

## **Chapter 5**

### **THE AUTOMOBILE AGE BEGINS, 1890-1930**

From the last decade of the 19<sup>th</sup> century to the Great Depression of the 1930s, motorized horsepower diminished Colorado's isolation from the rest of the nation. During those four decades, a parade of automobiles toward the Centennial State symbolized more than a vacation trip or journey's end. The car brought new industries and newcomers and heightened the role of the federal government in state activities.

#### **5.1 More Horses Under the Hood: The Early Years of the Automobile in the United States**

Similar to subsequent other advances in technology, like television and computers, the cost of the first motorcars prohibited their use to only the wealthy. In one of the first advertisements for a local car "dealership," in May 1900, a Denver cycling shop offered a steam-powered "Locomobile" for \$750 (Hafen, 1931: 3). The Locomobile was the original economy car compared to the competition of the day. By 1904, 11 European and 24 American manufacturers sold cars in the United States with imports averaging \$8,000 and domestics valued at \$3,700 (Lewis, 1997: 31).

Guided by Midwestern simplicity and driven by populist beliefs, Henry Ford democratized the nation's auto industry by building and selling an affordable automobile. Introduced in October 1908, Ford's Model T was a working-man's car built for work. Ford designed the Model T with high axles and 3.5-inch-wide tires to better travel rutted roads cut deep by farm wagons. The first Model T sold for \$850 – windshield, top, and headlamps were extra. By 1914, Ford began building his chassis for the Model T on a moving assembly line. This first step toward full mass production meant it became increasingly cheaper to buy a car. According to the 1920 census, there were 9.5 million car and truck registrations nationwide. In 1924, anyone could own a Model T for \$290 and the American auto industry produced close to 3.5 million cars (Lewis, 1997: 31-3). By the 1920s, the rise of the Model T and the construction of improved roads to handle increased auto traffic erased the memory of how Americans of a generation previous struggled just to travel a few miles away from home.

## 5.2 The Automobile and the Good Roads Movement

Mud and uncertainty were companions of traveling Americans during the 19<sup>th</sup> century. Travel in the nation's cities or countryside was often a dirty, dusty nuisance. After the Civil War, the prominence of the railroad, aided by the national government's issuance of land grants, convinced many that roads for foot or horse travel would ultimately become unnecessary (Holt, 1923: 4). This perception changed in 1878, when Colonel Albert Pope introduced a "safety bicycle" and subsequently touched off the cycling craze of the last quarter century. By 1900, more than 300 companies produced over a million bicycles a year (Lewis, 1997: 7).

In order for his bicycles to travel the land safely, Pope became the nation's loudest advocate for "Good Roads." In his pamphlet, *Highway Improvement*, Pope wrote: "American roads are among the worst in the civilized world, and always have been. I hope to live to see the time when all over our land, our cities, towns, and villages shall be connected by as good roads as can be found." (Lewis, 1997: 7). In the 1880s, Pope organized the League of American Wheelmen lobbying group and built a short stretch of macadam road in Boston to demonstrate the safety and sense of traveling along a smooth path.

Through the League's publication, *Good Roads*, the Wheelmen supported state associations across the country, held good-roads conventions and lobbied state legislatures for road improvements. The movement's first success came in 1891 when the New Jersey legislature passed the first state-aid bill for road construction in the nation. Two years later, Pope and the League of American Wheelmen persuaded the Department of Agriculture to create an Office of Road Inquiry to provide the public information about road construction. From 1893 to 1913, the relationship between the states and federal road authority remained indirect. The Office of Public Roads produced pamphlets on how to build good roads, but did not assist in the work itself. Widespread and insistent public demand brought direct federal participation in road construction by 1916 (Holt, 1923: 8-12) [Figure 2].

