Designed by Nature: Transportation, Tourism, and the Transformation of Glenwood Canyon

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Designed by Nature:  
*Transportation, Tourism, and the Transformation of Glenwood Canyon*

By:  
Ryan Rebhan

A thesis submitted to the faculty of the University of Colorado at Boulder in partial fulfillment of the requirements for graduating with Latin Honors for the degree of History in the School of Arts and Sciences.

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Abstract

This thesis explores the history of Glenwood Canyon in West-Central Colorado, with a particular emphasis on the history of the Glenwood Canyon I-70 project during the 1960s through the 1990s. It builds from a history of transportation networks in Colorado and their importance for the development of Glenwood Springs and the Roaring Fork Valley. This thesis then explores the development of transportation networks’ relationship with the tourism industry, with an emphasis on the implications for the surrounding environment when communities rely on tourism as an economic base. It highlights the development of the environmental movement in the 1960s and how the movement responded to the proposed construction of Interstate-70 through Colorado, culminating in the decades long protests and debates over constructing a four-lane interstate highway through the scenic Glenwood Canyon. I argue that the Glenwood Canyon I-70 project set the precedent for how transportation networks should be constructed through scenic areas and I highlight the importance of the National Environmental Protection Act of 1969 for giving legislative power to the popular environmental movement.
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INTRODUCTION

The Glenwood Canyon Interstate-70 project set the precedent for how transportation infrastructure should be developed in environmentally sensitive areas. The project, from the planning, the preparation, and the implementation revealed that developing infrastructure without destroying the surrounding environment requires extensive studying and public participation. This is especially true in environments as scenic as Glenwood Canyon. The democratization of the project to include the opinions of not only highway engineers but the general populace as well allowed for the creation of what many believe is the “crown jewel” of the entire interstate highway system and certainly one of the most impressive engineering accomplishments in Colorado, if not the nation.¹ The design of the highway protected the interest of the local citizenry, many of whom were concerned that a four-lane interstate highway through Glenwood Canyon would damage or destroy the canyons intrinsic qualities like its impressive canyon walls, the natural vegetation, and the recreational opportunities which fishermen, rafters, and hikers enjoyed.

The project was one of the most expensive stretches of highway in the United States. At a total of $490 million dollars for a twelve-and-a-half mile section of highway, or $39 million per mile, the Glenwood Canyon I-70 project revealed that environmental protection could be an extremely costly endeavor. It took nearly three decades to complete the project. The first bulldozers began working on the western end of the canyon in 1963, but the canyon did not open for interstate traffic until 1992. The

¹ This statement is often repeated by the Colorado Department of Transportation (formerly the Department of Highways). Thomas A. Thomas, “Roads to a Troubled Future: Transportation and Transformation in Colorado’s Interstate Highway Corridors in the Nineteenth and Twentieth Centuries” (PhD diss., University of Colorado, 1996): 290
question for a researcher is then why did the Glenwood Canyon I-70 project cost so much, take so long, and what made it such a unique section of the interstate?

The answer lies partly within the canyon itself and partly in the surrounding community of Glenwood Springs and the Roaring Fork Valley. The canyon environment is unique compared to the majority of the interstate highway system, even in Colorado. The highway engineers who designed the interstate system in the United States followed a simple design philosophy—straight and cost-effective. This is an easy philosophy to follow in the Midwest, the Plains, or the desert where highways can go as straight as possible for hundreds of miles, unimpeded by mountains or valleys. In Colorado, however, the Rocky Mountains present an interesting challenge to the highway engineer who wants to design a highway as cheap and straight as possible but is confronted with a rugged natural landscape. Glenwood Canyon is a narrow, winding mountain gorge, created by the erosion of the surrounding plateau by the Colorado River over the course of millions of years. Naturally, a highway through the canyon would have to follow the canyon’s path and could not be built as straight as other sections of the highway system. The highway also had to share the narrow canyon floor with the Colorado River, the Denver and Rio Grande Railroad, the Shoshone Power Plant and the thousands of locals and tourists who enjoyed hiking, fishing, or rafting in the canyon.

The reason for the extreme cost of the Glenwood Canyon I-70 project cannot be directly attributed to the canyon itself, though. It took the effort of many local residents who resisted the highway authority and demanded that if a four-lane interstate was constructed through Glenwood Canyon that it not destroy its finer qualities—namely the unique canyon walls, the river, and the popular recreation sections within the canyon. This included Hanging Lake, a small, crystal clear mountain lake accessed by trail in the
middle of the canyon. When construction began on the western end of the canyon in the 
early 1960s, the construction crews dynamited the canyon walls, pushed the fill into the 
Colorado River, and paid little regard to the aesthetic values of the canyon. Realizing 
that the interstate might actually destroy the canyon, or at least many of the things that 
locals enjoyed about the canyon, a large portion of the local citizenry stood up in 
opposition to the Department of Highways and demanded that the highwaymen protect 
the canyon—or not build the highway at all. The local protesters were so effective that 
the Colorado General Assembly passed Senate Joint Resolution No. 16 in 1968, which 
required that in the Glenwood Canyon I-70 project’s final design “the wonders of human 
engineering will be tastefully blended with the wonders of nature.” The highway 
through Glenwood Canyon would be, in effect, designed by nature. It would have to 
strike a delicate balance between the federal requirements for a four-lane interstate 
while simultaneously preserving the natural environment. Nature would determine how 
the highway navigated Glenwood Canyon, not the highway engineers.

Or at least a coalition of people who believed they represented Glenwood 
Canyon’s interests. The Senate Resolution created a Citizens Advisory Committee, 
comprised of seven citizens not employed by the highway department who would 
oversee the entire project and ensure that the highway engineers respected both the 
canyon itself and the interests of the local citizenry, who did not wish to see the canyon 
further damaged for the sake of a faster highway. This advisory committee was 
unprecedented in the history of highway development. However, it was so effective, that 
it should set the precedent for all future federally funded infrastructure development. 
The success of the Citizens Advisory Committee in helping to produce a final, award

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2 Senate Joint Resolution No. 16, 46th Colorado General Assembly, 1968.
winning design proved that when the natural environment is at stake, the local citizenry should have equal say along with the engineers and politicians.

This paper will discuss the history of Glenwood Canyon and the surrounding region from the first American exploration to the region in 1860 to the I-70 project over a century later. This history will highlight the importance of transportation infrastructure in the development of the region as it grew from an isolated area to a mining region to a tourist destination. It will also reveal how transportation projects tend to only be a temporary fix for economic issues. While one generation might need railroads to access the silver mines, the next generation might need a road for their automobiles. The generation after that might need a two-lane highway to promote tourism in the region, while the next generation will need to double the number of lanes in order to accommodate the ever-increasing traffic rates. This paper will discuss how various transportation networks navigated the canyon, their reasons for doing so, and their impact on the canyon’s environment. This will culminate in the interstate highway in the 1960s in which I will explore the debate over the interstate project and highlight how the highway engineers finally pulled off the project.

The project itself will highlight the importance of the National Environmental Protection Act of 1969 (NEPA) and how the act changed the dynamics of federally funded construction projects. The Glenwood Canyon I-70 project was the first section of interstate in Colorado to undergo an environmental impact study. Ralph Trapani, the project manager, claimed that there was more public participation on Glenwood Canyon
I-70 than on any other highway project in the nation. The project preceded the spirit of NEPA in the inclusion of public input via the Citizens Advisory Committee, but NEPA gave the local environmentalists the means of which to challenge the highway department. The success of the project, I argue, reveals the importance of citizen input in protecting the environment. The environmental impact studies, of which there were several, and the vast amount of public participation forced the engineers to be creative in their design. The project was given special regulations that granted engineers the ability to break away from traditional highway design because it was agreed between the government and the citizenry that no cost should be spared to protect the canyon.

The impact of the four-lane interstate extended far beyond the confines of the canyon, though. It placed Glenwood Springs and the Roaring Fork Valley right along an interstate corridor, granting access to the region for anyone who owned a vehicle. Those who protested the project did not only wish to protect the canyon walls from the highway. They also wished to protect their way of life—a way of life that is only possible with a small population and open spaces. The interstate highway meant more accessibility, which meant more people, which meant more development in the Glenwood Springs region. A type of anti-development, anti-“Progress” sentiment grew in the region. To understand this sentiment I will focus on its most notable character, Hunter S. Thompson, who became influential in local politics during the same time as the Glenwood Canyon I-70 project. Thompson’s “Battle of Aspen” and his campaign for sheriff of Pitkin County emphatically states the anti-“Progress,” anti-growth, anti-tourist sentiment of some Roaring Fork and Glenwood Springs residents. While some may

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argue that Thompson is too extreme of a character to properly represent the valley, I argue that the fact that the “Freak Power” coalition garnered so many votes and came as close as it did to winning their campaigns reveals that many in the valley shared a similar, maybe less extreme, opinion about the development of the Roaring Fork Valley. Many of these opinions were shaped by local sentiment towards tourism.

This paper will also focus on the impact of tourism on the Glenwood Springs and Roaring Fork Valley region. This thesis draws from various studies of tourism and its social, economic, and environmental impacts. I will refer to Hal Rothman’s *Devils Bargains: Tourism in the Twentieth-Century American West* several times in my paper. While Rothman never focuses on Glenwood Springs or Glenwood Canyon, his book focuses on the development of tourism in Steamboat Springs, Aspen, and Vail, Colorado, all of which follow a similar story as Glenwood Springs and grew as tourism destinations at similar times. Rothman’s argument that communities that rely on tourism as an economic base make a “devils bargain” because of the unforeseen consequences is seen in the Glenwood Canyon I-70 project. Glenwood Springs became reliant on various transportation networks to provide the community with economic necessities—at first the need for supplies and later the need for tourists. By the 1960s, many in the region did not want any further improvements to the transportation network and wanted things to remain as they were. Relying on tourism as an economic base, however, required that Glenwood Springs continued to develop to accommodate the tourists. I argue that an anti-tourist sentiment was influential in the environmental

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protests that took place during Glenwood Canyon I-70 project. The locals were not willing to sacrifice the environment of the canyon for the sake of safer roads for tourists.

I will also draw from William Philpott’s *Vacationland: Tourism and Environmental Transformation in the High Country*, which discusses the impact of tourism on the Colorado High Country, which closely resembles the I-70 corridor. Philpott reveals how, through community planners and boosters, Colorado communities created a tourism attraction built off the natural environment. The development of ski resorts, hotels, condominiums, and highways transformed the region’s communities and the environment. Many of these communities were small-towns that resided by near-pristine wilderness areas before the development of post-World War II tourism. However, boosters, through the use of advertisements, turned the Rocky Mountain environment into a commodity that could be bought and sold and extensively developed the region to accommodate tourists. While tourism played an influential role in the entire history of the Colorado High Country, the post-World War II boom brought unprecedented numbers of tourists and full-time residents to the region which necessarily brought extensive development.

Thomas Thomas’ Ph.D. dissertation “Roads to a Troubled Future: Transportation and Transformation in Colorado’s Interstate Highway Corridors in the Nineteenth and Twentieth Centuries” also comprises a major foundation of my historiography. Thomas reveals how Denver, the capitol city, influenced the creation of major transportation networks throughout the state in order to attract tourists. Denver has always needed access to the “mountainous hinterlands.” During the 19th Century, the city relied on

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6 Thomas, “Roads to a Troubled Future.”
railroad networks into the mountains in order to access the gold and silver mines. During the twentieth century, city boosters pushed for highways into the mountains so that Denver could exploit the potential tourism revenue in the mountains. Thomas reveals how the history of transportation in Colorado is a continuum and that each successive transportation network tends to only push the problems that accompany them along to the next generation—a trend that is evident in Glenwood Canyon.

While these three works comprise a major portion of the background history necessary to analyze my thesis, John Haley’s *Wooing a Harsh Mistress: Glenwood Canyon’s Highway Odyssey* provided me an excellent history of the Glenwood Canyon I-70 project. While not a formal historian, Haley worked on the project as an engineer and used an extensive amount of primary sources to reveal the history of the project and the various arguments and battles that took place during the long planning, designing, and construction phases. I use his work provide extensively during the latter portion of my thesis because his work drew from so many primary sources and explains the timeline of the event very well. I also use Conrad Schader’s *Glenwood Canyon: From Origin to Interstate*, for much of the general history of Glenwood Canyon.

Chapter One of my thesis, “Early Transportation Networks and Changing Cultures,” highlights the development of transportation networks in Glenwood Canyon from the Denver and Rio Grande railroad to the two-lane Highway 6 of the 1950s. I will use the development of these transportation networks to show how the local economies and cultures changed after the development of these networks, and how this effected the surrounding environment. It also highlights that Interstate-70 was not the first major

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transportation infrastructure to use the canyon and that it was not a pristine canyon prior to the project.

Chapter Two, “Transporting the Tourists and Disrupting the Locals,” focuses on the development of the interstate system and how it came to be in Colorado. The original plan for the Dwight D. Eisenhower Interstate Highway Defense System did not include an east-to-west highway through the Rocky Mountains. Instead, I-70 ran from Baltimore, Maryland to Denver and then split north-and-south on I-25, altogether avoiding the Rocky Mountains. This chapter will highlight the interstates intimate connection with tourism in Colorado. Therefore, in order to properly study the interstate and its impacts, one has to study the impacts of tourism. This chapter will draw from several secondary sources to analyze the impact of tourism and transportation infrastructure on local populations. It will also set the context for how Glenwood Springs and Roaring Fork Valley residents approached the Glenwood Canyon I-70 project.

Chapter Three, “Designed By Nature, Debated by Men,” draws from an extensive amount of primary sources to highlight the actual debate surrounding the project. I will analyze the initial protests, the Senate Resolution, NEPA, the environmental impact studies, the monthly publication *Canyon Echos* made specifically for the project by the Department of Highways, and the various designs submitted for the Glenwood Canyon project. I will highlight some of the important characters involved on the project, namely Floyd Diemoz and Mark Skrotzki, both members of the Citizens Advisory Committee who represented vastly different approaches to solving the issue at hand. It will explore the various issues related to the highway including the environment, the economy, and the culture of the region.
Chapter Four, “A Constructed Canyon,” explores the actual construction of the interstate highway through Glenwood Canyon. I will show how the actual construction exceeded the environmental demands made by the general populace and how, through the democratization of the planning and designing process and public participation, infrastructure development can in fact respect the natural environment; that progress and preservation are not necessarily mutually exclusive. The Glenwood Canyon I-70 project set the precedent for construction projects in environmentally sensitive terrain and this chapter reveals just how successful the project actually was.

The Glenwood Canyon I-70 project is a case study for any environmental historian who wishes to analyze the impact of transportation on the natural environment. It also shifts the focus for historians who study the impact of tourism to the importance of transportation in the development of a tourism economy. The history of transportation is essential to the history of Colorado because without the development of transportation networks much of mountainous areas would have remained isolated and pristine. The first settlements in the Glenwood Springs region were isolated from much of the outside world—and isolation caps population. The development of advanced transportation networks, culminating in the extension of the interstate highway system through Colorado, ended the region’s isolation and the region increasingly turned towards tourism as an economic base. No longer isolated, the region had to deal with the consequences of development. Over the course of several decades, mountainsides transformed into ski slopes, green pastures transformed into suburban sprawl, and Glenwood Canyon transformed into a four-lane interstate—all as a necessary cost of development. The Glenwood Canyon I-70 project is the story of a local community resisting further development and questioning what exactly “progress” is.
CHAPTER ONE: 
EARLY TRANSPORTATION NETWORKS AND CHANGING CULTURES

A trip through Glenwood Canyon is an adventure through millions of years of geologic history and is the stunning natural creation of water and earth. The steep, narrow gorge was created as the surrounding mountain plateau rose while the Colorado River simultaneously eroded the mountains down. The same processes that helped create mineral riches in the surrounding region also created a canyon full of recreational opportunities for anyone who enjoys hiking, rafting, fishing, or simply the natural serenity of the canyon. The canyon sits in the west-central portion of Colorado Rocky Mountains on the western side of the Continental Divide. The Rocky Mountains formed during the Laramide orogeny period, some 80-55 million years ago. During this time, the North American tectonic plates slid into each other, raised sedimentary rocks like gypsum, shale, and limestone, and formed the Colorado Rocky Mountains. In Glenwood Canyon, the oldest exposed rock is some 570 million years old. During the Pleistocene era, better known as the last Ice Age, the extreme runoff caused by the melting of the glaciers cut through the mountains to form the canyons and valleys, including Glenwood Canyon.

The canyon sits near the confluence of the Colorado and Roaring Fork Rivers and the west end of the canyon opens into the Roaring Fork Valley. The Colorado River eroded the plateau to form the 12.5-mile canyon, which at its highest point stands 1,300 feet above the canyon floor, and continues the erosion process today, as evident by the muddy waters during the spring runoff.

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“Canon of the Grand.” An early photograph of Glenwood Canyon, taken between 1885-1888. The upper-portion of the Colorado River before it connected with the Green River in Utah was originally named Grand River, thus the “Canon of the Grand” sat directly east of Glenwood Springs. This picture was taken before the Denver and Rio Grande Railroad laid tracks in the canyon. Glenwood Springs, at this time named Defiance, is visible in the background.  

The canyon also holds remnants of the frontier past and of man’s continuous manipulation of the environment to meet his needs. Since its discovery by American explorers in 1860, the canyon served as a transportation route for the first railroad into the valley, and previous generations have built a small dam, a power plant, a wagon trail, and a highway through the canyon. Glenwood Canyon now boasts a four lane

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interstate highway, part of the extension of Interstate-70 through Colorado. All of this despite the fact that the canyon is extremely narrow in some sections, especially in the middle of the canyon where Shoshone Falls meets the Colorado River, and is part of the White River National Forest. All of these projects within the canyon, especially the uniquely designed interstate highway, are remnants the region’s history and their impacts on the environment.

Ute Indians inhabited Western Colorado and used the Glenwood Springs area for hunting grounds long before the expansion of the American Empire following the Civil War. Several Ute Indian tribes used the hot springs (found at mouth of the canyon on the western side along the Colorado River) as healing waters. The Utes were the first people to discover the hot springs located in Glenwood Springs. Local legend holds that the Utes named the springs the Yampa springs, meaning “Big Medicine.” However, this was in fact a term created by some of Glenwood Springs’ first white residents. In the Ute language, yampah actually refers to a sweet potato, which some Ute tribes in Northern Colorado harvested. There is little evidence that the Ute tribes used the canyon because they never made a complete trail through the canyon. There was very little room in the narrow canyon for a trail because they river inhabited most of the canyon floor and the canyon walls were too steep to be used for a trail. The canyon acts as a natural barrier for larger animals like elk, deer, or bear, so the canyon would not have been ideal hunting grounds. If anything, the canyon was more of a burden that impeded travel to the Utes, who only lived in the Glenwood Springs area during the spring and summer to hunt and then left in the winter.

