

A Framework for Wayshowing:

Trail Ridge Road All-American Scenic Byway

Larimer & Grand Counties, Colorado



June 2019

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Executive Summary

In September 2018, twenty-eight preservationists and historians set out for a full day of field studies in conjunction with the Preserving the Historic Road International Conference. They had come together to discuss and debate the identification, preservation and management of historic roads and to address how rising environment and transportation challenges can be accommodated within their historic context. Trail Ridge Road in Rocky Mountain National Park was the case study at hand. The specific question was, “How does the wayshowing system at RMNP support how visitors find themselves in this unfamiliar travel environment, how do they respond to the unique characteristics of the byway, and are they able to build a cognitive map for themselves—a larger reference frame.

The group was driven by two experienced CDOT people, there was interaction with Rocky Mountain National Park Rangers at every stop. With navigation and interpretation out of the way, they focused on two things: 1) the details of context sensitive construction and maintenance of the road and how it changes with elevation change, and 2) snow and how it drives most decisions around management of the Park most days of the year.

The day’s end brought the group to a storage facility that held the 1931 SnoGo rotary snowplow. They were delighted with this sizeable artifact, and how with its very presence, it told the story of Trail Ridge Road with charm and heart. They expressed their wish to see it again in some public place, a place where it can be an ambassador for Colorado’s Scenic and Historic Byways Program.



Traffic is flowing again over Trail Ridge Road between Estes Park and Grand Lake, Colorado in 1942. Photograph by Ralph Baird, Denver Post Staff Photographer

Trail Ridge Road All American Scenic Byway



Photo by Hannah Frey

Context sensitive design features include A-frame pole fences and pathway steps of natural materials



Photo by Hannah Frey

Light A-frame pole fences delineate the separation between roads and the wilderness beyond (NPS Park Roads Recording Program, 2000)



Photo by Hannah Frey

Trail Ridge Road was one of the first places the NPS developed a system of pullouts so motorists could stop and safely view the scenery. The pedestrian walkway was added in the 1960s to improve safety (NPS Park Roads Recording Program, 2000)



Photo by Hannah Frey

Trail Ridge Road is open from Memorial Day to late September or mid-November, depending on snowfall

Introduction

Colorado's Legacy of Spectacular Roads

Colorado was one of the first states to embrace automobile touring. In 1910, the City of Denver established the Denver Mountain Parks to provide recreation for its citizens and to protect the beauty of the mountain landscape. Two years later in 1912, Frederick Law Olmstead Jr. designed a plan for Genesee Park that included two touring roads that today form the backbone of the route named the Lariat Loop Scenic and Historic Byway. In 2015, Pikes Peak Highway was constructed and immediately attracted motorcyclists and car racers as well as auto buffs. Rocky Mountain Park opened that same year headlining touring opportunities including Fall River Road, a trail once traveled by Ute and Arapaho Indians.

By 1932, RMNP visitors could drive along the newly constructed Trail Ridge Road. Colorado's legacy of land use conservation and roadways that work in harmony with the landscape have continued since then throughout the last century. The Glenwood Canyon segment of Interstate 70, built between 1980 and 1992, stands as the newest testament to thoughtful roadway design in Colorado.

Other national designations recognize Colorado's rich heritage in transportation. The National Register of Historic Places lists 61 bridges and 20 roads in Colorado. Three United States National Historic Trails pass through Colorado: Old Spanish National Historic Trail, Pony Express National Historic Trail, and Santa Fe National Historic Trail. Eleven of Colorado's Scenic Byways are designated by the U.S. Secretary of Transportation as America's Byways, giving Colorado more national byway designations than any other state in the union.

Trail Ridge Road, an All-American Scenic Byway

In 1985, Trail Ridge Road was listed in the National Register of Historic Places for its feat as the highest continuous paved highway (U.S. Highway 34) in the United States, and for its role in the development of Rocky Mountain National Park (RMNP). There are roads elsewhere in Colorado that reaches higher elevations i.e., Mount Evans (14,264') and Pikes Peak (14,110'), but all dead-end at their summits. The highest point on Trail Ridge Road is near Lava Cliffs (elevation 12,183').

In 1991, Trail Ridge Road was designated an All-American Road by the Federal Highway Administration's (FHWA) National Scenic Byways Program, as it possesses assets of extraordinary quality in the areas of archaeology, cultural, historic, natural, recreational and scenic values. The road is considered a destination unto itself, providing an experience so exceptional that travelers make the drive up over the highway as the primary reason for their trip.

