WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

XEROGRAPHIC COPIES OF COLOR TRANSPARENCIES

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-7127
HAER No. ME-58

I. INTRODUCTION

LOCATION: Between Park Loop Road and Cadillac Mountain Summit, Bar Harbor vicinity, Acadia National Park, Mount Desert Island, Hancock County, Maine

Quad: Seal Harbor, ME
UTMS: West end: Park Loop Road 19/560630/4912875
East end: Cadillac Mountain summit 19/561700/4911150

DATE OF CONSTRUCTION: 1929-1932

DESIGN: Bureau of Public Roads

ENGINEER: Leo Grossman, Bureau of Public Roads, Resident Engineer

CONTRACTORS: Joseph P. McCabe, Inc., Boston, MA, grading
Green and Wilson, Waterville, ME, surfacing

STRUCTURE TYPE: Park scenic highway

FHWA STRUCTURE NO: NPS Route 1A

OWNER: Acadia National Park, National Park Service

SIGNIFICANCE: The Cadillac Mountain summit, chief peak of Acadia National Park, is the highest point on the Atlantic Coast between Labrador and Brazil. The Cadillac Mountain Road makes the summit accessible to park motorists and is one of the chief attractions of the park.

PROJECT INFORMATION: Documentation of the Cadillac Mountain Road is part of the Acadia National Park Roads and Bridges Recording Project, conducted in 1994-95 by the Historic American Engineering Record. This is one in a series of project reports. HAER No. ME-11, ACADIA NATIONAL PARK MOTOR ROADS, contains an overview history of the park motor road system.

Richard H. Quin, HAER Historian, 1994
II. HISTORY

Cadillac Mountain, at 1,530' elevation, is the highest point on the Atlantic coast between Labrador and Brazil. It is the highest mountain on Mount Desert Island and one of the principal attractions of Acadia National Park. The Cadillac Mountain Road, which leads to the summit, is traveled by millions of visitors every year.

Mount Desert Island was first spotted by French navigator Samuel Champlain in 1604. He described the island's mountains as "destitute of trees, as there are only rocks on them." Champlain named the island the "Isle des Monts Desert," after the rocky, treeless summits, the chief of which is known today as Cadillac Mountain.

The name "Cadillac Mountain" dates only to 1918, when Lafayette National Park (now Acadia) superintendent George B. Dorr led a campaign to adopt more colorful names for many of the island's landmarks. For years, it had been known as "Green Mountain," probably on account of the luxuriant growth which cloaked the mountain's lower slopes. Dorr and his supporters renamed the mountain after Antoine Laumet (later La Mothe), the self-proclaimed "Sieur de Cadillac", who in 1688 received a grant or siegnurie to establish the settlement of "Douaquet", which included Mount Desert Island and parts of the mainland to the north. Cadillac did not stay on his grant long, as he went to Montreal then back to France before returning to North America to found the city of Detroit, ending his career as French governor of Louisiana. Cadillac's ownership of the island was later confirmed by the Massachusetts court when it recognized his granddaughter's claim to Douaquet in 1786. This claim included the greater part of the east side of Mount Desert Island, including "Cadillac Mountain." By the early 1800s, the land was largely sold off, the mountain tract being acquired by Senator William Bingham of Pennsylvania. Later, much of the Bingham

1There were other names, too. John and James Peters' "Survey of the De Gregoire half of the Island, 1807," called it "Bauld Mountain." Charles Tracy called it "Newport Mountain" in 1855, after Christopher Newport, captain of the 1607 Jamestown fleet, but this name was commonly attached to what is now called "Champlain Mountain." See Samuel Eliot Morison, The Story of Mount Desert Island, Maine (Boston, MA: Little, Brown and Company, 1960), 76.
land, including the mountain, was acquired from his estate by Edward Brewer, a shipbuilder from Hulls Cove.²

Whatever its name, the mountain dominated the island and was a well-known landmark to passing ships as it was visible far out to sea. In 1853, its height drew the attention of the United States Coastal Survey. Professor Alexander Dallas Bache of the survey began mapping the Maine coast that year. A year later, he chose Cadillac Mountain, which he called "Mount Desert," for a triangulation station. Richard Hamor of Eden (as Bar Harbor was then called) erected a 10' x 12' frame house for the survey quarters at a cost of $50, and Coast Survey Artificer Thomas McDonnell hacked out a rough road in order to drag up the survey equipment. C. O. Boutelle erected a heliograph signal here which remained in use until 1860.³ The "road" to the survey office was the first route, other than old Abnaki Indian trails, to the mountain summit.

The path to the observatory was popular, at times crowded with "troops of pedestrians." The Brewer family, which owned the mountain, improved the path into a buckboard road, so-named after the small spring wagons which were popular on the island late in the century. The Brewers tried to collect tolls from its users and erected a sign on the summit reading "Passengers will not forget to pay toll." The passengers usually "forgot" or refused to pay, though the owners insisted the tolls went toward the road's maintenance. Eventually, they stationed young boys at the road's lower end in an attempt to collect the fees.⁴

In 1882, a robber jumped a buckboard party from the woods along the road and demanded all their valuables. However, when the women emptied their purses, the thief told them not to bother, as


³Ibid., 128-2. Heliographs were mirrored devices used to reflect the sun's rays for triangulation.

he robbed only men! Despite the issuance of a $5,000 reward, the gentleman robber was never caught.\(^5\)

