

# HISTORIC AMERICAN ROADS

A  
COLLECTION  
OF PAINTINGS  
BY  
CARL RAKEMAN

FEDERAL HIGHWAY  
ADMINISTRATION



U.S. Department  
of Transportation  
**Federal Highway  
Administration**





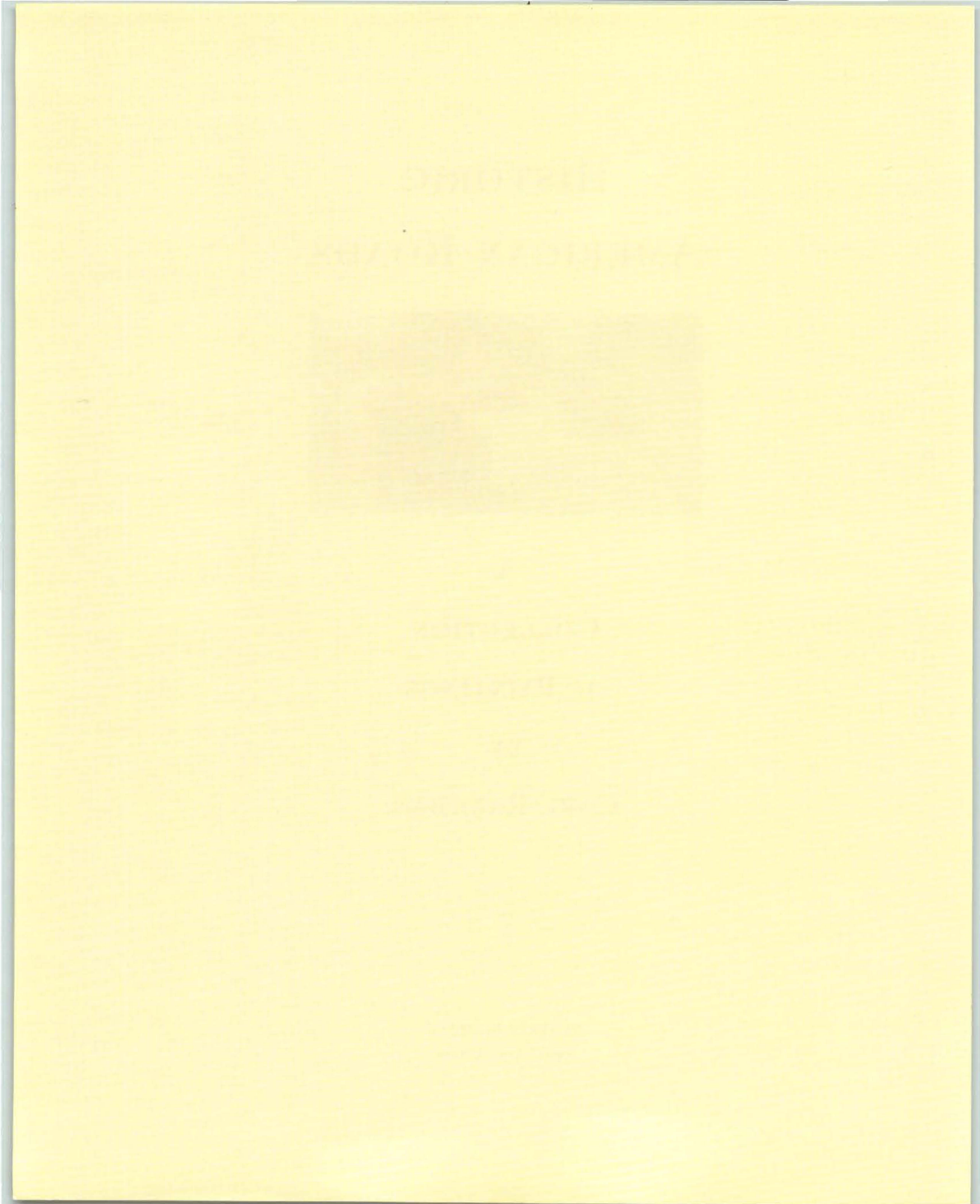
# HISTORIC AMERICAN ROADS



A  
COLLECTION  
OF PAINTINGS  
BY  
CARL RAKEMAN

≈

FEDERAL HIGHWAY  
ADMINISTRATION



# TABLE OF CONTENTS

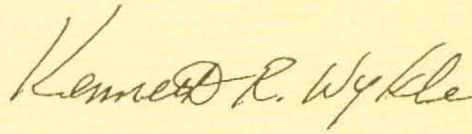
MESSAGE FROM THE ADMINISTRATOR	iv
BIOGRAPHY OF CARL RAKEMAN	v
1565 SAINT AUGUSTINE	1
1611 THE FIRST AMERICAN BRIDGE	2
1625 PAVED STREETS IN MAINE	3
1751 THE PENNSYLVANIA ROAD	4
1753 WASHINGTON CROSSING THE ALLEGHENY	5
1763 THE BOSTON POST ROAD	6
1769 SAN DIEGO, CALIFORNIA	7
1795 THE PHILADELPHIA AND LANCASTER TURNPIKE ROAD	8
1806 LEWIS AND CLARK AT FORT CLATSOP	9
1808 GALLATIN'S ROAD AND CANAL REPORT	10
1822 THE SANTA FE TRAIL	11
1823 FIRST AMERICAN MACADAM ROAD	12
1826 THE MICHIGAN ROAD	13
1830 THE IRON HORSE WINS	14
1836 THE DESERTED VILLAGE	15
1836 THE COUNTY COURTHOUSE	16
1839 OUR FIRST IRON BRIDGE	17
1843 THE OREGON TRAIL	18
1846 THE PLANK ROAD CRAZE	19
1858 BUTTERFIELD'S OVERLAND MAIL	20
1860 THE PONY EXPRESS	21
1866 DUDGEON'S STEAM CARRIAGE	22
1869 THE MEETING OF THE RAILS	23
1896 RURAL FREE DELIVERY	24
1909 RURAL CONCRETE ROADS	25
1918 FIRST FEDERAL-AID ROAD	26
1922 SNOW REMOVAL	27
1933 ROADS TO SERVE THE LAND	28
1934 RAILROAD CROSSINGS BRIDGED	29
1945 A RURAL INTERSTATE HIGHWAY	30

# MESSAGE FROM THE ADMINISTRATOR

America has a remarkable artistic record of its road and transportation history through the paintings of Carl Rakeman. While an employee at the Bureau of Public Roads from 1921 to 1952, Rakeman painted 109 transportation scenes depicting historic American roads, trails, and highways.

Over the years, his paintings have been exhibited throughout the country. This exhibit features 30 of his transportation paintings. The Federal Highway Administration is proud to display them during National Transportation Week.

I hope you enjoy this illustrated tour of America's transportation history and heritage.



Kenneth R. Wykle  
Federal Highway Administrator



# BIOGRAPHY OF CARL RAKEMAN

Carl Rakeman, a native of Washington, DC, was educated at the Corcoran Art School and at academies in Dusseldorf, Munich, and Paris. He was an etcher and mural artist, and painted in both watercolor and oil.

In 1921, Rakeman joined the Department of Agriculture, which at that time housed the Bureau of Public Roads (BPR), predecessor of the present Federal Highway Administration. During his thirty years with the BPR, Rakeman painted exhibits for the Good Roads meetings, state fairs, and

expositions—such as the Century of Progress in Chicago (1933) and the New York World's Fair (1939–40).