This 48-mile byway, distinctive in a multitude of ways, plays a unique role in Colorado's collection of twenty-six Scenic and Historic Byways. Trail Ridge Road came into the state collection with the designation of All-American Byway already established by the FHWA. It is not affiliated with a local byway organization nor guided by a Corridor Management Guide, as are all other Colorado byways. Instead, the roadway is owned and maintained by the National Park Service. Their Rocky Mountain National Park unit has proven to be a stellar steward of this historic transportation treasure and the road that came before it, Fall River Road.

A History of Trail Ridge Road (1929-1932)

For the purpose of encouraging tourism, the State of Colorado, Larimer County and Grand County decided to invest in the construction of Fall River Road (1913-1920). It was an unpaved, single lane road with steep grades, tight turns, narrow pullouts and sharp switchbacks. It proved tough to navigate, and even before construction was complete, plans were underway for a replacement road. The new road would need two lanes, a gentler grade, turns with a wider radius, long sweeping curves, and stonewalled large turnouts.

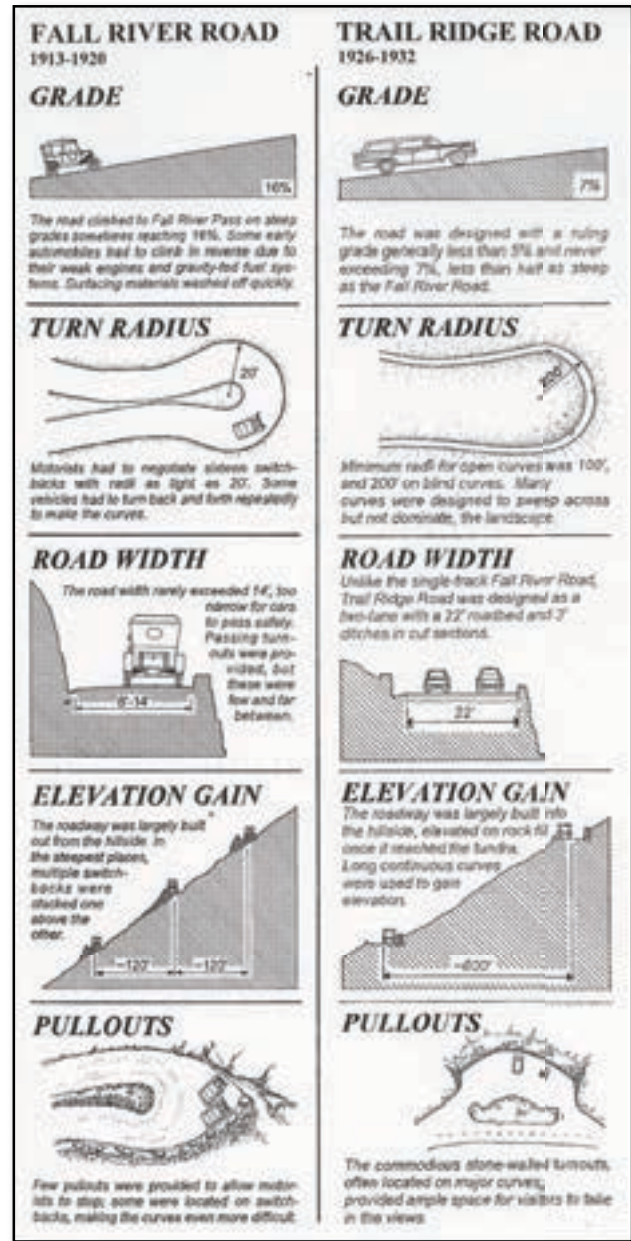
Limited scenic views had plagued the Fall River route, and the road was proving too narrow for the increasing number of vehicles.

The road was built during the Great Depression when millions were out of work. Workers only had about 4 months of the year to work, mid-June to mid-October, with drifting snow and high winds making work impossible during other months of the year. Most days they worked double shifts.

It was also the era of landscape preservation. Log and rock dikes were constructed to minimize rock blasting debris, and tundra sod was salvaged. Rock walls were built with rocks matching the surrounding landscape. The preservation ethic was firmly set in the project itself, and stands today as a prime example of thoughtful design and management.

More than eight miles of Trail Ridge Road lie at elevations above 11,000' and three miles are above 12,000'. Above tree line, the road crosses an open tundra landscape underlain by perpetually frozen soil called permafrost, traditionally found only north of the Arctic Circle.

One of the greatest high altitude challenges for the workers was constructing the roadway in this extremely delicate ecosystem that develops at a rate of about an inch every hundred years (NPS Park Roads Recording Program). Normal drills would not penetrate the frozen material. The thinner areas could be stripped away like sod or melted by exposure, but deep disturbance had to be minimized. Upper sections were carefully removed, then a roadbed was constructed on rock fill resting directly atop the frozen soil.



