

GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS & BRIDGES  
Gatlinburg Vicinity  
Sevier County  
Tennessee

HAER NO. TN-35

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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

PHOTOGRAPHS

MEASURED AND INTERPRETIVE DRAWINGS

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Department of the Interior  
P.O. Box 37127  
Washington, D.C. 20013-7127

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HISTORIC AMERICAN ENGINEERING RECORD

GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS AND BRIDGES  
HAER No. TN-35

Location: Great Smoky Mountains National Park,  
Tennessee and North Carolina

Date of Construction: ca. 1825 through the present (peak of  
NPS construction - 1930s-50s)

Type of Structure: Roads, Bridges, Tunnels and Landscapes

Use: National Park Transportation System

Designer: Private individuals, corporations, and  
State and Federal transportation  
authorities

Engineer: U.S. Bureau of Public Roads and National  
Park Service

Fabricator/Builder: Various private and public contractors

Owner: U.S. Department of the Interior,  
National Park Service, Great Smoky  
Mountains National Park

Significance: The transportation system of Great Smoky  
Mountains is representative of NPS park  
road designs throughout the country.  
Much of the construction work was  
undertaken by the Civilian Conservation  
Corps during the 1930s. Once  
established, this road system provided  
access to the first national park in the  
southern portion of the United States as  
well as links to the Blue Ridge Parkway.



GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS AND BRIDGES

HAER NO. TN-35

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## INTRODUCTION

### *Auto-Tourism in the Great Smoky Mountains*

Since its establishment in 1934 more tourists have annually visited Great Smoky Mountains National Park than any other national park in the United States. In 1994, the 8.7 million people touring the Smokies represented nearly twice the number of visitors spending time at the Grand Canyon, the second most-attended park in the country. Visitation is only expected to climb, reaching well over ten million by the year 2000.<sup>1</sup> To a large degree the popularity of Great Smoky Mountains National Park rests on its geographic location. Straddling the border between North Carolina and Tennessee, the park lies within a two-day drive for half the nation's population. Residents of New York, Washington, D.C., Atlanta, St. Louis, and Chicago live even

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<sup>1</sup> On Great Smoky Mountains National Park as most popular national park since 1934 see "Great Smokies Again Top in Visitors Campbell Told;" *Knoxville Journal*; 26 February 1958. For annual attendance statistics for Great Smoky Mountains National Park see Great Smoky Mountains National Park; "Travel to Great Smoky Mountains National Park;" Vertical File "Visitation 1990s;" Great Smoky Mountains National Park Archives (hereafter referred to as GRSM). For comparison between Great Smoky Mountains and Grand Canyon national parks see Daniel Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists: Coalition Building in the Establishment of the Great Smoky Mountains National Park" (Ph.D. diss., University of Tennessee, Knoxville, 1995); 1.

closer. These urbanites can rise at dawn, hop in their automobiles, and arrive in the wilds of the Great Smokies before the sun dips below the horizon.

Easy accessibility, however, fails to fully account for the widespread popularity of Great Smoky Mountains National Park. Visitors are also drawn to the park's unique scenery, much of which can be attributed to the region's geologic past. Beginning hundreds of millions of years ago as the planet formed and reshaped its surface, thermal convection currents deep within the earth's mantle drew the continents together. Gradually over millions of years the continents collided and rock strata which had once been horizontal was tilted at steep angles, folded, and faulted to form extremely high mountain ranges. The Himalayas were one such range, rising up when the Indian continent struck the Siberian plate on the Eurasian continent. The same geologic forces formed the Smokies approximately 200 million years ago when the North American continent struck Africa and uplifted the Appalachian range. Although since this time the 36 mile-long Great Smoky Mountains have been eroded by rain, sleet, snow, ice, heat, and wind, sixteen peaks in the range still ascend more than

6,000' above sea level, offering visitors dramatic views of the many valleys below.<sup>2</sup>

The geologic forces which formed the Smokies hundreds of millions of years ago also helped shape the region's contemporary environment. The park's changing topography, which ranges in elevation from 800' to 6,643', results in wide-ranging local weather patterns. Temperatures can vary as much as 20° Fahrenheit from mountain base to summit, and while precipitation averages 55 inches per year in the lowlands it can rain as much as 85 inches annually on Clingmans Dome, the highest peak in the park. Within a relatively small area, then, changes in altitude, temperature, and moisture create entirely different ecosystems for the park visitor to enjoy.<sup>3</sup>

In terms of biological diversity, a walk from mountain base to peak in the Smokies is often compared to the 2,000 mile trek

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<sup>2</sup> Harry Moore; A Roadside Guide to the Geology of the Great Smoky Mountains National Park (Knoxville: University of Tennessee Press, 1988); 23-26. Also see Henry Lix; "Short History of the Great Smoky Mountains National Park" (1958); unpublished paper; GRSM.

<sup>3</sup> Great Smoky Mountains Natural History Association and Great Smoky Mountains National Park; "Weather Summary" (Great Smoky Mountains National Park: 1995); 1.

on the Appalachian Trail from Georgia to Maine; in both instances hikers encounter a succession of habitats. In the Great Smoky Mountains, for instance, visitors can find more than 4,000 types of non-flowering plants and 1,500 species of vascular plants, 150 of which are considered rare. The park also has more tree species than all of northern Europe combined, and contains one of the largest stands of virgin temperate deciduous forest in North America. At least sixty native mammals live in the Smokies along with over 200 types of birds, thirty-eight reptilian species, and the most diverse salamander population anywhere in the world. Finally, fifty-eight species of fish swim the park's numerous rivers and streams, including several game fishes.<sup>4</sup> In recognition of such outstanding biological variety, the United Nations designated Great Smoky Mountain National Park an International Biosphere Reserve in 1976. This international

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<sup>4</sup> Great Smoky Mountains Natural History Association and Great Smoky Mountains National Park; "What Makes It Unique?" (Great Smoky Mountains National Park, 1995); 1-2. See also Great Smoky Mountains Natural History Association and Great Smoky Mountains National Park; "Trees & Forests" (Great Smoky Mountains National park, 1995); 1.

system, which aims to conserve the world's genetic diversity, contains 324 other reserves in eighty-two foreign countries.<sup>5</sup>

Unfortunately, most visitors to Great Smoky Mountains National Park fail to experience this scenic and biological abundance first hand. Instead they see much of it from their automobiles for only short periods of time. For example, more than 70 percent of the recreational activities undertaken by visitors in the park are pursued within a stones throw of a roadway. Approximately 16 percent, or one in six visitors, never even turn off their engines during their visit. And of those that do take the time to leave their cars, only 5 percent disembark at areas where they can more directly interact with the natural resources of the park. The other 95 percent stop at man-made facilities such as visitor centers, picnic grounds, and historic structures. On average, for every hour spent behind the steering wheel, visitors to Great Smoky Mountains National Park

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<sup>5</sup> Jim Ryan; "Smokies 'official' bio reserve;" National Park Service Courier; 3, no. 1 (1980): 6.

dedicate only eight minutes to activities outside their vehicles.<sup>6</sup>

*The Foundation of Current Park Motor Roads*

The motor road system of Great Smoky Mountains National Park did not mysteriously materialize when the park was established in 1934. Instead much of its foundation was laid well before this period by successive waves of people who journeyed back and forth across the Smokies. This essay provides a chronological history of the evolution of the park road system both before and after the creation of Great Smoky Mountains National Park. It argues that the contemporary transportation network was shaped by pre-park local inhabitants desirous of road development, by the rise of a nationwide wilderness movement during the 1930s aimed at limiting such development, and by the National Park Service which attempted to mediate between the two. In the Cades Cove and Cataloochee regions Indian footpaths gradually evolved into wagon roads, while in areas less conducive to farming, loggers likewise

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<sup>6</sup> Department of the Interior; Visitor Use Patterns at Great Smoky Mountains National Park; report prepared by John Peine and James Renfro; National Park Service, Southeast Regional Office, Atlanta, Georgia; 1988; pp. 33-41.

left their own imprint upon the Smoky mountain landscape. Moreover, this process by which local inhabitants influenced the future motor road system of Great Smoky Mountains National Park did not halt with the founding of the park. Rather, other groups of people exerted new pressures that continued to influence motor roads throughout the park's history. Along with examining these conflicting interests, the essay is also concerned with the motoring experience itself. Particular attention will thus be paid to the scenic qualities of these motor roads, roads which ultimately help to define the experience of those visiting Great Smoky Mountain National Park.

#### THE SMOKIES' PRE-PARK ROADS

##### *Indian Footpaths*

Long before tourists began motoring over Newfound Gap and causing traffic jams in Cades Cove, Indians cut swaths through the Smoky Mountain wilderness that would greatly influence the motor road system of the future National Park. This process began after the Cherokee, a branch of the Iroquois nation, migrated to the region more than a thousand years ago from the upper Ohio River. The blazing of footpaths continued throughout



the colonial period when the Cherokee occupied and controlled a large mountainous area including most of the land now comprising the states of North and South Carolina, Georgia, Alabama and Tennessee. The ancient Cherokee capital, Echota, was situated on the Little Tennessee River just outside the present park boundary.<sup>7</sup>

While refraining from taking up permanent residency within what is today the national park, the Cherokee nevertheless had a long history of journeying into and across the Great Smoky Mountains. Archaeologists have excavated the remains of several seasonal Cherokee villages within the park, principally along the Oconaluftee River and in Cades Cove.<sup>8</sup> Along with maintaining footpaths between these temporary residences and their capital, the Cherokee also created a sophisticated network of trails throughout the mountains for hunting, for socializing with kinfolk in other areas, and, on some occasions, for making war.

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<sup>7</sup> Lix; "Short History of the Great Smoky Mountains National Park;" 11-14. Also see Great Smoky Mountains National Park and Great Smoky Mountains Natural History Association; "Cherokee Indians;" (Great Smoky Mountains National Park, 1995); 1.

<sup>8</sup> Lix; "Short History of the Great Smoky Mountains National Park;" 14.

The two principal Indian footpaths of the region ran parallel to one another along either side of the Great Smokies (see Appendix 1). The Rutherford War Trace, named for Griffith Rutherford during an expedition in the 1770s, lay to the south of the park and followed a line between the Balsam and Blue Ridge Mountains of western North Carolina. It linked the areas around present-day Sylva, Waynesville, and Asheville. The other major footpath, the Great Indian War Path, followed the northern boundary of the park connecting present-day Sevierville and Maryville, Tennessee. In order to provide intercourse between these two major thoroughfares, the Cherokee also developed a number of foot trails directly across the Great Smokies.<sup>9</sup>

Three well-trodden footpaths linked the Rutherford War Trace and the Indian War Path. Near the present northeastern boundary of the park lay the so-called Cataloochee Trail, which connected the Cosby Creek region in Tennessee with Cove Creek Gap in North Carolina. Intermediate points along this trail included the mouth of Little Cataloochee Creek, Mt. Sterling Gap, and

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<sup>9</sup> Robert Lambert; "The Pioneer History of the Great Smoky Mountains National Park;" an unpublished report to the Great Smoky Mountains National Park Superintendent; 1 October 1957; GRSM; 8.

Davenport Gap. Branch footpaths broke off from the Cataloochee Trail down Cosby Creek, the Cataloochee Valley, and Indian Camp Creek. On the other side of the park near its western boundary the Cherokee maintained the Tuckaleechee-and-Southeastern Trail. Running from Sevierville into Tuckaleechee Cove (present-day Townsend), this Indian footpath continued southwestward along Little River and Laurel Creek into Cades Cove. There it divided into several branches that went through passes on the Appalachian ridge. Two of these branches led into the Hazel Creek and Twenty Mile Creek areas while a third wound its way from the lower end of Cades Cove to the Happy Valley-Chilhowee region in the west. Finally, the Cherokee established a third footpath, the Indian Gap Trail, across the middle of the park midway between the Cataloochee and Tuckaleechee-and-Southeastern trails. Beginning in present-day Sevierville the Indian Gap Trail came through present-day Pigeon Forge, followed the West Fork of the Little Pigeon River, and continued up to Indian Gap. It then descended the other side of the Smokies along the Oconaluftee River down to the present site of Whittier, North Carolina.<sup>10</sup>

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<sup>10</sup> Lambert; "Pioneer History of the Great Smoky Mountains National Park;" 8-9.

All three of these Indian footpaths greatly influenced the future motor roads of Smoky Mountains National Park. For example, the road that presently winds in and out of the park along its northeastern boundary from Cosby, Tennessee to Cataloochee closely follows the old Cataloochee Trail. The park road through Cataloochee valley likewise runs along this old footpath. Similarly, the present-day park thoroughfare into Cades Cove from the Townsend Wye area was constructed atop the Tuckaleechee-and-Southeastern Trail. Perhaps most obviously, modern highway 441 approximates almost perfectly the route of the Indian Gap Trail, veering off from the ancient footpath only near the top of the Smoky divide in order to cross at Newfound instead of Indian Gap.

While greatly influencing the future motor road system of the Great Smokies, the Cherokee were forced to abandon their footpaths long before cars or the national park became a reality. During the early nineteenth century, the Cherokee were pressured into signing a succession of treaties that culminated in the 1835 Treaty of New Echota, through which they relinquished control of all their ancestral lands lying east of the Mississippi River. Three years later when Andrew Jackson forced the Cherokee west to

Arkansas and Oklahoma over the infamous "Trail of Tears," during which time more than 4,000 Cherokee perished, some refused to leave and instead took refuge in the Cataloochee valley and other parts of the Great Smokies. Only after the surrender of Tsali, a popular Cherokee leader who had resisted the forced removal, were many of those in hiding allowed to join a small band of Cherokee who had gained the right to remain on the Qualla Indian Reservation located at southern end of what had once been the terminus of the Indian Gap Trail.<sup>11</sup>

### *Settler Wagon Trails*

The removal of the Cherokee to both the American west and the Qualla Indian Reservation cleared the way for white settlers, many of whom entered the Smokies along the same footpaths cleared by Indians. For instance, the early Euro-American settlers to the Cataloochee valley migrated from the east and wound their way down the Cataloochee Trail during the 1820s. Those settling in Cades Cove arrived later in the decade, coming from other valleys

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<sup>11</sup> Lix; "Short History of the Great Smoky Mountains National Park;" 9-15. Great Smoky Mountains National Park; "Cherokee Indians;" 2.

in Blount County by way of the Tuckaleechee-and-Southeastern Trail.<sup>12</sup> Others quickly followed. By the mid-nineteenth century Cades Cove could boast 137 homes housing 685 inhabitants, while Cataloochee, with its 1,200 residents, had become the most populated community in the Smokies.<sup>13</sup>

Like their Indian predecessors, early white settlers traveled extensively throughout the Great Smoky Mountains. Farmers in Cades Cove and Cataloochee visited neighbors throughout the year, made trips to one another's fields to help with planting and harvesting, and journeyed up into the mountains with their livestock in search of pasturage. Families also traveled within the Smokies to attend religious services, school, and various social events including weddings, funerals, and holiday gatherings. Recent scholarship on these pre-park

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<sup>12</sup> Lambert; "Pioneer History of the Great Smoky Mountains National Park;" 21 & 38. Also see Great Smoky Mountain Natural History Association; "Cades Cove: auto tour;" an interpretive booklet (nd); 8.

<sup>13</sup> Great Smoky Mountains Natural History Association; "Cades Cove;" 1. And Great Smoky Mountains Natural History Association; "Cataloochee: auto tour;" an interpretive booklet; 1. See also Jerry DeLaughter; Mountain Roads & Quiet Places: A Complete Guide to the Roads of Great Smoky Mountains National Park (Gatlinburg, Tennessee: Great Smoky Mountains Natural History Association, 1986); 68.

inhabitants further indicates that these early settlers were far less isolated from the outside world than previously believed. Thus along with traveling locally, most also journeyed to distant markets beyond the mountains with cattle or a wagon loads of produce.<sup>14</sup>

Settlers in Cataloochee and Cades Cove not only widened the Cherokee footpaths they had followed into the region but also constructed a host of new wagon roads throughout the Smokies (see Appendix 2). White settlers first altered the Cherokee's Cataloochee Trail. After authorization from the Haywood County court around 1825, a group of enterprising residents from Jonathan Creek widened and graded the trail and renamed it the Cataloochee Turnpike. Beginning below Cove Creek Mountain in Jonathan Creek Valley the road meandered tortuously over the mountains into Cataloochee Valley, where it dead-ended and the old Indian trail carried on. Rates on pack horses, cattle, and hogs, as well as the absence of rates for wagons, indicate that this was a "stockdriver's road," designed specifically for

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<sup>14</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" introduction.

driving herds of animals over the Smokies.<sup>15</sup> In 1851 the North Carolina legislature authorized the continuation of the Cataloochee Turnpike through Mount Sterling and Davenport gaps down to Big Creek and on to the Tennessee line near Cosby. This extension was completed in 1860 and used by raiding Union troops during the Civil War. Throughout, its bed closely followed the Cherokee's old Cataloochee Trail.<sup>16</sup>

Today the Cataloochee Turnpike is known as Route 32 in Tennessee, Route 284 in North Carolina where the road swings within park boundaries. It is called the Cataloochee Valley Road when it enters the valley proper. The northernmost section of the motor road begins eighteen miles east of Gatlinburg in Cosby, Tennessee, where Route 32 veers off to the right near the Cosby post office. Passing the turnoff to the Cosby campground, picnic

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<sup>15</sup> Peter Shelburne Givens; "Cataloochee and the Establishment of the Great Smoky Mountains National Park;" (masters thesis, Western Carolina University, Cullowhee, North Carolina, 1978); 44. See also Elizabeth Powers & Mark Hannah; Cataloochee, Lost Settlement of the Smokies: The History, Social Customs, & Natural History (Charleston, South Carolina: Powers-Hannah Publishers, 1982); 43.

<sup>16</sup> Givens; "Cataloochee and the Establishment of Great Smoky Mountains National Park;" 49. Also see Powers & Hannah; Cataloochee, Lost Settlement of the Smokies; 45-47.



area, and nature trail, the road climbs and curves up switchbacks along the park boundary for approximately eleven stomach-turning miles to the Tennessee-North Carolina state line. Here, at Davenport Gap, the pavement abruptly ends and the road crosses the famous Appalachian Trail. It then descends through thick forests into the village of Mount Sterling on Big Creek, runs uphill for another five-and-one-half miles to the park boundary, and crosses Mount Sterling Gap three miles later. The road then descends again along mountain switchbacks until it finally flattens out into the Cataloochee Valley. Here, open expanses of meadow confront the driver on either side. Except for the use of automobiles, today's route from Cosby to Cataloochee is quite similar to that taken by travelers during the early nineteenth century. As one Methodist circuit-riding missionary explained in 1800, "I rode, I walked, I sweat, I trembled, and my old knees failed. Here are gullies, and rocks, and precipices . . . but O, the mountains! Height after height."<sup>17</sup>

Soon after those in Cataloochee constructed the Cataloochee Turnpike, settlers in Cades Cove began improving Indian footpaths

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<sup>17</sup> As quoted in DeLaughter, Mountain Roads & Quiet Places; 71.

and laying out their own roads in that region. This process began informally within the cove itself as early residents wore wagon paths throughout the valley during the late 1820s and early 1830s. In an effort to link their homesteads, most of which were located near the base of mountains around the edge of the cove so as not to take up flat land suitable for agriculture, white settlers created a circular road system with a few lanes bisecting the valley floor. The park's contemporary Cades Cove loop road closely follows this "family-to-family" wagon network.<sup>18</sup>

While residents were busy linking their homesteads with wagon roads, two turnpikes were constructed nearby which although not directly connected to Cades Cove, nevertheless influenced road building into and out of the cove itself. One of these, known as the Parsons Turnpike, was located to the west just beyond the present park boundary and ran in a north-south direction from the mouth of Abrams Creek into North Carolina along the route now followed by U.S. 129. The other turnpike was never completed. Called the Anderson Turnpike, or the

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<sup>18</sup> Great Smoky Mountains Natural History Association; "Cades Cove;" 5.

McC Campbell-Anderson Road, it was planned to run from the eastern end of the cove up over the ridge of the Smokies at Spence Field and then down into North Carolina. The road was only constructed to the state line, passing through the present School House Gap, up White Oak Sinks to Laurel Creek, and then along Bote Mountain to Spence Field.<sup>19</sup>

The construction of the Parsons and Anderson turnpikes sparked somewhat of a road-building craze in Cades Cove, as residents attempted to link the cove with these two thoroughfares. In 1836, for instance, residents helped build a road from the eastern end of the cove up Crib Gap to intersect with the Anderson Turnpike where that road crossed Laurel Creek. This appears to be the first second-class, or wagon road, connecting the cove with Tuckaleechee. In 1838 the county court authorized the construction of another wagon road from the cove to link up with the Parsons Turnpike and called it the Parsons Branch Road. While both of these roads were being built to the east and south, the county court authorized the construction of a

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<sup>19</sup> A. Randolph Shields; The Cades Cove Story (Gatlinburg, Tennessee: Great Smoky Mountains Natural History Association, 1977); 13.

new road from Cades Cove north to Tuckaleechee via Indian Grave Gap. This thoroughfare served the residents of Cades Cove until 1920 when the State of Tennessee replaced it with the present Rich Mountain Road.<sup>20</sup> In the 1830s two additional roads were opened to connect Cades Cove with the outside world. One of these, known locally as the Cooper Road, became the principal route to Maryville, Tennessee for Cades Cove residents. The other road was called the Rabbit Creek Road and followed the Indian branch of the Tuckaleechee-and-Southeastern Trail leading out of the western end of the cove.<sup>21</sup>

Like those constructed in Cataloochee, many of the early wagon roads in Cades Cove paved the way, so to speak, for present-day park motor roads. For example, the contemporary Laurel Creek Road closely follows the old bed of the Crib Gap Road, while the route of the Parsons Branch Road remains for the most part unaltered. Although the Cooper Road and the Rabbit Creek Road are no longer used for wheeled traffic, both presently serve as hiking trails.

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<sup>20</sup> Shields; The Cades Cove Story; 13.

<sup>21</sup> Shields; The Cades Cove Story; 14.

Most importantly, however, the Cades Cove Loop road provides today's visitors with a glimpse of what it must have been like to travel through the cove during the mid nineteenth century. Much like the early settlers, today's motor tourists descend from the thick mountain forests along Laurel Creek onto the cove's cleared plain, where deer often graze on former agricultural fields. The eleven mile one-way loop road follows many of the grades and turns of the cove's old wagon roads, often weaving in and out of the woods just bordering the large meadow now maintained by the National Park Service. Along the way, the loop also passes numerous vestiges of the once-thriving community located in the valley. Motorists can stop and visit early Baptist and Methodist churches, a rustic water-powered mill, and numerous homesteads, each with their own family history.

### *Logging Railroads*

Unlike the early white settlers who built roads into Cataloochee and Cades Cove, loggers sought out the more inaccessible land within the Great Smoky Mountains. Here, where no farmer had cleared, sown, or harvested, they could find large stands of trees that were valuable as timber. This was hardly

the case in the North, where most of these loggers had come from. Having depleted the vast forests stretching from Maine to Minnesota and southward into Pennsylvania and Ohio, these northern-based logging companies began looking to the Southern Appalachians as a potential source of timber around 1900. Eventually they would log approximately 85 percent of what is now the national park. In doing so, however, they not only had to cut down one of the greatest virgin deciduous forests on earth. They also had to haul it away, a process that would greatly influence the future motor roads of Great Smoky Mountains National Park.

Logging had taken place in the Great Smokies long before the arrival of timber men from the North. During the late nineteenth century local managers ran small-scale logging operations that were financed with nearby capital. Cutting during this early period was highly selective, with loggers taking only the most valuable timber including poplar, black walnut, cherry, and ash. Primitive transportation technology and the difficulty of skidding logs through stumps or standing timber meant that many trees were sawed where they fell by portable mills. Those that were not were usually dragged by a team of horses or mules to

nearby water sources for transportation out of the forest.

Loggers thus focused their operations along the Smokies' numerous stream beds.<sup>22</sup>

The era of small-scale logging in the Great Smokies came to an end by the turn of the century. The growing demand for lumber and paper throughout the country and the development of improved methods of obtaining and manufacturing wood products brought outside capital and management into the region. With the arrival of larger operations also came increased demand for different tree species including oak, chestnut and hemlock. Central to this expansion was the logging railroad. As cutting progressed in a watershed, logging companies in the Great Smokies laid track up the valley, usually along streams and their tributaries. When loggers depleted the trees in that particular region they picked up the track and moved it for use in another watershed. Such logging railroads quickly reached areas within the mountains long considered inaccessible. By 1910, for instance, they had penetrated nearly all the watersheds within the park where

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<sup>22</sup> Robert Lambert; "Logging in the Great Smoky Mountains National Park;" an unpublished report to the Superintendent (1958); GRSM; 10-14.

extensive cutting took place. By World War I, these same railroad engines were chugging up the slopes of some of the Smokies' highest peaks.<sup>23</sup>

On the eve of the creation of the national park eighteen different lumber companies owned land in the Smokies (see Appendix 3). While their mill villages at Crestmont, Ravensford, Smokemont, Proctor, Fontana, and Elkmont are now overgrown with dense forests, the old track beds that many of these companies abandoned throughout the mountains remain (see Appendix 4). For example, the Cataloochee Lumber Company ran a standard gauge logging railroad from Waterville up Big Creek in the northeast section of the park. Today, this route that today serves as the access road to the Big Creek campground. Tracks laid out by other logging companies along Eagle, Hazel, and Forney creeks near Fontana also serve utilitarian purposes today, functioning as hiking trails.<sup>24</sup> The most obvious impact of such logging railroads on future park road development, however, is evident in

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<sup>23</sup> Lambert; "Logging in the Great Smoky Mountains National Park;" 16 & 29.

<sup>24</sup> Lambert; "Logging in the Great Smoky Mountains National Park;" 26 & 40-43.



the Tremont area on the Tennessee side of the Smokies and the region near Balsam Mountain in North Carolina.

In 1901 the Little River Lumber Company established the first major logging operation in what would become Great Smoky Mountains National Park. Two years later, after buying more than 70,000 acres along the tributaries of Little River, the company built a mill at Tuckaleechee and changed the town's name to Townsend in honor of the company's owner, W. B. Townsend. During the ensuing thirty years the firm cut between 750 million and one billion board feet in three different watersheds, producing enough timber to build 100,000 modern three-bedroom homes. Loggers working for Little River Lumber Company cut their last tree in December 1938 and the mill in Townsend sawed its last board on July 5, 1939.<sup>25</sup>

The Little River Lumber Company relied on a sophisticated network of railroad lines to transport all of this wood from the

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<sup>25</sup> Vic Weals; Last Train to Elkmont: A look back at life on Little River in the Great Smoky Mountains (Knoxville: Olden Press, 1991); 115. Lambert; "Logging in the Great Smoky Mountains National Park;" 52. Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 28. Also see Great Smoky Mountains Natural History Association; "Tremont Logging History: auto tour;" (Gatlinburg, Tennessee: Great Smoky Mountains Natural History Association, nd).

valleys where it was cut to the mill in Townsend where it was sawn into boards. Between 1904 and 1907 the company built a standard gauge railroad from Townsend up the west prong of Little River and continued it part way up Laurel Creek to Crib Gap. By 1908 it had also run an eighteen-mile logging railroad up the Little River's east prong and constructed a commissary, hotel, machine shop, and houses for workers at its terminus, naming this small mill town Elkmont. This line not only carried logs out and supplies in to Elkmont but also conducted regular passenger service from Townsend to the Appalachian Club and the Wonderland Hotel, both of which were drawing an increasing number of vacationers during this period. Finally, around 1926 the Company ran a third line up the middle prong of the Little River. During this period the Little River Lumber Company wore out ten locomotives.<sup>26</sup>

Before work on his rail line up the middle prong of Little River was even complete, in January 1926 W. B. Townsend began

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<sup>26</sup> Lambert; "Logging in the Great Smoky Mountains National Park;" 53-54. Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 28. Weals; Last Train to Elkmont; 21. Great Smoky Mountains Natural History Association; "Elkmont Logging History;" 2.

donating the railroad beds and bridges located on his logged-out holdings to the State of Tennessee. He first ceded the roadbed along the east prong of the Little River, which the state began widening in 1932 in order to accommodate automobile traffic between Townsend and Elkmont.<sup>27</sup> In 1933 a Civilian Conservation Corps (CCC) camp stationed along the middle prong of the Little River began work on that railroad line after Townsend abandoned it. CCC enrollees widened the bed, installed drainage features, and resurfaced the nine-mile road with crushed stone. After the lumber company finished its operations along the west prong of Little River and Laurel Creek in 1938, the Bureau of Public Roads began similar work on that abandoned railroad bed, completing the project in 1950.<sup>28</sup>

Because much of the contemporary motor road running along Little River and Laurel Creek was constructed directly atop abandoned railroad beds, it provides today's motorists with a

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<sup>27</sup> Weals; Last Train to Elkmont; 88.

<sup>28</sup> For Civilian Conservation Corps work on Little River Road see "Superintendent Monthly Report, August 1933;" GRSM. For Bureau of Public Roads work on Laurel Creek road see "Superintendent Monthly Report, November 1950;" GRSM.

driving experience that is unique within the Park. Like the old railroad line, the route from Elkmont to Cades Cove snakes back and forth with every bend. The road offers a low-elevation stream-side trip through the Smokies, with the roar of the river on one side and silent walls cut into the rock on the other. Along with winding through dense tree stands that often close above the road to form a leafy tunnel, the Little River-Laurel Creek road also passes a number of interesting stopping places. It begins at Sugarlands and continues on past Metcalf Bottoms where one can pull off and take a spur road to the Little Greenbrier School and cemetery. From that point, the road winds for a few more miles to the Sinks where a sharp turn in Little River's channel has formed a pool popular with divers. The road continues its sinuous course to the Townsend Wye where the middle, east, and west prongs of the Little River converge. While this area was very much the center of Townsend's logging operations during the early twentieth century, today the broad and peaceful stretch of river is a favorite swimming and sunning destination within the park. After running along the west prong of the Little River for a few more miles, the road begins following Laurel Creek down into Cades Cove.

Other logging operations near Balsam Mountain in North Carolina also greatly influenced the future motor road system in Great Smoky Mountains National Park. Soon after Townsend began laying track along Little River, the Champion Fibre Company constructed a pulp mill in Canton, North Carolina that dramatically increased the demand for timber by-products in the region. Sensing an economic opportunity, local timber companies began expanding their operations throughout the southern side of the Smokies.<sup>29</sup>

During the 1920s the Parsons Pulp and Lumber Company attempted to take advantage of the increased demand for Smoky Mountain wood products. The company built a mill at Ravensford near the present-day Oconaluftee Visitors Center that had a capacity of more than 2 million board feet of hardwood or three million board feet of spruce and hemlock per month. It also invested in a commissary, a boarding-house, and approximately forty houses for its workers, all located at Ravensford. Most importantly for the future road system of the national park, Parsons constructed a logging railroad sometime before 1926

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<sup>29</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 28.

across the Cherokee reservation and up Straight Fork to Round Bottom. This line was extended during the late 1920s to Balsam Corner Creek on the ridge of Balsam Mountain, with another spur running through Pin Oak Gap into the Cataloochee watershed.<sup>30</sup>

Much like the Parsons Pulp and Lumber Company, the Suncrest Lumber Company also expanded its operations in the Balsam Mountain region during this period. In 1925 Suncrest set up a mill in Waynesville, North Carolina and ran a railroad of its own from there to Black Camp Gap at the present-day park boundary. By 1929 it had extended this line along the Balsam Mountain ridge through Poll's (Paul's) Gap into the same Cataloochee watershed area served by the Parson Pulp and Lumber Company's railroad line. Although these two companies had established mills approximately twenty air-miles apart, they were laying out logging railroads that allowed them to cut towards one another's holdings.<sup>31</sup>

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<sup>30</sup> Lambert; Logging in the Great Smoky Mountains national Park; 31-32.

<sup>31</sup> Lambert; Logging in the Great Smoky Mountains National Park; 31.

When both the Parsons and Suncrest lumber companies ceased operations in the late 1920s and early 1930s, park officials immediately took steps to connect their two abandoned railroad beds in an effort to provide visitors with yet another unique motoring experience. In 1936 the CCC set to work widening both the Parsons' railroad bed up Straight Fork and the one built by Suncrest along Balsam Ridge, and also began connecting the two roads. Seven years later in 1943 the park finally opened the Straight Fork-Balsam Mountain road to motor traffic up to the Heintooga overlook.<sup>32</sup>

Although it follows former railroad beds, the Straight Fork-Balsam Mountain motor road provides today's park visitors with a markedly different driving experience than that found along Little River. Unlike the Little River and Laurel Creek roads, which stick to lower elevations, the drive along Balsam Mountain and down into Round Bottom passes through a wide range of scenery. The road begins in the Canadian high-country zone where

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<sup>32</sup> On CCC work widening and connecting the Straight Fork and Balsam Mountain sections see "Superintendent Monthly Report, May 1936;" GRSM. On the opening of the Straight Fork-Balsam Mountain road to the public see "Superintendent Monthly Report, June 1943;" GRSM.

spruce and fir dominate and continues along the ridge to the Balsam Mountain Campground (now closed), which at 5,310 feet was the highest developed campground in the park. From here the road ascends slightly to the Heintooga Overlook, which offers a breathtaking view of the valley below, and then begins its descent to Pin Oak Gap where it turns abruptly southwest toward Round Bottom. As the road heads down a deepening ravine the vegetation begins to change and rhododendron, mossy rocks, and dense woods replace the spruce and fir of the higher altitudes. At Round Bottom the road becomes broad and flat and remains so all the way to the park boundary with the Cherokee Indian Reservation.

#### MOTOR ROADS CREATE A PARK

##### *Auto-Boosters Promote a National Park*

The basic facts concerning the creation of Great Smoky Mountains National Park have been well-documented. Most accounts begin with the 1923 summer vacation of Mr. and Mrs. Willis P. Davis to national parks in the western United States, during which Ann Davis is reported to have asked her husband, "why can't



we have a national park in the Great Smokies?"<sup>33</sup> Historians usually next explain how Willis Davis then returned to Knoxville, enlisted the support of David Chapman, and began a park movement that raised millions of dollars, purchased over six thousand individual tracts of land, oversaw the removal of several thousand people from their homes and communities, overcame the opposition of five powerful timber companies, and finally, with the generous financial support of the Laura Spelman Rockefeller fund, succeeded in officially establishing a national park in the Great Smoky Mountains in 1934.

While historians are generally in accord concerning the facts leading up to the park's creation, they disagree widely on exactly why the park movement took shape. The most popular history of the park, that written by Michael Frome, makes heroes out of a few dedicated individuals including Willis and Ann Davis, David Chapman, and the other members of Knoxville's business community who first promoted the park idea after becoming alarmed at widespread logging throughout the region.<sup>34</sup>

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<sup>33</sup> As quoted in Campbell, Birth of a National Park In the Great Smoky Mountains; 13.

<sup>34</sup> Frome; Strangers in High Places.

Other histories argue that rather than a few ardent conservationists, it was an emerging desire within the National Park Service to protect biological diversity that ultimately led to a national park in the Smokies.<sup>35</sup> And although more recent scholarship correctly emphasizes the diverse roots and cooperative nature of the early park movement, it too fails to fully acknowledge the central role played by roads and auto-tourism in the founding of Great Smoky Mountains National Park.<sup>36</sup>

This omission seems all the more glaring considering the fact that the original park movement was intimately linked to road boosterism. Willis Davis, for instance, was not only general manager of the Knoxville Iron Company and a member of the Knoxville Chamber of Commerce, but was on the board of directors of the Knoxville Automobile Club.<sup>37</sup> The other so-called "father of the park movement," David Chapman, was likewise a prominent local businessman as well as a board member of the same car

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<sup>35</sup> Runte, National Parks; 117.

<sup>36</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 7.

<sup>37</sup> Although the name of the Knoxville Automobile Club was later changed to the East Tennessee Automobile Club, I have maintained the original name here so as to avoid confusion.

organization.<sup>38</sup> Moreover, both men used their influence within the Knoxville Automobile Club to jump-start their campaign to create the park.

Davis launched his promotional campaign for a national park in the Smokies at a Knoxville Automobile Club board meeting on October 22, 1923. At the meeting he found a very receptive audience. For years the club had been promoting the Smoky Mountains to motor tourists through a series of articles in Knoxville newspapers with headlines such as "Auto Club Recommends Jaunt to Gatlinburg for Weekends," and "Road to the Smokies Lends Lure to Those Who Would Escape City."<sup>39</sup> The club also endorsed proposed road-improvement projects through Cades Cove and across Newfound Gap in similar efforts to increase visitation in the area. Such roads, members of the Knoxville Automobile Club understood, would not only bring tourists to the region but their wallets as well. Even more importantly, if a national park was established in the Smokies the federal government might construct

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<sup>38</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 40 & 43.

<sup>39</sup> Lix; "Short History of the Great Smoky Mountains National Park;" 35.

new roads in the area. Thus Davis's notion of a national park complemented quite well the club members' own desire to promote economic development in the region through road building.

After Davis brought his park idea to the Knoxville Automobile Club, members immediately took action to support the project. In 1923 they created a special committee called the Smoky Mountains Conservation Association in order to publicize and coordinate the campaign and elected Davis as its president and Chapman as chairman of the board.<sup>40</sup> Interestingly enough, Davis and Chapman were not the only resources shared by both groups. The auto club and the new conservation organization also had the same office space and board of directors. Many of the publicity events organized by the Smoky Mountains Conservation Association involved the promotion of motor roads. For example, in May 1924, Davis, Chapman, and several other members of the conservation group made a five-day inspection trip into the Smokies to obtain first-hand information for their proposal to the federal government for a national park. An equally important

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<sup>40</sup> Lix; "Short History of the Great Smoky Mountains National Park;" appendix. This committee was called the Smoky Mountains Forest Reserve Association until January, 1924 when it changed its name to the Smoky Mountains Conservation Association.

purpose of the trip, however, was to promote road building in the area; officials of the Tennessee State Highway Department even accompanied the group.<sup>41</sup> And such close cooperation worked both ways, as when the Knoxville Automobile Club staged an elaborate victory banquet in 1926 after Congress finally passed the bill authorizing a national park in the Smokies.<sup>42</sup> In fact, so fuzzy was the distinction between the Auto Club and the Smoky Mountains Conservation Association that Russel Hanlon, then secretary-manager of the auto-club, remembered that, when either organization convened, "it was often difficult to determine which group was meeting."<sup>43</sup>

*Automobiles, "See America First," and Good Southern Roads*

Knoxville road boosters were not alone in their desires or actions. On the contrary, this local campaign was very much part of regional and national changes taking place during the 1920s that would also help encourage the creation of Great Smoky

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<sup>41</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 43.

<sup>42</sup> Campbell; Birth of a National Park; 45.

<sup>43</sup> As quoted in Campbell; Birth of a National Park; 17.

Mountains National Park. Nationwide, the development of mass-produced automobiles was resulting in cheaper prices and a correlative increase in automobile ownership. In the South, for instance, the number of registered automobiles increased from approximately 25,000 in 1915 to 146,000 just five years later. Just as importantly, Americans during this period were not just driving their new cars to and from work. Record numbers of them were also using their automobiles to experience a new type of leisure activity, one which involved vacationing in the great outdoors.<sup>44</sup>

The untapped potential of this nationwide increase in auto-tourism was not lost on National Park Service Director Stephen Mather, who embarked on an ambitious campaign during this period to popularize the national parks. After Mather persuaded well-known newspaper editor Robert Sterling Yard to become publicity director for the Park Service, the leading magazines in the nation including the *Saturday Evening Post* and *National Geographic* began running articles extolling the beauties of places such as Yosemite, Yellowstone, and the Grand Canyon.

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<sup>44</sup> Pierce; "Boosters, Bureaucrats, Philanthropists and Politicians;" 25.

western railroad companies had already launched their own highly successful "See America First" campaign to promote travel to western parks. Because of such efforts, attendance at national parks soared, increasing from 356,097 visitors in 1916 to more than 1.2 million in 1922.<sup>45</sup>

Along with these national events, the southern United States during this period experienced a related movement of its own that influenced the founding of a national park in the Smokies. Throughout the 1920s the issue of good roads became one of the primary political and civic issues in the region. Believing that improved motorways would propel the South into the national economic mainstream, Southerners such as the members of the Knoxville Automobile Club pressured their state representatives accordingly. The State of Tennessee responded by expanding its mileage in surfaced roads from 500 miles in 1920 to more than 5,000 miles by 1929. Not to be outdone, North Carolina built 7,500 miles of highway between 1921 and 1925, connecting all one hundred of its county seats. Although such projects proved particularly appealing to those living in the virtually roadless

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<sup>45</sup> Pierce; "Boosters, Bureaucrats, Politicians, and Philanthropists;" 18-20.

regions of Western North Carolina and East Tennessee, the high cost of building roads through the Smoky Mountains kept road construction in this area to a minimum.<sup>46</sup>

The motivations of park boosters were thus clear from the start, and had at least as much to do with road development as with traditional notions of scenic preservation. Along with wanting to protect the region from the onslaught of loggers, those such as Willis Davis and David Chapman also viewed the park as a means of encouraging tourism through road development. Chapman openly admitted as much. In a speech given to the Knoxville Kiwanis Club in January 1924, Chapman explained that if the federal government created a national park in the Smokies "tourists by the thousands would pass through Knoxville to reach this veritable paradise of beauty." He then explained to his audience that central to this rosy economic picture were the roads that the federal government would build to accommodate these tourists once the park was created.<sup>47</sup> For park promoters,

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<sup>46</sup> Pierce; "Boosters, Bureaucrats, Philanthropists and Politicians;" 25-26.

<sup>47</sup> Pierce; "Boosters, Bureaucrats, Politicians and Philanthropists;" 43.



then, tourism, road construction, and the creation of a national park were three aspects of a similar pro-development attitude expressed during an earlier era by the Smokies' pre-park inhabitants.

*Tennessee, North Carolina, and Newfound Gap Road*

The close connection between road development and the creation of Great Smoky Mountains National Park is best illustrated by the history of the region's most important thoroughfare, the Newfound Gap Road. As already noted, the Cherokee blazed a footpath across the Smokies through Indian Gap, just west of Newfound Gap, prior to white settlement. In an effort to improve transportation along this route the North Carolina state legislature chartered the Oconaluftee Turnpike Company in 1832 and permitted it to sell stock for the construction of a wagon road atop the Cherokee trail from Indian Gap down the Oconaluftee River to the area just below present-day Smokemont. This toll road was completed in 1839 only to be improved again in 1862 by Colonel W. H. Thomas and a Confederate

battalion made up primarily of Cherokee Indians.<sup>48</sup> Although the Oconaluftee Turnpike accommodated a steady stream of traffic throughout the late nineteenth and early twentieth centuries, during the mid-1920s civic boosters in both Western North Carolina and East Tennessee began demanding that the route across the mountains be improved once again, this time to accommodate the increasing number of motorists that were finding their way to the Smokies. While in accord that the wagon road should be made accessible to motor vehicles, supporters disagreed vehemently over who should pay for such repairs. The debate that ensued speaks volumes about the intimate connection between the creation of Great Smoky Mountains National Park and its road system.

The local dispute over whether or not the states of Tennessee and North Carolina should fund the construction of Newfound Gap Road was sparked by the contemporaneous actions of the National Park Service. At the time, the National Park Service was conducting surveys of the Southern Appalachian Mountains in order to determine the best location for a new

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<sup>48</sup> Lambert; The Pioneer History of the Great Smoky Mountains National; 65. Lix; "Short History of the Great Smoky Mountains National Park;" 84.\_

national park. After several months of on-site inspections, the congressionally appointed Southern Appalachian National Park Commission announced its recommendations on December 13, 1924. Although admitting that the Great Smokies "stand first because of the height of mountains, depth of valleys, ruggedness of the area, and the unexampled variety of trees, shrubs and plants," the report warned that their "very ruggedness and height make road and other park development a serious undertaking as to time and expense." In lieu of such findings, the congressional commission determined that the Blue Ridge Mountains of Virginia were the "outstanding and logical place" for the first national park in the South.<sup>49</sup>

Although in the end the Southern Appalachian National Park Commission recommended establishing two parks in the southern United States, one in Virginia and one in the Great Smokies, its findings in favor of Shenandoah National Park caused a heated debate among boosters in the Smoky Mountains region concerning the construction of Indian Gap Road. Three factions, each

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<sup>49</sup> As quoted in Campbell; Birth of a National Park; 29. See also Pierce; "Boosters, Bureaucrats, Philanthropists and Politicians;" 56.

supporting the construction of the road, vied for public support. The smallest contingent was comprised of those who argued that the construction of Indian Gap Road by the states of North Carolina and Tennessee would alleviate the fears expressed by the Southern Appalachian National Park Commission concerning the expense of building roads through the Smokies and thus encourage the creation of the park. In June 1927 this group declared in the *Knoxville News-Sentinel* that "the [Indian Gap Road] will permit men of means to see the (proposed) park area and thus assist in the national park campaign."<sup>50</sup> The Tennessee State Highway Commissioner agreed, issuing a public statement in July of the same year in which he "expressed the belief that construction of the [Indian Gap Road] will hasten realization of the national park."<sup>51</sup>

A second more vocal group argued that neither Tennessee nor North Carolina should expend funds to construct the Indian Gap Road because the federal government would do so when the national

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<sup>50</sup> "Sevier County Citizens Tell Why They Want Indian Gap Road Now;" *Knoxville News-Sentinel*; 23 June 1927; np.