Hoping to attract the tourists who began flocking to Mount Desert Island in the 1850s, the Brewers built a small hotel, the Summit Tavern, on the mountaintop. Visitors used the toll road for access. George Dorr, who later became the first superintendent of Lafayette National Park, later recalled it as "a simple frame structure which was admirably placed looking broadly out southward across the ocean and which gave welcome to visitors in the early days." The Brewer's hotel did not survive very long; it burned on 2 August 1884.\(^6\)

In 1881, Francis Hector (Frank) Clergue (or Clerque) of Bangor, a lawyer and entrepreneur who had organized the Mount Desert Fertilizer Company, leased the summit and a 160' wide right-of-way up the mountain from the Brewers and Walter H. Dunton, who owned a tract on the mountain's western flank. He then began the machinations to obtain a charter to operate a railway to the top. By February 1883, he managed to attract several investors and obtain the necessary permits. A. F. Hilton, who later that year built the Megantic Railway which connected the Canadian Pacific Railway with Portland, Maine was an investor and surveyed the route for the line. When snow cleared in the spring, construction began. Rails were bolted directly to the stone wherever possible, or laid on ties cut a few feet from the railbed.\(^7\)

The new "Green Mountain Railway" was a cog railway, constructed with a cog rail at the center to engage the locomotive's driving wheel and to allow the engine to help with the braking on the 33\(\frac{1}{3}\) percent grade. A 4' 7\(\frac{3}{4}\)" gauge, the same as the Mount Washington cog railway, was adopted for the line. The new


\(^7\)Hale, 156; Grindle, 2; Frank J. Matter, "The Train Up Cadillac Mountain," Acadia Weekly, 28 August 1994, 7.
$110,000 enterprise was celebrated in the Bangor papers, which compared it with the railway up Mount Vesuvius. It was the second cog railway in the country, after the recently constructed Mount Washington line in New Hampshire.\(^8\)

When the railway's first locomotive arrived at the Portland wharf in April, it proved too big for the ferryboat City of Richmond to handle, and it was finally lugged to Bar Harbor by the schooner Stella Lee. Fourteen horses drug the locomotive as far as they could, after which it was winched all the way to Eagle Lake. Once there, Richard Hamor (who had built the first structure on the mountain thirty years earlier) carried the engine across Eagle Lake to the base of the railway on his scow.\(^9\)

All was in readiness by 23 June, when the state railway commissioners, accompanied by former Vice-President Hannibal Hamlin, made their formal inspection. As the railway did not connect with Bar Harbor, passengers traveled from town to Eagle Lake in four-horse "barges," then crossed the lake on the little steamer Wauwinnet. Then it was up the mountain in "high behinds" passenger cars (with large wheels on one end and small wheels on the other) behind the little locomotive. The passengers could then take in the views from the summit, now unfortunately defaced by the railway right-of-way. A round-trip ticket cost $2.50.\(^10\)

The railway proved a great success in its first year, carrying 2,967 passengers and paying dividends of 6 percent. This encouraged the investors to construct a new hotel, the Green Mountain House, after the Brewer's hotel burned. The new hostelry could serve one hundred for dinner and provided lodging for fifty. Clerque and his partners hoped the railway would attract visitors to stay at the hotel in order to see the sun set and rise. (Due to its height and longitude, the summit is one of the first places in the United States to greet the rising sun.) A second hotel was established at the base of the mountain by Samuel Head, who ran the summit hotel for the investors. The railway company also contemplated spur lines to Bar Harbor, Northeast Harbor, Seal Harbor, Southwest Harbor, Bass Harbor,

\(^8\)Hale, 156-57; Collier, 46; St. Germain and Saunders, 38, Grindle, 1.

\(^9\)Hale, 157.

\(^10\)Ibid., 158; Matter, 9. While waiting on the Wauwinnet, passengers could refresh themselves at the island's first brew-pub, operated by a "suave Hungarian" at the north end of Eagle Lake. (St. Germain and Saunders, 38.)
Somesville, and even Greening's Island, but the legislature refused to grant permission. The island's summer colony likewise forced the company to drop plans to open the nation's first electric railway to replace the horse-drawn "barges" to and from Bar Harbor.\[11\]

The buckboard road remained in use, and to discourage this competition, the railway company erected gates across the roadway where it crossed their right-of-way. When these were torn down, they hired sixteen men to work all night laying dynamite charges, and blew the road up at dawn.\[12\] When the road was rebuilt, the railway company took no further action. By this time, the investors had other worries.

To the dismay of Clergue and his backers, the railway's popularity proved short-lived. Traffic dropped off after the first year, and the "barges" were replaced by smaller buckboard wagons. Visitors were disinclined to make repeat trips. The trip to the summit took two hours, and the descent one hour. A newspaper reported that "No one who ever made the journey enjoyed the experience, either going up or coming down."\[13\]

In 1890, the railway ceased operations. Clergue left the area, reportedly becoming engaged in business schemes with the Shah of Persia. The Wauwinnet was scuttled in 1893 and still lies at the bottom of Eagle Lake.\[14\]

The rebuilt buckboard road remained popular with buckboard and carriage excursionists. An 1887 map of Mount Desert Island shows its route as leaving the Eagle Lake Road near the present golf links, climbing the west side of the "Great Hill" extension of the mountain's north ridge, crossing over the crest of the White Cap, a projecting spur, then following the remainder of the north ridge of the mountain to the summit. Total length of the road was 1 mile 307 rods. The hotel and the U.S.C.S. station were

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\[11\]Hale, 156-59; Collier, 46; Matter, 9.

\[12\]Hale, 158.

\[13\]Ibid., 160; "Summit Cadillac Mountain Road One of Finest Scenic Roads in World."

\[14\]Collier, 47. The locomotive was acquired by the Mount Washington cog railway in 1895 when that company's engine was wrecked. It was is use there for more than three decades, until on its last trip, it careened down the mountain out of control and was destroyed.
shown on the summit. The road is still shown on early twentieth century maps, but by then it was impassible.