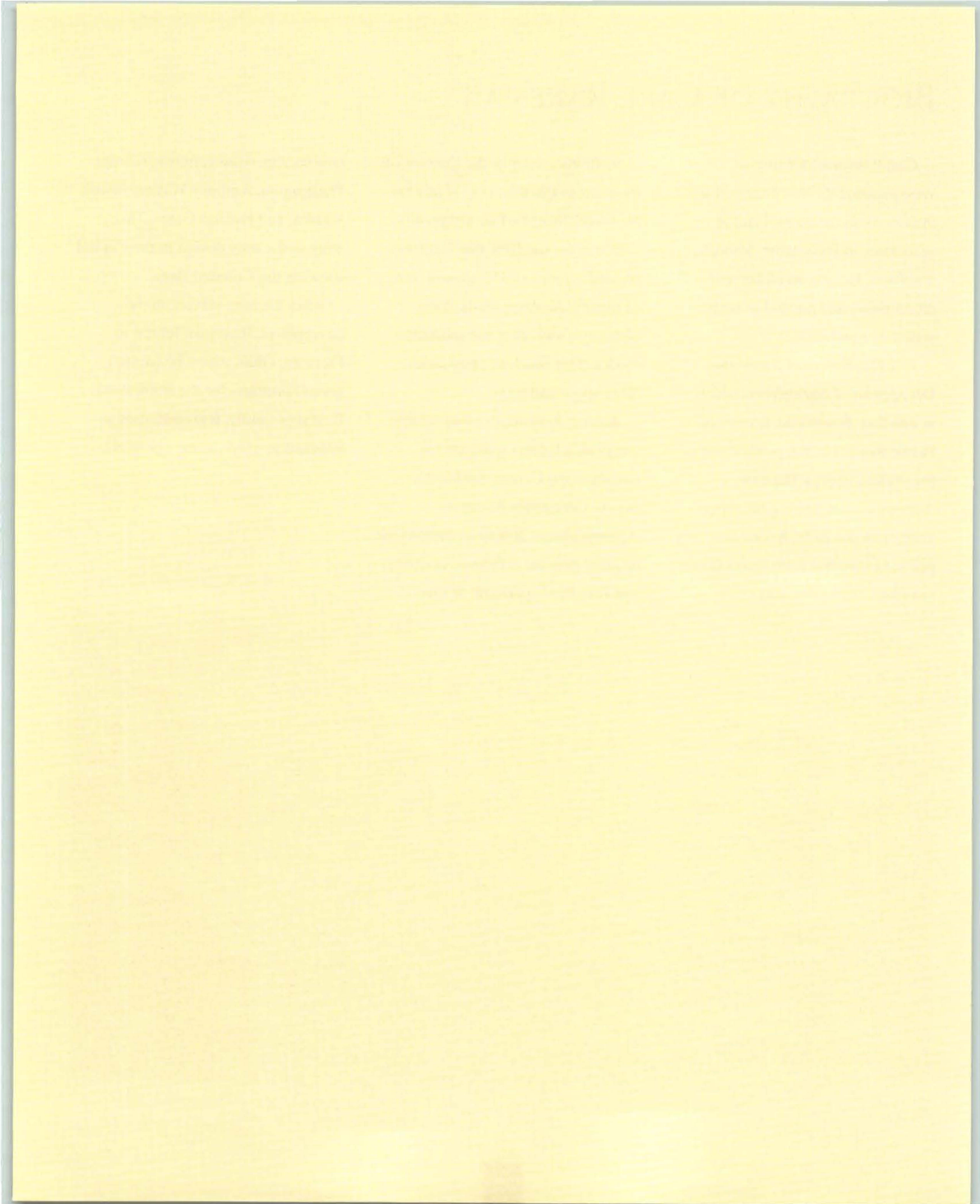
It was for the BPR that Rakeman painted a series of 109 illustrations of historic America roads, trails, highways, and other transportation modes. This brochure showcases 30 of those paintings.

Among Rakeman's most notable works as a federal artist are his murals in the Capitol Building's Senate Committee Room on Appropriations. Rakeman painted the lunettes over the windows, doorway, and fireplace—portraits of four

famous American generals: George Washington, Anthony Wayne, Joseph Warren, and Horatio Gates. This work is the only design in the Capitol showing the Colonial flags.

After his long service to the government, Rakeman retired to Fremont, Ohio, where he painted several portraits for the Rutherford B. Hayes family. Rakeman died in Fremont in 1965, at the age of 87.