<sup>51</sup> "Contract Let to Build Indian Gap Highway," *Montgomery (Tennessee) Vindicator*; 20 July 1927; np.

park became a reality. Obviously confident that a Great Smoky Mountains National Park lay in the not-so-distant future, this faction publicized its view in newspaper articles with titles such as "Hold Up That Indian Gap Road: Let Your Uncle Sam Build It!" The author of this May 12, 1927 editorial also argued against state funding on the grounds that "[building] this road BEFORE the park area is taken over will increase the value of the land on both sides of the road, and when it is acquired for the national park . . . we shall have to pay a higher price for that land than we would have to pay if the road is not yet built".<sup>52</sup>

Finally, the most vocal contingent in the debate favored the construction of Indian Gap Road regardless of whether or not the federal government created a national park in the Smokies. The proposed road bisecting the mountains, this group publicly asserted, "will be of much greater benefit to Sevier County and Knoxville than the park."<sup>53</sup> According to C. N. Bass, Commissioner of the Tennessee Department of Highways and Public

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<sup>52</sup> "Hold Up That Indian Gap Road: Let Your Uncle Sam Built It!;" *Knoxville News-Sentinel*; 12 May 1927; np. [Capitalization theirs].

<sup>53</sup> "Sevier County Citizens Tell Why They Want Indian Gap Road Now;" *Knoxville News-Sentinel*; 23 June 1927; np.

Works, such sentiment was widespread. In a letter to National Park Service Assistant Director Arno Cammerer, Bass explained, "I am of the opinion that [the local population] had personally rather see the road built than to have the Park established." In an added twist, Bass explained that allowing North Carolina and Tennessee to build Newfound Gap Road might actually help the National Park Service in its effort to establish a park in the region by appeasing the local population. "I believe the moral effect of having the road established and built," Bass wrote to Cammerer, "will assist in our efforts to secure the Park."<sup>54</sup>

Despite warnings from the National Park Service that plans for the proposed Indian Gap Road failed to meet Park Service standards and that the road would therefore have to be rebuilt when and if the Smokies became a national park, the state of Tennessee began constructing its portion of the road in 1927. After a team surveyed the old Cataloochee Turnpike and recommended a route through Newfound Gap rather than Indian Gap,

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<sup>54</sup> Commissioner of the Tennessee Department of Highways and Public Works C.N. Bass to National Park Service Assistant Director Arno B. Cammerer; 23 May 1927; File 1; Box 301; Entry 7; Record Group 79; National Archives (hereafter referred to as NARA).

the Tennessee Highway Department awarded the construction contract in July of that year. Crews began work the following month and completed the Tennessee side of what was now being called Newfound Gap Road in summer 1929. Because state road officials in North Carolina cooperated more closely with the National Park Service, the portion of Newfound Gap Road in that state was not finished until January 1933.<sup>55</sup>

*The National Park Service's Motor Road Aesthetics*

The National Park Service's warnings concerning the construction of Newfound Gap Road by Tennessee and North Carolina proved prophetic. Even before the federal government officially accepted deeds from both states for 150,000 acres of land in the Smokies on February 6, 1930, the Park Service had determined that much of Newfound Gap Road, especially on the Tennessee side, would have to be reconstructed. This project by the National Park Service would not only make Newfound Gap Road safer, but

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<sup>55</sup> On the construction of Indian Gap Road see "Superintendent Monthly Report, January 1933;" GRSM. Also see Lix; "Short History of the Great Smoky Mountains National Park;" 86. For National Park Service opposition to road plans see Campbell; Birth of a National Park, 72.

would also inaugurate a new era of road building in the Great Smoky Mountains.

The Park Service had begun building roads in earnest in the country's national parks during the mid-1920s. In many respects this process began in early 1926 when the Service entered into a cooperative agreement with the Department of Agriculture's Bureau of Public Roads (BPR). Under this agreement BPR engineers would provide technical expertise for road construction while the National Park Service's landscape architects would be responsible for ensuring these roads' aesthetic quality. The result was a naturalistic method of construction, often called "rustic," that involved the careful positioning of park roads in relationship to natural topography and scenery. Such an approach ideally suited the needs of park road designers, making it possible for them to uphold the twofold policy of the National Park Service: to provide access to the public while preserving the resources and scenery within the park.<sup>56</sup>

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<sup>56</sup> Cultural Resources, National Park Service, U.S. Department of Interior; "Historic Stonemasonry of Great Smoky Mountains National Park, G.P.S. Survey 1993, Open File Report No. 7;" report prepared by Interagency Resources Division Cultural Resources Geographic Information Systems Facility (Fall 1994); 11.



Although during the early 1930s the Park Service had been involved in planning several mountain roads in the eastern parks such as Skyline Drive in Shenandoah and Cadillac Mountain Road in Acadia, none posed the technical challenges of Newfound Gap Road in the Smokies. BPR engineers had to completely rework large sections of the Tennessee portion in order to make it safe for motor vehicles. For instance, to eliminate sharp curves and steep grades the BPR specified a loop-over structure in 1934 to replace two switchbacks, and added a second tunnel and several bridges in 1936. BPR engineers also decided to repave the entire road before opening it to the public in April 1938.<sup>57</sup>

As important as the technical improvements made by BPR engineers to Newfound Gap Road were the aesthetic changes undertaken by the National Park Service's landscape designers. In general, such changes took two forms. First, the road was reconstructed so as to provide motor tourists with even better

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<sup>57</sup> On the elimination of sharp curves and steep grades see "Report on Project 1A4, Tennessee State Highway Number 71:" 19 July 1935; File 12, Special Reports; Box 1, Jennison; GRSM. On construction of the loop-over see "Superintendent's Monthly Report, November 1935;" GRSM. On construction of tunnels see "Superintendent's Monthly Report, September 1937;" GRSM. And on opening of road to public see "Superintendent's Monthly Report, April 1938;" GRSM.

access to the park's breathtaking mountain scenery. Park Service landscape architects accomplished this through a variety of means, the most important of which was the scenic parking area or overlook.

Although the Park Service constructed a number of parking areas with scenic overlooks along Newfound Gap Road, the most impressive and well-known of these sits atop Newfound Gap. The Park Service began designing this overlook in 1936 as a memorial to Laura Spelman Rockefeller, whose son John D. Rockefeller, Jr., who oversaw the donation of \$5 million from the Laura Spelman Rockefeller Fund to help establish the park in 1928. Straddling the boundary between Tennessee and North Carolina, the overlook area included a stone masonry memorial platform as well as a large parking terrace with battered retaining walls. The parking area served a double purpose, giving motorists the opportunity not only of visiting the memorial but also of taking in the sweeping panoramic views of the North Carolina mountains displayed prominently from the lot.<sup>58</sup> Such was the view on

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<sup>58</sup> On commencement of work on memorial see "Superintendent's Monthly Report, July 1936;" GRSM. On FDR speech at memorial see "Superintendent's Monthly Report, September 1940;" GRSM. On expansion of parking area see "Plan for

September 2, 1940, when President Franklin Roosevelt officially dedicated Great Smoky Mountains National Park before a crowd of more than 10,000 people.<sup>59</sup>

Along with providing motor tourists with better access to the natural scenery of the Great Smoky Mountains, a second set of scenic improvements undertaken by Park Service designers made the Newfound Gap Road itself more aesthetically pleasing. One way the Park Service accomplished this was by extensively landscaping those areas along Newfound Gap Road that had been most severely reworked. Such landscaping was nothing new to the National Park Service. Following the lead of American urban park planners, who began practicing a form of Andrew Jackson Downing's "Natural" landscape gardening during the early nineteenth century, Park Service landscape architects emphasized informal principles of design that used native plants to harmonize with man-made structures.<sup>60</sup> In line with this tradition, the Park Service

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Proposed Project, 1A16, B9, Reconstruction Newfound Gap Parking Area;" Bureau of Public Roads, 1965; Maintenance Division Files; GRSM.

<sup>59</sup> "Superintendent's Report, September 1940;" GRSM.

<sup>60</sup> National Park Service; "Historic Stonemasonry of Great Smoky Mountains National Park;" 11.

went to great lengths to hide scars created by the reconstruction of Newfound Gap Road.

Designers completed landscape plans for Newfound Gap Road in January 1934. After establishing nurseries at Sugarlands in Tennessee and Ravensford in North Carolina, the latter of which produced more than 500,000 seedlings in 1940, the park used Civilian Conservation Corps (CCC) camps located within the park during the Great Depression to carry out the plan.<sup>61</sup> Throughout the mid to late 1930s CCC enrollees extensively landscaped the North Carolina section of the Newfound Gap Road by grading the banks of cuts, covering fills with leaf litter to stabilize soils, and planting the slopes with native tree species. The CCC also filled and planted the islands of the Newfound Gap parking area in 1936. In describing these CCC projects in his January, 1934 monthly report, Park Superintendent J. R. Eakin wrote, "this

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<sup>61</sup> On landscape plans and the nurseries at Sugarlands and Ravensford nursery see "Superintendent's Report, August 1933;" GRSM. On the Ravensford nursery in 1940 also see Lix, "Short History of the Great Smoky Mountains National Park," 97.

type of work is more apparent to the average tourist than our road and trail construction."<sup>62</sup>

Along with using native flora to hide the scars left by the reconstruction of Newfound Gap Road, Park Service landscape designers also recommended using building materials made of local stone.<sup>63</sup> This practice is most evident in the stone guardrails, culverts, and walls found along Newfound Gap Road, as well as on roads throughout the park. Plans for each of these structures called for the use of local sandstones and limestones whenever possible. In July 1937, for instance, the CCC constructed a dry masonry boulder retaining wall between Newfound Gap Road and the Oconaluftee River in North Carolina from native stones. CCC workers also built "stone barriers" of local sandstone near the loop-over in March 1938, and used nearby rock for much of the stone work for the Rockefeller memorial at Newfound Gap.<sup>64</sup>

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<sup>62</sup> On CCC roadside landscape work see King to Eakin; 9 July 1936; File 8 "Correspondence;" Box "Willis King 2;" GRSM. For Eakin's description of CCC landscape work see "Superintendents' Monthly Reports, January 1934;" GRSM.

<sup>63</sup> National Park Service; "Historic Stonemasonry of Great Smoky Mountains National Park;" 20.

<sup>64</sup> On the retaining wall along the Oconaluftee River see "Superintendent's Monthly Report, July 1937;" GRSM. On the stone

Even more impressive than the rock walls found along Newfound Gap Road are the impressive stone bridges and tunnels that help motorists up and over the Appalachian divide. As with most of the bridges in the park, those along Newfound Gap Road reflect a simple unornamented architectural style based on native stone materials. Although each concrete bridge is veneered in stonemasonry and arched with walls of native stone, each takes on a unique appearance because Park Service designers tailored every bridge specifically to the contours and natural setting of its particular site. The Park Service also built two tunnels along Newfound Gap Road during the reconstruction period, both of which are similarly blended naturalistically with the surrounding rock outcropping.<sup>65</sup>

Most of these aesthetic features are evident when one drives the Newfound Gap Road today. Because of them, and because the views along the road are some of the most breathtaking in the eastern United States, the route across the mountains is the

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barriers near the loop-over see "Superintendent's Monthly Report, March 1938;" GRSM. And for CCC stone work on the Rockefeller memorial see "Superintendent's Monthly Report, July 1939;" GRSM.

<sup>65</sup> National Park Service; "Historic Stonemasonry of Great Smoky Mountains National Park;" 21 & 22.

park's most traveled road. From the base of the Smokies at the Sugarlands Visitor Center motorists drive along the West Prong of the Little Pigeon River to Newfound Gap, which breaks through the Appalachian divide at over 5,000' above sea level. Drivers then descend more than 3,000' along the Oconaluftee River. Because of this changing elevation motorists pass through a succession of climatic zones that serve as habitats to various tree communities, including spruce-fir which is usually found in more northern regions. Moreover, the road provides the motor tourist with a host of opportunities to view and interact with this diverse scenery. As mentioned above, the Park Service constructed numerous overlooks including those at Chimney Tops and Oconaluftee Valley, to name just two, as well as the most famous at Newfound Gap. The route across the Smokies also encourages even more intimate encounters with the natural world through the numerous "quiet walkways" and "nature trails" that are set off just beyond many of Newfound Gap Road's overlooks. Here, visitors can stop and take self-guided nature trails in order to learn more about the park, or wander down a quiet walkway and just ponder the scenery.

It is because the National Park Service consciously designed such features into the reconstructed Newfound Gap Road that it is today considered one of the finest park roads in the country, compared often to Acadia's Park Loop Road, Shenandoah's Skyline Drive, and even to Glacier National Park's Going-to-the-Sun Highway. Even more important for future motorists, the reconstruction of Newfound Gap Road set the standard by which all subsequent road projects in Great Smoky Mountains National Park would be judged.<sup>66</sup>

#### THE PARK'S EARLY MOTOR ROAD DEVELOPMENT

##### *The Great Depression and Franklin Roosevelt's New Deal*

On October 29, 1929, the New York Stock Market crashed. Soon more than thirteen million Americans, or one in four, were jobless and bands of unemployed men, women, and young adults roamed the countryside searching for work. The economic situation was even worse in the Smokies than in the rest of the country. By 1930, for instance, eight banks in Western North Carolina, most of them in or near Asheville, had failed. On the

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<sup>66</sup> National Park Service; "Historic Stonemasonry of Great Smoky Mountains National Park;" 16.



other side of the mountains in Knoxville, six of the eleven banks that had been in operation in 1920 had also shut their doors by 1933.<sup>67</sup>

When Franklin Roosevelt became President on March 4, 1933, he immediately began a flurry of legislative activity aimed at alleviating this economic hardship. Roosevelt's New Deal began on March 9 when he declared a banking holiday to return confidence to the nation's depositors, and continued unabated one week later when he came to the aid of the nation's farmers with the Agricultural Adjustment Administration. In his third official act as President, Roosevelt called on Congress to create the Civilian Conservation Corps (CCC). Through the CCC he proposed to take 250,000 unemployed young men off the streets and give them jobs at thirty dollars a month doing conservation work primarily in national forests and national parks. "It is essential to our recovery program that measures immediately be enacted aimed at unemployment relief," the President explained on

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<sup>67</sup> Lucile Deaderick, ed., *Heart of the Valley: A History of Knoxville, Tennessee* (Knoxville: East Tennessee Historical Society, 1976), 377. Ina Van Noppen and John Van Noppen, *Western North Carolina Since the Civil War* (Boone, North Carolina: Appalachian Consortium Press, 1973), 387.

March 21. "We can take a vast army of these unemployed men," he added, and put them to work in "the prevention of soil erosion, flood control and similar projects."<sup>68</sup> Within a week the CCC was enrolling thousands of young men and the first CCC camp was being constructed near Luray, Virginia.<sup>69</sup>

Both the Depression and the New Deal significantly affected road building in Great Smoky Mountains National Park. Because the country's unemployed could rarely afford vacations, even inexpensive ones to national parks, motor-tourism in the Smokies declined dramatically during the early 1930s. In 1931, for instance, only 154,000 visitors made the trip to Great Smoky Mountains National Park.<sup>70</sup> Yet work relief projects such as the CCC also provided park administrators with a rare opportunity. This was first intimated even before President Roosevelt signed

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<sup>68</sup> Edgar Nixon, ed.; *Franklin D. Roosevelt and Conservation, 1911-1945* (Hyde Park, New York: National Archives and Records Services, 1957); 1:143-144.

<sup>69</sup> Conrad Wirth; *Parks, Politics, and the People*; (Norman: University of Oklahoma Press, 1980); 70.

<sup>70</sup> On the Great Depression see Arthur Schlesinger, Jr.; *The Age of Roosevelt: The Coming of the New Deal* (Boston: Houghton Mifflin Company, 1959); 16-18. For Great Smoky Mountains National Park attendance records see "Travel to Great Smoky Mountains National Park;" File "Visitation 1990s;" GRSM.

the CCC into law, when on March 16, 1933 National Park Service Director Horace Albright sent a memorandum to all park Superintendents informing them that a large federal appropriation for "conservation" work, including \$8 million earmarked for road construction, was probable.<sup>71</sup> Thus, while local road boosters during the 1920s had desired a national park in the Smokies in order to spur economic growth, in 1933 Great Smoky Mountains National Park was about to embark on a massive road building program in an effort to help the region avoid economic collapse.

#### *The CCC Develops Park Motor Roads*

In May 1933 Great Smoky Mountains National Park saw the establishment its first CCC camp on Laurel Creek in the Tennessee portion of the Park. The number of camps functioning simultaneously quickly increased to nine by July of that year and peaked at sixteen during 1934 and 1935, when the CCC stationed 4,350 enrollees in Great Smoky Mountains National Park. Before the federal government terminated the CCC and the camps abandoned in the park on July 8, 1942, nineteen companies had originated in

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<sup>71</sup> Wirth; *Parks, Politics, and the People*; 74.

the park and twenty-two camps, some of them side or spur camps, had been built within the park's boundaries (see Appendix 5).<sup>72</sup>

During the peak year of CCC activity in the Smokies, enrollees performed more than 85 million man-hours of labor.<sup>73</sup> While many CCC camp projects entailed conservation work such as tree planting, the great majority of enrollees constructed fire towers, sewer systems, visitor comfort stations, and hiking trails in an effort to develop the park for visitors. As park official Robert White explained in September of 1935, "Undoubtedly, the 17 CCC camps stationed in this Park have helped develop this Park at a much more rapid rate than any other Park

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<sup>72</sup> There is some debate as to the actual number of CCC camps functioning in Great Smoky Mountains National Park. Some of this confusion is due to the fact that camps were constantly being moved to other areas of the park or being reassigned to different regions of the country. Adding to this confusion is the fact that many side, or branch, camps seem to have functioned in the more inaccessible areas of the Smokies. See especially Charlotte Pyle; "CCC Camps in Great Smoky Mountains National Park;" (1979) unpublished manuscript; GRSM; 3. See also Walter Miller; "The CCC in East Tennessee and the Great Smoky Mountains National Park;" (1974); unpublished manuscript; GRSM; 6.

<sup>73</sup> This figure is a conservative estimate made by taking the 4,350 CCC enrollees stationed in the park in 1934-1935 and multiplying them by a forty hour work week and then again by a fifty week year (two weeks allowed for holidays). Total annual man-hours per year come to 87,000,000.

ever built by the Federal Government . . .the Park has advanced at least ten years."<sup>74</sup> One of the most common developmental projects for CCC camps stationed in the Smokies was improving existing park motor roads and constructing new ones.

The two CCC camps stationed in Cades Cove worked extensively on the motor roads in that region of the Park. Improvements began in January 1934, when CCC enrollees added drainage features and surfaced that portion of the loop road running eastward from the Cove through Crib Gap in preparation for its connection with a new road being planned up Laurel Creek to Townsend.<sup>75</sup> In the southern end of Cades Cove the CCC rebuilt two log bridges and a ford on the lower part of Parsons Branch Road and relocated nearly one mile of the road along Forge Creek. Between 1934 and 1938 CCC workers also stabilized the slopes of Rich Mountain Road, which ran north out of the cove towards Townsend.<sup>76</sup>

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<sup>74</sup> "Superintendent's Monthly Report, September 1935;" GRSM.

<sup>75</sup> "Superintendent's Monthly Report, January 1934;" GRSM.

<sup>76</sup> U.S. Bureau of Public Roads; "Inventory and Inspection Report, Parsons Branch Road;" 11 September 1950; GRSM. U.S. Bureau of Public Roads; "Inventory and Inspection Reports, Rich Mountain Road;" 11 September 1950; GRSM.

Along with road projects in Cades Cove, CCC camps in Great Smoky Mountains National Park worked on Little River Road between Elkmont and the Tremont Wye. The CCC began improving the Little River Road in August 1933, soon after their arrival in the park. With heavy earth moving equipment on loan from the Little River Lumber Company, enrollees removed rocks, added drainage features, and resurfaced the road with crushed stone.<sup>77</sup> In 1935 the CCC also reconstructed three bridges spanning Little River at Long Arm, the Sinks, and Camp Two.<sup>78</sup> The most substantial of these three structures, and possibly the most impressive CCC project in the park, was the construction of the four-arch stone bridge over the Little River at Elkmont begun in June 1936. According to Park Superintendent Eakin, this project involved "a very nice job of masonry . . . this type of construction is a new departure in this park." Eakin added that numerous CCC enrollees had become

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<sup>77</sup> "Superintendent's Monthly Report, August 1933;" GRSM.

<sup>78</sup> U.S. Bureau of Public Roads; "Inventory and Inspection Report, Cades Cove Road;" GRSM.

skilled stone cutters by the time the bridge was completed in July 1937.<sup>79</sup>

Besides improving motor roads running through the lowlands of the park in places such as Cades Cove and along Little River, the CCC also helped build new motor roads at much higher elevations. One such project was the 7.5-mile road running from Newfound Gap to Clingmans Dome, which at 6,643' is the highest peak in the Smokies. After construction of the road was completed in November of 1935, CCC enrollees began landscaping and bank-sloping the shoulders in May 1936.<sup>80</sup> The following year CCC workers also expanded the parking area at the terminus of the dead-end road, and built a rustic-style wood observation tower near the parking lot to allow park visitors to see over the spruce and fir trees on the peak.<sup>81</sup>

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<sup>79</sup> "Superintendent's Monthly Report, November 1936;" GRSM.  
"Superintendent's Monthly Report, July 1937;" GRSM.

<sup>80</sup> "Superintendent's Monthly Report, May 1936;" GRSM.

<sup>81</sup> On the expansion of the Clingmans Dome parking area see "Superintendent's Monthly Report, September 1937;" GRSM. On the wooden observation tower see "Superintendent's Monthly Report, May 1950;" GRSM.

Due in part to the work done by CCC enrollees, Clingmans Dome Road offers today's motorists outstanding views of one the most undeveloped areas in the Smokies, that lying southwest of Forney Ridge. As one winds from Newfound Gap past Indian Gap, where the old Indian footpath and Cataloochee Turnpike once crossed the Appalachian divide, motorists can peer through the trees alongside the road for a quick glimpse down corrugated valleys into North Carolina. They can also stop at one of the many overlooks and take in the view at their leisure. Either way, motorists will quickly realize that at this altitude the driving experience is quite different from anywhere else in the park. Along the way to Clingmans Dome present-day motorists may also notice the skeletal remains of fir trees, which have recently begun to die because of the balsam woolly aphid and acid rain. Finally, motorists can experience breathtaking views from the parking area at the end of the road, or leave their cars and walk the half mile to the observation tower at the summit.<sup>82</sup>

*A "Skyway" Across the Smokies*

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<sup>82</sup> The existing observation tower is a later construction, a replacement of the original.



Construction of Clingmans Dome Road actually marked the completion of just one section of a much grander road-building project planned for the Great Smoky Mountains. Beginning in February 1932, members of the Asheville, North Carolina Chamber of Commerce began promoting the construction of a so-called "Skyway" across the park along the Appalachian divide (see Appendix 6). The proposed road would begin in Deals Gap on the southwestern edge of the park and run eastward along the crest of the Smokies to Mount Sterling Village near the present-day Big Creek entrance on the very eastern side of the park.<sup>83</sup> In July of 1932 Superintendent Eakin announced that the park would go ahead with this project, and in November and December of that year the Bureau of Public Roads inspected the proposed route of the road.<sup>84</sup>

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<sup>83</sup> On the actions of the Asheville Chamber of Commerce see Great Smoky Mountains National Park Superintendent J. R. Eakin to National Park Service Director Horace Albright; 16 February 1932; File 2; Box 310; Entry 7; Record Group 79; NARA. On the early proposed route see "Planning For Park Highway;" *Asheville* (North Carolina) *Times*; 3 August 1932; 4.

<sup>84</sup> On J. R. Eakin announcement see "Plans 40-Mile 'Skyline Road' in Smoky Park;" *Knoxville News-Sentinel*; 29 July 1932; np Charles Peterson, Assistant Chief Landscape Architect, National Park Service to Director of National Park Service; 2 December

In many respects the actions of the Asheville Chamber of Commerce were similar to those undertaken nearly a decade earlier by its counterpart organization in Knoxville, Tennessee. Like Willis Davis and David Chapman, members of Asheville's business community wanted to capitalize as much as possible on the tourist potential of the new national park. Yet ever since Great Smoky Mountains National Park was established, the Tennessee side had developed at a much faster rate. In the North Carolina portion of the park there were no road projects such as those undertaken by the CCC in Cades Cove and along Little River, both of which drew motor tourists by the thousands each year. The Skyway, with both its end-points located in North Carolina, would help rectify this imbalance. And although the Asheville Chamber of Commerce employed democratic rhetoric in promoting their proposal, arguing that the road across the Smokies would "bring in its unfolding the largest practicable service to the largest possible number of people," their plan to build a state road from the Skyway at

Mount Sterling Village directly to Asheville suggests that ulterior economic motives were also involved.<sup>85</sup>

Much like road boosters during the 1920s who had hoped to lure a national park to the region, the Depression-era members of the Asheville Chamber of Commerce were attempting to expand the Smokies transportation system in an effort to increase tourism to the region. In both periods, road construction, the national park, and economic development went hand in hand. During the 1930s, however, a new way of thinking about terrain such as that spied from atop Clingmans Dome was also beginning to have an impact on road building in the Great Smokies. While some visitors looking down on one of the wildest regions of the park continued to see a landscape ready for development, others now saw a wilderness in dire need of protection from forces such as the Asheville Chamber of Commerce. And whereas prior to this time such wilderness advocates had been an inconsequential minority, during the Great Depression they increased in numbers as projects such as the Skyway threatened places including Great Smoky Mountains National Park.

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<sup>85</sup> "Planning for Park Highways;" *Asheville* (North Carolina) *Times*; 3 August 1932; 4; File 3; Box 310; Record Group 79; NARA.

*Smoky Mountain Wilderness Halts Skyway*

The notion that wilderness was worth preserving emerged in the United States during the 1920s, largely due to the efforts of Aldo Leopold. An employee of the United States Forest Service, Leopold worked tirelessly to convince both his superiors at work and the nation at large that wilderness, much like Frederick Jackson Turner's frontier, not only influenced American culture but made it distinctive and should therefore be protected from development. Leopold began publicizing such beliefs in a seminal 1921 article written for the *Journal of Forestry* in which he gave "definite form to the issue of wilderness conservation." As Leopold defined it, wilderness involved "a continuous stretch of country preserved in its natural state . . . big enough to absorb a two weeks' pack trip, and kept devoid of roads, artificial trails, cottages, or other works of man."<sup>86</sup>

Leopold's wilderness philosophy soon found advocates within the federal government. During the height of the New Deal, for instance, the Director of the Forestry Division of the United

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<sup>86</sup> Aldo Leopold; "The Wilderness and its Place in Forest Recreational Policy;" *Journal of Forest History*; 19 (1921); 718-721. As quoted in Roderick Nash; *Wilderness and the American Mind* (New Haven: Yale University Press, 1967); 186.

States Office of Indian Affairs, Robert Marshall, not only warned that public works projects including the CCC often threatened wild country such as that found in Great Smoky Mountains National Park, but also besieged government officials including Park Service Director Arno Cammerer with letters, telephone calls, and personal visits on behalf of wilderness preservation.<sup>87</sup> Benton Mackaye, the originator of the Appalachian Trail concept, likewise promoted the protection of undeveloped areas while working as a regional planner for the Tennessee Valley Authority.

Along with influencing those working for the federal government, wilderness preservation also began to find supporters in society at large during the early 1930s. In the Smoky Mountain region residents of Knoxville expressed their support by writing to the Department of the Interior, complaining that the proposed Skyway would cause "the destruction of vast spaces . . . of wilderness." And East Tennesseans were not the only ones opposing construction of the Skyway. The proposed road along the crest of the Smokies was becoming a cause celebre for wilderness enthusiasts nationwide during the 1930s. For example, on October

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<sup>87</sup> Nash; *Wilderness and the American Mind*; 204.

24, 1932, the Izaak Walton League, one of the America's leading conservation groups, wrote a letter to the Department of the Interior protesting the Skyway on the grounds that "damage would be done to values represented in natural and primitive conditions on the crest of the Great Smoky Mountains." The Society for Protection of New Hampshire Forests sent a similar letter and in early November the Riverside Woman's Club of Riverside, Illinois added its voice to those opposing the Skyway when members passed a resolution stating their "urgent protest against the building of a highway along the crest of the high central range of the mountains in the Great Smokies National Park," and mailed a copy to the Department of the Interior. Members of Chicago's Prairie Club, who had camped at Greenbrier in Great Smoky Mountains National Park during the summer of 1931, even organized a letter-writing campaign in that city aimed at the Park Service in an effort to halt the proposed road across the crest of the Smokies.<sup>88</sup>

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<sup>88</sup> For an example of letters from local Smoky Mountain residents see Robert Mason to Secretary of the Interior Ray Wilbur; 3 November 1932; Folder Roads-Protests; Box 311; Record Group 79; NARA. The letter from the Izaak Walton League is referred to in a response from E. K. Burlew, Assistant to the Secretary of the Interior, to S. B. Locke, Conservation Director,

In 1934 these disparate efforts to halt the Skyway cohered in a single event that would greatly affect the Great Smoky Mountains as well as unprotected wilderness throughout the United States. That year an East Tennessee lawyer named Harvey Broome met in Knoxville with Benton Mackaye and Robert Marshall to organize opposition to highways planned along the Appalachian crest, including the Skyway. This campaign gained momentum later that year when Marshall returned to Knoxville and joined Broome, Mackaye, and a forester associated with the Tennessee Valley Authority Association named Bernard Frank, in mailing out an "Invitation to Help Organize a Group to Preserve the American Wilderness." Sent out to those known to be deeply concerned

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Izaak Walton League of America; 1 November 1932; Folder 1 Roads-Protests; Box 311; Record Group 79; NARA. The letter from the Society for Protection of New Hampshire Forests is likewise referred to in a response from acting National Park Service Director Arno Cammerer to Philip Ayres, Forester, Society for Protection of New Hampshire Forests; 6 December 1932; Folder Roads-Protests; Folder 1; Box 311; Record Group 79; NARA. On the Riverside Woman's Club letter see Riverside Woman's Club Corresponding Secretary Dorothy Faul to Secretary of the Interior; 7 November 1932; Folder 1 Roads-Protests; Box 311; Record Group 79; NARA. The Prairie Club of Chicago is mentioned in a letter from Great Smoky Mountains National Park Superintendent J. R. Eakin to National Park Service Director Horace Albright; 29 November 1932; Folder 1 Roads Protests; Box 311; Record Group 79; NARA.

about roads such as the Skyway, the direct mail piece expressed the men's desire "to integrate the growing sentiment which [they] believe exists in this country for holding wild areas sound-proof as well as sight-proof from our increasingly mechanized life." It also expressed the conviction that such wilderness was "a serious human need rather than a luxury and plaything."<sup>89</sup> The response to this mailing organized in Knoxville encouraged Marshall, Mackaye, and Broome, among others, to establish in 1935 the Wilderness Society, which would become one of the leading environmental groups of the twentieth century.

#### *Park Service Mediation and Defeat of the Skyway*

As wilderness advocates nationwide became better organized and increasingly vociferous, the National Park Service attempted to mediate between them and those such as the Asheville Chamber of Commerce. In doing so, the Park Service first defended the need for roads in national parks. "It is the duty of the Director of the National Park Service," explained Horace Albright to an opponent of the Skyway in 1932, "to see to the development

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<sup>89</sup> As quoted in Nash; *Wilderness and the American Mind*; 207.



of these areas so as to make them available for the health and enjoyment of our people, not only for the young and husky who can hike and hit the trails on foot or horseback, but also that the elderly people, the infirm and the growing children may enjoy the hidden wonders of the park . . . Consequently, some roads are inevitable."<sup>90</sup> In the same breath, however, Albright supported wilderness preservation in Great Smoky Mountains National Park. "We do know that the area from Indian Gap eastward . . . is absolutely wilderness," Albright wrote in the same letter, "and the Director has already gone on record as saying that no road will ever go on the heights along the park line eastward of the gap."<sup>91</sup> Thus the Park Service proposed a compromise that would allow construction of the Skyway from Clingmans Dome westward to Deals Gap, but would leave the eastern portion of the Appalachian divide in a wilderness state.

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<sup>90</sup> National Park Service Director Horace Albright to Dr. V. E. Shelford; 9 November 1932; Folder 1 Roads-Protests; Box 311; Record Group 79; NARA.

<sup>91</sup> National Park Service Director Horace Albright to Philip Ayres; 6 December 1932; Folder 1 Roads-Protests; Box 311; Record Group 79; NARA.

Wilderness advocates wholeheartedly rejected such a compromise and instead took a hard-line approach. "I am making a plea that a rule of thumb of 'half and half' be not followed," wrote Harvey Broome to the National Park Service, "but that the variant beauties of the western section be also preserved in some extended fashion for those who like to tramp for their reward."<sup>92</sup> Robert Marshall also argued for the preservation of the Smokies' southwestern crestline. "A road down the whole southern portion of the Great Smokies might give from an hour to an hour and a half of driving to the average motorist," Marshall explained in a 1934 letter to Secretary of the Interior Harold Ickes, "yet this invasion of the primitive . . . would be the ruination of the finest area still left to the walker and camper in the Southeast."<sup>93</sup> Due to the increasing influence of such opinions within the federal government, the Skyway project was abandoned by 1935.

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<sup>92</sup> Harvey Broome to National Park Service Director Horace Albright; 14 October 1931; File 2; Box 310; Entry 7; Record Group 79; NARA.

<sup>93</sup> Director of Forestry of the Office of Indian Affairs Robert Marshall to Secretary of the Interior Harold Ickes; 29 August 1934; Folder 1 Roads-Protests; Box 311; Record Group 79; NARA.

Clingmans Dome Road and the view from it down onto one of the wildest regions of the park are symbolic of a new phase in the evolution of the motor road system in Great Smoky Mountains National Park. Constructed by the CCC during the Great Depression in an effort to aid the local economy, Clingmans Dome Road is a vestige of a pro-development mentality quite similar to that expressed by local road boosters, loggers, early white settlers, and even the Cherokee, each of whom desired to expand their transportation networks in order to heighten tourism, develop trade, raise timber production, or increase hunting in the Great Smoky Mountains. Yet the wilderness seen today from Clingmans Dome Road is also an artifact from an earlier era. And while it too greatly influenced road construction in the park during the 1930s, the desire to protect wilderness stemmed from an altogether different way of thinking. Rather than seeking new and improved transportation networks, those wanting to protect wilderness in Great Smoky Mountains National Park achieved just the opposite. Moreover, once they arrived in the Smokies, their influence was there to stay.

*World War II Halts Park Road Development*

The bombing of Pearl Harbor on December 7, 1941 and the United State's subsequent entrance into World War II affected those on the home front as well as those in Europe. Economic mobilization for war as well as the large number of men going off to fight opened up new employment opportunities nationwide. There was thus no longer a great need for work relief programs such as the CCC. Throughout 1942 the federal government began cutting back the number of camps across the country. Finally, on June 30 Congress officially terminated the CCC, an act that would greatly influence road building throughout the Great Smoky Mountains.<sup>94</sup>

The CCC withdrew from Great Smoky Mountains National Park on July 8, 1942, abandoning several camp road projects in the process. Along Newfound Gap Road, for instance, CCC construction of a stone-faced reinforced concrete arch bridge across the Oconaluftee River at Smokemont was discontinued at this time. Having finished the south abutment and approximately 80 percent of that on the northern side of the bridge, CCC enrollees left

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<sup>94</sup> Wirth; *Parks, Politics, and the People*; 144.

the park before beginning work on the arch itself. The CCC likewise left before completing an extension of the Alum Caves parking area, also along Newfound Gap, as well as a road realignment project in the Cataloochee valley.<sup>95</sup> As one park official explained, "Development had practically been abandoned during World War II. Physical facilities were in dire need of maintenance and replacement by the end of the war."<sup>96</sup>

*Post-War Economic Boom and the Foothills Parkway*

With the end of hostilities in both Europe and Asia in 1945, National Park Service Director Newton B. Drury looked with anticipation to the recommencement of federally funded development projects. To properly prepare for such funds, Drury held a "Post-War Planning Conference" in the Smokies in mid-July 1946. Two years later Great Smoky Mountains National Park received its first federal allocation for construction since the CCC withdrew from the area in 1942.<sup>97</sup> Not surprisingly, as soon

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<sup>95</sup> "Superintendent's Monthly Reports, July 1942;" GRSM.

<sup>96</sup> Lix; "A Short History of the Great Smoky Mountains National Park;" 82.

<sup>97</sup> Lix; "Short History of the Great Smoky Mountains National Park;" 82.

as news of the funds became publicized civic boosters again began promoting large-scale road construction projects, the most massive of which was the Foothills Parkway.

As with many earlier road proposals in the Smokies, members of the Great Smoky Mountains Conservation Association were the first to conceive of a scenic highway running through the Smoky Mountain foothills just outside the park and roughly parallel to the Park's Tennessee border (see Appendix 7). Conservation Association vice president General Frank Maloney promoted such a parkway during the late 1920s as a means of providing visitors with views of the northern flank of the Smokies and, perhaps more importantly, to facilitate motor-tourism along the Tennessee side of the park.<sup>98</sup> Yet while the region's most successful conservation organization supported the project, the Foothills Parkway actually owes its existence more to another scenic motorway being constructed on the other side of the Appalachian divide in North Carolina's Blue Ridge Mountains.

President Roosevelt approved funding for a parkway linking Shenandoah and Great Smoky Mountains national parks in June 1936.

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<sup>98</sup> Campbell; *The Birth of a National Park*; 144.

Two years earlier, however, when the Bureau of Public Roads began surveying a number of alternate routes for this 477-mile long roadway, politicians from Tennessee and North Carolina began competing fiercely for spoils. Representatives and senators from both states immediately began using all their political clout to situate the southern terminus and as much mileage of the planned parkway as possible in their respective states. Local boosters from East Tennessee enthusiastically joined the campaign, promoting Gatlinburg as the logical end-point of the proposed parkway while those from North Carolina countered by publicizing Asheville.<sup>99</sup>

Secretary of the Interior Harold Ickes announced on November 12, 1934 that the proposed parkway connecting Shenandoah and the Great Smokies would pass through North Carolina's Blue Ridge Mountains rather than the Smokies.<sup>100</sup> While North Carolinians rejoiced, boosters from East Tennessee immediately appealed to the federal government for compensation. On the very day of the

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<sup>99</sup> Harley Jolley; *The Blue Ridge Parkway* (Knoxville: University of Tennessee Press, 1969); 43 & 61.

<sup>100</sup> Lix; "The Short History of the Smoky Mountains National Park;" 87.

announcement, Marshall McNeil, editor of the *Knoxville News-Sentinel*, sent off a telegram to Secretary Ickes suggesting that the State of Tennessee be awarded another public works project to build a loop road around the northern end of Great Smoky Mountains National Park, as had been proposed nearly a decade earlier by General Frank Maloney. Swayed by such arguments, Ickes announced the following day that if the Blue Ridge Parkway was successful, a similar road might be built in Tennessee.<sup>101</sup>

Although Tennesseans had to wait a decade, they received their political payback in February 1944, when Congress authorized construction of the Foothills Parkway "to provide an appropriate view of the Great Smoky Mountains National Park from the Tennessee side."<sup>102</sup> While authorization had proven difficult, construction of the road took even longer and was ultimately less than successful.

The Bureau of Public Roads and the National Park Service divided the proposed route of the Foothills Parkway into eight

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<sup>101</sup> On the McNeil telegram see Jolley; *The Blue Ridge Parkway*; 92. On Ickes response see Lix; "Short History of the Great Smoky Mountains National Park;" 58.

<sup>102</sup> As quoted in Lix; "Short History of the Great Smoky Mountains National Park;" 58.



sections, only four of which were completed by 1996.

Construction began in September 1951 when engineers broke ground on the so-called Gatlinburg spur, which would replace Tennessee Route 71 from Pigeon Forge to Gatlinburg. Work commenced on the second section of the parkway, running from Little River near Walland westward along the slope of Chilhowee Mountain to U.S. Highway 129, on July 21, 1960, and the segment was finished six years later. This approximately twenty-mile section was the longest completed. The National Park Service then shifted its efforts to the eastern portion of the parkway, completing a section in 1968 from I-40 westward across Green Mountain into Cosby. The last section worked on by the Park Service ran from Little River near Walland eastward to Carr Creek.<sup>103</sup> Although begun in July 1966, this portion of the Foothills Parkway was never opened.

Most of the section of the Foothills Parkway were plagued with chronic landslides that not only delayed construction but ultimately led to the suspension of the entire project. During

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<sup>103</sup> On the Gatlinburg spur see "Superintendent's Monthly Report, July 1935;" GRSM. On the construction of the other sections of the Foothills Parkway see Campbell; *A Birth of a National Park*; 145.

the late 1970s, for instance, landslides occurred so frequently on the section between Walland and Carr Creek that the Park Service refused to open this portion of the road to the public for safety reasons.<sup>104</sup> In fact, so common were such slides along the completed sections that in July 1986 the Park Service recommended that all work on the Foothills Parkway be halted in order "to review environmental concerns and find a resolution to wall failures."<sup>105</sup>

The environmental problems noted by the Park Service in 1986 stemmed from what agronomists call pyritic material in the soils along the Walland-Carr Creek section of the Foothills Parkway. When this material was exposed to air and water, as occurred after cuts were made for the road, it turned into sulfuric acid, flowed with runoff into nearby streams, and caused "the complete biological destruction of several headwater tributaries to Cove Creek and Little River."<sup>106</sup> Alarmed by such

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<sup>104</sup> "Monthly Progress Report, June 1970;" Maintenance Division Files; GRSM.

<sup>105</sup> "Staff Meeting Minutes, July 22, 1986;" Box Staff Minutes; GRSM.

<sup>106</sup> "Wildlife official charges state ruins ecology along parkway;" *The Daily Times*; 3 April 1989; clipping located in

devastation, the Tennessee Department of Conservation sued the Park Service in order to halt construction along the entire Foothills project. In 1993 similar environmental concerns forced the Park Service to undertake an environmental impact study to determine whether construction of the Foothills Parkway should continue.<sup>107</sup> Thus, whereas during the early history of the Park roads had been built to provide visitors with better access to the varied environments of the Smokies, in the post-war period similar road projects were causing the destruction of this very diversity.

Although the Park Service has suspended construction of the Foothills Parkway, today's motorists can drive the finished sections of the road for a panoramic perspective found nowhere else. Because the road lies outside the park, motorists experience views both southward towards the Smokies as well as out over the tableland to the north. This is the case along the eastern section of the parkway from I-40 to Cosby, where motor

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"Foothills Parkway" vertical file; GRSM.

<sup>107</sup> "Draft Environmental Impact Statement, Foothills Parkway, Section 8D, Volume 1;" 8 August 1984; pp 3-4; Foothills Parkway Vertical File: GRSM.

tourists can stop at vistas pointing away from the park toward rolling farmland and English Mountain, or continue to an overlook facing south into the heart of the park itself. The longer western portion of the Foothills Parkway follows the crest of Chilhowee Mountain, an unusually long and uniform wrinkle in the flatland spreading out just north of the Smokies. From various overlooks along this section motorists gain excellent views of the Tennessee valley to the north with Maryville and Knoxville off in the distance. The high point of the Foothills Parkway, both literally and figuratively, is Look Rock, an observation ledge offering sweeping views of Gregory Bald, Thunderhead, and Cades Cove Mountain in the western portion of the park.

Much like CCC road work undertaken during the Great Depression, the post World War II construction of various sections of the Foothills Parkway represented the continuation of the pro-development attitude that had dominated the early history of the Great Smoky Mountains region. Yet as the defeat of the Skyway indicated, a competing ideology, one concerned with wilderness preservation, had also arrived on the scene during the early history of the park. And although road construction along the foothills suggests that wilderness advocacy was in decline

during the post World War II period, controversy over other proposed road projects within Great Smoky Mountains National Park indicates otherwise. In particular, the more than fifty-year battle over the proposed Northshore Road along Fontana Lake illustrates that opposition to road construction within the park was in fact gaining in influence.