The summit house hotel remained for nearly a decade. John D. Rockefeller, Jr. remembered it as becoming "more or less of a disorderly and disreputable resort, the character of which gave great concern to the summer people." The hotel was torn down in 1896; Rockefeller reported "the whole community was relieved."

In September 1908, a syndicate of automobile owners purchased the carriage road, announcing they would thoroughly repair it and establish a line of sightseeing automobiles to convey visitors to the top. This was at a time when automobiles were still banned from the island, but as this was a private road, such restrictions would not apply. Nothing evidently came of this scheme, and pressure was already mounting to allow automobiles on the island. The island roads were opened to cars in 1915.

Following the creation of Lafayette National Park in 1919, the idea of reopening or reconstructing the road to the summit was widely discussed. John D. Rockefeller, Jr., who was himself engaged in the construction of an extensive carriage road network [HAER No. ME-13] and who would soon fund the first park motor road, was an early advocate. In 1920, he expressed his views in a letter to George Wharton Pepper, congressman from Philadelphia and a Northeast Harbor summer cottager.

Since there was once a carriage road to the top of Green Mountain, I should think it not improbable that some day it would be rebuilt or a new road built for automobiles. That people who cannot walk or conveniently drive should be able to go to the top of one of the mountains seems to me not inappropriate or unreasonable. If such a road were constructed, I should think it would be the best possible

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16 Grindle, 2; John D. Rockefeller, Jr. to A. Atwater Kent, 11 December 1937. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 127 Folder 119.

Rockefeller acquired a large amount of the mountain tract and began construction of a new road to the summit. However, after grading about 500' of the roadway, he transferred this section to the national park. He continued construction of the "Mountain Road" or Jordan Pond-Eagle Lake Road segment of what is now the Park Loop Road, but left it to the government to complete the summit road.\footnote{19}

Congressman John A. Peters, representing Maine's Third District, wrote Park Service Director Stephen T. Mather on 9 April 1921 in support of the Cadillac Mountain road. He reported that a committee from Bar Harbor had indicated they were so anxious to have the road built that they would raise "a substantial part of the cost." He insisted the road should be designed and built to accommodate automobiles. Although the carriage road had been popular, he suggested that horsemen no longer showed much interest in making the trip. The old road was described as "washed out and obliterated."\footnote{20}

Superintendent Dorr had long dreamed of making the views from the summit available to motorists, and in 1922 received directions to survey a road route and make a proposal for its construction. He had park engineer Walters G. Hill conduct the survey that spring. In June, he forwarded the survey report to Washington, along with a letter which described the scenery the new road would afford.

\footnote{18}{Rockefeller to George Wharton Pepper, 16 September 1920, cited in Ann Rockefeller Roberts, Mr. Rockefeller's Roads: The Untold Story of Acadia's Carriage Roads and Their Creator (Camden, ME: Downeast Books, 1990), 91.}


\footnote{20}{John A. Peters, U.S. House of Representatives, to Stephen I. (sic) Mather, Director, National Park Service, 9 April 1921; Dorr to Arno B. Cammerer, Assistant Director, National Park Service, 14 June 1922. National Archives and Records Administration, Record Group 79, Central Classified Files, Arno B. Cammerer Papers.}
At the mountain summit one comes out facing the road on its last turn—on a vast sweep of ocean to the far horizon fifty miles away. It is an extraordinary view; there is no other like it on our Atlantic coast, and few in the world accessible by road. The whole road, as planned, from start to finish, is singularly beautiful and impressive, a true park road and it will make a unique addition to our national park system.  

Following an inspection trip to Lafayette National Park in June, Assistant Park Service Director Arno B. Cammerer urged construction of the road to the summit, stating in his report to Mather:

... anyone who has climbed any one of the major mountain masses will come to the sure conviction that a road for motorists should lead to the top of at least one of the mountains so that those who cannot climb may get an opportunity to receive the inspiration and feel the exaltation of spirit that come with an hour spent on the breeze-swept hills with their superb views over sea and island, losing themselves in the far distance. If the good motor road to the top of Cadillac Mountain is not provided in this plan, it will inevitably come through popular insistence in the future... In my opinion a road up Cadillac Mountain will not be equaled anywhere in the United States for its combination of mountain massing, valley, inland lakes, and ocean and should be given when built a distinctive name that will identify it as a national scenic road and give it individuality throughout the world, even as the Corniche and other old-world drives are world famous.

In granting permission to Dorr to proceed with the project, Cammerer added, "it is equally important in my opinion that no road go to the top of any other mountain in the park." This dictum became a park policy, and no other motor road was ever constructed to one of the island's mountain summits.

