, Trails and Wagon Roads)

Mining

Carbon River Road

Mount Rainier National Park

By the turn of the 20th century, mining and related development flourished in the Carbon River corridor. In 1899, rail service had been extended from Carbonado to Fairfax, allowing for the transport of coal from mines near the new park boundary to local markets (Martinson, 1966). When the national park was designated in 1899, the founding legislation allowed mining claims in the park, provided the claims were actively mined to extract metal ore. By 1900, J.I. Sexton of Tacoma and his associates held six claims and a mill site on the south side of the Carbon River within the park called Hephizibah Mining Company (Thompson 1981, 112). Two mining claims were also held by Mr. Fritz Hoose of Fairfax within the park. In 1909, Hephizibah's mill claim was deemed invalid and further timber cutting was prohibited by the Department of the Interior (Thompson 1981, 113).

The Washington Mining and Milling Company also had approximately 30 claims within the park on the south side of the Carbon River by 1909. The company had built several buildings and tunnels and were contemplating building a road from these claims to the logging railroad at Fairfax in 1909 (Acting Forest Supervisor's Report, 1909). Ultimately, the company constructed approximately three miles of wagon road along the south bank of the Carbon River (Catton 1996, 226). However, the road was not extended to Fairfax and did not connect with another road "other than a bridle trail leading from Fairfax up the Carbon River Valley" (O'Farrell, September 2, 1909).

Numerous management issues arose during this period of mining development between the mining companies and the Department of the Interior. In 1903, a dam had been constructed across the Carbon River in the park by the Carbonado Coal Company. Correspondence between Carbonado Coal Company executives and Acting Supervisor Allen reveals tension between the two parties concerning the removal of the dam. Ultimately, Allen prevailed and the dam was removed in 1904. In another dispute between Allen and the Washington Mining and Milling Company, a wagon road was built within park boundaries. Reportedly, the company was cutting down trees without permission to corduroy the road and construct bridges. The company claimed sole proprietorship of the road, excluding others from use of the road (HAER 1992, 3). By 1913, the Washington Mining and Milling Company closed their operations near the Carbon River (HAER 1992, 3).

By the end of the first decade of the 20th century, many of the mining claims within the park had been abandoned. In 1951, the Carbon River District Ranger reconnaissanced the area and described the remnants of the Washington Mining and Milling Company's operation:

"The notable feature of the mine was supposed to be an incline railway by which the ore was lowered from the tunnel to the river bottom 300 feet below. With these meager facts in mind I looked for the mine several times during the late summer without results. Again on February 23rd I made a try. While following the foot of the hill, at a point just behind the district powder magazine, I saw some cut stumps on the slope. An old, overgrown clearing led up to what appeared to be a rock slide below a small cliff. Actually it was a spoils dump of blasted rock, with here and there rusty cans, pieces of scrap and boards mixed in. At the top was a bench with remains of a snow-crushed pole-and-shake building on it. The collapse of the structure



had laid bare the remains of a cast-iron stove, table box-bunk, and cupboard; and an almost undamaged kitchen chair poked up out of the wreck. To the east on the same bench was a small, undamaged shake building with a low, steep roof, probably a storage shed, and about 100 feet distant was the wreckage of another large building. A short distance west of the main building, and in the head of a steep draw, was the mine tunnel. It was 6 feet square, very neatly cut into a gray, crystalline rock and did not appear to be blocked. The track was still in place inside. West of the tunnel on a smaller spoil bank was the remains of a small building which must have been the blacksmith shop. From the tunnel mouth the track was once carried over the draw on a trestle, cut only fragments remained. At the end of the trestle the remains of an incline railway slanted down the hill alongside the spoils dump which I had first seen. The incline consisted of large logs set end to end in two rows seven feet apart. They were notched for cross-ties which have all rotted away. At the base of the incline there is evidence of some installation which cannot now be identified. When I mentioned this to Don Loerke recently, he remembered seeing an old building there which was known as 'the Rudolph cabin'. He thinks it was later burned down" (District Ranger to the Park Naturalist, February 28, 1951). (See map, history #1)

Trails

As mining activity continued on the south side of the Carbon River, trail building was taking place on the north side. In 1907, Forest Supervisor Allen contracted with George W. Ish of Orting to construct and repair a four and one half mile trail on the north side of the Carbon River (Assistant Secretary of the Interior to Allen: May 28, 1907). The contract specifications included that the "bed shall have a level cross section not less than three feet wide and be cleared of all projecting stumps, roots and stones". In addition, "the right of way shall be cleared of logs, brush, and where required of standing timber for a width of six feet". Mr. Ish was required to construct crossings at all streams, install corduroy at muddy or swampy places and log cross gutters to drain the trail (1907 Notice of Bids). By August of the same year, Mr. Ish had started repairing the trail, which had been washed out by the river in several places. According to correspondence, Ish planned to lay down temporary riprap to protect the trail from future river damage (Correspondence to Allen: August 5, 1907).

By 1908, a trail had been completed from the north side of the Carbon River and the west fork of the White River for a distance of nine and seven tenths miles. Packhorses with light loads could utilize the new trail; however, Allen believed an additional \$1,000 of work would create a well-graded, permanent trail (Allen to the Secretary of the Interior, October 20, 1908). Only a year later, in 1909, Allen indicated that the park needed a trail to follow "as nearly as practicable" the park boundary to ensure the protection of timber and game in this area. At this time, the north park boundary followed the range line due east of the northwest corner of the park for three miles, south of its later adjustment to the north bank of the Carbon River. Allen proclaimed that "such a trail would make a thorough patrol possible and would also render the remoter parks and glaciers in the east and north side of the mountain comparatively accessible" (Allen to Sinclair: January 22, 1909).



Prior to the construction of the Carbon River Road in 1921, there was no easy way for visitors to reach the Carbon River area. According to a source from 1913, the most practical way to reach the northwest portion of the park was by train from Carbonado to Fairfax. After arriving in Fairfax, the train's last stop, visitors made the journey into the park by foot or horse. A general information brochure from 1913 indicates that the return to Fairfax could be made "by way of an excellent trail which leaves the National Park at a point three miles east of the northwestern corner, which point is also the location of the Carbon River Park Ranger Cabin" (DOI General Information Brochure 1913: 1, 5). Leaving the park, visitors crossed over the Carbon River on a bridge located at the Ranger Creek confluence and followed George Ish's trail on the north side of the Carbon River to reach the train at Fairfax. Fairfax was located on the south side of the Carbon River so another bridge was needed to get back to Fairfax.

Little information is known about the first Carbon River Ranger Cabin. It was located on the south side of the Carbon River at Ranger Creek and was built to serve as an entrance station for visitors entering the park from the Fairfax route along the north side of the river. According to the Historic Resource Study, the first ranger cabin at the Carbon River was completed in 1911 and destroyed by fire in 1962; however, this is not completely accurate (Thompson 1981, 186). More than one ranger cabin existed within the Carbon River District over time, and their information has been confused. It is likely that the first Carbon River Ranger Cabin at Ranger Creek was constructed in 1911, as Carbon River park ranger Thomas O' Farrell requested funds in 1913 to complete construction of the cabin. (See photo, history #2) This structure was demolished in the 1930s (Correct Location of Road, Map, 1945). (See map, history #3) Another ranger cabin, located at the contemporary entrance to the park, was likely constructed when the Carbon River Road and its associated approach roads were completed between 1923 and 1925. This cabin burned down in 1962 (Russel, 1980).

By 1913, other cabins existed along the Carbon River corridor, including the "Glacier Cabin," which was used by the NPS as a storage facility for visitors' supplies (O'Farrell to Superintendent Hall: March 3, 1913). The Glacier Cabin was located on the north side of the Carbon River, just downstream of a bridge crossing near Cataract Creek (Fabiani, 2006). In addition, the Olsen Cabin, formerly located at the Wonderland Trail Junction, was situated approximately 2 miles above Ipsut Creek Campground. Unfortunately, by the late 1960s the cabin had disappeared (Carbon River Sub-District Manual, General Description-Introduction, Chapter 1 Section 2, Page 1, 1967). Finally, according to a map from 1907 the following cabins were positioned within park boundaries along the Carbon River: the Winters, Callgrove, Evans and Chamberlin Cabins as well as Independence Camp (Map: March 31, 1907). (See map, history #4)

Early Planning

While the trail on the north side of the Carbon River was the primary route into the park via the Ranger Creek crossing for the first decade of the 20th century, the need for more direct access to the northwest boundary corner was contemplated as early as 1913. Maintenance of bridges crossing the Carbon River was difficult, and a trail on the south side of the river would allow rangers easier patrol of the area. In 1913, Ranger O'Farrell indicated that "a trail is projected



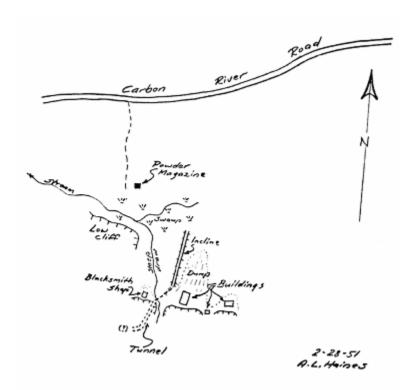
to traverse the northern boundary on the south side of the river, thus to make use of several miles of 'wagon road' constructed by the Washington Mining and Milling Company to mining locations in the park". At the time, the entrance to the park continued to lie at the junction of the Carbon River Trail and the Carbon Ranger Cabin, approximately 9 ½ miles from Fairfax (O'Farrell to Superintendent Hall: March 3, 1913). In May 1913, O'Farrell reported that despite swampy conditions, work was progressing on a \$500 extension of a trail from the east end of the mining 'wagon road' to the Carbon River Ranger Cabin (O'Farrell to Hall: May 3, 1913).

By the summer of 1913, the Department of Interior (DOI) expressed the need for a road in the Carbon River area of the park. Forest Supervisor Ethan Allen tried to interest NPR officials to construct eight miles of road up the Carbon River valley from Fairfax, to join a road to be built in the park. While railroad officials were interested in the concept, they were unwilling to commit at the time (Reid to Allen: July 12, 1913). In September 1913, Allen requested information from O'Farrell concerning the number of visitors entering the park in the Carbon River District. This information may have been needed to justify the construction of a road. O'Farrell reported that within the last twelve months, 1,000 people had entered the park. Of these, 400 people had stayed in the park for three days or more and the remaining 600 were transients. He also reported that the \$500 trail project had resulted in the construction of a pole and plank bridge across the Carbon River near the ranger cabin. He also indicated that \$200 had been spent on the improvement and repair of the Carbon River Trail between the ranger cabin and the snout of the Carbon Glacier. O'Farrell also noted that a bridge across the Carbon River at the mouth of Cataract Creek was damaged due to recent flood activity (O'Farrell to Superintendent Allen: September 13).

In 1914, the park continued to allot funds to the improvement of trails in the Carbon River District. Specifically, \$177 was used towards the improvement of the Carbon River Trail, which by now extended a distance of 12 ½ miles from the northwest park boundary to the Glacier Cabin, along the south side of the river. An additional \$88 was also spent on the reconstruction of a bridge across the Carbon River at Cataract Creek and the associated Cataract Basin Trail (O'Farrell to Allen: June 29, 1914). Repairs to the Carbon River Trail continued in 1915, including the replacement of the bridge across the Carbon River near the ranger cabin (O'Farrell, 1915). By October 1916, the Carbon River Trail had been improved and potentially straightened so that it ran from northwest park boundary to the Glacier Cabin via a crossing of the Carbon River at Cataract Creek, for a length of 8.5 miles (R.B. Marshall: October 30, 1916).

Carbon River Road

Mount Rainier National Park



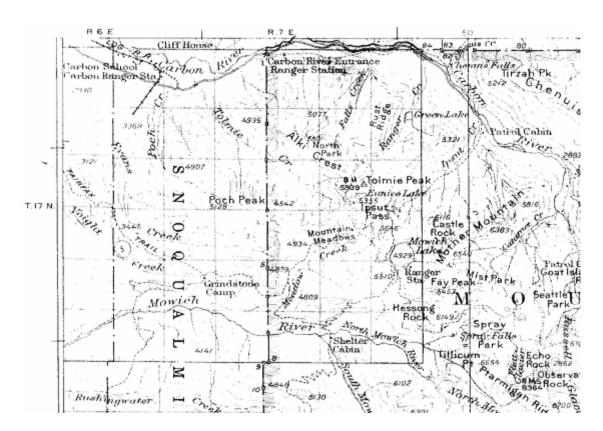
History #1: Drawing illustrating the location of an abandoned mine along the south side of the Carbon River Road, approximately one mile east of the entrance, 1951 (MORA Archives).



History #2: Historic photograph showing the Carbon River Ranger Cabin at Ranger Creek, c. 1920 (Photo Number: e277, MORA Archives).

Carbon River Road

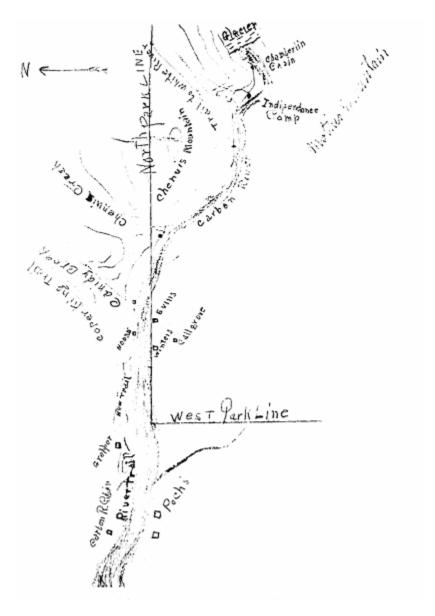
Mount Rainier National Park



History #3: Map from 1924 showing the location of the ranger station at the current park entrance as well as the location of the road. Note the location of the Carbon School, ranger station and railroad in the adjacent Forest Reserve (MORA Archives).

Mount Rainier National Park





History #4: Historic map showing cabin locations along the Carbon River, 1907. Note the site of Evans Cabin, which was located near Falls Creek (Microfiche D30: 215. MORA Library).

1915 – 1941 (Early Carbon River Road Development)

Survey

In 1915, plans for the development of an approach road to the Carbon River Entrance began to be openly discussed in the regional community. In a report entitled the "Proposed Carbon River Mountain Road from Puget Sound to Mount Tacoma," prepared for the Tacoma Commercial Club and Chamber of Commerce, the project gained public momentum. Local communities



were eager to take advantage of increased tourism created by a road to be constructed to the northwest park entrance. Entrepreneurs and businessmen associated with the Tacoma Chamber of Commerce each contributed one hundred dollars to conduct a survey for an approach road. NPR and several interested landowners in the vicinity also contributed funds towards the survey.

In the Chamber of Commerce report, the author Roy Thompson urged interested parties to view the route he proposed to Mount Rainier as "entirely practicable" with a grade shallower than five percent. Thompson indicated that the new road would shorten the distance to the park boundary by 21.3 miles from Tacoma and 41 miles from Seattle, compared with the existing route to the park's Nisqually Entrance. While Thompson's interests were primarily concerned with an approach road, he also advocated for a road survey within park boundaries. Thompson believed that an approach road could extend the existing alignment of the Northern Pacific Railroad up to the Forest Reserve boundary, and then a road, to be built by the government (Forest Service and Department of Interior) would continue for another 10.5 miles to the Carbon Glacier, 7.5 miles within the park. Thompson had written Mark Daniels, first General Superintendent and Landscape Engineer of the National Parks (within the DOI) to petition the U.S. Congress for \$3,000 for a survey of a Carbon River road within the park. Thompson also urged the Tacoma Chamber of Commerce, the Seattle and Tacoma Rainier Park Committee and NPR to petition the State Legislature to fund the construction of a state highway to the northwest park boundary.

Later in 1915, Stephen Mather, the Assistant Secretary of the Interior, indicated that the construction of a park road in the Carbon River area had become a priority for the DOI. Mather wrote to the NPR, asking whether the company would be interested in building an approach road to the park along the Carbon River. Mather said the DOI was interested in building a road in the park and sold NPR's investment in an approach road as a way to greatly increase tourism and support the concept of a hotel on the northwest side of the park. The NPR response was open-ended, indicating a lack of interest unless combined with a commitment for the NPR to build a hotel in the park, possibly at Spray Park, such as had occurred at Yellowstone and Glacier National Parks (Mather, 1915). In October 1915, the park's first superintendent, DeWitt Raeburn, and J.G. Morgan, an engineer associated with the Forest Reserve, began a survey for a road in the park along the Carbon River. Raeburn indicated to Mather that the approximate length of the road would be eight miles and would cost approximately \$6000 per mile. The park would need an additional \$1,500 to \$2,000 for clearing and grubbing of the road alignment. Raeburn was prepared to direct the bulk of the park's road appropriations for the construction of the Carbon River Road (Raeburn to the Secretary of the Interior: October 9, 1915). As road surveying continued throughout the month of October, the Forest Service, the DOI and the Manley-Moore Lumber Company cooperated on the project. The Forest Service allotted \$200 to survey three miles of approach road that would run through the Forest Reserve. The Manley-Moore Lumber Company offered a passenger service over their logging road to ensure the survey would include a connection to the end of their line, approximately two miles from the park boundary (Raeburn to Mather: November 1, 1915). Ultimately, the surveyed grade of the Carbon River Road varied from two and one half percent at the lower (west) end of the road to approximately six percent at the upper (east) end

Mount Rainier National Park

(HAER 1992, 3)

Carbon River Road

By November 1915, the road construction plan was progressing. Forest Supervisor Allen committed the Forest Service to the construction of the three miles of road within the Forest Reserve. It was acknowledged that the State Legislature would not meet for another year, so it was unlikely any State funds would be available for a state highway before 1917. However, the park's road survey was completed as scheduled. Superintendent Raeburn reported to Assistant Secretary Mather that the Carbon River Road would "follow practically on a water grade along the south bank of the river," with the "distance from the park boundary to Cataract Creek . . . about 8 miles". Potential hotel sites near the Carbon River Road were also discussed by Raeburn and Mather along with the road's relationship to other roads planned or existing near the park. With the Government Road (Nisqually Road) already built by the Corps of Engineer's from Nisqually Entrance to Paradise, the need for a West Side Road linking to a Carbon River Road, became more apparent. In addition, the desire to connect the Carbon River Road to a road proposed near the northeast of the park, the McClellan Pass Highway (State Route 410) was identified, suggesting a broad vision for a road network around the park. Raeburn stated to Mather:

"The hotel site . . . on the map has many advantages over the one at the mouth of Cataract Creek—it commands a magnificent view of the Mountain and Carbon Glacier, has more sun and better ground buildings and tents, eliminates about 3,000 feet of steep side hill road work in solid rock and is the point from which the West Side Road up Ipsut Creek should start, because of the big rock slide shown on the map. In view of the uncertainty as to location of the hotel site which I believe should be selected by a committee, the located line for Carbon Road has been staked out early up to mile 6 ½ below which point the location is not affected by the position of the hotel site . . . The proposition of a road to connect Carbon River with the Storbo Road, and the proposed McClellen Pass Highway does not look very promising on account of the high and rugged character of the region" (Raeburn to Mather: November 1, 1915).