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The first white visitors to Western Colorado viewed the canyon in a similar fashion: as nothing more than an obstacle. A dramatic change in humanity’s conception of the canyon from a natural barrier to a natural wonder occurred over the course of roughly one hundred years. The Ute Indians did not attempt to conquer the canyon in the same way that the American settlers did. The canyon was a natural obstacle and there is no evidence that the Utes attempted to significantly alter the canyon to improve transportation through the canyon. The American settlers, meanwhile, eventually attempted to alter the canyon by blasting away the canyon walls and filling the river to make way for a railroad, wagon trail, and eventually a highway. Over the course of the next century, popular conception of the canyon changed from the idea of it as a natural barrier to either be avoided or conquered to a beautiful, natural canyon that deserved protection from further intrusion. Ironically, the development of transportation networks through the canyon, itself the most damaging intrusion made into the natural environment, also helped facilitate an appreciation of the canyon that lead people to believe it deserved environmental protection. By creating highways and railroads through the canyon, which was previously too difficult to travel through, man changed not only the canyon itself but also the perception of the canyon.

Glenwood Canyon’s change in popular perception correlates closely with the development of the Grand Canyon into a national landmark. American West historian Hal Rothman explores this shift in thinking of natural landscapes in his analysis of the Grand Canyon. The two landscapes share similar characteristics as canyons in the American West shaped by the Colorado River. The appeal of the canyons spawned a tourism industry designed to provide access for common people to visit these natural wonders. The tourism industry helped facilitate a popular belief that the canyons are
natural wonders that should be admired for their natural characteristics, especially their size and scope. However, as Rothman explains,

Before 1860 the Grand Canyon was simply an obstacle to travel, an enormous hole in the ground...Spanish explorer Garcia Lopez de Cardenas, who in 1540 guided a contingent of the Vasquez de Coronado expedition to its rim, looked over the edge and perceived not the beauty, mystery, and the power of the canyon but only the obvious: its condition as a barrier to forward movement.13

When the first White Americans saw the Glenwood Canyon, there was very little, if any, conception of protecting the wilderness and preserving nature. The Ute Indians and the first American settlers in Western Colorado perceived the Glenwood Canyon and its geological history in a similar manner: not as an aesthetically pleasing, recreational haven that deserved environmental protection, but as a barrier to travel and settlement.

The canyon certainly was a barrier to miners hoping to strike gold (or silver) in the 1860s and 1870s. The first American expedition to the area and the first European-Americans to view Glenwood Canyon came in 1860. During the Civil War era, the population of Colorado had swollen following the discovery of gold on the Front Range of Colorado in 1858 and 1859. The 1860 census shows that the white and free-black population of Colorado jumped to 34,277 people in 1860 as news of gold discoveries spread.14 The pursuit of gold and silver sent expeditions into the previously undiscovered (by the Euro-Americans) Rocky Mountains. Captain Richard Sopris led an expedition of prospectors out of Denver, through the Blue to the Eagle River, and down the Roaring Fork Valley in search of gold and silver. Sometime during the expedition, Sopris became ill and his party carried him by horse, following the Roaring Fork River to its confluence with the Grand River (the river officially changed to the Colorado River

13 Rothman, Devil’s Bargains, 50.
in 1907). Here they rested at the hot springs, which would later become the Hot Springs Pool. To reach the hot spring across the river, the expedition cut down trees to make a raft, thus also becoming the first white rafters in Glenwood Springs.\textsuperscript{15} Although Sopris’ expedition returned to Denver without any gold, they brought back extensive information about what lay across the Continental Divide and the 12,953-foot Mt. Sopris in the Roaring Fork Valley is named after him.

The rush for the Rocky Mountain’s gold and silver deposits continued after the Sopris Expedition, despite not having struck gold. Sites like Leadville, Carbonate, and Aspen, all within a hundred miles of the canyon, became sites of major mining activity in the 1870s. At first, the miners and the Utes had a friendly relationship, for the most part, thanks in part to having a mutual enemy in the some of the Plains Indians. The Utes’ leader, Chief Ouray, was an adept peacekeeper who negotiated settlement talks between the American government and the Ute Indians for several decades. However, rising tensions caused by the constant intrusion into Ute lands by settlers culminated into several acts of violence on the Western Slope, notably the Meeker Massacre in 1879. These acts of violence, coupled with the desire for minerals and a general distrust of the Ute Indians by the citizens of Colorado, ultimately forced the Utes off their lands and into reservations in southern Colorado and one in eastern Utah.\textsuperscript{16} The removal of the Ute Indians from their native lands opened Western Colorado for settlement by the white and free-black population and set the course for a dramatic environmental transformation of Western Colorado as miners and ranchers settled the region.

\textsuperscript{16} Bangert, \textit{Ouray}, 71.
Mineral exploration brought major environmental transformation of the Roaring Fork Valley and Glenwood Canyon. The Ute Indian tribes’ impact on the environment was miniscule compared to the dramatic changes brought on by the gold and silver industries. Miners dug into the mountains, blasted holes, cut down extensive forestry in pursuit of mineral riches. They altered the course of rivers and the mining process and produced significant pollution, especially from mining tailings. Mining turned previously uninhabited lands into mining commercial sites.

At the southern end of the Roaring Fork Valley, Aspen became a major silver mining site. Originally named Ute City, miners in the camp found significant silver deposits but struggled because the treacherous wagon roads out of Aspen made only the highest-grade ore economically viable to ship. Food and liquor costs in the camp were extremely high.\textsuperscript{17} Thirty-five miles to the north in Glenwood Springs, at this time named Defiance, settlers, most of whom were ranchers or prospectors, lived in tents, dugouts, or cabins as temporary shelters as they waited for burros or horse-drawn wagons to deliver supplies over the mountains between Denver and the town.\textsuperscript{18} Despite the allure of silver riches, the ruggedness of the terrain made the region remote—and remoteness caps population. The Roaring Fork Valley was set become an isolated, low-population region with a busted mining sector unless advanced transportation networks connected it with other markets.

Transportation lies at the heart of development in Colorado. Without adequate transportation networks that linked the mountainous regions with Denver, most of Colorado west of the Front Range remained sparsely populated. The history of

\textsuperscript{18} Schader, \textit{Glenwood}, 31.
transportation in Colorado, and thus the history of development in Colorado, is a continuum whereby the state tries to meet the transportation needs of changing local economies and rising population demands but never adequately meets the demands for more than a few decades, when a new transportation network is needed because the last one does not meet the demands of the population. Glenwood Canyon, because it is the most direct link with Glenwood Springs and the Roaring Fork Valley with the east, is a testament to these constantly changing transportation networks and the environmental impact of these networks on the environment. Each successive transportation network exacerbates the population problem because as it becomes easier to access these areas more and more people frequent them, either as short-term visitors or as new residents.

Defiance remained sparsely populated throughout the first half of the 1880s. Some locals hoped that a railroad would one day come to the Roaring Fork Valley, believing the railroad would connect with Aspen’s rich silver mines. However, before the arrival of the railroad, the town struggled for equipment and supplies. Life in Defiance was slow in the 1870s. With only a small downtown area and sparsely located homesteads, most of the town remained open grass fields nestled between the two mountain rivers. In order to attract settlers, the Defiance Town and Land Company offered free lots to prospective settlers. In a letter from 1884, the company announced: “Free Lots to All; Any and all parties desiring to permanently locate in Glenwood Springs and build themselves a business house or Home can...Further information will be cheerfully given by applying in person to either of the above gentlemen.”19 In the early days of the town, locals welcomed outsiders to their mountain valley as a boom to the economy and the town had plenty of room for the much-needed settlement.

19 Parkison, *Hope and Hot Water*, 35.
The arrival of the Denver and Rio Grande Railroad to Glenwood Springs in 1887 turned the area from a failing mining region into a bustling commercial site built on the mining industries and a tourism industry based on the Hot Springs. The Denver and Rio Grande chose the Glenwood Canyon route in 1885 as part of its race with the Midland railroad to be the first to reach the mines in Aspen. The Midland Railroad approached Aspen from Independence Pass further south of Glenwood Springs, which linked Aspen with other southern Colorado mining towns like Ouray and Silverton. Denver and Rio Grande made a bold decision in choosing the narrow confines of Glenwood Canyon as their route. Only ten years prior, the Hayden Survey, a federally funded geological survey team who also explored the region around Yellowstone Park, in 1874 called the canyon “impassable to travel.”\(^{20}\) The canyon walls, according to the survey, were too steep to travel on and the rapids of the Colorado River were too dangerous to raft.

However, the canyon route made sense for the Denver and Rio Grande because they already had a line from Denver to Leadville (a major mining site to the east of Glenwood Springs). A line straight to Glenwood Springs and then south down the Roaring Fork Valley provided the most direct route to Aspen. Any other route that broke away from the Colorado River required building the railroad line through steep, mountain terrain full of peaks and valleys. The Colorado River valley, however, remained relatively flat and wide enough for the railroad, until Glenwood Canyon, where workers had to use dynamite to remove parts of the canyon walls in order to make enough room for the railroad line.

The fact that the Denver and Rio Grande railroad chose the Glenwood Canyon route over any other route highlights an important issue for the canyon: despite how difficult it may be to traverse, it is the most direct route for transportation between Glenwood Springs and everything to the east. Avoiding the canyon requires taking a much longer, often circular route, through the mountains that could potentially add hundreds of miles to the trip. The Midland Railroad approach Aspen from Independence Pass further south of Glenwood Springs and the Midland route to Denver was much longer than the Denver Rio Grande route through the canyon. Despite claims that it was “impassable” when the canyon was first discovered, all major transportation routes between Denver and the Western Slope of Colorado used Glenwood Canyon for passage through the White River Plateau. The first *intra*-state highway and the first *inter*-state highway, as well as the early wagon roads, all followed the Denver and Rio Grande’s path through Glenwood Canyon rather than traversing over the surrounding mountains because Glenwood Canyon is the most straightforward route from Glenwood Springs to the east.

Railroad construction in the canyon was difficult work. Construction workers used burros to haul equipment through the canyon and all of the work was done manually, with pick axes, shovels, and dynamite. Workers tied themselves to the canyon walls to reach steep ledges, inserted dynamite, and then blasted the canyon walls and used shovels and pick-axes to break apart the smaller rocks.\(^2\) Constructing the canyon route included two tunnels, totaling 1,603 feet in length, all of which involved exploding dynamite and then removing the rocks. Surprisingly, it only took six weeks to finish the canyon section, which, if anything, proves how efficient railroad companies could be

\(^{21}\) Schader, *Glenwood*, 64.
when in a race with another company. The twelve-mile stretch did cost $2,000,000, no small sum of money in 1885, but the Denver and Rio Grande reached Aspen three months before the Midland.22

The canyon was no longer an impassable barrier to travel, and life changed quickly for Glenwood Springs (no longer named Defiance) residents. When the railroad reached Glenwood Springs, the track, in an eerily poetic manner, sealed one of the main caves the Utes used for healing waters.23 The Denver and Rio Grande railroad linked Glenwood Springs with Denver and other mining towns throughout Colorado, thereby opening up new markets for trade for the local farms, ranches, and mines, and it eventually gave rise to Glenwood Springs’ tourism economy.

Governor Alva Adams, along with Denver and Rio Grande President David Moffat, arrived in Glenwood Springs on October 5, 1887 to roaring crowds and a large celebration.24 The Rio Grande railroad, along with the Midland railroad when it arrived in December of that year from the south, made Glenwood Springs a major railroad hub between Western Colorado and the Front Range. Even before the railroad arrived, the population of Glenwood Springs swelled with eager businessmen looking to cash in on the railroad traffic. After the railroad, farmers and ranchers took advantage of expanded markets for their products since they could now trade with the Front Range and the rest of Colorado. The railroad brought new banks, Glenwood Springs’ first school, and gave miners in Leadville and Aspen the opportunity to relax in the Hot Springs.25 The growth of Glenwood Springs following the town’s incorporation in 1885 was tremendous,

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22 Sampson, “Rock and Rail,” 74.
23 Urquhart, Glenwood Springs, 65.
24 Schader, Glenwood, 36.
especially considering that it was essentially unsettled and unknown land before that time. In less than a decade following the town’s incorporation, “Glenwood boasted electricity, two railroads, nearly three thousand new trees, running water, and a Presidential visit.”

The arrival of the railroad also had tremendous implications for the environment of the Roaring Fork Valley and Glenwood Canyon. The Hotel Colorado serves as a case study for the importance of transportation—by transportation I am referring to the creation of transportation networks, like railroads and highways—for commercial and environmental transformation in the American West. Environmental transformation is the process by which human’s manipulate the environment to their desires, typically for economic benefit. Environmental transformation includes, but is not limited to, ranchers using hillsides to feed their livestock, farmers planting crops, the excavation and mining process involved in resource extraction, or the manipulating of landscapes to construct railroads or cities. I am not referring to the environmental transformation caused by geology, like the creation of the Rocky Mountains, but to the human transformation of natural environments.

The Hotel Colorado is not only a symbol of human ingenuity and luxury but of the importance of transportation in the development of the American West. Walter Devereux, an Aspen miner who found fortune in coal mining, had long desired to spend his wealth on the material comforts that one could find in the East but were rare in the American West. The difficulty of shipping supplies to Glenwood Springs made Devereux’s dream of a luxurious hotel all but impossible to achieve. However, following 1887, Devereux commercialized the Hot Springs and adjoining vapor caves by building

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bathhouses (built with bricks imported from the Frying Pan quarry via the Midland railroad.) With an updated Hot Springs, it was time to build his hotel. Construction began in 1890, and two years later a magnificent 224 foot by 260 foot, Italian designed hotel, costing $850,000, which included two hundred guest rooms, forty bathrooms and a five thousand square foot dining room, stood near the confluence of the Roaring Fork and Colorado River. The railroad helped make possible an architectural masterpiece where just a decade prior residents of Defiance lived in temporary tents.

The construction of the hotel and of the railroad brought a swell in population to Glenwood Springs and of outside visitors to the region, mainly upper class tourists who took the Denver and Rio Grande Railroad and vacationed at the hotel. The hotel catered to an elite class who came to Glenwood Springs to relax and recreate in the mountains. Devereux constructed croquet grounds and tennis courts and converted his ten acres of land on the Roaring Fork River into a horse race track and polo grounds. The hotel transformed Glenwood Springs and the Roaring Fork Valley into a playground for upper-class American tourists. The hotel and the pool provided Eastern luxury in a Western landscape. Although the tourists sojourned to the rugged Western Slope of the Rocky Mountains, they did so in a catered, luxurious fashion.

Within a decade of the completion of the Hotel Colorado, tourists from across the United States took the railroad to Glenwood Springs. These tourists, most of whom traveled via the Rio Grande rail through the Glenwood Canyon, arrived in Glenwood Springs to enjoy the outdoors, even if that simply meant enjoying the view of Mt. Sopris from the balcony of the hotel. Railroad tourism in the mid-nineteenth century was

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28 Ibid., 7.
The Hotel Colorado.  

primarily an endeavor of the rich. During an era when schoolteachers made two hundred dollars a year, a round trip railroad ticket from coast-to-coast cost nearly three hundred dollars—even more than a railroad fare today. The rich and famous escaped the hustle and the bustle of the industrialized East to rest and play in a luxury that only they could afford. Tourist destinations in the American West went to great lengths to create luxury for their wealthy, Eastern guests. From the railroad catering on dining cars to the service at the hotel, guests who arrived at the Hotel Colorado enjoyed the Colorado landscape through a veil of luxury. The mountain landscape did not act as an

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obstacle to these tourists, as it did to the first settlers or miners in the region, because they traveled via railcar. They could enjoy the view of the mountains and of the canyon because they did not have to find a way to survive or make a living there like the local populace did, most of whom were ranchers or miners. This form of elite tourism helped create a Romantic ideal of the Rocky Mountain landscape for those who participated. They did not share the same sentiment towards the canyon that the first residents of Defiance did because their experiences were entirely different. While the first settlers looked at Glenwood Canyon as an obstacle between them and the supplies they needed to survive, these tourists could view the canyon through a veil of luxury and admire its aesthetic qualities, and then return to their homes back east.

Famous guests at the Hotel Colorado include Charles M. Russell, Diamond Jim Brady, Jay Gould, Buffalo Bill Cody, Mrs. J.J. Brown (who had recently survived the Titanic tragedy), and Presidents William Taft and Theodore Roosevelt. President Roosevelt frequented the Hotel Colorado several times during the turn of the century for hunting trips (the term “teddy bear” originates from his 1905 hunting trip when his daughter, Alice, named one of his bears “Teddy”). Hunting and fishing were popular endeavors for many of the tourists who stayed at the Hotel. President Roosevelt and other tourists who hunted the Roaring Fork Valley or White River Forest followed elite hunting guides and rode top of the line horses in their pursuit of elks or bears. They could then return to the luxury of the hotel and relax in the hot springs, all the while catered to by maids and other service workers at the Hotel.

Although the social inequality issues are clear, this early form of elite tourism to Glenwood Springs had a much lighter impact on the surrounding environment than the

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31 Ibid., 10.
later, more democratized forms of tourism would have after the advent of the automobile. Since only a certain, elite class could afford the railroad fare and a stay at the Hotel Colorado, these early, elite tourists to Glenwood Springs did not have tremendous impacts on the surrounding environment. Most of the environmental transformation occurred before they visited with the creation of the railroad through the canyon and the construction of the hotel. The tourists themselves had little impact on the environment. These tourists also followed an itinerary created by the local populace and did not stray far from the luxury provided to them. They stayed in the railcars, stayed at the hotel, relaxed at the pool, and followed guides when they ventured into the mountains. They stayed in the landscapes constructed for them and admired the natural landscapes from afar.

Regardless if the tourists received a manufactured experience, elite tourism became a major sector of the economy for Glenwood Springs. Promoters and businessmen of Glenwood Springs saw potential revenue in promoting their natural landscape for tourists and used the canyon as a major attraction for tourists. Following the opening of the Hotel Colorado, town promoters worked with Denver and Rio Grande to present the scenic attractions to the public using the new phenomenon of photographic advertising.32 Tour guides led tourists on horse through the narrow confines of the Glenwood Canyon to No Name and Grizzly Creek, or up the 1.5 mile hike to Hanging Lake—a beautiful, waterfall-fed mountain lake in the middle of the canyon. Tourists could also go to the Fairy Caves on Iron Mountain, which overlooked the hotel. There, workers dug a tunnel from the caverns to a small balcony on the side of the hill

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overlooking the canyon. Those brave enough could stand on the balcony and look down the 1,500 feet to the river below them.