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The summit road project was announced in October 1922. The local newspaper reported it that the National Park Service had called for "the best and most permanent construction and for a road of easy ascending grade and liberal width." An editorial said that such a road "had been the dream of Bar Harbor people" since the passing of the old carriage road. The paper hailed Dorr for initiating the project and Secretary of the Interior Albert B. Fall and Director Mather for authorizing it.24

Construction began that fall at the lower end of the road. Hill's specifications called for an 18' roadway with 3' shoulders, a maximum grade of 6 percent and an average grade of 4.41 percent, the use of earth and rock fill and a graveled surface.25

Before the work progressed much further, a controversy erupted over the park road program. George Wharton Pepper, now U.S. Senator from Pennsylvania, objected to several road projects in the park. Pepper was particularly unhappy with the carriage roads being constructed by Rockefeller, but also objected to the new Cadillac Mountain Road. The protests, which ultimately led to hearings in Washington, threatened to delay further construction. The road's advocates claimed Pepper wanted to discourage the public from visiting the island, instead keeping it a private haunt for his coterie's pursuits. The Bangor Commercial attacked the Senator and his supporters among the summer community for obstructing the completion of the much desired road.

It is the claim of this small group that with the admission of automobiles to a road over Cadillac Mountain . . . that their enjoyment of nature while climbing the rough and rugged paths of the Park will be so interrupted that they will return home with their day's outing spoilt by having the view from the top of Cadillac Mountain marred by the sight of a car which was not there when Champlain discovered the island. . .

It has been the dream since the advent of the automobile on Mount Desert Island to have a road go to the top of Green--now Cadillac--Mountain. This dream is now in its budding stage through the construction that is now underway and it

24Editorial, Bar Harbor Times, 11 October 1922; "Begin Construction of Automobile Road. . ."

25"Begin Construction of Automobile Road. . ."; "Section of Green Mt. Road Opened," Bar Harbor Times, 12 September 1923.
is the wish of the residents of this section that the bud may burst forth into flower and give to the people of the eastern part of the country the fruits of this great undertaking.26

After project advocates rallied behind the work, citing local support for the road and the large payroll the project entailed, Dr. Hubert Work, the Secretary of the Interior, gave orders for the construction to proceed. However, the failure of the National Park Service to obtain sufficient funds for its comprehensive system-wide road-building program forced another postponement.27

In July 1924, Director Mather visited the park and inspected the work in progress on the summit road. He told the Bar Harbor selectmen that the needed funds would be released, and stated though he had thought the supervisor for the construction of the Going-to-the-Sun Road [HAER No. MT-69] in Glacier National Park had "had the last word in road construction without landscape marring," he now felt that engineer Hill's work reflected the best efforts in road planning. He announced that he would convene a September meeting of all National Park Service engineers on Mount Desert Island, so that they could "sit at the foot of your chief engineer" and study the Cadillac Mountain Road approach, where "the very minimum of marring has been so well demonstrated." Secretary Work arrived in the park a few days later and also praised the new road.28

In January 1927, Rockefeller wrote Cammerer, stating that he had had his own engineer, Paul D. Simpson, review Walters Hill's survey and cost estimates for the road. Simpson told him that he thought considerable savings in both distance and cost could be achieved by adjusting the location and grade of the road. While Simpson understood that Rockefeller was not financially involved

26"Torrey Introduces Park Resolution," Bangor Commercial, n.d. [1924].

27Dorr to Cammerer, 10 January 1924; Cammerer to Dorr, 24 July 1924; Hubert Work, Secretary of the Interior, to Dorr, 25 July 1924. "Papers Relating to Road Hearing Before Secretary Work, March 16, 1924." Acadia National Park Library, Carriage Roads files.

28"Distinguished Specialists Overcome Obstacles in Park Road Case," Boston Evening Transcript, 9 August 1924; "Sec'y Work Inspects Park at Bar Harbor." Unidentified newspaper clipping, 2 July 1924.
in the road project, he knew his employer would want the road situated on the best possible location, both from a scenic as well as an economic viewpoint. Rockefeller did not quote any specific recommendations that Simpson had made in his review, but forwarded the warning on to Cammerer, inferring that the Park Service might well reconsider the route.²⁹

That fall, Cammerer and NPS Chief Landscape Engineer Thomas C. Vint arrived in Acadia to study government policies regarding the park and the landscape problems involved in its development. The two drafted a general management plan for the park, which among other things, discussed potential concessionaire operations and the existing and planned roads. No concessions were operating within the park boundary. They took notice of the Jordan Pond House as an "attractive and popular teahouse," but made the distinction that it was located on private land. However, they warned that once the Cadillac Mountain Road was completed, there would be demands to provide another tea-house or a hotel on the summit. While they agreed tea room service might be appropriate, as visitors coming to see the fabled sunrise were "entitled" to a good cup of coffee, they called the idea of a hotel "dangerous." If accommodations with meal service were offered for a few, they argued, demands for expansion would inevitably occur, eventually resulting in the development of a "regular seashore resort" to the detriment of both the park and the community. They urged that no other concessions should be planned.³⁰

Reporting on the Cadillac Mountain or "Summit Road," they estimated that it would cost $250,000 and require four or five seasons to complete the remaining three miles. They urged the Park Service to immediately prepare plans and specifications prepared and to award the contracts so that the construction could be completed by the end of the 1929 season. They recommended that the work be done under force account, rather than by a contract with the Bureau of Public Roads (BPR).³¹

Mather agreed the work should be pressed forward, but he wanted it done by the BPR. On 12 April 1928, he wrote BPR Chief Thomas

²⁹Rockefeller to Cammerer, 14 January 1927. Rockefeller Archives Center, Office of the Messrs. Rockefeller, Record Group 2, Homes (Seal Harbor), Box 74 Folder 763.


