



# 100th Anniversary Series

## PART I

# The Trunk Line Road System

PHOTO: A road construction (circa 1910) crew pause in their work along what eventually became the Daniel Webster Highway (Route 3), one of three north-south "trunk lines" identified by the New Hampshire legislature in 1909 for upgrade and construction.

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Among the most powerful proponents of good roads in the late 1800s was the League of American Wheelmen, a national fraternity of bicyclists who lobbied hard and successfully for better highways. Bicycling had become a national craze in the 1890s as the low-wheeled, chain-driven "safety" bicycle supplanted the high-wheeled "standard" machine. The safety bicycle was quickly adapted for women riders wearing long skirts, and cycling, formerly limited to athletic men, became a universal pastime.

Cycling was impossible on rutted, bony roads or on highways that were mires of mud during wet seasons. Cyclists needed hard-surfaced roads to enjoy their pastime. It happened that such roads served the broader needs of the nation, all the more as the automobile and motor truck began to account for an increasing proportion of highway traffic.

### Early "good roads" leaders

Founded in 1880, the League of American Wheelmen began to publish *Good Roads* magazine in 1892. The League's "Good Roads Campaign" was led by Colonel Albert A. Pope of Boston, the manufacturer of the popular Columbia bicycle and the benefactor of a course in highway engineering at the Massachusetts Institute of Technology. Pope's writings on improved highways were widely excerpted in New Hampshire newspapers during the 1890s.

Frank West Rollins, an indefatigable proponent of conservation and tourism in New Hampshire who would become governor in 1899, was one of the state's leading advocates for better roads. Writing in *The New England Magazine* in 1897, Rollins envisioned a state-built boulevard extending from the Massachusetts border through Franconia Notch, possibly with branches returning south through the Connecticut River valley or easterly through Crawford Notch and along the Saco River into Maine.

“We might have the cooperation of Maine and Vermont in this undertaking,” Rollins wrote, “and we might build a magnificent and comprehensive system of boulevards, with a definite aim and purpose, which would appeal to every lover of nature and outdoor life. I would have this boulevard built in the most approved and enduring manner, with a bicycle path at one side for the wheelmen.”

### Envisioning tourism... and the 20th century highway

In an age when the state’s old network of taverns had withered away with the impact of the railroad, Frank West Rollins saw the need for roadside accommodations offering food, shelter, and maintenance.

At suitable intervals, I would have picturesque and well-kept taverns, a treat to the eye as well as a comfort to the inner man. Connected with each tavern there would be a bicycle repair shop and a blacksmith’s shop – the two could be combined. At every crossroad or branch road should be a guidepost, not only telling where the road leads to and the distances, but indicating the nearness of any place of interest.

— Frank West Rollins, 1897

Even before the advent of the automobile, Rollins had anticipated the essential needs of the twentieth-century highway.

To realize this vision, Rollins recommended the creation of a state road commission like one that had already been established in Massachusetts. He foresaw the state’s employment of a chief highway engineer, with assistants in each county who would not only maintain state roads but also train local road agents. He recommended that state government undertake construction of these “boulevards” on the model he described.

### Visionary legislative action

In 1903, the state legislature passed two new laws that radically changed the role of state government in relation to how New Hampshire’s highways were constructed and maintained.

True to Rollins’ vision, which he had recommended for action only six years before, this new legislation made the following appointments and initiatives a reality in New Hampshire:

- The appointment of the state’s first highway engineer
- The creation of the first statewide highway survey
- The designation of certain roads as state highways
- The preparation for the introduction of another bill, to be considered in the next legislative session, that would detail the methods by which the state would construct roads in its own right and in partnership with towns.

### Lobbying for three key trunk lines

In 1903, Governor Nahum Bachelder appointed John W. Storrs – then employed as an engineer by the Boston and Maine Railroad – as the highway engineer for Coos, Carroll, and Grafton Counties. Storrs immediately took up Frank West Rollins’ vision of north-south “boulevards” leading from the Massachusetts border to the White Mountains.

Between 1903 and 1905, Storrs worked to persuade a skeptical governor and council of the need for three key roads to run north along the Connecticut, Merrimack, and Saco River valleys, converging near Mount Washington.