Mather's response to Raeburn indicated, "it is gratifying news that the road will follow the river practically on a water grade" demonstrating a lack of concern over locating the road within a floodplain (Correspondence, Mather to Raeburn: November 11, 1915). Potentially, the economic and aesthetic benefits of aligning the road near the river, along a path of least resistance to construction, outweighed concerns about flood potential in Mather's mind. However, consideration of flooding is surprisingly absent from the planning discussion, and indicates a lack of expertise in road engineering by the Department of Interior in the national parks at the time.

The National Park Service was created in 1916, and Stephen T. Mather was named its first director. Just as plans for the Carbon River Road were gaining momentum, it began to lose some limelight with the emergence of a bigger idea. The new NPS announced that a survey would be conducted for a road on the west side of the park, to be called the "West Side Road". This road would serve as a link in a proposed "mountain circuit road system". This would connect the Nisqually Road near the Tahoma Creek Bridge with the Carbon River Road via the West Side Road (HAER 1992, 20). Eventually the system would connect to roads on the east



and south side of the mountain, enabling park visitors to drive a complete circuit. While the overall concept was acknowledged as far-reaching and difficult in terms of constructability, the West Side Road was perceived as the necessary first step. Despite the agency's attentions now drawn to plans for the West Side Road, Superintendent Raeburn continued to work on the concept of an approach road to the northwest park boundary. In 1917, Raeburn reported to Assistant NPS Director Horace Albright that he had discussed the Carbon River approach road with two County Commissioners, in an effort to bypass the State. The Commissioners agreed to construct a road from Carbonado to Fairfax; however, the road would probably be built up the north bank of the Carbon River from Carbonado. In that case, the best route into the park would be on the north side, adding an additional three and one-half miles of road outside of the park (Raeburn to Albright: July 25, 1917).

Construction

In 1920, the National Park Service revised the "mountain circuit road system" concept. According to the new concept, the primary objective was the construction of an "Around-the-Mountain Road". The first step towards this goal would be construction of the Carbon River Road (HAER 1992, 20). At this time, NPS Director Mather was interested in gaining congressional support for the development of the national parks, including the building of campgrounds, ranger stations, hotels and road systems. In the early years of the National Park Service, the U.S. Congress appropriated limited funds for building in the national parks, and looked to private developers to satisfy these needs. Mather used his relationships with the business sector and political allies in the Good Roads Movement to lobby for funds for road building. The development of "good roads" in the national parks was central to Mather's vision for gaining public support for the agency. Mather believed that road access to parks would build a constituency of support for national parks within the general public, and lead to political support for the nascent agency. With a high population center around the Puget Sound, the development of roads in Mount Rainier National Park and the 'Around-the-Mountain-Road' concept was one of his greatest priorities.

In early 1921, conferences were held to garner financial support for road construction activities associated with opening the northwest corner of the park. These conferences, conducted by Irving Clark of The Mountaineers and Asahel Curtis of the Rainier National Park Advisory Board, also served to push Forest Service and Pierce County officials to begin working on the approach roads (Catton 1996, 226). As the winter of 1921 proceeded with heavy snow conditions, W.H. Peters, the new park superintendent, began final preparations for construction of the road. Peters contacted George Goodwin, NPS Chief Engineer, to inform him that J.P. Morgan's surveyed location of the Carbon River Road was awaiting his final approval (Peters to Goodwin: March 16, 1921). Goodwin had ultimate responsibility for the design of the road. In April, Director Mather informed Peters that funds for fiscal year 1922 had formally been allotted. Approximately \$50,000 had been granted towards construction of the Carbon River Road, beginning in October 1921. Mather indicated that George Goodwin was "to have exclusive charge of the Carbon River Road in the same manner as the work to be done by him on the transmountain road in Glacier Park" (Mather to Peters: April 1, 1921). By the end of April 1921, Mather reported that "it looks [like] at last as if some definite road building up the



Carbon River should be started this season" (Mather to Woodworth: April 26, 1921). Within the year, the contractor White, Brown and Leahy began construction of the first five and one half miles of road to Ipsut Creek (HAER 1992, 20).

As 1921 drew to a close, the town of Fairfax rejoiced in the completion of a new county road between Carbonado and Fairfax. Business owners in Fairfax closed up their shops for the day and residents celebrated the arrival of the new road. A critical link, the Fairfax Bridge (James O'Farrell Bridge), was officially dedicated on December 17, 1921. Constructed by Pierce County, the bridge cost \$500,000 to build and is reportedly the highest bridge in the state of Washington (HistoryLink.org Essay 7529). Regarding progress on the Carbon River Road and its approaches, a local newspaper indicated:

"Both the National Forest Service and the National Park Service are now engaged in extending the road so that during the coming tourist season it is expected that the north side will be partially opened. Extending as it does along the sheer walls of the Carbon River canyon the new road for a distance of three miles far outclasses the Nisqually Canyon on the old mountain road in point of scenery . . . W.H. Peters, superintendent of the Rainier National Park, in speaking of the plans of his office, announced that a road now is being built by the forest service from the edge of the reserve, where the proposed now county road will end, to the edge of the national park . . . And the National Park Service is building five and one-half miles of road to join the work for the forest service and extend into the park, Mr. Peters said. As soon as this is completed the park service will begin the construction of a road around the west side of the mountain to join with Paradise Valley, thus completing the loop. We hope to have this work done in time for the Portland Fair in 1925" (Fairfax article, December 17, 1921).

After snow melt in 1922, construction resumed on the final two and one half miles of the road above Ipsut Creek; however, the outlook for the completion of the Carbon River Road began to sour. The NPS learned that Pierce County would not finish construction of the approach road linking Fairfax to the Forest Reserve road in 1922. Consequently, there was no need to rush completion of the Carbon River Road as it would remain isolated. Chief Engineer Goodwin indicated that under the circumstances, he believed it would be wise to "build only a one-way road of cheap construction toward but not entirely to the Carbon Glacier". Furthermore, Goodwin advocated for the redirection of funds from the Carbon River Road to support the widening of the Nisqually Road from Narada Falls to Paradise, a concurrent project with budget overruns (Peters to Mather: April 11, 1922).

In an effort to remain optimistic about the completion of the Carbon River Road, Superintendent Peters pressed Director Mather on the value of the Carbon River Road from the perspective of the 'Around-the-Mountain-Road' concept:

"All of the park road systems with the exception of the newly constructed Carbon River Road have been built and maintained on standards far below that of the state and county roads approaching the park . . . The completion of the West Side Highway when considered in connection with the State's program will give three sides of the much discussed 'Around the Mountain Road' and a glance at the map will show that a comparatively short stretch of road



connecting the terminal of the Carbon River and White River roads will complete such a highway" (Peters to Mather: June 9, 1922).

Not only did Peters commend the design quality of the Carbon River Road, but he also continued to embrace the "Around the Mountain Road" idea. Despite Peters' optimism, the last section of the Carbon River Road was not completed in 1922. As construction resumed in the spring of 1923, extra time and money was needed to repair portions of the road that had been damaged by winter flooding. Chief Engineer Goodwin and the new park Superintendent C.L Nelson discussed the need for river revetments to protect the road (Goodwin to Nelson: February 14, 1923). By the summer of 1924, emergency roadwork had commenced because of additional flood damage to the Carbon River Road. At this time, funds had been allotted for revetments, which included the construction of cribbing. In a pedantic letter from Director Mather to yet another new park Superintendent Owen A. Tomlinson, Mather urged the park to finish the repair and revetment work in order to "save further damage to Government property, namely the Carbon River Road," revealing his frustration with the project (Mather to O.A. Tomlinson: July 25, 1924). At the time, Mather could not know that Tomlinson would remain the park Superintendent for a record 17 years, and would provide the staying power behind much of Mather's vision for the park. (see photos, history #5 and history #6)

By the fall of 1924, Chief Engineer Goodwin had also become so frustrated with the Carbon River Road that he recommended abandonment of the project. He was particularly disconcerted with Pierce County Commissioners who were unwilling to fulfill their agreement to complete the road from Fairfax to the Forest Reserve boundary. Additionally, Goodwin may have been willing to sacrifice the project in favor of the construction of a road to Yakima Park (Sunrise). The McClellan Pass Highway was under construction bordering the east side of the park, potentially enabling automobile access to the pristine Yakima Park subalpine meadows northeast of the mountain. While Goodwin believed the development of Yakima Park was a more favorable option than the northwest of the park, others did not agree. In a letter to T.H. Martin, General Manager of the Rainier National Park Advisory Board, Asahel Curtis, renowned Seattle photographer, and member of the Mountaineers and the Rainier National Park Advisory Board proclaimed, "...while a road into Yakima Park is a very important part of the National Park development, it does not serve the purpose originally planned, that is, a loop road or one by which people can go to the Mountain one way and return another. It would be merely a stub end road similar to the Paradise Road" (Curtis to Martin: November 20, 1924).

Despite funding struggles and flood damage, the completion of the eight-mile long Carbon River Road was announced in 1924. In order to complete the road as far as Cataract Creek, the standard of the road design was compromised, following Goodwin's direction. In a 1924, "Park Roads Report" the road was described as a two-way, 20 feet wide gravel road for five and one-half miles, graded with a crown and drained by ditches and wood culverts from the Carbon Entrance to Ipsut Creek. The report also indicated that this portion of the road was in need of a wing dam near Evans Cabin and surfacing. Above Ipsut Creek to Cataract Creek, the road extended another two and one-half miles as one lane, and was graded with a crown, but not surfaced. As a harbinger of future debate, the report indicated that this segment of the road would eventually need to be widened (Park Roads Report, 1924). While the eight-mile long



Carbon River Road was completed in 1924, the connecting approach road from Fairfax to the Forest Reserve boundary was not completed by Pierce County until 1925 (HAER 1992, 20).

By 1925, the cost of construction of the Carbon River Road and its associated approach roads had cost far more than each agency involved had anticipated. Pierce County spent over \$600,000 to construct the road from Carbonado to Fairfax and the road from Fairfax to the Forest Reserve boundary. The Forest Service invested \$70,000 in the three-mile long road through the Reserve to the park boundary. Finally, the National Park Service spent approximately \$100,000 constructing the eight-mile Carbon River Road within the park (Tomlinson to Mather: February 25, 1929). These budget overruns can be attributed to the protracted nature of the construction schedule, involving the cooperation of various agencies; but also the difficulty of building a road through the steeply sloping topography bounding the Carbon River and the unforgiving nature of the wild river itself, repeatedly damaging or destroying new segments of road built within its vicinity each winter. However, considering the scope of the project, the cost of building the park road was relatively inexpensive. The project involved the removal of numerous massive old growth trees from the road alignment, while retaining more than 100 trees at least four feet in diameter adjacent to the road for scenic purposes. Construction also involved several hundred feet of rock blasting to create a road bench in exposed bedrock slopes beside the river. Riprap was needed to retain the road where it encountered the river's edge, and road bridges were needed at June, Falls, Chenuis, Ranger and Ipsut Creeks. Many wood culverts were also required to drain the road in this rainforested area with more than 100 inches of precipitation per year. Despite these fairly standard complexities for rural roads at the time, the project was in essence a relatively short, lower elevation valley road located relatively close to industrialized areas of Pierce County. The limited funding of the road and the apparent difficulties in its construction reveal a lack of resources and experience in the young NPS agency for road building in the early 1920s.

As the Carbon River Road project neared completion, approximately ten years after its inception, other visitor amenities were added to the area. In 1924, a trail shelter called the Carbon Road Shelter Cabin was reportedly accessible three quarters of a mile from Cataract Creek on the Cataract Basin Trail (Tomlinson to Mather: October 27, 1924). By 1926, a 125-car public campground had been constructed along the Carbon River Road, probably in the Ipsut Creek area (Thompson, 1981, 168). Another change ensued with a 1926 boundary adjustment, which added a strip of land on the north side of the Carbon River to the park (Bacher, n.d.). Up until this point, the first three miles of the Carbon River east from the northwest corner of the park boundary had been excluded from the park. Additionally, it is likely that the NPS established an entrance station at the northwest corner of the park at this time.

Once the approach road to the park boundary was completed, visitors in automobiles could enter the park at the northwest boundary corner for the first time. Up until 1925, park visitors still entered on horse or by foot via the Carbon River crossing at Ranger Creek, three miles upriver of the northwest boundary. To protect park resources and enforce park rules, a ranger station was needed at the new automobile entrance. While the date of the Carbon River Entrance Ranger Station is unknown, it can be inferred that the NPS built the entrance ranger



cabin and woodshed just inside the park boundary beside the Carbon River Road in the early to mid 1920s. The cabin was a gable-roofed structure, oriented with the front gable towards the park entrance. The simple rustic structure, approximately 500 square feet in size, had a cedar shingle roof and cedar shakes sheathing the upper walls. Split cedar logs sheathed the lower walls and double-hung multi-paned sash windows daylighted the structure. A front extension of the ridge beam created a recessed porch with exposed rustic bracing in the gable end. A flagpole erected in front magnified the civic importance of the structure, and a phone line, wood stove and a woodshed added to the hospitality of the place. (see photo, history #7)

A year after completion of the Carbon River Road, the National Park Service entered into a Memorandum of Agreement with the Bureau of Public Roads (BPR), predecessor to the Federal Highway Administration, to gain professional expertise in the design and construction of the roads in national parks. The NPS/BPR partnership delegated responsibility for the engineering of roads and their construction oversight to BPR, and landscape architecture design and scenic preservation to the NPS (Catton, 1996, 231). In the MOA, the NPS had ultimately responsibility for road design. That same year, a contract was awarded by the BPR for the construction of the West Side Road (Catton, 1996, 231). As construction proceeded, NPS and BPR officials began to question whether the Carbon River Road would be able to serve as a suitable link for the 'Around-the-Mountain-Road'. Yet more damage to the flood-prone Carbon River Road prompted BPR engineers to recommend abandoning the eight-mile long road in favor of an entirely new alignment for the northern terminus of the West Side Road and an approach link road. While the BPR recognized it was not ideal to abandon the Carbon River Road and spend additional funds on the construction of a new road, the agency believed the NPS would save money in long run by avoiding costly flood repairs to the Carbon River Road (Tomlinson to Mather: February 25, 1929). Just one year after the completion of the Carbon River Road, an expert examination of the design by the federal government's expert road building agency had identified a problem the NPS had overlooked: the Carbon River Road would be prone to flooding in perpetuity, due to its naive alignment in the river floodplain.

As the development of the West Side Road progressed, construction problems ensued due to extremely steep terrain, rockslides and glacial outbursts of the Tacoma Glacier. By this time, many NPS officials had begun to question the feasibility of the 'Around-the-Mountain-Road' in favor of using regional roads outside of the park. Despite this, members of the Rainier National Park Advisory Board, which included various chambers of commerce, were not willing to give up on the plan that they had worked hard to support. In a 1929 letter from T.H. Martin, General Manager of the Advisory Board to Asahel Curtis, Martin presented the following plea:

"We have worked so long and tried in so many ways to secure the completion of this West Side connection that it may appear foolish to continue any longer. Yet I feel that we simply cannot give up this West Side road as a necessary part of the Park Highway development plan . . . You know better than anyone else what a difficult and embarrassing matter this Carbon River Road has been, for you have worked over it arduously for a great number of years. Primarily the difficulty of solving the problem lies in the fact hat there has all along been three interests to deal with; the National Park Service, the Forest Service and Pierce County . . . Having made the original surveys establishing the road inside the Park and having thus caused Pierce County



and the Forest Service to locate and build their sections of road to constitute a proper approach to the road inside the Park, it would appear that the Government, back of the National Park Service, should be willing to help undo the error that was made by its engineers; for in the light of present day conditions it must be admitted that the location along the Carbon River, made by National Park Service engineers, was erroneous; or at least it was unsatisfactory and was thrown out by the Government engineers who worked out what was to them a more satisfactory location . . . The Park highway system cannot be completed, or really effective, without the West side highway. It is a necessity and as such, it must succeed. We cannot see the plan abandoned; it would be unthinkable" (Martin to Curtis: February 19, 1929).

After receiving this letter, Curtis wrote to Superintendent Tomlinson, describing his thoughts on the failings of the Carbon River Road:

"I had a long letter from Mr. Martin covering this same point and while it is true that Pierce County and the Forest Service have spent considerable money on the extension of this road from Fairfax to Park Boundary and that this is now practically lost—it all relates to a chapter in Rainier National Park development, which I believe, should be forgotten. Had engineering knowledge been the guide rather than political expediency, the road would never have been located where it is. The original recommendation called for a location still farther south than the present survey from the Bureau of Public Roads but when we failed to secure the approval of this as a State Highway, we adopted the next best course which was the construction of the County road in the Carbon Canyon. Now all of those who were responsible for this error of policy have passed out of the picture and there is no advantage at the present time of bringing any of this question up again" (Curtis to Tomlinson: February 28, 1929).