The railroad was not the only transportation through the canyon for long. Colorado Senator Edward Taylor, a Glenwood Springs native, passed a bill in the Colorado General Assembly allocating $40,000 to build the Taylor State Road in 1902. Before the road, travelers heading from Glenwood Springs to Eagle (on the eastern side of the canyon) had to travel on old Ute trails north or south of the canyon. Glenwood citizens had actually petitioned to create a road through the canyon in 1883, but the county commissioners denied the project due to lack of funding. The road connected Denver with Grand Junction and Taylor ensured that the road used the Glenwood Canyon route because it was the most direct route between Grand Junction and Denver, plus it would benefit his hometown. The canyon portion of the Taylor State Road alone ended up costing $30,000 and took three years to construct, but eventually a gravel road, on the other side of the canyon from the Denver and Rio Grande railroad, snaked its way through the canyon. The road, prone to rock slides and floods, remained in poor condition until the Great Depression, when Taylor again passed a bill to improve roads in the state.

An emergence of respect for the natural beauty of the canyon set environmental constraints on the road. Certainly construction workers, mostly convict labors, had to dynamite more of the canyon walls and push the fill into the river in order to build the road. However, the plans mandated that the “natural beauty” of the canyon be maintained and that trees and shrubs be protected wherever possible. They also banned

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any roadside advertising throughout the canyon, thereby setting a precedent in the canyon that is followed to this day.\textsuperscript{35} This is not to say that there was a major environmental movement growing in Glenwood Springs at the turn of the century. The constraints placed on the construction project do reveal, however, that residents of Glenwood Springs by the turn of the century respected the natural beauty of Glenwood Canyon and did not wish to see a transportation network destroy the aesthetic qualities of the canyon.

Passage through the canyon, via rail or wagon, could be extremely dangerous. Shoshone Falls, which runs through the narrowest part of the canyon, often flooded over the Taylor State Road and eroded the railroad tracks on the other side. In the winter, snowslides covered the tracks or even buried entire trains. The first automobiles navigated a single lane, dirt road shared with horse and buggies. Motorists hoped that no oncoming traffic awaited them because in many places it was impossible to pass. If they did encounter an oncoming vehicle, one of the cars would have to back up until they could pass each other. Road maintenance was expensive and the canyon road was only open during the summer, which was common for many roads in Colorado during this time.\textsuperscript{36} Glenwood Canyon remained one of the most dangerous routes of travel in Colorado until the construction of the interstate highway.

Wagons on the Taylor State Road soon had to make way for automobiles. The spread of the automobile in American culture was astounding. Between 1900 to 1910, Denver went from zero automobiles to over 5,000.\textsuperscript{37} Colorado’s wealthy owned most of the automobiles during this time, but the automobile spread to the middle and lower

\begin{flushright}
35 Ibid.
36 Ibid., 122.
37 Thomas, “Roads to a Troubled Future,” 85.
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classes in the following decades. The first automobile traveled through Glenwood Springs in 1902, just after construction of the Taylor State Road. By 1920, citizens of Garfield County formed the Glenwood Motor Club and demanded safer, smoother roads for their automobiles.\textsuperscript{38} Calls for improved roads rang throughout the nation during the first few decades of the twentieth century as more and more people relied on the country’s faulty transportation system. The Good Roads movement actually started bicyclists with who struggled to ride their bikes on the bumpy roads and quickly spread to those with automobiles. Throughout the nation, organizations like the Automobile Association of America and the National Good Roads Association advocated for federal, state, and local spending to improve the quality of the nation’s roads.\textsuperscript{39} However, the movement needed to prove the economic benefits of good roads in order to convince the government to spend the amount of money necessary to improve the roads. Good roads only benefited a small portion of the society—that is, those who own automobiles, who in the 1910’s were a small portion of the wealthy class.

The automobile lobby convinced the Colorado legislature that good roads benefited the state by increasing tourism, saying that the revenue produced could offset the cost of initially improving the roads.\textsuperscript{40} Roads throughout Colorado could open up the mountains to tourists and make “Colorado more attractive to tourists than Switzerland.”\textsuperscript{41} Many of the advocates for good roads in Colorado came from Denver because Denver wished to utilize the mountains as an asset for tourism revenue. Easterners could stay in Denver and then travel in their cars to the mountains. However,

\textsuperscript{38} Ibid., 122.
\textsuperscript{39} Thomas, “Trouble Future,” 56.
\textsuperscript{40} Ibid., 60.
\textsuperscript{41} Ibid., 86.
Taylor State Road. A single vehicle navigates the Taylor State Road in 1917. It was impossible to pass on the narrow dirt road and snowy conditions closed the road in the winter. Scars from construction can be seen on the canyon walls where workers had to dynamite the rock face and then push the fill into the river in order to build the road.\(^{42}\)

without adequate roads, these areas remained isolated from most people. The number of cars in Colorado did not matter if there were not adequate roads for them to use. It was simply too dangerous or too inconvenient to travel into the Rocky Mountains on the old wagon roads.

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The Good Roads movement and the increasing democratization of the automobile in the 1920s ended the horse-and-buggy era and brought an increasing population of tourists and full-time residents to the Glenwood Canyon area. The county government led a campaign to improve the Taylor State Road through Glenwood Canyon. The state responded by sending convict laborers to work on the road. Improvements to the road included blasting more of the canyon wall and using the crumbled rock to widen the road into the river. Workers widened the road to two-lanes and improved the gravel base, but the road remained bumpy, the travel was slow through the canyon, and winter storms still closed the canyon route during the winter. However, it did increase access for motorized vehicles to Glenwood Springs and the Roaring Fork Valley because it was an improvement on the old road.

The next phase of road building came during the Great Depression. With work hard to come by, the federal government invested money in infrastructure to put men to work through agencies like the Works Progress Administration. This ended the practice of using convict labor on road building and made road working a viable economic option for many young men. Edward Taylor again secured money from the Colorado legislature for road building in Colorado, this time $36,000,000, a hefty increase from his first bill, to finance an updated, paved highway across the state from Denver to Grand Junction. Of this money, the state set aside $1.5 million for Glenwood Canyon. Workers expanded the road further and paved the road. Garfield County declared the canyon a scenic area and maintained a policy that forbade any advertising or billboards on the road. This new, wider, paved road served motorized traffic throughout the 1940s and

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43 Urquhart, Glenwood, 124.
44 Ibid., 139.
1950s. The road also served those on their way to enjoy a new wintertime sport taking hold in Colorado—skiing.

Skiing has roots in the mining days of Colorado, when it was a necessary means of travel during the winter months. During the first few decades of the twentieth century, it emerged as an organized sport and several, small-scale ski resorts opened throughout the state. Skiing as a sport, like railroad tourism and the automobile, originated in the upper class but spread through the middle class, especially during the economic boom following victory in World War II. As the sport grew, wealthy capitalists invested in ski resorts throughout Colorado and towns like Aspen and Steamboat Springs evolved from their mining and farming pasts into tourist communities. Aspen especially benefited from the rise in winter tourism. In 1939, Aspen has 800 residents and one electric light bulb.45 In comparison, Glenwood Springs had electricity since 1886 and lit most of the streets in town by the 1940s. However, in the early 1950s, led by the Chicago capitalist Walter Paepcke, Aspen reinvented itself as an upper-class mountain community that catered to elites and intellectuals during the summer and skiers during the winter.46 Aspen, through the diligent effort of Paepcke, evolved from its mining past in the second half of the twentieth century by utilizing the environment in a new way. Rather than extracting resources from the mountains, Aspen used the mountains as ski resorts and scenery and capitalized on Colorado’s expanded highway and road network to attract tourists. Travelers coming from every corner of the state could reach Aspen via automobile on the newly paved highways. They may not have

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45 Rothman, *Devil’s Bargains*, 206.
46 Ibid., 210.
been the safest nor the smoothest roads, but the highways linked Aspen with the more densely populated Front Range and tourists throughout the country.

Glenwood Springs benefited from the rise in skiing, as well. The Winter Sports Club started in 1940, and over the course of a few decades, several ski lifts operated on various mountains surrounding the city. The Sunlight Ski Corporation, formed by several Chicago businessmen, purchased land from the White River National Forest and developed the Sunlight Ski Resort south of Glenwood Springs. Skiing became a major feature in the local economy and in the state of Colorado and its growth was intimately tied with the development of the road network throughout the state. The completion of the Valley Highway from Denver to the Western Slope, which eventually became the route for Interstate-70, allowed for the development of ski resorts throughout the state because it provided access to the ski resorts. Skiers are the ski resorts capital and without roads no one can make it to the ski resorts. Skiing boomed in popularity during the 1950s—in 1954 there were 192,500 skier visits to the state and by 1965 there were 1,102,690. This growth continued and by 1980 the Interstate-70 corridor constituted “the greatest concentration of ski resorts in North America.”

The rise of skiing is part and parcel with the changing culture in post-World War II American society. The general rise in affluence of society and the democratization of individual transportation via the automobile directly contributed to the rise of the sport. Middle-class and upper-class American families in the 1950s could use their disposable income on family vacations to Colorado for hiking and camping during the summer and skiing during the winter. It also signified a shift in the economy of the American West.

47 Urquhart, Glenwood Springs, 151
48 Ibid., 278-280.
Many old mining districts shed their frontier pasts by manipulating their environments to cater to the tourism economy. They cut down trees and cleared paths for the ski resorts; they built roads through previously roadless areas; they cleared space and constructed hotels, condominiums, resorts, restaurants, shopping centers, etc. Most importantly, they changed how many tourists viewed the mountain landscape. The mountains were no longer something to be viewed Romantically from a hotel balcony—they were a playground. The steepness of the mountains was no longer merely an abstract notion, it was a physical trait of the ski slope that determined how difficult or exciting it would be to ski down. For the tourists, the emergence of outdoor recreation in the form of sports like skiing represented a shift in thinking about the environment. Middle-class families who vacationed to the Roaring Fork Valley post-World War II did so because of the recreational opportunities provided by the natural landscape.

This was not that different from when tourist destinations catered to the elites of society during the railroad age. In the railroad age, tourist destinations created a false sense of luxury for their guests in an otherwise rugged and oftentimes impoverished area. In the post-World War II era, places like Glenwood Springs and Aspen manipulated their environments to create false landscapes, like ski slopes, so that tourists could experience “nature” in a controlled environment. Although it is outdoors, the ski slope is a manufactured landscape. The paths are pre-determined and they all lead to the same place at bottom of the mountain. Skiing is not an escape into the great outdoors or the “rugged life” where one can get lost—it is a trip into a manufactured and catered experience centered on the natural environment. The rise of middle-class tourism in the post-World War II era may have evolved the American West from
Victorian-style hotels and railroads into ski slopes and paved highways, but the idea of manufactured landscapes that cater to tourists remained the same.

The creation of ski slopes throughout the Rocky Mountain environment changed how tourists and locals viewed the natural landscape. The ski slope signifies a change in the power relationship between man and his environment. The rugged Rocky Mountain environment shaped the early generations of Roaring Fork and Glenwood Springs citizens because man was forced to adapt to the realities of isolated, mountain living. Supplies were difficult to come by and most lived off the land, as ranchers or farmers, or they tried their luck in the mines. Either life was strenuous and left vulnerable to the whims of the environment—rockslides, snowstorms, droughts, etc. With every successive improvement of transportation networks, which correlated with changing economies and ways of life, the power dynamic shifted between man and nature. Two-lane highway traffic through Glenwood Canyon, a previously “impassable barrier to travel,” showed that man had essentially conquered the environment. Highways to Aspen and Glenwood Springs made possible the influx of outside capital necessary to manipulate rugged mountain landscapes into groomed ski slopes.

Nationally and statewide, automobile tourism in the post-war era grew tremendously. In 1945, immediately following the war, roughly 5 to 7 million tourists visited the American West. By 1960, that number reached 50 million visitors.49 While tourism existed in Colorado since the railroad age, it reached a new zenith during the mid-twentieth century thanks to the increased wealth, spread of the automobile, and the availability of cheap fuel. Thanks to state boosters, Colorado became one of the favorite

destinations for tourists. As more automobiles frequented the mountains, it became necessary to improve the state’s highways to handle the increased traffic.

This is not to say that all of the environmental transformation that occurred in Colorado, nor that all of the transportation networks in the state, only occurred due to tourism. Colorado followed the general trend of the American West with a boom in population following the war. Denver emerged as the epicenter of the Rocky Mountain region and from 1950-1961 doubled its population in just eleven years. The state built off the federal investments made into infrastructure for the war effort and continued to rely on federal money for infrastructure, especially for highway development. Many of the roads constructed in Colorado had direct ties to military infrastructure. This increase in population and construction of major infrastructure during the post-war years had dramatic effects on the environment. The increased population and the military infrastructure built during the war played an important role in the reasoning for the interstate through Glenwood Canyon.

Suburban sprawl accompanied the rising population and its reliance on the automobile. Denver increasingly decentralized as Denverites left the city to live in the suburbs. In twenty years from 1950 to 1970, the population of Denver residents living within city limits dropped from 74 percent to 42 percent. This meant that not only was the population of the American West ever-expanding, but this population increasingly spread outwards onto previously undeveloped lands of the Front Range. Where Denver could expand on the Front Range, Glenwood Springs had limited space available for sprawl due to its geographic location. Surrounded by canyons on both the east and west

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50 Ibid., 135.
ends of town (Glenwood Canyon to the east), and nestled in a tight, mountain valley, the city could only sprawl so far. Sprawl is relative to the geographic limitation of the city’s surroundings. While Denver’s rising population and sprawl might be more noticeable due to the sheer numbers, it does not mean that sprawl in Glenwood Springs and other small, mountain communities was not as dramatically impactful on the resources, infrastructure, and environment of the region.

In her epilogue written for her history of Glenwood Springs in 1968, Lena M. Urquhart looked at her changing city and remarked that “there is no more room.” As people look to “escape to the suburbs away from massed centers of civilization” they purchase lands and “in all directions, subdivisions and new homes are being built.”

Glenwood Springs served both as a temporary tourists escape and as a mountain home for those who did not want to live in the expanding cities. However, like the tourists, if not even more so, these new residents dramatically changed the region from a mountain oasis to a city struggling to handle its expanding population.

The Glenwood Springs region, and the entire State of Colorado for that matter, is a fantastic case study for the impacts of tourism on the environment and the community. Tourism, what before had been a small portion of the economy, became a major economic force during the second half of the twentieth century. The tourism industry has profound, oftentimes overlooked, impacts on both the tourists, the toured upon, and the environment that they experience. For the tourist, tourism acts as an escape valve from the doldrums of everyday life. However, rarely do tourists truly seek an authentic escape from their industrialized lives and the comforts that it provides them. When the elite railroad tourists “escape” to Glenwood Springs “experience” the

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52 Urquhart, Glenwood Springs, 166.
great outdoors, they did so from the comfort of a railroad and the luxury provided to them by the servants of the Hotel Colorado. Hiking guides or hunting guides then led them on trips into the wilderness, thereby granting the wealthy elites an “authentic” outdoors experience. Like a cat who no longer wishes to be petted, these elite tourists could then leave the outdoors and return to the grand luxury of the hotel.

The regions that accept tourism for economic purposes then face the necessity of providing comfort and experience for the tourists. For tourism to succeed in Colorado, it was necessary to create the proper infrastructure, i.e. roads, hotels, reservoirs, ski slopes, etc, to facilitate and maintain the tourism economy. Pristine mountains and tight canyons turned into ski slopes or highways to accommodate tourists. Entire service industries then sprang up across the region, which provided lower-class food service or hotel jobs to the local economy. Many of these workers face a paradox. They lived in the area because it offered a quiet escape from the faster paced city life, but by accepting these jobs, workers relied on a constant flow of tourists in order to make a living.

Oftentimes, those who were accepting these jobs at hotels, ski resorts, or restaurants were newcomers to the area. They had not grown up in the Roaring Fork Valley or Glenwood Springs, but they moved there later in life to enjoy an outdoor lifestyle, even if that mean accepting lower-wage jobs. American West historian Hal Rothman refers to these newcomers as “neonatives.” The neonative could range from the wealthy capitalist who moved into a place and used his resources to become a powerful member of the society, like Walter Paepcke in Aspen, or the ski-bum who followed Paepcke to find just enough work to afford a season pass to the ski slopes. Either way, these neonatives’ claim to residency in tourist communities is predicated on a romantic notion of the community that then they strive to maintain. Aspen attracted
two distinct neonative crowds throughout the year: the affluent, educated, and elitist summer crowd and the hedonistic, daredevil skiers in the winter. Whichever class or time of the year these outsiders moved to Aspen and claimed residency, they did so on the presupposition that they fit into one of these crowds and they worked to maintain Aspen’s culture as they saw it. However, upon their very arrival they had changed the culture of the town and oftentimes did not realize the irony of their own resilience to outsiders.53

The social factors that brought about tourism and suburban sprawl also facilitated the rise in environmentalism in the United States. Environmentalism in many ways is a response to the industrialization and commercialization of the United States economy in the post-World War II era. Philosophers like Henry David Thoreau and John Muir advocated for the importance of wilderness during the turn of the century, and Theodore Roosevelt and his Chief of the United States Forest Service Gilford Pinchot made significant strides in conservation. However, environmentalism became more mainstream during the revolutionary era of the 1960’s. It spread through the writing of Edward Abbey and Wallace Stegner, the music of John Denver, and the work of groups like The Nature Conservancy and the Sierra Club. It also spread because of the realities of American expansion and growth during the post-World War II era. The gobbling up and landscape for suburbs and shopping malls made environmental protection not merely a romantic notion for philosophers but a stark reality for American citizens with dire consequences.

The United States government followed suit with environmental protection legislation. Rachel Carson’s *Silent Spring*, a cornerstone of the environmental

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movement, led to the eventual banning of DDT for pesticide use. The Wilderness Act of 1964 set the standards for the preservation of wilderness and immediately set aside thousands of acres of American landscape for preservation. The act set aside lands throughout the American West not for mineral extraction, timber companies, or commercial expansion, but for the sake of preserving the land in its natural state for future generations. Even when lands were not set aside for wilderness, debates throughout the country took place over what the best use of lands and resources should be. Should rivers be dammed to create reservoirs for thirsty citizens? Who has more of a right to public lands, timber companies or hikers? Ranchers and oil men continued their long-standing battle over open spaces, but now arguments from ecologically minded citizens entered the fray. In the 1960’s, a contingency of Americans emerged who became more concerned with the human species impact on the environment. They questioned if America should continue on the road of urban sprawl and highway construction or should leave the natural environment to its own accord.