Wayfinding On Two Historic Roads in Rocky Mountain National Park

A 2018 Field Experience

In September 2018, twenty-eight participants with Preserving the Historic Road International Conference joined a full-day field session offered by the Colorado Department of Transportation that highlighted the construction and maintenance of two historic roads in Rocky Mountain National Park (RMNP). They first traveled Old Fall River Road, a dirt road constructed by the State of Colorado from 1913-1920 then continued on Trail Ridge Road, constructed between 1926-1932 as a replacement and upgrade to the existing road. The group traveled both directions between the two gateway communities of Estes Park and Grand Lake, stopping for interpretive presentations by National Park Service Rangers at pull-offs and visitor centers in Rocky Mountain National Park, and with historians in the gateway communities of Estes Park and Grand Lake.

Purpose of the Preserving the Historic Road International Conference was to “discuss and debate the identification, preservation and management of historic roads...and to address how rising environmental and transportation challenges can be accommodated with their historic context.” Trail Ridge Road was the case study at hand, and the specific wayfinding question to be answered was, “How does the wayshowing system at RMNP support how visitors find themselves in this unfamiliar travel environment, how did they respond to the unique characteristics of the byway, and could they mentally embed or visualize the route in a larger reference frame—a cognitive map.

The twelve (12) attractions listed below comprised the sites and attractions included on the agenda for the twenty-eight road preservationists:

Cultural Heritage Sites

- Big Thompson Canyon (flood)
- Fall River Road (now one way)
- Willow Park Ranger Station & Willow Park Stable
- Trail Ridge Road
- Smith Eslick Cottage Court (Grand Lake)
- Old Fall River Road Cut
- Snogo Snow Plow (1930)
- Stanley Hotel, Estes Park

Visitor Centers and Pullouts

- Fall River Road Visitor Center (elevation 4,982’)
- Alpine Visitor Center (elevation 11,796’)
- Grand Lake Historical Society (elevation 8,369’)
- Rainbow Curve Pullout (elevation 10,829)



Alpine Visitor Center (elevation 11,796’)



Trail Ridge Store and Cafe

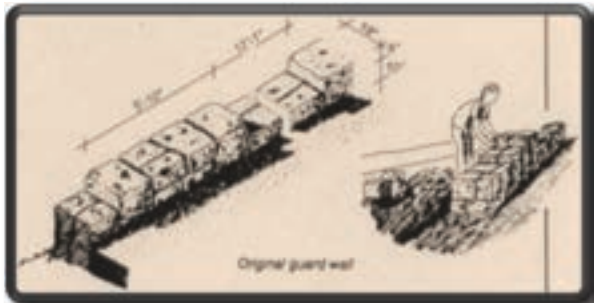
Photo by Hannah Frey

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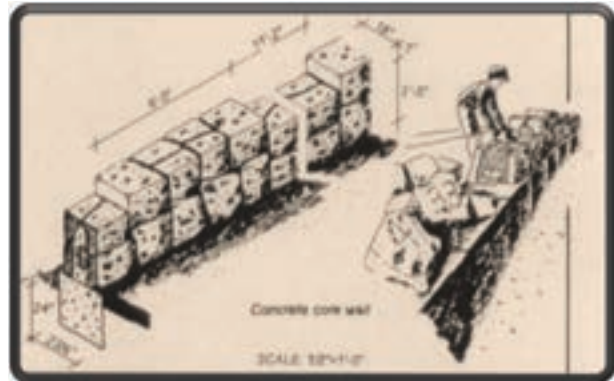


Photo by Hannah Frey

The hand-laid rustic-style stonewalls are the most extensively used form of roadside barrier. The original walls were “Type 3” crenellated parapet walls constructed from native stone chosen to harmonize with roadside outcrops. Some of these sections are now being replaced with concrete core walls faced with native stone, much of it, salvaged from older walls. *(NPS Park Roads Recording Program, 2000)*



Original guard wall
(NPS Park Roads Recording Program, 2000)



Concrete core wall
(NPS Park Roads Recording Program, 2000)

An Effective System of Wayshowing

The deployment of an effective system of wayshowing is an essential component of successful regional tourism strategies.

Wayfinding and wayshowing are related but distinct concepts. **Wayfinding** is the mental process performed by travelers in identifying and locating their travel destinations.

Wayshowing, on the other hand, is the communication in the form of maps, signs, and other media intended to aid the traveler in their wayfinding.