Despite engineers' criticisms of the Carbon River Road, Superintendent Tomlinson did not advocate for its replacement. Instead, Tomlinson's attentions were diverted to other efforts in the late 1920s, leading to a virtual ignoring of the Carbon River Road by NPS management, and a lack of maintenance. In 1926, Tomlinson began to master plan the park, according to directions provided by Director Mather to all park superintendents. Mather called for all parks to be master planned with an aesthetic vision for park infrastructure that provided for a coherent visitor experience, while protecting scenic beauty. At the time, national parks were experiencing a great increase in visitation due to a dramatic rise in automobile ownership. As a result, impacts to scenery were occurring in many parks through errant parking, camping and concentrated use of particular areas. Mather's vision for park master plans contained two interwoven components: a system of rustic park villages providing disseminated visitor services and administrative facilities and a system of scenic park roads interconnecting developed areas.

Mather's vision for scenic park roads took inspiration from the "Going to the Sun Road" just completed at Glacier National Park, the new Bronx River Parkway in New York and other scenic parkways built in America in the early 20th century. Urban parkways and other aesthetically designed roads provided a model for scenic park roads. According to Mather, scenic park roads were designed with "landscape engineering," an expression coined by the Director. These roads appeared to fit in with the contours of their scenic environment and be blended through rustic designed features such as stone masonry guardwalls, retaining walls,



bridges and culvert headwalls. Native materials and naturalistic forms would harmonize these roads and make them appear at home in the park environment. Tomlinson was inspired by Mather's vision, and set to work to master plan Mount Rainier National Park sooner than other park superintendents.

Superintendent Tomlinson worked with NPS Chief Architect Thomas Vint's Branch of Plans and Design in San Fransciso to draw up a master plan for the park. Between 1926 and 1941, various iterations of the plan were created, each revision providing more refinement than the former. The master plan incorporated all of the existing development in the park, including the Nisqually Road, the Carbon River Road, the concessionaire development at Paradise and Longmire, and turned it into a coherent system of scenic park roads and rustic developed areas, providing facilities around the park. The master plan enlarged the vision for Paradise and Longmire into rustic park villages, incorporating both concessionaire and NPS development. The plan added a new rustic village at Yakima Park (to be called Sunrise) and interconnected the three major developed areas with a system of scenic highways. Despite pressure from political interests, Tomlinson eventually abandoned the "Around-the-Mountain-Road" concept. The late 1920s version of the park master plan included the West Side Road connecting to the Carbon River Road, and the Carbon corridor connected to the east side McClellan Pass Highway via regional roads, rather than via a road built across the north side of the park. By the early 1930s, the master plan showed a road connecting Paradise through the Stevens Canyon to the east side of the park, and after 1931, an "East Side Highway" connecting to the McClellan Pass Highway. The McClellan Pass Highway had been renamed the "Mather Memorial Parkway" in honor of the first NPS Director, after Mather's untimely death in 1929. Clearly, the Carbon River Road remained a key element of the master plan, despite its poor engineering design.

CCC Involvement

While the Carbon River Road had been virtually abandoned in the late 1920s, and the West Side Road was terminated before connecting to the Carbon, the area received a resurgence of activity in the early 1930s with the influx of the Civilian Conservation Corps labor force. The CCC was created in the first 100 days of office by President Franklin Delano Roosevelt as an Emergency Conservation Work (ECW) organization in response to the Great Depression. Administered by the War Department, unemployed, unmarried men were enlisted to perform conservation projects on public lands. In the first year of its existence, CCC workers began repairing, constructing and improving numerous features within the Carbon River District. Road repair, flood control and the construction of buildings were all within the CCC's work objectives, directed by the park's new master plan.

The CCC men, who were part of Camp No. 3, were housed at the Ipsut Creek Campground. (see photo, history #8) In order to accommodate Camp No. 3, changes were needed to the existing automobile campground, and visitors were excluded for the duration. Temporary buildings were planned for the camp and were to be removed after all ECW activities were completed. The buildings included a mess hall, an office, tool houses and various accessory buildings, with covered tent frames for sleeping quarters (ECW Report, season ending October



21, 1933 by Hasley Davidson, Landscape Architect). By November of the same year, an office and tool house that was combined into one building and a barn/temporary station had been constructed (Monthly Report, ECW Camp No. NP-3, November 1933). In order to accommodate the workforce, additional land area was cleared and grubbed near the campground. Fire hazard removal was also undertaken to ensure the dense undergrowth in the area would not burn. Finally, a water system was installed for camp use, which included a redwood water tank and pump, diverting water from Ipsut Creek. According to reports the 50-foot tall, three thousand gallon tank was discretely concealed within the forest and could hardly be seen 200 feet away (ECW Report, October 21, 1933, Davidson).

After preparing camp, the CCC began working on projects directly related to the improvement of the Carbon River District. One of the first projects, resulting from the CCC occupying the only public campground in the area, was the construction of a new public campground at the terminus of the Carbon River Road at Cataract Creek. By October 1933, the CCC had cleared approximately six-tenths of an acre of land, removed fire debris and had constructed temporary toilet facilities. It was reported that this new campground could be "easily obliterated in the future or serve as an overflow camp ground whichever the future conditions demand" (ECW Report, October 21, 1933, Davidson). CCC crews also repaired the Carbon River Road Shelter Cabin at Cataract Creek.

Another project undertaken by CCC crews in the 1933 season was the repair of the Carbon River Road. Improvements included spreading gravel over the entire surface of the road from the Carbon River Entrance to Olsen's Cabin, a distance of approximately seven miles. Sources indicate that the road had no foundation and numerous potholes and deep ruts. Crews also cut brush, cleaned and graded the road ditches (R.D. Waterhouse: February 21, 1933). The CCC also re-decked several road bridges including the Ipsut Creek Bridge and the four others between Ipsut Creek and the Carbon River Entrance (Monthly ECW Report, October 31, 1933).

While the repair of the Carbon River Road was the priority CCC project for Camp No. 3 in the 1933 season, the crews also made improvements near the park entrance. In accordance with the park master plan, NPS design plans had been prepared for a rustic Carbon River Entrance Arch. Construction began in 1933 and was nearly complete by the end of the season, however, crews needed to wait for the soil around the arch to settle before installing corner braces. Modelled after the parks Nisqually Entrance Arch, the rustic structure was designed with massive; whole log notched posts and beams, spanning the width of the Carbon River Road at the park boundary. Approximately 18 feet high and 24 feet wide, the structure bore a routed wood sign identifying the park. (see photos, history #9, history #10 and history #11)

The CCC was also engaged in planting and other improvements at the Carbon River Entrance Station. This work included clearing underbrush and logs and draining a marshy area near the ranger cabin. Afterwards, topsoil was added and the entire area was naturalized by planting with native shrubs, ferns and moss. A service driveway was constructed behind the ranger cabin to access the woodshed. The 12 foot-wide driveway was curbed on either side with logs. (see photo, history #12) On the south side of the Carbon River Road, a marshy area was



drained and covered with gravel and soil. In this area, ferns, moss and shrubs were planted near a small registration booth structure. This structure, possibly built at the time of the ranger cabin, was an approximately 80 square feet enclosed structure, which housed a ranger for registering visitors. The simple, gable roof structure had a cedar shingle roof and cedar shake sheathing on the upper walls. The lower walls were sheathed with split logs, similar to the sheathing pattern on the ranger cabin, and the structure had several multi-paned windows and a door. A whole log ridge-beam was cantilevered out over the Carbon River Road, potentially to bear a sign. On the north side of the road an area was filled and surfaced with gravel to create a parking area at the entrance for six cars (ECW Report, October 21, 1933, Davidson). (see photo history #13)

Finally, in the season of 1933, CCC crews worked on flood protection for the Carbon River Road. The CCC installed log cribbing along the bank of the Carbon River near Evans Cabin, approximately two miles from the park entrance. (see photo, history #14) By the end of October 1933, the cribbing was nearly complete. The structure was composed of 17,000 linear feet of logs laid parallel and perpendicular to the riverbank to form a type of basket, bound with heavy gauge wire. The cribbing was then filled with 3,000 cubic yards of river rock to create a heavy surcharge. Before the structure was complete, flooding undermined a 200-foot section of the cribbing. While the cribbing could be repaired, its completion was delayed until March 1934 (ECW Camp No. 3 Monthly Report, October 1933). The repaired section was a rectangular, single-faced log crib150 feet long by 10 feet wide and 10 feet high. Rock used to infill the cribbing was obtained from a road washout. Additional rock was quarried from a rock cut near the old ranger cabin bridge site at Ranger Creek, where several curves were removed from the road alignment to improve safety (Project No. C-22, MORA Roads Binder, 1798-1939). (see photo, history #15) CCC crews continued to work on the cribbing throughout the winter of 1933-34. Cold temperatures led to a large number of CCC men renting accommodations from the Manley Moore Lumber Company near Fairfax, three miles from the park entrance (Proposed Civil Works Program, November 16, 1933).

The CCC continued work in the Carbon River District in 1934. Numerous projects were undertaken, including the construction of an equipment shed and garage in a utility area about one eighth of a mile along the road east of the Entrance Station (Microfiche D34, 156). Designed by the NPS, the garage was a gable-roofed structure, with four vehicular storage bays sealed by overhead doors. The approximately 40 feet by 18 feet structure had a cedar shingle roof, lap sided walls and a dirt floor. During the year, the park attempted to acquire Civil Works Program funding for the improvement of the approach road to the park entrance through Snoqualmie National Forest (formerly the Forest Reserve). While this project was recommended for the First Civil Works Program, it was rejected as the work was outside of the park. A year later, as the road condition worsened, the project was accepted by the BPR District Engineer, but was ultimately denied by the ECW due to a lack of funds (Tomlinson to Director Albright: June 26, 1934).

In December 1933 and January 1934, floods damaged more sections of the Carbon River Road and its bridges. CCC crews immediately filled potholes, repaired washouts and installed more wood culverts to better drain the road. They also repaired a section of road above Ipsut Creek



where 200 feet of road had washed out. The Ipsut Creek road bridge was also damaged and rebuilt (Project No. C-24, MORA Roads Binder, 1798-1939). Despite the winter's flood events, superintendent Tomlinson desired to make use of the CCC labor force to continue to improve the Carbon River Road design. To fully realize the original design that had been compromised by Chief Engineer Goodwin, the park proposed in 1934 to widen the road above Ipsut Creek to enable two way-traffic. (Goodwin was replaced as NPS Chief Engineer during the 1920s.) The widening would involve blasting at three short rock cuts. Surfacing of the road with three-inch crushed river gravel and oiling was also proposed. This plan dealt with the road from the park entrance to a mile above Ipsut Creek. At the time, there were no plans to improve the last 1 ½ miles to Cataract Creek (Proposed Project No. 7RT, Grading and Resurfacing, February 14, 1934). Probably due to limited funding of the ECW Program during the early years (the program lasted until 1941), the proposal to widen the road above Ipsut Creek was not realized. However, the proposal indicates a perceived worthiness of the road's role in the park's master plan, despite the persistent efforts required to maintain the road.

Other projects undertaken by the CCC in 1934 included more work at the Carbon River Entrance. The crews lined the parking area built the previous year with log curbing to strengthen the naturalistic character of the developed area while protecting vegetation from vehicles. The logs were 15 inches in diameter and were half buried in the ground to provide stability. The CCC crews also removed a brick walkway that ran between the road and the ranger cabin and replaced it with flagstone path (ECW Report, October 20, 1934, Davidson). Shrubs, ferns and moss were planted around the Entrance Arch, which had been completed earlier in the season.

During this field season, CCC laborers were directed to experiment with a new type of flood protection for the Carbon River Road that did not require the use of timbers. The installation or revetment consisted of boulders piled into a dike and bound by a light consistency of cement mortar poured over the top. Crews also installed a four-foot diameter rock berm along the Carbon River to protect the road. The rock berm was enclosed in a galvanized wire mesh. This structure in turn was protected by shear log buffers at either end (ECW Report, third enrollment period, 1934, C.E. Drysdale, ECW Supervising Engineer). Traces of these rock berms still exist along the edge of the river channel near the historic location of Evans Camp.

As the work at the park entrance was completed, the CCC began improvements near Ipsut Creek, including at the newly constructed Ipsut Creek Patrol Cabin, built the previous season. In order to mask construction scars, the men planted shrubs, ferns and moss around the building. Additional plantings were strategically installed along the road and near the Ipsut Creek Bridge to obliterate bare areas. The CCC expressed pride in their camp and planted moss, ferns and shrubs around the Ipsut Creek Campground (ECW Report, season ending October 20, Davidson). CCC Camp No. 3 was noted as one of the tidiest and most aesthetically pleasing spike camps in the park.

In addition to building structures, repairing roads and installing flood protection, the CCC played a large role in naturalizing areas of the park that were denuded by the development of new facilities as a result of the implementation of the park master plan. In 1934 in the Carbon River



District, CCC crews removed their temporary horse barn at Evans Camp, which had stabled ten horses. The opening in the forest was replanted with trees and shrubs to conceal the denuded site of the barn (ECW. Report, season ending October 20, 1934, Davidson). Today this site is still discernible within the former Evans homestead area, north of the Carbon River Road. By the end of the 1934 season, Halsey Davidson, CCC Landscape Architect, reported favorably on the scenic qualities of the Carbon River Road:

"In our opinion this particular road, Carbon River Road, is one of the most attractive in the park, due we think, to the heavy forest and the abundant moisture which is conducive to the growth of ferns, moss and thick undercover. Fallen trees here take on a cover of moss and tree seedlings which add greatly to this picturesque road. This year we have insisted upon these logs remaining untouched, not only for their own contribution to the beauty of this drive, but also because they provide the shade and help maintain the moisture so necessary to many smaller forms of plant life. We believe that this policy should be continued, particularly along this road" (E.C.W. Report, season ending October 20, 1934 by Halsey Davidson).

(See map, history #16 to view 1934 existing conditions).

CCC crews returned to the Carbon River District in 1935. In his seasonal report, Jay T. Olds, the Superintendent of the Carbon River Camp, submitted a lengthy description of the work accomplished during the year. This included channel clearing of the Carbon River, maintaining telephone lines, making improvements at the "Carbon River Campground" (probably the Cataract Creek Campground), and minor road maintenance. The road work included gravel resurfacing and relocation of a 600-foot segment of the road through the "Carbon River Campground," which had been washed out by flood waters the previous winter (Microfiche D22, 5). This work was probably at the Cataract Creek Campground.

Construction of log cribbing by the CCC continued in the 1935 season. Olds reported that standard cribs were constructed along the Carbon River according to NPS specifications. The cribs were built five logs high and eight feet in width. A cedar puncheon floor was placed on top of the bottom logs and the logs were drift-bolted together at bearing points and secured together with nine-pound wire. Finally, the cribs were filled with rock, derived from blasting at two rock cuts along the Carbon River Road. These cuts were located at Ranger Creek and at the Chenuis Creek crossing. Today, these rock cuts remain prominent features of the road and exhibit naturalistic landscape design qualities as well as meticulous care in their craftsmanship, avoiding drill scars (Microfiche D22, 5).

Four cribs were constructed by the CCC during the 1933 to 1935 period. Crib number one was located at the park entrance and was 366 feet long. Crib number two was located near the Copley Lake trailhead. This structure was shorter than the others, measuring only 112 feet. In 2006, Carl Fabiani reported that the Copley Lake trailhead was located approximately 100 yards east of the Falls Creek culvert. Furthermore, Fabiani reported that there are remnants of cribbing at this location today. Crib number three, which was constructed in the 1933-1934 season, was located near the former Evans Cabin and was 285 feet long. Crib number four, the largest crib, was located just above the Ipsut Creek Campground, and measured 400 feet in



length (Microfiche D22, 5). Remnants of these cribs still exist at the Carbon River entrance and near Evans Cabin site. Today these groups of logs, bound together by wire and filled with rock, are visual reminders of the CCC role in the development of the Carbon River Road. Furthermore, the cribs are indicative of flood problems apparent from the earliest years of the road's development.

The CCC continued to maintain and improve the Carbon River District from 1935 until their disbandment in 1941; however, archival records of their involvement are limited after 1935. It is likely that CCC was involved in the addition of road fill at the Carbon River Entrance to create a parking area near the registration booth, as well as the removal of the entrance arch, potentially in 1936 (Acting Superintendent Macy to Fred Dixon, BPR District Engineer: October 23, 1936). The CCC left the park in 1941 after removing their spike camp at the Ipsut Creek Campground (Superintendents Annual Report, 1941). The campground itself was an improvement on the 1920s version, with a road system and parking spurs at individual campsites. While the CCC presence in the Carbon River District lasted just eight years, their hard work had lasting impacts. While the concept of linking the West Side Road to the Carbon River Road was abandoned due to extreme construction difficulties, the Carbon River Road remained viable in the park's 1930s master plan as a spur road. The West Side Road was also completed as a spur road, along with another spur road in the northwest part of the park: the Mowich Lake Entrance Road. The 'Around the Mountain Road' concept had given way to a more feasible reliance on regional roads to link the various areas of the park.

As the work force dwindled in the Carbon River District, the Carbon River Road began to deteriorate. According to the new park Superintendent John C. Preston, by June 1941 the Carbon River Road near the Cataract Creek Campground had become impassable due to a rockslide across the road (Superintendent's Annual Report, 1941). In response to the worsening condition of the road, Preston echoed his predecessor's vision in declaring that the upper section of the road (above Ipsut Creek) should be widened and the road be surfaced with oil macadam (MORA Roads Binder, 1940-2004). However, the window of opportunity had closed. Congress had de-authorized the Civilian Conservation Corps and by the end of the year, the country was involved in World War II. Funding for improvements and operations in the national parks was cut to support the war effort and a period of inactivity and the deterioration of the Carbon River Road ensued. While the CCC and Superintendent Tomlinson had left the park, and funding diminished, their legacy was emblazoned in one of the most highly developed national parks in the system before World War II. Tomlinson's final iteration of the master plan was almost completely implemented, and the park had almost 100 miles of scenic park roads, and several hundred facilities, all built in the rustic style of architecture, or the naturalistic style of landscape architecture, as it came to be called.