During the 1950’s and 1960’s, residents of the Roaring Fork Valley carried various claims to residency, native status, and environmental attitudes. Many of them had only recently arrived to the region. They may have used Highway 6 and 24 through the Glenwood Canyon and arrived by car. Their families may have arrived when the old dirt Taylor State road carried the first cars through the region a few decades before. Some residents were from the 10th Mountain Division who trained in Aspen during the war and returned after combat. Other residents may have arrived on vacation to enjoy a skiing trip or fishing adventure and never left. Or they may have been part of the old stock who lived in the region during the railroad and mining days. From these various

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54 Public Law 88-577 in U.S., Statues at Large, 78, pp. 890-96.
backgrounds emerged a community that increasingly relied on the tourism industry and transportation networks, especially through the Glenwood Canyon, for their economic well being and their quality of life. They also had a deep connection to the natural environment. They worked the land, hiked the mountains, relaxed in the hot springs, fished in the rivers, hunted in the hills, and enjoyed the natural scenery that the Western Slope of the Colorado Rockies provided them. When the federal government proposed a four-lane interstate through the canyon as part of the Dwight D. Eisenhower Interstate Highway System, these residents carried these backgrounds into a debate over tourism, community, and the environment in the twentieth century American West.
CHAPTER 2:
TRANSPORTING THE TOURISTS AND DISRUPTING THE LOCALS

Glenwood Springs, the Roaring Fork Valley, and Western Colorado underwent profound changes as the region’s communities matured from the late 19th Century to a post-World War II society. This chapter will contextualize Glenwood Springs and the surrounding region prior to the Glenwood Canyon I-70 project, with a particular focus on how tourism affected the communities. Glenwood Springs in particular represents this dramatic change as a community that only several decades before was isolated from the rest of the United States now boasted a robust tourism community, banks, hotels, paved streets, and functioning municipalities. The region owed its maturity to expanded transportation networks. Western Colorado could not have developed without first the rail railroad and later the highway network. In Glenwood Canyon, a railroad, a power plant, and U.S. Highway 6 connected Glenwood Springs with the east. Despite the growth, most of the communities remained small-towns and many continued to rely on ranching or farming as their primary economic income. One was more likely to be stuck behind a herd of sheep than rush hour traffic in Glenwood Springs.

The announcement in 1957 that Glenwood Springs was on the interstate highway route through Colorado was not met with the same enthusiasm that met the Denver and Rio Grande Railroad in 1887. Many Glenwood Springs and Roaring Fork residents opposed the idea of a four-lane interstate highway through Glenwood Canyon because they felt it threatened the way of life that they enjoyed and had helped create in the area. Certainly many embraced the interstate highway as an improved road through the canyon that could potentially boost the economy. However, many local residents expressed concern about how the interstate would change the pace of life in Glenwood
Springs. The region prided itself on being an oasis from the industrialized cities and the fast paced life of cities like Denver.

The interstate highway promised to bring more tourists to the region. Although the city had long relied on the tourism industry, some residents felt that the tourists posed as much of a threat to their way of lives as anything else. The interstate would involve extensive environmental transformation in the canyon, and once finished it would bring tourists and new residents at a faster rate than the city and valley had ever experienced. The threat of tourism to the way of life in Glenwood Springs was as real as the threat of construction crews to the canyon’s wall.

William Philpott writes in his introduction to Vacationland: Tourism and Environmental Transformation in the High Country that tourism is the story of human contact and conflict. Tourism’s profound social implications must be included in any study of the subject. The tourism industry tends to highlight and enforce social divides, especially class differences. As Philpott explains,

In places where it [tourism] takes root, it brings not just tourists themselves but also investors, promoters, entrepreneurs, and workers, who end up altering their destination’s demographics, social dynamics, and relations of property and power. Not to mention relations of employment and labor, for the production of tourist experiences takes a lot of work, often by immigrant or indigenous workers of low incomes, who may find themselves serving or performing for people of very different value systems, histories, cultural identities, class statuses, and races.55

The Hotel Colorado’s maids are one example of this type of relationship between the wealthy tourist and the lower-class servants. At the hotel, servants and maids catered to the wealthy tourists to create a relaxing environment. This relaxing environment is juxtaposed with the rather rugged life that most Roaring Fork residents

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55 Philpott, Vacationland, 8.
actually lived and the lifestyle of the hotel maids outside of work. Yet, while tourism highlights the stark class divides within society, it also brings together groups of people who may have otherwise never interacted, which may in turn lessen the divide between them. However, the tourism industry catered to the wealthy class of people but was made possible by the labor of the lower class, oftentimes immigrant labor.

What exactly is a tourist? Tourism, despite how frequently the word is used and despite the fact an entire industry is dedicated to it, remains a surprisingly difficult term to define. The word tourist often brings to mind the image of a middle-aged father, wearing a Hawaiian shirt, an oddly fitting hat, with a camera strapped around his neck as he struggles to open his fanny pack to get sunscreen for one of his two children. However, the typical tourist is hard to define and rarely fits such a simple stereotype. Tourists do not always stand out amongst the locals as easily identifiable “others” whose temporary stay to enjoy the land that locals call home is clear. Many tourists blend into their new surroundings and they might stay much longer than the four-day weekend. How long does someone have to visit to be considered a tourist? What exactly differentiates a tourist from someone else, like a person visiting his or her relatives?

For the purpose of this paper, I will use Philpott’s “loosely” defined definition of tourists and apply it to “short-term visiting and sightseeing, of course, but also to seasonal residency, second-home owning, and other phenomena that saw people staying in place longer than conventional tourists do.” Borrowing Philpott’s definition of tourism allows for a broad study of tourist’s interactions with the culture, the economy, and environment of Glenwood Springs and the Roaring Fork Valley—from the weekend visitor to the neonative. This loose definition of tourism may not please those who want

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56 Ibid., 6.
a more specific definition or for those who want an analysis of a specific type of tourist, say skiers or hunters from out of state. However, a large variety of tourists visited Glenwood Canyon and the Roaring Fork Valley and for the sake of this paper they will be analyzed as a collective group.

Earl Pomeroy, in his study of the tourist in the American West, reminds us that the tourist “never simply tours through the West: he changes the West when he looks at it, not only because he wears out the highway pavements, but because Westerners change the West into what they think he wants it to be or, with less commercial intent, even change themselves into what they think he is.” Westerners in the Roaring Fork Valley changed their West into an outdoor recreational haven for tourists by manipulating the environment to create ski slopes and punching holes through canyon walls to create roads.

For the most part, tourists to the Roaring Fork Valley and Glenwood Springs in the post-World War II era visited to enjoy the natural scenery and to recreate outdoors. The valley offered numerous skiing opportunities, especially the world-renowned resorts in Aspen. In the summer, tourists could fish, hike, camp, four-wheel, take horse trails, or stay in the town and relax at the Hot Springs Pool or visit the Fairy Caves. The region offered numerous opportunities for tourists to recreate and use the environment. This also highlights how different tourists may be from one another, depending on if they visited in the winter to ski or during the summer to hike Hanging Lake. They may be out of state visitors or they may be from the Front Range of Colorado.

Regardless of the difficulty in defining exactly what a tourist is, a major tourism industry took hold in Colorado during the middle-part of the twentieth century. City

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Pomeroy, Golden West, vii.
developers like Walter Paepcke turned Colorado mountain communities into tourist destinations like Aspen. They did so by investing in ski slopes, building hotels, restaurants, and through extensive public advertising that promoted the community. They then sold hotel packages, ski tickets, restaurant deals, and other marketing ploys to the tourists. These community developers created an “atmosphere” for the American tourist—an atmosphere that catered to desires for luxury in exotic places.58 These developers and boosters turned the Rocky Mountains’ natural scenery and recreational opportunities into a commodity that could be bought and sold.

Selling the Colorado landscape to tourists became big business. Colorado competed with other states throughout the American West for tourists’ dollars. Brochures spread across the country to boost Colorado as a destination for potential tourists. Private interest groups like the American Automobile Association promoted the opportunities in Colorado made possible by the expanded road network. Drivers could enjoy the scenery and beauty of the Rocky Mountains from the comfort of their automobile.

The state government also boasted Colorado as a major tourist destination. The state competed with other states in the American West for tourist revenue through extensive advertising campaigns. The State Advertising and Publicity Committee ran full-page advertisements in magazines like National Geographic and spread brochures and maps throughout the country. These pamphlets touted Colorado as a fishing, hiking, and skiing oasis, with numerous safe, family friendly, affordable options.59 The extensive amount of funding made by the state for tourism publicity, as well as the

58 Ibid., 56.
59 Ibid., 66.
wealth of private interests groups that touted the state’s outdoor recreational opportunities, showed that tourism was no longer a fringe economy in Colorado. Tourism in the post-World War II era was big business.

Road building grew alongside tourism in order to accommodate the state’s increasing traffic and the increasing number of automobiles. The American West, in general, struggled to accommodate the post-war population boom and road building “lay at the heart of western pro-growth programs.” 60 Much of the financing for road development in the West came from the federal government. The federal government played a crucial role in developing transportation networks throughout the American West. In Colorado, the federal government helped provide much of the financial support to build roads linking Denver with its mountainous hinterlands. The costs of constructing modern highways through the Rocky Mountains to grant access for tourists and residents was simply far too expensive and difficult for the state to achieve. In order to construct the roads necessary to accommodate tourists, the state, like many other Western states, turned to the federal government for assistance.

Federal support increased with each successive highway act, starting in 1916. By the passage of the Interstate Highway Act in 1956, the federal government assumed 90 percent of the capital necessary to construct an interstate highway through the state. 61 The first highway bills helped pave and expand the Depression era Taylor State Road to a paved, two-lane highway by the 1940s. To pay for the construction of new roads, the federal government set aside Highway Funds each year, often paid by taxes on gasoline.

\[60\] Thomas, “Troubled Future,” 127.
\[61\] Ibid., 160.
Despite the federal assistance, the nation’s roads remained in poor, oftentimes deplorable conditions. A report from the Bureau of Public Roads to President Truman in 1949 reported that “nearly 94 percent of the main highways of the country would have to be repaired and improved to handle an increased volume of traffic.”\textsuperscript{62} This was especially true in Glenwood Canyon. Highway 6 through the canyon was not adequately equipped to handle the increased motor traffic. The road had always been a narrow, two-lane road with sharp turns and numerous locations where motorists pulled off to the side of the road to access the river. The road became especially dangerous with the increased traffic, much of which came from out of state visitors who were not accustomed to driving in the canyon. Although the population of Glenwood Springs in 1960 was slightly under 6,000, traffic through the canyon on busy summer days reached 10,000 people and was projected to reach 12,050 Average Daily Traffic by the year 2000.\textsuperscript{63} Out of state drivers made up as much as 40 percent of the traffic in the canyon. Accidents were frequent in the canyon. Motorists not only had to navigate the narrow canyon road but also had to deal with other cars who parked on the side of the road to picnic, fish, or raft in the river. Rockslides were common, as well as dangerous icy conditions during the winter ski season.

The state of the nation’s roads became a major issue for the Eisenhower Administration. Dwight D. Eisenhower knew the deplorable conditions of the nation’s roads and the importance of interstate highways first hand. In 1919, following World War I, then Lt. Eisenhower participated in the 1919 Motor Transport Corps, a convoy of army vehicles attempting to travel from coast-to-coast on the then incomplete Lincoln

\textsuperscript{62} Ibid., 169.
\textsuperscript{63} Ibid., 295.
Highway. The convoy averaged barely 5 miles per day as the convoy was constantly stuck in mud and trudged along on the unpaved highways. The final report from the convoy emphasized that “the necessity for a comprehensive system of national highways, including transcontinental or through-routes east and west, north and south, is real and urgent as a commercial asset to further colonize and develop the sparsely settled sections of the country.”

A few decades later, as Supreme Commander of the Allied Forces during World War II, Eisenhower learned the importance of good highways from the German’s Reichsautobahn and he witnessed first hand what a system of limited access, straight, high-speed highways looked like because he used the system to quickly move material and men during the war effort.

Eisenhower also had a connection with Colorado. Eisenhower frequented the state on fishing trips and his family stayed in a second home outside of Denver. Colorado Governor Edwin “Big Ed” Johnson knew Eisenhower had been stuck in traffic on his way to fishing trips and used the President’s connection to Colorado to facilitate additional funds for highway development in Colorado. When the 1956 Dwight D. Eisenhower Interstate Highway Act originally passed, it did not include any plans for a highway west of Denver through the mountains. In the original highway plan, Interstate-70 traveled from Baltimore, Maryland to Denver, where it split north and south, altogether avoiding the Rocky Mountains. Travelers to Colorado would have to leave the interstate in order to access most of the state’s ski resorts. Glenwood Canyon

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64 Gutfreund, Twentieth Century Sprawl, 24.
would remain a two-lane highway and Glenwood Springs, Aspen, and the rest of the Roaring Fork Valley would not be along the interstate highway.

Not if Governor Johnson and a coalition of Colorado officials had anything to say about it. Then Governor of Colorado “Big Ed” Johnson fought extensively to have the federal government approve an interstate highway extension through Colorado and into Utah. Without his diligent work, I-70 may have never connected the Front Range with the Western Slope of Colorado. Johnson knew the importance of improving the state’s roads after he moved to Routt County in Northwestern Colorado in the 1920s and began operating a small fleet of trucks. The road conditions in the area were so deplorable that it became a major part of his political agenda to improve the state’s roads.67 Johnson, along with a coalition of state boosters, convinced Eisenhower that the extension of the interstate through the mountains would secure the state “an additional 50 million dollars in tourist spending.”68 It would also provide access to the mountain’s resources, like oil shale on the Western Slope, which could benefit the country’s military infrastructure.

It took extensive politicking from state officials to get the federal government to agree to extend the interstate through Colorado. The work done by Gov. Johnson and the rest of the state officials to extend the highway through Colorado had major implications for the history of Colorado settlement in the second half of the 20th Century. After several years of discussions, the federal government added another 1,000 miles to the highway act. Colorado would have an east-to-west interstate highway to connect Denver with the Western Slope. The highway provided Denver access to its

67 Ibid., 106.
68 Ibid., 206.
mountainous hinterlands, further expanding the city’s growth. Gov. Johnson called it “the biggest thing that has ever happened to Colorado.” The state and the tourism industry could now benefit from the access to the interstate highway system that spread throughout the United States.

The United States’s Interstate Highway System started in 1956 and by the time of its completion became one of the largest engineering projects in the world. A sprawling network of high-speed, limited access highways connected motorists from every continental state in the union. As it continued to expand from its initial plan, the system eventually grew to be 43,795 miles long and encompass 62 superhighways. It is important to remember the context that the interstate highway system came from. The highway system grew from fears during the Cold War that the United States’s highways were incapable of supporting mass transit in case of nuclear war. Eisenhower learned from his own experiences of the inadequacy of the highway system during his military tenure and personal life. As a politician, Eisenhower justified the nation’s largest public works project as a matter of national defense, but he also appreciated the impact it would have on every day citizens and businesses.

Now that Colorado would have an interstate through the mountains, the question for Colorado politicians, boosters, businesses, and citizens was what route the interstate would take through the Rocky Mountains. The Rocky Mountains are a formidable barrier to travel, as evidenced by the fact that most of the major railroads and highways had skirted around Colorado, choosing instead to travel through southern Wyoming or northern Arizona. Many of the same qualities that make the Rocky Mountains beautiful

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69 Ibid., 241.
70 McNichol, Roads that Built America, 10.
gave engineers headaches. The interstate would have to cross the Continental Divide and go above 10,000 feet in elevation. Highway designers and road workers would have to ensure safe travel for motorists through harsh Colorado winters. The highway would have to adhere to safety standards set by the federal government dictating road curvature and grade, a much easier task in the Midwest than in the Colorado Rockies. Colorado’s environment was another major obstacle that the highways through the flatter part of the nation did not have to deal with. Highway engineers constructing Interstate-70 leading up to the eastern face of the Rocky Mountains followed the old engineering philosophy of building the straightest and cheapest highway possible. The Colorado Rockies made the engineers’ job much more difficult.

The Continental Divide played a major role in determining the route of the transcontinental interstate highway though Colorado. Due to the elevation of the pass, it would be necessary to drill a tunnel through mountains, because going over the divide would create too steep of a grade for the highway. Governor Johnson wanted the highway to take the old U.S. Highway 40 route, near Craig, and cross the Continental Divide through Berthoud Pass. The Highway 40 route bypassed Glenwood Canyon, thus leaving Glenwood Springs and the Roaring Fork Valley off the interstate’s route. Johnson and supporters of the Highway 40 route ultimately lost when the Colorado Commission­ers voted unanimously in 1960 to choose the Highway 6 route from Empire Junction to Dotsero as the route for the new interstate. The route would include a tunnel at Loveland Pass that would become the Eisenhower-Johnson Tunnel and would take the highway directly to the east of Glenwood Canyon.

Thomas, “Roads to a Troubled Future,” 192.
Ibid., 261.
Constructing the interstate highway through Colorado proved to more difficult and expensive than the supporters of the highway initially thought. The Eisenhower-Johnson Tunnel’s two bores combined cost 257 million dollars—a “sum approximately equal to the original estimate of the entire stretch of Interstate 70 from Denver to the Utah state line.” Not only was the work expensive but it was dangerous too. Construction on the first bore of the tunnel caused hundreds of serious accidents, 20 amputations, three deaths, and nearly five-thousand worker-days lost to injury. However, despite the difficulties in construction and the extreme cost of the tunnels, the tunnels opened for traffic in 1979 as the highest point in the interstate highway system and Interstate-70 successfully passed the Continental Divide.

By the time the highway reached Dotsero, just east of Glenwood Canyon, Coloradoans had already learned many of the lessons that accompany highway construction. Interstate highways in Colorado were extremely expensive, as seen in the exceedingly high cost of the Eisenhower-Johnson Tunnel. Highways could be detrimental to the environment, as old highways turned into bustling, four-lane interstates with bumper-to-bumper traffic during the winter ski season.