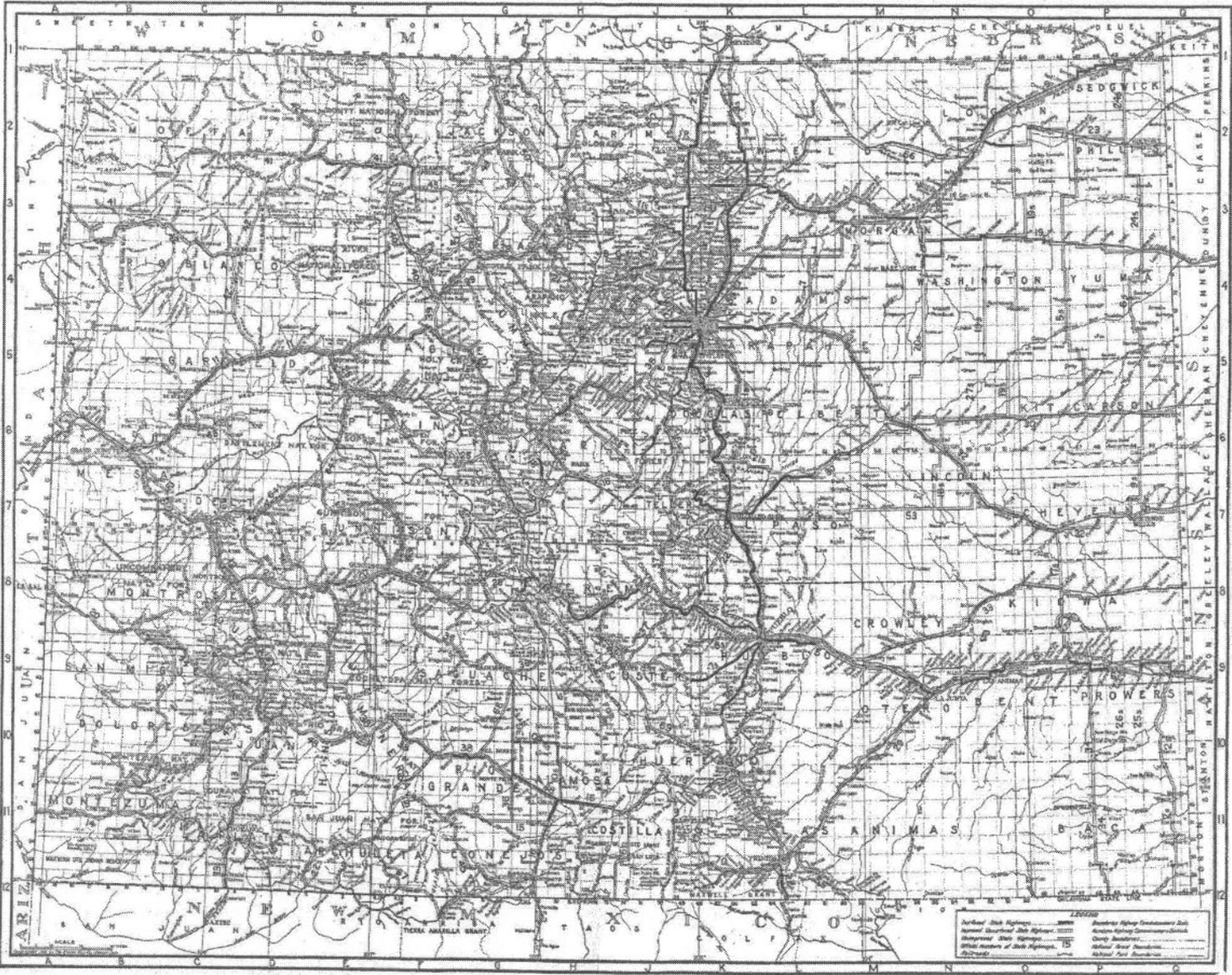
# Map of the State Highways of Colorado

Issued August 1916 by the State Highway Commission of Colorado

A. S. HERRICK, ENGINEER  
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SCALE OF MILES



LEGEND

Interstate Highways	.....	Abandoned Highway (Remains) Dotted
Federal Aid Highways	.....	County Road
State Highways	.....	City Road
County Highways	.....	State Road
City Highways	.....	State Road
Other Highways	.....	State Road

### **5.3 The Romance of the Open Road: The Early Years of Automobile Touring**

The automobile reawakened an element in the national character to travel whenever, wherever one pleased. Unfortunately, the highways of the early 20<sup>th</sup> century could only take a driver so far, as none of the states, or any county in those states, could boast of a completed highway system.

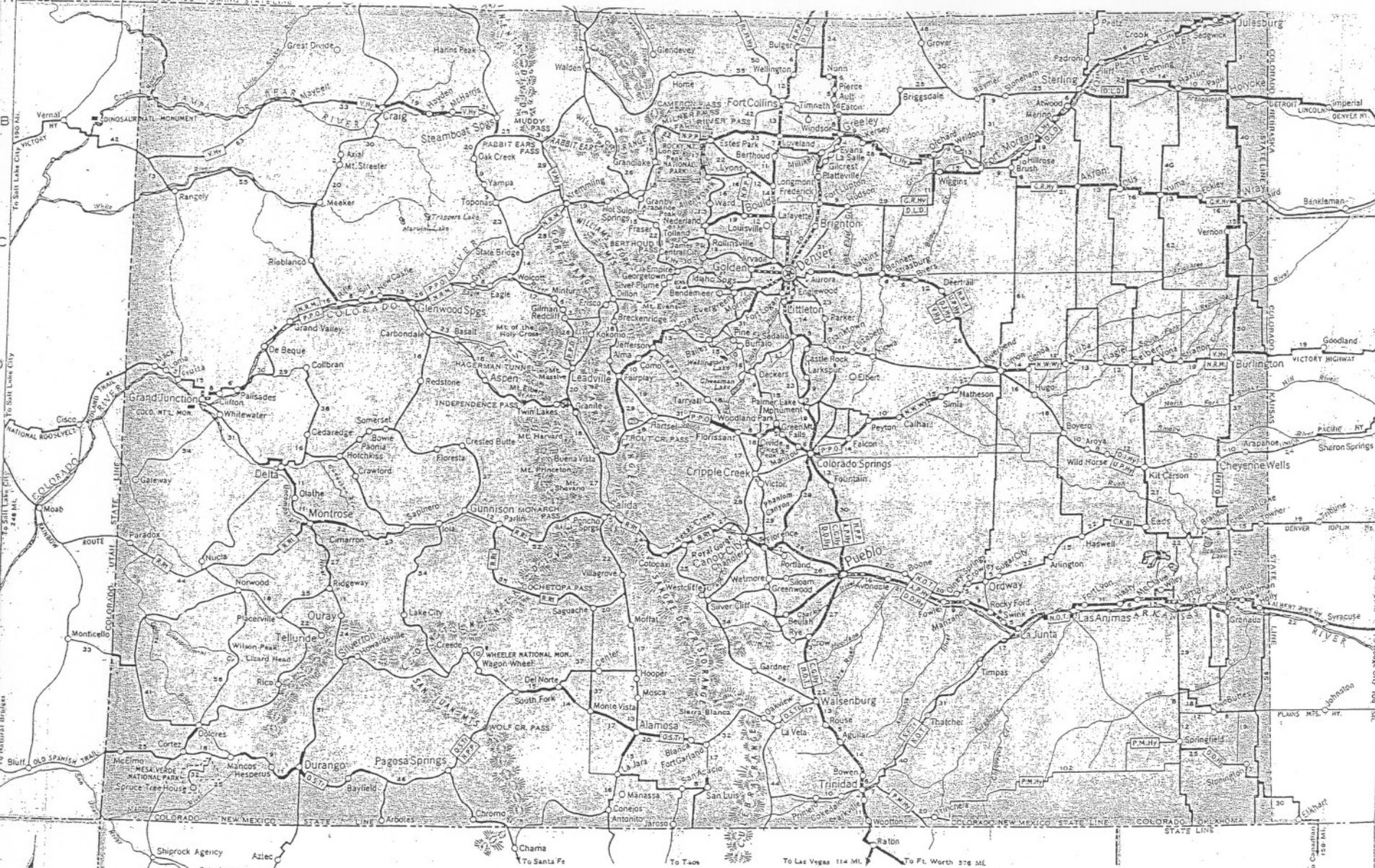
During the 1910s, loose alliances of motorists, automobile industry executives, community boosters, and speculators envisioned the construction of transcontinental automobile highway. On August 1, 1912, Colorado's representative in the U.S. House, Edward T. Taylor, introduced a bill "establishing the Lincoln memorial highway from Boston, Mass. to San Francisco, Cal." The bill died in the House Agriculture Committee, but the name caught the nation's attention (Wolfe, 1999: 4). A little more than a month later on September 6, Carl G. Fisher, developer of the Indianapolis Motor Speedway, presented his plans for the creation of a Coast-to-Coast Highway to an approving audience of automobile manufacturers. By the following summer, various individuals and groups pledged \$4 million toward construction. In July 1913, organizers agreed to call their venture the Lincoln Highway Association (AASHO, 1952: 109).

The Association planned to build an automobile highway along the most direct route from New York to San Francisco during the mid-1910s. The auto enthusiasts faced a decision similar to the Union Pacific in 1870 – how to build a transcontinental road that would safely and economically cross the Rocky Mountains. Like Union Pacific, the Lincoln Association selected South Pass in southern Wyoming as the most practical route over the Continental Divide. Not wanting to lose tourist dollars to Wyoming, the Denver Chamber of Commerce and Governor Elias M. Ammons attempted to broker a deal with the Association's leadership to have the Association recognize a spur from Julesburg in northeastern Colorado along the path of today's US 6 to Denver and then north to Fort Collins before following the North-South Highway (modern I-25) back to Cheyenne and onto the main road as part of the main Lincoln Highway. The state promised to maintain the road at no cost to the Association. A rough and rocky drive by Lincoln Highway officials through Western Colorado did not help the state's chances with the Association and its leadership viewed Colorado as a "state full of malcontents." Relations grew to the point where

the Lincoln Association eventually warned travelers to avoid the loop – and consequently Colorado – in its 1916 auto guide (Wolfe, 1999: 12-13, 17, 19).