³¹Ibid., 33.
H. MacDonald, asking the BPR to take over the project. He indicated the NPS had programmed $115,000 in its 1928 budget for the work. He requested MacDonald to immediately assign an engineer to begin investigations for the work. Mather's request was made under terms of the 1926 agreement between the two agencies, under which the BPR became responsible for major road construction projects in the national parks. By this time, Park Service forces had only completed the grading of about 6,000' of the roadway. Maps published in 1926 show the road had been graded from the "Mountain Road" to the top of the White Cap, the spur on Cadillac's northwest flank.32

In 1928, BPR highway engineer H. G. McElvey conducted a new reconnaissance survey for the summit road. Soon afterward, BPR senior highway engineer W. J. Anderson was placed in charge of the survey. He was aided by assistant highway engineer Leo Grossman and junior highway engineer R. J. Zeglen. The crew ran a new and improved line. As much as possible of the existing graded roadway was retained from the "Mountain Road" to the White Cap. From there to the summit, the road was laid out on alignments and grades in accordance with accepted BPR standards for road construction in the national parks, these based on the 1927 Forest Highways Standard. On the BPR section of the road, grades would not exceed 7 percent and minimum curvature of 150' on open curves and 200' on blind curves. Spiral curves, a technique borrowed from railway construction, were to be employed. For economy of construction, no flat or down-grade section would be permitted; instead, the road was designed to climb all the way to the top. Flattening the grade would increase both the length and the cost of the road.33

The typical road section adopted called for an 18' roadway with 2' shoulders in cuts, 3' shoulders in fill areas less than 3' high, and 4' shoulders with border stone guard rail in fill areas


As it was thought that insufficient funds were initially allocated for the entire grading project, the Bureau of Public Roads first advertised only the portion of road to station 174+34.70, the location of a turnout on the mountain flank. The project was to be extended if more funds became available. When bids were opened in May 1929, Green and Wilson of Waterville, Maine had submitted the low bid of $146,175.10. As this figure exceeded the engineers' estimates, their bid was rejected by the Secretary of the Interior. The project was readvertised and bids were opened again late June. Joseph P. McCabe, Inc. of Boston submitted the new low bid of $146,323.60. Although this exceeded the original low bid, the Assistant Secretary of the Interior awarded the contract to the firm on 27 June.35

Work began on 12 August. The contractor moved in his equipment consisting of a steam shovel, a gas shovel, five trucks, a caterpillar tractor, five compressors, nine jackhammers, a drill sharpener and two forges. Two 1½ cubic yard "iron mules" were tried on the project but proved impractical.36

Clearing was carried out by National Park Service force account labor, though the grubbing, or removal of stumps, was done by the contractor. Crews pulled out stumps with power shovels and then burned them on the right-of-way.37 Most of the excavation consisted of rock which had to be drilled then blasted out. The drilling proved very difficult. The contractor resorted to a change of blacksmiths (who maintained the drills) and brought in experts from various compressor and explosive companies. The BPR Division of Management sent three engineers to study the project and make recommendations. McCabe barely managed to break even on this phase of the project. Construction of embankments was generally uncomplicated except for one area which was so steep that dumped material would not stay in place. At this point, it became necessary to construct a hand-placed rock embankment, 10' to 30' high, using a derrick. The contractor installed two stone

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36 Ibid.
37 Ibid., 2.
box culverts and a number of 18" concrete pipe culverts for drainage.\footnote{Ibid., 2-3.}

"Guardrails" for the road consisted of large boulder border or coping stones, about 3' 6" in height. The stones were closely spaced so that gaps of only about 4' appeared between them. The BPR engineer noted they made a "very substantial and pleasing" effect.\footnote{Ibid., 3.} Similar border stones had been used on the Rockefeller carriage roads in the park and on the earlier "Mountain Road" motor road segment.

Dennis Doonan, dynamite man for the McCabe company, was fatally injured on the project on 10 September 1929. Doonan had been anxious to complete the drilling and blasting on a ledge face near the lower end of the road, and asked two employees to work overtime on the drilling. As one of the men, Jean Lipscomb, was drilling a hole, the drill steel snapped off. When he removed it from the hole, he found it very hot and showed it to Doonan. Although he had had thirty years experience in blasting work, Doonan disregarded the overheated steel, and proceeded to load the hole with a charge. He placed two sticks of dynamite in the hole, and tamped them down. Nothing happened, but when he added a third stick with an electric blasting cap, the charge exploded, injuring Doonan so badly that he died in the hospital the following morning.\footnote{Grossman, Cadillac Mountain Highway project diary, 10 September 1930. MSS, Acadia National Park Historical Collection.} The tragedy did not, however, seriously delay the project.