*Wilderness Preservation and the "Road to Nowhere"*

The controversy over the Northshore Road began during World War II, when the Tennessee Valley Authority (TVA) decided to construct a dam at Fontana on the Tuckaseegee River. Located approximately five miles south of the park's 1940 southern boundary, the resultant Fontana Lake would flood a major portion of North Carolina Highway 288 connecting Bryson City and Fontana Village. Rather than relocate the road themselves, as promised to local inhabitants, officials of the TVA offered to donate the land lying between the proposed lake and the park boundary to Great Smoky Mountains National Park if the Park Service would take over responsibility for building a replacement road from Bryson City to Fontana Village along Fontana Lake's northern shore. Faced with a rare opportunity to enlarge the park, in

July 1943 the Department of the Interior entered into a four-party contractual agreement with the TVA, the State of North Carolina, and Swain County, North Carolina, under which Great Smoky Mountains National Park was enlarged by almost 44,000 acres and the Park Service agreed to build the Northshore Road inside the park's southern boundary (see Appendix 8).<sup>108</sup>

The Park Service began constructing the Northshore Road on October 13, 1947, and completed a one-mile spur at Fontana Dam in September 1948.<sup>109</sup> After a long hiatus, work recommenced in 1960 on the eastern portion of the road from the park boundary near Bryson City to Canebrake Branch. Because of numerous engineering adjustments this 2.5-mile section was not completed until August 1963.<sup>110</sup> In preparation for more work on this section, a tunnel was constructed in October 1961 and the road was extended for another 2.5 miles from Canebrake Branch past Nolan Creek. When completed on August 23, 1965, this five-mile section of the

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<sup>108</sup> Campbell; *The Birth of a National Park*; 132. Also see "Superintendent's Monthly Report, May 1943;" GRSM.

<sup>109</sup> "Superintendent's Monthly Report, September 1947;" GRSM. "Superintendent's Monthly Report, September 1948;" GRSM.

<sup>110</sup> "Superintendent's Monthly Report, August 1963;" GRSM.

Northshore Road was opened to the public, who often referred to it as the Bryson City-Fontana Road in anticipation of the day when it would run all the way to the Fontana Dam.<sup>111</sup>

In 1964 events in Washington D.C. threw into doubt the completion of the Northshore Road. In that year Congress passed the Wilderness Act, which enabled the federal government to protect public land from all future development, including road construction, by designating such land "wilderness" and adding it to the National Wilderness Preservation System. Although wilderness designation was difficult to come by, involving a lengthy government review, local hearings, and a separate act of Congress, the law defined wilderness and institutionalized its protection for the first time in American history.<sup>112</sup> "A wilderness," the legislation states, "in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of

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<sup>111</sup> On construction of the tunnel see "Superintendent's Monthly Report, October 1961;" GRSM. On the 2.5-mile extension see; "Superintendent's Monthly Report, August 1965;" GRSM.

<sup>112</sup> Nash; *Wilderness and the American Mind*; 225-226.

life are untrammelled by man, where man himself is a visitor who does not remain."<sup>113</sup>

In 1965 Great Smoky Mountains National Park became the nation's first testing ground for the Wilderness Act when the federal government reviewed the park's holdings to determine if any of its lands garnered wilderness designation under the new law. After the Park Service surveyed the Smokies and found that approximately half of the park's 512,000 acres fit the criteria for preservation in the wilderness system, it held public hearings on the matter in Gatlinburg, Tennessee on June 13, 1966. As The Wilderness Society explained to its members, "at this first hearing, precedents will be set and procedures developed for all subsequent hearings" throughout the nation.<sup>114</sup> According to local newspaper accounts, the Gatlinburg hearings were dominated by two local factions. On the one hand were hikers, conservationists and outdoor enthusiasts represented by the Smoky Mountains Hiking Club of nearby Knoxville, Tennessee.

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<sup>113</sup> As quoted in Willard Yarbrough, "Hikers Propose Two Wilderness Areas in Smokies Instead of Six," *Knoxville News-Sentinel*, 1 May 1966; np.

<sup>114</sup> "The Great Smokies Park and the Wilderness Act;" *The Living Wilderness*; (Autumn 1965): 3.



Not surprisingly, this group proposed the designation of two large wilderness areas, one on either side of Newfound Gap Road, covering approximately three-fourths of Great Smoky Mountains National Park (see Appendix 9). The other contingent hailed from Swain County, North Carolina, on the south side of the Smokies, and opposed any designation of wilderness for fear that it would make the completion of the Northshore Road illegal and thus dash any hopes of increased motor tourism in the Bryson City area.<sup>115</sup>

As it did during the controversy concerning the Skyway, the National Park Service again attempted to mediate between wilderness enthusiasts and pro-development road boosters such as those living in Swain County. In an effort to appease wilderness advocates, Great Smoky Mountains National Park Superintendent George Fry proposed six smaller wilderness areas rather than the two larger ones promoted by the Smoky Mountains Hiking Club. However, Fry situated these six wilderness tracts so as to leave a swath of undesignated land running up and over the crest of the Smokies to allow the construction of a thirty-two mile motor road connecting Townsend, Tennessee with Bryson City, North Carolina

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<sup>115</sup> Yarbrough; "Hikers Propose Two Wilderness Areas in Smokies Instead of Six;" *Knoxville News-Sentinel*; 1 May 1966; np.

(see Appendix 10). This "Transmountain Highway," Fry hoped, would not only relieve congestion on the Parks' Newfound Gap Road but would also appeal to Swain County residents by serving as a substitute of sorts for the Northshore Road, which under this proposal would be abandoned.<sup>116</sup>

Although a Swain County government commission voted in 1965 to accept Superintendent Fry's compromise, Secretary of the Interior Stewart Udall refused to approve construction of the Transmountain Highway on the grounds that it would destroy the wilderness quality of the western half of Great Smoky Mountains National Park. Instead, in December 1967 Udall put forth his own compromise for the citizens of Swain County, North Carolina. Rather than constructing either the Transmountain or Northshore Roads, the National Park Service would extend the Northshore Road a few miles more to the eastern edge of Fontana Lake and develop a marina on the site in order to expand tourism in the region.<sup>117</sup> However, when the Park Service began constructing this extension

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<sup>116</sup> Willard Yarbrough; "Hikers Propose Two Wilderness Areas in Smokies Instead of Six;" *Knoxville News-Sentinel*; 1 May 1966; np.

<sup>117</sup> On Udall's proposal see "Staff Meeting Minutes, December 19, 1967;" Box Staff Minutes; GRSM.

in July 1968, Swain County residents sued the federal government for breach of the 1943 Northshore Road agreement.<sup>118</sup> "We've been treated worse than the Cherokee Indians were in Andrew Jackson's day," explained Swain County druggist Kelly Bennett to reporters in 1968. "The Indians were chased off their land, finally given some trinkets for it. We gave our land for a promise -- a promise that hasn't been kept for twenty-five years."<sup>119</sup>

The controversy over the Northshore Road did not end with the 1968 law suit against the federal government. Instead it continued for the next three decades, with both wilderness enthusiasts and Swain County residents pressuring government officials to live up to the promises of either 1964 or 1943. Tennessee Senator Jim Sasser introduced a bill in December of 1977 that would establish a 475,000-acre wilderness area in Great Smoky Mountains National Park and bury once and for all the Northshore Road project. Swain County residents fought back by appealing to North Carolina Senator Jesse Helms, who succeeded in

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<sup>118</sup> "Monthly Status Report, February 1970;" Maintenance Division Files; GRSM.

<sup>119</sup> Willard Yarbrough; "Swain County to Sue U.S. Over Fontana Road Pact;" *Knoxville News-Sentinel*; 4 February 1968; b-2.

filibustering Senator Sasser's wilderness bill in June 1978, thus keeping hopes alive that the Park Service would someday resume work on the road along Fontana Lake. Although in July 1996 Senator Helms introduced legislation of his own aimed at completing the Northshore Road all the way from Bryson City to Fontana Village, Swain County residents remain skeptical.

Such skepticism is glaringly obvious when present-day motorists approach the beginning of Northshore Road just outside Bryson City and are greeted by a large hand-painted billboard that reads "Welcome to the Road to Nowhere, A Broken Promise: 1943-?" As drivers continue past this sign into the park the secluded motorway ascends through rising knobs that grow higher and higher on both sides, resembling a gorge. The first of many scenic overlooks offers motorists an unobstructed view back toward the uppermost waters of Fontana Lake, which have been impounded behind a dam approximately twenty-five miles downstream. Back on the road, drivers will next pass over Nolan Creek Bridge spanning the deep cut of Nolan Creek, whose waters flow 5,000' down the mountainside from Clingmans Dome. At the end of the completed section, the road simply stops at a small parking lot. Here, trails leading off to Forney Ridge and an

eerie automobile tunnel built for the abandoned extension of the road, offer visitors an opportunity to leave their cars and explore.

#### PARK ROADS DURING MISSION 66

As the controversies over the Skyway and the Northshore Road illustrate, the desire to increase tourism through road development and efforts to protect wilderness areas from such development have evolved alongside one another throughout the history of Great Smoky Mountains National Park. In many ways, roads and wilderness are two sides of the same Smoky Mountain past. Before the 1950s the National Park Service often found itself mediating between road supporters such as the residents of Swain County, North Carolina and wilderness advocates including Knoxville's Smoky Mountains Hiking Club, but during the late 1950s and early 1960s Park Service officials found themselves in a new role. Rather than trying to appease opposing groups, the Park Service became more of a central player in its own right during the Mission 66 era. As several road projects in the Smokies during this period illustrate, park officials found it difficult to completely ignore their prior relationship with road

boosters and wilderness advocates. Indeed, even though neither group was directly involved in planning Mission 66 projects in Great Smoky Mountains National Park, both continued to indirectly influence the park's road development.

*The 1950s and the Deterioration of Our National Parks*

In January of 1955 the magazine *Reader's Digest* conducted a year-long, 8,000-mile inspection tour of the country's national parks. It reported its findings in an article titled "The Shocking Truth About Our National Parks," which warned readers planning vacations to Yellowstone, Yosemite, and the like, that their "trip is likely to be fraught with discomfort, disappointment, even danger." According to the article, National Park Service Director Conrad Wirth was all too aware of this dire situation. "Comfort stations can't be kept clean and serviced," Wirth is reported to have said. "Water, sewer and electrical systems are taxed to the utmost . . . [and] physical facilities are deteriorating or are inadequate to meet public needs."<sup>120</sup>

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<sup>120</sup> "The Shocking Truth About Our National Parks;" *Reader's Digest* (January 1955); as quoted in Wirth; *Parks, Politics, and the People*; 237.

The deterioration of the country's national parks noted by *Reader's Digest* in 1955 was due to a lack of federal funding during and immediately after World War II. For example, in 1945 Washington allocated only \$5 million to the National Park Service. And although a decade later the Park Service received \$32,525,000, this allotment was actually \$1 million less than the amount allocated to national parks in 1940.<sup>121</sup> As Park Service Director Wirth explained, "appropriations had been cut drastically during the war . . . and we were in desperate need of extra money to repair the damage that wartime neglect had wrought."<sup>122</sup>

Funds to rehabilitate the country's national parks came in 1956 in the form of Mission 66. The ten-year program aimed to expand the carrying capacity of the national parks by adding visitor centers, increasing overnight facilities and reconstructing roads, all in order to accommodate the estimated eighty million auto vacationers expected to swarm to the national parks during 1966, the golden anniversary of the National Park

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<sup>121</sup> Wirth; *Parks, Politics, and the People*; 238.

<sup>122</sup> Wirth; *Parks, Politics, and the People*; 238.

Service. All totaled, Mission 66 would be responsible for building or reconstructing almost 3,000 miles of roads in the country's national parks.<sup>123</sup> It should come as no surprise, then, that in 1955 the American Automobile Association co-sponsored the program's kick-off dinner in Washington, D.C, a celebration not unlike the banquet organized thirty years earlier by the Knoxville Automobile Club in honor of Congress's decision to locate a new national park in the Smokies.<sup>124</sup>

#### *Mission 66 in the Smokies*

Mission 66 revitalized road development in Great Smoky Mountains National Park. Newfound Gap Road, for instance, was greatly improved during this period. In 1958 the Park Service reconstructed the lower section of the road in North Carolina, repaired the bridges spanning the West Prong of the Little Pigeon River, and installed a new lining and portals to the upper tunnel on the Tennessee portion of the road. The entire North Carolina

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<sup>123</sup> Wirth; *Parks, Politics, and the People*; 262.

<sup>124</sup> Runte; *National Parks*; 173.



side of Newfound Gap Road was also repaved.<sup>125</sup> As important as these improvements to Newfound Gap Road itself, Mission 66 involved the reconstruction of many road-related structures. The Park Service expanded the Smokemont campground in March 1959, but the most impressive of such projects involved the Newfound Gap parking area. Mission 66 enabled the Park Service to relocate Newfound Gap Road and run it to the side of the gap in order to expand the adjacent parking area. Begun in September 1965, this major reconstruction was completed in November 1967.<sup>126</sup>

Mission 66 also enabled the Park Service to repair, improve, and reconstruct the motorways and road related structures in Cades Cove. Work began in the cove in 1956, when the Park Service improved the loop road and expanded the picnic area near

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<sup>125</sup> On reconstruction of Newfound Gap Road see "Superintendent's Monthly Report, March 1958;" GRSM. On repairing bridges and tunnels see "Superintendent's Monthly Report, July 1958;" GRSM. On repaving Newfound Gap Road see National Park Service; *Mission 66 Prospectus*; 13 April 1956; Foothills Parkway Vertical File; GRSM.

<sup>126</sup> On expansion of the Smokemont campground see "Superintendent's Monthly Report, April 1958;" GRSM. On the reconstruction of the Newfound Gap parking area see "Plan for Proposed Project 1A16, B9, Reconstruction Newfound Gap Parking Area;" Bureau of Public Roads, 1965; Maintenance Division Files; GRSM.

the entrance to the cove. Plans to expand the adjacent campground to include 250 sites began in 1958. In 1963 the Park Service also rebuilt two bridges on the Parsons Branch Road, one over Anthony Creek and the other over Forge Creek.<sup>127</sup>

*Roaring Forks, a Wild Road*

While the Park Service undertook many other road projects throughout Great Smoky Mountains National Park during the Mission 66 era, none compare to the work done in the Roaring Forks-Cherokee Orchard area near the park's Gatlinburg entrance. This project resulted in a special type of motor road found nowhere else in the park. Moreover, the work done along Roaring Forks and in Cherokee Orchard also stands apart from Mission 66 work nationwide, due primarily to the unique and long-standing influence of both road boosters and wilderness enthusiasts.

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<sup>127</sup> On improvement of the Cades Cove loop road see "Superintendent's Monthly Report, June 1956;" GRSM. On the expansion of the Cades Cove picnic area and campground see "Mission 66 Prospectus, Great Smoky Mountains National Park;" 23 April 1956; pp 16-17; Foothills Parkway Vertical File; GRSM. On repairing the Parsons Branch Bridges see "Superintendent's Monthly Report, May 1963;" GRSM.

Long before Mission 66 took shape in the mind of Park Service Director Conrad Wirth, settlers migrated to what is today known as Cherokee Orchard before the Civil War. The small community constructed a crude wagon road up LeConte Creek, formerly known as Mill Creek, which the county improved during the late nineteenth century.<sup>128</sup> Soon after the Civil War settlers also arrived in Roaring Fork valley, about two miles due east of LeConte Creek. As in Cherokee Orchard, those living in the community along Roaring Fork quickly cleared a wagon road up the valley which they gradually improved over the years by removing large boulders, or "graybacks" as locals called them. After 1900 a lumber company greatly improved the Roaring Fork wagon road in the course of its logging operations, but both it and the road to Cherokee Orchard remained dead-ends.<sup>129</sup>

Mission 66 work began in this region of the park in February 1963, when the Park Service began constructing a connecting spur

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<sup>128</sup> "Inventory and Inspection Report, Cherokee Orchard Road;" Bureau of Public Roads; 11 September 1950; GRSM.

<sup>129</sup> "Inventory and Inspection Report, Roaring Fork Road;" Bureau of Public Roads; 11 September 1950; GRSM. See also "Roaring Fork Auto Tour;" Great Smoky Mountains Natural History Association and the National Park Service; 4.

between the endpoints of Cherokee Orchard and Roaring Fork Roads in order to form a loop motorway. In April of that year three bridges were completed on this new road link and grading was underway on the entire loop. By June 1963 the Park Service had also sloped the banks and added drainage features along the entire loop, and built five more small bridges from the upper end of the loop at Cherokee Orchard to the park boundary at Roaring Fork.<sup>130</sup>

For all this road work, the Mission 66 project in the Roaring Fork-Cherokee Orchard area is most interesting for what it did not construct. For instance although the Cherokee Orchard Road was widened from 14' to 18' in order to accommodate two-way motor traffic, the 5.3 mile road connecting Roaring Fork and Cherokee Orchard was made only 10' wide for one-way traffic.<sup>131</sup> Likewise, the Roaring Fork portion of the loop was kept narrow and without shoulders. The Park Service also refrained from

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<sup>130</sup> On the widening of Cherokee Orchard Road and linking it to Roaring Fork Road see "Superintendent's Monthly Report, February 1963;" GRSM. On constructing bridges and grading along the Roaring Fork Road see "Superintendent's Report, April 1963;" GRSM.

<sup>131</sup> "Superintendent's Monthly Report, June 1963;" GRSM.

straightening the twists and turns of the original wagon path so the motor road would follow the natural terrain as much as possible, and kept the speed limit at ten miles an hour. As Great Smoky Mountains National Park Superintendent Fred Overly explained, "it will be an unusual automobile nature trail."<sup>132</sup>

While unique for Great Smoky Mountains National Park, the Roaring Fork-Cherokee Orchard Road also stands apart from Mission 66 work nationwide. From the outset, Park Service road projects during this period of development attracted numerous critics. For instance, after riding over the Mission 66 reconstruction of Tioga Road in Yosemite National Park, Ansel Adams is reported to have said, "the old road in a sense 'tiptoed' across the terrain, the new one elbows and shoulders its way through the park -- it blasts and gouges the landscape."<sup>133</sup> Not so with the Mission 66 work along Roaring Fork. "It's a poke-along road if there ever was one -- a nature trail on wheels," wrote a writer for *Motor News* magazine. "By following the natural terrain . . . the

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<sup>132</sup> Warner Ogden; "New Scenic Automobile Nature Loop Trail Starts at Gatlinburg;" *Knoxville News-Sentinel*; 21 April 1963; c-1.

<sup>133</sup> Ansel Adams as quoted in Runte; *National Parks*; 173.

National Park Service has made it possible for the visitor who couldn't even think of hiking to see, close up, just what the Smokies are made of."<sup>134</sup>

Part of the reason for Roaring Fork Road's distinctiveness is due to the long history shared between park officials, road boosters, and wilderness advocates at Great Smoky Mountains National Park. While not directly involved in planning the Roaring Fork Road, the influence of wilderness enthusiasts was nevertheless evident in the thinking of those park officials planning the road. "We look at it as an automobile nature trail," explained Superintendent Overly. "On this new road we are making an effort to keep the natural wilderness as much as possible." In the same breath Overly also demonstrated his concern for road boosters. The road, admitted Overly, "[will] help the economy of the area . . . we are assisting in the economy [of Gatlinburg]."<sup>135</sup> Thus even though they were not

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<sup>134</sup> Jim McKenna; "Down the Roaring Fork;" *Motor News: the official publication of the Automobile Club of Michigan* (September 1964); 12.

<sup>135</sup> Warner Ogden; "New Scenic Automobile Nature Loop Trail Starts at Gatlinburg;" *Knoxville News-Sentinel*, 21 April 1963; c-1.

directly involved in planning the Roaring Fork-Cherokee Orchard loop road, both those wishing to protect wilderness in the park as well as those desirous of road development in order increase tourism in the region seem nevertheless to have indirectly influenced the construction of this Mission 66 project.

Such influences are evident when today's motorists leave downtown Gatlinburg and wind their way along Roaring Fork Road. Upon entering the park the forest immediately closes over the road, creating a sense of quiet isolation. For the first half of the 11-mile loop the motorway ascends up towards Cherokee Orchards, with the vegetation changing along the way from hardwood species such as chestnut oak, maple, and yellow poplar to a pine-oak forest at higher elevations. At the end of the two-way portion of the road near Cherokee Orchard, the road begins its descent into the Roaring Fork watershed. Motorists will feel the change if driving with their windows down. The cooler air is more moist, a perfect environment for the straight evergreen hemlocks that now predominate. As motorists continue to descend, the hemlocks abruptly give way to yellow-poplars. Here, along Roaring Fork the road turns and twists atop the old wagon road that ran beside the stream. On this final section

motorists can stop and visit several old homesteads of early Roaring Fork settlers as well as a tub mill once used to grind grain. Before leaving Roaring Fork Road and heading back to the bustle of Gatlinburg, motorists pass "The Place of a Thousand Drips," a trickling waterfall covered in liverworts, mosses and ferns.

## BRIDGES AND TUNNELS

### *Introduction*

The road related structures built in the national parks in the 1920s through the 1940s were designed in the rustic style, which allowed these man-made elements to fit in with the natural landscape. To facilitate this, the Park Service developed standards based upon the rustic aesthetic for the design of stone structures such as bridges. These informal design principles required the use of native rock the same coloration and character as the natural rock outcroppings found around the structures. In the cut and arrangement of the stone, straight lines and right angles were avoided, and weathered and moss covered stone surfaces were exposed.



Although still rustic, the stone work in Great Smoky Mountains National Park has a more formal appearance than that in the western parks, where the Park Service first used the rustic style. In the Smokies, the bridges and other structures have more straight lines in the cut and arrangement of the stone used in their construction, and include formal design features such as string courses, piers and breakwaters. These formal features are believed to be the influence of Charles Peterson, chief of the eastern office of the Park Service's landscape division, who oversaw the design of most of the road related structures built in the park during its development in the 1930s. Peterson worked in several eastern historical parks prior to his involvement in the development of the Smokies, and although still working in the rustic style, was probably influenced by the more formal designs he encountered in these other parks.

*Reinforced Concrete With Stone Masonry Facing: Single Arches*

The most common type of bridge in Great Smoky Mountains National Park is the reinforced concrete bridge, which was faced with stone masonry in order to adhere to Park Service standards for the construction of road related structures in the rustic

style. Most of these bridges were built in the 1930s when the roads in the park were first developed, and are located primarily on the Newfound Gap, Fighting Creek Gap, Little River, and Laurel Creek roads.

Single-arch reinforced concrete and stone masonry spans in Great Smoky Mountains National Park can be found in the following locations: Newfound Gap Road at the West Prong of the Little Pigeon River (6.1 miles from the park boundary at Gatlinburg), Cole Branch (9 miles), Trout Branch (9.3 miles), and Walker Prong (12.6 miles); Little River Road at Laurel Branch (4.5 miles from the intersection with the Newfound Gap Road), and the Middle Prong of the Little River, or the Townsend Wye (16.9 miles); Laurel Creek Road at the Tremont junction (0.2 miles from the intersection with the Little River Road), Laurel Creek (1.6 miles), the West Prong of the Little River (2.1 miles), Laurel Creek (2.15 miles), Laurel Creek (2.7 miles), Schoolhouse Gap junction (3.6 miles), and Laurel Creek (5.2 miles); and, on the Elkmont Road at Laurel Branch.<sup>136</sup>

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<sup>136</sup> Bridge and Culvert Inventory, North District, Great Smoky Mountains National Park, 1971; Maintenance Division Files; GSMNP.

*Townsend Wye Bridge*

The last reinforced concrete and stone masonry bridge built in the park is the Townsend Wye Bridge, which carries the Little River Road over the Middle Prong of the Little River. This bridge replaced an old wood structure, which was considered to be "insecure" as well as inadequate for carrying automobiles in the period after World War II when visitation in the park increased dramatically. The new bridge was constructed by Troitino and Brown, Incorporated of Asheville, North Carolina between October 13, 1950, and July 13, 1951, at a cost of \$59,390.<sup>137</sup>

The Townsend Wye Bridge is a 90' single-span reinforced concrete arch, with stone-faced spandrel and wing walls, and stone parapet walls. The structure was designed for a 28' wide roadway and a 3' wide sidewalk, and is a total width of 31'-6" between the parapet walls.<sup>138</sup>

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<sup>137</sup> Bureau of Public Roads, "Final Construction Report, Project 3C2, Construction of Bridge Over Middle Prong of Little River, Spur to Park Boundary, Great Smoky Mountains National Park," 1953, 2; Federal Highway Administration, Sterling, Virginia (hereafter referred to as FHWA).

<sup>138</sup> Ibid, 1.

During construction, the contractor had to lower the planned elevation of the south abutment footing 5' "in order to find a more secure foundation." In addition, the "radius of the northwest wing wall was changed from 10' to 20' in order to better tie into the stone outcrop in the bank." While constructing the falsework on the bridge, a flood on the Middle Prong in March 1950 washed out all falsework completed up to that point.<sup>139</sup> Despite these problems, upon completion of the Townsend Wye Bridge the BPR commented that the "contractor has done an excellent job. In spite of the elements (early cold weather, flash floods in spring) he made very good progress and the end result is an attractive bridge."<sup>140</sup>

*Reinforced Concrete With Stone Masonry Facing: Multiple Arch Bridges*

Three multiple arch reinforced concrete and stone masonry bridges were built in Great Smoky Mountains National Park at the following locations: a triple-arch bridge, referred to as the Headquarters Bridge, carries Newfound Gap Road over the West

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<sup>139</sup> Ibid, 4-5.

<sup>140</sup> Ibid, 2.

Prong of the Little Pigeon River 1.5 miles from the beginning of the road at the park boundary with Gatlinburg; a double-arch bridge carries the same road over the same river at the 9.4 milepost; and, a triple-arch bridge carries the Little River Road over Fighting Creek 0.4 mile from the intersection of the road with Newfound Gap Road.

The Headquarters Bridge was built in 1937 as part of the relocation of the lower part of Newfound Gap Road to the west side of the West Prong. Unlike most bridges in the park, the Headquarters Bridge was not constructed by a contractor, but by the BPR. Stone for the bridge was quarried nearby and cut at the construction site. The BPR reported that "[a]ll masonry stones were carefully selected from an ample stock to obtain a pleasing architectural effect as well as a sound and substantial structure, and were set by expert stone masons."<sup>141</sup> Work on the bridge began on April 20, 1937, and was completed on September 30, 1937, at a cost of \$45,093.<sup>142</sup>

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<sup>141</sup> Ibid, 4.

<sup>142</sup> U.S. Bureau of Public Roads, Final Construction Report, Project 1A7, Bridge Number 8 Across West Prong of Little Pigeon River at Junction Routes 1 and 3, October 1937, 2; FHWA.

The Headquarters Bridge "is composed of three reinforced concrete arches with stone faced arch rings and spandrels, and gravity type wings of stone masonry."<sup>143</sup> Each arch has a span of 47'-4". The length of the bridge is 161'-4" long "from abutment face to abutment face," 170'-8-5/8" "out to out of abutments at top of footings," and 272' overall.<sup>144</sup>

*Steel and Stone Masonry: Multiple Arch Bridge*

One multiple arch steel and stone masonry bridge, the Elkmont Bridge, is located in Great Smoky Mountains National Park. This structure is located on Elkmont Road, 1.95 miles from the intersection of this thoroughfare with Little River Road, and carries Elkmont Road over the Little River. The bridge is comprised of four multi-late arches, the total length of which are 113'. Each arch is 18'-4" wide and 13'-4" high.<sup>145</sup> The full bridge is 201' long and 22' wide.<sup>146</sup>

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<sup>143</sup> Ibid, 3.

<sup>144</sup> Ibid, 2.

<sup>145</sup> Bridge and Culvert Inventory, North District, Great Smoky Mountains National Park, 1971; Maintenance Division Files; GSMNP.

<sup>146</sup> Federal Highway Administration, Bridge Safety Inspection Report, NPS Route 4 Over Little River, Great Smoky Mountains

Construction of Elkmont Bridge was begun by CCC enrollees in June 1936.<sup>147</sup> First, the corrugated steel plates which formed the four arches for the bridge were set in place, then lined on top with reinforced concrete. The face of the bridge was lined with stone which was quarried along the nearby Little River Truck Trail.<sup>148</sup> When the stone had reached a suitable height, the bridge arches were covered with fill which would support the roadbed. While the bridge was being built, the park superintendent commented that, "This type of construction is a new departure in this park."<sup>149</sup>

In December 1936, the park reported: "Masonry on the wing walls, abutment, spandrel walls, and ringstones was brought to approximately road grade on the first span (north) of the Elkmont bridge. Ringstones and spandrel walls were started between the other three spans and a small amount of backfilling started."<sup>150</sup>

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National Park, Structure Number 5460-047P, March 31, 1981; FHWA.

<sup>147</sup> Superintendent's Monthly Report, June 1936; GSMNP.

<sup>148</sup> Superintendent's Monthly Report, August 1936; GSMNP.

<sup>149</sup> Superintendent's Monthly Report, November 1936; GSMNP.

<sup>150</sup> Superintendent's Monthly Report, December 1936; GSMNP.

Elkmont Bridge was completed by the CCC in July 1937.<sup>151</sup> Of the work performed here, Park Superintendent Eakin commented: "it is said that many of the enrollees could now secure a job of stone cutter in any organization."<sup>152</sup>

### *The Loop Over Bridge*

The Loop Over, located on Newfound Gap Road 8.6 miles from the park boundary with Gatlinburg, is one of the most interesting road related structures in Great Smoky Mountains National Park. As the road climbs toward the crest of the Smokies, the Loop Over makes a 360 degree turn, forming a helix which carries Newfound Gap Road over itself by use of a bridge.

The Loop Over was built in 1935 during the Park Service's reconstruction of Tennessee Route 71, a treacherous road which had been built from Gatlinburg to Newfound Gap in the 1920s. Two tight switchbacks on the road, which presented motorists with dangerously sharp curves, were replaced by the Loop Over, which allowed for one long, safe curve to carry the road up the grade.

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<sup>151</sup> Superintendent's Monthly Report, July 1937; GSMNP.

<sup>152</sup> Superintendent's Monthly Report, November 1936; GSMNP.



The initial design for the structure was probably done by Charles Peterson.

The Loop Over was constructed by the C.Y. Thomason Company of Greenwood, South Carolina between May 30, 1935, and December 6, 1935, at a cost of \$77,644.<sup>153</sup> The bridge portion of the Loop Over is a single arch reinforced concrete and stone masonry structure, 95' long, 42' wide, and 21' high in the center of the arch.<sup>154</sup> Stone for the structure was quarried near the bridge site.<sup>155</sup>

Upon the completion of the Loop Over in November 1935, Superintendent Ross Eakin commented: "This is a remarkably fine job....[and] has already attracted almost nation-wide attention."<sup>156</sup> The structure became an attraction in itself, and was featured prominently in contemporary postcards and souvenirs.

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<sup>153</sup> U.S. Bureau of Public Roads, Final Construction Report, Project 1A5, Loop Bridge, Great Smoky Mountains National Park, 1936, 2; FHWA.

<sup>154</sup> Bridge and Culvert Inventory, North District, Great Smoky Mountains National Park, 1971; Maintenance Division Files; GSMNP.

<sup>155</sup> U.S. Bureau of Public Roads, Final Construction Report, Project 1A5, Loop Bridge, Great Smoky Mountains National Park, 1936, 16; FHWA.

<sup>156</sup> Superintendent's Monthly Report, November 1935; GSMNP.

In late 1937 and early 1938, CCC enrollees constructed stone barriers on the roadside and landscaped the area around the Loop Over. The landscaping was done with great care, particularly inside the circle created by the Loop Over, as the "planting" had to be "kept low enough to avoid reducing visibility in the area," and creating a hazard for motorists.<sup>157</sup> The roadside was also edged with log guardrails, which were in keeping with the rustic style. However, these have since been replaced with dimensional timber which is less expensive to install and maintain.

#### *Structural Steel Girder and Reinforced Concrete Bridges*

In the period after World War II, many of the bridges built in Great Smoky Mountains National Park were composed of concrete bridge decks supported by steel girders. Although not as picturesque as the reinforced concrete and stone masonry bridges constructed in the rustic style, these new bridges were less expensive and easier to construct. Three such bridges, the Camp Two, Long Arm, and Sinks bridges, were constructed by Charles Blalock and Sons, Incorporated of Sevierville, Tennessee in the

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<sup>157</sup> Superintendent's Monthly Report, March 1938; GSMNP.

early 1970s. This was part of a larger project to improve a 12.5-mile portion of Little River Road between its junction with Elkmont Road and the Townsend Wye. As part of this project, the three original timber bridges at these river crossings were demolished.

The full project began on August 22, 1972.<sup>158</sup> The old Camp Two Bridge was demolished in October 1972, and construction of the new bridge began the following month.<sup>159</sup> By April 1973, the concrete deck was being laid and the stone masonry installed on the abutment of Sinks Bridge.<sup>160</sup> The full road project was completed on May 8, 1974, at a cost of \$1,793,511.<sup>161</sup>

The Camp Two Bridge is 140' long and 20' wide, the Long Arm Bridge is 141' long and 20' wide, and the Sinks Bridge is 105' long and 20' wide.<sup>162</sup>

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<sup>158</sup> Federal Highway Administration, Final Construction Report, 3B13, Great Smoky Mountains National Park, 1974, 1-2; FHWA.

<sup>159</sup> Staff Meeting Minutes, October 17, 1972; Box Staff Minutes; GSMNP.

<sup>160</sup> Staff Meeting Minutes, April 4, 1972; Box Staff Minutes; GSMNP.

<sup>161</sup> Federal Highway Administration, Final Construction Report, 3B13, Great Smoky Mountains National Park, 1974, 1-2; FHWA.

<sup>162</sup> Ibid, 2.

*Timber Spans*

Numerous timber span bridges are located on secondary roads throughout Great Smoky Mountains National Park, most notably the Roaring Fork Motor Nature Trail. Several of these bridges carry this winding road over streams, adding to the area's rustic character. The deck on each of these small, one lane bridges is made of wood boards laid on their sides, which improves the strength of the deck. For support, two steel beams run under the deck along the length of the bridges, which are set on two stone or concrete abutments.

*Smokemont Bridge*

The Smokemont Bridge is a bit of a mystery. It is unlike any other bridge in the park, and no records relating to its construction exist in the park archives. The bridge carries a spur road from Newfound Gap Road across the Oconaluftee River to the Smokemont Campground. The structure consists of a wood deck spanning the river between two stone abutments. A stone pier, located in the river, supports the deck. Logs placed between the pier and the east bridge abutment in an inverted "V" configuration add additional support to the deck. These supports

on the underside of the bridge may have been part of its original design, or may have been added later in order to allow the bridge to carry heavier loads.

In April 1940, the CCC was working on a reinforced concrete bridge with stone masonry facing at the entrance to the Smokemont Campground. However, the CCC program in the park ended in July 1942, leaving the bridge incomplete.<sup>163</sup> In 1950, the BPR reported on the condition of the unfinished bridge and stated that despite the intervening eight years, the structure was in good shape and could be completed.<sup>164</sup> Despite this favorable report on the condition of the bridge, there is no record of further work on it. Instead, the Park Service probably demolished the sections of the bridge which had been built and constructed the current wood deck bridge in the 1950s.

### *Luten Bridges*

Two single-span Luten bridges are currently located in Great Smoky Mountains National Park. One triple-span bridge was

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<sup>163</sup> Superintendent's Monthly Report, July 1942; GSMNP.

<sup>164</sup> Ibid.

demolished in 1982 and replaced by a modern structural steel girder and reinforced concrete bridge. All three bridges were erected by the Luten Bridge Company of Knoxville, Tennessee for Swain County, North Carolina in 1921. These structures provided access to communities located at Smokemont and Oconaluftee prior to the establishment of the park in 1934. Because they were built for developed areas and were not intended for a national park, these concrete bridges contrast greatly with the rustic bridges constructed under the Park Service.

The demolished bridge crossed the Oconaluftee River 0.5 mile north of the present Oconaluftee Visitor Center, and later carried a spur road from Newfound Gap Road to an administrative area. One of the existing bridges carries the same spur road over Ravens Fork to an intersection with Big Cove Road near the park boundary with the Cherokee reservation. The other existing bridge is in the Smokemont Campground. Today, it no longer carries a road, but rather the Smokemont Loop hiking trail out of the campground.

Daniel Luten, a former professor of engineering, founded the National Bridge Company of Indianapolis, Indiana in 1901. Developing several new and innovative ideas for the preexisting

concept of using steel rods to strengthen arched concrete bridges, he published numerous articles on these ideas in engineering and technical journals, held forty-nine patents for improvements in bridge construction, and began to construct reinforced concrete bridges in the Midwest. Luten's company offered several alternative methods for the construction of one of his bridges to contractors: direct supervision of the work by a Luten company foreman; supply the steel, working drawings, engineering advice, and a license to utilize the patents to erect a Luten bridge for a flat fee; or, supply working drawings and a license for a royalty of 10 percent of the contract cost. These business methods proved lucrative for the company in Indianapolis and its nine franchises, which were located in Berlin, Connecticut, Chicago, Des Moines, Knoxville, Los Angeles, Philadelphia, Topeka, and York, Pennsylvania. By the mid-1930s, approximately 15,000 Luten bridges had been built.<sup>165</sup>

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<sup>165</sup> Section 106 Statement, Removal of Oconaluftee Bridge, Great Smoky Mountains National Park, 1980; Box Trout, Edward L.; File 14, Luten Bridges; GSMNP.

Luten believed that the concrete arch bridge was superior to the concrete girder bridge "in almost every respect." In 1911, he stated that the concrete arch

is better adapted to soft foundations, is more efficient and more economical, provides greater discharge for the same waterway area, is not injuriously affected by temperature changes, provides a smooth roadway, is easier to erect, and fails slowly in case of failure, can be widened at any time without loss of the original investment, and last and most important of all is adapted to artistic treatment of railings and spandrels of great variety.<sup>166</sup>

On the issue of the superior appearance of the concrete arch over the concrete girder bridge, Luten was firmly convinced, as it "presents the more pleasing appearance because it employs concrete in a thoroughly natural manner."<sup>167</sup>

### *Steel Truss Bridges*

Two steel truss bridges are located in Great Smoky Mountains National Park: a warren pony truss with welded connections and a pratt through truss with pin connections. Both bridges carry

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<sup>166</sup> Luten, Daniel B. "Concrete Bridges," article from an unnamed publication, 1911; Box Trout, Edward L.; File 14, Luten Bridges; GSMNP.

<sup>167</sup> Ibid.



Route 284 over Cataloochee Creek north of Cataloochee Valley, and were built by North Carolina prior to the 1934 establishment of the park. The bridges were probably constructed in the 1920s when North Carolina improved the historic Cataloochee Turnpike, which became North Carolina Route 284. The nearby fords which served the turnpike and were replaced by the bridges are still visible.

### *Tunnels*

Four tunnels are located in Great Smoky Mountains National Park, two on Newfound Gap Road, one on Laurel Creek Road, and one on Northshore Road. A fifth tunnel is located on the Gatlinburg Spur of the Foothills Parkway. These structures were built to carry the roads through ridges which protruded into the right-of-way, rather than have the roads go around the ridges with sharp and potentially dangerous curves. In keeping with the rustic style, the portals of the tunnels were designed to blend in with the rock outcroppings around them, and stone similar to the natural rock was used in their construction. This is particularly the case with the lower tunnel on Newfound Gap Road,

which successfully uses a double arch ring portal to blend in with the natural rock around it.

The two tunnels on Newfound Gap Road were constructed between 1933 and 1935 by contractors working on the reconstruction of Newfound Gap Road. During their construction, the BPR reported that the upper tunnel was "constructed by driving two parallel headings, starting at the [lower] portal and proceeding upgrade." All excavated material was hauled away with mule drawn carts with a capacity of  $\frac{1}{2}$  cubic yard.<sup>168</sup> In January 1934, BPR engineer W.I. Lee reported:

The arch ring on the upper part of the tunnel (above the wall plate), is being taken out now. The north portal was entered by driving two parallel drifts, bracing these, then enlarging the section to receive the full timber lining for the arch ring. This procedure was followed for approximately 70 feet, where the heading tightened up sufficiently to permit removal of the entire arch ring a short distance ahead of the lining prior to placing the timber sets. The south portal is being excavated by two parallel drifts in the same manner as...the north portal.<sup>169</sup>

The lower tunnel, which is located 8.2 miles from the beginning of the road at the park boundary with Gatlinburg, is

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<sup>168</sup> Superintendent's Monthly Report, December 1933; GSMNP.

<sup>169</sup> Superintendent's Monthly Report, January 1934; GSMNP.

253' long, 30' wide, and 13' high.<sup>170</sup> The upper tunnel, located 13.45 miles from the park boundary, is 287' long, 30' wide, and 13'-6" high.<sup>171</sup>

The construction of the tunnel on Laurel Creek Road was carried out by the BPR as part of the larger project to construct this road from the Townsend Wye to Cades Cove. This project was begun on October 3, 1938, and completed on July 17, 1939, at a cost of \$105,757.<sup>172</sup>

Drilling for the tunnel began on January 30, 1939, and was completed on May 1. The construction of the concrete lining was begun on May 3, and completed on May 30. Near the upper portal of the tunnel, timber lining was left in place, and the concrete

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<sup>170</sup> Federal Highway Administration, Bridge Safety Inspection Report, NPS Route 1A Thru Chimney Tops, Great Smoky Mountains National Park, March 25, 1980; FHWA.

<sup>171</sup> Federal Highway Administration, Bridge Safety Inspection Report, NPS Route 1A Thru Morton Mountain, Great Smoky Mountains National Park, March 25, 1980; FHWA.

<sup>172</sup> Public Roads Administration, Final Construction Report, Project GSM 3B1, Great Smoky Mountains National Park, 1940, 6; FHWA.

lining was constructed inside of it.<sup>173</sup> The tunnel was completed in June or July.<sup>174</sup>

The Laurel Creek tunnel is located 1.2 miles from the intersection of the road with Little River Road at the Townsend Wye. The structure is 121' long, 29.6' wide, and 17' high.<sup>175</sup>

#### CONCLUSION

The history of Great Smoky Mountains National Park has always been intimately linked to the history of its roads. Smokies' pre-park inhabitants not only laid the foundation, so to speak, for the future motor road system of the national park but their footpaths, wagon roads, and logging railroads also greatly influenced the movement to establish the park during the 1920s and early 1930s. Newfound Gap Road, for instance, which at one time functioned as the Indian Gap Trail, the Oconaluftee Turnpike, and along its lower stretch near Smokemont as part of a Parsons Pulp and Lumber Company logging railroad, was one of the

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<sup>173</sup> Ibid, 13.

<sup>174</sup> Superintendent's Monthly Report, June 1939; GSMNP.

<sup>175</sup> Bridge and Culvert Inventory, North District, Great Smoky Mountains National Park, 1971; Maintenance Division Files; GSMNP.

central concerns of the national park movement from the very start. Moreover, the importance of such roads did not diminish after the park was authorized in 1934. Motor roads continued to guide the park's history right down to the present.

The ongoing battle over whether or not to construct motor roads in Great Smoky Mountains National Park involved two competing factions. On the one hand were those such as Willis Davis and David Chapman who promoted road building as a means of increasing tourism in the area. Motor roads, auto tourism, and the national park were each important components of their plan for economic expansion. On the other side of the debate were wilderness enthusiasts who viewed such road construction as a serious threat to the Smokies and took action to thwart such projects. And although these wilderness advocates began their campaign in Knoxville by organizing opposition to roads planned along the Appalachian crest, their ideas spread and ultimately resulted in the Wilderness Act of 1964. The debate over motor roads in the Smokies influenced not only Great Smoky Mountains National Park but the entire country as well.

The National Park Service at first refrained from entering into the debate concerning motor road construction in Great Smoky

Mountains National Park. During the controversy over the proposed Skyway, for instance, the Park Service let the Asheville Chamber of Commerce and wilderness advocates such as Broome, Marshall, and McKaye battle one another for the support of the public at large. However, as time progressed and debate between these groups intensified, the Park Service found itself forced into a new role. During the controversy over the Northshore Road, for example, the Park Service promoted a number of compromises aimed at appeasing both road proponents and wilderness enthusiasts. It did likewise during the construction of the Roaring Fork Motor Nature Trail.