The sting of not being on the Lincoln Highway did not hurt Colorado for long. By 1916, a number of named interstate roads entered the state from all directions. Some, like the National Roosevelt Middle Trail and the Victory Highway, followed the route of modern US 40 over the plains into Denver and on to the Western Slope. Mostly tracing modern U.S. 50, the National Old Trails Highway served as the primary auto highway for southern Colorado while the Great North and South Highway ran south from the Wyoming border to the New Mexico state line. Along the Omaha-Lincoln-Denver (OLD) Road, early drivers could easily identify their location by an 18-inch-wide band of white paint on telephone poles or fence posts from Nebraska to Denver. The President of the Omaha-Denver Good Roads Association, W.A. Taylor, wrote to Colorado Highway Commission Chairman C.P. Allen with praise for how well-marked the road was west of the Nebraska-Colorado line. From the perspective of nearly a century later, Taylor's comments recall the "frontier" era of auto travel when the brave motorist ventured on rough roads without the aid of traffic or direction signs, reliant only on painted lines on posts and poles:

“From Fleming on westward, the road is quite well marked. I found on my way coming home traveling along the road that there was wonderful satisfaction whenever I was in sight of the white band on the telephone post or post, and I am satisfied that tourists who are strangers through the country will have very much the same feeling in regard to it as I did” (Colorado Department of Highways, 1911(a)) [Figure 3].



# BEST ROADS OF COLORADO

SHOWING ROAD DISTANCES - PRINCIPAL CITIES

MILEAGE MAP

### ROAD LEGEND

- Surfaced Roads
- Paved Roads
- Highly Improved Roads
- Other Thoroughfares
- Road Distances in Miles

SCALE IN MILES



NAMED TRAILS This list gives the named roads with the symbol key number and letter showing their location on the map.

SYMBOL	KEY	MARKER	SYMBOL	MARKER
	Albert Pike Highway F-8			Pikes Peak O. to O. Hy. E-2
	Colorado-Kansas Blvd. E-10			Plains-Mts. Highway G-10
	Colorado to Gulf My. G-8			Rainbow Route F-4
	Dallas-Can.-Denver Hy. F-8			Rocky Mt. Highway A-7
	Denver-Joplin Hy. D-9			Santa Fe Trail G-9
	Detroit-Lincoln-Den. Hy. C-5			Old Spanish Trail G-3
	Golden Rod Highway C-11			Union Pacific Hy. D-3
	Gulf, Plains & Can. Hy. D-11			Victory Highway D-9
				North Star Highway C-10

By 1925, the establishment of the numbered highway system nationwide made named highways redundant. After the federal numbers game, the Lincoln became US Highway 30 (now Interstate 80) and the National Old Trails Road was renamed US Highway 40. During this era, one of the beneficiaries of early transcontinental auto travel was Denver's Colfax Avenue. Boasting a dual identity as both a neighborhood street and transcontinental highway, Colfax Avenue formed part of the right-of-way for US 40. During the 1920s, motor inns, restaurants, and curio shops lined blocks of Colfax from the prairie to the foothills west of Denver. Each structure seemed more outrageous than the next as architectural styles like Art Deco and Moderne greeted travelers. After World War II, Colfax took the "exaggerated modern" form of building construction through exaggerated structural components, oversized roofs, V-shaped columns, and visual fronts. Colfax Avenue retains much of its eclectic nature scattered along its length from gaudy restaurants and motels.



**Plate 2.** In 1914, construction along Denver’s main thoroughfare, Colfax Avenue, grew west from the city’s downtown. The president of the city’s Board of Public Works, Seth B. Bradley, boasted that the new viaduct would “cut a quite a figure” as it provided easy access to the mountains from Denver. A consortium of the Denver Tramway Co., the Denver and Rio Grande, Colorado and Southern and Burlington Railroads, the City of Denver, and the state spent \$853,316 to complete the project. Postcard courtesy: Lyle Miller.

## 5.4 The Automobile in Colorado

Who first took the wheel behind a motorized vehicle in Colorado remains a mystery. A carnival performer, Achille Phillion, deserves some consideration for this milestone. In June 1892, Phillion and his four-wheel, steam-operated carriage arrived at the Manhattan Beach amusement park on the northwest shore of Sloans Lake in Denver. Chugging along the grounds of Manhattan Beach twice daily that summer makes Phillion's case as the state's first motorist (Miller, 1999: 25).

According to a diary located in the archives of the Colorado Historical Society, Denver's David W. Brunton was the first automobile owner in the state. In an October 14, 1898, diary entry, Brunton wrote: "Went to automobile show at Mechanics Institute, Boston, and tested several motors cars." A few months later in May 1899, Brunton noted: "May 7. Left Butte [Montana], reaching Denver on the 9<sup>th</sup>. Found Columbia electric automobile awaiting me. Spent day setting it up. May 10. Ran electric carriage on the streets in Denver." (Hafen, 1931: 2).

Sparked by Brunton's first trip in his Columbia-Electric motorized vehicle, the first years of the new century soon saw almost every inaccessible part of the state touched by the motor car. In September 1900, John Brisben Walker failed in his attempt to ascend Pike's Peak by car. However, he drove to elevation of 11,000 – 3,110 feet short of the summit, but higher than anyone in the world had reached by motorized vehicle up until that time. Walker later recounted that the drive back down was similar to "plummeting down a toboggan chute." (Miller, 1999: 26). On August 12, 1901, W.B. Felker and C.A. Yount rode a Locomobile to the summit of Pike's Peak. Above timberline the steep road offered a challenge and, at one point, the pair had to lift the machine over a snowdrift. The Locomobile reached the Peak's summit just as the 3:20 p.m. cog train left from Pike's Peak to Manitou Springs. On August 28, J.E. Barnes crossed "the Crest of the Continent" when his horseless carriage reached Leadville. At times on the journey, Barnes wrapped ½-inch rope around the rear wheels to prevent his car from slipping on the steep grades (Miller, 1999: 26).