History #5: Historic photograph, looking west, showing flood damage on the Carbon River Road, n.d. (Photo Number: e77, MORA Archives).



History #6: Log cribbing constructed along the Carbon River, c. 1925 (Photo Number: twc586, MORA Archives).



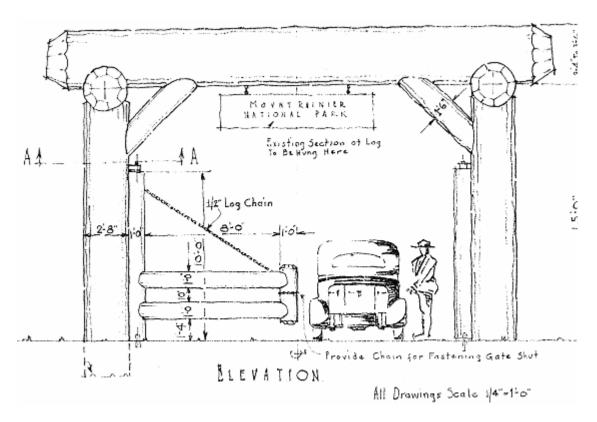
History #7: Historic photograph showing the Carbon River Ranger Station at the Carbon River Entrance and an associated woodshed, 1931 (Photo Number: n4036, MORA Archives).



History #8: Historic photograph, looking northeast, showing temporary CCC buildings at Camp No. 3, located in the Ipsut Creek Campground, c. 1939. Note the Ipsut Creek Bridge in the foreground (Photo Number: is1141, MORA Archives).

Carbon River Road

Mount Rainier National Park



History #9: Historic drawing illustrating the construction plan for the Carbon River Entrance Arch, 1933 (Microfiche etic: 8403, MORA Archives).



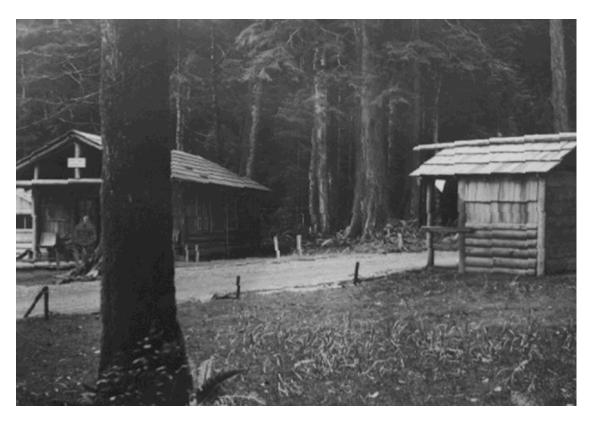
History #10: Historic photograph, looking east, showing the Carbon River Arch under construction, c. 1933 (Photo Number: ps3649, MORA Archives).



History #11: Historic photograph, looking east, showing the Carbon River Arch. Note the Carbon River Ranger Cabin in the background, 1953 (Photo Number: is1953, MORA Archives).



History #12: Historic photograph, looking north, showing the service drive behind the Carbon River Ranger Station, located at the Carbon River Entrance, n.d. (Photo Number: twc587, MORA Archives).



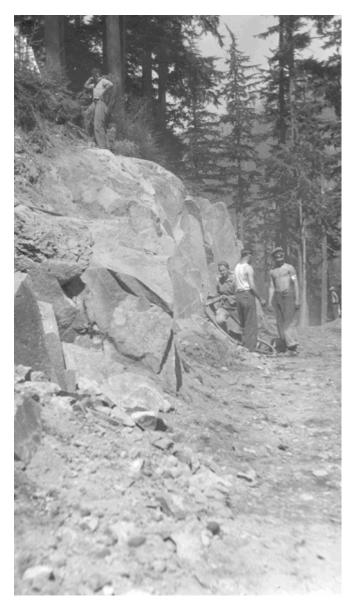
History #13: Historic photograph, looking northeast, depicting the Carbon River Entrance area. Note the orientation of the road in relationship to the Registration Booth and the Ranger Cabin, n.d. (Photo Number: twc588, MORA Archives).



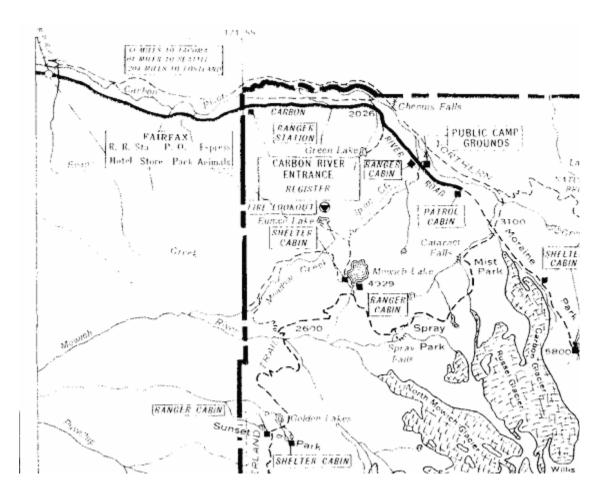
History #14: Historic photograph depicting CCC crews constructing log cribbing along the Carbon River, c. 1934 (Photo Number: n4502, MORA Archives).

Carbon River Road

Mount Rainier National Park



History #15: Historic photograph, looking west, showing CCC crews drilling rocks in an effort to widen the Carbon River Road, c. 1935 (Photo Number: n4500, MORA Archives).



History #16: Historic map illustrating the location of the Carbon River Road as well as numerous other features including the Ipsut Creek Patrol Cabin and Campground, 1934 (Circulars of General Information, The National Parks, MORA Library).

1942 – 1971 (The War Period and Mission 66)

Flood Damage and Repair

By 1942, inadequate funding was available for maintenance of the Carbon River Road. In response to the 1941 rockslide, the road was closed above Ipsut Creek to automobile traffic and designated a truck trail (Superintendent's Annual Report, 1942). Three years later in 1945, the Carbon River washed out a portion of the road below Ipsut Creek, necessitating extensive repair work (Superintendent's Annual Report, 1945). Several structures were built and several were removed or destroyed during this time. A map drawn in January 1945 confirms the existence of some of the structures along the road in December 1944. These included the Ranger Station at the Carbon River Entrance, a road bridge at Falls Creek and the CCC's log cribbing near the site of Evans Cabin. The map also indicates that the original Ranger Cabin near Ranger Creek had been obliterated by 1944 and that the Evans Cabin had been razed in 1934. Due to the rockslide and flood damage on the upper part of the road, the map indicates



that the road terminated at Ipsut Creek (Correct Location of Road Map, January 1945). Despite the condition of the upper part of the road, two pit toilets were installed at the Carbon River Entrance on the south side of the road in 1944 (Superintendent's Annual Report, 1944).

In 1947, the flood season proved especially detrimental. According to the Chief Ranger's November 1947 Report, the last mile of the road above Ipsut Creek, was made impassable. Later that year, the Superintendent indicated that the Carbon River Road was in great need of maintenance and that the road above Ipsut Creek was quickly returning to a "natural state" (Superintendent's Annual Report, 1947). The Superintendent's warning was heeded, and by 1948, funds were appropriated for road repairs. The rockslide area was cleared and the last two and one half miles of the road were widened by a bulldozer to an unspecified width. As a result of the work, the road was reported to be once again "used by the public for its entire length" (Chief Ranger's Report, August 1948).

Other renovations in the Carbon River District were described in the 1948 Chief Ranger's Report. The Carbon River Ranger Station's porch was replaced and the building received new mudsills and stringers, restored wood flooring and new cedar log steps. At Ipsut Creek Campground, a "small building", used as a utility shop, was re-clad in shakes. This is probably the small building still extant on the south side of the road near the campground amphitheater. Other renovations involved the re-decking of three bridges between the Carbon River entrance and Ipsut Creek. Slide areas along the road were re-cribbed with cedar logs and backfilled with soil and rock. As a result of the 1948 work, the Carbon River Road was re-opened all the way to Cataract Creek and was reportedly in better condition than it had been for several years (Chief Ranger's Report, July 1948).

Clean up from the neglect of the 1940s continued in 1950. In July 1950, the remains of a fallen tool shed were removed, presumably in the utility area (Chief Ranger's Report, July 1950). At Ipsut Creek Campground, two abandoned comfort stations (probably built by the CCC) were torn down. A new water line was constructed to the wood shed near the Carbon River Ranger Station (Chief Ranger's Report, August 1950). It was also reported in 1950 that the road was closed above Ipsut Creek due to river encroachment near Six-Mile Creek (Cataract Creek) (Chief Ranger's Report, October 1950). By 1951, three additional parking spaces were constructed at the Carbon River Entrance and a split cedar fence was near the river to keep visitors from climbing on the "faulty cribbing" at the park entrance (Chief Ranger's Report, May 1951). Later that fall, a flood washed out 200 feet of road adjacent to the Chenuis Falls turnout and repairs were planned for the following spring (Chief Ranger's Report, October 1951).

Similar clean-up activities continued throughout the early part of the 1950s as park officials sought to tidy up the area and control the Carbon River. As it was clear that log cribbing and revetments were no match for the river, the park constructed a dam near Ipsut Creek in 1952 to protect the road and Ipsut Creek road bridge (Chief Ranger's Report, July 1952). Despite efforts to the contrary, portions of the Carbon River Road were continued to be damaged by high waters on a frequent basis. After the 1950 closure of the road above Ipsut Creek, a year elapsed before eight tenths of a mile were reopened in June 1952. A turnaround area was built



at the terminus of the road, just beyond the Ipsut Creek Campground (Chief Ranger's Report, June 1952), formalizing the closure of the last two and one half miles of the road to vehicles and its conversion to a trail. As the cycle continued, high waters inundated the road at Chenuis Crossing in September 1952 causing moderate damage to the Chenuis road bridge and a culvert (Chief Ranger's Report, September 1952). The bridge was re-decked and the culvert was refurbished during the following year (Chief Ranger's Report, August 1953). By 1954, the road was reported to be "very rough" and in poor condition due to inadequate maintenance (Chief Ranger's Report, October 1954). In October 1955, another flood washed out two portions of the road, forcing the park to request \$7,500 to make the necessary repairs (Quinn 1992, 6).

Mission 66

The early to mid 1950s were a struggle for park officials to maintain the Carbon River Road, due to frequent flood damage and limited funding. However in 1955, the park had the opportunity to receive an infusion of funding through the Mission 66 program. This program, adopted by the NPS in 1955, served to improve inadequate facilities in all national parks and to spread visitor use more evenly throughout Mount Rainier National Park (Catton 1996, 4). As a ten-year program, its completion was timed to coincide with the commemoration of the 50th anniversary of the NPS in 1966 (Mission 66 for Mount Rainier National Park, 1957). In the Mission 66 Plan, minor roads, including the Carbon River and Mowich Lake Roads were to be improved and the Ipsut Creek Campground was to be improved and expanded. Park officials also considered relocating the Carbon River District headquarters to a less flood-prone location outside of the park, though this was not implemented (Development and Maintenance Collection, Microfiche 23).

As Mission 66 gained momentum, plans were proposed for future development and inventories of existing facilities were prepared. In 1957, the following structures were inventoried at the Carbon River Entrance: an entrance station (registration booth), a ranger station, an oil house and a powerhouse. The ranger station wood shed also still existed in 1957. In the utility area, an equipment shed, a tool house, a radio shack, a guest house (residence), a crew quarters (trail bunkhouse) and two trailer sites were inventoried (Master Plan Development Outline, Building Chart, July 1957). Facilities located at the Ipsut Creek Campground included a horse barn and six pit toilets. By 1957, the trail shelter at Cataract Creek had been obliterated, however. The park's Mission 66 Plan for future development included road construction, road repair, interpretation and camping facilities in the Carbon River District. The plan included a recommendation to pave the Carbon River Road and include the area in the future interpretive plan for the park (Master Plan for the Preservation and Use of Mount Rainier National Park, Mission 66 Edition). The Mission 66 Plan proposed to modernize a roadside exhibit at the Ipsut Creek Campground and highlight the early history of the region (Master Plan Development Outline Mount Rainier National Park, Interpretation, May 1957). Also part of the plan was the recommendation to improve and expand the campground to accommodate visitors seeking the unique remoteness of the area (Comprehensive Program of Use and Protection Mount Rainier National Park, June 1955).

With the Carbon River Road clearly part of the Mission 66 Plan, the park continued to repair



the Carbon River Road and make some alterations to reduce the road's vulnerability to flooding. Due to serious flood damage in 1955, the spring of 1956 was devoted to repair work. During repairs, several changes were made, including minor realignment and the addition of crushed gravel to raise the vertical alignment of the road from two to five feet, allowing for installation of larger culverts under the road bed. The log bridges at Falls and Ranger Creeks, Chenuis Crossing and Ipsut Creek were replaced with large, corrugated multi-plate culverts (Quinn 1992, 6). Despite these drainage upgrades, a 1959 flood washed out 800 feet of the Carbon River Road near Falls Creek. In some places, the road lost ten feet of grade. The same flood also destroyed parts of the road near Chenuis Crossing and the Ipsut Creek Campground (Quinn 1992, 6).

As the 1960s began, park officials continued to maintain and improve the Carbon River District while following the objectives of the Mission 66 Plan. In 1961, the road was re gravelled and graded by a local company from Fairfax (Chief Ranger's Report, July 1961). (see photo, history #16) In 1960, the park's trail crew constructed a corral in the utility area, for the storage of trail pack horses (Chief Ranger's Report, July 1960). In the following year, the ranger station and wood shed at the Carbon River Entrance received new concrete slab footings and the buildings were slightly realigned (Chief Ranger's Report, September 1961). Unfortuitously, just one year later the ranger station and wood shed burned down, due to an unattended wood stove. This left the Carbon River rangers having to live in a trailer for two seasons (Thompson 1981, 186). To provide better accommodations, a "transa-house" was installed at the entrance in 1965 on poured concrete footings (Carbon River Sub-District Manual, General Description-Introduction, Chapter 1 Section 2, Page 3, 1967).

By the conclusion of the Mission 66 program, the Carbon River District had undergone some noteworthy changes, including the repair of several buildings and structures, an expansion of the Ipsut Creek Campground, improved interpretation and the maintenance of the Carbon River Road up to the campground. In addition, the first mile of the road had been paved with asphalt and all of the bridges had been removed, with the exception of the Ipsut Creek bridge. Park officials hoped these enhancements would improve driving conditions and encourage more visitation of the Carbon River District. However, the improved conditions could not prevent yet more flood problems and did not significantly alter park visitation patterns. After only a short period of time, the Carbon River Road was once again considered for abandonment.



History #17: Historic photograph of the Carbon River Road, 1961 (Photo Number: is1681, MORA Archives).

1972 – 2006 (Contemporary Maintenance and Development)

Development Plans

After the Mission 66-era, park officials began to develop the 1972 Park Master Plan. In the plan, the park proposed to close the Carbon River and Mowich Lake Roads to visitor automobiles. In lieu of automobile access, a parking area would be provided near the park boundary and visitors would have access on foot, bicycle or by park minibus. Ultimately, the proposal was rejected due to various problems, including lack of cost savings for road maintenance, (as maintenance would still be required for the minibus service) and the provision of a minibus service was problematic. Park officials were also concerned that closing the road would turn away visitors rather than draw them to this side of the park (Catton 1996, 594-595). It is important to note that while the Carbon River Road avoided closure, the Mowich Lake Entrance Road was intermittently closed during the 1970s, due to lakeshore impacts from camping. With the 1972 proposal rejected, minor development resumed in the Carbon River District. In 1974, a trailer shelter was designed and installed at the Carbon River Entrance on



the site of the former ranger station. The wood frame gabled-roof shelter with wood posts covered the transa house, and still exists today (Trailer Shelter Plans, 1974). Within the year, interpretation was prepared for a new Carbon Rain Forest Nature Trail near the park entrance, including a self-guided nature trail pamphlet (The Carbon Rain Forest Nature Trail by Mike Spindler, Pacific Northwest National Parks and Forests Association, 1974). In 1977, rangers at the Carbon River Entrance recorded approximately 52,000 visitors (Development Concept Plans for Carbon River, White River, Sunrise, Tipsoo Lakes, September 1979).

In 1977, another destructive flood washed out road culverts at Ipsut Creek. A "Bailey Bridge" was constructed across the creek as a temporary measure, until plans could be drawn up for an emergency relief project bridge in 1979. The resulting plain concrete span bridge still exists today and serves as the entrance to the Ipsut Creek Campground (Emergency Relief Project-Carbon River Road-Ipsut Creek Bridge, 1980). The damage caused by the high water gave rise to consideration of relocating some Carbon River facilities outside of the park; however, there were no sites within a reasonable distance that were also not subject to flooding, and so no further action was taken (Development Concept Plans for Carbon River, White River, Sunrise, Tipsoo Lakes, September 1979). By the late 1970s, the popularity of the Carbon River District had grown to the extent that some updates and repairs were needed. Visitor parking at the park entrance, at the popular trailheads and scenic turnouts along the road was inadequate. Traffic jams were occurring at the entrance station and the utility area was reported to be in poor condition. In response, a Development Concept Plan was formulated in 1979 for the Carbon River District. The DCP emphasized the preservation of the remote character of the valley and the importance of providing a "relatively undeveloped, rustic outdoor recreation experience" for park visitors. The plan called for the reduction of services and facilities to protect the area, and a reduction in park employee housing (Development Concept Plans for Carbon River, White River, Sunrise, Tipsoo Lakes, September 1979). Despite the objective to reduce facilities and services, additional parking was proposed at the Entrance Station, Ranger Creek, Chenuis Falls and near the Ipsut Creek Campground. Picnic facilities at Falls Creek would also be expanded. Numerous other changes proposed included relocation of the water chlorination system from June Creek to the utility area, replacing the pit toilets with vault toilets at both the entrance and the campground, and the removal of the park housing function at the utility area. This proposal was combined with the creation of two dormitory units near the Ipsut Creek Patrol Cabin. Furthermore, it was deemed that the Carbon River Road would be retained as a "low standard, rural drive". Minor road maintenance plans included widening, improved drainage and riverbank stabilization (Development Concept Plans for Carbon River, White River, Sunrise, Tipsoo Lakes, September 1979).