Much like an archeological site, the motor road system of Great Smoky Mountains National Park provides present-day visitors with a host of information concerning the park and its history. The roads of the Cataloochee valley, for example, stand as a continual reminder of this tension between development and preservation. Plans proposed during the 1970s to develop the area by paving the road through the valley, extending it to form a loop motor road, and connecting the whole complex with I-40 to the east to afford easier access to the area, were shelved when local residents voiced concern that such development would

destroy the so-called wild quality of the valley. The Park Service was forced to abandon the project after paving only five miles of the valley road. When present-day visitors approach the valley on a dirt road only to find a seemingly out of place segment of paved road, they are in fact experiencing first-hand a material artifact of the park's long-term history.<sup>176</sup>

Like its past, the future of Great Smoky Mountains National Park will also be shaped to a great degree by this debate involving road proponents, wilderness advocates, and the mediation of the National Park Service. Presently the Park Service is undertaking studies to alleviate automobile congestion in the Smokies and is considering running shuttle busses around Cades Cove, limiting access to the Roaring Fork Motor Nature Trail, and making Newfound Gap a one-way thoroughfare. Such proposals are again aimed at mediating between those desirous of vehicular access to the park and those wanting to protect the park from overdevelopment. Moreover, such concerns will only increase in importance with the arrival of gambling in Cherokee in 1997, as is suggested by the recent controversy over the

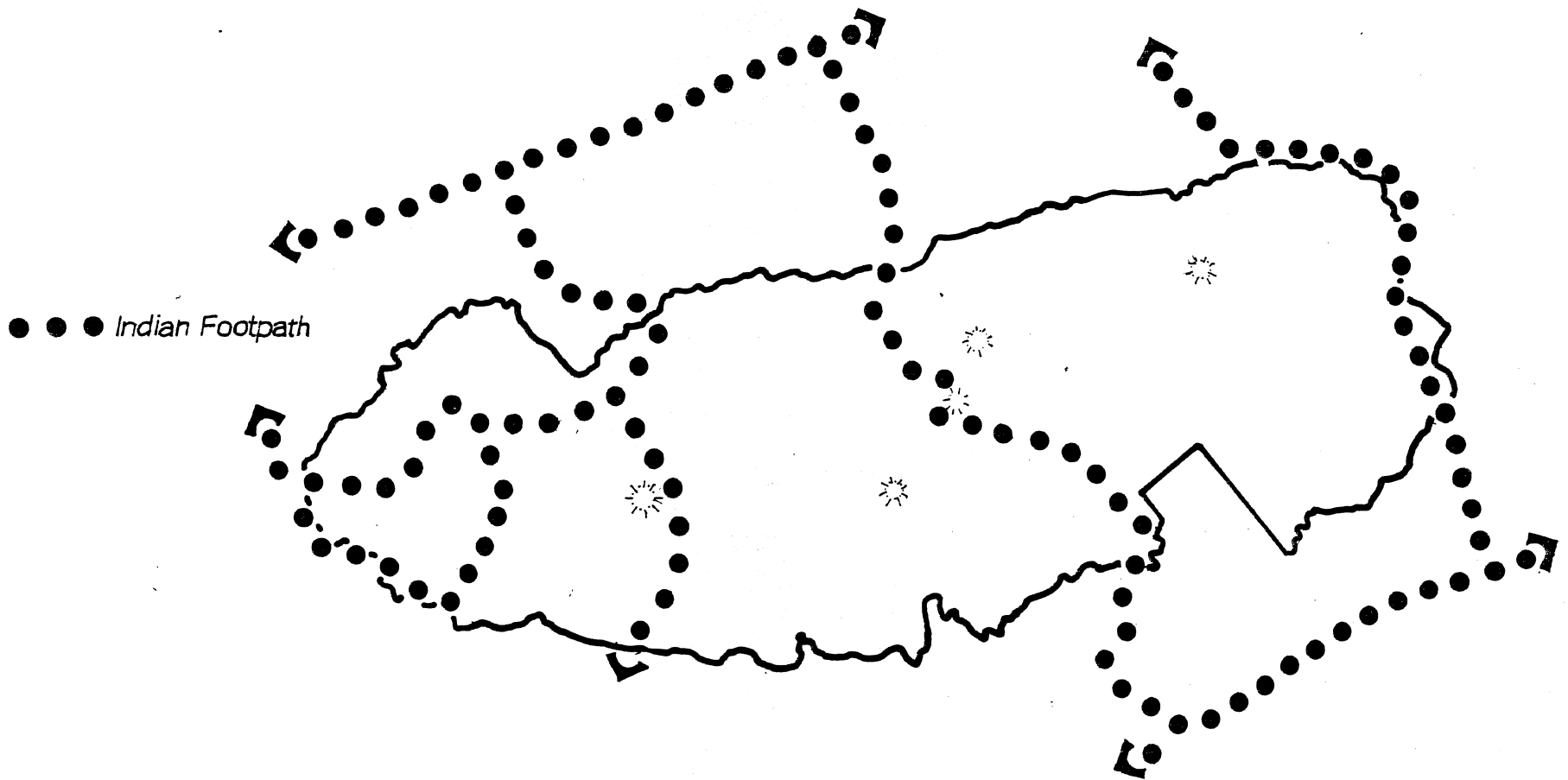
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<sup>176</sup> Superintendent's Monthly Report, (date needed from Michael's road report).

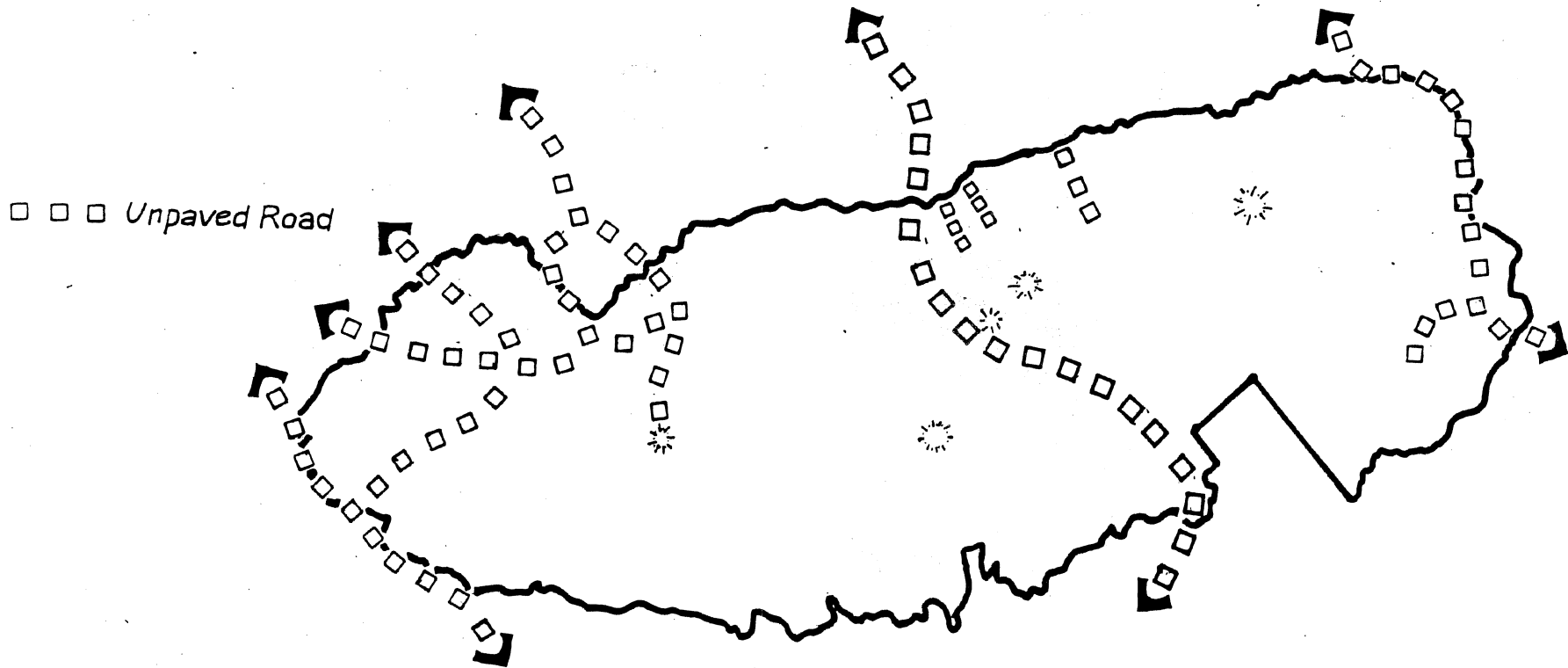
maintenance of Newfound Gap Road during the winter in order to allow visitors year-round access to the casino. The park and its motor roads, then, continue to share a history, one that will shape the future of the Smokies as much as it has influenced the region's past.



APPENDIX 1



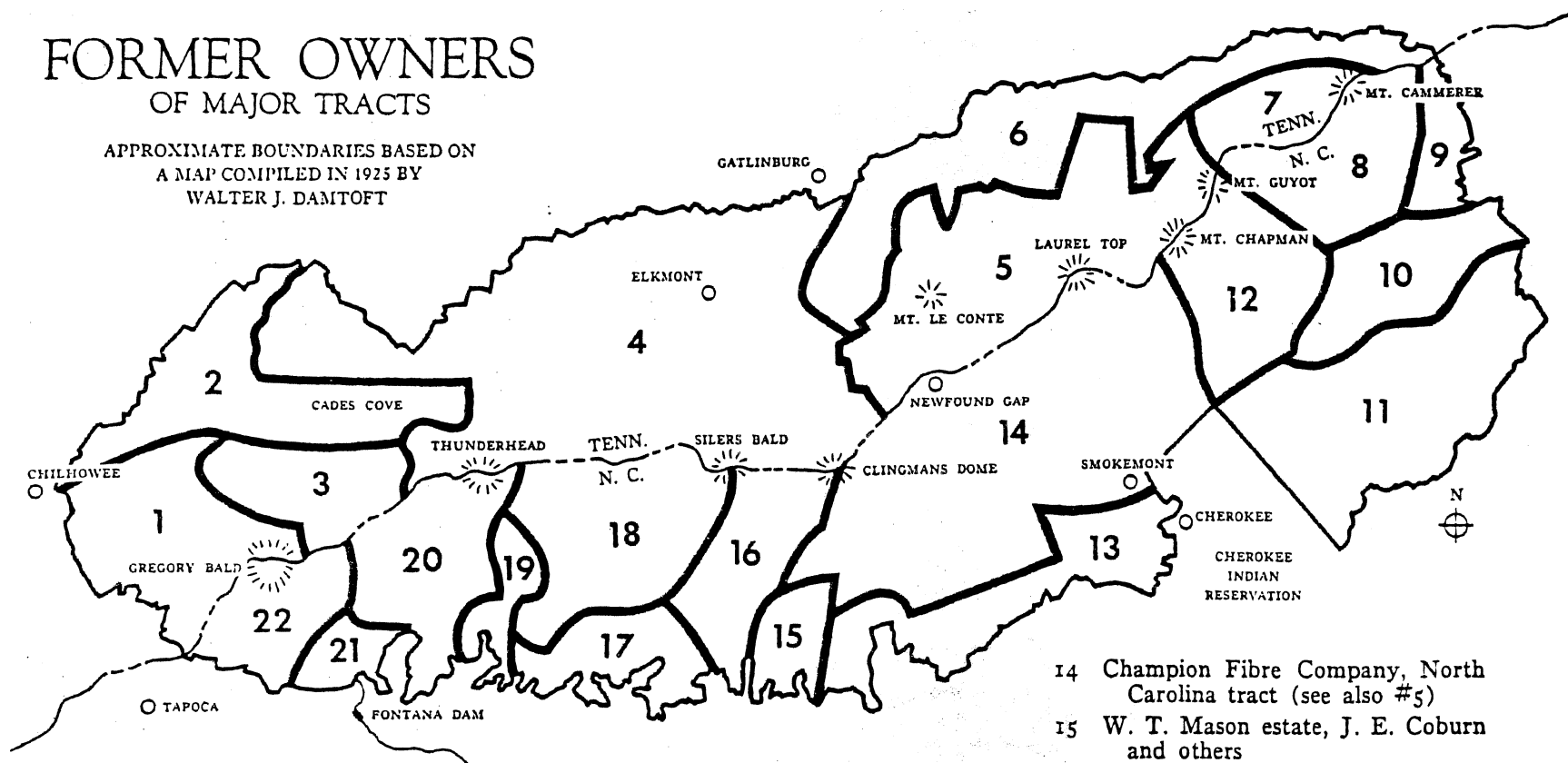
APPENDIX 2



# APPENDIX 3

## FORMER OWNERS OF MAJOR TRACTS

APPROXIMATE BOUNDARIES BASED ON  
A MAP COMPILED IN 1925 BY  
WALTER J. DAMTOFT

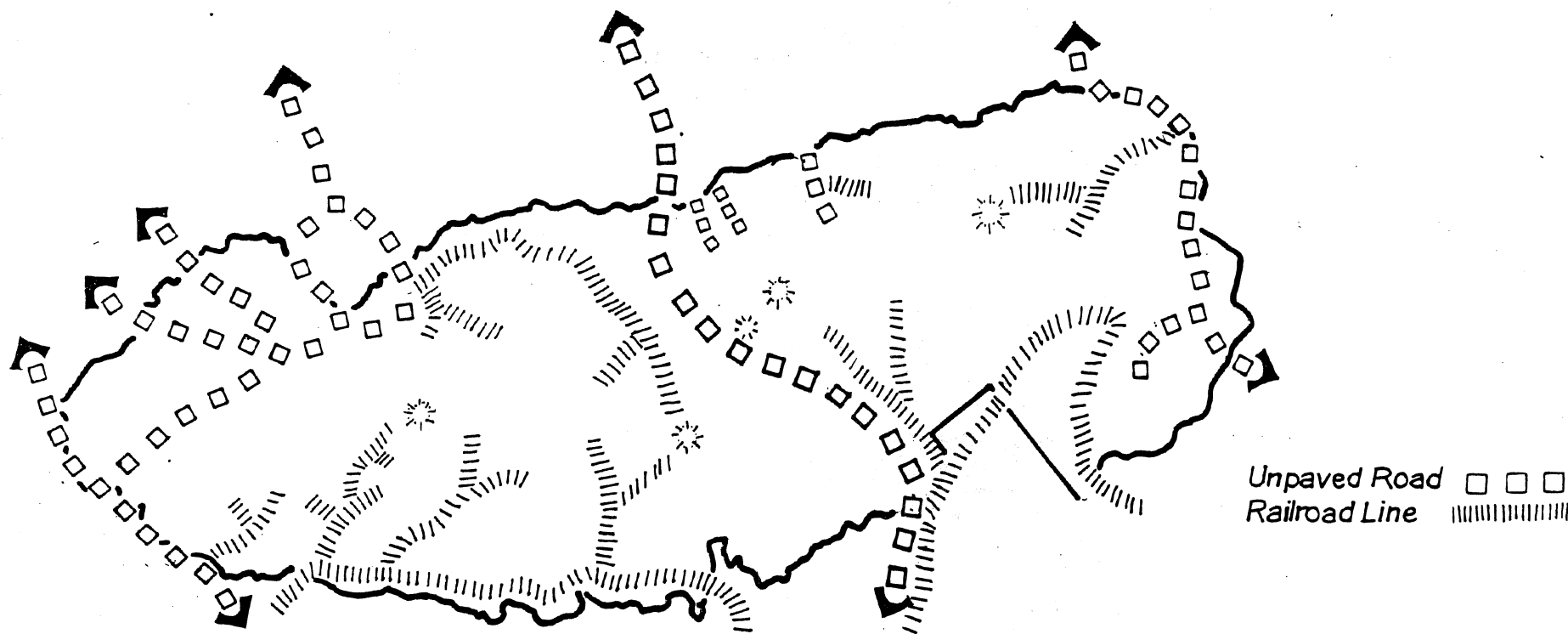


- 1 Aluminum Company of America
- 2 Cades Cove farms and small timber tracts
- 3 Morton Butler heirs
- 4 Little River Lumber Company
- 5 Champion Fibre Company, Tennessee tract (see also #14)
- 6 Miscellaneous farms and small tracts

- 7 Chilhowee Extract Company
- 8 Crestmont Lumber Company
- 9 C. Boice
- 10 Suncrest Lumber Company
- 11 Farms and small tracts
- 12 Parsons Pulp and Lumber Company
- 13 Scattered Cherokee and other small holdings

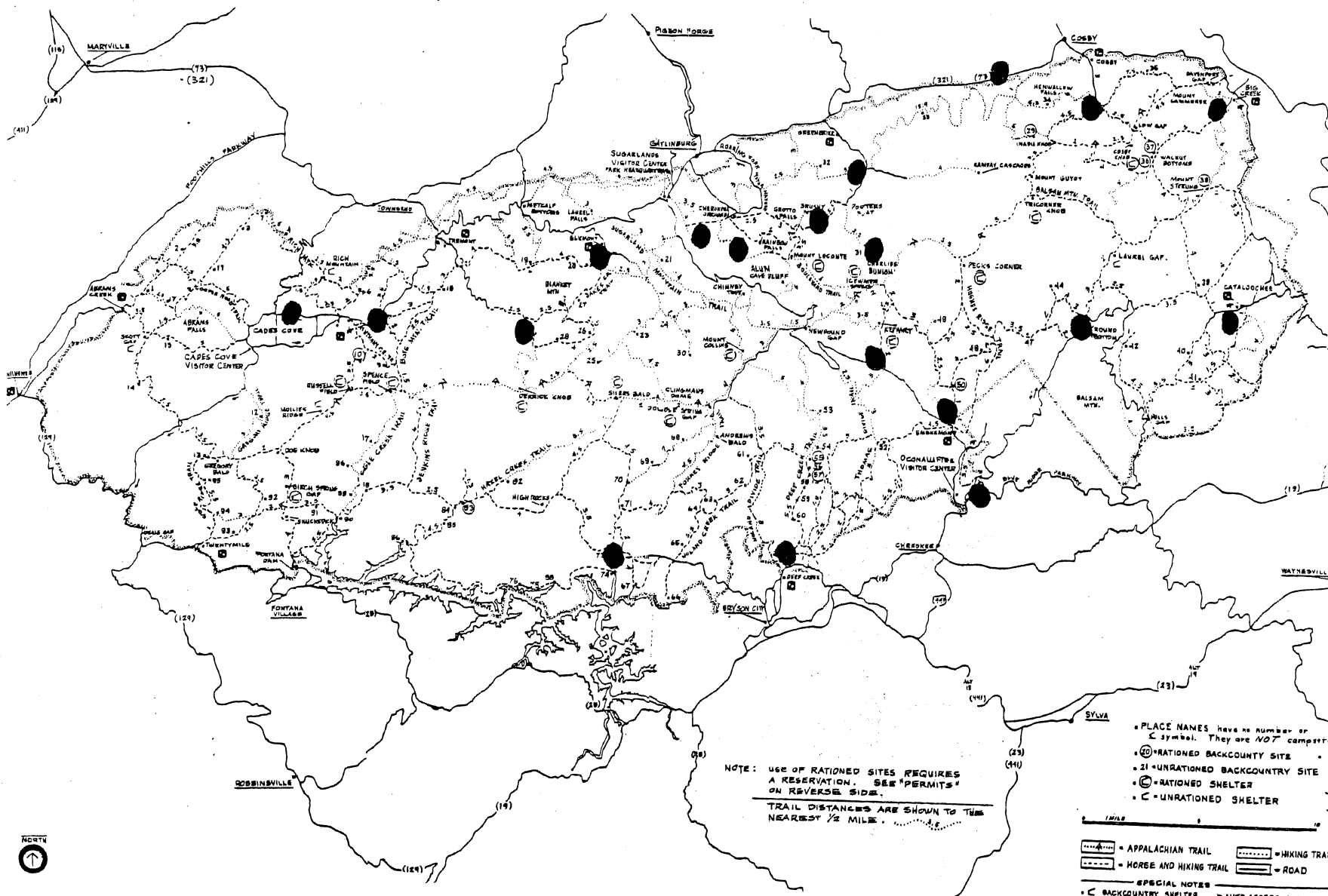
- 14 Champion Fibre Company, North Carolina tract (see also #5)
- 15 W. T. Mason estate, J. E. Coburn and others
- 16 Norwood Lumber Company
- 17 J. E. Coburn and miscellaneous small tracts
- 18 W. M. Ritter Lumber Company
- 19 Adams and Westfeldt
- 20 Montvale Lumber Company (part of which was bought by the N. C. Exploration Company)
- 21 J. E. Coburn
- 22 Kitchin Lumber Company

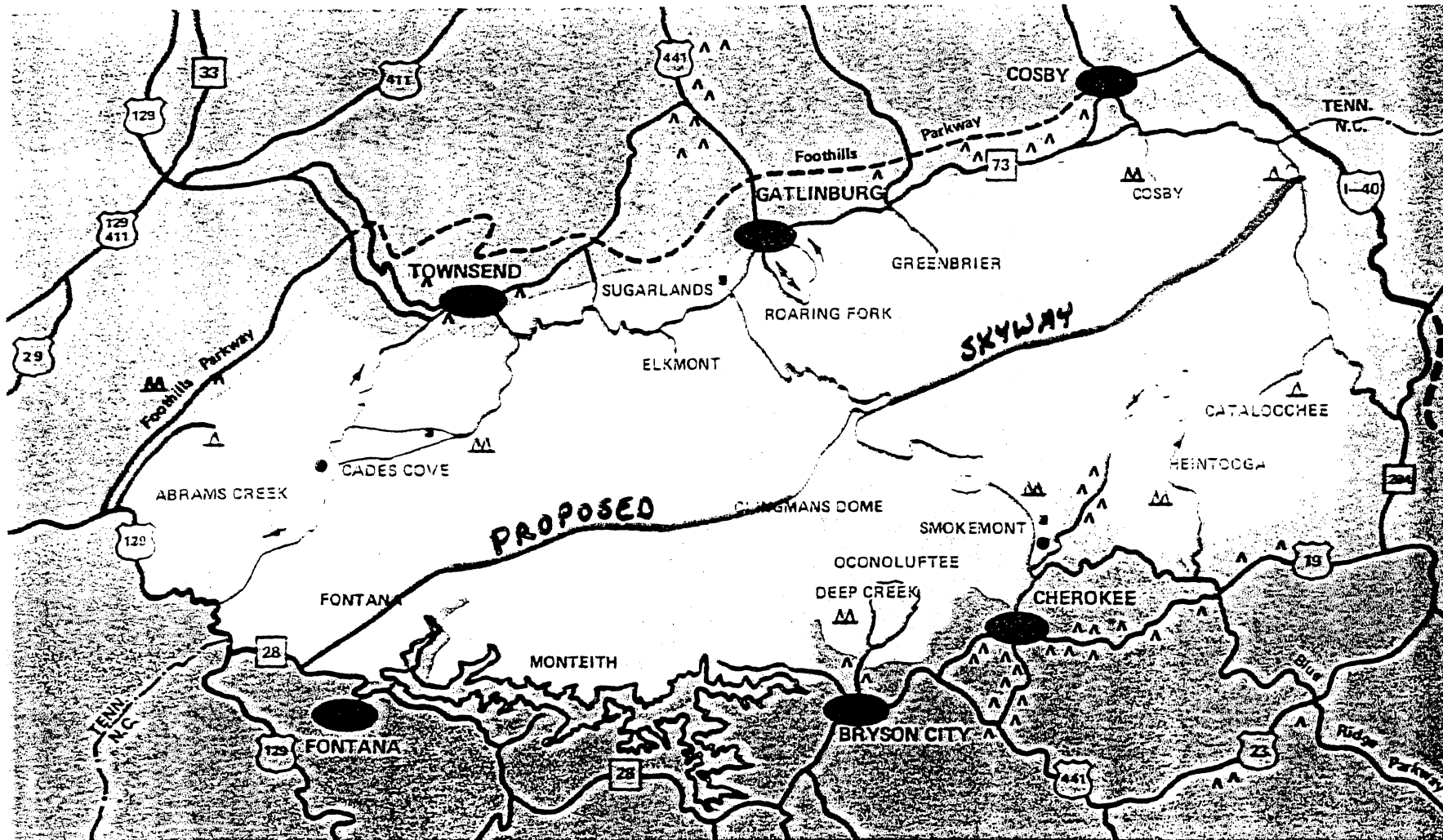
APPENDIX 4






# APPENDIX 5

## C. C. Camps as they were located in the Great Smoky Mountains National Park





# Great Smoky Mountains National Park

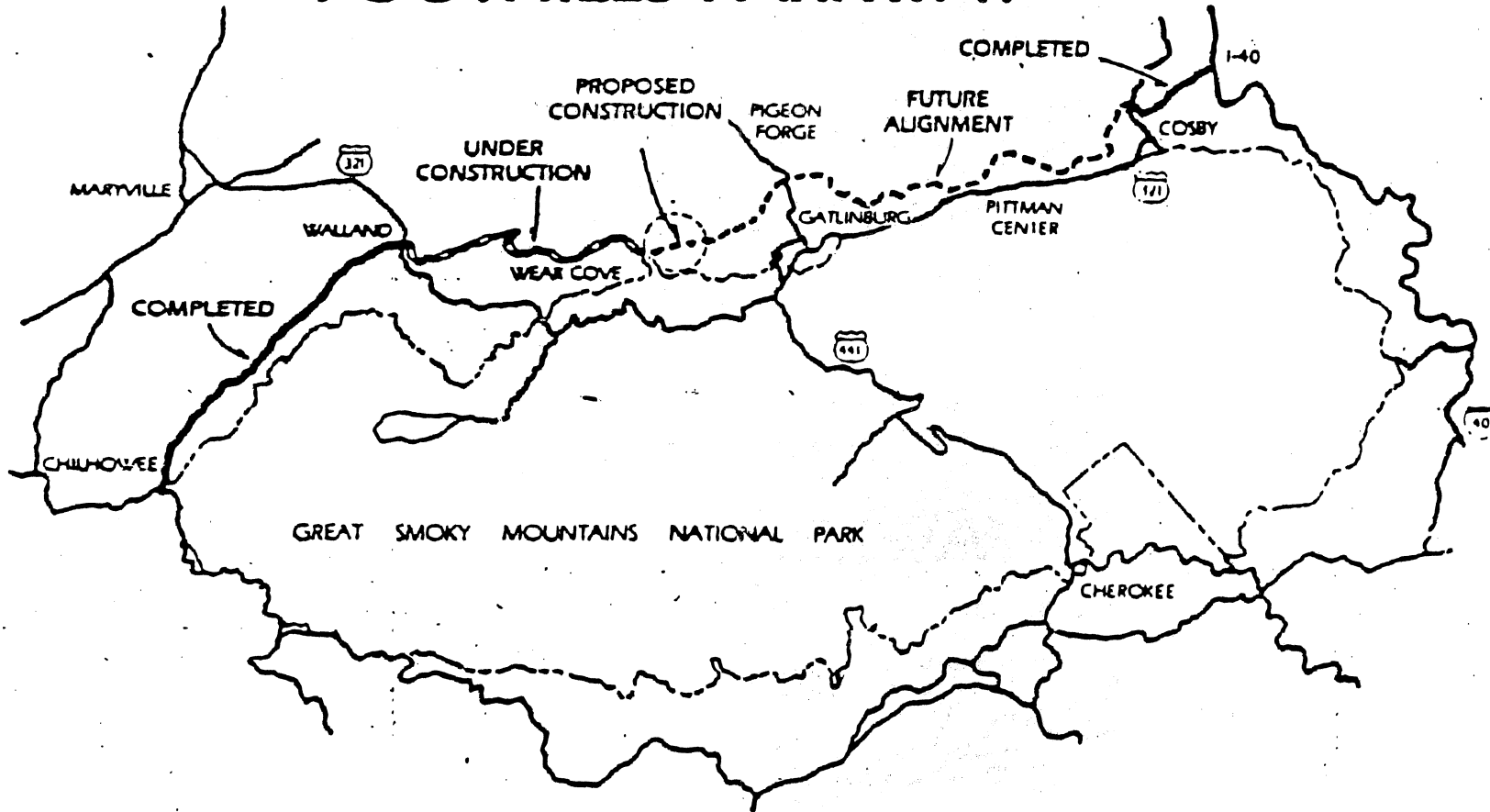
CAMPGROUND (DEVELOPMENT)   
(PRIMITIVE)   
(PRIVATE) 

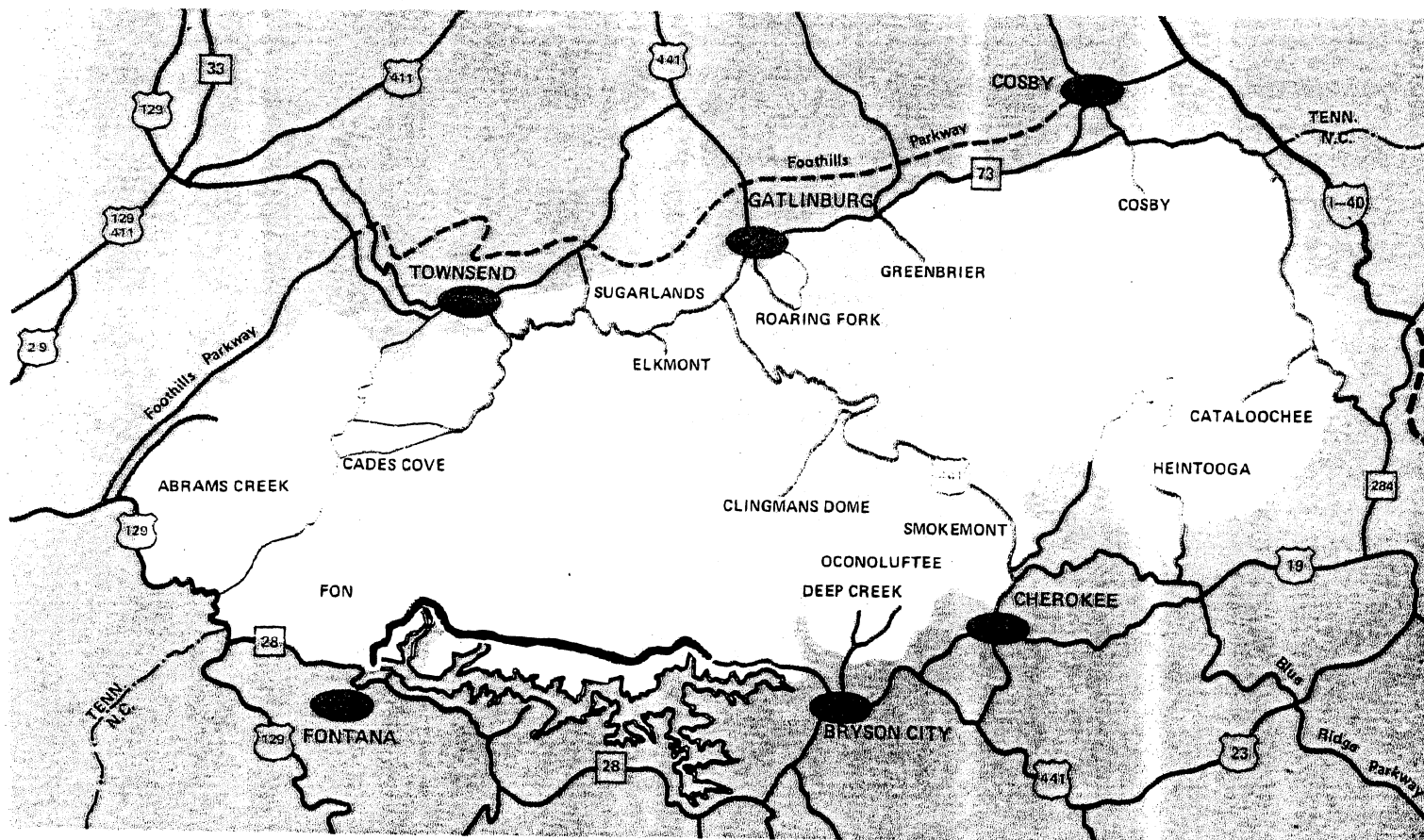
VISITOR CENTER   
PIONEER FARM EXHIBIT 

SCALE IN MILES

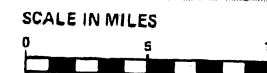


# FOOTHILLS PARKWAY





**Great Smoky Mountains National Park**



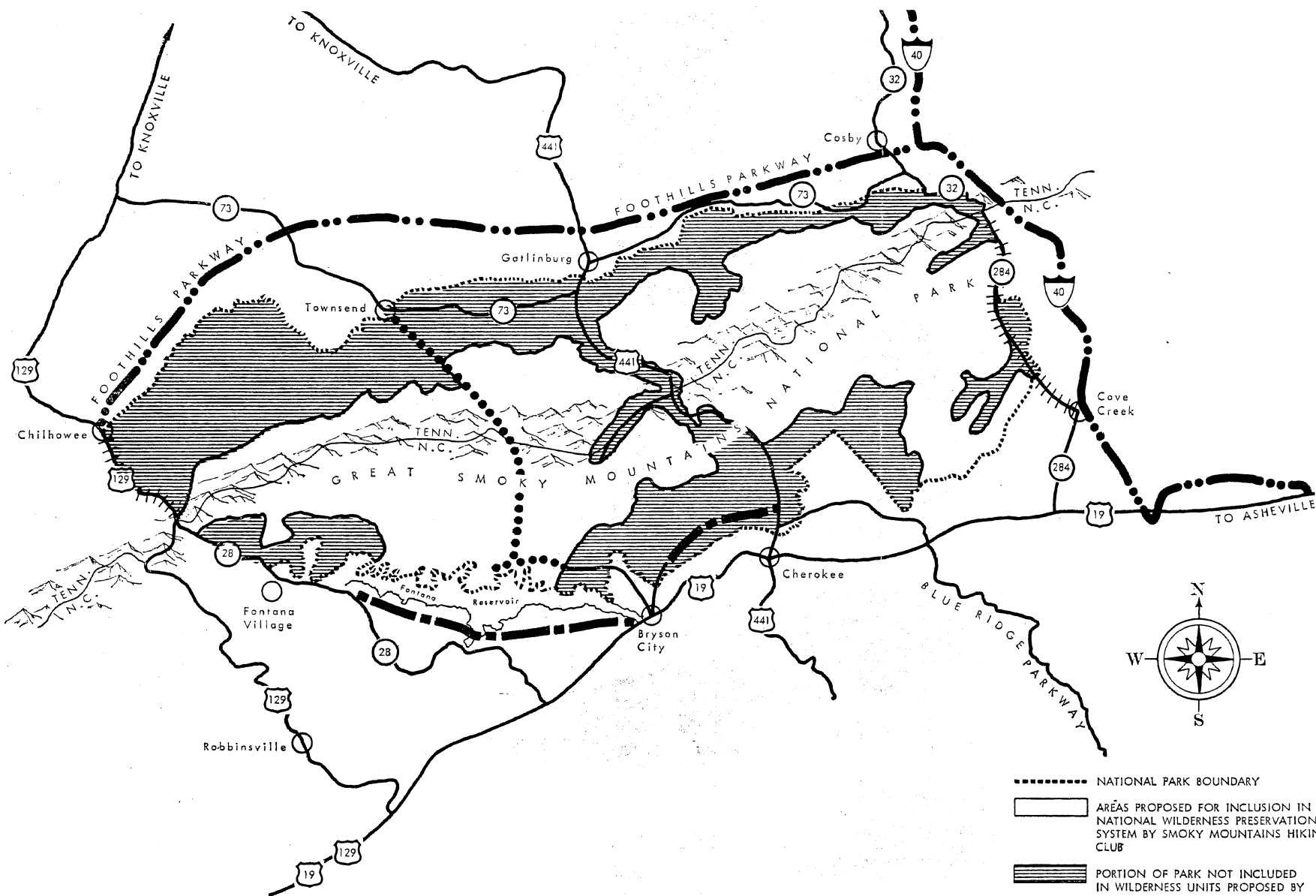


# APPENDIX 9

## GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS AND BRIDGES

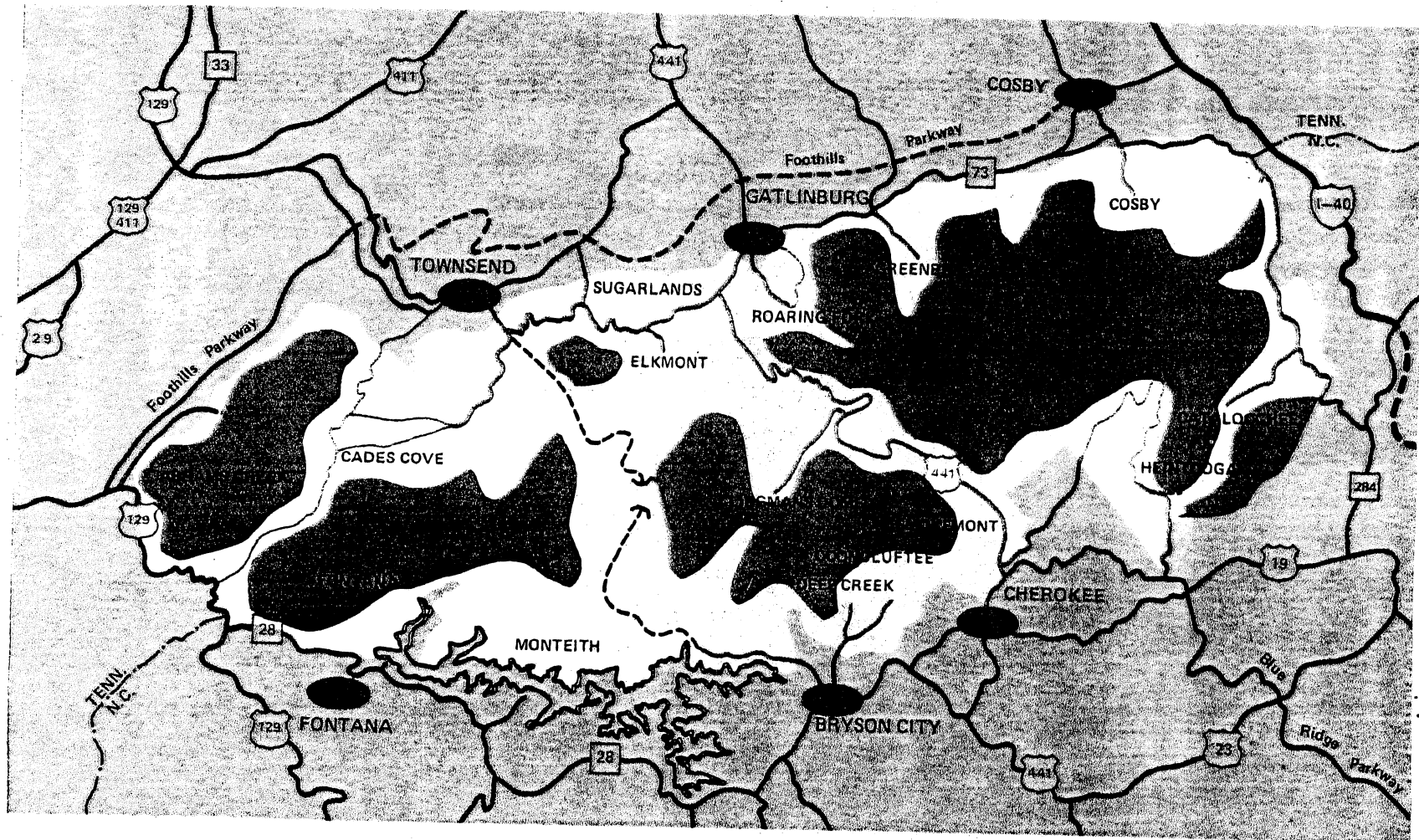
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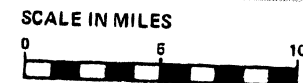


- NATIONAL PARK BOUNDARY
- ▨ AREAS PROPOSED FOR INCLUSION IN NATIONAL WILDERNESS PRESERVATION SYSTEM BY SMOKY MOUNTAINS HIKING CLUB
- ▨ PORTION OF PARK NOT INCLUDED IN WILDERNESS UNITS PROPOSED BY SMOKY MOUNTAINS HIKING CLUB
- EXISTING ROADS
- ..... ROADS UNDER CONSTRUCTION
- ..... TRANSMOUNTAIN ROAD PROPOSED BY NATIONAL PARK SERVICE
- . - . - . ALTERNATIVE PARKWAY ROUTES

MAP OF THE GREAT SMOKIES NATIONAL PARK, SHOWING TWO UNITS SUGGESTED BY WILDERNESS PROONENTS FOR WILDERNESS DESIGNATION UNDER THE WILDERNESS ACT; SHOWING A TRANS-MOUNTAIN ROAD PROPOSED BY THE NATIONAL PARK SERVICE (BRYSON CITY, NORTH CAROLINA TO TOWNSEND, TENNESSEE) THAT WOULD BISECT THE PROPOSED WILDERNESS UNIT IN THE WESTERN SECTION; AND SHOWING ALTERNATIVE ROAD PROPOSALS ADVANCED BY LOCAL WILDERNESS PRO- PONENTS THAT WOULD SAVE THE WILDERNESS.



**Great Smoky Mountains National Park**



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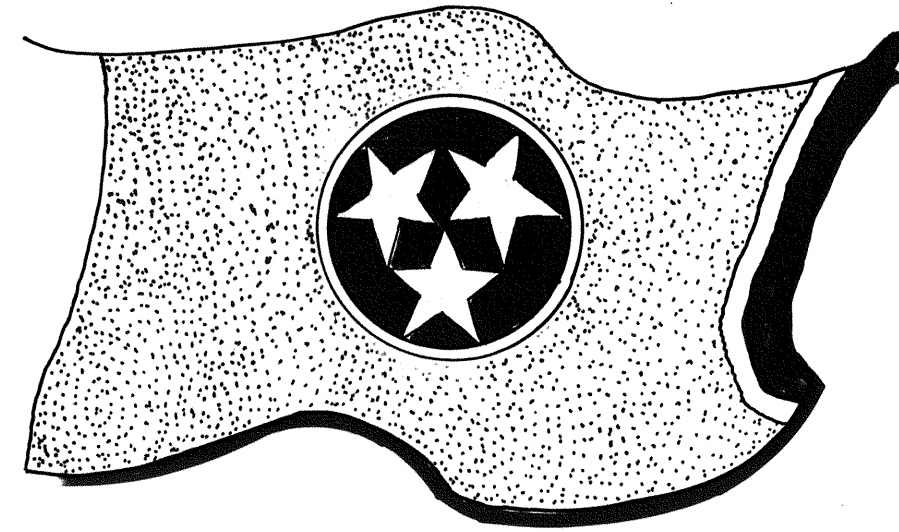
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Tennessee State Flag



The history of Great Smoky Mountains National Park has always been intimately linked to the history of its motor roads. The movement to establish the park began when Willis Davis promoted the idea during a Knoxville Automobile Club board meeting in 1923. Alarmed at excessive logging and desirous of federally funded roads, the Automobile Club created the Smoky Mountains Conservation Association to lobby the federal government for a national park in the Smokies. When Congress finally announced authorization of the park in 1926, the Knoxville Automobile Club held a celebratory banquet.

The motor roads of Great Smoky Mountains National Park did not simply materialize with the establishment of the park. Long before tourists began motoring over Newfound Gap and causing traffic jams in Cades Cove, the Cherokee, white settlers, and loggers greatly influenced the Smokies' motor road system. After migrating to the region more than a thousand years ago from the upper Ohio River, the Cherokee blazed a sophisticated network of footpaths throughout the mountains for hunting, for socializing, and, on some occasions, for making war. Today's road from Cataloochee along the northeastern boundary of the park closely follows one of these Cherokee trails. White settlers migrated to the Smokies during the 1820s and 1830s along these same Cherokee footpaths. After widening many of them, settlers also began building new wagon roads throughout the mountains that evolved into park thoroughfares such as the Parson Branch and Rich Mountain roads near Cades Cove. Unlike these settlers, loggers sought out the more inaccessible regions of the Smokies. Timber firms including the Little River Lumber Company began logging in 1901 and by the mid-1930s had cut approximately 85 percent of what was one of the largest virgin deciduous forests on earth, leaving behind a legacy of abandoned railroad beds that were easily transformed into park motorways such as Little River Road.

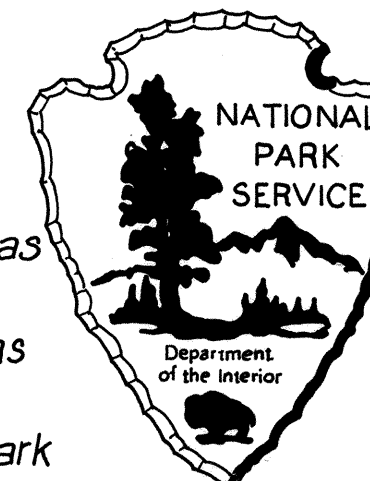
Immediately after the federal government officially established Great Smoky Mountains National Park in 1934, the National Park Service began reconstructing Newfound Gap Road, a state-built road running up and over the Appalachian divide in the very heart of the Smokies. Although during the early 1930s the Park Service built several mountain roads in eastern parks including Skyline Drive in Shenandoah and Cadillac Mountain Road in Acadia, none posed the technical challenges of Newfound Gap Road in the Smokies. To eliminate sharp

# THE GREAT SMOKY



# MOUNTAINS NATIONAL PARK ROADS & BRIDGES

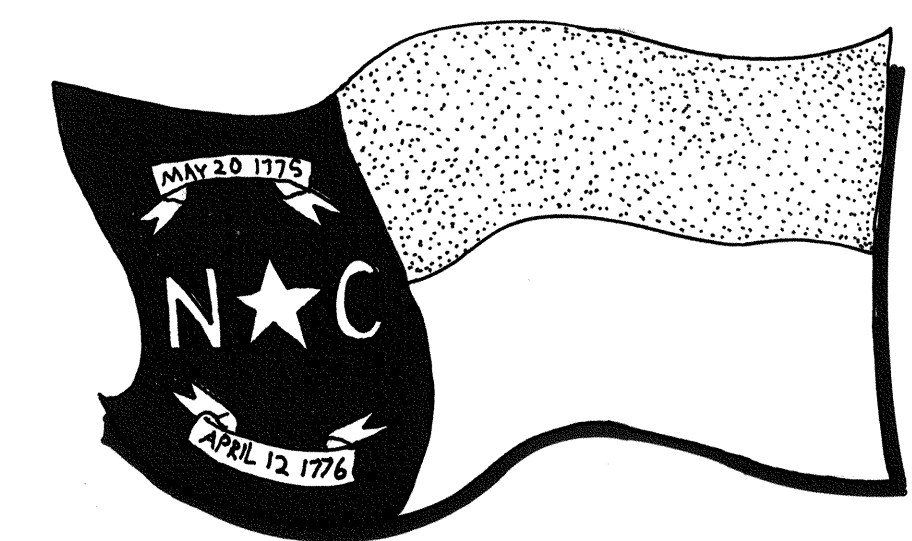
This project is part of the Historic American Engineering Record, administered by the Historic American Buildings Survey/Historic American Engineering Record Division (HABS/HAER) of the National Park Service, U.S. Department of the Interior (E. Blaine Cliver, Chief), and was cosponsored during the summer of 1996 by HAER and GRSMNP (Karen Wade, Superintendent). The project was funded by the Federal Lands Highway Program (Thomas Edick, Administrator) through the National Park Service Park Roads and Parkways Program (Mark Hartsoe, Manager).