In January 1902, a Denver police court fined a driver for operating “his machine along the streets of the city at a speed which endangered the lives of the pedestrians.” Clocked by a police officer going 40 miles per hour on 16th Street, the judge fined the speeder \$25 and costs (Hafen, 1931:5-6). Despite the occasional restriction, the automobile opened avenues to all elements of society. By November 1902, the *Denver Post* commented: “Out of the 200 owners of machines in town today about a dozen women only have had the courage to take their levers and their destinies in their own hands, and face the world.” None of the women listed in the article owned a vehicle in their own right (Hafen, 1931: 6).



**Plate 3.** Bumper-to-bumper traffic held a different meaning on the streets of Denver at the turn of the 20<sup>th</sup> century. These proud horseless carriage owners met at the corner of 18<sup>th</sup> and Stout in front of the Colorado Winton Motor Carriage Company. Source: Denver Public Library, Western History Department. ©1995-2002 Denver Public Library.

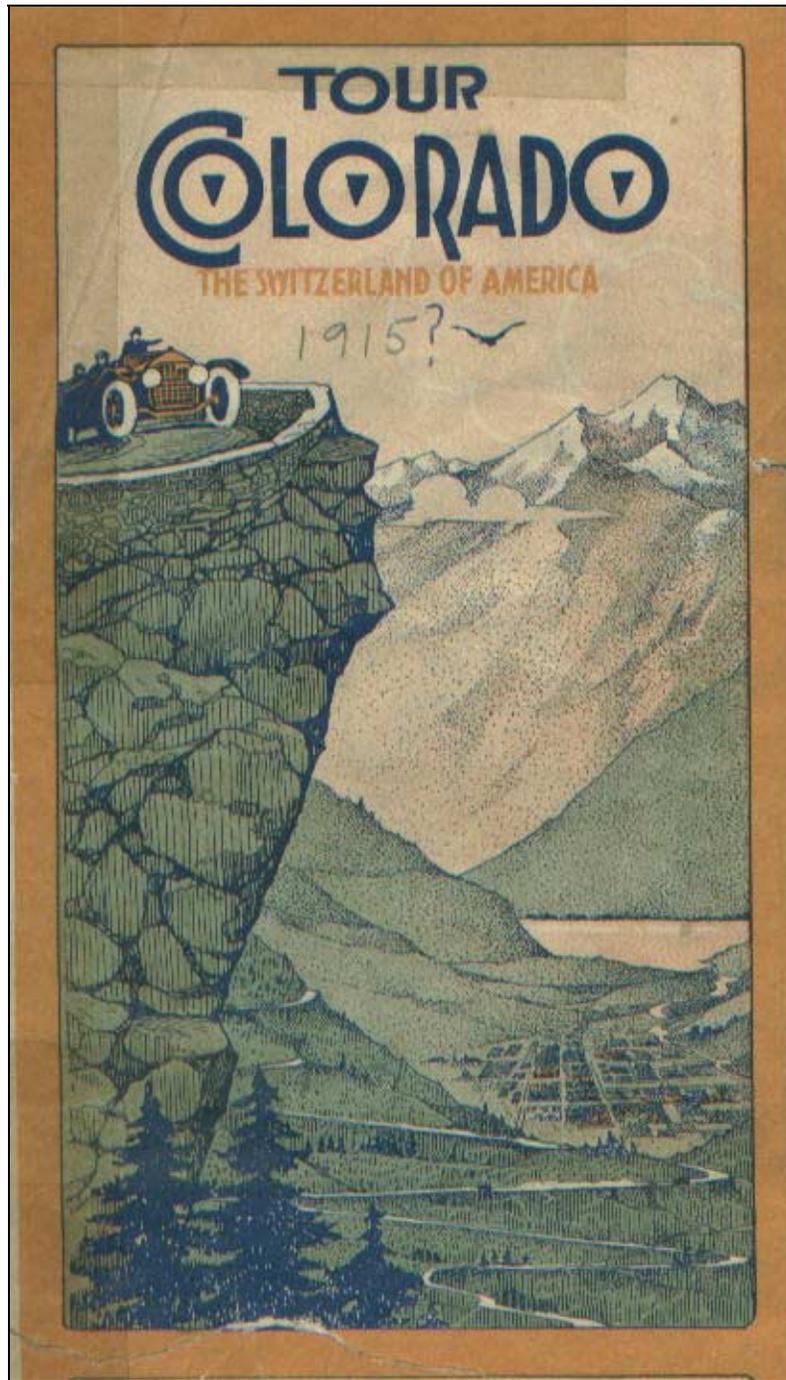
The first automobile to make a transcontinental trip by way of Colorado arrived in July 1903. A 12-horsepower, one-cylinder Packard driven by E. T. Fetch with M.C. Krarup as passenger came through the state by way of Grand Junction, Glenwood Springs and Colorado Springs, before reaching Denver on July 20. The *Denver Post* quoted Krarup that “Heavy chains were necessary to be wrapped around the wheels . . . in order that the steep mountain grades might be overcome.” (Hafen, 1931: 10).

## **5.5 Tourism and Demand for Mountain Roads**

To take advantage of their new gadgets, auto clubs and groups of businessmen developed a handful of scenic roads across the state. Motorists could pay a \$2 toll to the top of Pike’s Peak, or travel the Fort Collins and the Poudre Canyon Road, Durango’s Electra Lake Drive, and Trinidad’s Stonewall Canyon Road. (Bartlett, November 1918: 10).

During the summer of 1911, a rumor spread among out-of-state motorists that Colorado was charging a \$15 tax for a permit to travel through the state and \$20 for extended stays beyond a month. Stories of “bleaching” tourists had the leadership of the State Highway Commission in correspondence with the heads of neighboring state’s Good Roads Associations, assuring them the rumors were all lies. In June 1911, Highway Commissioner C.P. Allen wrote to a member of the Omaha-Denver Good Roads Association with the statement that has become a state mantra: “Colorado is looking for all the tourists she can get” (Colorado Department of Highways, 1911(b)).

Depending on correspondence during the 1910s, Colorado’s tourist roads were either splendid or below average. A 75-mile auto trip between Denver and Colorado Springs – part of the Great North and South Highway—took five hours and 20 minutes over gravel, steep grades, sharp turns, ruts and chuckholes. Despite those obstacles, travelers kept coming. By 1915, the amount of traffic between Denver to Colorado Springs averaged 253 cars per day, with 85 of those vehicles from out-of-state (Colorado Highways, April 1929(a): 8).



**Plate 4.** Tourism, the automobile and Colorado were made for each other. In 1915, the Denver Motor Club issued this map urging motorists to see “The Switzerland of America.” Source: Rocky Mountain Philatelic Library.

By the early 1920s, the Highway Department knew the political necessities of putting on a tourist friendly face to the rest of America. Inter-department correspondence of the time reflects the caution of the Highway Department's leadership:

“Major Blauvelt is disinclined to publish a map in which we definitely state that any Colorado highway is impassable. This should be modified in some way – such as, ‘poor condition’ or ‘very poor condition.’ Or what is better yet, leave the key showing ‘state highway’ but saying nothing about the condition.”(Colorado Department of Highways, 1923).