Construction and Repair

The majority of the 1979 DCP recommendations were not implemented, though some were funded through a mid-1980s Federal Lands Highway project involving the Federal Highway Administration (successor agency to the BPR). The 1985 project involved overlaying 1.4 miles of existing pavement (from the park entrance) with asphalt, and resurfacing another 3.65 miles with crushed aggregate. Additional work included the rehabilitation of parking areas, the installation of log barriers and the reconditioning of ditches (Bid solicitation, offer and award,



D30, 1985). Old log curbs were removed through the project and replaced with mill-furnished shorter and smaller diameter logs. In accordance with the DCP, the Green Lake Trail and Chenuis Fall Trailhead parking areas were expanded, the Falls Creek picnic area was expanded, and parking was added at the terminus of the road beyond the Ipsut Creek Campground. While the park housing function was not removed from the utility area, it was downsized due to sanitary problems with the high water table. The old trail crew bunkhouse was dismantled by one half to become a restroom and laundry facility, and two trailers superseded the function of the old ranger residence, effectively halving the residential function of the area. Dormitory units were not installed near the Ipsut Creek Patrol Cabin.

Only a short time after the completion of the FLHP project, a flood destroyed a small segment of the road east of Chenuis Creek. Repairs to 0.284 miles of the road were performed in 1987 (Flood Damage Repair, 1987, Denver Etic Drawing, 41936). Again in 1990, significant flood damage occurred during a November storm in which fourteen inches of rain fell in just five days. This flood destroyed a turnout at Chenuis Falls and was rebuilt by the park as an expanded turnout retained by riprap, to accommodate a picnic area (Catton 1996, 569).

Flood events continued throughout the 1990s, with the most devastating damage occurring in the spring of 1996 with a 100-year flood. During this event, floodwaters destroyed a dike near Falls Creek and washed out the picnic area. Furthermore, a 1,350 feet-long segment of the road was damaged, with a six to ten foot wide channel cut along the roadway. The damage was estimated to cost at least \$500,000 to repair (Purpose and Need for Carbon River Road Repairs-1998). Due to the amount of damage sustained, the park was forced to close the road to vehicular traffic until funds could be appropriated for its repair, a period of approximately 2 years (The Seattle Times, April 7, 1996). The extensive damage caused by the 1996 flood and the history of flood events on the Carbon River Road motivated the NPS to request the Federal Highway Administration (FHWA) to complete a hydraulics study. The study, completed in 1997, indicated that the historic and contemporary flood damage to the road was random in time and location, with no apparent trends. The study concluded that the annual cost to the park of keeping the road open would be \$30,000. While the hydraulics report was completed in February 1997, the decision to reconstruct the Carbon River Road was not made until after the new draft park General Management Plan (GMP) had been released for public review in March 1998. The GMP identified three potential management strategies for the road:

- "1) Reconstructing the road for private vehicle access to allow for pre-flood recreational uses and management;
- 2) Reconstructing the road to a lesser standard and allowing only a visitor transportation shuttle system, maintenance, foot and bicycle access; and
- 3) Decommissioning the road and restoring the area back to wilderness with hiking trails" (Purpose and Need for Carbon River Road Repairs-1998).

GMP comments clearly stated that the public preferred to have the Carbon River Road repaired to its pre-flood condition and be open to private vehicular traffic. As a result, Alternative B—Carbon River Road Reconstruction was selected. This called for the repair of the road to occur within the existing alignment and for the road to be restored to "pre-existing"



grade, condition and character" (Purpose and Need for Carbon River Road Repairs-1998). Despite the fact that records indicated at least 11 different flood events had damaged the road between 1924 and 1996, costing \$1.3 to \$1.6 million, the NPS committed to repairing the Carbon River Road. By 1998, funds were allotted from the Emergency Relief from the Federally Owned (ERFO) Road Program (Purpose and Need for Carbon River Road Repairs-1998) and repair work was completed in February 1999. Just five weeks later, another flood destroyed a portion of the road (The Seattle Times, February 20, 1999). This time, park staff performed the repairs, and by April the road had been reopened as a one-lane width through the damaged area between Falls and Ranger Creeks (The Seattle Times, April 13, 1999). Today, this segment of the road remains narrower than the rest of the five miles of the road.

In 1997, the Mount Rainier National Historic Landmark District was designated, and the Carbon River Road was included within the NHLD boundary. Encompassing all the extant infrastructure built in the park between 1906 and 1957, the NHLD represented the best example of an early national park master plan surviving within the park system. Despite numerous flood repairs throughout the 20th-century, the NHLD nomination found that overall, the Carbon River Road retained integrity in its original alignment and design.

Flood damage continued to occur intermittently between 1999 and 2006, with repairs performed by park staff. The park's new GMP, finalized in 2001, stated that the NPS would preserve the NHLD to retain the highest order of integrity possible. In addition, the park would continue to maintain the Carbon River Road, but would not go to "heroic measures" to repair the road, should a devastating flood occur. In such a case, the road could be turned into a trail on the same alignment, allowing for "walk-in" use of the Ipsut Creek Campground and Patrol Campground. In 2000, a vault toilet was installed at Carbon River Entrance, along with a new concrete path. The vault module was clad in a rustic envelope with a cedar-shingle roof and lap siding, designed to complement the rustic character of the NHLD.

The Addition

In 2002, initial proposals for a 1000-acre expansion of Mount Rainier National Park were released. This park expansion, the largest in over seventy years, was sought by the NPS as a means to better provide public access on the northwest side of the park. The addition included a 3-mile band of land along the Carbon River (The Seattle Times, December 19, 2002). In 2004, Washington's congressional delegation began working across party lines to ensure that the boundary adjustment would be voted on in a timely manner (The Seattle Times, February 27, 2004). In fall 2006, the park was close to successfully acquiring approximately 800 acres of land from the Marsh and Thompson families and from the Plum Creek Timber Company. In the future, the Thompson Homestead, located several miles outside of the contemporary park boundary, may be used as a campground, potentially superseding the flood-prone Ipsut Creek Campground as a vehicular campground. Shuttle services may also be offered to park trailheads from this location in the future (The Seattle Times, December 19, 2002), potentially perpetuating the historic use of the Carbon River Road.

Mount Rainier National Park



Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The Carbon River Road serves as an intact example of an early national park road. The particular significance of the road is tied to its early survey and construction date. Surveyed in 1915 and constructed between 1921 and 1924, the road was built prior to the involvement of the Bureau of Public Roads (BPR) in park road building activities. As a result, the Carbon River Road remains an intact example of a road surveyed and designed by the National Park Service (NPS). Without the partnership of BPR engineers, the NPS built a relatively un-engineered road. The Carbon River Road was aligned as a narrow, gravel road, through old-growth forest in the Carbon River floodplain. The road was designed with few engineered structures, instead the design of the road relied more on wagon road technology than modern engineering. The road was built with wood bridges at every creek crossing, wood culverts to drain the road, and log cribbing to armor the river banks near the road. The low elevation route with respect to the floodplain and the lack of sophistication in engineering left the road vulnerable to flooding from the start. While some modifications to the road have been made, it remains a primitive road with an archaic design character.

While the Carbon River Road was constructed prior to Mount Rainier's first master plan, it played a significant role in park planning from an early date. Specifically, the road was tied to the development of the "Around-the Mountain-Road" plan, which was proposed during the 1910s and early 1920s. At the time, park planners envisioned the development of a West Side Road that would connect with the Carbon River Road. Furthermore, additional plans were proposed, which included the development of a road that would link the Carbon Road to the Storbo Road or the McClellan Pass Highway to connect it to the northeast side of the park. This proposed system of park roads would allow visitors to travel around the mountain by vehicle. Ultimately, this plan was abandoned due changing perceptions concerning park development. As a result, the Carbon River Road's vital link, the West Side Road, was left unfinished due to the areas rugged terrain, thereby leaving the Carbon River Road as spur road.

The period of significance for the Carbon River Road begins in 1915 when the alignment of the road was staked out in a field survey. The period extends to 1941, when CCC laborers disassembled their camp in the Carbon River District. This period of significance reflects an integral period of development in which NPS officials planned, surveyed and constructed the road. Furthermore, this period includes CCC landscaping, maintenance and repair activities along the Carbon River Road. Many of the extant landscape characteristics and features date to this period of development.

The Carbon River Road, located within Mount Rainier's National Historic Landmark District, was evaluated as a cultural landscape. As a result of the completion of the evaluation, it was determined that the road possesses the following characteristics, which contribute to its overall integrity. These include: natural systems and features, spatial organization, land use, circulation, topography, vegetation, buildings and structures, views and vistas and archaeological sites. These landscape characteristics and associated features are significant as they retain their historic integrity as expressed during the period of



significance 1915-1941.

Integrity

The Carbon River Road retains all seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Furthermore, the road reflects the spatial organization, physical components, and historic associations that it attained during the period of significance, 1915-1941. The Carbon River Road, as evaluated in the summer of 2006, illustrates clear evidence of deterioration to segments of the roadbed due to natural forces associated with flooding. However, the overwhelming majority of the resources remain and the integrity of the landscape is intact.

Location: The road's location, situated in the northwest corner of Mount Rainier National Park, has not changed since the period of significance.

Design: The layout and linear alignment of the road remains unchanged since the period of significance. Additionally, the associated features of the road, including buildings and structures, topography, circulation features and spatial organization (nodes of primary development) still convey historic design patterns and intentions of the NPS landscape architects from the period of significance.

Setting: The physical environment associated with the Carbon River Road has undergone few changes since the period of significance. While traveling along the road, visitors still have the opportunity to enjoy a temperate rainforest environment defined by lush vegetation and specimen trees. Furthermore, visitors can also enjoy picturesque views of the Carbon River and associated valley.

Materials: Materials such as native stone, wood, and plants were implemented during the period of significance by CCC laborers in the Carbon River District. Extant built features such as the Ipsut Creek Patrol Cabin and several buildings in the maintenance and utility area still reflect the use of these native materials.

Workmanship: The high level of workmanship produced by the CCC crews is evident in all aspects of the road corridor, which includes the construction of log cribbing along the riverbank, the use of native vegetation along the roadbed and the construction of numerous buildings in developed areas along the road.

Feeling: The feeling of the Carbon River Road is conveyed through the retention of much of the historic fabric of the road. The road, designed by NPS landscape architects, followed the basic principles of naturalistic landscape design. 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 and response to natural systems.

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



Landscape Characteristic:

Natural Systems and Features

Numerous elements associated with the Carbon River Valley attribute to the significance of natural systems and features as a landscape characteristic. These elements, which are associated with the development of the Carbon River Road, consist of the Carbon Glacier and River, several creeks, including June, Falls, Ranger and Ipsut Creek as well mineral deposits in the area. Each of these features influenced the siting, alignment and development of the Carbon River Road during the historic period.

While other factors, such as the development of the area for tourism and the construction of a hotel, may have played a minor role in the alignment of the road at its eastern end, access to the Carbon Glacier was the primary objective behind the design of the road. Historically, visitors to the Carbon River District were primarily interested in viewing the Carbon Glacier. As a result, guided tours by horse or foot, offered visitors the opportunity to make the trek to the glacier. Not surprisingly, this task was an arduous experience, which limited the opportunity for such an adventure only to those who could handle the physical strain.

By 1913, a trail system had been established along the northern side of the Carbon River. In addition, numerous cabins had been constructed on the southern side of the river, near the present location of the Carbon River Road. As the Carbon River District became developed, it was clear that there was a need for a road on the southern side of the river. Not only would a road on this side of the water make the Carbon Glacier more accessible, but it would also allow park rangers to patrol this area of the park with relative ease.

Only two years later, in 1915, a survey was conducted for the construction of a road on the southern side of the river. The survey, prompted by outside parties with vested interests, was completed within the year. By 1921, construction of the Carbon River Road had commenced. The road was completed to the Carbon Glacier, near Cataract Creek in 1924; however, the approach road to the park would not be completed until 1925.

Other natural features also influenced the siting and alignment of the Carbon River Road. During the early part of the 20th century, as visitors were trekking up the northern side of the Carbon River Road to reach the Carbon Glacier, mining activity was occurring on the southern side of the road and within park boundaries, approximately one mile from the contemporary entrance. Here, two primary mining operations, the Hephizibah and the Washington Mining and Milling Companies were extracting "white ore" from the ridges overlooking the floodplain. Associated with the Washington Mining and Milling operations was a wagon road that was constructed to transport the mined material. Remnants of the road have been located by Carl Fabiani, MORA employee; however, its exact location has not been mapped. Regardless, historically, the road was situated south of the contemporary location of the Carbon River Road. It is possible that the alignment of the road ran adjacent to this area, which had been cleared of vegetation.



Streams and creeks may have also influenced the development of the road. Historically, the Carbon River Road intersected with several small watersheds. The first stream, June Creek, was located at the park entrance. At this location, an early water pump system was installed. Remnants of this historic feature are extant. Falls and Ranger Creek were two additional water sources, which were situated approximately 1.5 and 3 miles east of the entrance. The presence of water at Ranger Creek allowed for the development of the first park Ranger Cabin in the valley, and a destination point for the Carbon River Road alignment. Finally, Ipsut Creek, was situated near the terminus of the road, approximately 4.5 miles from the entrance. Abundant perennial water in Ipsut Creek allowed for the development of a large campground in this location. All of the streams and creeks mentioned above, while not significant in size and often intermittent, required the development of bridges. Today, streams and creeks continue to flow in approximately the same locations; however, the means to divert these waters have changed. Corrugated metal culverts have replaced the former bridges at Ranger and Falls Creek. In addition, a concrete bridge has been constructed over Ipsut Creek and concrete box culvert diverts the water associated with June Creek into the Carbon River.

Second only to the Carbon Glacier, the Carbon River Road was also aligned according to the location of the Carbon River, which serves as an extensive drainage system for the Carbon Glacier as well as for the creeks and streams mentioned above. Park planners and engineers designed the road to blend in with the landscape with the utmost sensitivity to its natural surroundings. Careful attention was paid to construct the road near the Carbon Riverbed, instead of on a bench. Regardless of the sensitivity that was applied when considering the construction and design of the road, several contemporary road-engineering tenets were overlooked. Perhaps the most costly mistake that was made included the alignment of the road in a floodplain. Engineers may also have made another mistake, which included not taking into account the ability of the river to change its course. Since the road was completed in 1924, numerous floods have destroyed several portions of the Carbon River Road. It is likely that this damage could have been avoided if different construction and engineering techniques had been implemented during the 1920s. It is certain that historically, the Carbon Glacier may have determined the alignment of the road; however, today, the very existence of the road is determined by the course of the Carbon River.

Today, these dynamic natural systems and features continue to shape the landscape. These features play an important role in the development of the Carbon River Road. As a result, natural systems and features as a landscape characteristic remain significant.

Spatial Organization

The spatial organization of the Carbon River Road retains integrity, which contributes to the road's historic significance. The road's primary spatial feature is its linear alignment that serves to connect the Carbon River Entrance Station near the park boundary, to the Ipsut Creek Campground at the road's terminus. The alignment of the road is predominantly west to east and is generally curvilinear with the exception of a relatively straight segment between the Chenuis Falls Trailhead and the Ipsut Creek Campground. The vertical alignment of the road is a relatively shallow gradient and low elevation, climbing from 1880 feet to 2360 feet. A secondary spatial feature associated with the road includes several historic nodes of



development, which are located near the entrance, utility and maintenance area and the campground.

Today, the road begins at the park boundary and extends approximately five miles to the current location of the Ipsut Creek Campground, where it terminates. Its alignment between these two points reflects planning decisions made in the mid 1910s and early 1920s by early park officials and planners, such as Superintendents DeWitt Raeburn & William H. Peters and NPS Chief Engineer, George Goodwin. It may also reflect the actions of J.P. Morgan, an engineer, who made the initial road survey in 1915 and worked for the Forest Reserve.

The road, constructed from 1921-1924, was originally intended to be connected with the West Side Road to create an "Around-the-Mountain-Road" system. Ultimately, this plan was not realized and the Carbon River Road was never linked to another route. As a result, the linear alignment and nodes of development associated with the spatial organization of the road has remained intact.

During the historic period, several areas of the road were defined by discreet development in tightly managed areas mentioned above. These areas were located near the park entrance, within the utility/maintenance area and at the Ipsut Creek Campground. In the case of the park entrance and utility areas, these nodes were largely cleared of trees, buildings were clustered, and revegetation was performed. At the Ipsut Creek Campground, facilities were laid out within the forest canopy to provide shade for campers. While many of the original buildings in these developed areas are non-extant today, new buildings and structures have been added in generally the same locations. The continued utilization of the established historic developed areas represents continuity in this second level of spatial organization.

Presently, the three primary historic developed areas remain in the same locations and continue to serve the same function as they did in the historic period. In addition, a fourth developed area has been constructed near the Chenuis Falls Trailhead, approximately 3.5 miles east of the entrance. At this location, the park has expanded the parking area, developed an interpretive sign and created a picnic spot. Here, visitors can enjoy the scenic views of the Carbon River and the associated valley. While this is a relatively new development, created in 1985 as a result of a development concept plan, it does not detract from the spatial integrity of the Carbon River Road.

It should be noted that the only significant change associated with the spatial organization involves the road itself. Originally designed to bring park visitors directly to the Carbon Glacier, the road has been shortened by approximately three miles. This portion of road; however, was single-lane and susceptible to flood washouts from an early date. Therefore, this change, while significant, does not negatively influence the historic integrity of the road, its alignment or the uses associated with the road. As a result, due to only minor changes of the principal road from the park entrance to the Ipsut Creek Campground and the associated corridor since its completion in 1924, the spatial organization of the road retains integrity.

Land Use



Historically, land associated with the Carbon River Corridor was utilized for non-park purposes. In the early part of the 20th century, several mining companies operated within park boundaries. In addition, at least one recorded homestead claim was made within contemporary park boundaries by W.L. Evans. While Evans resided along the Carbon River Road, he constructed numerous buildings, cleared several acres of land and plowed approximately half an acre of ground. By 1906, Evans died and his land claim was terminated. At this time, a mineshaft and a small clearing are all that remain visible from this early period of use of the Carbon River valley.