The field work, measured drawings, historical reports, and photographs were prepared under the direction of Program Manager Todd A. Croteau and Richard Quin, Program Historian. The recording team consisted of Edward Lupyak, Field Supervisor; Landscape Architects Matthew Regnier, Karen Young and Dorota Sikora (ICOMOS intern, Poland). Historical reports were prepared by Project Historians Michael Kelleher and Neil Maher. Formal large-format photography was done by David Haas.

Note: Drawing concept taken from Great Smoky Mountains National Park 50th anniversary poster and historic photographs.

North Carolina State Flag



curves and steep grades the Park Service constructed a loop-over structure as well as a tunnel and several bridges along the almost thirty-mile highway. As important as these technical changes were aesthetic improvements. The Park Service added numerous overlooks to provide motorists with better access to the park's breathtaking scenery and made the road itself more pleasing by extensively landscaping shoulders and using native materials in the construction of bridges and tunnels whenever possible. Due to this naturalistic, or "rustic," approach, and because it passes through an incredibly diverse scenery, Newfound Gap Road is today considered one of the finest park roads in the country.

While road boosters such as Willis Davis saw the national park as a means of developing motorways through the Smokies, during the 1930s others advocating the preservation of wilderness also began influencing the motor road system of Great Smoky Mountains National Park. The notion that American wilderness was worth protecting was in a very real sense born in the Smokies, when Robert Marshall, Benton McKaye, and a local lawyer named Harvey Broome met in Knoxville, Tennessee to organize opposition to the construction of several proposed highways along the Appalachian divide. Not only did this campaign result in the founding of the Wilderness Society, one of America's most influential environmental organizations, but it also defeated plans for a "Skyway" along the crest of the Smokies. Passage of the Wilderness Act in 1964 likewise resulted in the indefinite postponement of the proposed Northshore Road along the southern boundary of the park between Bryson City and Fontana Dam.

Funding for road improvements throughout the national park system increased dramatically during Mission 66, a ten-year program aimed at expanding and rehabilitating the infrastructure of national parks. While the Park Service undertook several road projects in Great Smoky Mountains National Park, none compare to the work done on the Roaring Fork Motor Nature Trail. Due to past experiences with wilderness advocates, Park Service designers kept the road narrow and one-way for most of its length, and aligned so as to follow the twists and turns of the natural terrain. The result is a ten-mile road through a wild landscape unlike other motorways in the park and Mission 66 projects nationwide.

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UNITED STATES DEPARTMENT OF THE INTERIOR

GREAT SMOKY MOUNTAINS NATIONAL PARK  
ROADS & BRIDGES  
SEVIER COUNTY

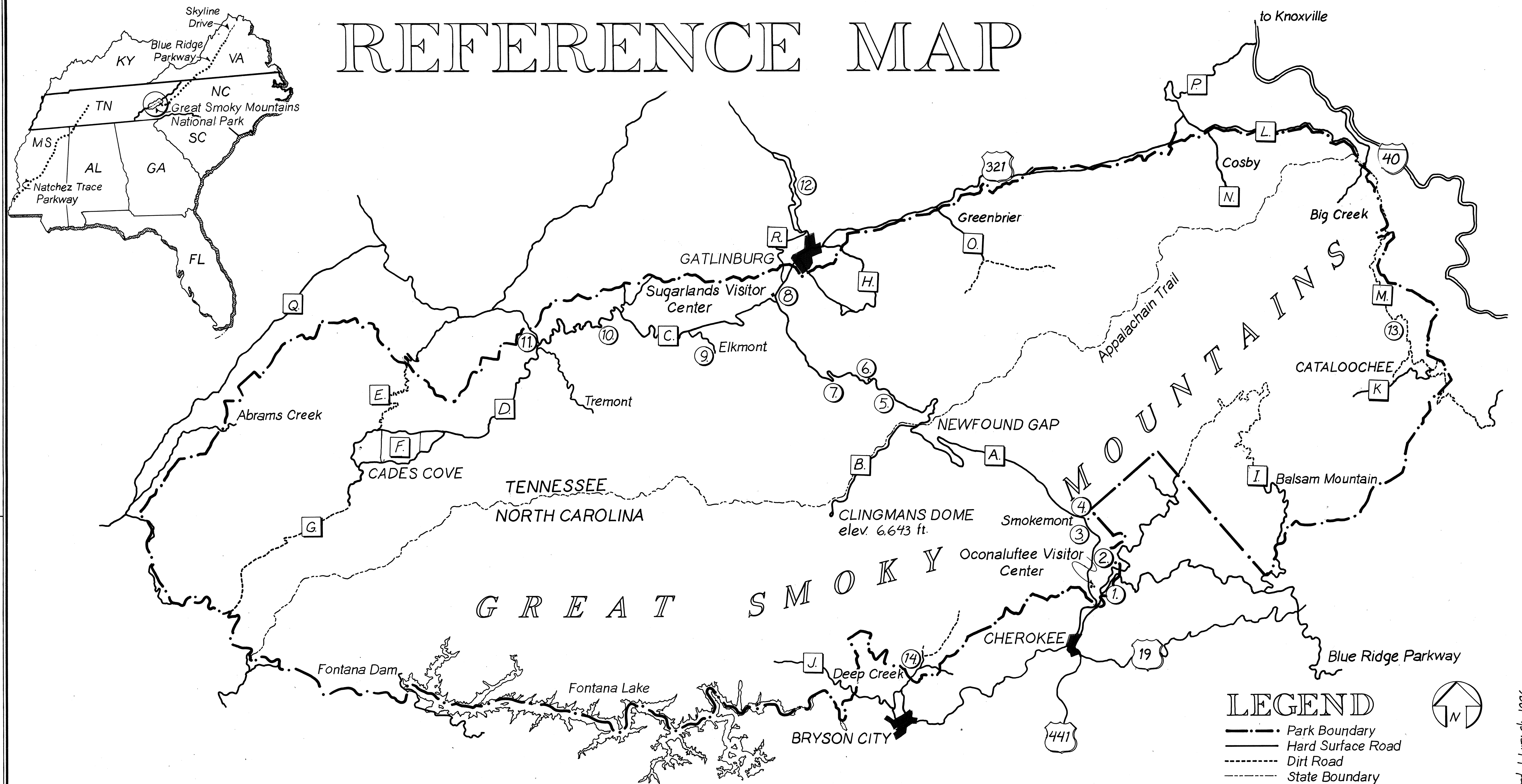
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# REFERENCE MAP



## ROADS □

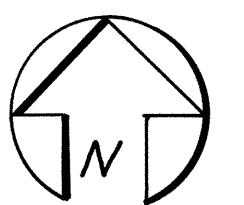
	HAER #		HAER #
A. Newfound Gap Road	TN-35-A	J. Northshore Road	TN-35-I
B. Clingmans Dome Road	TN-35-B	K. Cataloochee Valley Road	TN-35-F
C. Little River Road	TN-35-C	L. Route 32	---
D. Laurel Creek Road	TN-35-D	M. Route 284	TN-35-N
E. Rich Mountain Road	TN-35-O	N. Cosby Road	TN-35-J
F. Cades Cove Loop Road	TN-35-D	O. Greenbrier Road	TN-35-L
G. Parson Branch Road	---	P. Foothills Parkway East	TN-35-E
H. Roaring Fork Motor Nature Trail	TN-35-G	Q. Foothills Parkway West	TN-35-E
I. Heintooga/Balsam Mt. Road	TN-35-M	R. Gatlinburg Bypass	TN-35-E

## BRIDGES ○

	HAER #		HAER #
1. Luten Bridge, Raven Fork	TN-35-T	8. Headquarters Bridge	---
2. Luten Triple Arch, Oconaluftee (demolished)	TN-35-T	9. Elkmont Vehicle Bridge, Little River	TN-35-S
3. Smokemont Bridge, Oconaluftee	TN-35-R	10. Sinks Bridge, Little River	---
4. Luten Bridge, Bradley Fork	TN-35-T	11. Townsend Wye Bridge	---
5. Little Pigeon River Bridge	---	12. Crossover Bridge at Perry's Dam	---
6. Loop Over	TN-35-Q	13. Cataloochee Creek Bridge	---
7. Chimneys Bridge, West Prong Little Pigeon	---	14. Timber Bridge, Deep Creek (demolished)	---

## LEGEND

- Park Boundary
- Hard Surface Road
- - - Dirt Road
- - - State Boundary



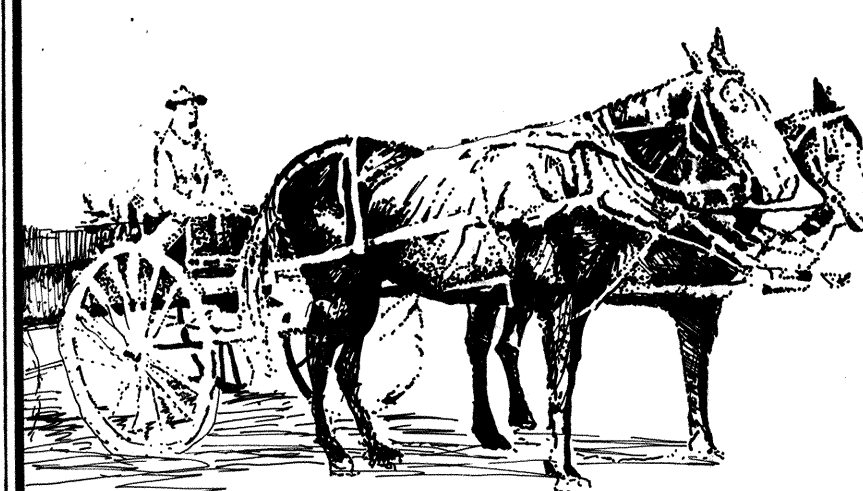
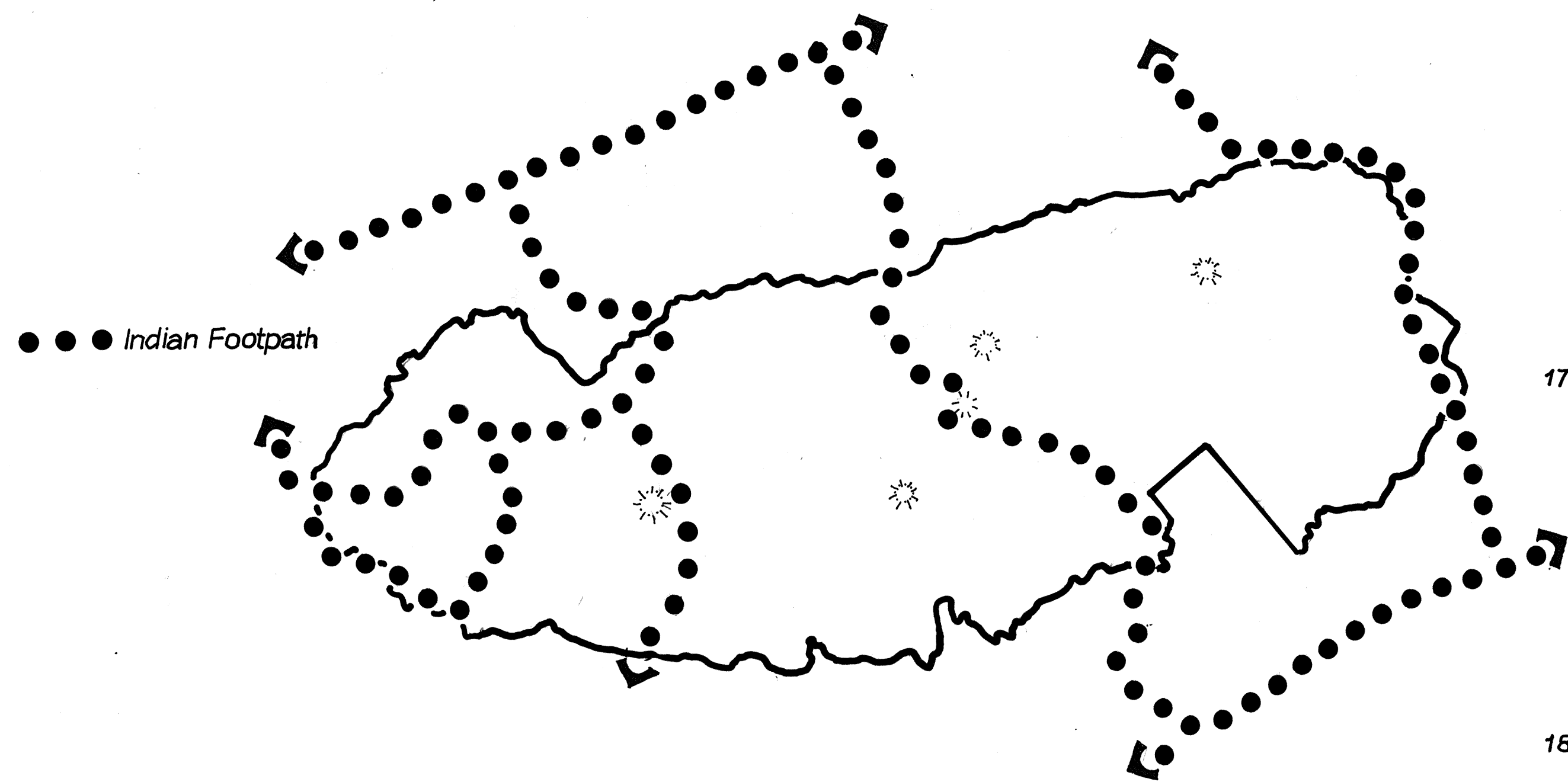


# EVOLUTION OF MAJOR ROADS



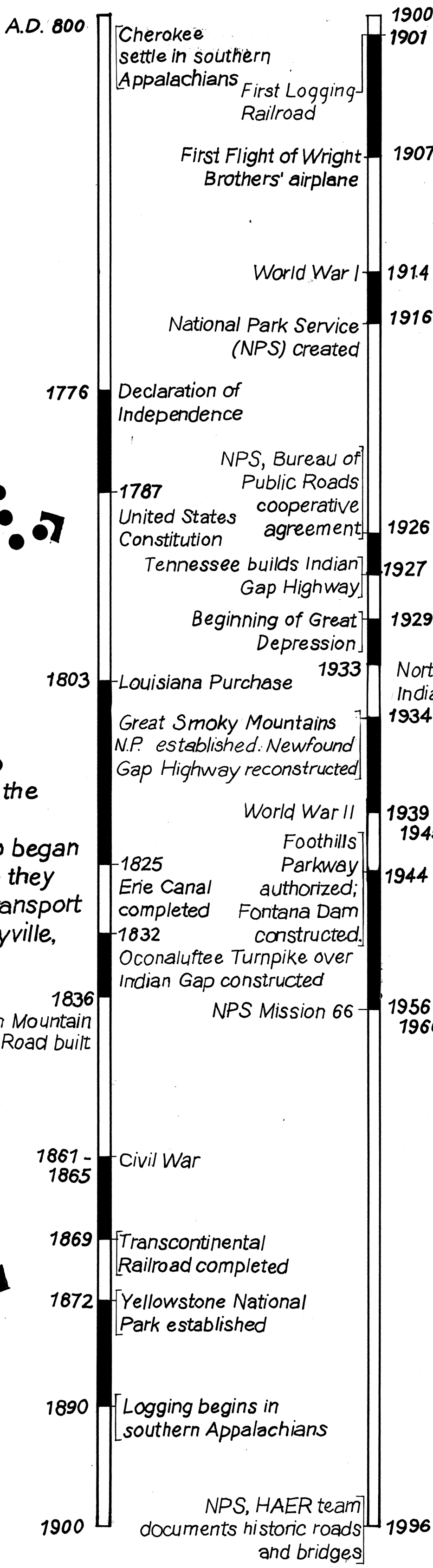
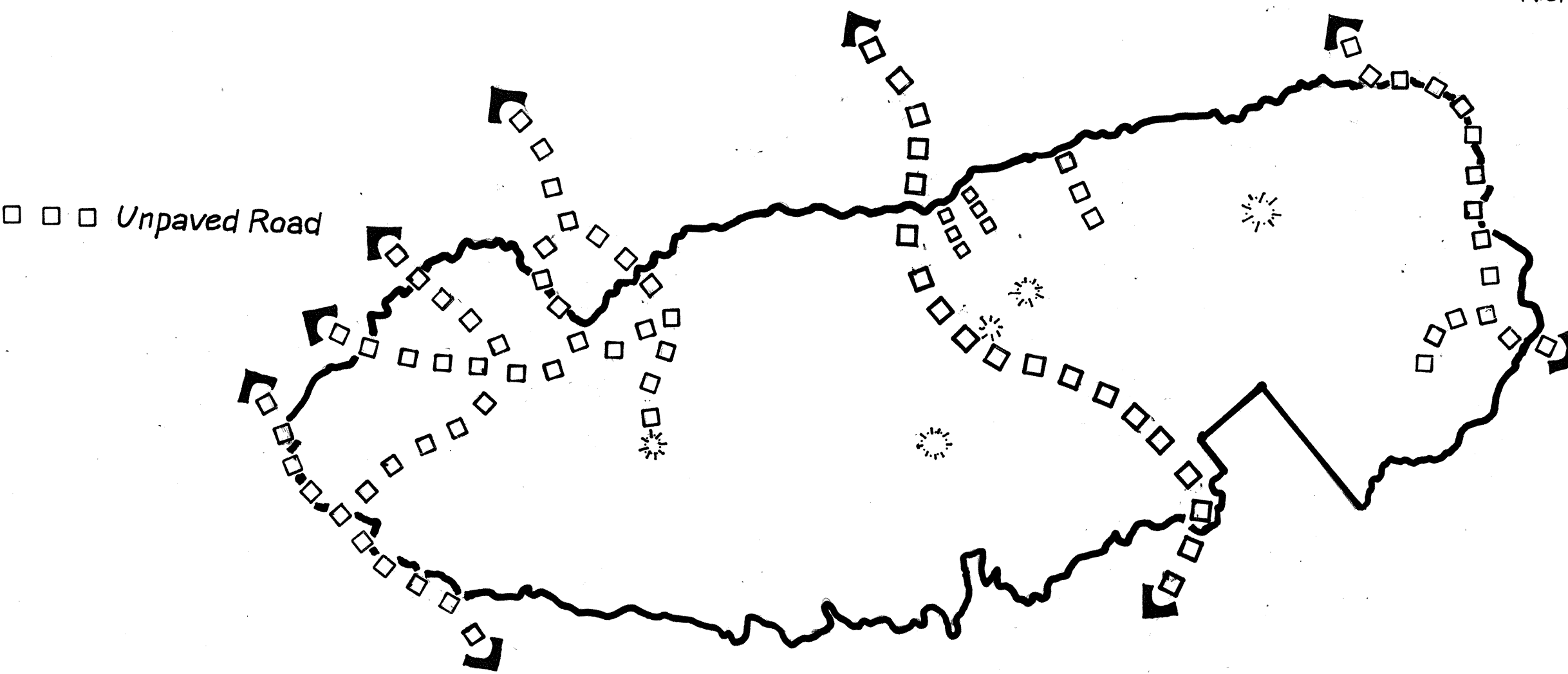
A.D. 800

Long before tourists began motoring over Newfound Gap, Native Americans blazed a sophisticated network of footpaths through the Great Smokies. This process began after the Cherokee, a branch of the Iroquois nation, migrated to the region more than a thousand years ago from the upper Ohio River. To link their two principal trails running parallel on either side of the Smokies, the Cherokee cut three footpaths directly across the mountains. The Cataloochee Trail, the Tuckaleechee-and-Southeastern Trail, and the Indian Gap Trail were each used for hunting, for socializing with kinfolk in other areas, and, on some occasions, for making war.



1800 - 1900

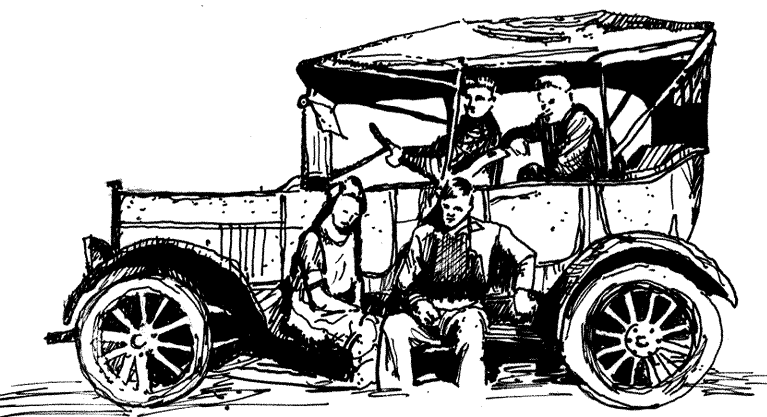
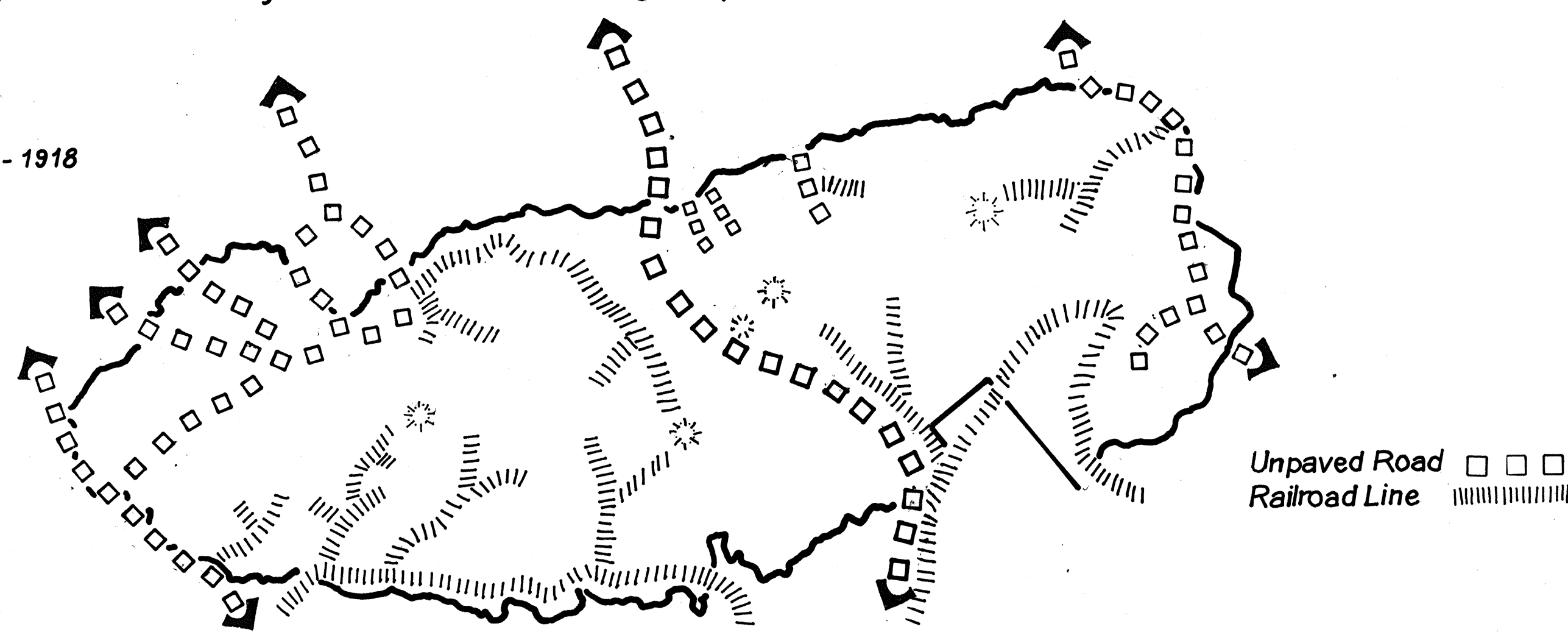
Much as their Native American predecessors, early white settlers also traveled extensively throughout the mountains. Those settling during the 1820s and 1830s in Cataloochee and Cades Cove first widened the Cherokee footpaths they had followed into the region. Soon they also began constructing a host of new wagon roads throughout the mountains so they could visit with neighbors, attend religious services and school, and transport herds of cattle and wagon-loads of produce to distant markets in Maryville, Knoxville, and beyond.



Unlike early settlers, loggers sought out the more inaccessible land within the Smokies. Here, where no farmer had cleared, sown, or harvested, they found one of the greatest virgin deciduous forests on earth. Timber firms such as the Little River Lumber Company began cutting in 1901 and by the mid-1930s had logged approximately eighty-five percent of what would become the national park. To transport this timber from forest to mill, timber companies relied on an elaborate system of logging railroads that eventually reached the Smokies' highest peaks.

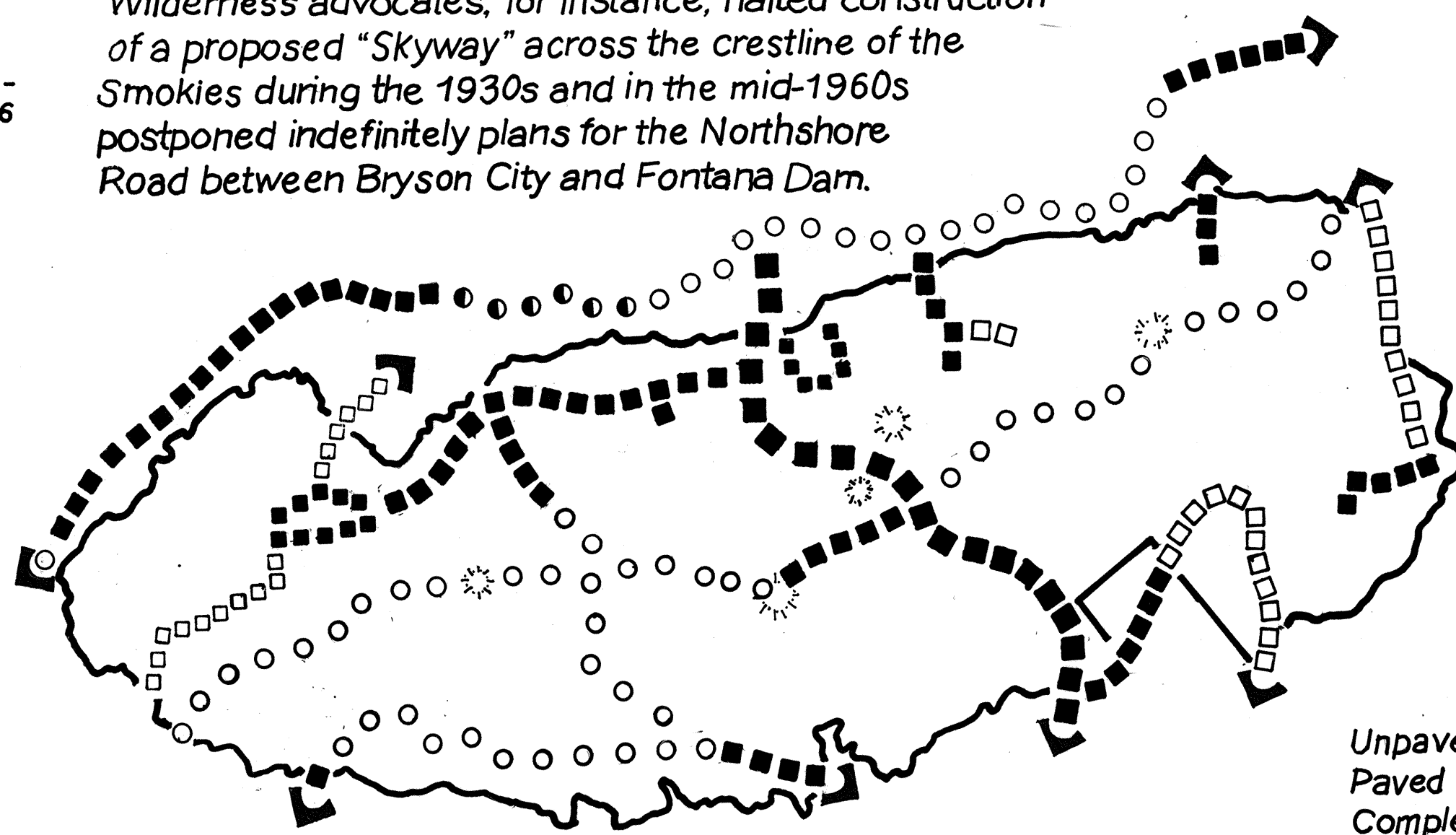


1900 - 1934



1934 - Present

Native American footpaths, white settler wagon roads, and logging railroads all influenced the motor road system of Great Smoky Mountains National Park. Today's Newfound Gap Road closely follows the old Indian Gap Trail, and the Little River Road runs along the abandoned railroad beds of the Little River Lumber Company. After the establishment of the park in 1934, other forces also began shaping its motor road system. Wilderness advocates, for instance, halted construction of a proposed "Skyway" across the crestline of the Smokies during the 1930s and in the mid-1960s postponed indefinitely plans for the Northshore Road between Bryson City and Fontana Dam.



DELINEATED BY: Karen A. Young, 1996

NATIONAL PARK SERVICE ROADS & BRIDGES RECORDING PROGRAM NATIONAL PARK SERVICE UNITED STATES DEPARTMENT OF THE INTERIOR

GREAT SMOKY MOUNTAINS NATIONAL PARK ROADS & BRIDGES SEVIER COUNTY

TENNESSEE

SHEET 3 OF 11

HISTORIC AMERICAN ENGINEERING RECORD TN-35

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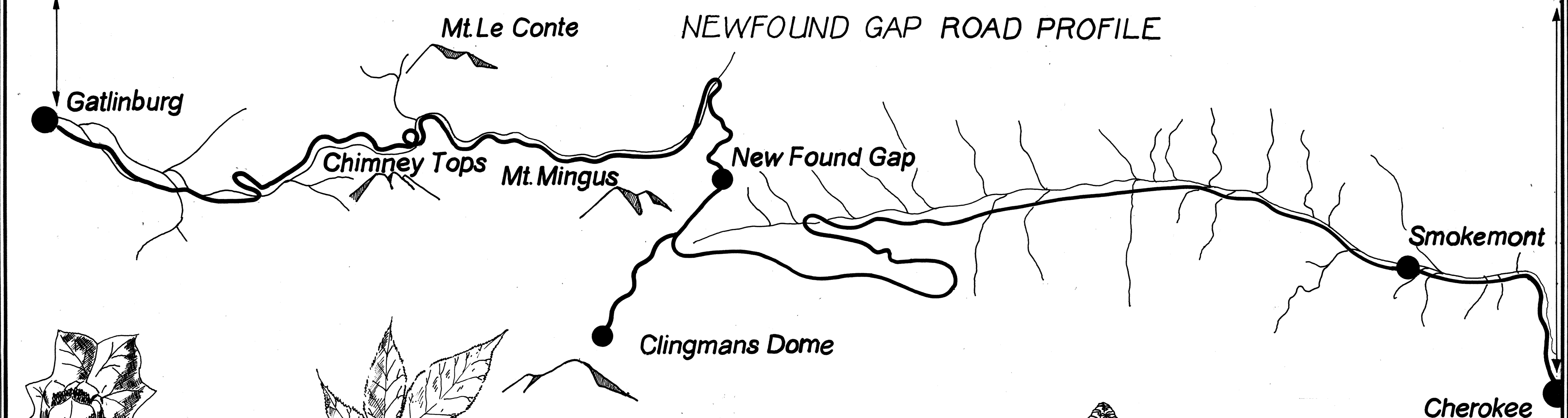
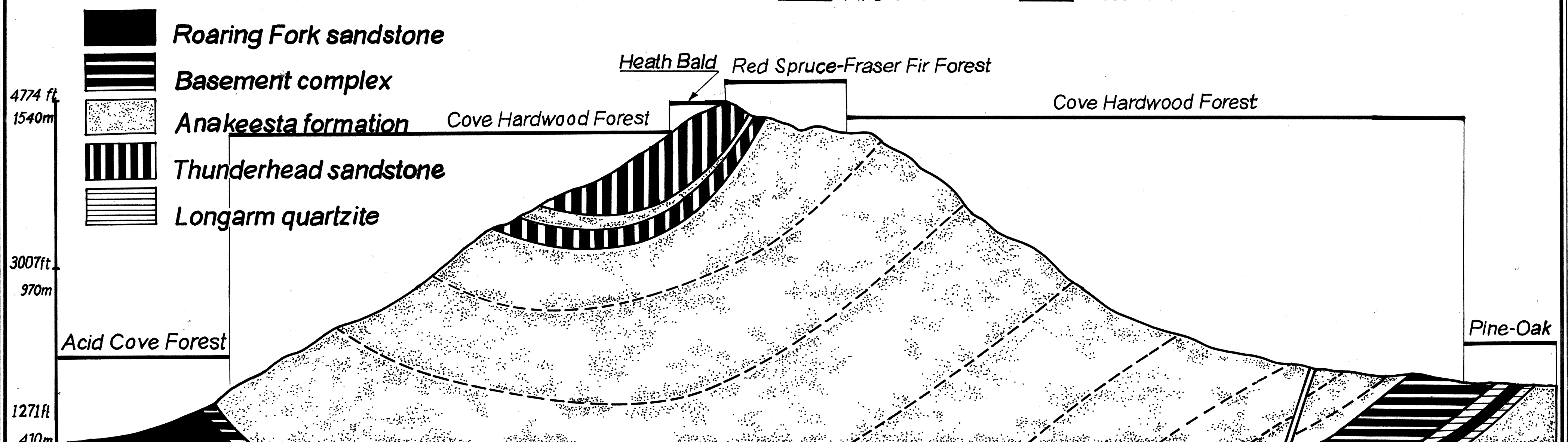
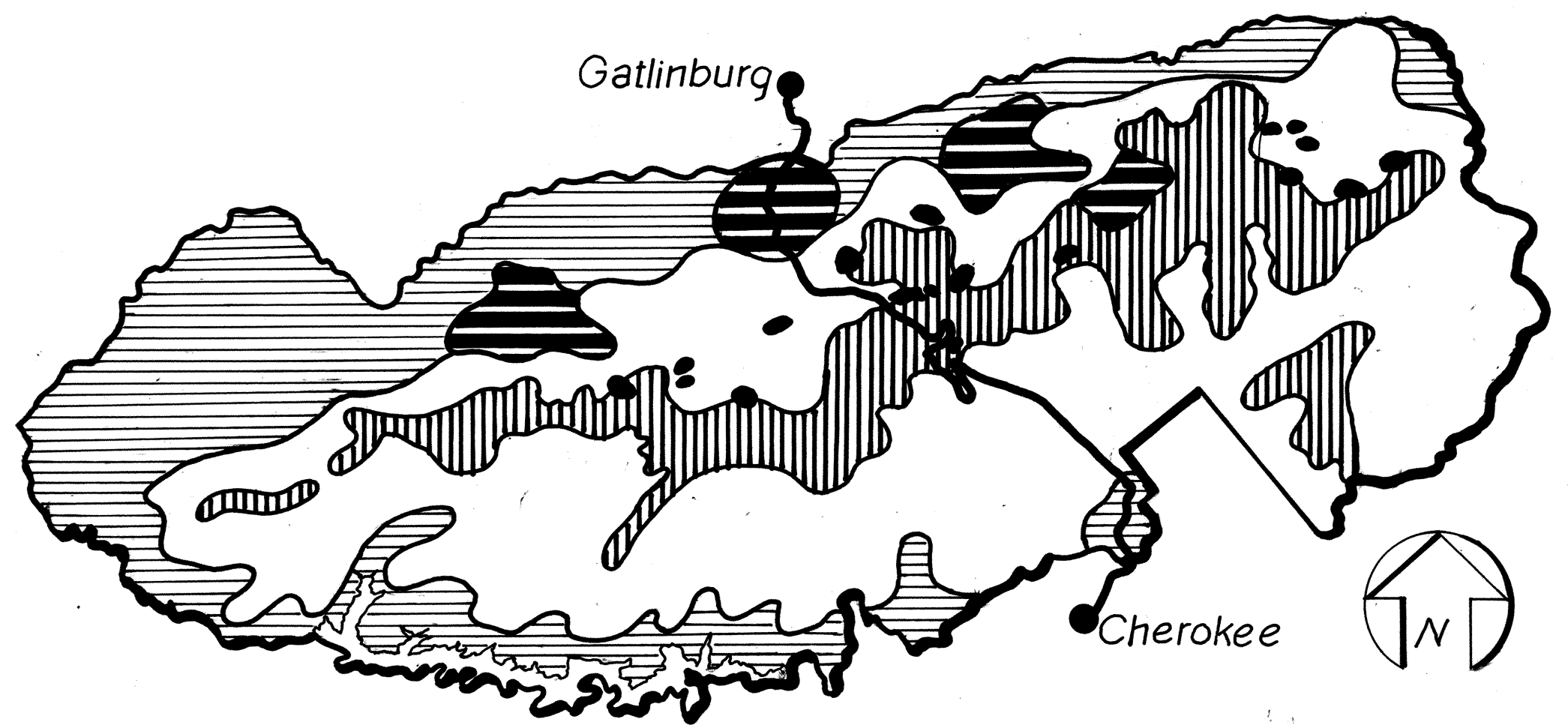




# CLIMATE, TERRAIN & VEGETATION

Elevations in Great Smoky Mountains National Park range from 800' to 6,643'. This great variation in topography drastically affects the local weather: temperatures can vary 10 to 20 degrees Fahrenheit from mountain base to summit, and rainfall averages 55 inches per year in the lowlands to 85 inches per year at Clingmans Dome.

The rocks in the park are mostly sedimentary, formed by deposits of soil, silt, sand, and gravel carried from higher elevations by erosion and deposited into a shallow sea. Drifting continents gradually collided some 200 million years ago, creating tremendous pressures in the earth which caused these horizontal sedimentary rocks to fold and thrust faults to move geologically older rock on top of younger rock, creating the uplifted region known as the Appalachian Mountains. Forces such as wind, rain, freezing, and thawing eroded the surface of this uplifted region, which has nearly been worn down to a level plain. However, the actions of streams and rivers have cut into the plain, creating the steep valleys which are characteristic of the Smokies.



## Acidic Cove Forest

The acid cove forest is found in sheltered areas at low to moderate elevations; primarily narrow, rocky gorges, steep ravines and the low, gentle ridges found within coves, all of which contain rocky and acidic soil. The canopy of this natural community includes primarily *Liriodendron tulipifera*, *Betula lenta*, *Betula alleghaniensis*, and *Tsuga canadensis*. The open understory may include *Magnolia fraseri*, *Halesia carolina*, and *Rhododendron maximum*. The ground cover is generally not well developed and consists of a few acid-loving species such as *Galax urceolata*, *Polystichum aristichoides*, *Mitchella repens*, *Epigaea repens*, *Thelypteris noveboracensis*, *Arisaema triphyllum*, *Viola spp.*, and *Medeola virginiana*.

DELINEATED BY: DOROTA SIKORA, 1996



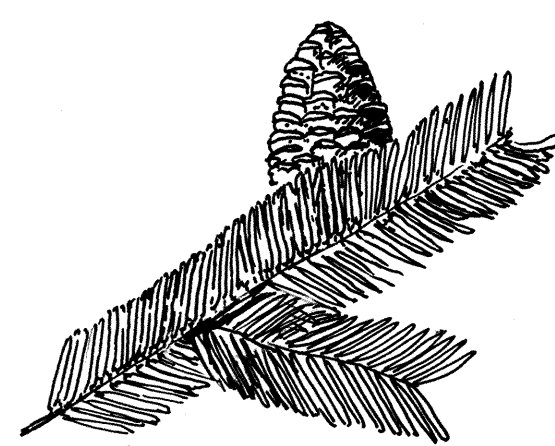
## Cove Hardwood Forest

Found in sheltered areas at low to moderate elevations, the cove hardwood forest occupies broad coves and the lowest slopes of the mountains where the soil is rich, generally circumneutral and rocky, but will generally be deep. The canopy of this natural community is dense, with a diverse mixture of mesohytic trees including *Liriodendron tulipifera*, *Tilia americana* var. *heterophylla*, *Acer saccharum*, *Aesculus flava*, *Betula lenta*, *Magnolia acuminata*, and *Prunus serotina*. The open understory includes *Cornus florida*, *Carpinus caroliniana*, and *Magnolia tripetala*. The ground cover is lush and very diverse, and typical includes *Cimicifuga racemosa*, *Trillium erectum*, *Caulophyllum thalictroides*, *Impatiens pallida*, and *Impatiens capensis*.



## Heath Bald

Found at extremely high elevations on exposed sites such as mountain peaks, sharp ridges and steep slopes, heath balds occur where the soil is thin and rocky and often has a thick organic layer. This natural community does not have a canopy and often is dominated by an understory of dense shrubs including *Kalmia latifolia*, *Rhododendron maximum*, *Rhododendron carolinianum*, *Aronia melanocarpa*, and *Clethra acuminata*. Ground cover is usually sparse, consisting primarily of *Gaultheria procumbens*, *Melampyrum lineare*, and *Galax urceolata*.



## Spruce-Fir Forest

The red spruce-fraser fir forest is found on the highest peaks, generally above 5,500'. The soil is highly variable, ranging from deep mineral soils to rugged boulder fields. The canopy of this natural community is dominated by *Picea rubens* and *Abies fraseri* (the latter now badly ravaged by the Balsam woolly adelgid) and also includes *Betula alleghaniensis* and *Acer spicatum*. The understory is generally sparse, but may be dense, and includes *Viburnum lantanoides*, *Vaccinium erythrocarpum* and *Sambucus racemosa* var. *pubens*. Ground cover is often dense and dominated by *Oxalis montana*, *Athyrium filix-femina* var. *asplenoides*, *Dryopteris campyloptera*, and *Cacalia rugella*.

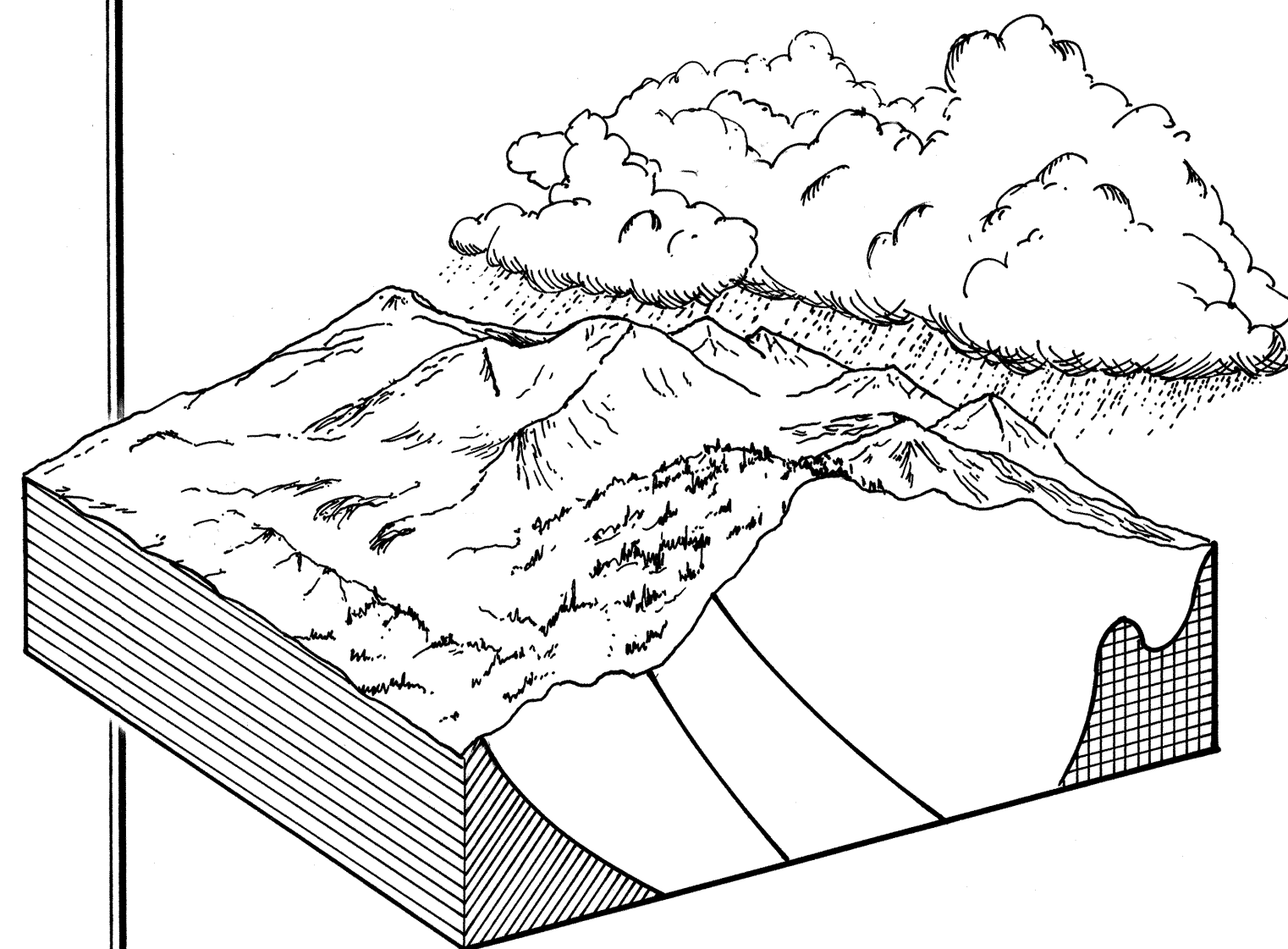


## Pine-Oak Forests

This natural community is found on exposed sharp ridges, knobs, low elevation peaks, and steep south slopes. The soil is generally thin, rocky and extremely acidic. The pine-oak canopy ranges from open to nearly closed, is often stunted and gnarled, and is dominated by a combination of *Pinus virginiana*, *Pinus pungens*, *Quercus coccinea*, and *Quercus montana*. The understory is very dense and is dominated by *Kalmia latifolia* and *Gaylussacia ursina*. The ground cover includes *Epigaea repens*, *Chimaphila maculata*, *Galax urceolata*, and *Schizachyrium scoparium*.