On 17 June 1930, BPR District Engineer Guy M. Miller ordered the extension of the work to the summit. The grading contract was completed on 1 November at a total cost of $154,221.52.\footnote{Ibid., 2, 4.}

In December, National Park Service Assistant Landscape Architect Charles E. Peterson came to Acadia to inspect the project for acceptance. As Peterson later recounted, "I met Grossman on the summit of the mountain. He was as proud of work as if he had just completed the Panama canal. I told him it was the worst piece of landscape damage ever inflicted on a national park."\footnote{Charles E. Peterson interview, 23 August 1995.} Peterson was aghast by the lack of project cleanup work. The
contractor had left debris strewn all over the project, and the blasting had cast stone a considerable distance to either side of the road. In his report, Peterson recommended against accepting the project until the contractor removed his truck tires, rubbish, and construction equipment and took efforts to clean up the sidecast stone. Peterson told BPR engineer Miller that the contractor's general disregard for the blasting restrictions outlined in the specifications had caused extensive landscape damage. As McCabe had failed to make any money on the work, he conceded it would be difficult to have him do any further clean-up work. Peterson warned Miller that it would be necessary to place more stringent restrictions in future specifications for road work in the park.43

Nothing was evidently done to correct the disfigurement. In September 1931, Peterson put his earlier impressions in writing. "The contract of the grading work on Cadillac Mountain which was completed last year constitutes the worst piece of landscape damage which any road has done in a national park." The contractor had been required to pick up all rock lying outside of the toe of the slope within a distance of 30' from the road shoulders, while rock and dead vegetation outside the 30' area was to be handled by force account. McCabe had completed his work, but much debris remained. Peterson noted that $11,000 had been transferred to the Acadia park books for clean-up, but doubted it would be sufficient for the work. He stated there was a "crying need" to do something more, especially because of all the criticism of road-building work in the park and because the road would be judged against Rockefeller's excellent work.44

Peterson also urged the widening of the road in several locations, especially at major curves, noting that extra grading would generally not be required. The widening could utilize some of the waste rock which had been thrown over the edge. The only extra cost would involve relocating several stretches of the border stones, but he thought they could be eliminated altogether. He added that the use of guard rail (in this case, the stones) was "greatly in excess of that which we regularly follow in Park work," in some cases being employed on the insides of curves. He recommended that where the road needed widening,  

43Charles E. Peterson, Assistant Landscape Architect, Branch of Plans and Design, National Park Service, to Guy M. Miller, District Engineer, Bureau of Public Roads, 20 December 1930, attached to Ibid.

the stones should simply be tipped over into the ditch and
covered up. Any extra widened areas would be used by motorists,
he felt, because "fine views are to be had at nearly all points." He
urged the BPR be directed to submit an estimate for this work,
and that it be carried out as soon as possible.  

Another criticism Peterson noted was inadequate parking at the
summit, which consisted only of a widened space below the
terminal loop. He thought a main parking area should be
constructed inside the loop, and the existing area designated for
overflow. The loop was one of the areas "devastated" by the
excessive blasting, and placing the parking here would con-
centrate the damage in one spot. Along with the other work,
Peterson felt the parking area should be constructed before the
road opened the following summer. He added that as the parking
area and loop lay in a saddle below a short rise, visitors would
want to leave their cars and walk around to take in the views.
Accordingly, he suggested the construction of a system of trails
around the summit. To determine their location, he urged that
the BPR topographic map of the summit be expanded so that the
location of the trails, as well as the desired tea house, could
be chosen. The trails, he believed, should be 4' 6" wide and
paved with crushed rock. Their surfacing could use some more of
the excess rock lying along the road. He insisted that all of
the work on the mountain should be done under the supervision of
a Park Service landscape architect in order to avoid such
problems as had previously been encountered.

With the grading project complete, the BPR prepared designs and
specifications for the subsequent surfacing project. The Bureau
of Public Roads had initially decided to surface the road with a
bituminous macadam using emulsified asphalt as a binder.
However, an inspection of an experimental stretch of this
surfacing at Dedham, Massachusetts showed such surfacing did not
hold up well, being "shot to pieces" only five months after it
had been laid. Rather than risking similar failure on the
Cadillac Mountain project, BPR engineers decided to utilize
"Pentolithic" macadam. The specifications called for a 22'

45Idem, "Memorandum for the Director No. 2: Special
Widenings for the Cadillac Mountain Road," 26 September 1931.
National Archives, Record Group 79, Central Classified Files.

46Idem, "Memorandum for the Director No. 3: Parking Area on
the Summit of Cadillac Mountain," 26 September 1931; "Memorandum
for the Director No. 4: Path on the Summit of Cadillac Mountain,"
26 September 1931. National Archives, Record Group 79, Central
Classified Files.
pavement of pentolithic type bituminous macadam using 2' of the stone shoulders on each side as part of the base course.\textsuperscript{47}

Pentolithic macadam was a patented type of bituminous macadam. The 2 1/2" thick pavement was laid 22' wide along the road. First, a layer of top stone was applied, then it was lightly sprayed with diesel oil. After this had penetrated through the top course, hot asphalt was applied with a pressure distributor and rolled. After the rolling, a layer of small stone was sprayed with light oil and spread over the surface to fill the voids. The pavement was then thoroughly compacted. An asphalt seal coat was then applied and its surface was again covered with more oiled stone and rolled. Due to the oiling of the stone, the contractor was able to use a harder grade of asphalt than could be used by the usual penetration method; this type of asphalt was generally used only in hot mix pavements such as sheet asphalt. Stone aggregate for the paving came from a 50' cut two-thirds of the way up the mountain. The pink granite gave the road a pleasing, pink surface, harmonious with the surrounding rock.\textsuperscript{48}