After the mining and homestead claims expired, the Carbon River Corridor began to draw an increased number of visitors seeking recreational opportunities. As early as 1911, a Ranger Cabin had been established at Ranger Creek, which was situated approximately three miles from the contemporary park boundary. Here, the park created a facility that would provide information to visitors traveling to the Carbon Glacier and other destinations in the area. Additionally, this cabin allowed park rangers the opportunity to reside in the area and patrol the district. This established presence ensured that there were no illegal activities occurring within park boundaries.

As the number of visitors continued to increase, the park contemplated the construction of a road in the Carbon River District. In 1915, a line was surveyed and between 1921-1924, the Carbon River Road was constructed. This road was designed to serve as a pleasure drive. Characterized by curvilinear lines and large specimen trees bordering its edges, the road traversed through a temperate rainforest environment in which visitors could enjoy viewing immense old growth trees and dense vegetation. Beyond serving as a pleasure drive, the road was created to furnish visitors with the opportunity to access the Carbon Glacier, Mount Rainier's most accessible glacier. In addition, the Carbon River Road also provided visitors with the opportunity to camp at the extant Ipsut Creek Campground and the secondary Carbon River Campground, once located near Cataract Creek. Today, visitors still have the opportunity to hike to the Carbon Glacier, camp at the Ipsut Creek Campground, picnic at the Chenuis Falls Trailhead and drive down the Carbon River Road. Furthermore, they also have the chance to utilize numerous trails, including the non-historic Rainforest Loop Trail, as well as the potentially historic Green Lake Trailhead, the Chenuis Falls Trailhead and a non-maintained trailhead leading to a historic mine shaft. It is important to note that all of the trailheads mentioned above have associated parking areas where visitors can leave their vehicles while using the trails. As a result of the continued use, the recreational land uses associated with the Carbon River Road remain intact.

After the road was completed in 1924, the park created administrative facilities for the northwest corner of the park at the Carbon River entrance, thereby abandoning the Ranger Cabin at Ranger Creek. This development included a rustic registration booth, ranger cabin and associated woodshed. It is also likely that there was a comfort station constructed at this location. This area served to provide visitors with information concerning available activities along the Carbon River Road. Furthermore, the cabin and woodshed served as a residential



facility for the park ranger. Ultimately, this developed area remained largely intact until the early 1960s when a fire destroyed the cabin and woodshed. Shortly after the fire, the area was redeveloped and new buildings were constructed in approximately the same locations as their predecessors. Today, this area continues to provide information to visitors as well as serve as the administrative facilities for this portion of the park, thereby reflecting a similar land use.

Additional land uses associated with the Carbon River Road Corridor include the establishment of a maintenance and utility area near the entrance of the park. Here, several buildings were constructed in the 1930s because of the efforts of CCC crews. Not surprisingly, several of the buildings situated in this location were intended to be used for maintenance-related functions. In addition, several cabins in this area were also historically used as bunkhouses. Today, this area still functions as a maintenance and utility area; however, there is no residential activity occurring in this locale.

Today, the Carbon River Road and its associated features are utilized in the same manner as they were historically. Therefore, the road maintains its historic design intent by continuing to provide park visitors with the same informational, recreational and transportation opportunities. Specifically, visitors today can still travel by automobile down the road. Along the route, they can stop to view the immense old growth trees and dense undergrowth associated with the temperate rainforest environment. Furthermore, visitors can visit the Carbon Glacier; utilize numerous trailheads via parking areas and camp near the Carbon River while taking in the beauty of the surrounding river valley.

Circulation

Since its construction in 1924, the Carbon River Road has served as a transportation corridor for visitors seeking the opportunity to view the Carbon Glacier. While the road is a pleasure drive, its primary purpose is to provide a circulation route in the northwest corner of Mount Rainier National Park. In addition to through-circulation, the road also provides visitors with the opportunity to stop at numerous places along the road, which includes several trailheads, a picnic area and a campground. Many of these features are associated with the historical development of the road and as a result contribute to the significance of the road's circulation patterns.

The circulation features associated with the Carbon River Road include the nearly five-mile road itself, as well as parking areas associated with trailheads, log curbing/bumper stops, turnouts and service roads. Other features, including the linear alignment of the road are discussed in the spatial organization section and the road's cross section and grade are discussed in the topography section.

While circulation is the primary objective of the Carbon River Road, places to stop along the road are also part of the historic design. Today, five different parking areas are situated along the road, all of which are associated with trailheads and characterized by the presence of non-historic, mill-furnished log bumper stops. It is should be noted that similar mill-furnished logs are also located along the road in numerous locations in addition to the parking areas. In most cases, these logs serve as curbing, which illustrates the location of the edge of the



roadway.

The first trailhead and parking area is located at the park entrance. At this point visitors can access the non-historic Rainforest Loop Trail. Developed in the mid 1970s, this trail serves to provide visitors easy and convenient access to a temperate rainforest environment. Measuring only .25 of a mile, the trail meanders around large growth trees, over small bridges and across wooden boardwalks.

Approximately one mile east of the entrance, there is a parking area near a non-maintained trail, which leads to a historic mineshaft. The trail, while no longer maintained by the park, is discernable and can be followed to a bench above the floodplain where the mineshaft is located. Characterized by steep terrain, fallen trees and a narrow base, this path is quickly returning to a natural state. The asphalt paved parking area associated with the trail is not historic; however, due to the presence of the mineshaft it is likely that a turnout was historically situated in this location.

The third trailhead, called Green Lake, has a parking area located near Ranger Creek. The location of the parking area and trailhead are likely historic due to their association with the first Carbon River Ranger Cabin; however, the parking area was expanded to allow more space for vehicles and is compatible.

It should also be noted that a fourth trailhead, picnic and parking area is located near Chenuis Falls. This spot, defined as a developed area, may have historic undertones due to its association with the waterfall; however, the parking and picnic area was expanded significantly in the mid 1980s. During the expansion, additional parking was built, which included the creation of two vegetated islands located in the middle of the parking area. This expanded development may have occurred as a result of flood damage near the historic picnic area at Falls Creek. The Falls Creek locale, once defined by lush green grass was a favorite picnic place for countless visitors for many years (Fabiani, 2006). Unfortunately, this area was destroyed by floodwaters on numerous occasions. Today, this area has a 10-12 foot deep channel cut into the earth on the north side of the road.

Finally, today a non-historic trailhead and parking area is located at the terminus of the Carbon River Road, just beyond the Ipsut Creek Campground. This path is part of the Wonderland Trail and leads to the Carbon Glacier, which is only a seven-mile roundtrip hike to the lowest glacier in the contiguous 48 states. The initial route of the Wonderland Trail is on the alignment of the former Carbon River Road, to the point where it branches. The branch point would have been the historic trailhead. The trailhead at Ipsut Creek Campground is therefore non-historic, created when the road was shortened.

The circulation pattern of the Carbon River Road is also characterized by several service roads. In all, three service roads and a driveway exist today. The first historic service road is associated with the utility and maintenance area near the park entrance. The road is



approximately 55 feet long, is paved with asphalt and extends north towards the maintenance and utility area as well as the Carbon River. The second historic service road is situated on the southern side of the Carbon River Road, just east of Falls Creek. Leading to an explosive cache, this grass road is not heavily utilized. Finally, the last service road is non-historic. Paved with spotted areas of gravel, it served as a route to a helibase in the 1980s. It is located on the northern side of the road, near the Chenuis Falls Trailhead and picnic area. Today, it appears slightly overgrown with piles of logs sitting along its edges.

The historic driveway mentioned above is associated with the Ipsut Creek Patrol Cabin and is paved with asphalt and gravel. The driveway is approximately 80 feet long and 11 feet wide. Leading to the Patrol Cabin, the driveway loops around a small vegetated island, which contains a non-historic wooden flagpole, a contemporary memorial boulder and several small alder trees. It is likely that that the alignment of this historic road is intact. However, it should be noted that historic sources report that small segments of corduroy were visible behind the cabin at one time. This feature, while non-extant today, may have been associated with a historic trail or drive near the cabin.

Turnouts, while visible on the landscape, were not a dominant feature of the road historically. The majority of turnouts are non-historic and occur near flood-damaged areas that are too narrow for the passage of two vehicles at the same time. A few turnouts do exist in non-disturbed areas at the eastern end of the road. In these cases, the turnouts are almost always situated on the northern side of the road and are defined by a moderate size and a lens shape. Furthermore, these turnouts are paved with gravel and occasionally curbed with non-historic milled logs. It is likely that these turnouts are historic and were constructed to take advantage of the views of the Carbon River and associated valley. These turnouts have been determined to be compatible features.

Generally, the road as a transportation and circulation corridor remains intact. While the addition of trailheads, service roads and turnouts may have slightly modified the visual qualities of the landscape associated with the road, the core feature of the road as a circulation system, remain intact and as a result is significant.

Character-defining Features:

Feature: Trail (1)

Feature Identification Number: 115012

Type of Feature Contribution: Contributing

Feature: Parking Area (1)

Feature Identification Number: 115014

Type of Feature Contribution: Contributing



Feature: Service Road (1)

Feature Identification Number: 115016

Type of Feature Contribution: Contributing

Feature: Intersections (2)

Feature Identification Number: 115018

Type of Feature Contribution: Contributing

Feature: Driveway (1)

Feature Identification Number: 115020

Type of Feature Contribution: Contributing

Feature: Curb (1)

Feature Identification Number: 115022

Type of Feature Contribution: Contributing

Feature: Trailheads (4)

Feature Identification Number: 115024

Type of Feature Contribution: Contributing

Feature: Service Road (2)

Feature Identification Number: 115026

Type of Feature Contribution: Non Contributing

Feature: Parking Areas (12)

Feature Identification Number: 115028

Type of Feature Contribution: Non Contributing

Feature: Turnouts (10)

Feature Identification Number: 115030

Type of Feature Contribution: Non Contributing

Feature: Intersection (1)

Feature Identification Number: 115032

Type of Feature Contribution: Non Contributing



Feature: Vegetated Islands (4)

Feature Identification Number: 115034

Type of Feature Contribution: Non Contributing

Feature: Trailhead (1)

Feature Identification Number: 115036

Type of Feature Contribution: Non Contributing

Feature: Curbs (16)

Feature Identification Number: 115038

Type of Feature Contribution: Non Contributing

Topography

Surveyed and built prior to the appointment of the Bureau of Public Roads, the Carbon River Road was constructed using rudimentary engineering principals. Adhering to the path of least resistance, the road winds along the relatively flat valley floor of the Carbon River for approximately five miles. Following the river floodplain for most of its course, the road grade never exceeds 6%. Due to the road's crowned prism, there was very little disturbance associated with the construction of the road. Minor disturbances along the corridor included through-fills in low-lying areas and two earth and rock cuts near the river. Otherwise, the historic road alignment required little cutting and filling. While this rudimentary design avoided scenic impacts and cost considerably less than a bench-cut higher elevation route, it did expose the road to flood hazard.

Existing Conditions:

Road prism

The cross section of the road in most locations along the Carbon River Road is crowned with ditches along either side. In low-lying locations where there has been flood damage, the road consists of fill and sits on a bench. Several historic earth and rock cut benches are also found along the corridor where the road is adjacent to the Carbon River. These cuts are located near the Green Lake Trailhead by Ranger Creek and west of the Chenuis Falls Trailhead and picnic area.

Surface

The Carbon River Road is partly defined by its gravel road surface. Generally, the roadbed is surfaced with a layer of gravel that runs along almost the entire route. At the entrance, however, the road is paved with asphalt for approximately the first tenth of a mile. A short stretch of asphalt can also be found near the Ipsut Creek Patrol Cabin. The gravel road remains in good condition along a significant portion of the road, though several sections of road that are prone to flood damage have been paved with a larger grade of rock material. In these



damaged areas, the road is rough and includes numerous potholes.

Width

Throughout its course, the Carbon River Road has a consistent historic width of 18 to 20 feet. However, the road narrows by as much as five feet in areas that were recently damaged by flood activity. The narrowest portion of the road is near Falls Creek, where the road is rough and practically one-lane wide. It is characterized by potholes and small turnouts that were constructed to allow a vehicle to turn off the road in the event that two vehicles were to meet on the narrow stretch of road. The road also narrows slightly near the Green Lake Trailhead and the Chenuis Falls Trailhead where the road runs in between a rock cut and the Carbon River.

Gradient

The historic gradient of the road ranges from 2.5-6%. At the park entrance, the road grade measures 2.5% at the lower (west) end of the road. As the road progresses eastward, the grade gradually climbs to approximately 6% near the Ipsut Creek Campground at the far eastern end of the road (HAER 1992, 3).

Flood damage

The primary changes on the Carbon River Road have occurred as a result of flood damage. Significant changes have been made to the road prism near Falls Creek. In this area a 10-12 foot deep channel was cut by the river along the northern side of the Carbon River Road. This channel destroyed a 1350-foot segment of the road, causing park officials to close the road until funds could be allotted for its repair. In 1998, when this portion of road was repaired, park officials were careful to restore the road to its pre-existing alignment and grade though the road width was decreased to 12 feet to allow for the retention of a new deep ditch along the north side of the road, to increase drainage capacity during a flood event. Additional flood repair work has also been undertaken near the Chenuis Falls Trailhead and picnic area as well as near the site of Evans Cabin. Other floor repair and control work along the Carbon River Road included the installation of riprap and a linear berm as well as cribbing in several locations. Bridges were also removed at Falls, Ranger, and Chenuis Creeks and replaced with contemporary culverts. Several historic cedar culverts, situated along the Carbon River Road, have also been replaced with new culverts.

The topographic conditions of the road today are generally those that were present during the period of significance. While there have been minor changes to the road, the original design intent and alignment remains intact. Furthermore, a significant portion of the road retains its original road prism, width and gradient. The road circulation system and associated topography has changed only slightly since the period of significance. Therefore, topography is a landscape characteristic that contributes to the historic integrity of the Carbon River Road.

Character-defining Features:



Feature: Rock Cuts (2)

Feature Identification Number: 115040

Type of Feature Contribution: Contributing

Feature: Berm (1)

Feature Identification Number: 115042

Type of Feature Contribution: Contributing

Vegetation

Vegetation is a primary landscape characteristic of the Carbon River Road cultural landscape. In this portion of Mount Rainier National Park, large old growth trees associated with the park's only temperate rainforest envelope the area in an abundant canopy. Here, massive specimen trees, retained during the construction of the road, line the corridor. In all, over 100 specimen trees, some measuring ten feet in diameter, were documented near the route. These trees were saved during road construction through the curvilinear alignment of the road curving to avoid them. They would have been protected during construction and during the felling of trees in the path of the road. Most likely, plywood would have been used to protect the trees from scarring as trees were felled or stumps were dynamited. Today, several of the conserved trees are located within one foot of the road edge. These features serve to contribute to the overall significance and integrity of the road.

The composition and character of the plant communities along the Carbon River Road Corridor remain fairly consistent throughout its entirety, with subtle changes occurring as the road advances east. From the park entrance to the Ranger Creek area, a distance of approximately three miles, the road winds through a dense lowland temperate rainforest. This wet environment is especially conducive to the growth of Douglas fir (Pseudotsuga menziesii), western red cedar (Thuja plicata) and western hemlock (Tsuga heterophylla). Sitka Spruce (Picea sitchensis), principally found along the first several miles of the Carbon River Road also flourishes in this environment. Due to the large amount of precipitation that falls in the area, moss, ferns and devil's club (Oplopanax horridum) form a dense blanket of vegetation over a large portion of the forest floor.

Due to the moist, temperate rainforest environment, moss and numerous fern species are especially abundant along the Carbon River Road. During the 1930s, CCC crews often utilized these forms of native vegetation as they "renaturalized" areas that had been scarred by construction. Areas that were intentionally planted with this type of vegetation included locations near the park entrance as well as by the Ipsut Creek Patrol Cabin and Bridge.

Just beyond the Chenuis Falls Trailhead, approximately 3.5 miles from the park entrance, the road begins to shift towards the banks of the river. As a result, the thick forest begins to open up to light and views of the river and associated valley. From this point, to the roads termination at the Ipsut Creek Campground, young alders occupy the riverbanks and other disturbed areas

along the road. While Douglas fir, western red cedar and western hemlocks still grow in abundance along this portion of the road, there are fewer large specimen trees. Moss, ferns and devil's club also still occupy the wet, low-lying areas along this portion of the road corridor.

Today, vegetation continues to contribute to the historic character of the Carbon River Road. Many of the large specimen tress, which played a role in the development of the road during its construction, remain in excellent condition and retain integrity. Their spectacular appearance gave the Carbon River Road the reputation as one of the most beautiful roads' in the region, upon its construction. These features contribute to the overall significance of vegetation as a landscape characteristic of the Carbon River Road.

Buildings and Structures

The buildings and structures associated with the development of the Carbon River Road are important components of the cultural landscape. Not only do these features represent the accepted design and planning philosophies of the time, but they also illustrate the historical development of the road as it changed through time.

When considering the development of buildings and structures along the Carbon River Road, there are there are two discernable periods of development. The first period is bound by the period of significance, 1915-1941 and includes numerous structures that are no longer extant today. The second period of construction includes construction that may be associated with the Mission 66 program.

Historically, the first residential development occurred in the Carbon River Valley in the opening decade of the 20th century. At this time there were several cabins situated along the Carbon River, near the contemporary location of the Carbon River Road. According to a map drawn in 1907, there were seven cabins on the southern side of the Carbon River, within contemporary park boundaries. Today there are no traces of these buildings on the surface and their original locations are unknown.

As increased numbers of visitors frequented the northwest corner of the park to view the Carbon Glacier, there was a need for a Ranger Station in the area. In 1911, a cabin near Ranger Creek, on the southern side of the Carbon River, approximately three miles from the contemporary park boundary, was utilized. It is not known if this cabin was a preexisting building that had been privately owned or if it was associated with the Forest Reserve. The building was appropriately named the Carbon River Ranger Cabin. The building was of log construction and defined by saddle-notching and exposed rafter-tails. After construction of the Carbon River Road had been completed in 1924, a new Ranger Cabin and several associated buildings were constructed at the new park entrance. It is likely that the Ranger Creek Ranger Cabin fell into disuse during the 1930s. Today this building is non-extant and the original location is unknown; however, a clearing on the southern side of the road, near the Green Lake Trailhead may be the original site of the building.