### New Hampshire’s first highway “survey”

The legislation passed in 1903 also called for a survey of highway conditions in New Hampshire. For this task, Governor Bachelder chose



Shown here in 1890 on Long Pond Road in Concord, Will Virgin (left) and Fred Johnson show off their new Columbia “Light Roadster Safety” bicycles. This revolutionary bicycle weighed 56 pounds, had solid tires, and cost \$135.

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Arthur W. Dean, a former city engineer of Nashua.

Dean compiled the first highway map of New Hampshire, assessed highway conditions throughout the state, studied and reported upon highway agencies and legislation that already existed in other states, and recommended passage of a law that would extend state highway aid to New Hampshire towns. Then, as now, a few “facts and figures” made a difference.

In 1905, Dean’s report secured passage of New Hampshire’s first state-aid highway law.

This legislation made the following initiatives and associated responsibilities a reality:

- Towns would be required to make annual appropriations for permanent highway improvements, based on their assessed valuation.
- Towns would be empowered to raise additional highway funds, to be used as a “match” for state funding.
- The state would appropriate funds to match town appropriations, in order to maintain designated “state highways.”
- The clear designation of certain roads as “state highways.”
- The creation of a new state position: New Hampshire Highway engineer.
- The provision of “consulting services,” to be provided by the state highway engineer and his staff, to any town requesting these services.

## Establishing New Hampshire’s trunk line highways

In 1905, Governor John McLane appointed Arthur W. Dean the first state highway engineer.

Under Dean’s leadership, the legislature adopted plans (in 1909) to create three key north-south routes, which became New Hampshire’s first trunk line highways.



*Frank West Rollins, a strong advocate for conservation and tourism in New Hampshire become governor in 1899, and was one of the state’s leading advocates for better roads.*

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These first trunk line highways evolved into the Dartmouth College Highway (Route 10) in the west, the Daniel Webster Highway (Route 3) in the middle of the state, and Routes 1A and 16 in the east.

The newly created “highway department” completed improvements on these roads by 1915, and thereupon designated a series of east-west trunk line roads to link the north-south routes. Another law (passed in 1915) required that all bridges built on these trunk lines and cross-state highways have a capacity of at least ten tons.

## The horseless carriage

When New Hampshire legislators passed state-aid highway legislation in 1905, they were aware of the vast change in transportation foretold by F. O. Stanley’s ascent of Mount Washington by an automobile in 1899. New Hampshire was rapidly becoming a proving ground for the entire nation about a new mode of transportation: the automobile.

In 1904, the first “Climb to the Clouds” event brought a host of competing individuals (with their “automobiles”) to Pinkham Notch to emulate Stanley’s grueling drive to the highest peak in the Northeast.

Many “motion picture” cameramen recorded this event, and New Hampshire – as well as the automobile – gained significant national exposure.

The following year, the Boston automobile enthusiast Charles J. Glidden instituted the first “Glidden Tour” for the American Automobile Association, which was created that same year. Among its many stops and options, the “Glidden Tour” included a climb of Mount Washington, in an automobile, in its itinerary.

The proprietors of several grand hotels in the White Mountains also made a special effort to attract the gatherings and “conventions” of the growing community of “motorists.” Among these visionary New Hampshire hotel operators were John Anderson and John D. Price of Bretton Woods, founders of the world-famous automobile races at Ormond Beach in Daytona, Florida. Interestingly, in 1904, John Anderson went on record in the press favoring a New Hampshire law that would establish speed limits for “automobiles,” as well as fines for violators.

## Creating the demand for “good roads”

Throughout the opening decades of the new century, New Hampshire state government worked continuously to promote tourism that involved the automobile. This effort grew significantly in focus (and expense) during the 1920s and 1930s.

As early as 1907, *New Hampshire Farms for Summer Homes* magazine (one of the early state-funded publications that promoted New Hampshire tourism) was featuring “enticing mountain views as seen from the automobile.”

Another early automobile enthusiast (from New Jersey!), W. J. Morgan, also had a significant impact on how New Hampshire could welcome the growing number of “automobilists.” W. J. Morgan is also credited



*This photo, taken in 1914 along what would eventually become the Daniel Webster Highway (Route 3) clearly illustrates the problems faced by early motorists in the opening decades of the 20th century. Federal aid, which first arrived in 1917, enabled state highway engineers to conduct a number of experiments with asphalt binders and concrete pavements on the trunk line highways, and begin “paving” the way for the future.*

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with suggesting the 1904 “Climb to the Clouds” event, and he praised New Hampshire state government for the money it had appropriated for the White Mountain road improvements since 1904.