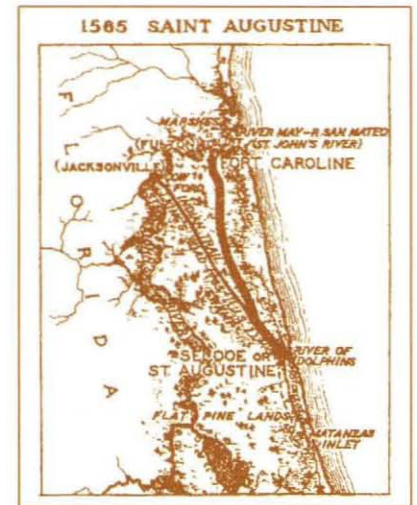


# 1565—SAINT AUGUSTINE

Saint Augustine, Florida, was the first permanent European settlement within the United States' present territorial limits. The town was founded by the Spanish in 1565 as they sought to protect their trade routes in the new world. This settlement became the hub from which many trails and roads grew, eventually becoming the current vast network of American highways.

The first road built by non-Indians in Florida, and possibly in the United States, was cut with axes through forest and swamp by 20 men leading about 500 soldiers. After losing about half of the ships with which they had departed Spain, these troops docked at Saint Augustine and marched 40 miles north. At Fort Caroline, the Spanish successfully attacked the French Huguenot

colony, and conserved this valuable trade passage.

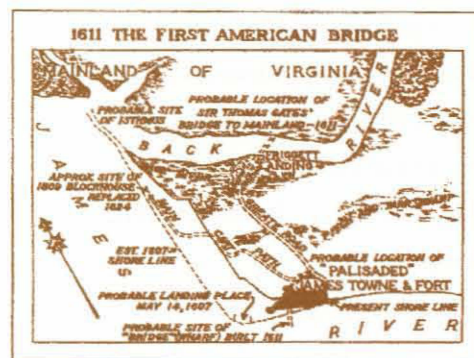


# 1611—THE FIRST AMERICAN BRIDGE

The first “bridge” on record built by European settlers in America was located at “James Towne” island, Virginia. Here English settlers built a structure resembling a 200-foot-long wharf extending from the James River bank to a 12-foot-deep channel which provided docking for vessels.

Although the settlers first landed in 1607, it was not until 1611 that they began building a connection between the island and the mainland.

This painting shows this first bridge where it was believed to have been built—at the terminus of “the old Greate Road” at the “Friggett Landing” on Back River where supplies were delivered to the settlement.



# 1625—PAVED STREETS IN MAINE

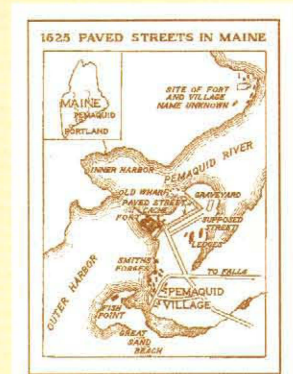
In pre-colonial times, Pemaquid, Maine, was the center of the most prolific fishing grounds on the North American coast. Its short sand beach provided a convenient landing place along the otherwise rocky New England shore.

Some authorities believe Pemaquid was established at the same time as the Plymouth colony, in 1620. However, several explorers reported seeing settlements in the

vicinity as early as 1605, so it is probable that Europeans were there even earlier. The greatest likelihood is that merchants with headquarters in England established a fish and fur trading center there in about 1600.

Some of Pemaquid's roads were paved, probably before 1625. According to John Henry Cartland, an authority on the area's roads of that era, the main street of large stones was 33-feet wide, including

gutters, or "water courses." Smaller cobblestones formed an 11 1/2-foot-wide street, and "longer cobbles were selected and placed across the sidewalk on lines two feet and one-half apart, then the space filled in with smaller ones."



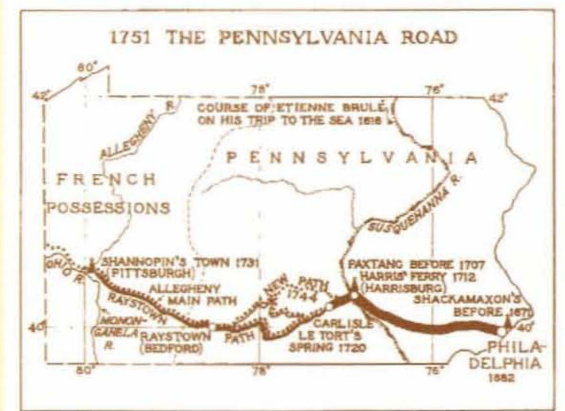
# 1751—THE PENNSYLVANIA ROAD

The Pennsylvania Road was the most important pre-Revolutionary path through the Alleghenies. It provided the shortest path towards the northwest while also serving as a route for trade with both the Indians and English. The road was originally the Allegheny Path, a prehistoric Indian trail.