Interstates also brought profound changes to the communities along its route. Residents of Glenwood Springs could look to the east up the interstate for examples of the changes that interstate-based tourism industries could bring. Vail, Colorado was evidence to this point. Vail did not exist as a town until 1962 when it started as a ski resort along the newly constructed highway. Vail developers wanted to create a first-class, year round resort community. Vail in many ways was the antithesis of the ethos

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73 Ibid., 275.
74 Ibid., 272.
that Aspen had created. While Aspen catered to the eccentric, Vail catered to first-class, wealthy citizens who expected top-tier service without the drugs or hippies that Aspen attracted. In the 1960s, the Vail Ski Company went as far as to forbid employees from having beards. As a local editor of a newspaper quipped, Vail was “off-limits to Jesus Christ, Abraham Lincoln, and other subversive employees.”\(^7\) Vail fully represented the class divisions that the tourism industry exploits. While catering to first-class, wealthy skiers and hikers year round, Vail exploited the low-wage workers who made the experience possible. What had once been a mountain ridge off Highway 6 with no development turned into a sprawling ski resort town, full of class divisions and exploited labor, all within a decade of the construction of the interstate highway.

The Roaring Fork Valley had also undergone some dramatic changes in the last half-century. The boom-and-bust cycle of mining had turned Aspen, the economic anchor of Pitkin County, into a ghost town before Walter Paepcke invested in its revival in the 1950s. Following the Silver Panic of 1873, Aspen never returned to the same level of mining production. The famous Smuggler Mine shut down and most mining activity left the region. While the census of 1890 counted 9,000 residents in Pitkin County, the county only held 1,770 residents in 1930.\(^6\) Those who stayed were primarily ranchers and farmers and most of them lived with kin. These families earned their livelihood from the land, primarily from raising cattle and planting and selling potatoes. The expansion of the tourism industry during the middle of the 20th Century attracted new types of people to the valley with a different set of cultural values. Tourism and skiing relied on the land, sometimes the same land, to recreate and recreationalists conflicted

\(^{75}\) Rothman, Devil’s Bargains, 235.

with the ranchers who used the land to push cattle. Eventually, this new generation of Roaring Fork residents pushed out the farmers and ranchers and the valley transformed from a ranching and farming valley into an outdoor recreation haven for tourists and locals.

Yet, the changes are not as dramatic as one might think. In fact, they highlight that the old is new again when considering economies in the Roaring Fork Valley. Despite their apparent differences, mining, ranching, and tourism all rely on a very similar set of circumstances and all of them manipulate the environment to create capitol. As Annie Gilbert Coleman said in her study of the Roaring Fork Valley during ‘the quiet years,’

Successful tourist economies such as Aspen’s have indeed assumed characteristics similar to earlier mining communities. They have developed new transportation corridors (and airports), altered the physical landscape (in the form of ski trails, lifts, and restaurants), and created such urban problems as pollution, housing shortages, congested transportation, and an increasingly marginalized work force. These decidedly unromantic developments arrived hand-in-hand with the new jobs, higher revenues, and rising real estate values that accompany booming economies—just as they had during Aspen’s silver boom in the 1880s.77

The Roaring Fork Valley’s economic transition during the post-war boom created tensions between residents and highlighted the difference between those relying on the older economies and those who moved to the region for reasons other than family ranching. This tension is best highlighted with Hunter S. Thompson’s bizarre run for political office in 1969-1970. Thompson moved to Wolf Creek, just outside of Aspen, in 1967. Thompson didn’t move to Aspen for the skiing or hunting opportunities that attracted most new residents. Although he loved to shoot guns, Thompson was a terrible

77 Ibid., 45.
shot and if he ever did ski there is no proof. It seems that Thompson moved to Aspen because he heard of the interesting groups of progressive thinkers who started to call Aspen home. He was forced to leave California after writing *Hell’s Angels: The Strange and Terrible Saga of the Outlaw Motorcycle Gangs* and Colorado seemed far enough away without having to return to his home state of Kentucky.

“The Battle of Aspen,” a *Rolling Stone* article written by Thompson in 1970 that chronicles Thompson’s support of Joe Edwards’ campaign for mayor of Aspen in 1969 and Thompson’s subsequent run for sheriff of Pitkin County in 1970, highlights the tension between the newcomers—“refugees” from various communes who moved to Aspen in the “Summer of Love” that was 1967 and created a “Freak” class of lower-class residents who partied hard and took plenty of drugs—and the older generation of Aspen and Roaring Fork Valley residents. The first winter sent many of these freaks home but those who stayed found jobs as “carpenters, waiters, bartenders, dish-washers” and lived in the low-cost parts of town. The arrival of these new residents changed the political landscape of Aspen. Despite Aspen’s reputation as a liberal, progressive city, throughout the 1950s and 1960s most Roaring Fork residents voted Republican and Aspen GOP registrations outnumbered Democrats two to one. These “refugees” however represented a “jangled mix of Left/Crazies and Birchers; cheap bigots, dope dealers, nazi ski instructors and spaced off ‘psychedelic farmers.””

The once quiet ranching community transformed into a melting pot of ranchers, skiers, elites, and “freaks” who battled over the fate of Aspen. They carried fundamentally different ideas of how local politics should work and who should be in charge. They debated and fought and ran for

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office for a place they called home. Yet, many, if not most, of these residents had only recently moved to Aspen, some only within a few years.

Certainly Thompson’s Freak Power campaign deserves some ridicule. Thompson’s campaign platform for sheriff included such ideas as renaming Aspen to Fat City so that real estate developers could not use the name Aspen; removing the paved streets and replacing them with sod so that everyone in town walked or road bicycles; legalizing drugs and punishing “dishonest dope dealers” (whatever that might mean) by putting them into shackles and putting them on display downtown; forbidding hunting and fishing to all non-residents; and disarming all police officers in town and focusing the sheriff’s office attention on “all those engaged in any form of land-rape.” However, Thompson’s campaigns speaks to the truth of the multifaceted issues facing the Roaring Fork Valley as it developed during the post-war boom and throughout the 1960s. Land-developers and real-estate agents wanted to devour every inch of Aspen and turn the valley into subdivisions, condominiums, and ski parks. Real estate prices in Aspen skyrocketed and developers saw gold (or perhaps silver) in Aspen real estate. Edwards’ campaigned for mayor against the “sub-dividers, ski-pimps and city-based land-developers who had come like a plague of poison roaches to buy and sell the whole valley out from under the people who still valued it as a good place to live.”79 While it may appear on the surface that Thompson planned on using the sheriff’s office to legalize drugs in Aspen (or Fat City), the primary purpose of Thompson’s platform was to protect the natural environment from further development, like highways and real-estate development.

79 Ibid., 33.
Transportation stood at the heart of the development conflict and thus the question of improved transportation was also a question of how rapidly the community would undergo irreversible changes, both economically and culturally. Thompson and Edwards campaigned to “prevent the State Highway Department from bringing a four-lane highway into the town” (the Highway Department had been considering upgrading Highway 82, which ran from Glenwood Springs to Aspen, into a four-lane highway to better accommodate tourists and ski traffic) and to prevent further, uncontrollable development by blocking any new downtown apartment buildings. Views of the mountain landscapes mattered more to Thompson and the Freak Power than the “Progress” of economic development.

Thompson exemplifies the anti-tourism, anti-growth sentiment of many Roaring Fork Valley citizens when he writes, “Fuck the tourists, dead-end the highway, zone the greedheads out of existence, and in general create a town where people could live like human beings, instead of slaves to some bogus sense of Progress that is driving us all mad.”80 To many, the extension of Interstate–70 through Glenwood Canyon represented the “bogus sense of Progress” of the American experiment. Here lies a beautiful mountain gorge, shaped by the Colorado River cutting into the great Rocky Mountains that the Highway Department wanted to turn into four-lane interstate corridor to accommodate tourists and land-developers, who could then turn Glenwood Springs and the Roaring Fork Valley into condominiums, hotels, ski resorts, restaurants, and a pseudo-elitism built off the backs of minimum-wage servants. Not everyone stood to benefit from the potential economic boost of the interstate and many residents were not

80 Ibid.
willing to sacrifice their way of life so that out-of-state tourists could have safer, speedier travels.

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Interstate-70 had to traverse one last section of difficult terrain before it linked Denver and the Western Slope of Colorado. In fact, the plateau between Eagle and Glenwood Springs proved to be the most difficult section of the entire interstate highway system—even more difficult than the Continental Divide. Not only did 1,500-foot canyon walls stand before the highway department and their goal of an interstate, east-west highway through Colorado, but a new geopolitical force of anti-highwaymen and environmentalist, recently armed with new environmental legislation, emerging scientific studies, and increasing wealth and popularity opposed the Department of Highways plan to construct a four-lane interstate in the Glenwood Canyon.

This new geopolitical force came together to defend the natural environment from destruction caused by the interstate highway. The Highway Department had several options to link Eagle with Glenwood Springs, but each option would entail a major construction project in environmentally sensitive terrain. The three options considered included a northern route through the Flat Tops Wilderness area, a southern route over Cottonwood Pass that the original settlers into Glenwood Springs used, or to follow the Highway 6 route through Glenwood Canyon. All of these options would be expensive—very expensive. What the Highway Department had not expected in Glenwood Springs was a major environmental protest against the construction project that would caste the project into unforeseen territory for the highwaymen—the field of public scrutiny. The Glenwood Canyon I-70 project had perhaps the most public input
on any construction project ever. It took over thirty years for the Highway Department to come to an agreement with the local citizenry, the environmentalists, and the state and federal governments on how to construct a twelve-mile stretch of highway. At stake was the very way of life for many local citizens and the introduction of a quiet, mountain community to the high-speed interstate traffic and the expanded growth that accompanied it.

The protest against the final-link of the interstate highway system in Glenwood Springs displayed a mix of the growing power of the environmental movement and an old-fashioned Western distrust of the outside world. A coalition of environmentalists and preservationists stood up against the highway proposal in a fight to protect the environment from the interstate highway and to leave it as is. They were joined by outdoor recreationalists and concerned citizens who might not share their same sentiments about the environment but did not want to see their way of life destroyed for the sake of speedy and safe travel through their homelands by American motorists. The ensuing debates, meetings, legislation, and citizen participation also revealed the power of compromise when engineers and environmentalists work together in the construction of engineering projects through environmentally sensitive terrain.
CHAPTER 3: DESIGNED BY NATURE, DEBATED BY MEN

The terrain between Eagle and Glenwood Springs, Colorado presented the Department of Highways several major obstacles before engineers could connect Interstate-70 through the White River Plateau. The top of the plateau was near pristine territory in the 1960s. The land to the north of the Colorado River, known as the Flat Tops, was a protected area and part of the White River National Forest. To the south of the river was Cottonwood Pass, a steep mountain terrain that reached almost 10,000 feet in elevation and was home to the largest migratory elk population in the United States. There were not cities, towns, ski slopes, or development in either of these areas except for the few ranches along Cottonwood Pass. For the most part, the land between Eagle and Glenwood Springs was near-pristine wilderness in the 1960s.

Given the difficulty of going either north or south of the river into the Flat Tops or Cottonwood Pass areas, the Department of Highways planned to follow the path of Highway 6 through Glenwood Canyon. Given the fact that a highway and a railroad already traveled through the canyon, it was certainly not pristine or as wild as the Flat Tops were. Big game animals tended to avoid the canyon because the steep canyon walls acted as a natural barrier to wildlife. The canyon, though, was certainly not an ideal location for a four-lane interstate highway. It was narrow—so narrow, in fact, that to put a single-lane dirt road through it required construction crews in the 1900s to dynamite the canyon walls to make enough room. How could a four-lane interstate possibly fit in the canyon?

Highway 6 was also one of the most dangerous roads in the entire country throughout the 1950s and 1960s. The highway wound through the canyon only several feet from the river and it was not uncommon for drivers to drive into the Colorado
River. Since the canyon was such a popular location for outdoor enthusiasts, there were over fifty spots along the road where people could pull off the highway and access the river. This congested traffic in the canyon and accidents were common as vehicles tried to merge back onto the highway and were struck by moving traffic coming around a corner. If a two-lane highway could barely fit into the canyon, the proposition by the Department of Highways of expanding the highway to four-lanes appeared extremely arrogant.

Outdoor recreationalists who enjoyed the canyon because they could fish, hike, or play in the river also wondered how they could continue to enjoy the canyon if the Department of Highways pushed a four-lane interstate through the canyon. Their fears were justified, too. The original highway design by the Department of Highways for the interstate highway through Glenwood Canyon did not take into account providing access for recreationalists to the river or the canyon’s popular hiking trails. The Department designed the four-lane interstate under the assumption that they would continue expanding the road like previous construction projects had—by dynamiting the canyon walls and pushing the fill into the river. The canyon might not be wide enough for a four-lane interstate, but construction crews could make it wide enough.

The natural terrain also had a new coalition of groups and individuals who wished to protect the natural environment from development. Groups like the Sierra Club, the Colorado Open Space Council, and the Rocky Mountain Center for the Environment emerged from the popular environmentalism movement of the 1960s and sough to protect Colorado’s natural environment from uncontrolled development. These groups believed that Glenwood Canyon was not an appropriate location for a four-lane interstate. The Department had erred in choosing the Highway 6 route through
Colorado because it required that Glenwood Canyon be compromised to make room for a four-lane interstate. These influential environmental groups opposed the ideology that high-speed highways should sprawl throughout the entire state of Colorado in order to provide motorized tourists easy access to the natural settings. These environmental groups also finally had the legislative power necessary to oppose the Department of Highways.

Western writer Wallace Stegner warns in *Where the Bluebird Sings to the Lemonade Springs* that we, as Americans, need to be cautious as we adapt and settle to the American West landscape. We should take great pains to ensure that we do not love the scenery to death and trample or even destroy the precious resources that our Earth provides us. The beauty of the American West is a commodity. It has been sold to the Victorian tourists who visited by railroad. It was sold to the post-World War II tourists as an escape from the industrialized productivity of the post-war society. Today, it is sold to skiers, hikers, fishermen, and hunters. The scenery of the American West is sold right along with the right hotel package and travel accommodations. If we do not carefully consider the impacts of our growth and construction we may very well destroy the land that we love. As Wallace Stegner writes,

> Without careful controls and restrictions and planning, tourists can be as destructive as locusts—can destroy everything we have learned to love about the West. I include you and me among the tourists, and I include you and me in my warning to entrepreneurs. We should all be forced to file an environmental impact study before we build so much as a privy or a summer cottage, much less a motel, a freeway, or a resort.\(^1\)

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It took no stretch of the imagination to consider the Roaring Fork Valley, Glenwood Canyon, and the valley that the city of Glenwood Springs sat in as mountain oasis. The Central and Western Colorado Rockies were home to some of the largest herds of migratory elk and deer in the nation; they were home to mountain lions, bobcats, brown bears, moose, rabbits, eagles, falcons, turkeys, and many other rare and exotic species. Snowpack in the mountains melted in the spring and summer and fed rivers that cut through mountains and valleys, carrying rainbow trout and an abundance of other fish. In Glenwood Canyon, one could sit alongside the Colorado River and witness millions of years of geological history as they looks up 1,500-foot canyon walls. They can see fish swimming down the river and watch the rapids cut past the boulders that have fallen into the river. If they are lucky, they may see a bald eagle perched by her nest protecting her eggs or witness a bighorn sheep gracefully work his way up the cliffs. Glenwood Canyon is a treasure, a hidden gem of the American landscape.

Luckily for Stegner and those who think like him, the Glenwood Canyon I-70 project underwent scrutinizing environmental impact studies. Citizens, politicians, and engineers scrutinized every detail of the project in a process that took over thirty years to complete. The incredible attention to detail and scrutiny of the project can be connected to the environmental movement of the 1960s. In the 1960s, American society witnessed the impact of the vast expansion of the highway network and of suburban sprawl on the landscape, as well as a slew of environmental disasters across the nation. Rachel Carson’s 1962 book *Silent Spring* in which she revealed the environmental impacts of using dichlorodiphenyltrichloroethane, better known by the acronym DDT, as an insecticide for farming, was the symbolic beginning of the popular environmental movement in the 1960s. A growing environmental consciousness certainly prevailed
prior to the release of *Silent Spring* but the success of the book—it was a *New York Times* bestseller—helped to spread an environmental consciousness through American society. More Americans began to understand man’s impact on the natural environment and that significant changes needed to occur in society in order to curb the degradation of the environment. The wilderness conservation and environmental movement has origins long before the 1960s, but in the 1960s it became mainstream. Roderick Nash explains in his seminal work on the wilderness movement that, in the 1960s, “man, in a word, was rediscovered as being part of nature. The ecological perspective also entailed recognition that civilized man has placed heavy strains on the delicate balances that support life on earth.”

Congress responded to the growing environmental movement with a series of environmental and ecological legislative acts, including the National Wilderness Preservation System (1964), the Land and Water Conservation Act (1964), the National Trails System (1968), and the National Wild and Scenic Rivers System (1968). Although these previous acts made substantial progress for environmental protection, none carried the weight and influence that the National Environmental Policy Act of 1969 (NEPA) did. The act fully recognized humans’ impacts on the natural environment and gave teeth to popular environmentalism by requiring that all major, publically funded acts provide extensive public involvement before the project begins.

NEPA reads,

> The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and

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expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.84

All of the issues spelt out in the opening paragraph of NEPA are seen in the Glenwood Canyon I-70 project. The construction of previous transportation networks through the canyon had clearly had a “profound impact” on the canyon, as evidenced by the scars left on the canyon walls from dynamite blasts. Population growth and resources exploitation, both intimately tied to the development of transportation networks through Glenwood Canyon, had transformed the mountain valleys and altered the physical environment. NEPA gave legislative power to those who questioned if the interstate highway extension through Colorado had more of a negative impact on the environment than a positive influence on social and economic issues.

NEPA required that federal agencies “utilize a systematic, interdisciplinary approach” when designing projects that have an impact on the environment. The act required that “presently unquantified environmental amenities and values may be given appropriate consideration in decision making,” meaning that the aesthetic values the canyon walls of Glenwood Canyon would be considered alongside the potential economic impacts the interstate highway. NEPA required federal agencies to prepare environmental impact statements for actions that significantly affected the environment. These statements would address:

I. The environmental impact of the proposed action.
II. Any adverse environmental effects that cannot be avoided should the project be implemented.
III. Alternatives to the proposed action.
IV. The relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity.
V. Any irreversible and irretrievable commitments of resources that would be involved in the proposed action.  