### **5.5.1 Colorado's Private Auto Roads**

Colorado points with pride to its egalitarian roots, but some of its first important auto roads were built by the wealthy for the wealthy. Two men – Frelan Stanley and Spencer Penrose – symbolized the elitist nature of the automobile's first decade.

In 1903, one of the inventors of the Stanley Steamer, Frelan Stanley, successfully drove a Steamer from Denver to Estes Park, then an elite resort near Long's Peak. Upon completing his journey, Stanley believed that the Rocky Mountains should be the highlight of every automobile owners cross-country travels. Stanley proceeded to build a huge tract of land, build a hotel, and run a fleet of Stanley Steamer Wagons from Denver and other Front Range cities to his new resort. A torrent of visitors to the Stanley Hotel over the proceeding decade turned Estes Park from an isolated retreat for wealthy hunters to one of the leading tourist attractions in the state. By 1913, Estes Park counted 50,000 visitors a year (Thomas, 1996: 55-6).

One of Colorado's homegrown millionaires took Stanley's plans one-step further. Colorado Springs mining baron Spencer Penrose boasted a fleet of cars at a time when most rural Coloradoans had yet to see one drive past. The *Colorado Springs Gazette* noted in 1910 that Penrose had to build an addition of an oversized garage on to his home to house his four canary-colored Lozier cars costing some \$5,000 each (Breckenridge, 1985: 186). When he was not out buying automobiles, Penrose stayed active in the Colorado chapter of the National Good Roads Association, the Rocky Mountain Highway Association and the creation of the State Highway Commission in 1909. Penrose spent a quarter of a million dollars to transform an old carriage

road into the Pike's Peak Auto Highway. Completed in July 1915, Penrose sponsored an annual auto race to peak's summit to demonstrate the practicality of auto travel in the mountains. On Labor Day 1915, the first Pikes Peak Hill Climb brought thousands of spectators to see the country's best drivers tearing along the narrow shelf roads only inches from sheer drops of 1,000 feet. The first hill-climb winner, Ray Lentz of Seattle, drove his Romano Special to the top of Pike's Peak in 20 minutes and 55.6 seconds (Breckenridge: 187).

### **5.5.2 The Colorado Automobile Club**

From 1899 to 1902, a cadre of well-to-do doctors, lawyers, and businessmen introduced the automobile to the state. In October 1900, a "Good Roads Convention" met in Denver where delegates presented papers favoring a national highway from Denver to Salt Lake City via Berthoud Pass (Hafen, 1931: 12). Automobile ownership grew quickly, and by May 15, 1902, 42 auto owners had organized the Colorado Automobile Club. The first auto club in the state, the Colorado Automobile Club organized on May 15, 1902. Membership elected the state's first driver, David W. Brunton, president and W.H. Bergtold, secretary. The organization's constitution listed the following "objects" of the club:

- "1<sup>st</sup>. The securing of rational legislation.
- "2<sup>nd</sup>. The formation of proper rules governing the use of the automobile.
- "3<sup>rd</sup>. To protect the interests of automobilists against unjust discriminations.
- "4<sup>th</sup>. To maintain their lawful rights and privileges.
- "5<sup>th</sup>. To encourage prudence and care in driving automobiles.
- "6<sup>th</sup>. To promote the good road movement." (Hafen, 1931: 8).

Similar to other "Good Roads Clubs" across the nation, the Colorado Automobile Club lobbied to upgrade the state's roads for safe auto travel. The voice and political clout of automobile owners grew louder and stronger during the first decade of the 20<sup>th</sup> century. At the suggestion of Governor Jesse F. McDonald, 65 owner-delegates from across the state met in Denver and formed the Colorado Good Roads Association in July 1905. At the next convention the following summer, membership drafted language favoring creation of a State Highway Commission. A number of powerful Coloradoans opposed state control of the roads, and the bill

never reached the floor of the House or Senate during the 1907 legislative session. Undaunted, Association membership launched another effort during the 1909 session. In public and private, Association members educated legislators on the economic benefits of good roads. Their efforts resulted in passage of the state's first highway bill on May 5, 1909 (Maloney and Reedy, 1929: 2-3).

### **5.5.3 Denver Mountain Parks**

Looking west from the offices and municipal buildings of downtown Denver, the city's elite viewed the mountains to the west differently in the wake of the automobile. Those who ran the city saw tourism holding unlimited economic potential. It was up to the municipal leadership to devise a plan to link the mountains and the city together in motorist's minds.

In 1909, Mayor Robert Speer proposed at a Chamber of Commerce banquet to bring the high country to the city through the annexation of a chain of mountain parks west of Denver (Author Unknown, n.d.(a): 1). In 1913, the city obtained an amendment to the State Constitution allowing purchase of land in other counties, primarily Jefferson County. The city proposed that Denver property owners invest one-fifth of a mill over a five-year period to acquire land toward building parks and mountain roads. Jefferson County officials enthusiastically agreed to the plan. Speer commissioned a scion of the nationally known Brookline, Massachusetts landscape architecture family, Frederick Law Olmsted, Jr., to plan and design the mountain parks, including the scenic roads to connect them. Olmsted proposed public transportation to the foothills and recommended that the Denver Tramway Company build trolley lines to the mountain park system. The city administration blocked Olmsted's plans in an attempt to appease a growing number of motor tourists. Olmsted blocked Denver Mountain Park's Superintendent Edward S. Letts' plans to level the summit of Genessee Mountain, the city's first mountain park to make it more accessible to automobiles. (Noel, 1987: 44). Olmsted designed for almost nine miles of mountain roads. Among the roads recommended was a passage through Mount Vernon Canyon, near Lookout Mountain. The designer predicted that this road would "become the most direct and probably the most useful business road to the mountains from Denver." A half-century later, Olmsted's Mount Vernon route furnished the right-of-way for Interstate 70, west of Denver (Thomas, 1996: 87).

Prior to the Denver Municipal Park system, Jefferson County resident “Cement Bill” Williams built an auto road to the top of Lookout Mountain. Williams ran out of money and the City of Denver completed the paved road in 1913 (Noel, 1987: 43). Private citizens donated the land for the first mountain park in 1914 and within the five years allotted by the state to raise tax money for the project, Denver acquired more than five square miles of parkland for \$34,000 and invested \$225,000 for construction of 75 miles of roads. The mountain park system stature grew nationally over the years. The federal government sold the city several thousand acres for the park at dirt-cheap price of \$1.25 per acre. By the Great Depression of the 1930s, President Franklin Roosevelt’s work programs improved the roadways from flooding and built Red Rocks Park (Thomas, 1996: 88). Denver eventually spent an estimated \$3 million on buildings, constructing highways, erecting shelter houses, opening picnic grounds, and building parking lots to make its 25 mountain parks attractive to tourists (Noel, 1987: 45). The resultant 380-square-mile Denver Mountain Park System remains the city’s primary contribution to the preservation of the Front Range’s natural and visual resources (Author Unknown, n.d. (a): 5).