The painting shows Carlisle, which was the beginning of the pack-horse trail to the west and the end of

the wagon road from the east. After 1755, the road was opened to serve as a military supply line.

The road fell into disuse with the development of the Pennsylvania Canal system and the Baltimore and Ohio railroad, until interest was revived by the automobile in the 1890s.



# 1753—WASHINGTON CROSSING THE ALLEGHENY

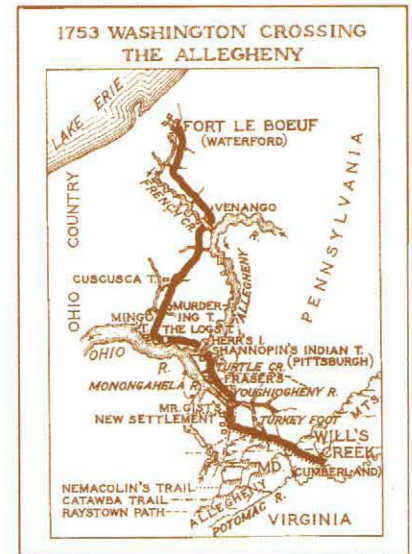
On October 31, 1753, Major George Washington and his guide, Christopher Gist, set out from Williamsburg to the nearest French outpost, at Fort Le Boeuf, in Waterford, Pennsylvania. Washington carried Virginia Governor Dinwiddie's warning to the French army, which had invaded the Allegheny River Valley.

On the return trip, progress on horseback was so slow that

Washington and Gist struck out on foot by the most direct route home. The painting shows them poling their hastily constructed log raft across the Allegheny River on December 29, 1753. Their ability to light a camp fire on Herr's Island saved them from disaster after Washington fell into icy river waters.

They arrived back in Williamsburg on January 16, carrying back to

Dinwiddie the French commander's refusal to heed the ultimatum.

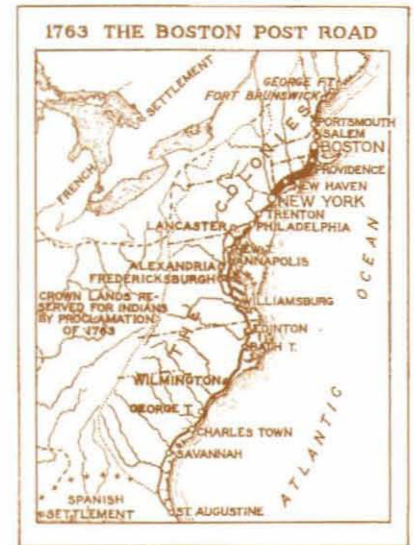


# 1763—THE BOSTON POST ROAD

In 1729, a horseback post ran from north of the Massachusetts Colony to Philadelphia. It took four weeks to send a letter from Boston to Williamsburg, Virginia. Improvements began in 1737, when Benjamin Franklin was appointed Deputy Postmaster General. In 1753, post service expanded to Charleston, South Carolina, and by 1757 had become a paying institution.

Franklin became Postmaster General in 1775. The painting shows him on a post office tour in a one-horse chaise, accompanied by his daughter on horseback, while a post rider delivers an urgent message.

The transition from post riders to mail stagecoaches occurred during and after the Revolutionary War. Levi Pease, a blacksmith, is credited with establishing the first successful stage line between Boston and New York.

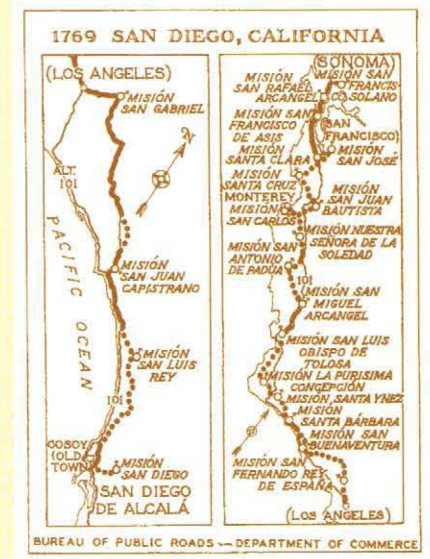


# 1769—SAN DIEGO, CALIFORNIA

The first of California's Spanish missions was founded in 1769 at San Diego de Alcalá, when Franciscan Friar Miguel Jose Junipero Serra blessed the Cross on a spot known by the natives as Cosoy (see painting).