Keys to Effective Wayshowing

An effective system of wayshowing responds to the needs of travelers at all stages in their journey. At a minimum, effective wayshowing for the traveler must:

- Support how people find their way in unfamiliar travel environments
- Provide a guidance system of reliable and consistent components on the Byway
- Respond to the unique characteristics of the Byway
- Integrate pre-visit, visit, and post-visit stages of the Byway experience
- Contribute to a safe roadway and travel environment
- Become a widely practiced body of knowledge among Byway providers

With the assistance of an effective wayshowing system, successful travelers should be able to:

1. Identify origin and destination
2. Determine turn angles
3. Identify segment links and directions of movement
4. Recognize on-route and distant landmarks
5. Mentally embed or visualize the route in a larger reference frame: a cognitive map

Stages of Wayshowing

Effective wayshowing is essential not only to ensuring good experiences for the visitor, but also in attracting that visitor in the first place. While wayshowing may seem to begin and end with the traveler on the road, it also plays an important role in attracting visitors, assisting in their trip planning, and in enhancing their recollections with others after their trip is complete. Consider the travel experience as five distinct stages:

Choose

The point at which the traveler decides his or her travel destination or destinations. *Wayfinding Needs: What are the travel routes? What is there to see and do and where are these activities located? How much time is required for the trip?*

Prepare

This is the stage in which the prospective traveler plans and prepares for their trip, including making reservations or other advance travel arrangements. *Wayfinding Needs: How will we get there? Where will we stay, eat and stop? How much time should we allot to travel to and on the travel route? Where are the heritage, recreational, and cultural attractions of the area?*

Go/Do

This stage is the event itself as the visitor makes his or her way to or around their destination. *Wayfinding Needs: Where are the entry points to the route? How do we get back on track if we get off the route? Where are the attractions along the route? Where can we get information along the route? Where do we get gas, food, or lodging?*

Recall

This is the stage in which the memories of the trip extend its enjoyment beyond the time spent away from home. With travel completed, visitors typically want pictures, maps, souvenirs or other items to assist their recollection of a memorable trip. *Wayfinding Needs: What will help us recall the good times we had on the trip? Where were the sites we really enjoyed?*

Do Again

It is hoped that with an enjoyable and memorable trip, many visitors will return. *Wayfinding Needs: Where are those good maps from our last trip? We need to show our friends and family what they might like.*

Wayshowing Components

A successful wayshowing system includes multiple components that not only direct the traveler, but also provide interpretive information. Wayshowing does not start and stop on the road, but exists to provide the traveler with information to plan their trip and assist in the recollection of it afterwards through maps, websites and other media that can be accessed away from the physical roadway. Essential elements of a wayshowing system include the following:

- Entrances, Exit and Gateway Signage. Identification of where to enter and exit a route or Byway so that travelers know their position relative to accessing and leaving a Byway or other route.
- Orientation Stops. Pull-offs, turn-outs and other places for motorists to stop and help them create, refresh, and expand their mental maps of a Byway or other route, its intrinsic qualities, and overarching interpretive theme with exhibits, maps, and other means of communication.
- Repetitive Route Markers. A sequence of visual cues for motorists to follow along a Byway or other route.
- Direction Signage to Planned Destinations. Signs that alert and guide motorists to featured stops and attractions along or near a Byway or other route.
- A Portable Map. A carry-on map of a Byway corridor or travel region and its various attractions and amenities.



Kawuneeche Visitor Center sign

Photo by Hannah Frey

Summary

As an All American Road, Trail Ridge Road carries the highest scenic designation awarded by the Federal Highway Administration. Coloradans have a deep appreciation of its grandeur, and the state byway community a deep pride in the road's superior expression of the ethics of preservation and heritage.

The day-long field experience provided a rare opportunity to evaluate what professionals who are specifically interested in historic roads would find valuable in Colorado's crown jewel. In short, they were most fascinated with two things: 1) the details of context sensitive construction, reconstruction, and road maintenance, and 2) snow and all its variables, its effect on the landscape and how it dominates most decisions about management of the Park, and the maintenance of the road.

Our preservationists and historians were driven by experienced CDOT drivers over the one-way, one-lane Fall River Road, and then onto the more expansive Trail Ridge Road, so navigation was not a worry for them. Interpretation also did not pose immediate challenges, since RMNP Rangers interacted with them at most every stop. Many of the group did look to the landscape for meaning, however, and grappled with the larger impacts of high altitude on plant and animal life, and human life as well.

The day's end brought us to a storage facility that held the 1931 SnoGo rotary plow. The group came to life, delighted with sizeable artifact that, with its very presence, told the story of Trail Ridge Road with charm and heart. They hope to see it again when they return, in someplace public, someplace where it can be an ambassador for Colorado's Scenic and Historic Byways Program.

Trail Ridge Road- Rocky Mountain National Parks Scenic Byway (48 miles)

Colorado Byway communities include Estes Park, Granby, Grand Lake and the Rocky Mountain National Park



<http://www.coloradodot.info/travel/scenic-Byways/assets/scenic-Byways-maps>