The paving project was advertised in the spring of 1931. Bids were opened in April and the contract was awarded to Green and Wilson of Waterville, Maine, on the basis of the firm's low bid of $60,760.62.\textsuperscript{49}

Green and Wilson began moving in construction equipment in May and proceeded with the construction of a crushing and screening plant. Other equipment used on the project included a gas shovel, ten trucks, a power roller, two stone spreaders, two compressors, two jackhammers, a drill sharpener and an oil forge. The work included some minor excavation for slight changes in alignment and to break off points to improve visibility. Several culverts were lengthened to conceal their outlets. Before the surfacing could be applied, it was necessary to reshape and compact the subgrade so that the proper depth of the surfacing could be obtained. Once this was completed, a broken stone base course, 3½" thick, was applied. This was then compacted and filled with dust and screenings to make a firm and level base.

\textsuperscript{47}Grossman, Project Diary, 30 December 1930-16 May 1931.


\textsuperscript{49}Ibid., 1-3.
The surfacing contract was concluded in October 1931 at a cost of $68,069.34. The total cost of the 3.86-mile road was $350,000.\(^{50}\)

While this work was underway, park force account labor completed three buildings on the mountain. A small ranger shelter was constructed at the base of the road for $550; it was provided with a telephone so rangers could report accidents or seek instructions. On the summit, a comfort station was built for $1,500, and a ranger station, designed by Charles Peterson, was constructed for $1,600.\(^{51}\)

As the work neared completion, a dedication was tentatively scheduled for 17 September, and President Herbert Hoover and Secretary of the Interior Ray Lyman Wilbur were invited to attend.\(^{52}\) However, the dedication had to be postponed until the following summer. The committee reported that the President and the Secretary were not available, many of the summer colonists would be gone, and Superintendent Dorr indicated that while cars might be able to make the trip, the roadside cleanup work still needed to be done.\(^{53}\)

With the surfacing project complete, park officials began allowing automobiles to travel over the road during the day. Chief Ranger B. L. Hadley warned motorists they should exercise caution because work crews were still engaged in roadside cleanup and finishing work. More than 3,000 visitors in 800 cars made the trip on the first day, 11 October.\(^{54}\)

Charles Peterson inspected the surfacing project for the Park Service and recommended its acceptance on 27 October. He noted that the contractor had handled the cleanup of the scattered rock well, and stated that with the completion of the force account

\(^{50}\)Ibid.


\(^{52}\)"To Open Mountain Road Sept. 17th," Bar Harbor Times, 12 August 1931.

\(^{53}\)"Road Opening is July 4, 1932," Bar Harbor Times, 26 August 1932.

\(^{54}\)"Summit Road Now Open to Traffic," Bar Harbor Times, 7 October 1931; "3000 Visitors to Cadillac Sunday," Bar Harbor Times, 14 October 1931.
cleanup of rock outside the 30' margin, "the whole road will certainly be as orderly as it is practical for us to make it." Peterson later stated that much of the scarring had been concealed with blueberry sod.\textsuperscript{55}

Rockefeller, who had carefully monitored work on the road while he was engaged in constructing other parts of the park motor road system, was disappointed in the shortcomings of the roadside cleanup program and the poor facilities provided at the summit. He wrote Mather's successor as Park Service director, Horace M. Albright, urging the matters be addressed before the road was opened.\textsuperscript{56} Albright made his first visit to Acadia in June 1932 and inspected the project. On his return to Washington, he wrote Rockefeller with his impressions of the work.

The importance of the Cadillac Mountain Road looms larger every day. I have taken all feasible steps to program its further development through roadside clean-up and we are shortly sending to Acadia two of our best men, Assistant Engineer O. G. Taylor and Landscape Architect Zimmer, who will spend considerable time studying the problems that need more attention.\textsuperscript{57}

Albright also indicated that Assistant Director Harold C. Bryant, in charge of the Park Service's educational work, accompanied by Dr. Herman C. Bumpus, Director of the American Museum of Natural History, would soon arrive in Acadia for an extended stay, during which time they would work out a series of trails and interpretive displays for the summit.\textsuperscript{58}

At last the big day came. On 23 July 1932, the new Cadillac Mountain Road was dedicated under cloudy skies. President Hoover was represented by Secretary of the Navy Charles Francis Adams, and Secretary of the Interior Ray Lyman Wilbur sent his


\textsuperscript{57}Ibid.

\textsuperscript{58}Ibid.
assistant, Joseph M. Dixon. The events began with a dog show at
the Bar Harbor casino, at which Edsel Ford (a summer cottager at
Seal Harbor) delivered the prize. At noon the official party
journeyed up the road. After the Bar Harbor band played the
national anthem, Superintendent Dorr cut a silk ribbon, formally
opening the road. At this point, the clouds broke loose and a
hard rain began falling, forcing the remaining exercises to be
hastily relocated to the Malvern Hotel. Following an invocation
by the Rt. Rev. William T. Manning, Episcopal Bishop of New York,
Maine Governor William Tudor Gardiner, Senator Frederick Hale,
Congressman John E. Nelson and Rhode Island Governor Norman S.
Case all spoke briefly to the crowd of about 1,000 before
Secretary Adams delivered the keynote address. John D.
Rockefeller III represented his father, who was ill at his Seal
Harbor summer home. A bonfire and fireworks display planned for
the evening had to be canceled on account of the weather. 60