San Diego was the southernmost of 21 missions built along a 700-mile route paralleling the Pacific as far north as Sonoma. Roads used by the Spanish government to transmit dispatches and troops were called

Los Caminos Reales, meaning Royal Roads. Because the missions were visited by Franciscan friars, the old road, which corresponds closely with the present U.S. Route 101, has become known as "El Camino Real of the Padres."





# 1795—THE PHILADELPHIA AND LANCASTER TURNPIKE

The privately built Philadelphia and Lancaster Turnpike Road was the first important turnpike and the first long-distance broken-stone and gravel surface built in America according to formal plans and specifications. The road's construction marked the beginning of organized road improvement after the long period of economic confusion following the American Revolution.

The road opened the territory northwest of the Ohio River and provided cheap transportation between the coast cities and the new Republic's "bread basket" region surrounding Lancaster.

By 1843, railroads and canals drove stagecoach and Conestoga wagon companies into a drastic decline. During the next half century, the road fell into disuse and lack of

repair, recovering with the invention of the automobile.

The Spread Eagle Tavern is shown as it appeared in 1795.



# 1806—LEWIS AND CLARK AT FORT CLATSOP

Lewis and Clark's expedition to the Northwest Coast—the first transcontinental exploration sponsored by the U.S. government—followed circuitous river routes that were later replaced by the more direct land route, the Oregon Trail.

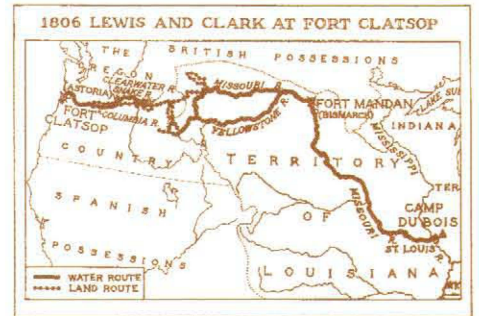
President Thomas Jefferson commissioned the expedition to promote trade with the Indian tribes of the Missouri River region and to

explore the lands of the Louisiana Purchase.

Jefferson's private secretary, Meriwether Lewis, led the expedition, accompanied by his boyhood companion and experienced frontiersman William Clark. The party left Washington in July 1803, accompanied by 14 soldiers and nine Kentucky hunters.

The painting shows Lewis at Fort Clatsop, giving a list of the

expedition party names to the Chinook Indian Delashelwilt. The date is March 1806, and the group is beginning the journey home.



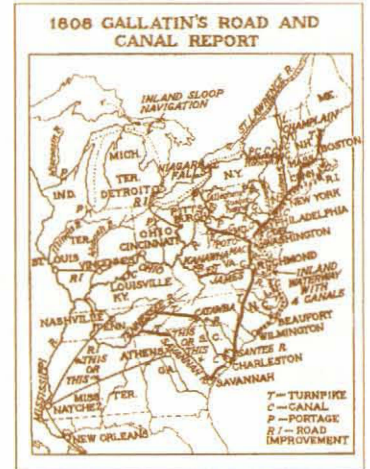
# 1808—GALLATIN'S ROAD AND CANAL REPORT

In 1808, Albert Gallatin, Secretary of the Treasury, presented a report “respecting roads and canals” to the U.S. Senate. This report became the mold for national transportation policies. Secretary Gallatin urged “early and efficient aid of the Federal Government” to “shorten distances, facilitate commercial and personal intercourse, and unite ... the most remote quarters of the United States.”

Gallatin’s report, although written before the advent of railroads and restricted to public roads and canals, remains remarkably valid even today.

The report reflected three basic concepts: the legitimacy of Government aid for through-routes of national importance, that only routes that would yield reasonable returns on investment should be constructed, and that a nationwide transportation

system was essential to national defense.