The interstate highway system was nearly complete by 1969 when NEPA passed. The Department of Highways constructed most of the interstate system with little consideration to the surrounding environment and the impacts that the highway would have once finished. Construction of the interstate, for the most part, followed the basic engineering philosophy of building as straight and cheaply as possible. In 1969 when NEPA passed, the Colorado Department of Highways had yet to finish the final link of Interstate-70 in Glenwood Springs. The Department of Highways assumed that the route would follow Highway 6, as it had through most of the state, and travel through Glenwood Canyon to connect Gypsum with Glenwood Springs. This route followed the recommendations of the “Pavlo Report,” a report issued by the Pavlo Engineering Company in 1960 that recommended that I-70 generally follow the routing of Highway 6 west of Denver. The report was influential in choosing the Straight Creek tunnel location for Eisenhower-Johnson Tunnel. However, NEPA’s passage ensured that the planning and routing of the interstate through Glenwood Springs would involve a multi-disciplinary approach to the environmental impacts of a four-lane interstate through Glenwood Canyon’s sensitive terrain. While the Pavlo Report was designed by highway engineers for highway engineers, the Glenwood Canyon project required the

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85 National Environmental Policy Act of 1969, Sec. 102.
input of environmentalists, recreationalists, local citizens, local politicians, and highway engineers. The process would be democratic and the entire community and state would help decide the fate of Glenwood Canyon.

The actions of many Glenwood Springs and Roaring Fork citizens embodied the spirit of NEPA before it actually passed. Glenwood Springs and Aspen residents expressed concerns about the interstate project through Glenwood Canyon, fearing that the project would destroy the natural qualities of the environment and could ruin their way of life in the canyon where the locals and tourists hiked, fished, rafted, and picnicked. Starting in 1962 when discussions began on the project, residents raised concerns and protested the Colorado Department of Highways over construction issues. Construction started on the west end of the canyon from Glenwood Springs to No Name Creek, a few miles east of Glenwood Springs. This phase of construction followed the typical road building method known as cut-and-fill. Construction crews dug into the hillside and pushed the debris into river to make the road as straight as possible. The construction of this first segment of the interstate in the canyon prompted rallies, editorials in the local papers, protests, and eventually public hearings that characterized the fight for Glenwood Canyon. Although an anti-highway sentiment resided in the valley before construction started, it remained a relatively small portion of the populace. By the mid-1960s however, area residents realized that the interstate construction could potentially destroy the canyon unless concerned citizens did something about it.

The initial pressure from concerned citizens prompted the Colorado General Assembly to respond with a resolution to ensure that the Glenwood Canyon I-70 project would make special efforts to protect the natural beauty and recreational opportunities of the canyon. The Colorado General Assembly Joint Resolution No. 16 read, “the
interests of the people of this state will be best served by a highway so designed that, to the fullest possible extent, the wonders of human engineering will be tastefully blended with the wonders of nature." To aid in this accomplishment an advisory committee comprised of people not employed by the highway department would oversee the project, ensuring that the interests of the engineers were balanced with the interests of the citizenry. This committee would be appointed by the Department of Highways. The resolution also required that the Department of Highways “make a special effort to arrive at a design that will preserve the natural beauty of the Glenwood Canyon.”

Passed in 1968, the resolution preceded NEPA and embodied many of the aspects of the bill. The resolution ensured that the construction of the interstate highway through Glenwood Canyon would consider the environmental impact of the highway and would attempt to mitigate the impact of construction on the canyon.

Joint Resolution No. 16 mandated that the Department of Highways work with the Citizens Advisory Committee who would comment upon and approve or disprove of the final plan and design of the Glenwood Canyon I-70 project. At first, the Department of Highways only paid lip service to actually listening to the requests made by the Citizens Advisory Committee. While the Senate Resolution had granted the committee equal authority to decide on the routing and design of the highway, the highwaymen did not really wish to listen to the concerns of the citizen committee. The highway engineers had never been told how to do their job by a group of laymen, especially not a group of citizens who raised concerns about the “aesthetic values” of the environment or the “recreational opportunities.” It was the highwaymen’s job to create a high-speed autobahn through Colorado like the federal and state government wanted, not to protect

87 Senate Joint Resolution No. 16, 46th Colorado General Assembly, 1968.
the natural environment or be concerned with the local citizenry’s sentiments about how the interstate highway would change their culture. That is exactly what the Citizens Advisory Committee’s job was, though.

The Citizens Advisory Committee immediately questioned the propriety of the Glenwood Canyon route for an interstate. Appointed in January 1969, the Committee questioned if the canyon could sustain a four-lane interstate without necessarily damaging the aesthetic and recreational values of the canyon and the health of the ecosystem. Two urban planners, two architects, a landscape architect, a physician, and a businessman comprised the first committee. After touring the canyon several times and reviewing studies from the Department of Highways, the committee submitted two resolutions in September of 1970. Expressing their concern for the construction of the interstate on the west end of the canyon, the committee recommended that:

1. Complete studies of alternative routes be undertaken; and
2. Glenwood Canyon be protected and declared a “National Scenic Area.”

Declaring the canyon a National Scenic Area would ensure that the canyon be protected from further construction. No interstate highway could go through a National Scenic Area so Glenwood Canyon would remain as is, with a two-lane highway and the railroad. Traffic could continue to use the canyon but large trucks would be banned.

In response to the first request of the committee, the Department of Highways contracted De Leuw, Cather & Company, a Chicago based engineering and planning firm, to study the impacts of a Glenwood Canyon route and a Cottonwood Pass route. Cottonwood Pass peaked at nearly 10,000 feet to the south of Glenwood Canyon. The route, which at the time was only a single-lane gravel road, then connected with the

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Roaring Fork Valley and would enter Glenwood Springs from the south where it would then continue west. The Department of Highways did not require De Leuw, Cather to study the Flat Tops route because they assumed it was out of the question, but the later Environmental Impact Study required by NEPA would consider the Flat Tops route, as well as Cottonwood Pass and Glenwood Canyon.

Some locals argued that a local design firm should conduct the studies rather than the Chicago based, De Leuw, Cather firm. They also criticized the firm’s report because it only studied two, basic alternatives—a four-lane route through the canyon and a four-lane route over Cottonwood Pass. Opponents argued that the study did not include a comprehensive list of alternatives—i.e., a two-lane, scenic corridor alternative, a split design that put two-lanes through the canyon and two-lanes over the pass, or other land use options for the two routes, such as declaring Glenwood Canyon a National Scenic Area or National Park. This in part shows the difficulty of implementing NEPA for federally funded projects. Although NEPA required impact studies and studies of alternative methods, in the early 1970s the Department of Highways and many engineering firms did not know how to conduct environmental impact studies.

While the firm did not officially endorse a route in their study, the report clearly supported the canyon route as the most feasible option. The report studied everything from economic activity, government financing, pollution, public health and safety, and aesthetics. The data collected showed that the Cottonwood Pass route was more expensive, required the transplantation of homes and ranches along the way, was a less direct route east-to-west through Colorado, and more negatively affected fish and wildlife than the canyon route. The Cottonwood Pass route put Interstate-70 directly
through the migratory deer and elk population and the highway would then navigate down the Roaring Fork River, which was an even more popular fishing area than Glenwood Canyon. De Leuw, Cather recommended that “esthetic values” be respected in the final design, even if this meant modifying interstate design standards, no matter which route was selected, but especially in the canyon.\(^{89}\)

Several environmental organizations and citizens criticized the De Leuw, Cather report for its scope of study. These environmental organizations wished to see that the utmost care be taken in studying all of the possible options for the highway before the Department of Highways be allowed to proceed. The Rocky Mountain Center on Environment argued that the report did not ask key questions regarding the canyon, such as “what is the best and highest use of Glenwood Canyon?” and “can a highway of Interstate geometry and traffic use co-exist with the natural beauty of the Canyon?”\(^{90}\)

The groups argued that the study did not cover land use and recreational matters within the canyon, nor did it cover land use and recreational questions on Cottonwood Pass. Although the canyon had been a transportation route for over a hundred years, these groups argued that perhaps the canyon would better serve the region if it were a National Park or left as a recreational haven, not as a four-lane interstate route. The Association for Beautiful Colorado Roads, the Colorado Open Space Council, the Citizens for Glenwood Canyon Scenic Corridor, and the Bureau of Outdoor Recreation of the Department of the Interior all took positions against the scope of the De Leuw, Cather report (and the Draft Environmental Impact Statement based on it) and requested that further studies of the alternatives be made.


\(^{90}\) Ibid., I-4.
The De Leuw, Cather study became the basis for the Department of Highways Draft Environmental Impact Study in 1971, which was required after the passage of NEPA. The Glenwood Canyon I-70 project was the first project in the state of Colorado to undergo an environmental impact study as required by NEPA. NEPA gave power to the environmental organizations or any citizen who wished to express their opinions on the project. These organizations, as well as hundreds of Colorado citizens, made their positions heard during several rounds of public meetings concerning the project. The Colorado Department of Highways held meetings in October of 1971 in Glenwood Springs and Denver to discuss the routing of Interstate 70 from Gypsum to Glenwood Springs. This was the first stage of several in planning and designing the highway. The first stage would choose the route of the interstate, the second stage the design of highway, and the third stage would be the fine-tuning of the design. After these three phases the project could begin construction. Prior to the meeting, the Colorado Department of Highways went on record to say that the Department had not “committed to any particular routing” for the interstate prior to the meetings.91 However, the De Leuw, Cather report comprised the basis for the recommendations and the presentations from the Department of Highways, and the report clearly supported the canyon route over the Cottonwood Pass route. The meetings included presentations from the Department of Highways, engineers, members of the Citizens Advisory Committee, and from several environmental protection advocacy groups.

With public opinion divided on the interstate issue leading up to the October meetings, the Glenwood Springs Chamber of Commerce created a film on the project to

show to citizens leading up to the meetings. Floyd Diemoz, Jerry Brown, Ed Mulhall, and Jim Rose created “I-70: Where and How?” under their own expense and then presented the film at public viewings, for free, to help the citizens make an informed decision on the interstate route. The film marked a change in thinking for the Citizens Advisory Committee (of which Floyd Diemoz was a member of). The makers of the film actually endorsed the Glenwood Canyon route. The makers of film argued that a route over Cottonwood Pass or the Flat Tops would be more damaging to the environment than the canyon route and that the no-highway option was not viable since the interstate already extended east and west of the canyon. The makers of the film, however, argued that the Department of Highways design a unique highway that served to protect the interests of outdoor recreationalists and limited the amount of intrusion into the river or the canyon walls. The cut-and-fill method would simply not work in the canyon so creative techniques should be adopted, the film argued. They said that the Department of Highways could adopt construction techniques used in the Alps, where construction crews built sections of the highway offsite and then lowered them into place using a crane.

While the Citizens Advisory Committee originally “doubted the ultimate suitability of Glenwood Canyon for I-70 construction” and requested studies of alternative routes in July 1970, by October 1971 the committee had determined that Glenwood Canyon was the only feasible route for the interstate. However, the committee demanded that the highway be constructed with the utmost respect for the natural environment.92 This meant limiting the amount of canyon walls that had to be removed

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to make room for the highway, avoiding altering the river as much as possible, protecting the natural vegetation, and creating a highway that granted motorists access to the river and the various hiking trails throughout the canyon. The Glenwood Springs Chamber of Commerce and the Citizens Advisory Committee compromised with the Department of Highways—although they initially questioned the suitability of the canyon for the interstate, their stance prior to the October 1971 meetings requested that the highway be built with the utmost respect to the natural environment of Glenwood Canyon.

The Department of Highways proposed three routing alternatives for the interstate to be discussed at the meetings: the Glenwood Canyon route, Cottonwood Pass, and a route to the north through the Flat Tops Wilderness Area. Few if any actually considered the Flat Tops route a viable option. The Flat Tops route climbed above 10,000 feet in elevation while crossing into a wilderness area home to large migratory elk and deer populations, as well as numerous mountain lakes, streams, canyons, and primitive territory. The Cottonwood Pass route had similar issues. The pass required a 7% percent grade at times and an 8-mile stretch of continuous 6% grade. Right of way acquisition would cost $5,838,000 and total 2,513 acres—over three times the acreage and nearly ten times the cost of the Glenwood Canyon route. Cottonwood Pass then connected with Highway 82, which connected Aspen and Glenwood Springs and was one of the most dangerous wildlife passing highways in the nation. Between 1965-1967, a reported 1,625 deer-vehicle accidents occurred on Highway 82.94

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94 Gary T. Myers, Wildlife Researcher at the Division of Game, Fish and Parks, letter to Mr. Don Walter, July 9, 1970.
The deer-vehicle accidents meant a dwindling deer population, which negatively affected Garfield County’s hunting economy. The Colorado Division of Game, Fish and Parks recommended the canyon route because it “would be the least detrimental to the environment” because the Cottonwood Pass route would have to cross the Roaring Fork River, potentially negatively impacting the fishing economy, as well as the migratory deer population.95 Despite the impassioned response against the highwaymen when they originally began construction in Glenwood Canyon, studies of alternative routes clearly showed that the canyon was the safest, most environmentally sensitive, and cost-effective route for Interstate 70 through the White River Plateau.

The “no Interstate highway” option was no longer viable since the interstate already reached Eagle to east of the canyon and was under construction west of Glenwood Springs. It was also not the popular opinion of most residents, who saw the potential positive impacts of the interstate for their community and businesses outweighing the potential negative impacts on the canyon. A faction of the community certainly maintained an anti-freeway stance throughout the entire process. The community as a whole, however, never maintained an anti-freeway stance—they simply wanted the highway department to build the highway in such a way that future generations could continue to enjoy the canyon’s visual features and the hiking, fishing, and rafting that it offered.

The debate in the early 1970s concerned the issue of timing, as well. The more business friendly residents wanted the construction to begin immediately so that the highway could be finished as soon as possible. The more ecologically minded citizens

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requested further studies and analysis before construction began to ensure a highway
design that protected the canyon. It was not enough that the canyon was the best route
for the highway. Both sides of the argument wished to see the canyon and would not
accept a highway that destroyed the Glenwood Canyon environment, but they disagreed
on how many studies needed to be done beforehand.

An editorial in the Glenwood Post on September 1, 1971 a month before the
public meetings drew the “battle lines” for the interstate project. Referencing the movie
created by the Chamber of Commerce, the editorial asked “aren’t there better design
approaches? Aren’t there alternatives to cut-and-fill construction?” The design and
construction of highways in the Alps showed that more creative approaches to highway
designing could be achieved if the project was “allowed to proceed without unrealistic
budgetary limitations, without being saddled be design criteria unsympathetic to
Glenwood Canyon, criteria which may disregard the spectacular grandeur of the
Canyon.”96 The uniqueness of Glenwood Canyon demanded a unique design approach to
highway engineering. The old cut-and-fill method, as evidenced on the west end of the
canyon, was not adequate for the spectacular nature of the canyon. The writers of the
editorial, as well as the makers of the film, believed that the Glenwood Canyon I-70
project could be an engineering marvel if no expense was spared on the project and the
highway engineers were creative in the design and construction of the project.

Nearly 250 people attended the first meeting concerning the routing for the
interstate in Glenwood Springs. Those present at the meeting included the Department
of Highways District Engineer Dick Prosence, mayors from several Colorado towns,
members of the Glenwood Springs Chambers of Commerce, representatives of the

Sierra Club, the Rocky Mountain Center for Environment, leaders of Club 20 (a representative body of Western Colorado communities and business leaders), and several geologists, engineers, foresters, and common citizens. Despite the wide range of people present at the meeting, nearly everyone agreed if there was going to be an interstate highway between Eagle and Glenwood Springs then it should follow Highway 6 through Glenwood Canyon. It did not matter if they focused on the practicality of the route, the total cost, safety concerns, or the potential environmental impact—engineers and environmentalists agreed that Glenwood Canyon was a better route for I-70 than Cottonwood Pass or the Flat Tops.

Support from local environmental groups did not come without stipulations. The Sierra Club accepted that the canyon may be the best route but requested:

that the extension of Interstate 70 through Glenwood Canyon ought not to be undertaken by the Colorado Division of Highways and the Federal Highway Authority without a major land use study programmed and carried out by an agency (a) qualified to collect and evaluate ecological, social and economic data, and (b) experience in land use planning, and (c) independent of pressures of local interests and vested commitments of governmental agencies such as the Colorado Division of Highways.”

The Sierra Club recommended that the Bureau of Outdoor Recreation conduct the land use study. Land use studies are designed to study the economic and environmental impacts of various uses of land. A land use study of Glenwood Canyon would entail studying the potential economic benefits of declaring the canyon a national landmark, a scenic area, a national park, or as transportation link to understand what the best use of the canyon for the regional economy and environment would be.

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Not everybody wanted more land use or environmental impact studies on the project. Club 20 recommended that the Department of Highways expedite construction because the request for studies had already delayed construction several years. Further delay, Club 20 argued, adversely affected the Western Colorado economy, which was in dire need of a boost. Although skiing and tourism had benefited several high profile cities and counties (like Aspen and Pitkin County,) the per capita adjusted gross income was below the state average in 20 of the 21 counties west of the Continental Divide and 14 of the 21 counties had lost population in the past ten years. Club 20 reasoned that the interstate highway should not be delayed any further because it could provide a much needed economic boost to the Western Slope of Colorado by virtue of being connected to the interstate highway system. Unfortunately for Club 20, it would be another twenty years before the project finally opened fully for traffic.

The contrast between the Sierra Club’s and Club 20’s resolutions highlights the important issues of the interstate highway with the economic and environmental history of Western Colorado. While the Western slope of the Rocky Mountains served as a playground for tourists, those who lived in the region often lived below the economic standard of the rest of the United States. Western Coloradoans often accepted lower wages because the no other place in the country matched the scenery and recreational opportunities provided in Western Colorado. This was true for the ski bums who take service industry jobs and for a large majority of the population who wished to live in Western Colorado. For Club 20 and their supporters, the issue of the interstate was essentially dollars and cents. A limited access, four-lane interstate highway through

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Glenwood Canyon would connect Western Colorado’s economy with the rest of the United States. While there were still plenty of other canyons and mountains to be enjoyed in Colorado, there was only one real option for the highway. The economies of the Western Slope, especially the farmers, ranchers, the energy industry, and the tourism industry would all benefit from an interstate and the sooner construction finished the better.

For the Sierra Club and other more ecologically minded people, a slight economic boost to the region was not worth destroying the natural environment that made the region so unique. The interstate would not only damage the canyon in the short term, but the increase in population and increased motor vehicle access to the region could negatively affect the environment for a long time. Throughout the length of the project, the environmental opposition continuously requested that more studies be completed to fully understand the impacts of the highway before the canyon was potentially destroyed for the sake of faster, safer roads. This stance angered many Western Coloradoans who wanted the project completed in a timely manner, but NEPA required that this environmental perspective be fully considered before the project began and environmentalists fully utilized their new legislative authority.