As a result of the completion of the Carbon River Road, a new Ranger Cabin was constructed at the park entrance. The cabin was a gable-roofed structure, oriented with the front gable



towards the park entrance. The simple rustic structure, approximately 500 square feet in size, had a cedar shingle roof and cedar shakes sheathing the upper walls. Split cedar logs sheathed the lower walls and double-hung multi-paned sash windows daylighted the structure. A front extension of the ridge beam created a recessed porch with exposed rustic bracing in the gable end. According to photographs, a woodshed was also associated with the Ranger Cabin as well as an entrance station. The entrance station, located on the southern side of the road, was a simple gabled building characterized by a ridge beam extension and a cedar shingle roof. Split cedar logs sheathed the lower portion of the building and cedar shakes sheathed the upper walls. While today both of these buildings are non-extant, new buildings were constructed in the same approximate locations, thereby allowing the spatial context of the road in association with the entrance area to remain intact

Construction continued along the Carbon River Road during the 1930s because of the efforts of the CCC. During this period, laborers constructed numerous temporary buildings that were associated with the CCC camp at the Ipsut Creek Campground. Furthermore, they also constructed several buildings and structures that were intended to serve as permanent fixtures along the road. The first structure that was built by CCC crews included a rustic entrance arch that was constructed with massive; whole log notched posts and beams. Spanning the width of the Carbon River Road at the park boundary, and measuring nearly 18 feet tall, the structure was completed in 1934 and included a wooden sign identifying the park. This structure is also non-extant, however.

Another building constructed by CCC crews included an equipment shed and garage in the utility/maintenance area, which is located about one eighth of a mile along the road east of the Entrance Station. Designed by the NPS, the garage was a gable-roofed structure, with four vehicular storage bays sealed by overhead doors. The approximately 40 feet by 18 feet structure had a cedar shingle roof, lap sided walls and a dirt floor. Today, this building remains in the utility area and is a contributing feature.

The utility and maintenance area also contains two additional buildings that were constructed during the CCC era. Today, these buildings are extant; however, they are vacant and quickly deteriorating. The first building, measuring 25 feet by 15.5 feet, served as a ranger residence. The residence was a gabled structure with a cedar shake roof and exposed rafter tails. The building sits on poured concrete blocks and is sided with clapboard and painted brown. A lean-to-shed that stores firewood is situated on the eastern side of the building. It should be noted that this building retains integrity and therefore is a significant feature.

The second building, located in the utility area, served as a bunkhouse. The building, which has been cut in half, is gabled, has a shingled roof and exposed rafter tails. Furthermore, it sits on poured concrete blocks and is lap sided and painted brown. Today, this building is approximately 16 feet by 12 feet; however, it is likely that it was much larger before it was altered. This building, while potentially being constructed during the CCC era, does not retain integrity because of the substantial changes, which have significantly altered the appearance of



the building. However, since the building was constructed during the period of significance, it is compatible.

Finally, the last building that was constructed during the historic period is the Ipsut Creek Patrol Cabin. Built in 1934 by the CCC, this 24 foot by 17 foot rustic building is a wood framed gabled structure with peeled logs and saddle notching. The roof consists of cedar shakes and exposed rafter tails. Furthermore, the building sits on a foundation comprised of river cobbles and concrete. The building is extant and contributes to the significance of the cultural landscape due to its rustic character and association with the CCC.

After the CCC crews disbanded their camp in 1941, there was a limited amount of new construction along the Carbon River Road. At this time, the NPS struggled to find funds to maintain this area of the park due to U.S. involvement in World War II. As a result, very little money was available for the construction of new buildings in the park. Between 1956 and 1966, the Mission 66 program was implemented. This program served to initiate the construction of several buildings at the Carbon River Entrance. The first immediate need was a new ranger cabin. In 1962, the ranger cabin, which was situated at the Carbon River entrance and constructed in the mid 1920s, burned. Shortly after the fire, several "transa houses" were installed at the entrance. Later, a board and batten building with a shingle roof was constructed in the same location as the original ranger station. Today, this structure is extant and measures approximately 50 feet by 30 and includes an attached trailer shelter. This building, due to the construction of the trailer shelter addition is not contributing or compatible.

Another building that was constructed with Mission 66 funds was the entrance station or booth, located on the southern side of the Carbon River Road. This building, measuring approximately 15 feet by 11.5 feet, is a gabled wooden structure with exposed rafter tails. It is sheathed in cedar shakes and roofed with cedar shingles. Whole peeled logs support a shed roof, which sits on a slab of poured concrete, on the western façade. While this building sits in approximately the same location as its predecessor, a 1930s registration booth, it is not the original historic entrance station seen in photographs. Rather, this building may have been constructed to mimic the original booth by implementing a rustic style of architecture in its design. As a result of this effort, the building is not contributing, but is compatible within the cultural landscape. Curiously, a small gabled structure (similar in size), clad in board and batten, with cedar shingles sits near the Amphitheater today. This building may have served as the original registration booth; however, its appearance has significantly changed and as a result is not contributing, but compatible.

In addition to buildings, there are also several compatible structures situated along the Carbon River Road. These structures serve to control high waters and flood damage. Two gabions exist near the intersection of Falls Creek and the Carbon River. These flood revetment devices consist of river cobbles encased in galvanized wire mesh, which serve to deter floodwaters from the road. The gabions, one measuring nearly 50 feet in length and the other measuring 37 feet are contemporary; however, their construction follows an earlier precedent established by



the CCC during the 1930s. There are also three segments of compatible riprap located along the road. The riprap is located near Falls Creek, just east of the Green Lake Trailhead and near Chenuis Falls. The riprap associated with Falls Creek is approximately 20 feet long and consists of large angular rocks that may be mixed with historic riprap. Additionally, the riprap associated with the Green Lake Trailhead is significantly longer stretching from 2.69 miles to 2.95 and contains large rock material. Finally, the riprap near the Chenuis Falls Trailhead stretching from 3.48 miles to 3.82 miles, serves as a retaining wall buffering the edge between the Carbon River and the Carbon River Road.

Several other non-contributing and incompatible buildings are situated in developed areas along the Carbon River Road. These buildings include a metal maintenance shop in the utility area as well as another metal building, situated near the park entrance and termed the "safe house". The maintenance shop, sheathed in a metal siding and roofed with a similar material, sits on a poured concrete foundation and has one sliding garage door and a single entrance door. The "safe house", sheathed and roofed in metal, contains a single door at western entrance and sits atop a poured concrete foundation. Both of these structures are non-contributing because of their contemporary construction and associated materials.

Two comfort stations also exist along the Carbon River Road. The first of the two is located at the park entrance. This comfort station is a gabled building with a shingle roof and lap siding. Constructed as a prefabricated building, it sits atop a poured concrete vault foundation with waste pits located under the building. This type of vault toilet construction has been implemented in numerous locations around the park. Due to its pseudo rustic design, this building is compatible within the cultural landscape. The second comfort station is located near the Ipsut Creek Campground and is non-contributing due to its poor physical condition. Characterized by a gabled roof and sawn wood siding, this building also has a metal roof and exposed "rafter tails".

Finally, a concrete bridge exists over Ipsut Creek. While historically, this bridge was constructed with rustic design principals, today it is of concrete construction. Funded with emergency relief dollars in 1979-1980, the bridge measures 78 feet by 17.5 feet. Due to the relatively recent construction and associated material, this structure is not contributing or compatible within the Carbon River Road cultural landscape.

While many of the structures and buildings that were constructed along the Carbon River Road during the historic period are non-extant, the original alignment and siting of these buildings is reflected in buildings that were constructed later. These alignments as well as the continued use of the three principal developed areas, located at the entrance, utility area and campground serve to support the significance of buildings and structures as viable landscape characteristics within the cultural landscape as a whole.

Character-defining Features:



Feature: Ipsut Creek Patrol Cabin

Feature Identification Number: 115044

Type of Feature Contribution: Contributing

Feature: Equipment Shed/Garage

Feature Identification Number: 115046

Type of Feature Contribution: Contributing

Feature: Residence

Feature Identification Number: 115048

Type of Feature Contribution: Contributing

Feature: Gabions (2)

Feature Identification Number: 115050

Type of Feature Contribution: Contributing

Feature: Riprap (2)

Feature Identification Number: 115052

Type of Feature Contribution: Contributing

Feature: Fire Hose Storage Structure

Feature Identification Number: 115054

Type of Feature Contribution: Contributing

Feature: Entrance Comfort Station

Feature Identification Number: 115056

Type of Feature Contribution: Contributing

Feature: Ipsut Creek Bridge

Feature Identification Number: 115058

Type of Feature Contribution: Non Contributing

Feature: Ipsut Creek Comfort Station

Feature Identification Number: 115060

Type of Feature Contribution: Non Contributing



Feature: Safe House

Feature Identification Number: 115062

Type of Feature Contribution: Non Contributing

Feature: Registration Booth

Feature Identification Number: 115064

Type of Feature Contribution: Non Contributing

Feature: Ranger Station and Trailer Shelter

Feature Identification Number: 115066

Type of Feature Contribution: Non Contributing

Feature: Maintenance Shop

Feature Identification Number: 115068

Type of Feature Contribution: Non Contributing

Feature: Bunkhouse

Feature Identification Number: 115070

Type of Feature Contribution: Non Contributing

Feature: Small Gabled Building

Feature Identification Number: 115072

Type of Feature Contribution: Non Contributing

Views and Vistas

The Carbon River Road, surveyed in 1915, was constructed for the basic purpose of allowing visitors convenient access to the northwest corner of the park and the Carbon Glacier. By constructing a road in this location, visitors from Tacoma and Seattle could visit the park without traveling the extra distance to the Nisqually Entrance. Furthermore, as plans developed, park officials hoped that this road would someday serve as a vital link in the "Around-the-Mountain-Road".

As construction of the Carbon River Road commenced in 1921, it followed a different alignment than previously surveyed by J.P. Morgan in 1915. Morgan, an engineer associated with the Forest Reserve, initially surveyed a direct line near the Carbon River as the most plausible route for the Carbon River Road. However, as plans for a hotel and associated tourist expansion developed, it is likely that the projected alignment changed as a result of the involvement of National Park Service Chief Engineer, George Goodwin. Goodwin became involved in the project in 1921 and was authorized to make the final determination concerning



road alignment. It is likely that Goodwin authorized the changes in order to make the Carbon River Road a pleasure drive.

Ultimately, the Carbon River Road was constructed in the floodplain of the Carbon River. It is uncertain why the road was constructed so close to the river. It is likely that this route offered the path of least resistance in terms of vegetation and topography. However, it is also possible that this route was selected in order to provide views of the Carbon River and valley while driving at travel speed.

While this route did not offer picturesque or dramatic views of Mount Rainier, the Carbon River Road offered visitors the opportunity to experience other features that were unique to this section of the park. At the western end of the Carbon River Road, near the park entrance, the road traversed through a dense stand of old growth forest that today is characterized as a temperate rainforest. As the road advanced eastward, the road followed the Carbon River and provided several opportunities to view the glacially fed Carbon River and the associated valley. This was accomplished through the construction of several parking areas and turnouts on the north side of the road and two campgrounds not far from the glacier. At the roads termination, near Cataract Creek, visitors could view the Carbon Glacier.

Today the road continues to serve as a pleasure drive. Visitors have the opportunity to view huge Douglas fir, Sitka Spruce and Western Red Cedars as they drive along the winding, curvilinear road. Furthermore, visitors can stop at the Chenuis Trailhead and picnic area to take in the splendid views of the Carbon River valley. While it is clear that the road is characterized by its destination: the Carbon Glacier and Wonderland Trail, it is certain that the views of the old stands of forest, the river and the valley are also appreciated. As a result, views and vistas, while not a primary landscape characteristic of the Carbon River Road, still contributes to the integrity and significance of the road.

Small Scale Features

The Carbon River Road contains numerous small-scale features that are not contributing to the overall significance of the road. Constructed prior to the implementation of a naturalistic design ethic, the road's associated small-features exhibit no historic integrity. Originally, the road possessed only a few features that were "naturalistic" or "rustic". These features included cedar culverts and a series of bridges, which were situated along the Carbon River Road. Unfortunately, due to the high occurrence of floodwaters, the original cedar culverts that served to divert water away from the road were washed away with the road. Furthermore, the bridges were also destroyed by flooding.

Several non-contributing, but compatible features exist along the Carbon River Road. These features include two contemporary metal double leaf gates, wrapped in cedar and painted brown. The gates are located at the park entrance; near the entrance of the road and just beyond the Entrance Station; at the end of a Service Road. Additional compatible features include a painted brown, wood routed sign with white letters at the entrance, a wooden flagpole near the Ipsut Creek Patrol Cabin, eight culverts and four wooden kiosks. The kiosks serve to provide visitors with park information and are positioned at several locations near the road,



which includes one at the park entrance, two near the Ipsut Creek Campground and one near the Amphitheater, which is associated with the campground. While the kiosks vary according to size, all of them are constructed of wood, painted brown and clad with a small cedar shingled roof. Finally, a series of compatible double and triple-rail split cedar fences are located at the entrance, in the utility area and near the campground area.

Ultimately, corrugated steel culverts replaced both the wooden culverts and bridges mentioned-above. Today, forty culverts are found along the Carbon River Road. The majority of these small-scale features are noncontributing and frequently range from 18 inches to 36 inches. Four culverts are significantly larger than those mentioned above and range from 108 inches to 144 inches. It is likely that these culverts represent the areas along the road that were once supported by bridges.

Numerous additional non-contributing, non-compatible small-scale features exist along the Carbon River Road. These features include a memorial boulder near the Ipsut Creek Patrol Cabin, a scored concrete drinking fountain and metal flagpole located at the entrance and two gates—one situated near the utility area and another near a service road that served as a helipad base in the 1980s. As a result of a relative lack of contributing small-scale features, this landscape characteristic does not contain integrity.

Character-defining Features:

Feature: Wooden Flagpole

Feature Identification Number: 115074

Type of Feature Contribution: Non Contributing

Feature: Signs/kiosks (5)

Feature Identification Number: 115076

Type of Feature Contribution: Non Contributing

Feature: Fences (10)

Feature Identification Number: 115078

Type of Feature Contribution: Non Contributing

Feature: Culverts (40)

Feature Identification Number: 115080

Type of Feature Contribution: Non Contributing

Feature: Steel Flagpole

Feature Identification Number: 115082

Type of Feature Contribution: Non Contributing



Feature: Water Fountain

Feature Identification Number: 115084

Type of Feature Contribution: Non Contributing

Feature: Gates (4)

Feature Identification Number: 115086

Type of Feature Contribution: Non Contributing

Feature: Boulder Monument

Feature Identification Number: 115088

Type of Feature Contribution: Non Contributing

Archeological Sites

Five recorded archaeological sites exist along the Carbon River Road corridor. As a result of their association with the historic development of the road, these features serve to contribute to the overall significance of the road. In addition, five additional historic archaeological sites were identified along the road corridor during fieldwork in 2006. These sites have not been formally documented by park archaeologists.

The five-recorded archaeological sites, located along the Carbon River Road, include the Carbon River Water System, June Creek Cabin, Washington Mining and Milling Company Mine Shaft, the Falls Creek Can Dump and the Carbon River Historic Levy #1. The site location, description and function has been documented by the park archaeologist and records are located in the cultural resources office at Longmire, Washington. The following is a summary of each recorded archaeological site within the Carbon River Road corridor.

The Carbon River Water System (FS2005-15) is located just south of the Rainforest Loop Trail at the park entrance. It is a single component historic water system that originally served as an early water system for the Carbon River entrance. Scattered galvanized steel pipe and heavy gauge wire are extant on the surface. This historic archaeological feature contributes to the overall significance of the development of the entrance station and associated buildings at the Carbon River entrance.

The remains of the June Creek Cabin (FS2005-17) are located on the south side of June Creek, approximately 1/3 of a mile from the park entrance. Several springboard stumps and a piece of sheet metal pipe are extant at this location. It is likely that this site was associated with the Hephzibah Mining Company's operations, which occurred in the early part of the 20th century. This historic archaeological feature is significant due to its association with the early mining history of the Carbon River Corridor.

Just east of June Creek lies the remnants of a mineshaft associated with the Washington



Mining and Milling Company's operations (FS1997-04). The mineshaft, located one mile from the entrance, on the southern side of the Carbon River Road, is situated approximately 200 feet above the floodplain. The mine opening measures 6 x 6 feet and is reportedly at least 50 feet deep. Remnants of an inclined railway are extant within the shaft. Today, the mine is boarded up to prevent visitors from entering the shaft. This historic archaeological feature is significant due to its association with the early mining history of the Carbon River Corridor.

The Falls Creek Can Dump (F1997-19) is another recorded archaeological site along the Carbon River Road. This site is located approximately 1.5 miles from the entrance on the south side of the Carbon River Road. Several tin cans and two pieces of mammal bone were recovered from this area. It is likely that these artifacts are associated with the historic Evans Cabin homestead site, which was located on the north side of the Carbon River Road near Falls Creek. This historic archaeological feature is significant due to its association with early exploration and development of the Carbon River Corridor.

The Carbon River Historic Levy #1 (FS1997-03) is the last recorded archaeological site along the road corridor. This feature is located near the historic Evans Cabin homestead site, on the north side of the road along the Carbon River. The site includes the remnants of a bridge or boardwalk that was exposed as a result of flood activity and a levy. The bridge is two-feet below ground level and is twelve feet long and seven feet wide. It contains several logs, which are nailed together. Rough-cut wooden planks lie perpendicular to the logs described above and are attached with nails or spikes. Furthermore, the levy is characterized by a log frame and filled with river cobbles. This archaeological feature was constructed during the CCC era and was employed as a flood revetment device; it is also referred to as cribbing. These historic archaeological features are significant due to their association with CCC era construction along the Carbon River Corridor.