# 1822—THE SANTA FÉ TRAIL

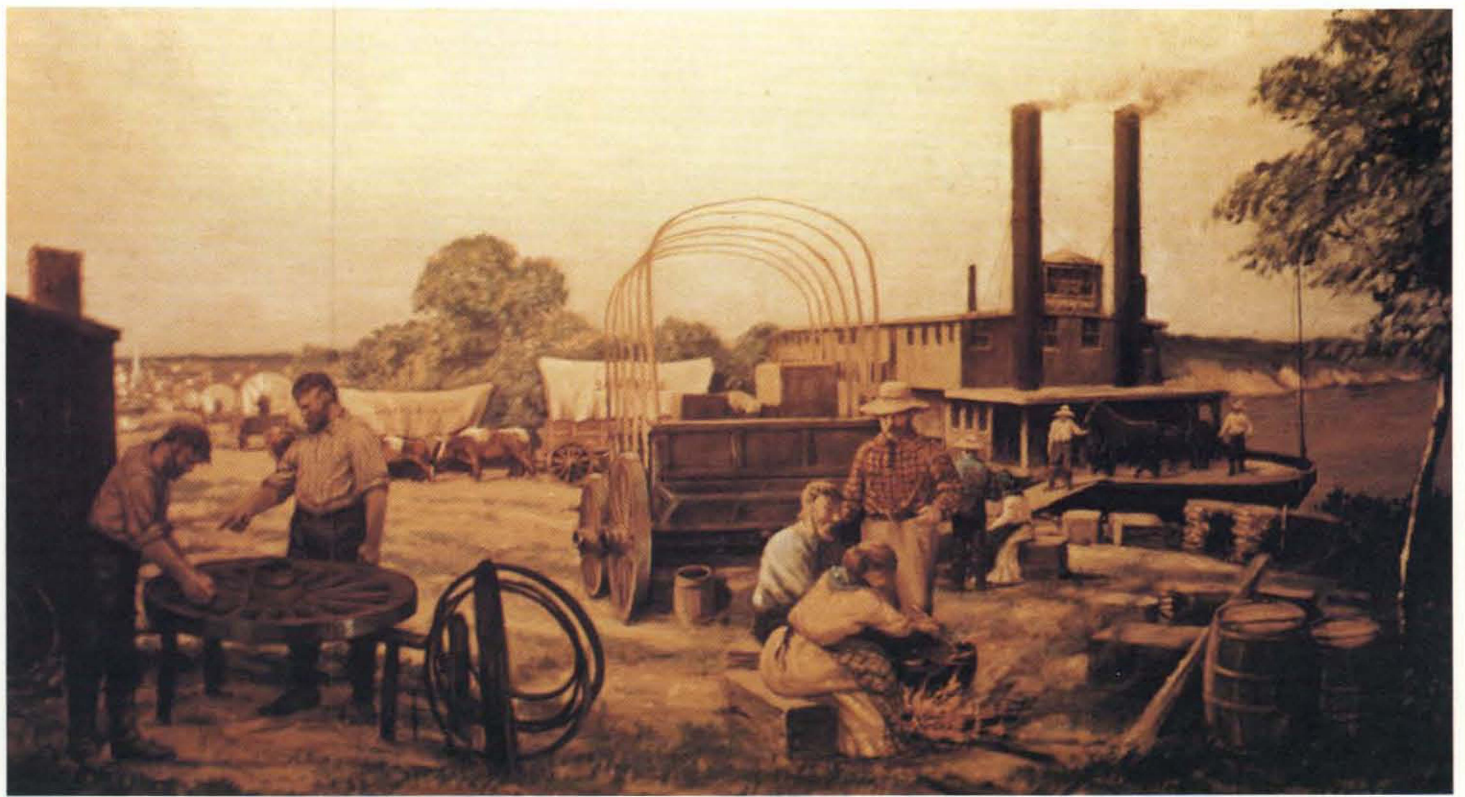
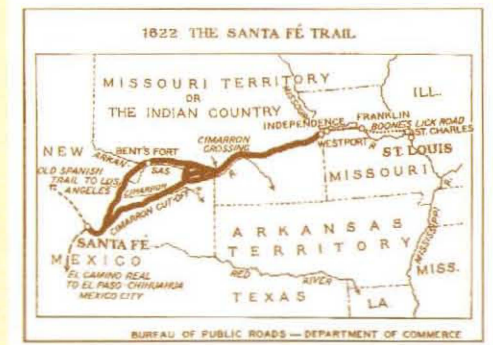
The Santa Fe Trail was the first pioneer road between the Mississippi River and the far west. Occasional explorers and traders passed, but it was not until Mexico declared independence from Spain in 1821 that periodical and legal international trade began to flow. The Santa Fe Trail connected with the El Camino Real, which ran to Mexico City.