Several other environmental organizations took formal stances against the Glenwood Canyon route at the Denver meetings, held the day following the Glenwood Springs meeting. These organizations cited the De Leuw, Cather environmental study and the Department of Highways’ Environmental Impact Study, claiming that neither adequately studied other routes nor conducted a full-scale land use analysis of the entire corridor. However, those present at the Denver meeting overwhelmingly supported the Glenwood Canyon route for I-70, as long as the Department of Highways designed and
constructed a highway that respected the aesthetic, environmental, and recreational qualities of the canyon.

It seemed that the Department of Highways would get what they had wanted in the first place—a highway that followed Highway 6 through Glenwood Canyon. Despite state and federal policies mandating the Department study alternative routes involving extensive public input, the highway would follow the same route as originally chosen nearly a decade prior. However, the Citizens Advisory Committee and environmental groups would not approve of the project until they had approved a design. The how of the project was just as important as the where. The committee requested that a preliminary design be presented before the Glenwood Canyon route was selected. The design and the routing phases could not be separated in the canyon because the Citizens Advisory Committee would not approve the Glenwood Canyon route before the Department of Highways proved that they could design a highway that met the various demands made by citizens and environmental groups.

The Citizens Advisory Committee learned that it was not easy to tell highway engineers how to do their job. Floyd Diemoz, long-time member of the Citizens Advisory Committee, learned this the hard way. After showing his film advocating for construction techniques used in the Alps to the Department of Highways, Diemoz and his partners received a letter from the Colorado Good Roads Association, who acted as the political brawn of the Department of the Highways. Diemoz, in a later interview, remembered being told by a representative of the Colorado Good Roads Association after a screening of the film that,

However, as I told you after the showing, and from what I’ve learned from several of the engineers that were at the Denver showing, the narrative should be changed to delete the portion where it is stated that massive cuts...
and fills will be eliminated, or to that effect. So in essence the Highway Department, through the Colorado Good Roads Association, said, ‘Change that film. If we want to do it with cut-and-fill we will do it that way.’

The Department of Highways did not want to adapt the construction techniques that the film recommended because it was not how they did their job. They were educated highway engineers who had constructed thousands of miles of highway without ever using the cantilever approach practiced in the Alps. The Department of Highways showed a reluctance to work with the Citizens Advisory Committee in the early stages of the Glenwood Canyon I-70 project, especially on issues concerning environmental protection and construction methods. Times were changing and the old school highwaymen were reluctant to change with them. The highwaymen never had to file environmental impact studies before, let alone be told by citizens how to build a highway. The incredible amount of public input on the project certainly made the highwaymen’s job more difficult, but if they were going to build a highway through a scenic gorge then they were going to have to adapt to the changing times. Diemoz refused to remove the section of the film and the Department of Highways eventually adopted the cantilever construction method recommended in the film.

Following the meetings, the Colorado Department of Highways officially requested the Glenwood Canyon route on January 10, 1972 to the federal government so that funds could be allocated for preliminary designs. As part of the agreement with the Citizens Advisory Committee, the Department of Highways agreed to retain the committee during the design phase and to solicit public input on the designs. The federal highway agency agreed, and in July authorized preliminary designs for the

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Glenwood Canyon route. Three design firms unveiled their plans for the project in August 1974, putting them on display in the Theodore Roosevelt room in the Hotel Colorado. In order for the project to move forward a consensus would have to be reached on the best design to submit to the federal highway department, who would not allocate federal funds for a project until presented with a design.

It proved hard to build a consensus on the best design. All three design firms created unique highway designs for squeezing the interstate into the canyon while limiting disruption of the natural environment. Glenwood Springs residents and the Citizens Advisory Committee lacked cohesive support for a singular design. Making matters even more difficult it was during this time that Mark Skrotzki, an Aspen native and member of the Citizens Advisory Committee, formed Citizens for Glenwood Canyon Scenic Corridor. Skrotzki wanted Glenwood Canyon to remain a scenic, two-lane highway, which would require interstate commuters to exit the freeway and drive significantly slower through the canyon. To help gain notoriety Skrotzki enlisted the support of former Secretary of the Interior Stewart Udall and famous musician and Aspen resident John Denver to act as honorary members of the organization. Citizens for Glenwood Canyon Scenic Corridor had significant support in the 1970s. A petition sponsored by the group that would give Glenwood Canyon a “Scenic Corridor Designation” garnered 10,000 signatures, although many of these people came from outside Glenwood Springs or even outside the state.100

Skrotzki would prove to become one of the most important characters in the Glenwood Canyon I-70 project. He fervently opposed the four-lane interstate project for decades and spent tens of thousands of dollars of his own money to try and stop the

project. He organized letter-writing campaigns, demonstrations within the canyon, and maintained opposition to the project, even while the rest of the Citizens Advisory Committee worked towards compromise with the federal and state highway agencies. Skrotzki advocated for an improved two-lane highway through the Glenwood Canyon—hence the name of his organization—and refused to accept a four-lane highway.\textsuperscript{101} None of the designs on display represented a two-lane option. Despite Skrotzki’s use of celebrity power, the vast majority of citizens continued to support a four-lane interstate through Glenwood Canyon. After several meetings, the Department of Highways and the Citizens Advisory Committee (with the exception of Skrotzki) agreed that the highway would be four-lanes and no money would be spent on designing a two-lane road. The project was already becoming quite costly and federal law mandated four-lanes for all interstate highways, so it would be a waste of money, the Department of Highways argued, to hire a design firm to design a two-lane highway.

The three designs remained on display for several months before the Citizens Advisory Committee chose the Gruen Associates design as the best option. The Gruen design included terraced highways, split level design, multiple tunnels, and four rest areas providing access to Hanging Lake, No Name, Grizzly Creek, and Bair Ranch. This preliminary design would not be the official design used for the project, but it proved that a four-lane interstate could navigate through the canyon without compromising the integrity of the canyon. With agreement on the Gruen design, The Colorado Department of Highways sent their recommendations of the Glenwood Canyon route with a highway designed similar to the Gruen plan to the federal government. The Federal Highway

Administration then ratified the final environmental impact statement in December of 1975 and officially chose the canyon route for I-70 through Colorado in 1976. After 13 years of debate and over $1 million spent on studies on the best route for the interstate, the project finally moved into the design phase. District Engineer Dick Prosence estimated that the project would be finished by the “fall of 1978.” Construction was imminent.

Or so it seemed. The design process proved to be more controversial than the route selection phase to the chagrin of Skrotzki. None of the initial designs included a two-lane option because it did not meet interstate highway standards. However, the Federal Highway Act of 1976 included an amendment that allowed for variations in lane requirements as long as the variations did not present a safety hazard. This amendment gave support to Skrotzki’s hope for a two-lane highway through Glenwood Canyon.

To continue to ensure that the public was on their side, The Department of Highways formed a new Citizens Advisory Committee in 1976 and began a monthly publication, *Canyon Echos*. The publication provided information on the design and construction of the project for anyone interested, as well as information on the people involved on the project and a forum for letters to the editor. The publication, free to anyone who requested it, was unprecedented for the highway department. Engineers updated readers on every phase of the design process as well as provided detailed information from studies and reports. *Canyon Echos* symbolized the incredible level of comprise made between the Department of Highways and the citizens and how far the

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102 Ibid., 131.
103 Ibid., 128.
department had come over the course of the project. By 1976, the Department of Highways realized that the public had a lot at stake in Glenwood Canyon and that they were going to have to work with the citizens in order to make the project a success.

The first issue of *Canyon Echos* in May of 1976 showed that many citizens were still divided on the Glenwood Canyon project. In the back of the issue, the letters to the editor showed the various sentiments towards the canyon project. One writer urged the project to proceed “full speed ahead,” while another argued that “there is absolutely no need for a four-lane highway.” The author of the letter, a Glenwood Springs citizen, argued that drivers should have to slow down in Glenwood Canyon and that taking an extra ten minutes to travel through the canyon seemed like a “small request” for the sake of protecting the canyon. Rather than spending millions of dollars to build the four-lane highway, a few thousand dollars could be spent on guard rails and enforcing the speed limit through the canyon.104

Another letter in the May, 1976 issue of *Canyon Echos* argued that “the time has come to draw the line and not alter nature to accommodate the whims of man.”105

There clearly resided within the Roaring Fork Valley and Glenwood Springs a sentiment that American society had done enough damage to the surrounding environment and that it was time to reconsider the necessity of continual growth and development. The Department of Highways faced a difficult task in convincing the local citizenry that they could in fact create a highway that would not destroy the canyon. The publication of *Canyon Echos*, as well as their decision to retain the Citizens Advisory Committee,

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proved that department had become sympathetic to public opinion and were willing to work with citizens and environmental protection advocates.

The Department of Highways moved forward on the project by creating a Technical Review Group. This group joined the Citizens Advisory Committee as another citizen body providing input into the project. The Technical Review Group comprised of representatives from the U.S. Forest Service, the U.S. Bureau of Outdoor Recreation, the Division of Wildlife, the U.S. Geological Survey, the Denver and Rio Grande Railroad, the Public Service Company of Colorado, and the Federal Highway Administration.\(^{106}\)

This group focused on the technical aspects of the highway design, such as speed limits, road width, adequate rest areas, and other technical details of the actual design. A series of public meetings held throughout the state gathered input and the advisory committee and technical review group combined efforts to study three options for construction in the canyon: a two-lane, 48-foot wide road, a 56-foot four-lane and a 68-foot four-lane road. Both groups, as well as most of the public, supported a minimum 56-foot wide four-lane highway.

The Citizens for Glenwood Canyon Scenic Corridor, meanwhile, privately funded a report for an alternative two-lane highway design. The $8,500 report, partly funded by the Colorado Open Space Council, designed a two-lane road with a median barrier, guardrails, three tunnels, and ten recreational pull-offs, as well as a bike path.\(^{107}\)

The study angered many who felt that a four-lane road was the only real option and that Skrotzki was simply wasting time and money with essentially a do-nothing alternative. Despite the dissenting vote from Skrotzki, the Citizens Advisory Committee

\(^{106}\) Ibid., 134.
\(^{107}\) Ibid., 140.
recommended a 68-foot, four-lane interstate through the entire canyon. Their recommendation included 18 specific recommendations for the design and that the committee remained involve throughout the design project.\textsuperscript{108}

The Colorado Highway Commission approved funding to solicit designs in January of 1977. The Citizens Advisory Committee not only remained involved in the project but hand selected the designers. To Joseph Passonneau and Edgardo Contini fell the task of designing a four-lane highway that pleased all of the various interests involved in the project. The major considerations for the designers were aesthetics, recreation, safety, ecology, river encroachment, construction difficulties, and views for drivers.\textsuperscript{109} While they would build off of the Gruen Associates design, the design created by Passonneau and Contini would be theirs, not Gruen’s. The work of the designers underwent constant citizen scrutiny for over a year and a half until the designers made their official presentation in the fall of 1978. Passonneau and Contini had to design a highway that squeezed four-lanes into the bottom of Glenwood Canyon but limited intrusion into the river, limited the amount of rock face that had to be removed, protected as much of the natural vegetation as possible, provided scenic views for drivers, and provided access for recreationalists, all the while maintaining interstate highway safety standards.

While Passonneau and Contini worked on their designs, the project avoided another potential pitfall that would have further delayed the project. Despite the extensive review processes conducted by the Department of Highways, De Leuw, Cather, and the Citizens Advisory Committee, the Executive Director at the President’s Council

\textsuperscript{108} Ibid., 144-145.
\textsuperscript{109} Ibid., 150.
on Environmental Quality requested that a new supplemental environmental impact study be conducted. The director wanted a study that considered more extensive alternatives and was updated to include new design approaches.\textsuperscript{110} Sam Caudill, Chairman of the Citizens Advisory Committee, sent the Passonneau and Contini design report to the Secretary of Transportation with a letter requesting that the supplemental environmental impact study not be conducted because the work done by the Citizens Advisory Committee was a “much more positive and creative process than the E.I.S. process is.”\textsuperscript{111} The report and letter convinced the secretary that another study was unnecessary and he scratched his request. The Citizens Advisory Committee had proven its worth to the project and proven that they could conduct proper environmental impact studies.

The Passonneau and Contini design draft report became available for public comment on October 6, 1978. After the 45-day comment period, the design had overwhelming support. 86\% of the 947 comments supported the design, including 5 state and federal agencies and 18 counties and municipalities.\textsuperscript{112} Regardless that a strong anti-highway sentiment had resided in the region during the project, Passonneau and Contini designed a marvelous highway concept that quelled many of the fears that the highway would destroy the canyon. The United States Department of Transportation approved the draft design report on September 13, 1979. The project then moved into the final design phase, which meant a fine-tuning of the technical details.

Passonneau and Contini designed separate ends of the canyon—Passonneau the east and Contini the western side, closer to Glenwood Springs. De Leuw, Cather
remained active on the project by designing the interchanges and landscaping throughout the canyon. Although each firm focused on distinct sections of the canyon, the three firms collaborated with one another and the Citizens Advisory Committee and Department of Highways throughout the process. The extensive collaboration between the groups can best be seen at the Hanging Lake interchange. At Hanging Lake, the Citizens Advisory Committee recommended the most expensive alternative that routed the interstate through twin tunnels on the south side of the canyon, thus leaving the hiking area separated from the road. The Department of the Highways tried to coerce the committee to change their stance because it would save millions of dollars, but the committee stood firm and ultimately the designers, with approval from the Department of Highways, chose the twin tunnel alternative.113

The final design for the Glenwood Canyon I-70 project was truly an engineering marvel. To squeeze the four-lane interstate into the canyon without removing the majority of the canyon walls, the designers created a terraced highway concept where the westbound lanes stood above the eastbound lanes and were built up the canyon walls. The entire design was actually a structure, not merely a road built on top of the ground. The highway was essentially designed above the canyon floor, like a bridge. As Ralph Trapani, project manager for the Glenwood Canyon I-70 project, explained, “Glenwood Canyon is a twelve-mile long structure. You are always either on a retaining wall, on a bridge or in a tunnel. You never get off of those for twelve miles.”114

Rather than diverting the highway into the river in certain sections, the designers

113 Ibid., 172.
installed tunnels through the rock face. The concept included four rest areas and most of the project would be built using the cantilever practice developed in the Alps and recommended by the Citizens Advisory Committee. The Passonneau and Contini design was the most unique highway design in the history of the interstate highway system—it was also the most expensive.

The projected cost of the design submitted to the Federal Highway Administration was nearly $300 million in 1980 money.\textsuperscript{115} $300 million dollars was an extraordinary amount of money for a twelve-mile section of road. The compromises with recreationalists, Glenwood Springs citizens, and the environmental protection measures proved to be expensive—the antithesis of highway engineering ideology. Most activists involved on the project had long proclaimed that no cost should be spared in order to protect the canyon and recreational interests.

Ninety percent of the cost would be covered by the federal government, but times had changed dramatically since the process started in 1963, especially the economic state of the country. The economy no longer enjoyed the post-war boom that made the interstate project possible in the first place in the 1950s. The economy shrank in the 1970s, inflation ran rampant, and a new president took office promising to cut federal expenditures. In 1980, President Reagan promised to make massive cuts in federal spending. One of the goals of his administration was to cut spending to the highway administration. A task-force investigation reported that construction of 96.36 percent of the interstate highway system cost $78.1 billion—the remaining 3.64 percent would costs at least that much.\textsuperscript{116} Not only that, but a significant amount of the old

\textsuperscript{115} Ibid., 183.
\textsuperscript{116} Ibid., 194.
interstate highway was already crumbling and needed repair because it had been in use for over two decades. The Reagan administration wanted to finish the interstate highway system as quickly and cheaply as possible and they did not want to pay any extra expenses on the roads for things like environmental protection. The Reagan administration wanted highway engineers to return to the old philosophy of straight and cheap highways. The administration took a close look at the Glenwood Canyon project which it seemed to be far too expensive of a project in the down economy.

The canyon project also found opposition from within the state over its cost. Although the federal government would pay ninety percent of the project, the state still needed to match 10 percent of the funds—some $25 to $30 million. Andra Schmidt, chairwoman of the Colorado Highway commission, disgusted with the cost of the project, told reporters that “we could pave the four lanes with silver dollars for that amount.”\textsuperscript{117} $300 million was an extraordinary amount of money to spend and she wanted the Department of Highways to solicit new, cheaper design alternatives.

The project also found opposition in another rather unlikely source from within the state. The recently created Colorado Association of Ski Towns, a representative body of municipalities with strong connections to the skiing industry, passed a resolution opposing the canyon project on the grounds that the money could be better spent in other areas of transportation throughout the state. The president of the association happened to be the mayor of Vail. In a later letter to the U.S. Army Corps of Engineers, Vail Mayor Pro-Tem E. William Wilto wrote that “we are opposed to the current plan because of the projected cost” and that “improvements and maintenance of our existing highway system must not be jeopardized or delayed because of a lack of

\textsuperscript{117} Ibid., 170.
funds caused by this project.”118 The fact that Vail, a town that owed its existence and success as a ski town to the construction of the interstate through Colorado, would officially oppose the project was a little hypocritical. However, the group had a valid point that the hundreds of millions of dollars that would be spent on the twelve-mile canyon could be spent on improving hundreds of miles of roads throughout the state.

The argument over the cost of the project proved that Glenwood Canyon I-70 was a national affair and not merely a local issue. The local constituents showed overwhelming support for the design because it protected the interests that so many had fought and argued for for so long. Over a decade and a half of discussions had led to a unique highway design that would navigate the narrow canyon without obtruding too far into the river or removing too much of the canyon wall face, while also providing access to the river for fishermen, hikers, rafters, and bikers. However, to many outsiders, who may have never experienced Glenwood Canyon, it seemed that the project had gone too far in providing amenities and was far too expensive.

The project found a savior in Colorado Senator William Armstrong. In a colloquy included in the Congressional Record, Armstrong exempted Glenwood Canyon from Congress’ prohibition on spending for environmental amenities on unfinished sections of the interstate system.119 The Reagan administration had hoped to cut costs for the unfinished sections of the interstate by prohibiting spending on recreational and environmental amenities, ensuring the lowest cost for construction. Had this prohibition passed without Sen. Armstrong’s exemption, the canyon project may have never been constructed. The Department of Highways would have had to solicit a new

119 Haley, Harsh Mistress, 196-197.
round of designs for cheaper options without the environmental amenities, which would have put the entire project into a quagmire.