There are also five potential unrecorded archaeological sites along the Carbon River Road. The first remnant that will be discussed includes CCC cribbing, which was located on the north side of the Carbon River Road near the park entrance. This feature, while in a poor condition, illustrates the workmanship associated with CCC flood revetment construction techniques. The cribbing, defined by logs situated at right angles and in filled with river cobbles and riprap, is bound together by a series of heavy wires. Today, this historic archaeological feature is approximately 140 feet in length; however, historically it was 366 feet long. This archaeological feature is an important resource that adds to the significance of the road.

Another potential archaeological feature situated at the park entrance includes a historic concrete foundation, which served as the base for a generator building. This foundation, measuring 9.5 feet by 10 feet, is located approximately 105 north of the Carbon River Road. On top of the concrete foundation sits a raised concrete block, which served as an engine mount. Today this historic archaeological feature serves to illustrate an earlier period of development along the Carbon River Road.



The scattered remains of a tool shed foundation; located in the maintenance and utility area, serve as another potential historic archaeological feature recorded during fieldwork in the summer 2006. In poor condition, this site measures approximately 12 feet by 7 feet and is significant when considering the historical development of the utility and maintenance area along the Carbon River Road.

Another site includes a clearing that is associated with the site of Evans Cabin and homestead, near Falls Creek. Measuring approximately one acre in size, the area does not include any aboveground historic features. Rather, it is characterized by a clearing in the dense old growth forest. In this location, several stumps remain, which indicate that trees were felled. In addition, the ground in this area has been cleared of dense undergrowth and is free of decaying logs and other tree material. It is likely that this area could yield significant historic archaeological information concerning the development of the Carbon River Road in the future.

Near the Green Lake Trailhead, another potential historic archaeological site was recorded. Historically, the original Carbon River Ranger Cabin was situated at this location. Prior to construction of the Carbon River Road, visitors traveled up the northern side of the river, crossed a bridge and entered the park here. Today, a substantial clearing, measuring less than one acre, is visible on the south side of the Carbon River Road, just east of the Green Lake Trailhead. It is likely that the original ranger cabin was located in this vicinity, which attributes to the significance of this location as a historic archaeological site.

It is certain that these historic archaeological sites, several of which existed during the period of significance, yield important information concerning the historical development of the Carbon River Corridor.

Landscape Characteristic & Features Graphics:

Characteristic: Natural Systems and Features

Carbon River Road

Mount Rainier National Park



Natural Systems and Features #1: Contemporary photograph showing the location of the Carbon River in relationship to the road. Note the non-contributing riprap along the riverbank, which serves to protect the road from high waters (MORA, 2006).



Characteristic: Spatial Organization



Spatial Organization #1: Contemporary photograph, looking southeast, showing the compatible registration booth and associated parking at the Carbon River entrance (MORA, 2006).





Spatial Organization #2: Contemporary photograph showing the Ipsut Creek Campground on the northern side of the Carbon River Road (MORA, 2006).





Spatial Organization #3: Contemporary photograph, looking north, showing the contributing service road that is associated with the utility area (MORA, 2006).





Spatial Organization #4: Contemporary photograph, looking east, showing the Wonderland Trailhead parking area. Today, the Carbon River Road terminates at this location; however, historically the road extended three miles further (MORA, 2006).



Characteristic: Circulation



Circulation #1: Contemporary photograph showing the prism of the Carbon River Road. This photograph is representative of a large proportion of the road, which is defined by a crowned double ditch construction (MORA, 2006).





Circulation #2: Contemporary photograph showing a portion of the Wonderland Trail, located east of the Ipsut Creek Campground. Portions of this trail are situated in the historic location of the Carbon River Road (MORA, 2006).



Characteristic: Topography



Topography #1: Contemporary photograph, looking east, illustrating the rock cut bench cross section of the Carbon River Road near Ranger Creek. Note the close proximity of the Carbon River on the northern side of the road (MORA, 2006).





Topography #2: Contemporary photograph showing flood damage associated with the Carbon River Road near the Evans Cabin site (MORA, 2006).



Characteristic: Vegetation



Vegetation #1: Contemporary photograph showing a large Douglas fir tree along the road. The tree was retained during the construction of the road, which contributes to its significance as a contributing landscape feature (MORA, 2006).

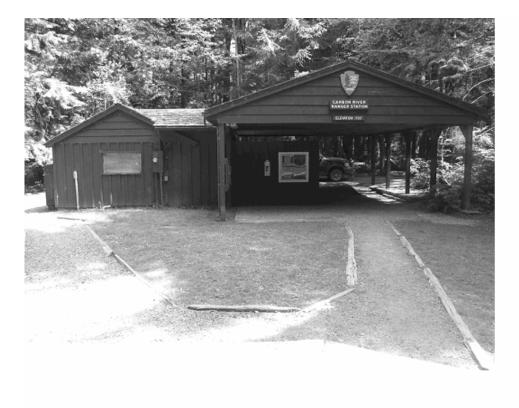


Characteristic: Buildings and Structures



Buildings and Structures #1: Contemporary photograph showing the utility building, located near the park entrance. Today, this building serves as a contributing landscape feature due to its association with the CCC in the Carbon District (MORA, 2006).





Buildings and Structures #2: Contemporary photograph showing the non-contributing Carbon River Entrance Station and associated trailer shelter (MORA, 2006).





Buildings and Structures #3: Contemporary photograph, looking south, showing the Ipsut Creek Patrol Cabin. Constructed in the 1930s as a result of CCC efforts, this building is a contributing landscape feature (MORA, 2006).



Characteristic: Views and Vistas



Views and Vistas #1: Contemporary photograph, looking east, showing the Chenuis Falls Trailhead. Due to its relatively recent construction, this area serves as a non-contributing node of development (MORA, 2006).



Characteristic: Small Scale Features



Small Scale Features #1: Contemporary photograph illustrating a rock gabion, which serves as a non-contributing flood control device (MORA, 2006).





Small Scale Features #2: Contemporary photograph showing a non-contributing culvert at Ranger Creek, near the Green Lake Trailhead (MORA, 2006).



Characteristic: Archeological Sites



Archaeological Sites #1: Contemporary photograph showing remnants of log cribbing along the banks of the Carbon River, near Evans Cabin. Today, these remnants serve as contributing archaeological features (MORA, 2006).





Archaeological Sites #2: Contemporary photograph showing the boarded entrance of a historic mine, located on the southern side of the Carbon River Road. This contributing archaeological site is located one mile from the park entrance (MORA, 2006).





Archaeological Sites #3: Contemporary photograph showing the interior of the mine entrance shown above. Note the extant tracks from an incline railway, which historically transported the mined mineral ore to the river bottom below (MORA, 2006).



Condition

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 09/27/2006

Impacts

Type of Impact: Flooding

Impact Description: Glacial outburst floods from the Carbon Glacier have repeatedly

caused extensive damage to the Carbon River Road since its construction in the 1920s. The most recent severe flood event resulted in damage to a 1350-foot segment of road near Falls Creek, approximately 1.4-1.7 miles from the west park entrance. This area has been repaired; however, a 300-foot segment has not been surfaced properly. To repair this damaged area, a 3-inch layer of wearing course needs to be placed on the road

near the intersection of Falls Creek.

Type of Impact: Other

Other Impact: Deferred Maintenance

Impact Description: Due to periodic seasonal flooding, the Carbon River Road needs

to undergo extensive ditch and culvert cleaning to reduce the potential for washouts. Furthermore, numerous potholes along the road need to be repaired. This repair should include the installation of a base material reinforcement as well as a wearing

course.

Stabilization Costs

Landscape Stabilization Cost: 20,000.00

Cost Date: 09/27/2006

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

Treatment

Approved Treatment Document Explanatory Narrative:

NA

Approved Treatment Completed: No

Approved Treatment Costs

Landscape Treatment Cost: 0.00

Landscape Approved Treatment Cost Explanatory Description:

NA



Bibliography and Supplemental Information

Bibliography

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

Citation Type: Narrative

Citation Location: PWRO-SEA, MORA

Citation Author: NPS

Citation Title: 1907 Notice of Bids (posted by G.F. Allen)

Year of Publication: 1907

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 215

Citation Author: NPS

Citation Title: Acting Forest Supervisor's Report

Year of Publication: 1909

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: Bacher, Kevin L.

Citation Title: Mount Rainier Chronology

Citation Publisher: NPS

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: Broom, Jack

Citation Title: "On repaired road to Rainier a river runs through it again"

Source Name: Other



Citation Author: Spindler, Mike

Citation Title: The Carbon Rain Forest Nature Trail

Year of Publication: 1974

Citation Publisher: Pacific Northwest Parks and Forests Association

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, K18: 1

Citation Author: NPS

Citation Title: Carbon River Corridor Charette

Year of Publication: 2004

Citation Publisher: In partnership with the Mt. Baker Snoqualmie National Forest

Citation Type: Both Graphic and Narrative

Citation Location: NPS online

Citation Title: Carbon River Road bid solicitation, offer and award

Year of Publication: 1985

Citation Type: Both Graphic and Narrative

Citation Location: MORA Archives Microfiche, D30: 18
Citation Title: "Carbon River Road reopens...sort of"

Source Name: Other

Citation Author: NPS

Citation Title: Carbon River Sub-District Manual

Year of Publication: 1967

Citation Type: Narrative

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 Location: MORA, PWRO-SEA



Citation Author: NPS

Citation Title: Chief Ranger's Reports: 1947, 1948, 1950, 1951, 1952, 1953, 1954,

1960, 1961

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Comprehensive Program of Use and Protection Mount Rainier

National Park

Year of Publication: 1955

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D18: 23

Citation Author: NPS

Citation Title: Correspondence: to O'Farrell. September 2,1909

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Correspondence: District Ranger to Park Naturalist. February 28,

1951

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Correspondence: Assistant Secretary of the Interior to Allen.

May 28, 1907

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 215

Citation Author: NPS

Citation Title: Correspondence: to Allen. August 5, 1907

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 215



Citation Author: NPS

Citation Title: Correspondence: Allen to Secretary of the Interior. October 20,

1908

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 59

Citation Author: NPS

Citation Title: Correspondence: Allen to Sinclair. January 22, 1909

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 59

Citation Author: NPS

Citation Title: Correspondence: O'Farrell to Superintendent Hall. March 3, 1913

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 214

Citation Author: NPS

Citation Title: Correspondence: O'Farrell to Superintendent Hall. May 3, 1913

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 214

Citation Author: NPS

Citation Title: Correspondence: Reid to Superintendent Allen. July 12, 1913

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Correspondence: O'Farrell to Superintendent Allen. September

13, 1913

Citation Type: Narrative

Citation Location: MORA Archives, Microfiche D30: 214

Citation Author: NPS

Citation Title: Correspondence: O'Farrell to Superintendent Allen. June 29,

1914

Citation Type: Narrative

Citation Location: MORA Archives, Microfiche, D30: 1914



Citation Author: NPS

Citation Title: Correspondence: from O'Farrell, 1915

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 214

Citation Author: NPS

Citation Title: Correspondence: from R.B. Marshall. October 30, 1916

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 214

Citation Author: NPS

Citation Title: Correspondence: Raeburn to the Secretary of the Interior.

October 9, 1915

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 215

Citation Author: NPS

Citation Title: Correspondence: Raeburn to Mather. November 1, 1915

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Correspondence: Mather to Raeburn. November 11, 1915

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Correspondence: Raeburn to Albright. July 25, 1917

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Correspondence: Peters to Goodwin. March 16, 1921

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63



Citation Author: NPS

Citation Title: Correspondence: Mather to Peters. April 1, 1921

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Correspondence: Mather to Woodworth. April 26, 1921

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22, 63

Citation Author: NPS

Citation Title: Correspondence: Peters to Mather. April 11, 1922

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 64

Citation Author: NPS

Citation Title: Correspondence: Peters to Mather. June 9, 1922

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 64

Citation Author: NPS

Citation Title: Correspondence: Goodwin to Nelson. February 14, 1923

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 65

Citation Author: NPS

Citation Title: Correspondence: Mather to O.A. Tomlinson July 25, 1924

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 65

Citation Author: NPS

Citation Title: Correspondence: Curtis to Martin. November 20, 1924

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 65



Citation Author: NPS

Citation Title: Correspondence: Tomlinson to Mather. February 25, 1929

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 128

Citation Author: NPS

Citation Title: Correspondence: Tomlinson to Mather. October 27, 1924

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 118

Citation Author: NPS

Citation Title: Correspondence: Martin to Curtis. February 19, 1929

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 128

Citation Author: NPS

Citation Title: Correspondence: Curtis to Tomlinson. February 28, 1929

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 128

Citation Author: NPS

Citation Title: Correspondence: from R.D. Waterhouse. February 21, 1933

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D30: 122

Citation Author: NPS

Citation Title: Correspondence: Tomlinson to Director Albright. June 26, 1934

Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-1939

Citation Author: NPS

Citation Title: Correspondence: Acting Superintendent Macy to Fred Dixon,

BPR District Engineer. October 23, 1936

Citation Type: Narrative

Citation Location: MORA Archives Microfiche D30: 122



Citation Author: NPS

Citation Title: Development Concept Plans for Carbon River, White River,

Sunrise, Tipsoo

Year of Publication: 1979

Citation Type: Narrative

Citation Location: MORA Archives Microfiche D18: 4

Citation Author: Dickie, Lance

Citation Title: "Building a better road to a Rainier treasure"

Source Name: Other

Citation Title: ECW Camp No. NP-3 Monthly Report., October 1933

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 1

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Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 2

Citation Title: ECW Project No. C-22

Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-1939

Citation Title: ECW Project No. C-24

Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-1939

Citation Title: ECW Projects

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D34: 156 and D22: 5

Citation Title: ECW Proposed Project No. 7RT, Grading and Resurfacing

Citation Type: Both Graphic and Narrative

Citation Location: MORA Archives Microfiche, Etic Drawing: 5063

Citation Title: ECW Report, October 21, 1933

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 2



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Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 1

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Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-1939

Citation Title: ECW Report, third enrollment period, 1934

Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-

1939

Citation Title: Emergency Relief Project, Carbon River Road, Ipsut Creek Bridge

Year of Publication: 1980

Citation Type: Both Graphic and Narrative

Citation Location: MORA Archives Microfiche, Etic Drawing: 41920

Citation Title: "Fairfax Bridge opens to auto traffic on December 17, 1921"

Citation Type: Narrative

Citation Location: HistoryLink.org Essay 7529

Citation Title: Fairfax newspaper article, n.d.

Citation Type: Narrative

Citation Location: Carbon River area MORA Bibliography File

Citation Title: Flood damage repair drawing

Year of Publication: 1987

Citation Type: Graphic

Citation Location: MORA Archives Microfiche, Etic Drawing: 41936

Citation Title: Forest Reserve History

Citation Type: Narrative

Citation Location: http://www.fs.fed.us/gpnf/forest-research/heritage/early2a.html#to

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Citation Author: Department of the Interior

Citation Title: General Information Brochure

Year of Publication: 1913

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: Hall, Nancy Irene

Citation Title: Carbon River Coal Country

Year of Publication: 1980

Citation Publisher: Enumclaw, WA: Courier Herald Publishing Co.

Citation Type: Both Graphic and Narrative

Citation Location: MORA Carbon River Ranger Station

Citation Author: NPS

Citation Title: Map, Carbon River Cabins, 1907

Citation Type: Graphic

Citation Location: MORA Archives Microfiche, D30: 215

Citation Author: NPS

Citation Title: Map, Correct Location of the Road, 1945

Citation Type: Graphic

Citation Location: MORA Archives Microfiche, Etic Drawing: 5336

Citation Author: Martinson, Arthur D.

Citation Title: Mountain in the Sky: A History of Mount Rainier National Park

Year of Publication: 1966

Source Name: Other

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Master Plan Development Outline, Building Chart, 1957

Citation Type: Both Graphic and Narrative

Citation Location: MORA Archives Microfiche, D18: 27



Citation Author: NPS

Citation Title: Master Plan for the Preservation and Use of Mount Rainier

National Park, Mission 66 Edition

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D18: 22

Citation Author: NPS

Citation Title: Master Plan Development Outline Mount Rainier National Park,

Interpretation, May 1957

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: Meany, Edmund S., editor

Citation Title: Mount Rainier: A History of Exploration

Year of Publication: 1916

Citation Publisher: New York: The Macmillan Co.

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Mission 66 for Mount Rainier National Park, 1957

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D18: 23-24

Citation Author: Montgomery, Nancy

Citation Title: "Flood damage cuts access to NW corner of Rainier Park"

Source Name: Other
Citation Author: NPS

Citation Title: Park Roads Report

Year of Publication: 1924

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, D22: 63

Citation Author: NPS

Citation Title: Plans, trailer shelter, 1974

Citation Type: Graphic

Citation Location: MORA Archives Microfiche, Etic Drawing: 60021A.



Citation Title: Proposed Civil Works Program, November 16, 1933

Citation Type: Narrative

Citation Location: MORA Roads Binder, 1798-1939

Citation Author: NPS

Citation Title: Purpose and Need for Carbon River Road Repairs

Year of Publication: 1998

Citation Type: Narrative

Citation Location: MORA Archives Microfiche, 1997-98-01

Citation Author: Quinn, Richard H.

Citation Title: The Roads and Bridges of Mount Rainier National Park, No.

WA-35

Year of Publication: 1992

Citation Publisher: National Park Service

Source Name: HAER

Citation Type: Narrative

Citation Location: PWRO-SEA, MORA

Citation Author: Russel, Julie

Citation Title: Sources of Information About and History of Carbon River

District Mount Rainier National Park: An Interview with Carl

Fabiani

Year of Publication: 1980

Citation Type: Narrative

Citation Location: MORA Archives

Citation Author: NPS

Citation Title: Superintendent's Annual Reports: 1941, 1942, 1945, 1947

Citation Type: 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: Narrative

Citation Location: PWRO-SEA, MORA

Citation Author: Welch, Craig

Citation Title: "Mount Rainier park could grow"

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