More good roads in New Hampshire will mean further increase in the arrival of money-spending people, and among them must be figured the large and growing army of automobilists, who have, it seems, decided that New Hampshire is a good place to visit in the summer.

Money spent on behalf of good roads by the state of New Hampshire will be seed well sown, and will surely bring forth results a hundred fold.

— W. J. Morgan

### Funding the trunk lines

In 1911, an inspection of New Hampshire highways by an engineer of the federal Office of Public Roads revealed the fact that:

The three trunk lines, now nearing completion, pass through many towns that have shown their public spirit and their pride in the State by contributing their share to the construction of these highways, which are used largely by automobiles from outside the State whose owners pay no taxes in the state and from which the towns mentioned receive no direct benefit whatever.

Under the present law these towns are legally but unjustly bound to maintain these roads, to be ground to pieces and worn out by foreign traffic.

In response to this problem, the 1911 legislature passed a law that appropriated the net income from motor vehicle fees to highway improvements. Two-thirds of that revenue was thus allocated for trunk line highway maintenance. The rest was to be used in cooperation with towns to maintain and support “state-aid” roads.

### First state highway commissioner

The second decade of the twentieth century saw significant changes in how New Hampshire state government understood and responded to road (and bridge) creation and maintenance.

In 1915, after a decade of all “road issues” being the purview of the “governor and council” a new state agency was born. Governor Rolland Spaulding appointed Frederick E. Everett (1876–1951), who had joined the highway department as an engineer in 1906, to the new post of New Hampshire Highway Commissioner. One of his early objectives was the completion of the state’s trunk line highways and cross-state highways.

In 1915, virtually all roads in New Hampshire were gravel or water-bound macadam, the latter being roads with wearing surfaces of crushed stone and stone dust, wetted and rolled but not otherwise cemented. In 1911, an inspection by the federal Office of Public Roads revealed some experiments with bituminous binders on selected portions of the trunk line highways.



*Frederick E. Everett, shown here in the late 1940s near the end of his career, was New Hampshire’s first Highway Commissioner and served for thirty-four years (1915–1949).*

### Federal aid

In 1917, New Hampshire received the first financial aid under the Federal Aid Road Act of 1916, a law intended to improve mail delivery to rural towns with populations under



*The work of state government to promote tourism during the opening decades of the twentieth century was spurred to new heights by the growing popularity of the automobile. Shown here in 1918 at a guesthouse and farm in East Concord, a motoring club proudly shows off their vehicles.*

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2,500, and to improve roads in national forests. All but 27 of New Hampshire's 246 communities fell below this population.

By 1920, using this funding, Everett had carried out a number of experiments with asphalt binders and concrete pavements on the trunk line highways.

### Assignment of route numbers

In 1922, highway commissioners from the New England states met and agreed to assign route numbers to the region's principal roads. The old names of New Hampshire's trunk line, cross-state, and state-aid roads were now supplemented by the interstate numbering system the commissioners adopted at that time.

Route 10, for example, began on Long Island Sound and entered New Hampshire at Hinsdale; in New Hampshire, it followed the route

designated the Dartmouth College Highway.

Route 6 started at Cape Cod, entering New Hampshire at Nashua, passing northward through Manchester, Concord, and Franklin, and ending at Colebrook; it coincided with the trunk line named the Daniel Webster Highway (Route 3).

Route 18 started at Portland, entered New Hampshire at Conway Center, and passed through Crawford Notch and Twin Mountain to leave the state at Littleton; it corresponded with the Theodore Roosevelt Highway.

Route 1, the great coastal route of the eastern United States, followed the Newburyport Turnpike northward toward New Hampshire, traversed the coastal region along the Lafayette Road, and passed into Maine at Portsmouth.

### Four-season maintenance

Winter plowing of trunk line roads began in 1925-26, after a new law allowed the commissioner of the New Hampshire Highway Department to designate certain sections of the trunk line system for snow removal.

At first, a snow cover of four inches was left on these sections of highway to accommodate horse-drawn traffic. After deep frozen ruts made the roads nearly impassable for all vehicles, however, snow was removed close to the road surface during the season of 1926-27, when over 1,100 miles of trunk line highway were plowed.

By the early 1930s, New Hampshire's trunk line roads were recognized as reliable year-round conduits of commercial and recreational traffic, and as one of the state's proudest assets.