# DESIGN PRINCIPLES



## Geology and Road Construction

The geologic makeup of GSMNP is predominantly metamorphosed sedimentary rock, ranging from phyllites, schists, and quartzites, to slates, shales, sandstones, and metasilstones. The natural instability of slates and metasilstones caused numerous landslides during road construction, and stabilizing roadbeds built on these formations was crucial. In contrast, sandstone is stronger and erosion resistant, and excavating roadbeds through this rock required heavy machinery and took a great deal of time. However, this excavated rock provided excellent building material for stone walls and bridges.

Thousands of years of geologic change and erosion have shaped the Great Smoky Mountains, which are characterized by high mountain peaks, steep hillsides, deep river valleys, and fertile coves. This difficult terrain, and the underlying bedrock, presented numerous challenges for the designers of the roads in Great Smoky Mountains National Park (GSMNP). J. Ross Eakin, the park's first Superintendent, wrote that in comparison to the mountains of the west, where the National Park Service had a great deal of experience building roads, the geologically older mountains of the east are "cut up by many more gullies," and "to secure good [road] alignment along our mountain sides will require tremendous cuts and fills," thereby creating "a terrible scar" on the roadsides.

Attempting to avoid as much scarring as possible, road designers used tunnels, bridges, and retaining and revetment walls. Tunnels cut through ridges where, if not used, the construction of the road would create an unsightly and unstable road scar, and would present an unsafe turn radii for motorists (see fig. 2 & fig. 3). Bridges spanned the numerous streams and rivers the roads had to cross, and created safer road alignments by allowing for consistent grades. Where the routes followed streams closely, revetment walls were constructed to hold back fill and prevent the streams from undercutting the roadbeds. Techniques such as rounding cuts and revegetating roadsides (see fig. 1) controlled erosion and reduced visible road scars. Using all of these methods, designers were able to create some of the most pleasurable and scenic roads in the national park system.

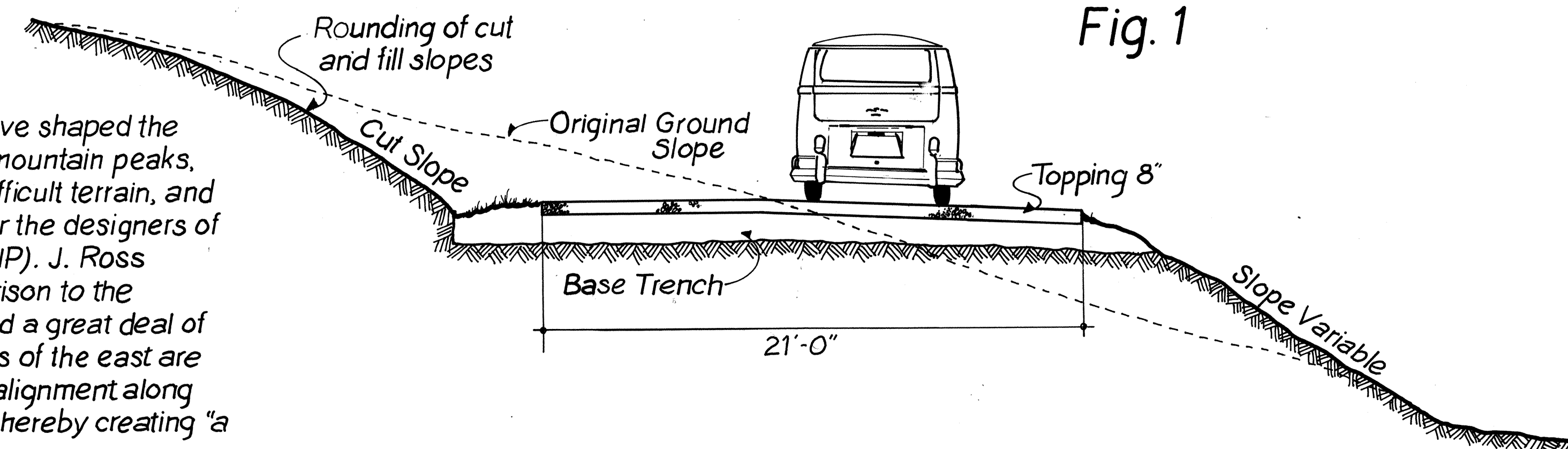


Fig. 1

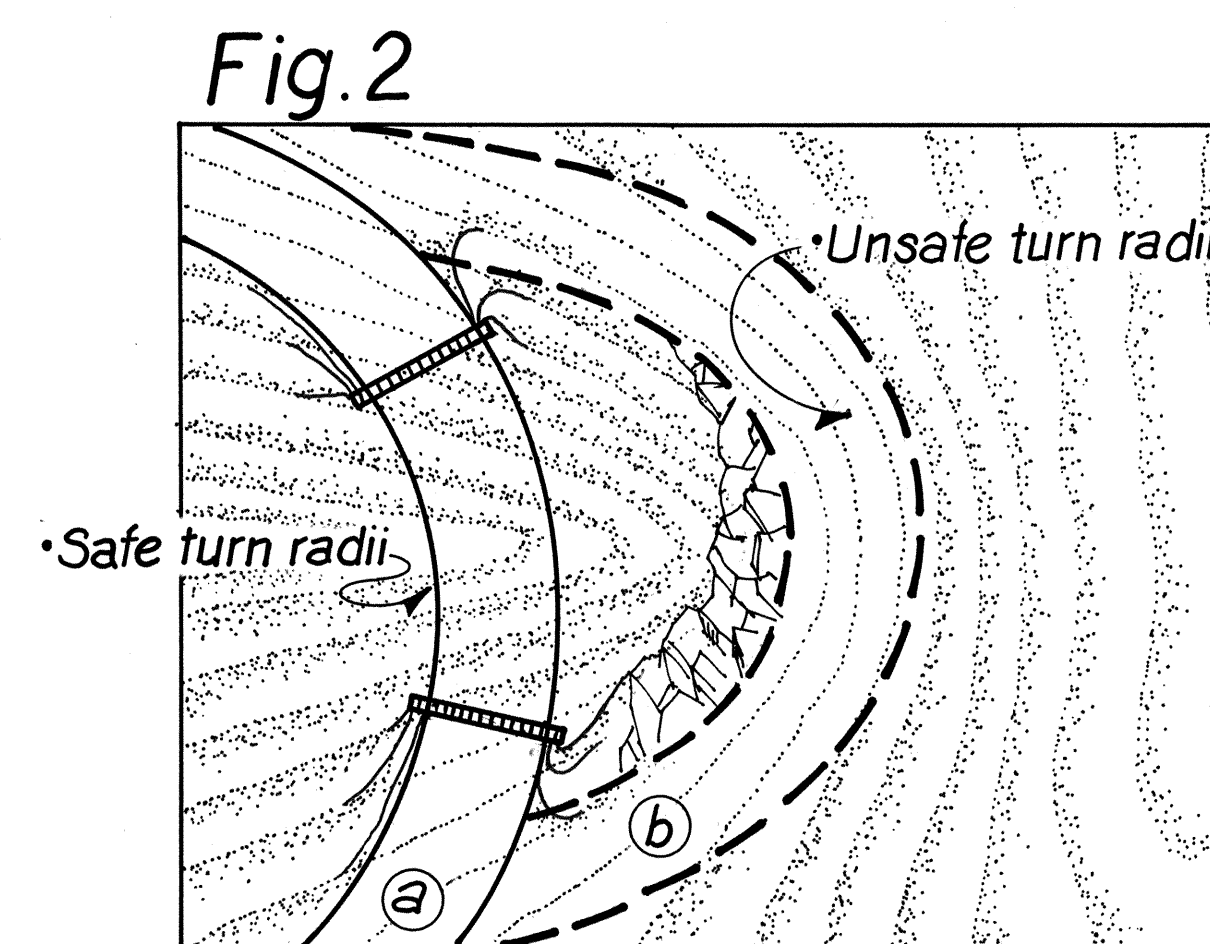


Fig. 2

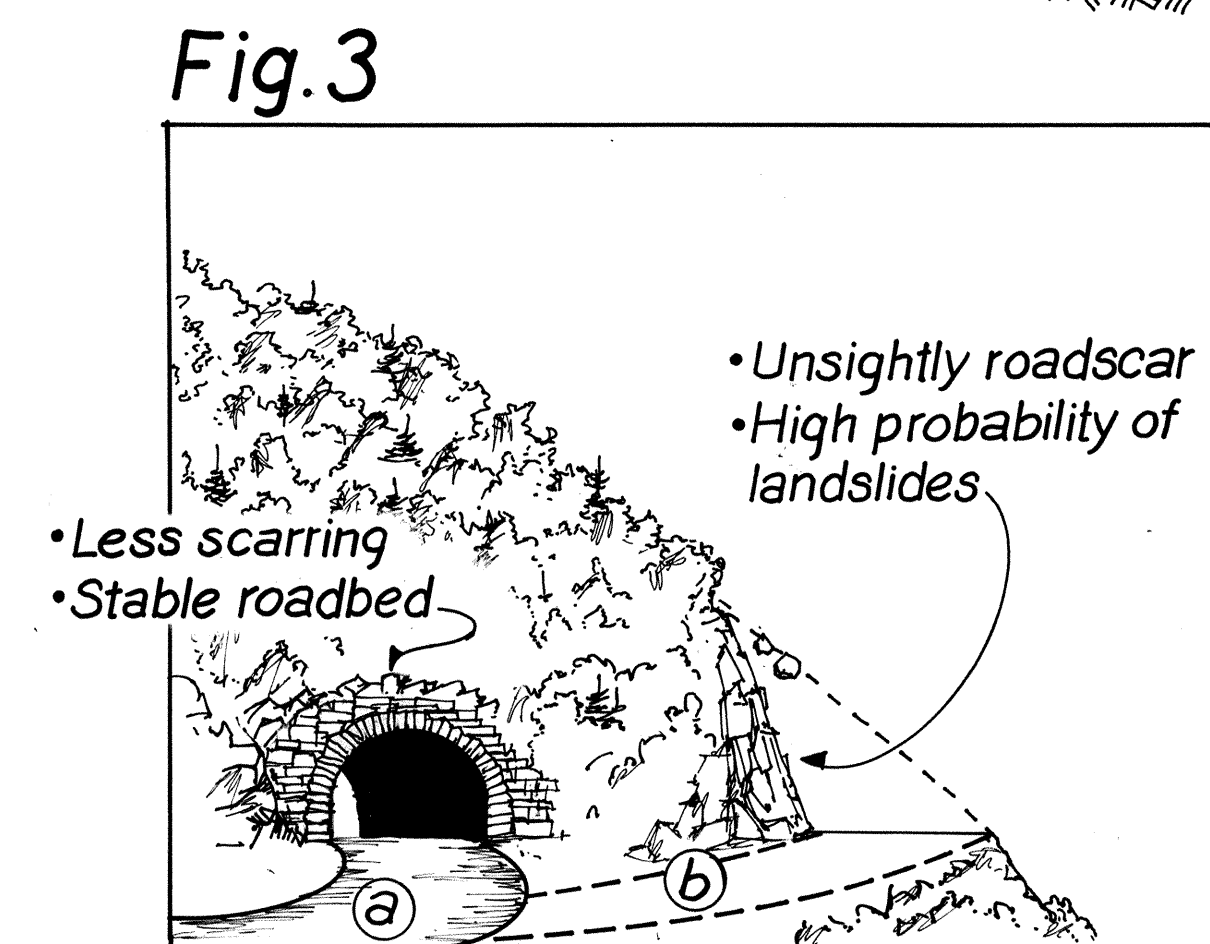
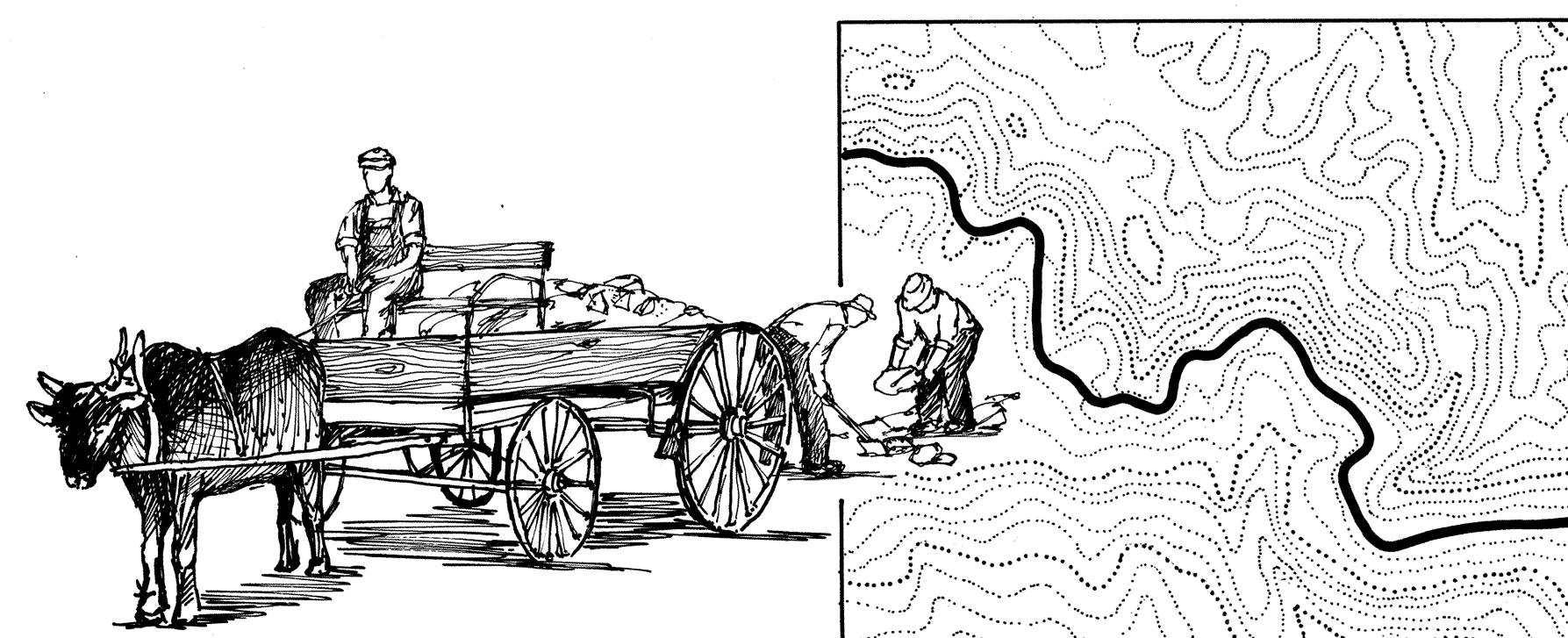
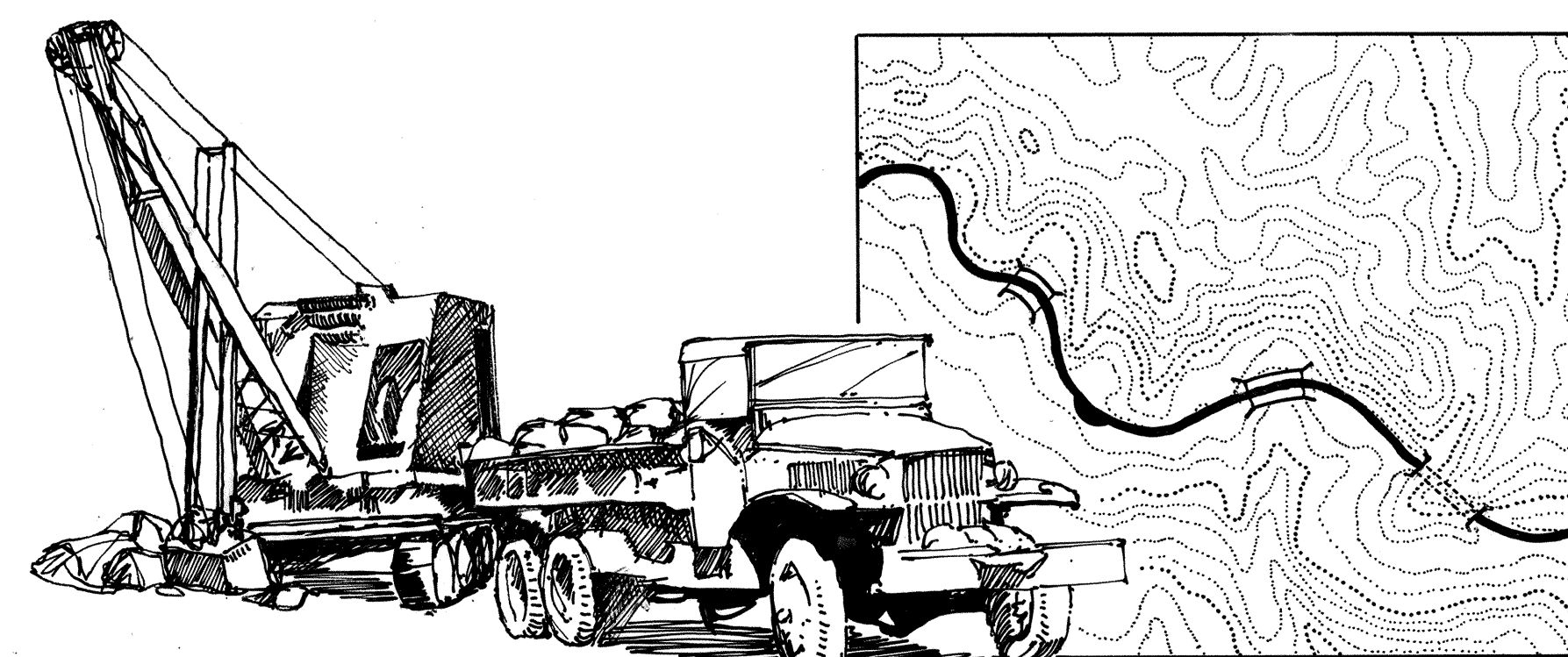


Fig. 3



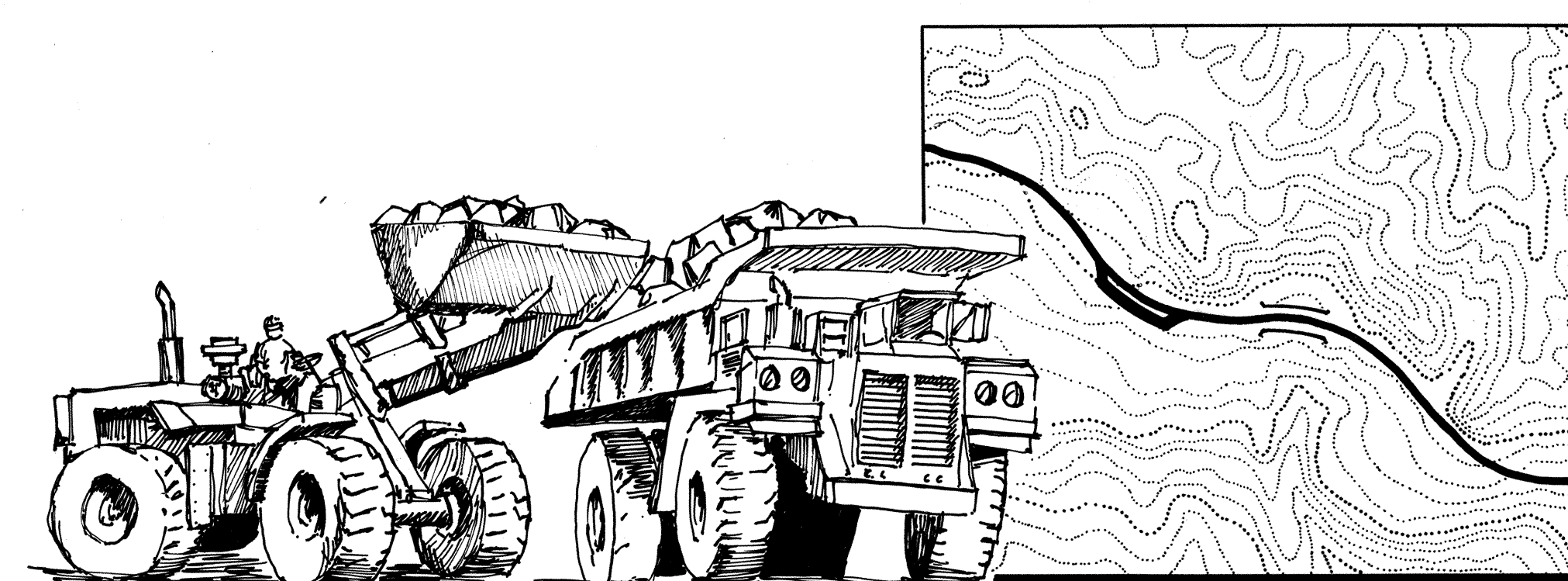
## EARLY ROADS

Before the park was established in 1934, white settlers built rough wagon roads along river valleys, and through gaps in the mountains. Lacking heavy equipment, these early road builders used hand tools and man power. Rocks which were too large to move were either blown apart with blasting powder, or cracked through a combination of heating by fire followed by cooling with cold water. Oxen and other beasts of burden hauled away excavated earth and rock. These simple construction techniques made digging large road cuts, hauling material up and down steep slopes, and building bridges over streams difficult. As a result, the settlers built winding roads along the contours of the land.



## 1930S & 1940S

When the National Park Service created GSMNP in 1934, the existing roads had to be improved and new roads were needed in order to make the park accessible to visitors. New engineering concepts, improved technology, and better tools and equipment made the construction and improvement of roads in this period easier than it was for the early settlers in the Smokies. Men and animals still did much of the work, but new earth-moving machines such as steam shovels and diesel trucks with diesel engines made road construction more efficient. Concrete, replacing wood and stone, made bridges stronger and easier to build. These factors allowed road designers to go beyond building winding roads along the contours of the land, and use bridges and tunnels to create safer and more pleasurable road alignments for motorists in the park.



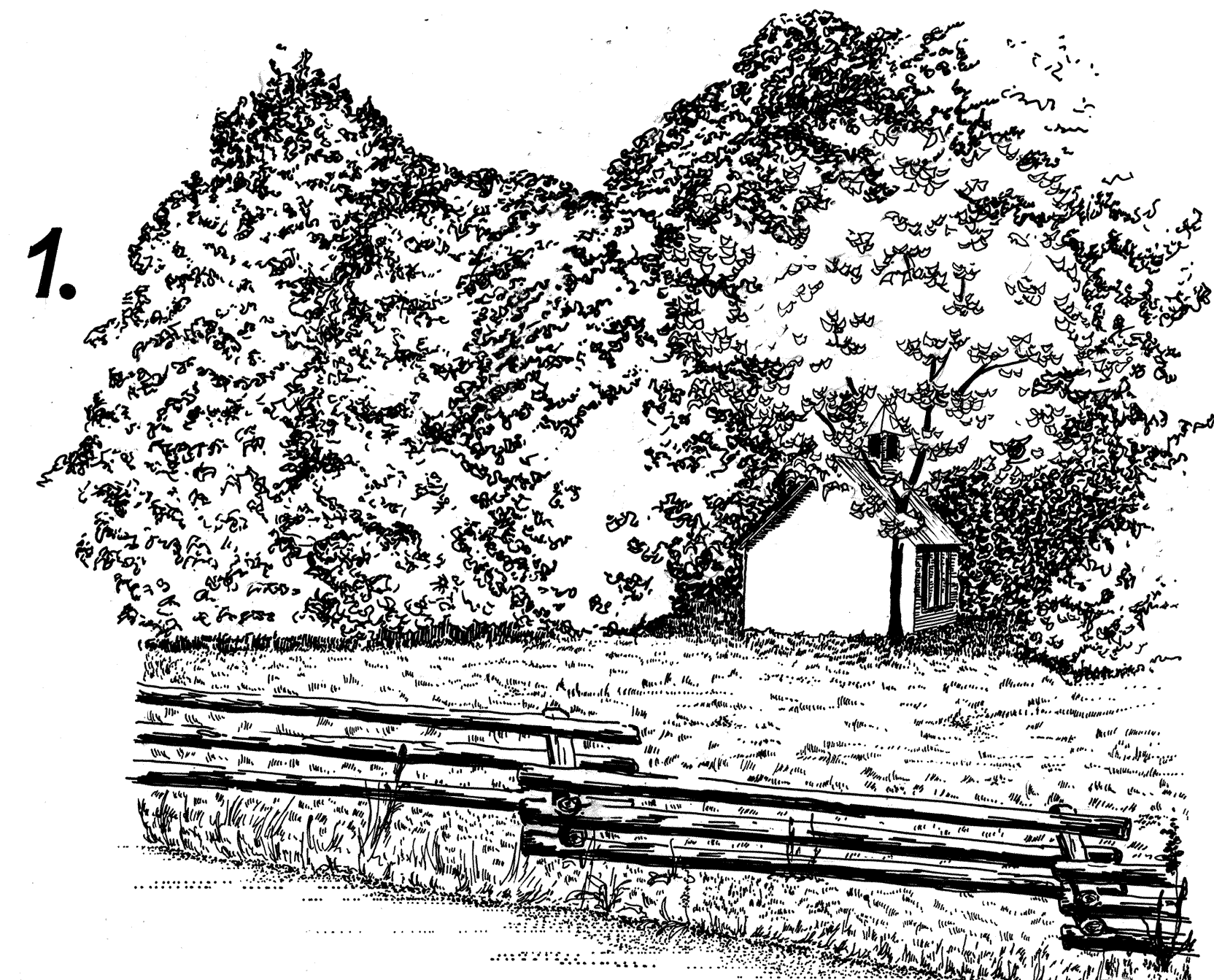
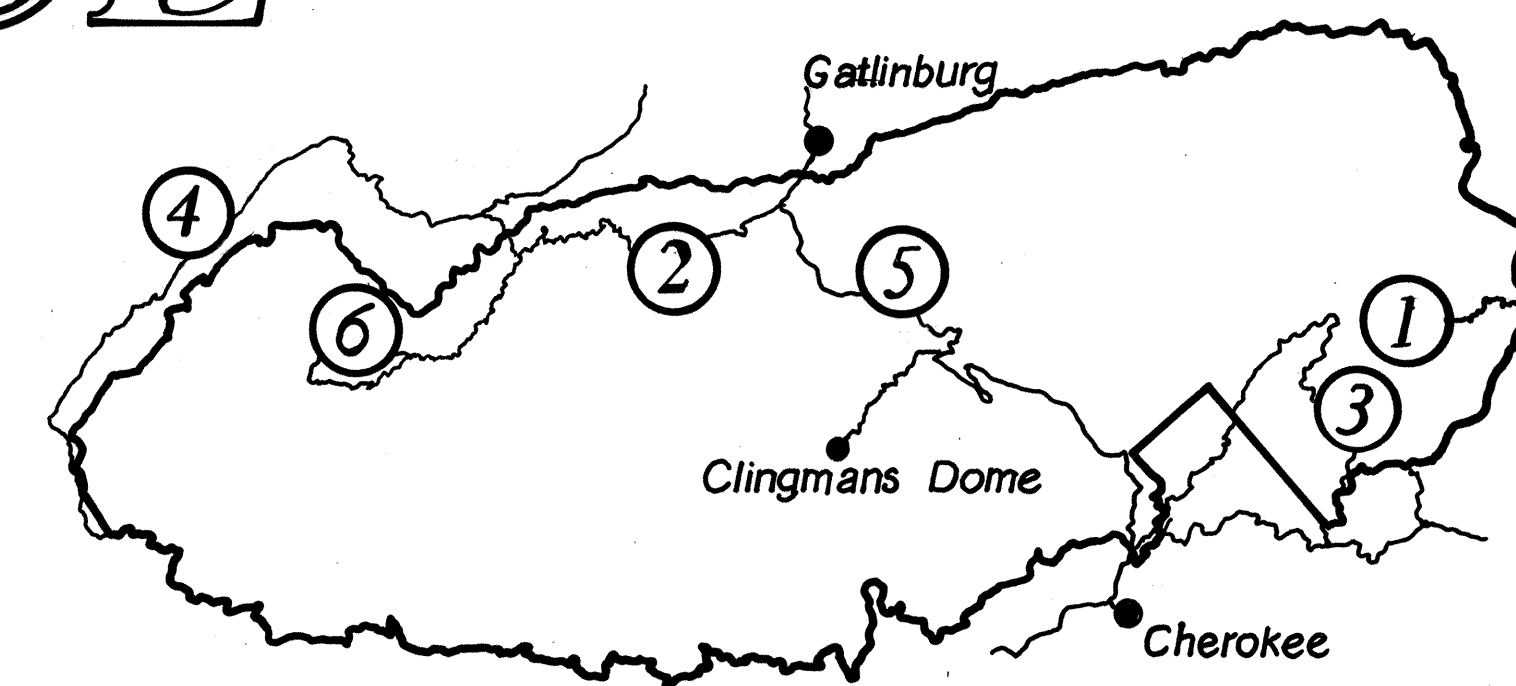
## 1950S & 1960S



With the increasing number of visitors to the park in the years following World War II, roads were once again improved and expanded by the federal government through a program to update park infrastructure, known as Mission 66. In addition, the faster vehicles used by park motorists required that road alignments be improved. During this period of road construction, designers were able to work with the new technology of the postwar era. In place of steam shovels, gigantic earth-moving machines dug out cuts for roadbeds, placed fill, and removed excavated material at faster rates. Mobile cranes were now available to lift huge steel beams into place in the construction of bridges. Combined with the advanced engineering techniques of the period, this improved technology let road designers overcome the constricting topography of the Great Smoky Mountains.

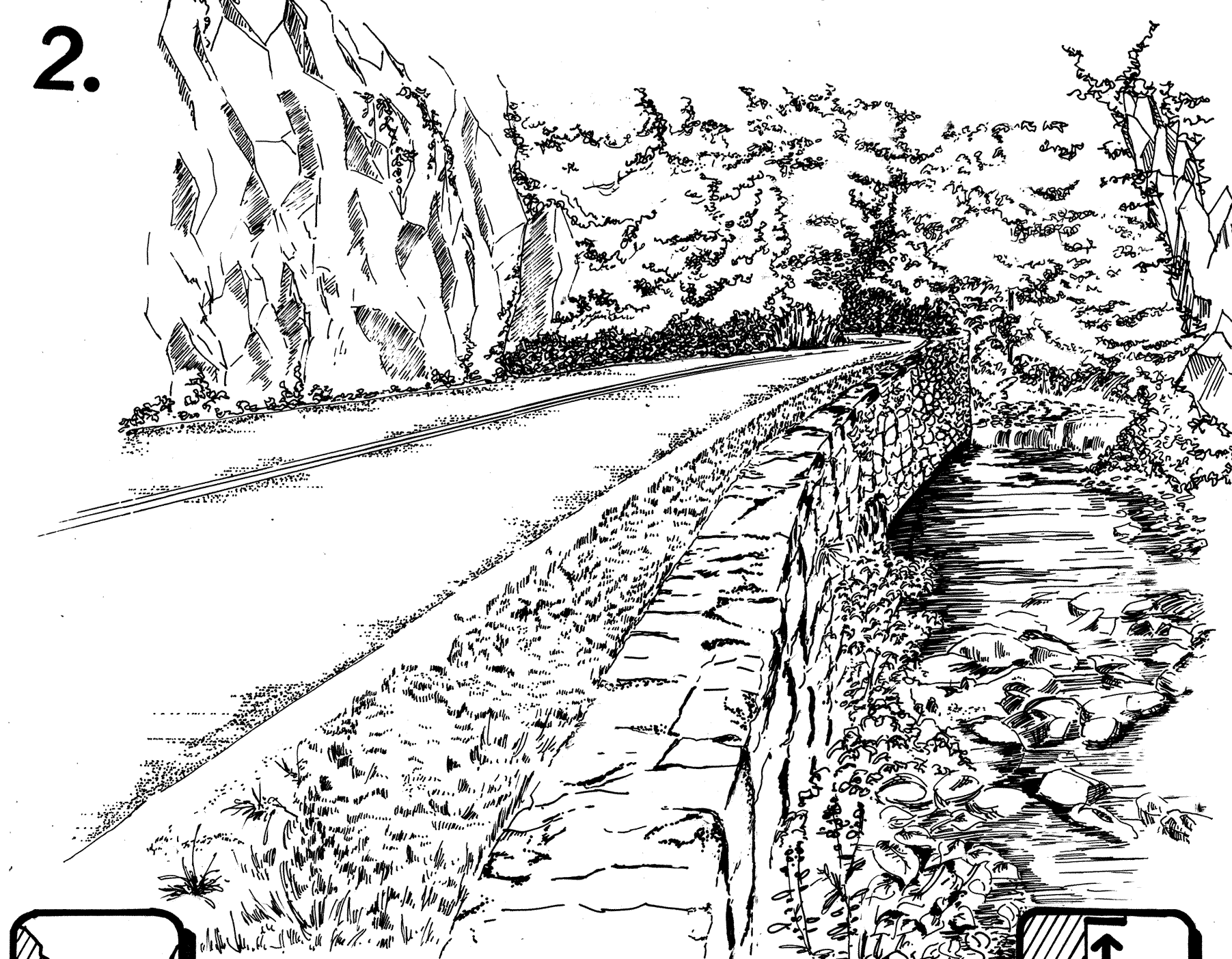


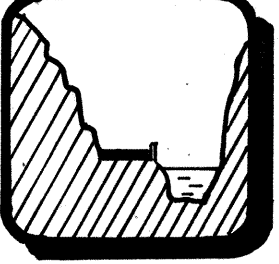
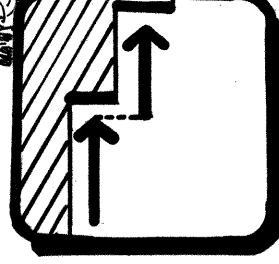
# MOTORIST EXPERIENCE

The roads in Great Smoky Mountains National Park offer a wide range of experiences for the motorist. Scenic overlooks and planned vistas were designed throughout the park to direct the visitor's eye. The roads travel over a variety of topography and provide differing views ranging from; gentle farmlands, deep river valleys, climbing mountain roads, steep gravel switchbacks, sweeping ridgetops, historical and natural points of interest.

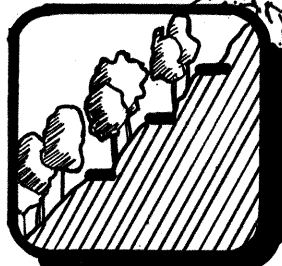
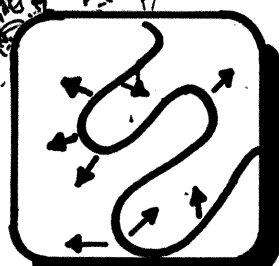


**1.**  Points of Interest - Several roads are designed to showcase specific natural and historical points of interest. Roads such as Cataloochee provide visitors with access to historic structures and intimate natural scenery from their vehicles. 

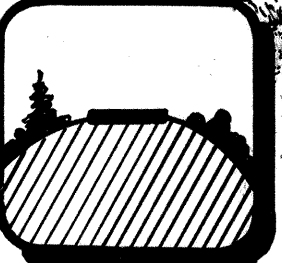
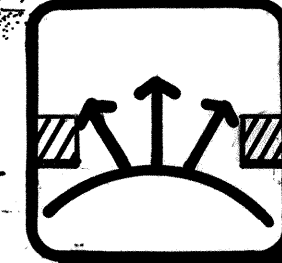


**2.**  Deep River Valleys - The Little River and Laurel Creek roads twist and turn between narrow gorge walls and offer only limited views of the scenic river and walls above. The road, carried by a revetment wall, is dimly lit as the tree canopy is dense and the gorge walls are tall. 

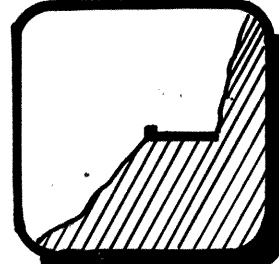
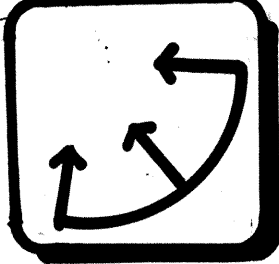


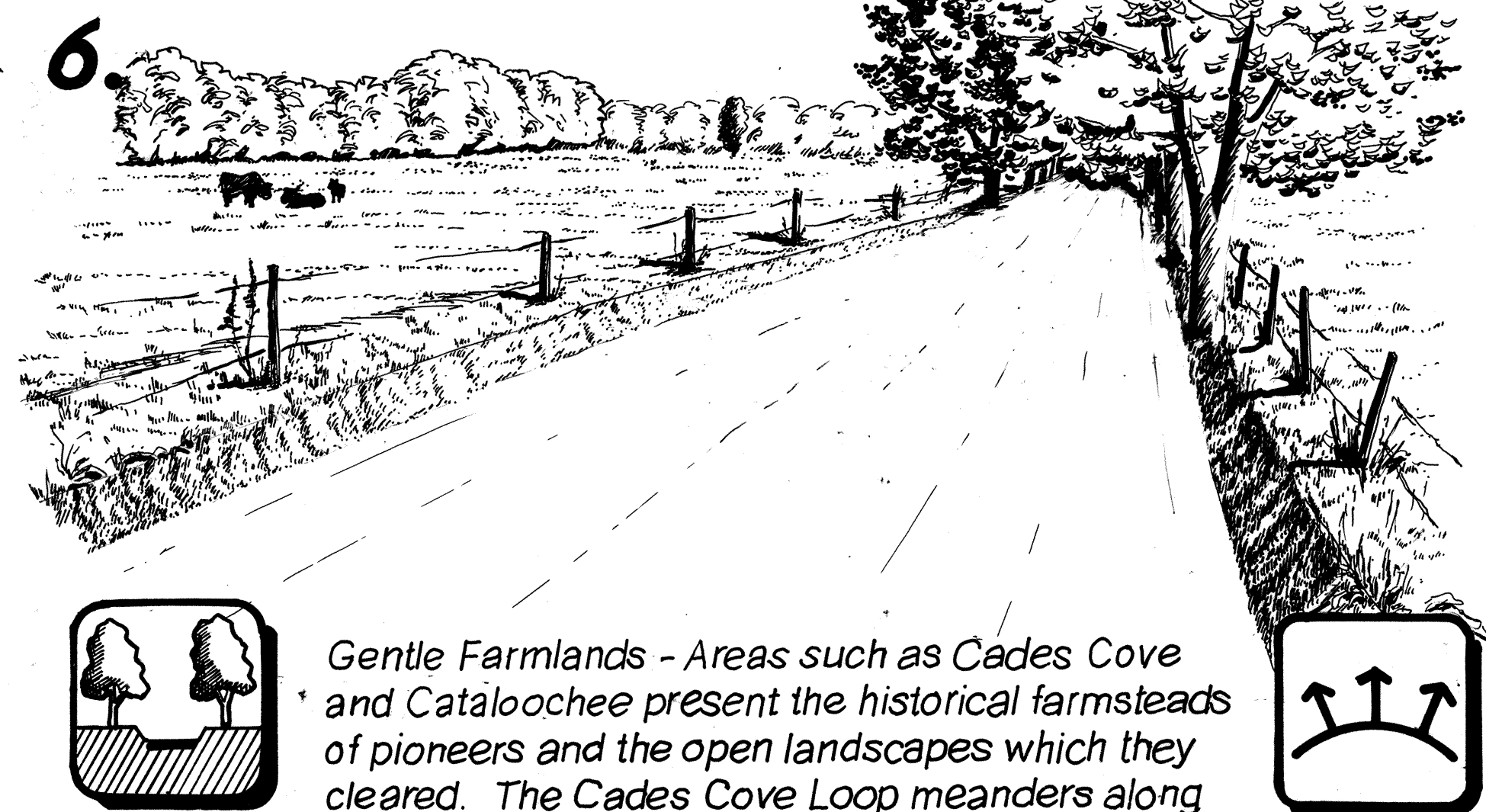
**3.**  Steep Switchbacks - Rich Mountain Road and other similar gravel routes maintain the character of historical pioneer travel through the Smoky Mountains. The single-lane roads follow the topography of the land up, over and around ridges in a series of switchbacks. 

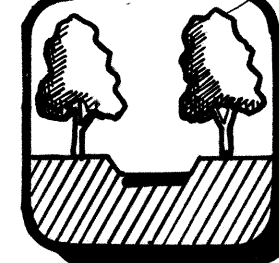



**4.**  Sweeping Ridgetops - Roads such as the Foothills Parkway follow ridges which offer gentle curving alignments and wider roadways. Broad views of distant mountains and valleys are presented through areas cleared of trees. 



**5.**  Mountain Climbs - The Newfound Gap Road clings to the side of mountains through most of its ascent with dramatic views of nearby peaks, ridges and valleys. The roadway is benched into the steep slopes using retaining walls and many pullouts are provided to enjoy the vistas. 



**6.**  Gentle Farmlands - Areas such as Cades Cove and Cataloochee present the historical farmsteads of pioneers and the open landscapes which they cleared. The Cades Cove Loop meanders along the edge of pastureland and the forest. 