As the city built roads in the mountains, Denver was also deciding how to plan and pave an urban grid. Experimenting with four separate materials, the city paved four blocks of Speer Boulevard in 1910. On succeeding blocks, city crews alternated between asphalt concrete, tar concrete, a patented type of bituminous concrete known as “Amiesite” and tar concrete placed over an existing Macadam base. The city committed to asphalt concrete when it paved eight additional blocks of Speer in 1912. From 1916 to 1918, the city paved 35 to 40 blocks with asphalt and asphalt concrete. Denver owned and operated the plants and trucks while day labor performed all grading and sub-grading (Johnson, 1922: 20).

Denver businessmen attempted to profit from the city’s proximity to the mountains. In 1915, Denver built its first free municipal auto camps in City Park. Lasting only three years until 1918, the City Park camp was a welcome site to cross-country motorists. One, Horace Albright, assistant director of the National Park Service, recalled his personal experiences traveling through Colorado and staying in the Denver Auto Camp:

“It is an inspiring sight to go into a park like the beautiful City Park of Denver and see several hundred cars parked in their allotted spaces and their happy owners, many of them with large families, enjoying camp life” (Athearn, 1986: 147).

Other urban camps subsequently followed City Park, notably Rocky Mountain Park in northwest Denver and Overland Park on the South Platte. Opened in 1920, Overland Park featured campsites, water, fuel, toilets, and showers—all things the weary traveler sought after a long journey to Colorado. Overland Park also boasted a billiard room, restaurant, barbershop, and dance floor. Some condemned Overland Park as dangerous to public morals. In 1923, the city charged 50 cents a night to help finance this mass motor camping and attract a “better class of tourist” (Noel, 1987: 47). With the onset of the Depression, poor migrants flocked to the Park, forcing the city to close Overland in 1930. Colorado historian Thomas Noel noted, “Poor motor migrants of the 1930s killed the idea that automobiles were only toys of the rich.” (Noel, 1987: 47).

## **5.6 Highway Construction in Colorado, 1910-1920**

Effective January 1, 1910, the new highway law granted to the state authority over the planning and construction of Colorado’s roads and highways. The law created a three-member commission with a working budget of \$56,000. Governor John F. Shafroth appointed C.F. Allen, William Wiley, and Thomas H. Tully as Colorado’s first highway commissioners. Their primary responsibility was to map and lay out a state road system. The trio first asked each county to submit maps and documentation indicating their most heavily traveled roads. Thirty-three counties sent maps to the commission during 1910, from which the commission designated the first system of state primary roads totaling 1,643.5 miles. Only 33 of Colorado’s 62 counties bothered to survey, forcing the commission to schedule an automobile expedition to examine the condition of the state’s roads (Wiley, 1976: 11).

Likening himself to the pioneers, commissioner Thomas H. Tully found that both nature and the average citizen were unprepared for what a state highway system would mean to the state:

“We found that the people were apathetic. There didn’t seem to be any particular interest in highways. There was a disposition manifested in virtually every

section of the state of jealousy of some other section. The belief seemed to prevail that all the highway commission was after was to put in a few good roads around Denver” (Colorado Highways, April 1929(b): 9).

The commission faced more than apathy and suspicion. Tully recalled that the most disheartening aspect of their adventure was driving over the same rutted ground covered by the pioneers’ wagons a half century earlier:

“We traveled 1,600 miles in the state and the motorist today who is not familiar with the highway conditions of that day has no conception of what we had to contend with. We found bridges we did not dare to cross in a car, encountered mud that stuck us, found grades we managed to crawl up at a speed a snail could beat, and roads that were never meant for anything but a horse-drawn vehicle” (Colorado Highways, April 1929(b): 9)[Figure 4].

Seeing that they had their work cut out for them, the commission moved quickly in their first year. Tully described in a letter his commission’s expediency regarding road construction to a colleague in Texas:

“Since the creation of the commission last January we have declared 1,600 miles of state highway and there is now work underway at fifteen different points in the state by contract and at three different points in the state by convict labor” (Colorado Department of Highways, 1910).

Drawing from their experiences, the commission sent its first annual report (1910) to the governor filled with recommendations. The commissioners supported the creation of a permanent Internal Improvement Fund to be used solely for road construction, replacing wooden bridges with concrete, continued use of convict labor in road work, and installation of uniform, statewide road signs (Colorado State Highway Commission, 1910: 30-1).

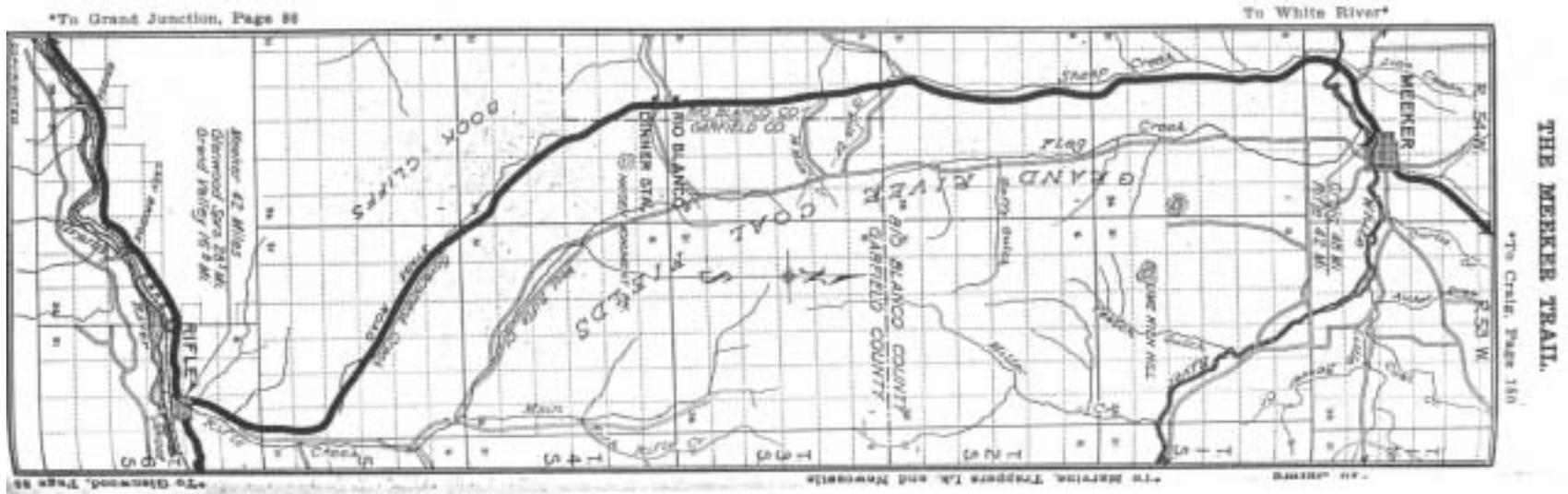


Figure 4. In 1910, the first State Highway Commission traveled Colorado's roads. That year, stagecoaches competed with automobiles for space on the Meeker Road (later State Highway 13). Source: Denver Chamber of Commerce, c. 1912: 148).