With the Armstrong exemption in place and the approval of the final design, the project faced one last hurdle before construction could begin. Skrotzki and the Citizens for Glenwood Canyon Scenic Corridor filed a lawsuit, filed in conjunction with the National Wildlife Association, the Environmental Defense Fund, Sierra Club, the Colorado Open Space Council, the National Organization for River Sports, and the Colorado Whitewater Association, for a restraining order against construction through the narrow, middle section of the canyon. The lawsuit argued that the middle section of the canyon, between the Shoshone Power Plant and the dam, was too narrow for a four-lane interstate and should remain a two-lane highway. The lawsuit was made against the United States Army Corps of Engineers’ recent supplemental environmental impact study.

Prior to the lawsuit, the United States Army Corps of Engineers required a Supplemental Environmental Impact Statement concerning fill material used in this section. The corps hired De Leuw, Cather to assimilate data for the report. The lawsuit filed by Skrotzki argued that De Leuw, Cather represented a “conflict of interests” because of their vested interests in the project, since they had worked on the project from the very beginning. The lawsuit also argued that the population projections and traffic demand projections made by in the report were far too high and that a two-lane interstate would be able to support the traffic demands. Skrotzki had conducted his own population projections, which figured much lower than the De Leuw, Cather projections. Skrotzki continued to argue that a two-lane interstate would better protect

120 Ibid., 210.
the canyon’s environment and could handle future traffic demands. Skrotzki also
capitalized on the objections to the cost of the project. He argued that since the
population and traffic projections were too high, the cost of the project could not be
justified.

Unlike earlier opposition to the environmental impact studies, the opposition
to the supplemental environmental impact study made in 1981-1982 did not concern the
scope of the study. The U.S. Army Corps of Engineers by the early 1980s had conducted
numerous environmental impact studies throughout the nation and were much more
adept at them then when NEPA originally passed. The study considered the impact of
six alternatives, including a no build option and a 48-foot, two-lane road through the
canyon and found minimal environmental impact from the use of fill within the canyon.
The study noted the impact of steadily increased traffic rates within the canyon and the
“bottleneck effect” if this portion of the interstate remained two-lanes while fed by four-
lane traffic from both ends. Skrotzki’s lawsuit focused on the “bottleneck effect,”
arguing that the traffic projections made by De Leuw, Cather were too high, and that the
project was not worth the cost since a two-lane highway could sustain traffic demands.

Skrotzki and the Citizens for Scenic Glenwood Canyon organized a large letter
writing campaign and several protests within the canyon. On one occasion, Skrotzki
organized a protest in the canyon to prove that the narrow, six-mile section of the
canyon between the Shoshone Power Plant and the dam was too narrow for a four-lane
interstate. John Denver made a special appearance at the protest. Denver is an
interesting character in the Glenwood Canyon saga. One the one hand, he represents the

growing environmental movement and the love of the outdoors in Colorado. On the other, he epitomizes the ironic stance of many Roaring Fork Valley residents against outsiders. Denver’s move to Aspen in 1969 made a profound impact on the singer-songwriter—so much so that he changed his name from Henry John Deutschendorf, Jr. to better identify with the state (and to better market his name). The folk artist wrote one of his most famous songs about Colorado and the time he spent in Aspen. “Rocky Mountain High,” written and recorded in 1972, told a story about a man who “came home to a place he’d never been before” in the Rocky Mountains. Interestingly the song’s character came to the mountains “on the road, hanging by a song,” but Denver now protested an improved road. Perhaps the seventh stanza of the song explains why, when Denver looks in fear in “why they try to tear the mountains down to bring in a couple more/more people, more scars upon the land.” Denver certainly could have been referring to the scars in Glenwood Canyon made by the builders of Highway 6.

John Denver epitomized a ridiculously hypocritical ideology that permeated protests throughout the Glenwood Canyon I-70 project—that it was perfectly acceptable that generations of Roaring Fork Valley citizens had moved to the beautiful area on the support of improved transportation networks but that it was unacceptable to improve the networks further because it might bring in more people. The vast majority of the engineers, citizens, and environmentalists who worked on the project worked towards a compromise that promoted a safer, more efficient road that respected the natural qualities of the canyon. There remained a radical element within the protests that would never accept an interstate through the canyon. These protesters overlooked the fact that roads and railroads had a long history in the canyon and that the current highway was inefficient for supporting traffic. Highway 6 through Glenwood Canyon was one of the
most dangerous sections of road in the entire state and it would only get worse as traffic demands increased. These protesters did not want a safer road on the principle that it would “scar the mountains”—mountains that were already scarred by previous generations. The noble element of the environmentalists’ protest that men should not ruin the environment for the sake of commercial growth failed to recognize the fact that a highway already existed in the canyon. They were not defending a pristine, roadless canyon from an interstate—they were protesting against a safer, environmentally sensitive highway designed through extensive collaboration and study.

The final Glenwood Canyon I-70 design proactively attempted to heal the scars made by previous generations in the canyon. Workers would use a paint that matched the natural rock to hide any scars in the rock face, they would replant thousands of plants and trees, and the design of the highway that blended into the canyon more so than the old Highway 6. Glenwood Canyon was already scarred by previous generations but the Passonneau and Contini design would not only make the road safer and faster, but would heal many of the old scars made in the canyon.

However, Denver and the Citizens for Glenwood Canyon Scenic Corridor continued to argue that the middle section of the highway was too narrow for a four-lane interstate. They felt that no matter what the design, Glenwood Canyon was no place for a four-lane highway. To prove their point, Denver planned to throw a silver dollar across the river to show just how narrow the canyon was. It turns out that Denver was better at engaging audiences than gauging distances. According to former sheriff Ralph Baker, at the protest, the county commissioner handed Denver a rock and said, “let’s see you throw this across the river.” Denver looked on in dismay when his first attempt landed in the middle of the river. Giving it another try, Denver picked up another rock and “it
landed about in the same place.” The group moved to the narrowest section of the canyon and Denver was finally able to hurl a rock across the river, although just barely.

The point of the John Denver protest story is not to question the folk singer’s arm strength. The protest symbolizes that some of the protesters overlooked the statistics and the science of the project to fight the interstate on heartstrings. The years of studies proved that the interstate needed to be constructed despite the sensitivity of the canyon. The canyon already served as a transportation corridor providing access to Glenwood Springs and the Roaring Fork Valley. It would continue to be a transportation network, regardless if the protesters succeeded in limiting it to a two-lane highway. Had these protests occurred before the Denver and Rio Grande railroad blasted through the canyon or the Taylor State Road removed cliff outcroppings and pushed material into the river, then their stance rests on a worthwhile question: Should a man risk the pristine health of a beautiful canyon in order to gain quicker access to mines or ski slopes? However, the question in the early 1980s was not over a pristine canyon. The question was whether or not a dangerous canyon road should be improved to the standards of the highway feeding it in both directions and if this could be done in an environmentally sensitive manner.

Luckily, a comprehensive group of scientists, engineers, politicians, and citizens worked together and compromised with one another to create an interstate that both improved safety and recreational opportunities and limited the potential environmental damage by focusing on the reality of the situation and not their emotions. It took them nearly two decades, but the Glenwood Canyon I-70 routing and design process proved that recreationalists, highwaymen, engineers, politicians, and

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122 Schader, Glenwood Canyon: 144-145.
even environmentalists can compromise seemingly antagonistic ideas to create engineering masterpieces.

Judge John L. Kane denied the motion for a restraining order. In typical Glenwood Canyon I-70 fashion, the lawsuit ended in compromise. The settlement created a “River Sports Advisory Committee” to protect the interests of river sports enthusiasts. Concerning traffic projections, the compromise required two meetings to be held each year to study the traffic flows through the canyon. The settlement also improved the revegetation plan, required crews to mitigate construction impact, and required the Department of Highways to project construction costs and schedule. The settlement effectively ended Skrotzki’s, Denver’s, and the rest of the plaintiffs’ hopes for a two-lane scenic corridor through the canyon. After nearly two decades of discussions, protests, studies, designs, and collaboration, construction on the final link of Interstate-70 began.

CHAPTER FOUR: A CONSTRUCTED CANYON

By the time construction finally began on the Glenwood Canyon I-70 project, the highway engineers and construction crews were excited to finally get started on building the actual road. The Department of Highways had listened to the concerns of local citizens and environmentalists for two decades and designed one of the most unique stretches of highway in the world. Many workers recognized that they were working on an engineering marvel and the eyes of the world were watching them since the Glenwood Canyon I-70 project had become such a national affair over the course of its long, drawn out history.

The construction project had some of the most stringent environmental protection laws on any project in the nation. Prior to construction of any section of the highway, workers would mark certain trees or bushes that were off limits and fined anybody who destroyed the vegetation, up to several thousand dollars for certain trees. One worker was fired for driving his bulldozer in off limits territory, even though it was only several feet away from the highway. Project Manager Ralph Trapani recalled the Citizens Advisory Committee chairman, Sam Caudill, “called me up several times threatening literally to kick my ass if we didn’t build a nice highway through that Canyon, because the only reason he was supporting that four-lane was because it was an environmentally sensitive design. And as soon as he saw thing going the other way, he was going to join up with the opposition.”

To mitigate construction impact on the canyon floor and the vegetation, construction crews used the cantilever method recommended by the Citizens Advisory Committee and first used on highways in the Alps. The project was the first project in

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124 Trapani interview.
the United States to use such a construction method and it was a resounding success.\textsuperscript{125} The cantilever approach allowed for minimal impact on the actual ground floor of the canyon because the highway was essentially built offsite and then lowered from above, piece by piece. The crane used on the project was shipped from France, complete with instructions—in French. Crews used the crane throughout the canyon, but it was especially important in the narrower sections of the canyon.

The Glenwood Canyon I-70 project took twelve years to construct. The a 12.5 mile stretch of road included 15 miles of individually designed retaining walls, 40 bridges and viaducts, two 4,000 foot tunnels that removed 250,000 cubic yards of tunnel muck, used 30,000 tons of structural steel, 30,000 tons of reinforcing steel, 810,000 tons of concrete, and 150,000 new trees and shrubs. Over 300 engineers and other project crewmembers worked with some 500 daily workers for over 385 man years to complete the project. All in all, the project cost $490 million to complete, making it one of the most expensive stretches of road in the entire country.\textsuperscript{126} In the spirit of the Colorado Senate resolution that required that “the wonders of human engineering will be tastefully blended with the wonders of nature,” the four-lane interstate navigated through the canyon on terraced, split-level roadways built into the hillside to limit intrusion into the river. Where it was necessary to blast part of the canyon wall to make room, crews painted the newly exposed section a natural color to blend it with the natural rock.

One of the major successes of the construction project was how construction crews managed to maintain the flow of traffic through the canyon during construction.

\textsuperscript{125} McNichol, \textit{The Roads that Built America}, 235.
\textsuperscript{126} Ibid., 230-233, 258.
Without any alternative routes it was necessary for interstate traffic to continue to use the traffic during the 12 years of construction. To mitigate traffic congestion crews used a pilot car operation that utilized alternating single lanes of traffic. After the implementation of the pilot car program, accidents during construction fell to below average for construction sites, despite the fact that traffic in the canyon peaked at 18,000 cars per day. The pilot car program won the Transportation Achievement Award for Operations from the Institute of Transportation Engineers.127

The Glenwood Canyon stretch of Interstate-70 opened for traffic on October 14, 1992. The Colorado Department of Transportation (formerly the Department of Highways) marked the occasion with a week-long celebration that included guided tours throughout the canyon and ceremonies. The event culminated in a ribbon cutting ceremony in the Hanging Lake tunnel. Attendees to the ceremony included Colorado Governor Roy Romer, members of the Citizens Advisory Committee Floyd Diemoz and Sam Caudill, engineers from several firms involved on the project, project manager Ralph Trapani, and over 1,000 Glenwood Springs and Colorado residents. The ceremony marked not only the completion of one of the most impressive civil engineering projects in the nation, but also the “final link” in the 43,000 mile, $130 billion dollar interstate highway system. The Glenwood Canyon I-70 project linked Glenwood Springs and the rest of Western Colorado with an interstate highway that began in Baltimore, Maryland and ended in Cove Fort, Utah. The once secluded hunting grounds and healing waters of the Colorado Ute now opened to interstate traffic as one of the most scenic, mesmerizing stretches of interstate in the entire country.

127 Ibid., 238, 246.
Sam Caudill, who served on all three Citizens Advisory Committees and the Construction Review Committee, spoke at the ribbon cutting ceremony. Caudill originally opposed the Glenwood Canyon I-70 project, voting in 1969 to oppose the canyon project and seriously question the viability of Glenwood Canyon as an interstate corridor. On this day, however, Caudill spoke in admiration of the work completed by the designers and construction crews. For Caudill, the project served as a model for future engineering projects in environmentally sensitive areas and how to “sensitively blend the functional needs of man with nature’s environmental designs.”

Engineers designed four separate recreational pull-offs in the canyon to protect recreational amenities for kayakers and fishermen. Hanging Lake, which is one

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of the most popular hiking trails in all of Colorado, was secluded from the highway traffic so that hikers could enjoy their hike without noise pollution from the interstate. The Colorado Department of Transportation also placed boulders in the river to speed up rapids in several sections of the river and created fishing alcoves on the eastern end of the canyon, showing just how much they were willing to work with local outdoor recreationalists. Rather than ruining the canyon for those who liked to hike, fish, or raft it, the Department of Transportation in fact improved many of the recreational opportunities.

The new four-lane interstate was also much safer than the old two-lane Highway 6. Although many people intuitively assume that interstates are more dangerous because traffic moves faster, interstate highways are actually the safest roads in the nation. After construction finished in the canyon, accident rates dropped 40 percent from despite the increase in traffic rates.\textsuperscript{130} By all measures, the Glenwood Canyon I-70 project was a success.

In a Colorado Department of Transportation film about the project, one CDOT member remarked that “if you’re driving through the canyon, you’ll not only see that the environmental concerns of the past have been met, but you’ll see a canyon that now looks more natural than it ever did before.”\textsuperscript{131} The statement is of course a little naïve. Glenwood Canyon with a four-lane interstate, no matter if the roads are terraced and if crews painted the wall with a natural color, does not look “more natural than it ever did before.” Interstate traffic is not more natural than the rainbow trout or bighorn sheep.


\textsuperscript{131} \textit{Glenwood Canyon: Mastering Engineering And Environment in the Colorado Rockies}, directed by Tom Pade (1996; Denver, Colorado: Colorado Department of Transportation, 1996), DVD.
The Glenwood Canyon I-70 project was, however, a landmark to how major construction projects could blend into the natural environment with sensitive designs that could actually enhance some of the finer qualities of the scenery. With adequate planning, man can continue to expand into the surrounding environment without altogether destroying it.

Today, the Glenwood Canyon I-70 project is a testament to the popular environmentalism of the 1960s and 1970s. It is also a landmark to the power of compromise between parties and how the environment can help bridge the divides between them. The narrow confines of the canyon placed engineers and environmentalists in close contact with one another and made them work together. Ralph Trapani marveled at how the engineers and environmentalists on the project changed roles during the project. “The environmentalists were worried about engineering issues and the engineers were worried about environmental issues,” said Trapani. “It’s a crazy thing, and it’s probably something some sociologist could spend a lot of time on.”

The project is a testament to the importance of the National Environmental Protection Act of 1969. NEPA was a landmark environmental protection legislation and the success of the Glenwood Canyon I-70 project proved it. NEPA required highway engineers to consider the tremendous impact that the highways they construct have on the natural environment and the surrounding culture. The years of impact studies, public meetings, designs, debates, and the democratization of the process to include the input of a wide-range of people is the only reason that the project did not end in failure.

Because of NEPA and the incredible amount of public participation on the project, the interstate highway through Glenwood Canyon improved the old highway yet preserved many of the natural qualities of the canyon.

Glenwood Canyon I-70 is also a model for the benefits of public input as it is one of, if not the, most publically scrutinized transportation projects in American history. Public input played a major role in the entire project, from route selection to design to construction. And it very well should have. Glenwood Canyon was a national landmark and a single entity like the Department of Highways should not have decided its future. The incredible amount of public commenting made the project the success that it is. Without it, highway engineers may have blasted through the canyon in the 1960s with little respect for the finer qualities of the canyon and scarred the canyon walls while ruining the recreational opportunities within it. However, by arriving at a design that respected not only the canyon but the desires and needs of the public, the project is an engineering marvel and a model for future projects.

While the cost of the project angered many, Trapani defends the cost of the project by noting that the cut-and-fill method would have not only been more damaging to the environment but may have been costlier than the final design. As Trapani explained in 1987 during construction, “a lot of people take exception to Glenwood Canyon and say we are wasting money in the environment. But if you take the original 1969 environmental impact statement, that had a construction cost for Glenwood Canyon in it. Let’s call it the typical old highway engineer, you know, rape and plunder highway. Big cuts, large river fills. If you escalate that to where we are now, that’s actually—that actually costs more than what we are building out there currently with a
terraced alignment, the tunnels and all the bridges.” Tripani’s statement shows how full circle the highway administration had come from the beginning of the interstate highway project to the final-link in Glenwood Canyon. The Department of Transportation deserved credit for adapting to the changing times, even though it was a slow process for some. Post-World War II American culture demanded a high-speed, efficient highway across the American landscape built at the lowest cost and the Department of Highways did an incredible job of constructing the interstate highway system to those needs. In the 1960s and 1970s, with the rise of popular environmentalism, the department had to adapt to environmental concerns and did so admirably, even if they were reluctant to adhere to environmentalist’s concerns at times.

The Glenwood Canyon I-70 project received numerous awards after its completion. The project earned the American Society of Civil Engineers' Outstanding Civil Engineering Achievement award for 1993, which is given to the most impressive engineering project in the nation. The project is admired amongst engineers and highwaymen and used as a case-study for engineering in rugged terrain. Altogether the project received over thirty awards for the Colorado Department of Transportation.

The Glenwood Canyon I-70 project proves that transportation infrastructure does not have to destroy the natural environment if nature determines the design. The arrogance of previous generations to construct transportation networks through every landscape in the American West caused significant damage to the natural environment. In doing so, they forced the natural environment to adapt to their needs when they dynamited canyon walls, destroyed the natural vegetation, disregarded or never

133 Ibid., 39.
134 Haley, Harsh Mistress, 270.
considered the railroad’s or highway’s impact on the wildlife, and paid little attention to how the infrastructure blended into the natural environment. If the Glenwood Canyon I-70 project set the precedent for designing infrastructure through scenic and environmentally sensitive terrain, then nature should be the designer for our infrastructure. No cost should be spared and plenty of time and diligence should be afforded to mold to nature’s design. There will be future transportation networks built in the Rocky Mountains of Colorado and their designers ought to follow the precedent set by the Glenwood Canyon I-70 project.

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