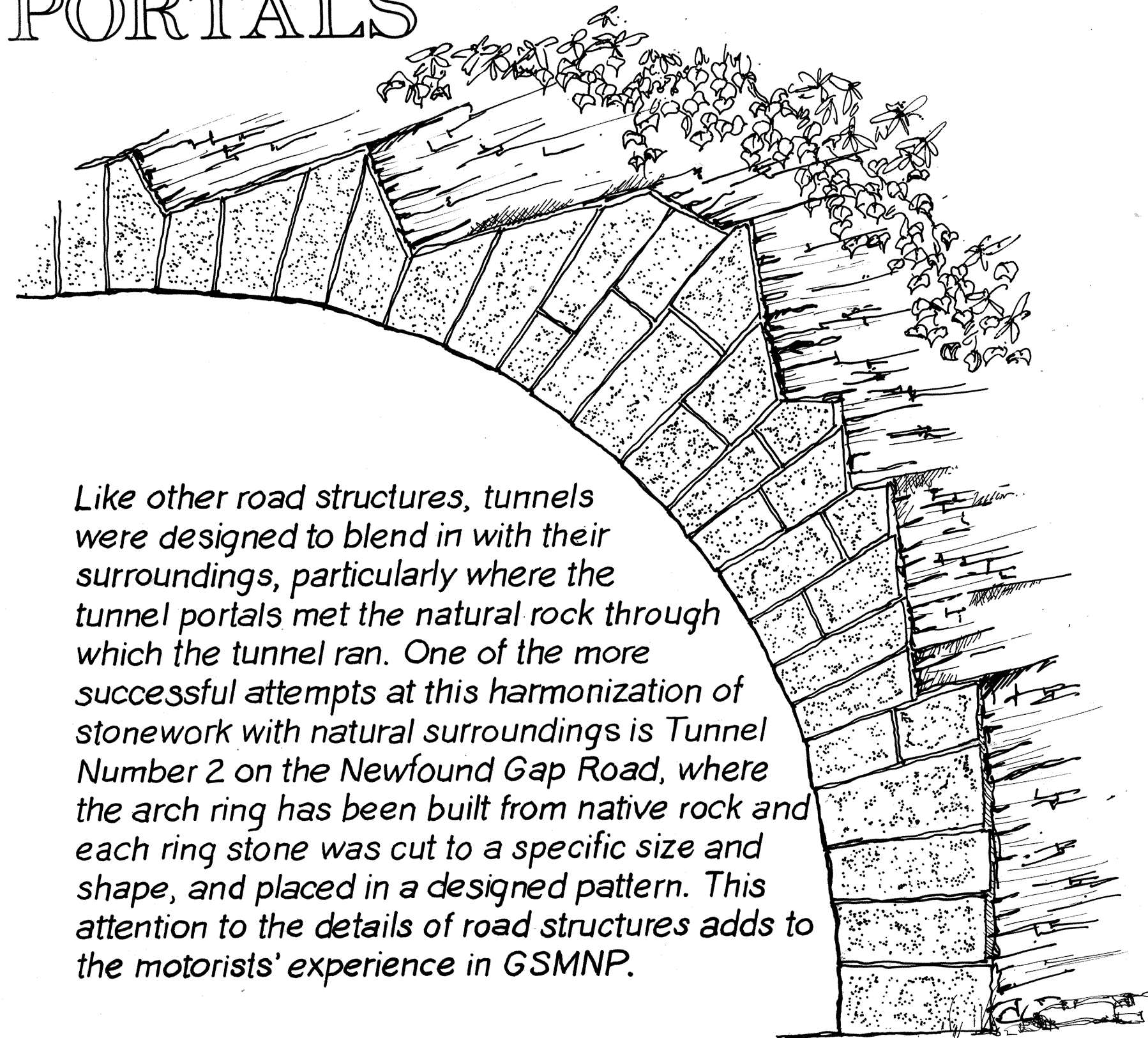


# STONEWORK

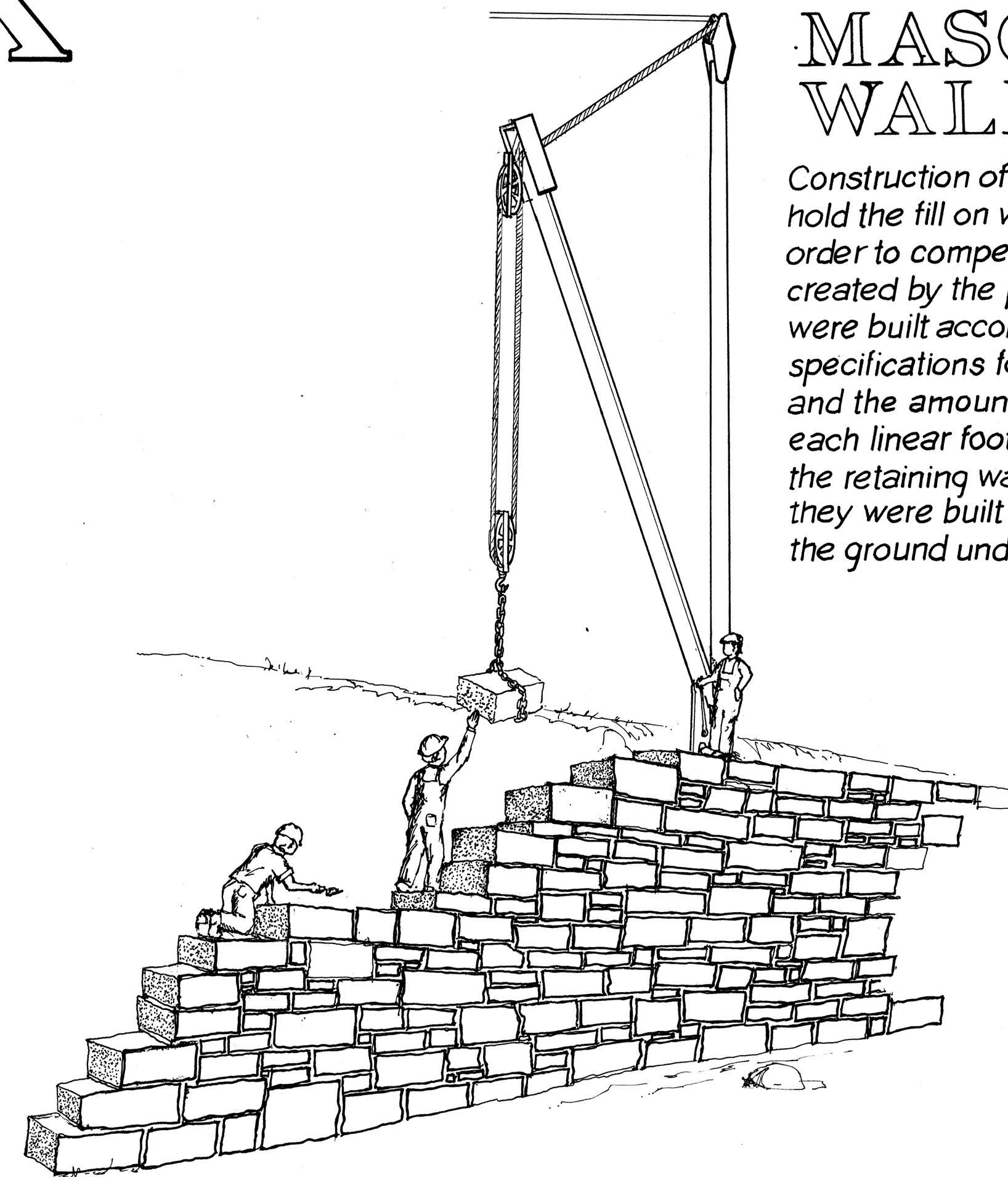
The roads of Great Smoky Mountains National Park (GSMNP) were carefully designed to harmonize with their surroundings. Using design standards based upon the principles of naturalism and scenery preservation, the roads and their accompanying features were constructed so as to have as little impact on the natural features and topography of the park as possible. The stonemasonry used in the construction of road structures such as bridges, culverts, and retaining walls were essential parts of this concept.

The stonework in national parks was built to be naturalistic, or "rustic", in appearance, which required use of stone of the same color and characteristics as the surrounding rock, and avoidance of right angles and straight lines in the cut and arrangement of the stone. Stonework in GSMNP did not adhere to the "rustic" style as closely as in other national parks, as there were more rectangular stones laid horizontally and mortar joints that roughly followed horizontal and vertical lines. These factors, combined with the use of ornamental details such as buttressing piers and string courses in bridge construction gave a more formal appearance to the road structures in the park. Although not as rustic in appearance as the stonework in other parks, the bridges, retaining walls and other masonrywork in GSMNP blend in with their surroundings extremely well.

## TUNNEL PORTALS



Like other road structures, tunnels were designed to blend in with their surroundings, particularly where the tunnel portals met the natural rock through which the tunnel ran. One of the more successful attempts at this harmonization of stonework with natural surroundings is Tunnel Number 2 on the Newfound Gap Road, where the arch ring has been built from native rock and each ring stone was cut to a specific size and shape, and placed in a designed pattern. This attention to the details of road structures adds to the motorists' experience in GSMNP.

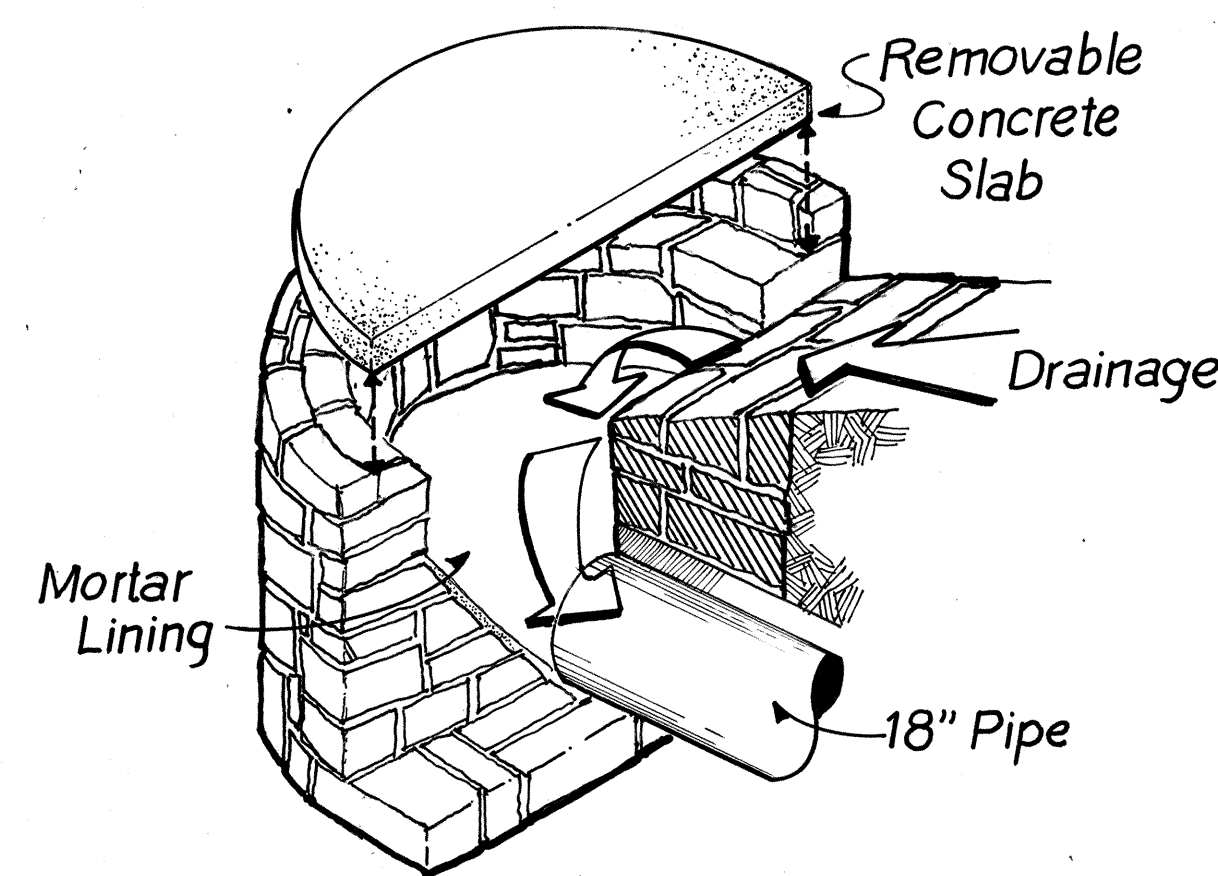
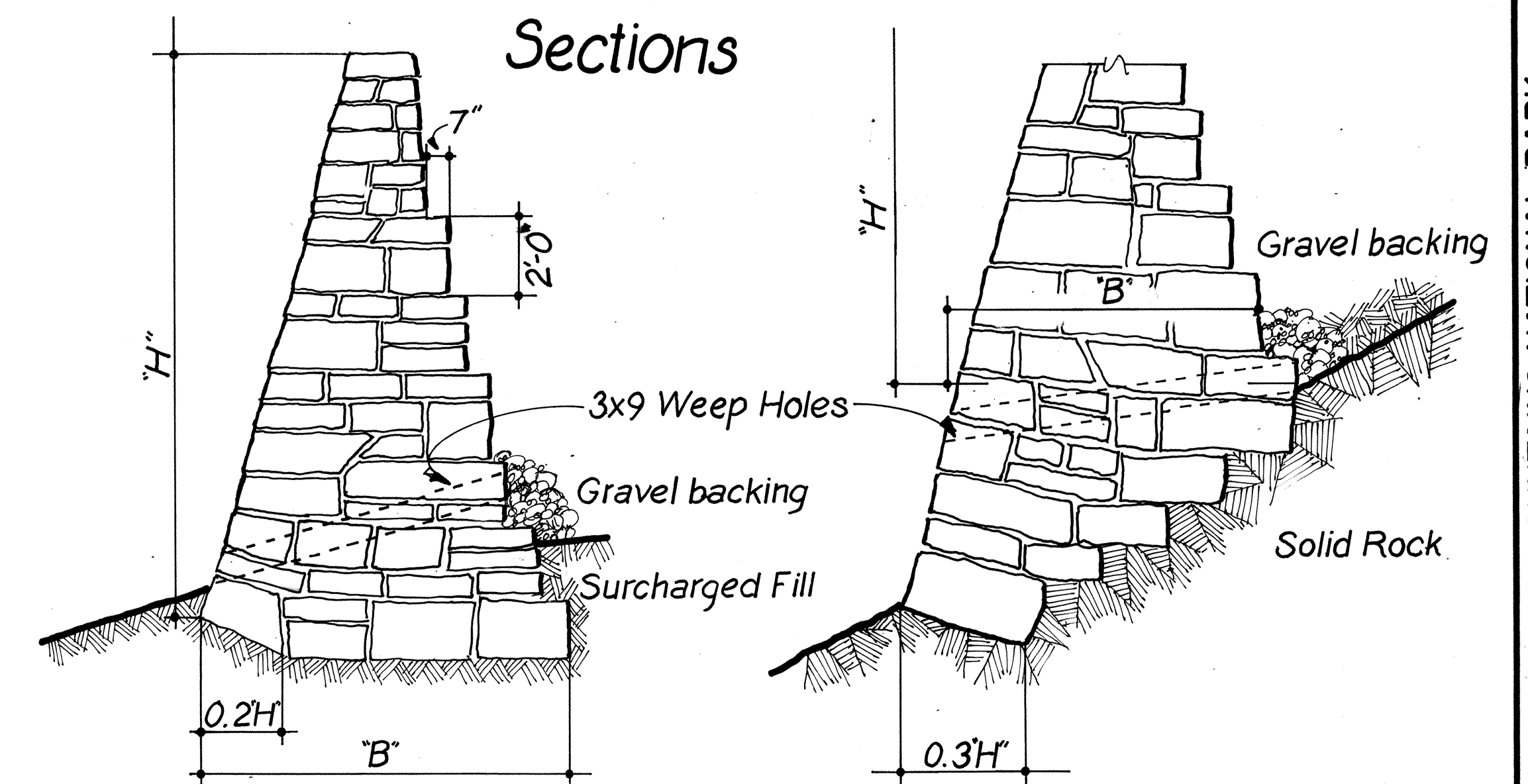


Revetment and retaining walls were built where fill was needed to construct roadbeds on steep mountain slopes and in river valleys. The large stones were hauled into place by cranes or winches, where they were dry or wet laid by masons.

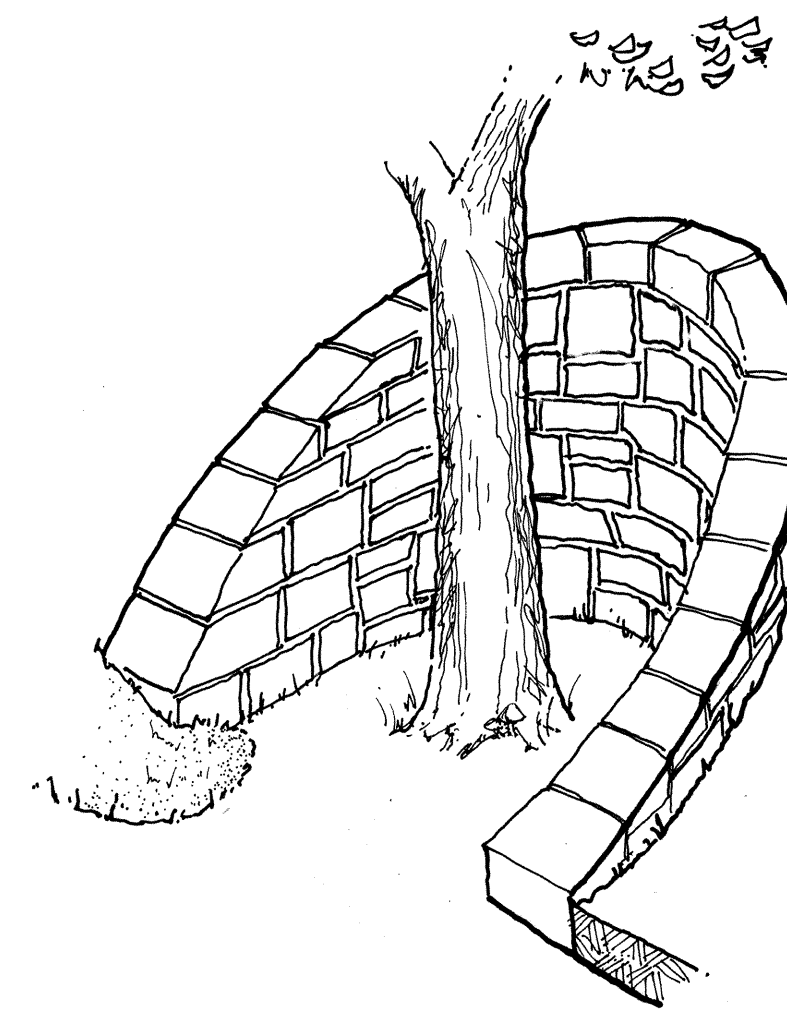
## MASONRY WALLS

Construction of retaining walls was necessary to hold the fill on which roads were constructed. In order to compensate for the stress on the walls created by the pressure of the fill, retaining walls were built according to certain engineering specifications for height, the thickness of the base, and the amount of masonry material needed for each linear foot of wall (see chart). The footing of the retaining walls differed depending on whether they were built on rock or earth, and whether or not the ground underneath the wall was sloped.

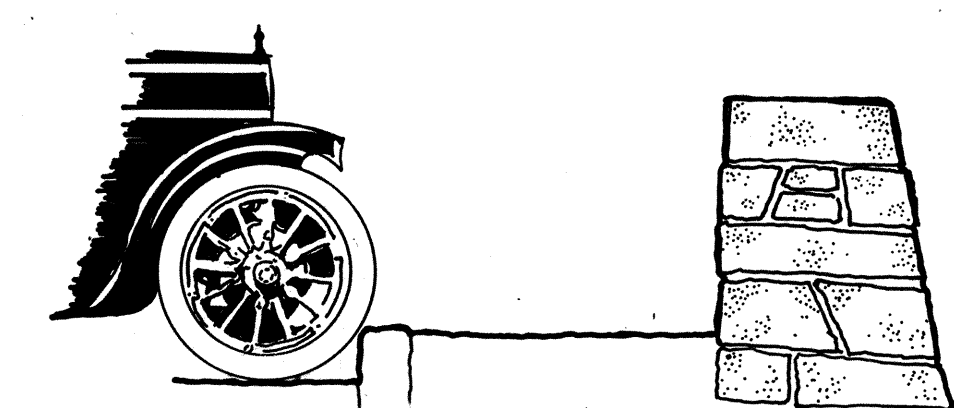
HEIGHT Feet	BASE Feet	Masonry per Lin. Ft. of Wall Cubic Yards
3	2'-9"	0.27
4	3'-0"	0.37
5	3'-4 1/2"	0.50
6	3'-11"	0.64
7	4'-5 1/2"	0.79
8	5'-0"	0.96
9	5'-7 1/2"	1.16
10	6'-3"	1.38
11	6'-10 1/2"	1.62
12	7'-6"	1.93
13	8'-1 1/2"	2.14
14	8'-9"	2.49
15	9'-4 1/2"	2.83
16	10'-0"	3.19
17	10'-7 1/2"	3.57
18	11'-3"	3.97
19	11'-10 1/2"	4.40
20	12'-6"	4.85



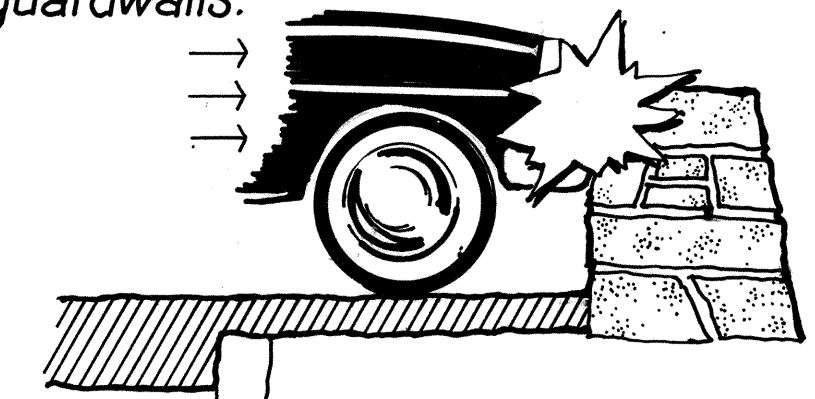
Drop culverts were constructed of stone, not for appearance, but for the durable property of this material.



In order to save some of the larger trees along newly constructed roads, stone wells were built to hold back fill which would otherwise overwhelm them.



Curbs and sidewalks at bridges and pullouts prevented automobiles from hitting the stone guardwalls.

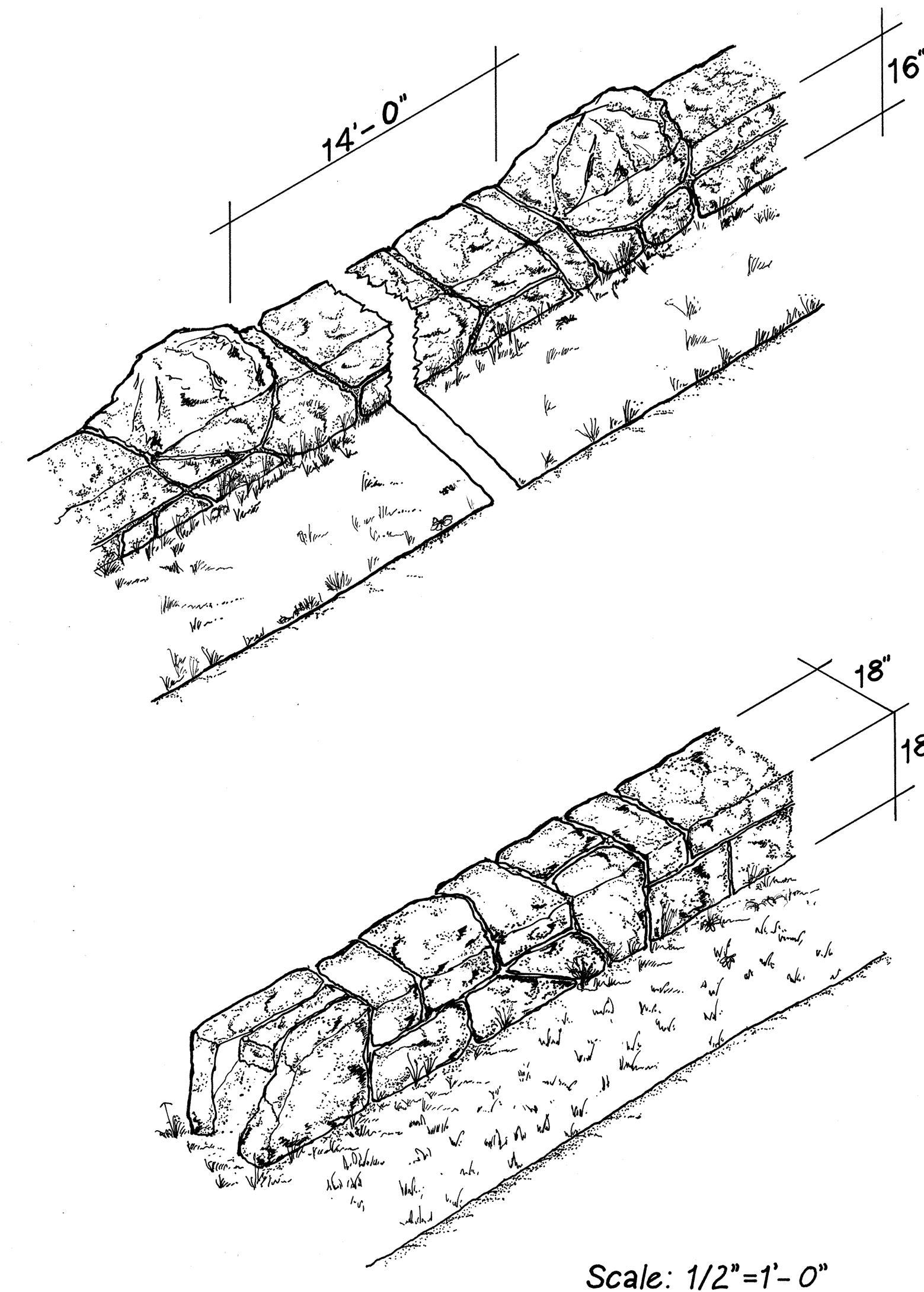
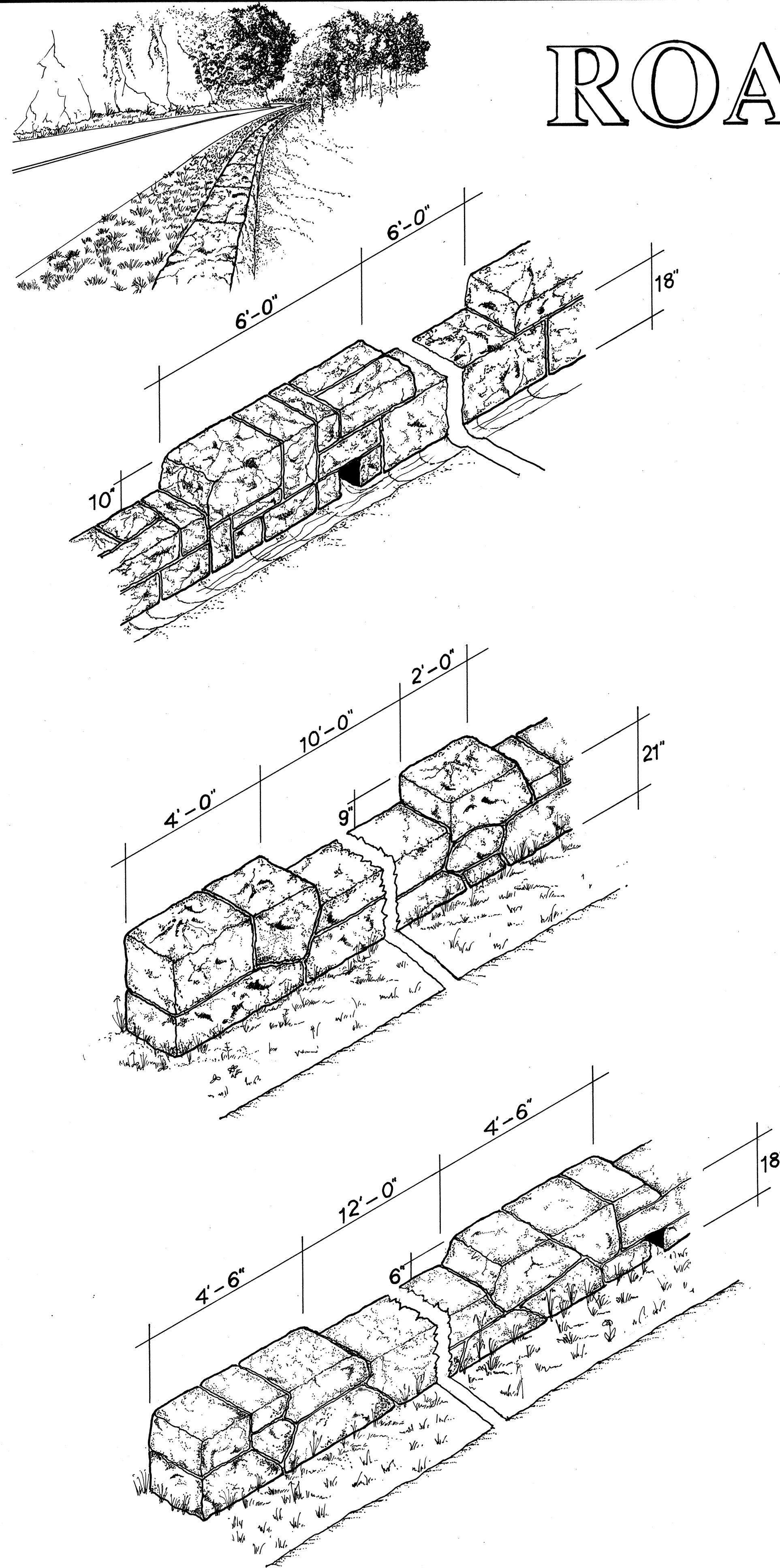


After years of repaving, the sidewalks and curbs have been covered with asphalt, leaving the guardwalls susceptible to damage.



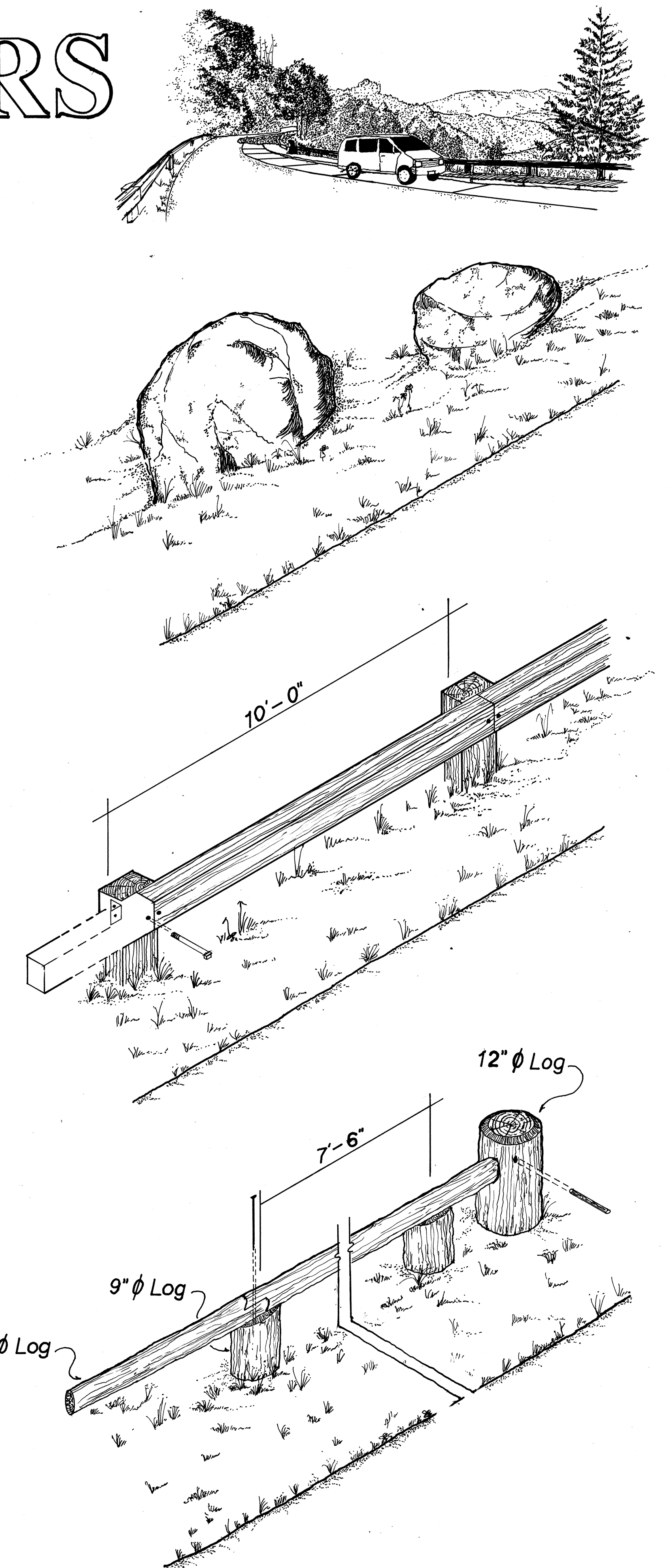
# ROADSIDE BARRIERS

Roadside barriers in Great Smoky Mountains National Park provide for the safety of both motorists and park resources. For the motorist, the barriers define the edge of the road and may prevent a car from leaving the roadway. For park resources, the barriers may prevent a motorist from pulling to the side of the road and damaging a natural or historic area. GSMNP uses standard park architectural plans for guardwalls and guardrails, which require that the barriers be constructed in the rustic style. The most common roadside barriers are a series of 18" stonemasonry parapet walls carefully designed by the National Park Service. Within the typical proportions used, diversity and variation were encouraged to meet design standards ensuring irregularity, informality, and harmonization with the surrounding landscape. To break the monotony of long linear expanses of guardwalls, various crenulation patterns were introduced. Functionally, the guardwalls are freestanding or extended from retaining walls, culverts, and bridges. Other types of barriers include large boulders placed on the shoulder to deter motorists from traveling off the pavement. Guardrails are typically horizontal wood timbers attached to vertical wood posts, more recently with steel plates. An earlier type, now mostly replaced, consisting of roughly hewn posts, was typically used in forested landscapes.



Scale: 1/2" = 1'-0"

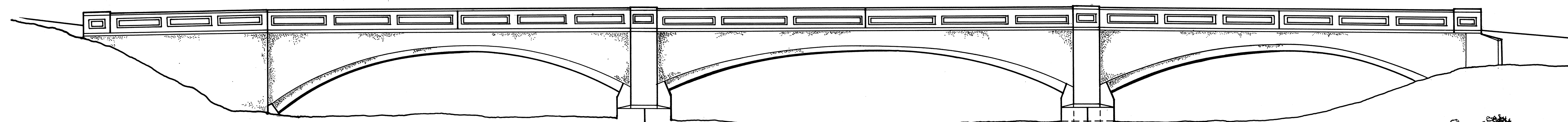
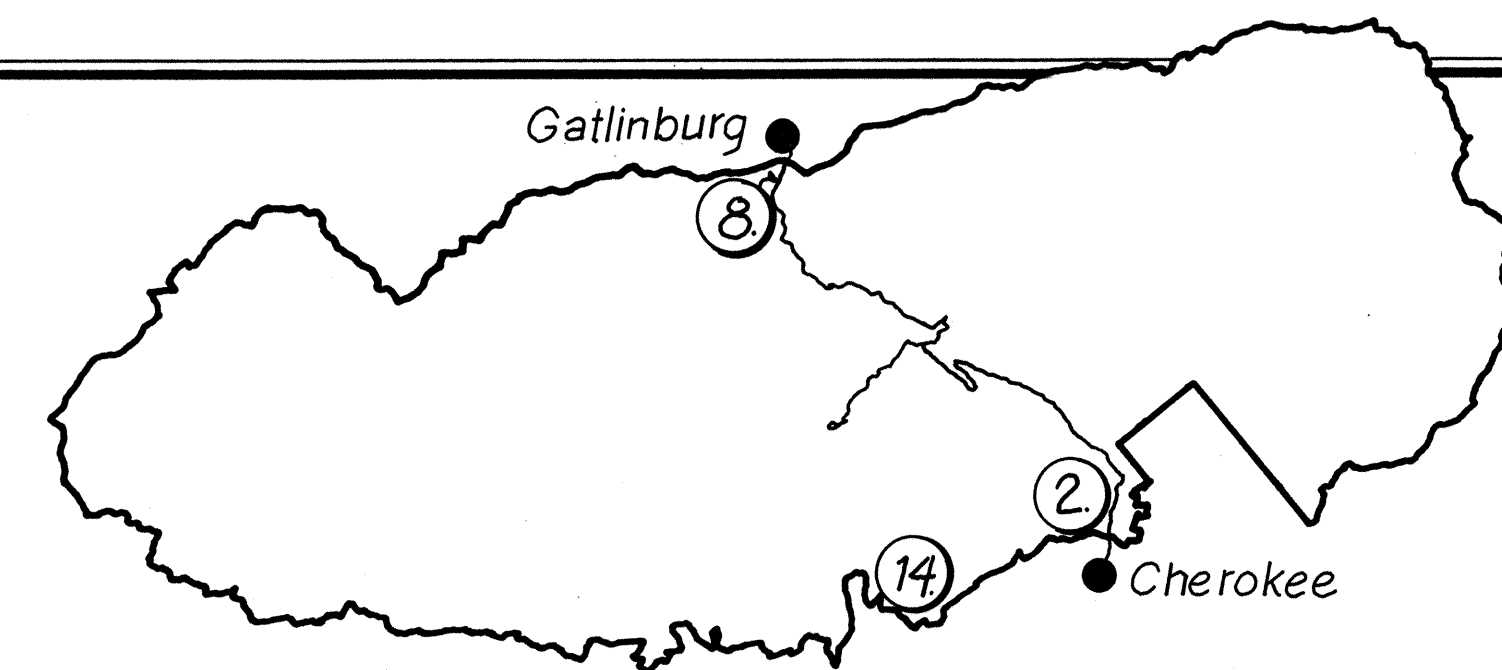
Note: Drawing based on *Historic Stonemasonry of Great Smoky Mountains National Park GPS Survey 1993*, and field photographs.





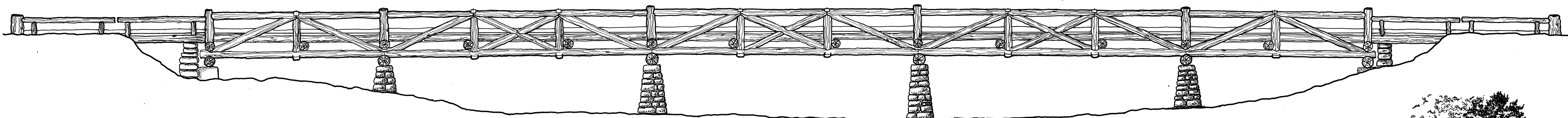
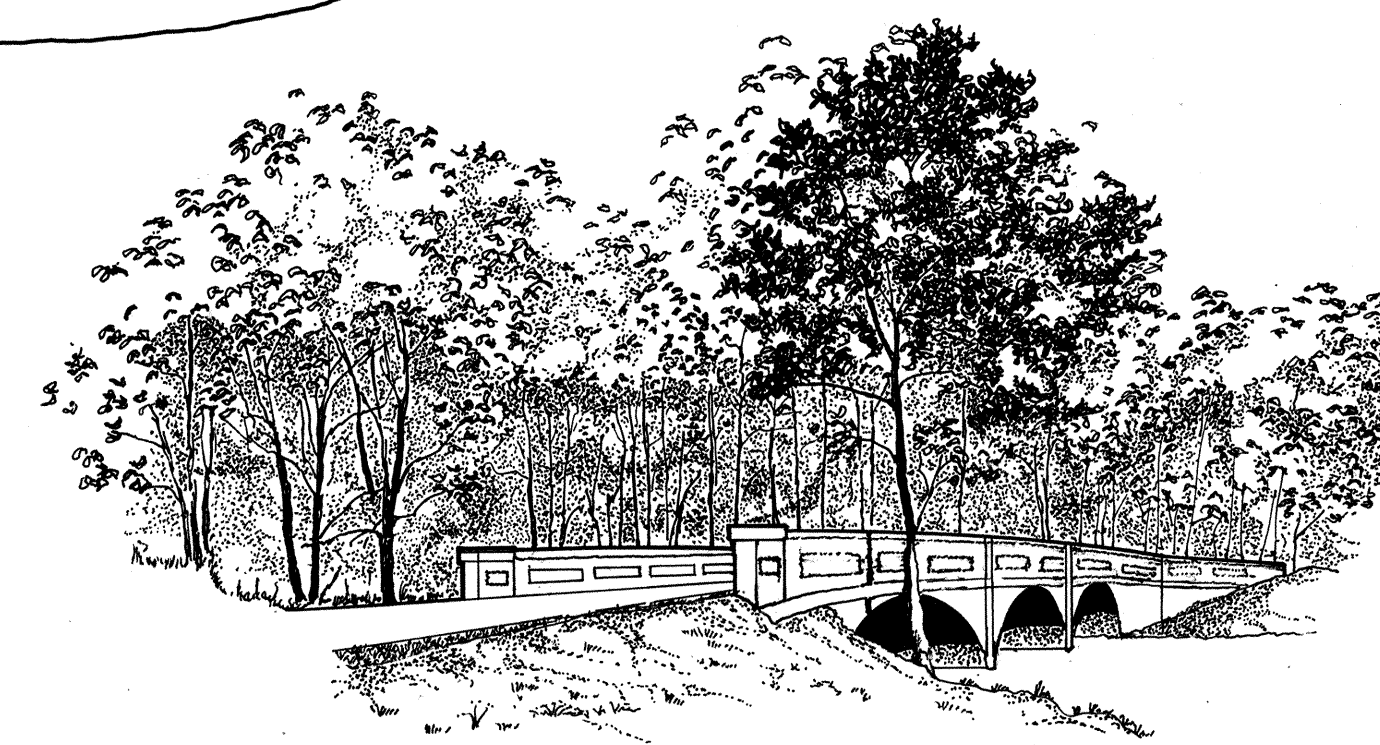
# BRIDGE COMPARISON

Note: Drawings based on original construction documents located in GRSMNP headquarters, photographs and field measurements.