A number of Colorado cities also showed ingenuity when constructing their first automobile roads. In 1909, a segment of one of the state's oldest routes, the Santa Fe Trail, received a modern makeover after Pueblo County Commissioners contacted Thomas Tynan, warden of the Colorado penitentiary. The commissioners sought the use of 35 convicts to perform "experimental road work" towards hard surfacing a portion of the Old Santa Fe Trail located on Pueblo's eastern city limits. Convicts graded an adobe roadbed for drainage, then placed a foundation of smelter slag from the Colorado Fuel & Iron plant, and rolled the material into the roadbed. Corrugated iron culverts placed below road level eliminated bumps along the surface. The final stroke required soaking and rolling a layer of gravel into the slag. After completion, residents of Pueblo boasted, "the Santa Fe Trail became the most modern section of highway in the West" (Taylor, March 1927: 9).

The automobile brought rapid changes to Colorado's cities, but many areas of the state had to yet to take part in this revolution. Residents of Southwestern Colorado sought a road east over the Continental Divide to open traffic between Alamosa, the San Luis Valley, and the rest of the state. The only route connecting the two regions at that time was a rough wagon road over Elwood Pass, where grades ran as high as 25 percent.

Responding to those pleas in 1913, the Highway Commission searched for a way over the San Juan Mountains and considered both Elwood Pass and a recently surveyed route near Wolf Creek. The commissioners took a "hair-raising" ride over Elwood Pass's 25-percent grade, and while the engine was still warm, immediately confirmed Wolf Creek the winner. During 1916, crews cleared Wolf Creek Pass at a cost of \$100,000. Subsequently surfaced with dirt and gravel, the road measured from six-feet to 12-feet wide with occasional turnoffs allowing cars traveling in opposite directions to pass. To avoid expensive blasting over the South Fork Canyon, engineers located a portion of the roadbed along steep cliffs bordering the canyon. On completion of the road in 1916, drivers by the hundreds took a chance to cross the new pass (Federal Highway Administration, n.d.: 4).

By the time of America's entry into World War I, the state and federal government shared the same aspirations for better roads. Colorado was limited in the amount of roads it could build by

the state's lack of funding resources and the extreme cost of building in the mountains. The end of the war signaled the start of a long partnership between the state and federal government came into being.

## **5.7 The Federal Presence in Colorado and the 1916 Public Roads Act**

In 1916, the U.S. Congress took up the debate over federal aid for highways. Colorado's congressional delegation, led by Representative Edward Taylor, sponsored several pieces of highway legislation. Taylor sponsored four road-related bills that session, including one proposing the sale of public lands in Colorado, Arizona, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming and Oregon, with half of the revenues going toward a "public-roads fund" (Thomas, 1996: 63).

The Federal Highway Act of 1916 provided federal funds for the building of roads in various states as match for the respective state's funds supplied by their highway commissions. The Act also required that each state select 7 percent of their total road mileage, which roads would be eligible for federal funds. Each state designated their most important roads as either "primary" or interstate and the remainder as "secondary." In 1917-18, the first federal funds allotted to Colorado amounted to \$17,000 (Zahn, 1922: 10).

In time, the state-federal partnership toward road construction went smoothly, but some in the Highway Department felt that the federal government had to do more for Colorado. In 1916, responding to an inquiry from the editor of Motor Print magazine, Commissioner Thomas J. Ehrhart explained the view of people from the other end of the federal funnel:

"A very large percentage of the land area of Colorado is included in forest reserves and other public lands, from which the federal government is deriving an income through its system of Landlordism from our own people and the state and the county governments of Colorado are spending many thousands of dollars each year on public highways across the public lands." (Colorado Department of Highways, 1916).

According to the 1916 Federal Act, every state had to meet certain minimum organizational requirements to receive aid. Colorado was one of 15 states that did not meet those requirements.

In 1917, the State Legislature passed the Highway Act creating a State Highway Fund to distribute state and federal funds for the development and maintenance of the State Highway system. Lawmakers also reorganized the State Highway Commission into the State Highway Department. A commissioner and a five-man advisory board were responsible for the new department's policies (Wiley, 1976: 15).

The same year of the Federal Highways Act, the federal government established Rocky Mountain National Park near Estes Park. Located near Denver, the park is unique among the National Park System due to its proximity to a major urban center. Within three years of its creation – 1919 – Rocky Mountain Park drew almost 170,000 visitors. The mountain drive still was primitive as a motor guide from the early 1920s advised drivers to “use extreme caution” to “blow the horn at every turn” and never exceeds 12 miles per hour (Noel, 1987: 46). According to the National Park Service, the Rocky Mountain National Park was the leading tourist destination in the national system by the start of the 1920s (Thomas, 1996: 89).

At the first meeting of the Highway Advisory Board of December 6, 1917, the board approved the first direct contracts let by the State Highway Department. Colorado and the federal government split the costs on six initial projects:

Federal Aid Project (FAP)-1 Denver-Littleton (Santa Fe) \$73,939.74

FAP-2 Pueblo-Trinidad \$267,191.91

FAP-3 Granite-Twin Lakes \$37,089.90

FAP-4 Rifle-Meeker \$79,082.85

FAP-5 Placerville-Norwood \$7,480.00

FAP-6 Lamar to Springfield \$10,030.90

Supported by FAP money, in 1918, the Highway Department laid its first stretch of concrete pavement south of Denver along today's Santa Fe Drive (U.S. Highway 85). Taking nearly a year, contractor Charles Connor of Denver poured a four-mile long, 16-foot-wide strip of concrete from Denver to Littleton at a cost of \$77,571. Traffic volume supported the wisdom to concrete this section first. By 1923, the state counted 1,200 to 3,500 vehicles a day between Denver and Colorado Springs. That year, the Highway Department widened the road to 18 feet to accommodate increased volume (Maloney, 1924: 8-9). During the early 1920s, Santa Fe

Drive was part of the Great North and South Highway. Drivers in Colorado Springs burned a “Dusty Roads” effigy in honor of the opening of the 73-mile stretch (Christensen, et. al. 1987: 51).