The Portland Sunday Telegram extolled the road as "one of the
finest mountain drives in the world." It noted that it was now
possible to motor to the summit in "high gear," the former steep
grades having been eliminated. The pavement was supposedly "non-
skid" if drivers exercised normal caution. The paper noted that
the road was completed exactly fifty years after the Green
Mountain Railway had gone into use. The park's 1940 master plan
stated that the road had cost $315,550.89. 60

On 26 July 1932, John Richardson of Parsons, Kansas became the
first person to ride a bicycle up the road to the summit.
(Actually, he walked his bike over several sections.) When the
local newspaper asked him why he undertook the trip, he replied
"I wanted to have some way to get down easily." 61

With the road complete, park officials began to host sunrise
breakfasts at the summit. While visitors had to bring their own

59 "Will Dedicate Road July 23," Bar Harbor Times, 11 May
1932; "Many Thousands will Witness Cadillac Mountain Road
Dedication," Bar Harbor Times, 20 July 1932; "Old Cadillac Stormy
as Road is Dedicated," Bar Harbor Times, 27 July 1932; "Notables
of State and Nation Attend Opening of Cadillac Mountain Road,"
Portland Sunday Telegram, 24 July 1932.

60 National Park Service, "Acadia National Park Master Plan,
1940" (Richmond, VA: National Park Service, Region One, 1940), 4.

61 "Rides Bike Up Cadillac Road," Bar Harbor Times, 27 July
1932.
food, water and a place to cook were provided for them, and a park ranger was present to receive them. The breakfasts were scheduled only for Fridays, but visitors could make arrangements for other days of the week.\textsuperscript{62}

In August 1932, the McCabe Company began work on a $13,000 contract to enlarge the parking space at the summit. At the same time, Leo Grossman was directing twenty men in additional roadside cleanup along the road. The 2,000' parking area was completed in November. In September, Edward Zimmer began supervising the construction of the summit trail network.\textsuperscript{63}

The Acadia Corporation, the principal park concessionaire, began construction of a refreshment stand on the summit in summer 1934. Plans for the structure were drawn up by New York architect Grosvenor Atterbury for a site chosen by landscape architect Frederick Law Olmsted, Jr., consultant to the Park Service and Mr. Rockefeller. The stand, called the "Cadillac Mountain Tavern," opened in July.\textsuperscript{64}

The National Park Service issued a motorists' guide titled "Are You Driving Down Cadillac Mountain?" in the mid-1930s. It was intended interpret some of the most outstanding vistas and natural phenomena along the route. Among the scenes it called attention to were distant vistas of the Cranberry Islands and nearer views of Eagle Lake and Bar Harbor. Where the road crossed through deep cuts, it described the various rocks at hand, mostly granite or slate-colored trap dikes. Near the bottom of the road, it discussed the various trees through which the road passed, conifers higher up, giving way to more deciduous

\textsuperscript{62}"Park Service Will Sponsor Breakfasts," Bar Harbor Times, 13 July 1932. This practice evidently continued only a short while; no park employee in 1994 seemed to remember them.

\textsuperscript{63}"Parking Space is Being Made," Bar Harbor Times, 3 August 1932; "Complete Parking Space on Summit," Bar Harbor Times, 2 November 1932; Will Protect Summit Plants," Bar Harbor Times, 26 September 1932.

\textsuperscript{64}"Refreshment Stand Being Built at Summit of Cadillac Mountain," Bar Harbor Times, 20 June 1934; "Cadillac Mountain Tavern Opened Tuesday," Bar Harbor Times, 18 July 1934.
trees near the end. Today, interpretation is provided by roadside displays and seasonal ranger programs on the summit.

In March 1941, with war clouds looming, the U.S. Army Corps of Engineers selected a site on the mountain summit for a radar station. The Public Roads Administration [PRA], Depression-era successor to the Bureau of Public Roads, was asked to draw up plans for a concrete platform and short connecting road. The BPR designed the layout to use existing paths and cleared area as much as possible in an effort to reduce damage to the summit landscape. The work was financed by a $7,000 allotment from the National Park Service Roads and Trails account and reimbursed by the Corps of Engineers. National Park Service force account labor carried out the work under the PRA supervision. The work was completed on 17 June at a cost of $4,556.75.

The Cadillac Mountain Radar Station, operated by the U.S. Army Air Corps, was established to seek out enemy submarines plying the coast. The summit road was closed during the war while the station was in operation. It was dismantled soon after the end of the hostilities. The Cadillac Mountain Road reopened in October 1945; the parking area for the former radar site is now known as "Sunset Overlook."

Today, the Cadillac Mountain Road remains one of the principal attractions of Acadia National Park. Visitors make more than a million visits to the summit annually. Many take the extra effort to arrive before dawn in order to be among the first Americans to see the sun rise over the Atlantic. While the mountain is frequently shrouded in clouds, reducing visibility to a few feet, on a clear day the mountain offers far-flung vistas of the Gulf of Maine to the southwest, the Atlantic Ocean to the southeast, and the northern Appalachians on the mainland to the north. The parking area and paved trails designed by Charles Peterson are crowded with visitors during the main tourism season, and cars often slow to a crawl behind other vehicles.


laboring up the grade. But the view from the top is worth the effort to most visitors, and every trip over the road is a memorable one.
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