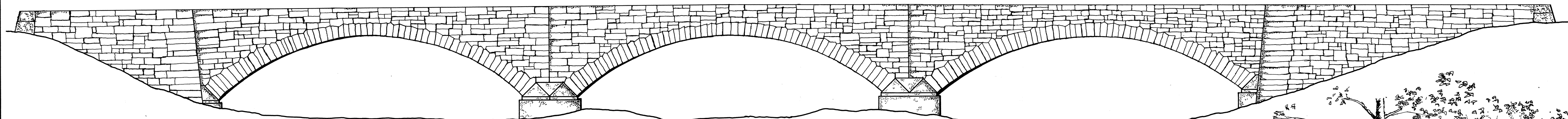
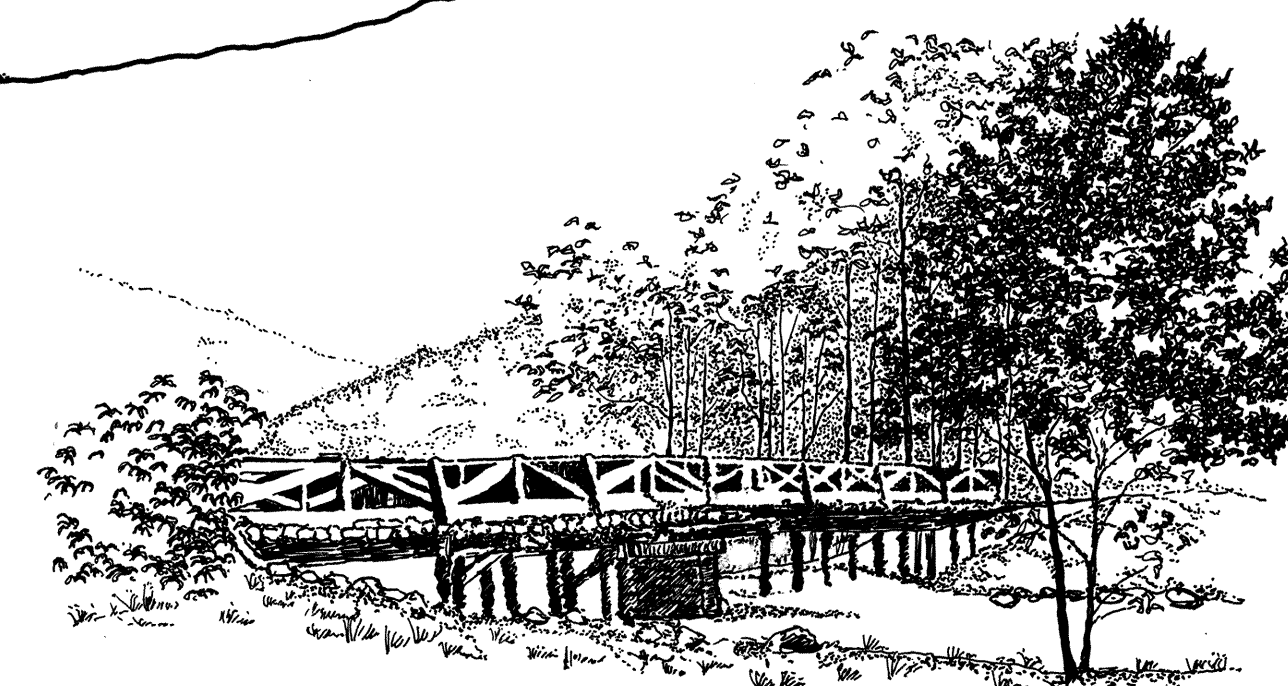
② LUTEN TRIPLE ARCH  
OCONALUFTEE  
1921

Tow String Road  
Demolished 1982  
Overall 178'00"



⑦④ TIMBER BRIDGE  
DEEP CREEK  
1930

Demolished  
Overall 185'00"



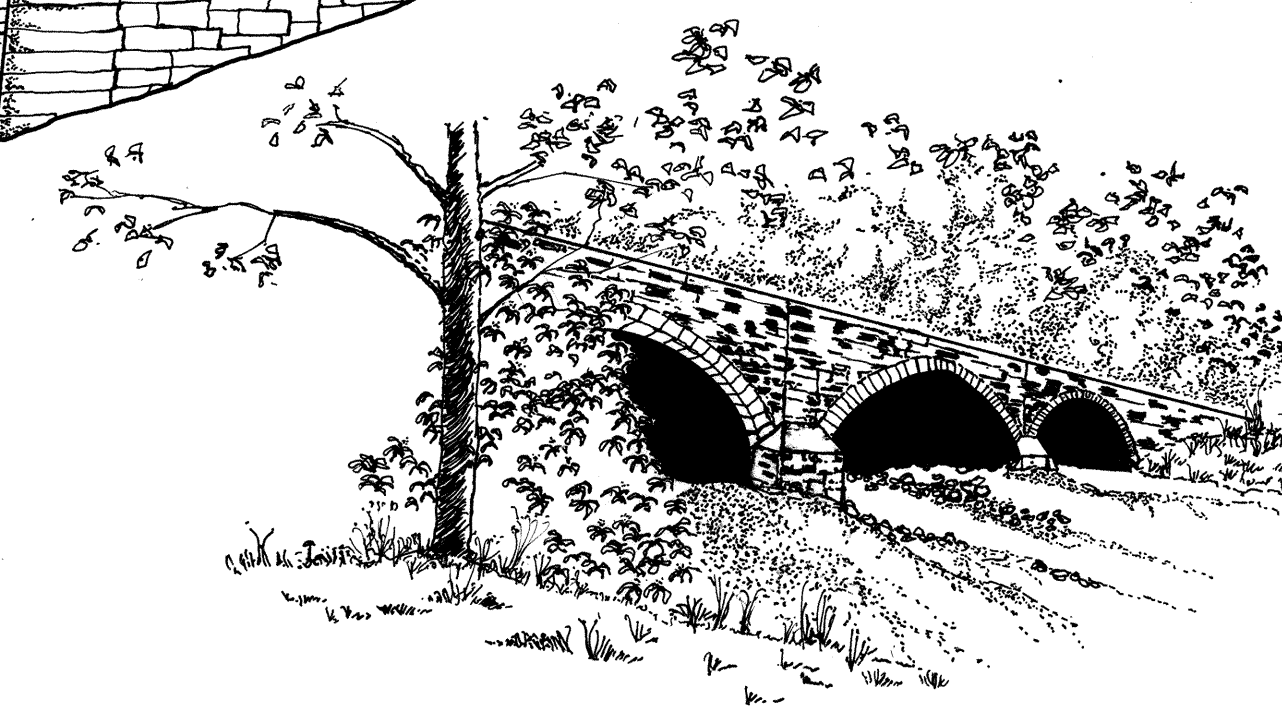
⑧ HEADQUARTERS  
BRIDGE  
1937

Newfound Gap Road  
Overall 254'00"

0 5 10 15 20 25  
Feet

Scale: 1/8" = 1' - 0"

0 1 2 3 4 5  
Meters



DELINEATED BY: Matthew J. Regnier, 1996  
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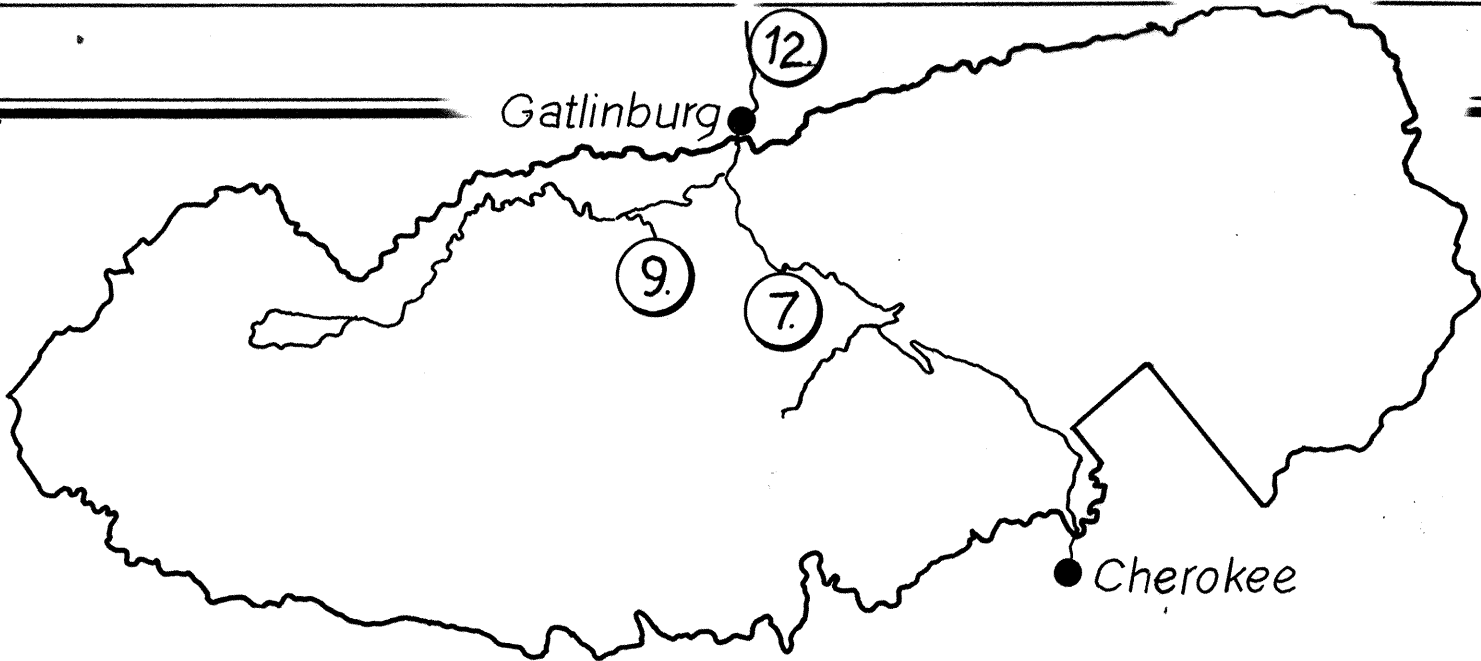
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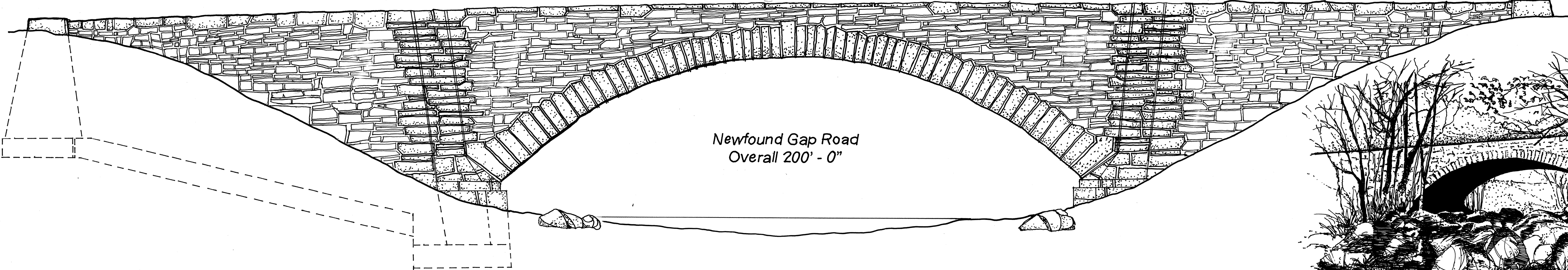


# BRIDGE COMPARISON

Note: Drawings based on original construction documents located in GRSMNP headquarters, photographs and field measurements.



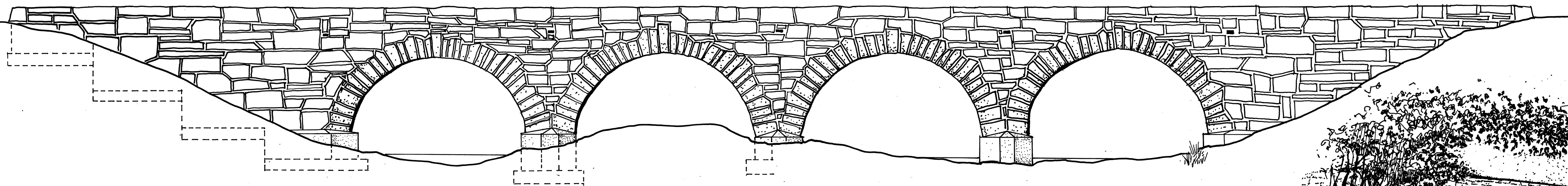
## ⑦ CHIMNEYS BRIDGE 1937



Newfound Gap Road  
Overall 200' - 0"



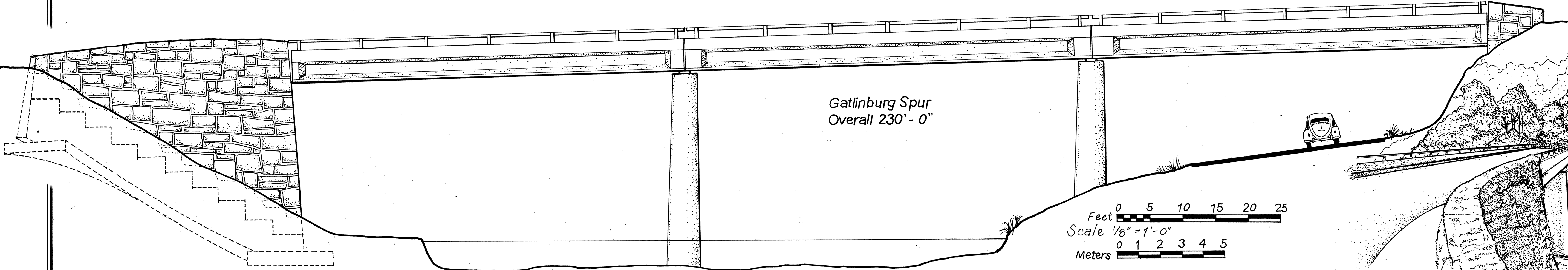
## ⑨ ELKMONT VEHICLE BRIDGE 1937



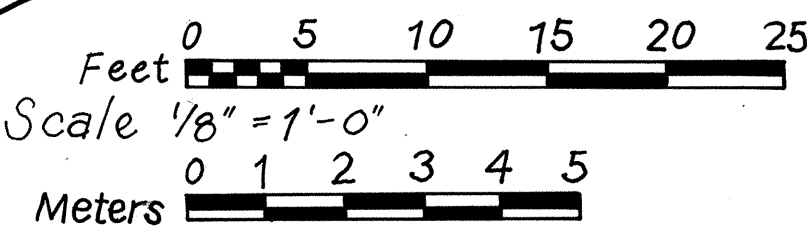
Elkmont Campground  
Overall 198' - 0"



## ⑫ CROSSOVER BRIDGE AT PERRY'S DAM 1960



Gatlinburg Spur  
Overall 230' - 0"



DELINEATED BY: Karen A. Young, 1996  
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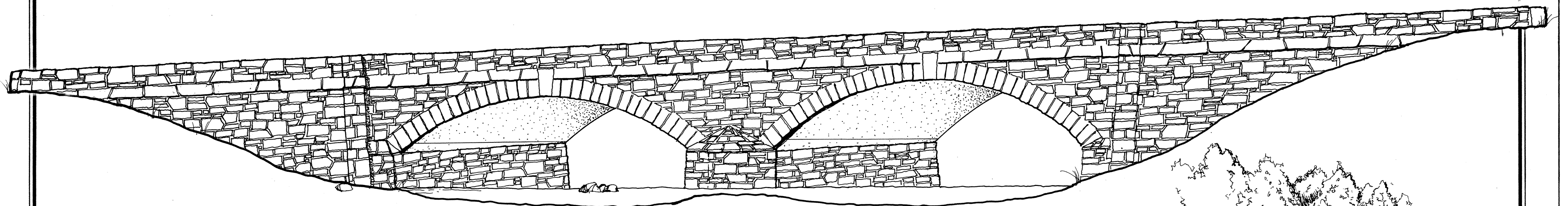
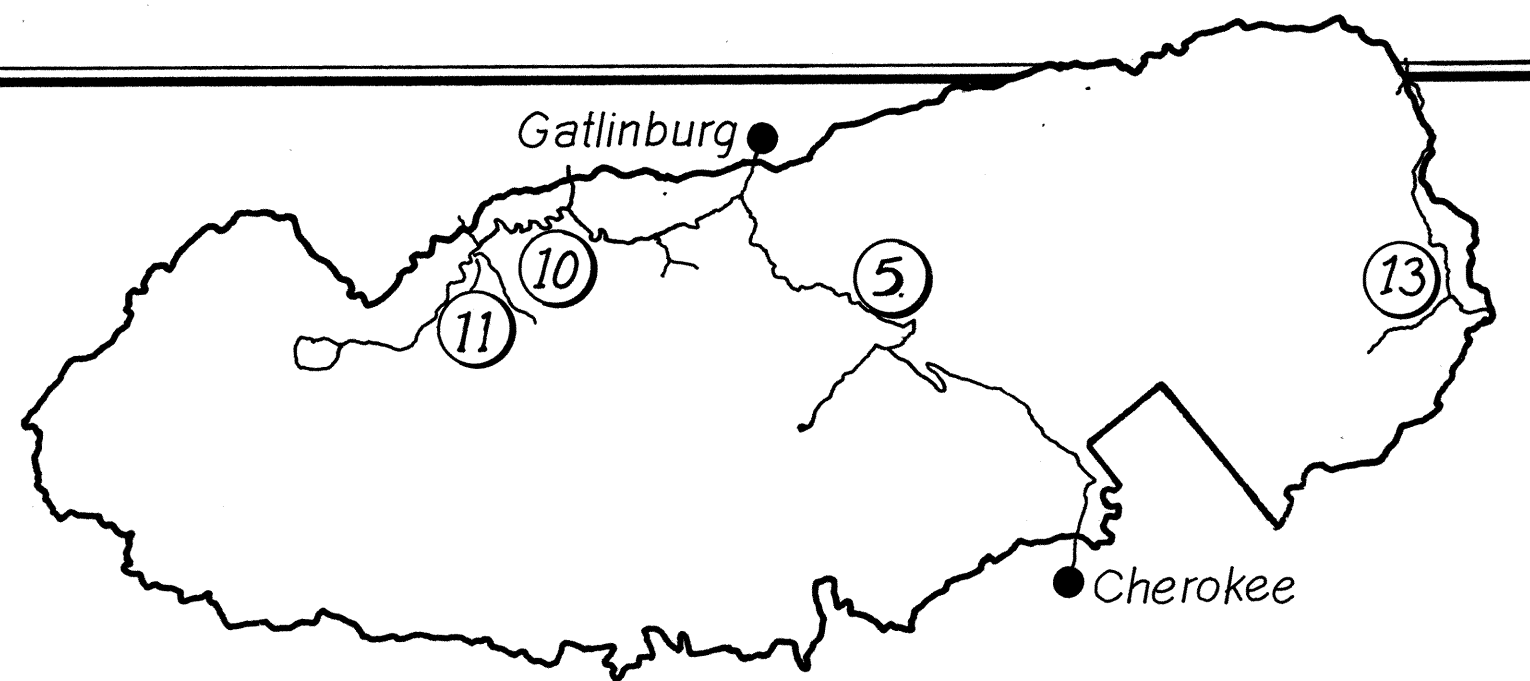
TENNESSEE

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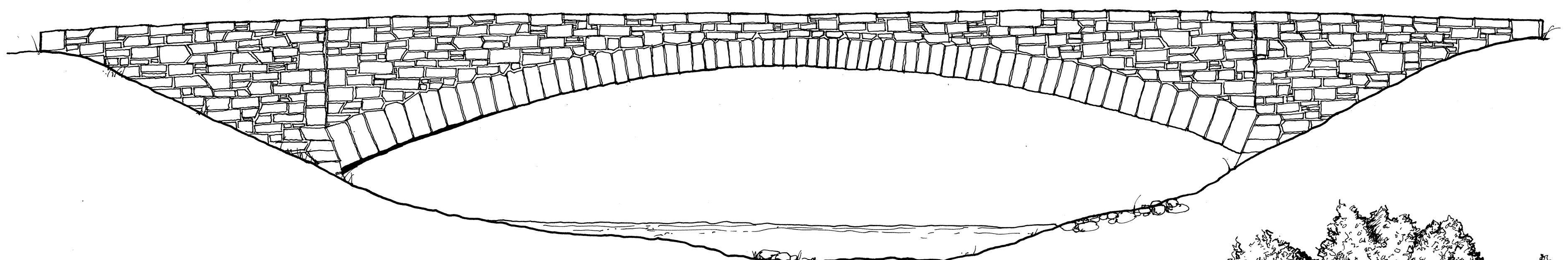
# BRIDGE COMPARISON

Note: Drawings based on original construction documents located in GRSMNP headquarters, photographs and field measurements.



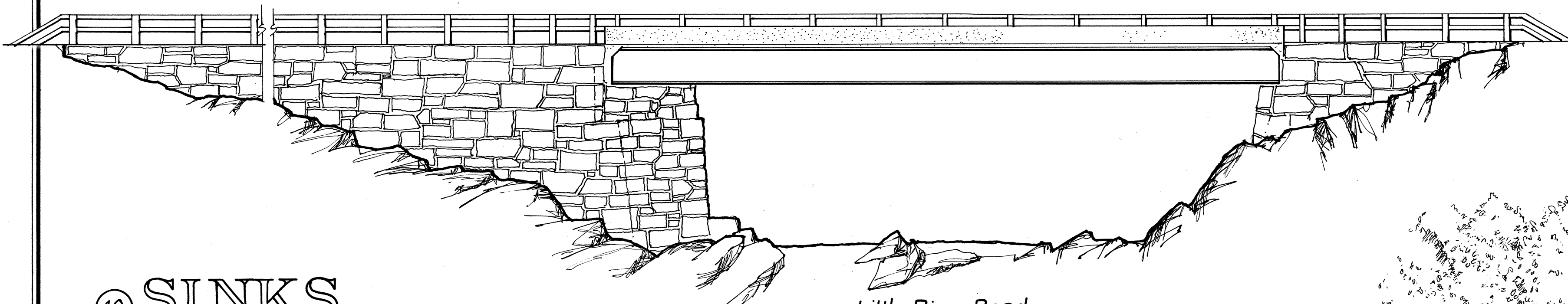
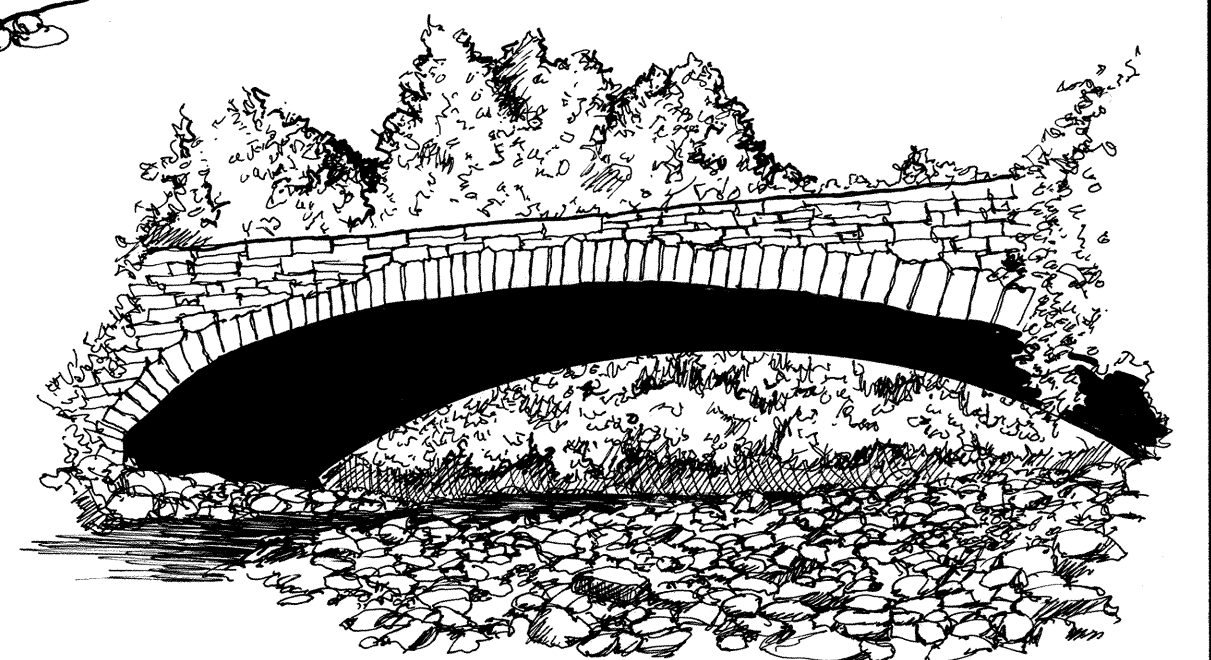
⑤ LITTLE PIGEON  
RIVER BRIDGE  
1937

Newfound Gap Road  
Overall 179'9"



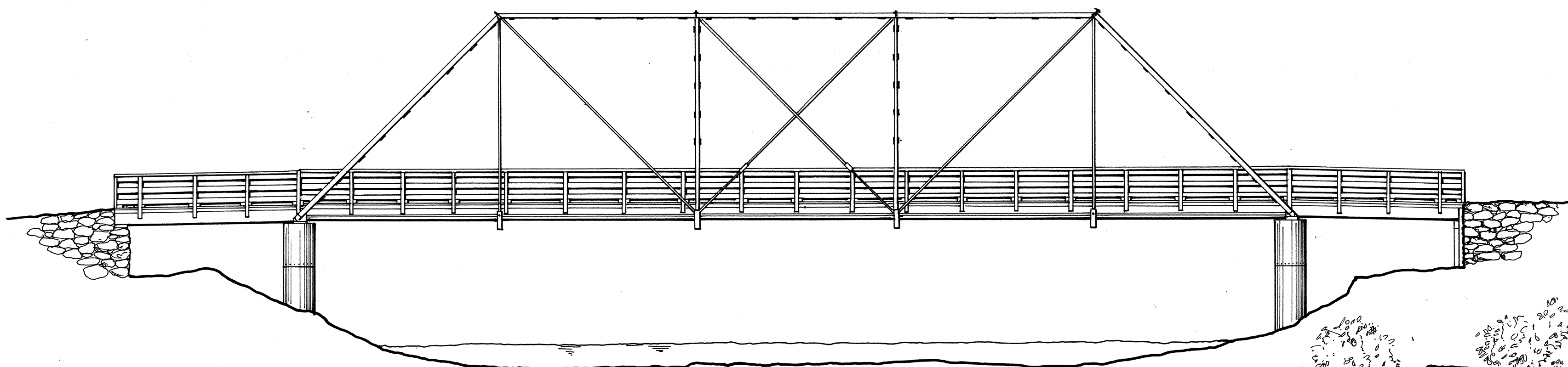
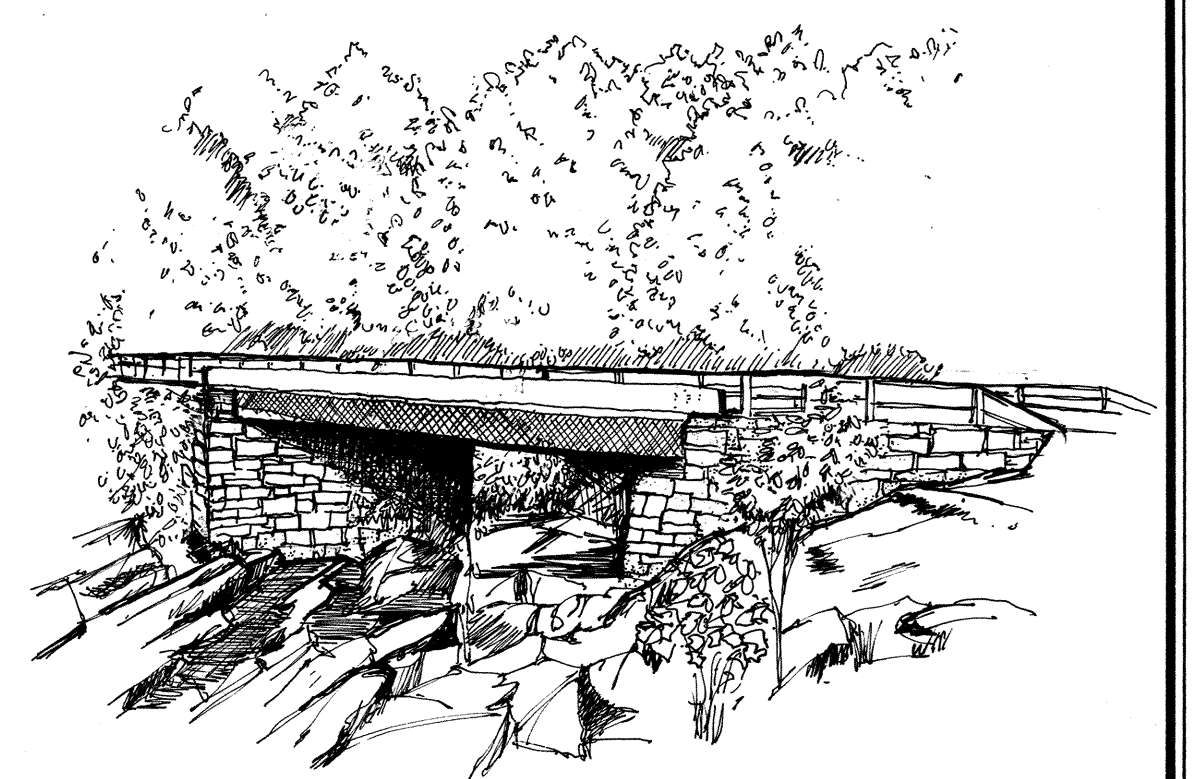
⑦ TOWNSEND  
WYE  
BRIDGE  
1952

Little River Road  
Overall 150'



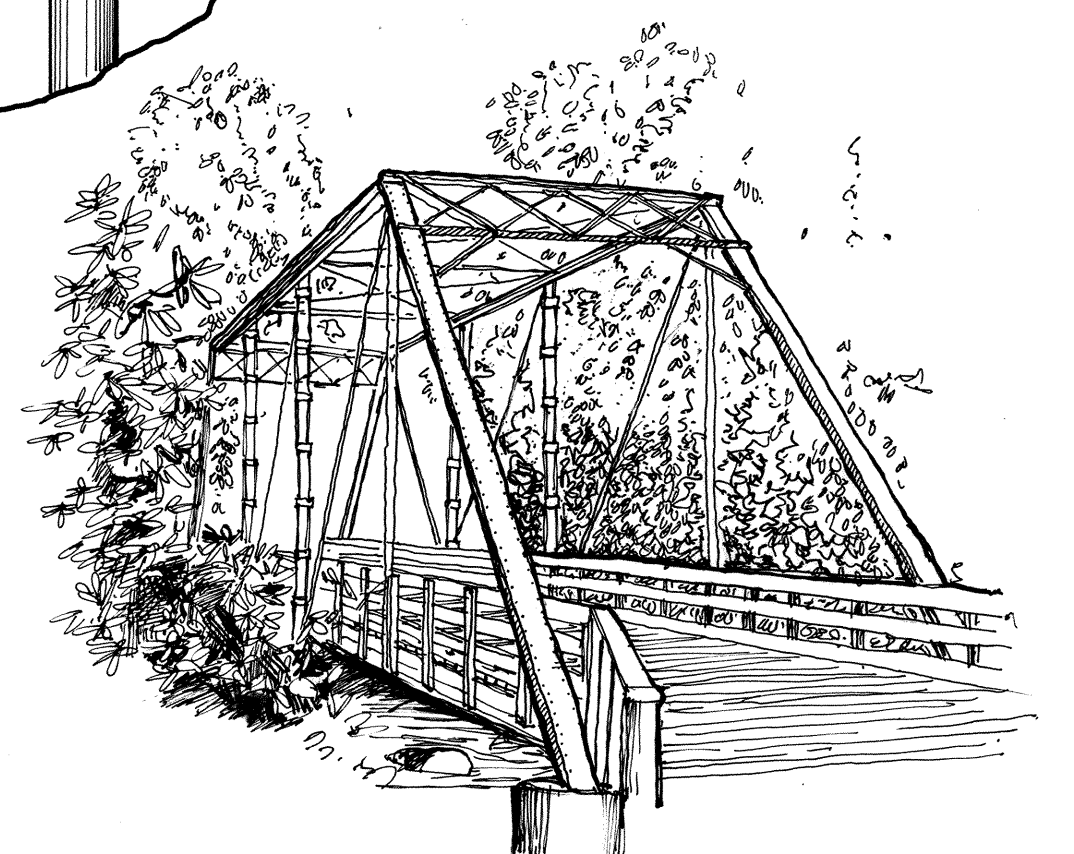
⑩ SINKS  
BRIDGE  
1950

Little River Road



⑬ CATALOOCHEE  
CREEK  
BRIDGE  
ca. 1920

Route 284  
Overall 122'8"



Feet 0 5 10 15 20 25  
Scale 1/8" = 1'-0"  
Meters 0 1 2 3 4 5

DELINEATED BY: Ed Lupyak, 1996

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David Haas, Photographer, 1996

- |          |   |
|----------|---|
| TN-35-1  | SUGARLANDS VISITOR CENTER LOOKING N.                                      |
| TN-35-2  | PARK HEADQUARTERS AT SUGARLANDS LOOKING NW.                               |
| TN-35-3  | CONVERTED GARAGES AT PARK HEADQUARTERS AT SUGARLANDS<br>LOOKING S.        |
| TN-35-4  | FIRST BRIDGE TO HOUSING AREA, SUGARLANDS.                                 |
| TN-35-5  | BRIDGE TO MAINTENANCE AREA, SUGARLANDS.                                   |
| TN-35-6  | SMALL CULVERT ON ROAD TO HOUSING AREA, SUGARLANDS.                        |
| TN-35-7  | HOME AND ROAD AT TOP OF HOUSING AREA, SUGARLANDS.                         |
| TN-35-8  | TOWNSEND (GATEWAY COMMUNITY) INTERSECTION ROUTES 73<br>AND 321.           |
| TN-35-9  | BRYSON CITY (GATEWAY COMMUNITY) INTERSECTION MAIN AND<br>EVERETT STREETS. |
| TN-35-10 | GATLINBURG, TENNESSEE FROM PARK ENTRANCE LOOKING NNE.                     |
| TN-35-11 | GATLINBURG FROM "SPACE NEEDLE" LOOKING N.                                 |
| TN-35-12 | GATLINBURG FROM GATLINBURG BYPASS OVERLOOK LOOKING ENE.                   |
| TN-35-13 | VIEW OF PIGEON FORGE (GATEWAY COMMUNITY) LOOKING N.                       |
| TN-35-14 | VIEW OF CHEROKEE, NORTH CAROLINA (GATEWAY COMMUNITY)<br>LOOKING WSW.      |
| TN-35-15 | VIEW OF MAGGIE VALLEY, NORTH CAROLINA (GATEWAY<br>COMMUNITY) LOOKING WNW. |



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Photographs TN-35-1 to TN-35-15 were previously transmitted to the Library of Congress in 1996.

INDEX TO HISTORIC PHOTOGRAPHS

All of the images are photographic copies of negatives from the National Park Service Photograph Collection.

- TN-35-16 Joe Murphy, Jr., Photographer, circa 1909-14  
LOCOMOTIVE NO. 148 STEAMS UP LITTLE RIVER GORGE, CA. 1909-14.  
LITTLE RIVER ROAD WAS CONSTRUCTED OVER THIS RIGHT OF WAY  
IN 1932.
- TN-35-17 Photographer unknown, March 1928  
PARK ROAD BOOSTERS ATTEND A MEETING IN MARCH OF 1928,  
WHEN A \$5 MILLION GIFT FOR THE LAURA SPELLMAN  
ROCKEFELLER MEMORIAL WAS ANNOUNCED.
- TN-35-18 George Grant, Photographer, circa 1936  
NEWFOUND GAP ROAD.
- TN-35-19 Photographer unknown, circa 1950  
"THE LOOP OVER" BRIDGE WAS CONSTRUCTED ON NEWFOUND GAP  
ROAD TO REPLACE A SERIES OF DANGEROUS SWITCHBACKS. THIS  
ENGINEERING FEATURE QUICKLY BECAME A POPULAR TOURIST  
ATTRACTION.
- TN-35-20 Jack Boucher, Photographer, circa 1950  
MOTORISTS IN CADES COVE CAPTURE THEIR AUTO TOUR ON FILM.
- TN-35-21 Abbey Rowe, Photographer, 1952  
VIEW OF NEWFOUND GAP PARKING AREA FROM ROCKEFELLER  
MEMORIAL.

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TN-35-22      Jack Boucher, Photographer, 1959  
VISITORS ENJOY THE VIEW FROM CLINGMAN DOME PARKING AREA.

# HISTORIC AMERICAN ENGINEERING RECORD

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ADDENDUM TO  
GREAT SMOKY MOUNTAINS NATIONAL  
PARK ROADS & BRIDGES  
Great Smoky Mountains National Park  
Gatlinburg Vicinity  
Sevier County  
Tennessee

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Photographs TN-35-1 to TN-35-15 were previously transmitted to the Library of Congress in 1996.  
Photographs TN-35-16 to TN-35-22 were previously transmitted to the Library of Congress in 2001.

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TN-35-23      FIELD TEAM AT SUGARLANDS ENTRANCE SIGN TO PARK, 1996.

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All of the images are photographic copies of negatives from the Great Smoky Mountains National Park Archives. The photographer is unknown. The 4x5 negatives were enlarged from 35mm negatives. The prints were made from the 4x5 negatives.

TN-35-24	ca. 1920s OX TEAM ON OLD STATE HIGHWAY OVER NEWFOUND GAP.
TN-35-25	1931 SUPERINTENDENT ROSS EAKIN, ARTHUR MILLER, CHARLES PETERSON, O.G. TAYLOR AND JOHN NEEDHAM ON A SURVEY OF THE PARK BOUNDARY.
TN-35-26	ca. 1960 AERIAL VIEW OF SUGARLANDS VISITOR CENTER.
TN-35-27	ca. 1937 CONSTRUCTION OF CHIMNEYS BRIDGE, NEWFOUND GAP ROAD.
TN-35-28	ca. 1935 CONSTRUCTION AT CHIMNEYS BRIDGE.

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TN-35-29	ca. 1937 CHIMNEYS BRIDGE, NEWFOUND GAP ROAD.
TN-35-30	ca. 1937 CONSTRUCTION OF LITTLE PIGEON RIVER BRIDGE, NEWFOUND GAP ROAD.
TN-35-31	ca. 1937 LITTLE PIGEON RIVER BRIDGE, NEWFOUND GAP ROAD.
TN-35-32	ca. 1935 CONSTRUCTION OF "THE LOOPOVER," NEWFOUND GAP ROAD.
TN-35-33	ca. 1935 CONSTRUCTION OF "THE LOOPOVER," NEWFOUND GAP ROAD.
TN-35-34	ca. 1935 CUTTING STONE AT THE ROCK QUARRY.
TN-35-35	ca. 1935 CONSTRUCTION OF NEWFOUND GAP ROAD, CLEARING AND SLOPING WORK.
TN-35-36	ca. 1937 TUNNEL CONSTRUCTION ON NEWFOUND GAP ROAD.
TN-35-37	ca. 1937 NEWLY COMPLETED TUNNEL #2, NEWFOUND GAP ROAD.
TN-35-38	ca. 1920s "OLD" NEWFOUND GAP.
TN-35-39	ca. 1937 NEWLY COMPLETED NEWFOUND GAP SCENIC AREA.
TN-35-40	1928 PARK BOOSTERS AT MEETING ANNOUNCING \$5 MILLION GIFT FOR

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LAURA SPELLMAN ROCKEFELLER MEMORIAL AT NEWFOUND GAP.

- TN-35-41     ca. 1950s  
NEWFOUND GAP SCENIC AREA AND ROCKEFELLER MEMORIAL.
- TN-35-42     ca. 1940  
ROCKEFELLER MEMORIAL PLAQUE AT NEWFOUND GAP SCENIC AREA.
- TN-35-43     ca. 1938  
VISITOR AT NEWFOUND GAP SCENIC OVERLOOK.
- TN-35-44     ca. 1940  
ROAD VIEW FROM ABOVE.
- TN-35-45     ca. 1936  
CONSTRUCTION OF ELKMONT BRIDGE.
- TN-35-46     ca. 1960  
CONSTRUCTION SCARS ALONG FOOTHILLS PARKWAY.
- TN-35-47     ca. 1950s  
ROCKSLIDE REPAIRS ALONG ROAD.
- TN-35-48     ca. 1960  
ROCKSLIDE ON GATLINBURG BYPASS.



**GREAT SMOKY  
MOUNTAINS  
NATIONAL PARK**

AN INTERNATIONAL BIOSPHERE RESERVE

HAER No TN-38-23

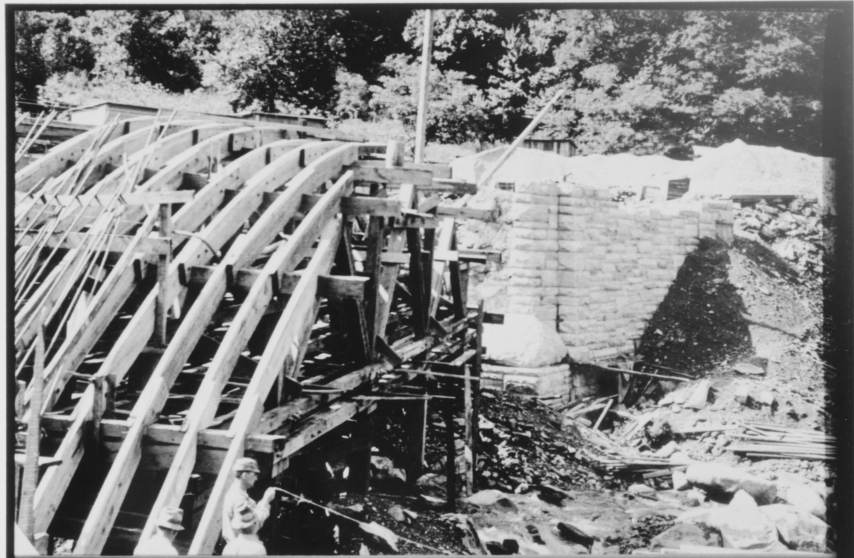




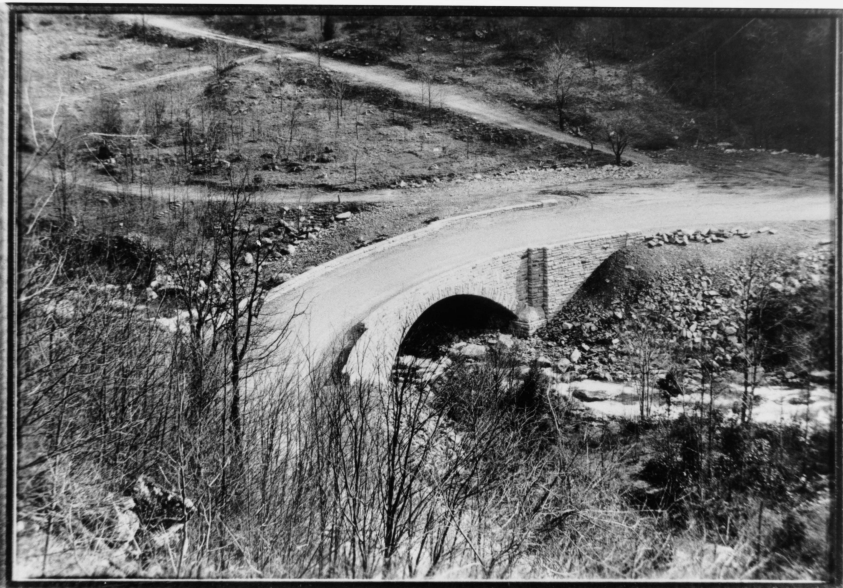
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Kodak 100T-MX  
HWR No TN-39-29





Kodak 100Tmx H&W M27N-39-31





KODAK 100T MX H&E NO. TN-35-33



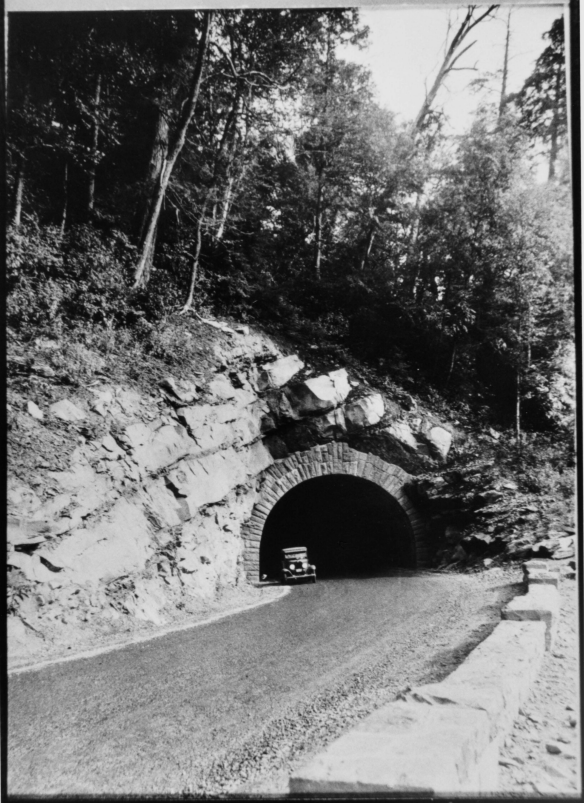


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HPK No TN-35-41



FOR THE PERMANENT ENJOYMENT  
OF THE PEOPLE

THIS PARK WAS GIVEN  
ONE HALF BY THE PEOPLE AND STATES  
OF NORTH CAROLINA AND TENNESSEE  
AND BY THE UNITED STATES OF AMERICA  
AND ONE HALF IN MEMORY OF  
LAURA SPELMAN ROCKEFELLER BY THE  
LAURA SPELMAN ROCKEFELLER MEMORIAL  
FOUNDED BY HER HUSBAND  
JOHN D. ROCKEFELLER

KODAK SAFETY FILM



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HA-5C No. 17-353



HAER No. TN-35-4



HAER No. TN-35-5



HAER NO. 17-55-4



HAER NO. TN-35-7



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HAER No. TN-35-9







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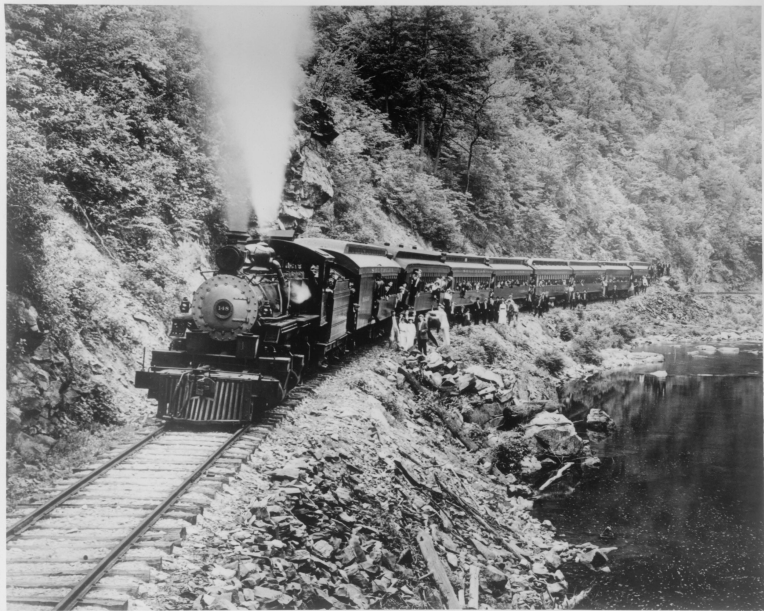
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FACE No. IV-35-14



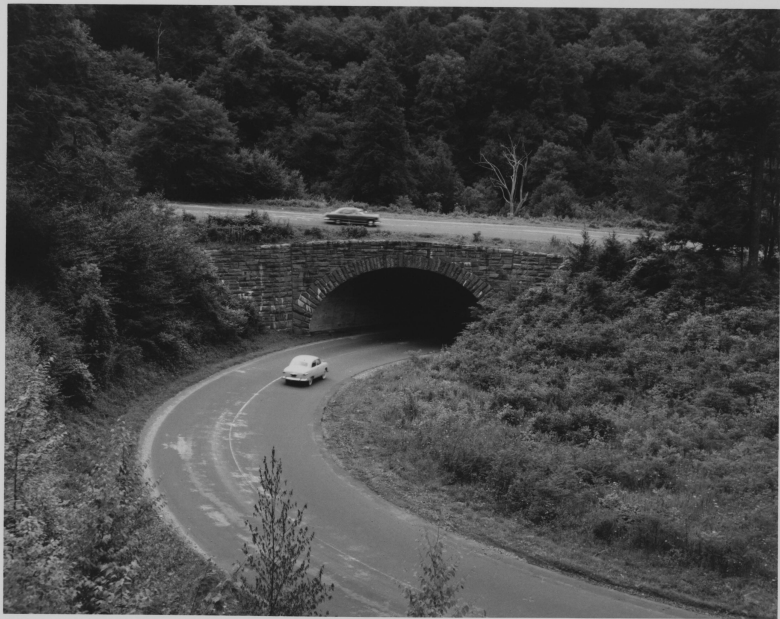
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HAER No. TN-35-21