It took a while before the impact of the Model T opened the nation’s roads to all classes of drivers. After initial distrust of the auto as a rich-man’s toy, rural Coloradoans improved their standard of living after deciding to go behind the wheel. In 1919, after almost a decade of state statistic keeping, the publication of the State Highway Commission saw a correlation between the automobile and agriculture:

“The biggest advance made by any industry in this state in the past decade has been in agriculture; road building, perhaps, stands second. The former has been the result of bringing under cultivation hundreds of thousands of acres of fertile land in nearly all sections of the state and of the introduction of better methods in eastern Colorado. The latter has been largely the result of the agricultural growth of the state, for new and better highways have been required to transport the immensely increased products of our farms to market” (Colorado Highways Bulletin, July 1919: 14).



**Plate 5.** On Colorado's eastern plains, the automobile was a familiar sight by the early 1920s. However, the ruts in this photo attest to how far the country had to catch up with the state's cities when it came to road construction. Postcard courtesy: Lyle Miller.

The numbers showed that the state's highway mileage grew from 25,000 in 1909 to 45,000 by 1919. In that same period, the number of farm acreage grew from 2,614,312 acres to 4,500,000 acres – an increase of more than 70 percent (Colorado Highways Bulletin, July 1919: 14).

In 1923, the state instituted a new numbering system and drivers soon referred to the road as State Highway (SH) No.1. In 1927, a subsequent Federal Highway Aid program re-designated SH 1 as U.S. Highway 85. Connecting Greeley, Denver, Colorado Springs, and Pueblo, U.S. 85 remained Colorado's major north-south highway until the construction of Interstate 25 during the 1950s and 1960s (Herbst and Rottman, 1990).

In the 1920s, the combination of federal dollars and gasoline tax revenues encouraged the Highway Department to tackle new challenges. Also feeling the demands from increasing numbers of tourists to build good mountain roads, the department headed for the hills.

## **5.8 High Altitude Highways: Mountain Road Building, 1920-1930**

During his 50 years with the Highway Department, Charles E. Shumate participated in nearly every aspect of state road building. Shumate eventually served as the executive director of the department from 1963 to 1975. Looking back on his career in 1974, Shumate remembered that his greatest amount of frustration and satisfaction derived from building roads over Colorado's most formidable natural landmarks:

“Other states have short areas of difficulty in highway construction. Washington and California have some challenging terrain, but every highway west of Denver has to go through the mountains. I don't think any other place in the United States presents the problems that Colorado has in highway construction” (Denver Post, 1974: 18).

There are 34 mountain passes on the state highway system. Two of these passes are over 12,000 feet, seven top 11,000 feet, and 10 are over 10,000 feet above sea level. The most traveled, and occasionally, feared include Raton, La Veta, Cochetopa, Poncha, Tennessee, Monarch, Berthoud and Rabbit Ears Passes.

For decades, both the state and national publications extolled the natural wonders of Colorado. Inspired by a 1915 Kansas City Post article describing the Rocky Mountains as the “Playground of America,” many drivers came from across the nation to see Colorado’s natural wonders (Colorado Highways, March 1926(b): 9). The automobile fostered tourism in its development as one of the state’s most important industries. After World War I, it was the job of the Highway Department to keep visitors coming back to Colorado through the construction of well-built and designed roads.

In 1919, the Highway Commission supervised its first major post-war mountain construction project over 11,400-foot Monarch Pass. Two-thirds of the 27.5-mile long Monarch Pass Highway ran through Cochetopa National Forest. The U.S. Forest Service contributed \$204,450 to complete the job through the National Forest. The road was hacked out of the mountains mostly by pick and shovel and team and wagons, and the pass’s narrow and steep conditions and dangerous curves tested laborers (Colorado Highways, April 1922: 8; Jeffrey: 1922). Crews contracted to the Bureau of Public Roads completed the highway through the forest in 1922. Although it was considered an engineering triumph of the early 1920s, the completed road was difficult and dangerous. By 1938 the Highway Department cleared a new Monarch Pass route less than a mile southeast of the original route. Designed with more maneuverable curves and improved alignment, the rebuilt Monarch Pass Highway reached an altitude of 11,312 after completion in 1939 (Rocky Mountain Contractor, October 12, 1938: 6).

High-country construction visited all the state’s mountain ranges during the 1920s. In the San Juan Mountains, Otto Mears’ toll road from Durango to Ouray underwent reconstruction from south of Ouray to the top of Red Mountain Pass between 1921 and 1924. The Colorado Highway Department, Bureau of Public Roads and U.S. Forest Service contributed funds toward construction. During the submission of bids, one contractor spoke up after realizing the cost of building the auto highway would approach \$1 million dollars. He referred to the project as “the million dollar highway that we’re building.” The phrase caught on, and at the July 1924 ribbon cutting, a sign was erected with the name “The Million Dollar Highway.” The state highway publication Colorado Highways commented in August 1924 that the Million Dollar Highway

offered “some of the most difficult and costly road-building in the world” and when complete the road was in “as fine condition as the best of the Denver boulevards” (Wilson, 1924: 4). The “Million Dollar Highway” originally referred to the 12 miles from Ouray to Red Mountain Pass, but since the 1920s the name has been used for the entire 70 miles from Ouray to Durango.

In 1915 members of the Denver Mountain Parks Commission conceived the idea of constructing the highest highway in the world to the summit of Mt. Evans. The city of Denver, the federal government and the state each contributed to the quarter-million-dollar road. Highway engineers designed the route at a standard road width of 20 feet and a six-percent grade from Bergen Park to the mountain’s summit. From the summer of 1924 to October 1927, four different contractors worked on the road. The last section between Echo Lake and the saddle between Mount Evans and Mount Epaulet offered its own set of problems, including a three-month annual construction period and the thin atmosphere above timberline that made hard labor difficult. The road opened in 1927. With a summit of 14,126 feet above sea level, Mt. Evans Road remains the highest automobile highway in America (Colorado Highways, April 1927: 4).

Despite these accomplishments, some out-of-state bureaucrats thought Colorado had not done enough. Chief of the Bureau of Public Roads, Thomas H. MacDonald, stated in 1928: “Colorado is overlooking one of the biggest opportunities that could possible come to a state. She is letting the big stream of traffic go by her to the north through Cheyenne, and south over the old National Trail, instead of bringing it into her state and making provision for it to travel through the Rockies” (Colorado Highways, April 1928(a): 4). Colorado’s defense to this criticism was that the large number of roads through untaxable federal lands prevented a major revenue base for state road building. These circumstances put Colorado 40<sup>th</sup> of 48 states in highway revenues (University of Denver 1940: 15). Within a few years of McDonald’s complaints, the uncertainty of a nationwide economic collapse provided Colorado with opportunity to improve its highway system.