Over time, Boone's Lick (named after Daniel Boone's primitive salt

evaporation operations, and later known as the town of Franklin) became the cradle of the Santa Fe trade. But by 1831, a debarkation point on the Missouri River was needed closer to the frontier. The town of Independence was founded, and, by 1832, was generally the outfitting station for caravans going to Santa Fe.

The painting shows travelers tightening steel wagon wheels before

continuing the long journey westward.

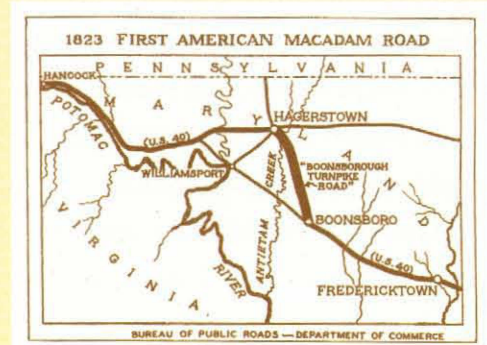


# 1823—FIRST AMERICAN MACADAM ROAD

The first macadam surface in the United States was laid on the “Boonsborough Turnpike Road” between Hagerstown and Boonsboro, Maryland. By 1822, this section was the last unimproved gap in the great road leading from Baltimore on the Chesapeake Bay to Wheeling on the Ohio River. Stagecoaches using the road in winter needed 5 to 7 hours of travel to cover 10 miles.

Construction specifications for the turnpike road incorporated those set forth by John Loudon McAdam of Scotland. After side ditches were dug, large rocks were picked and raked, then were broken “so as not to exceed 6 ounces in weight or to pass a two-inch ring.” Compacting work for each of the three layers was quickened using a cast-iron roller, instead of allowing for compacting under traffic.

In 1830, after 5 years of work, the 73-mile National Pike (or Cumberland Road) became the second American road to be built on the “McAdam principle.”

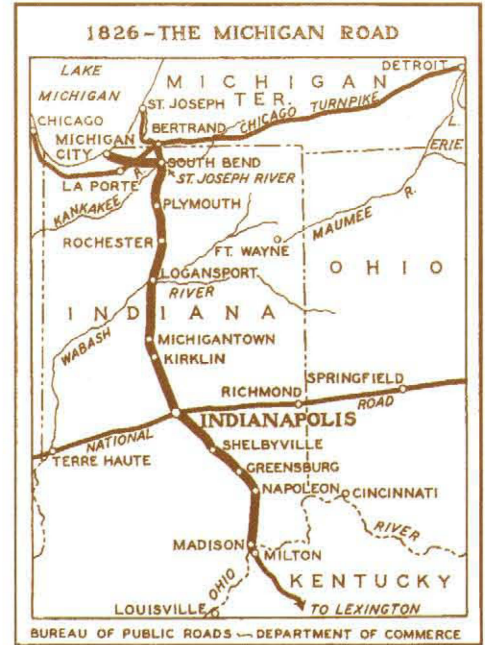


# 1826—THE MICHIGAN ROAD

Contrary to popular impression, the 267-mile Michigan Road—named after the lake—was not the main route for Michigan's settlers, but was built and used principally by Indiana's settlers. This north-south route was the shortest one between the Ohio River and the Great Lakes when waterways were the principal arteries of travel.

While the road's vast swamps, wild animals, and sometimes hostile Indians did not deter pioneers, the Michigan Road became a practically useless mud stream in winter.

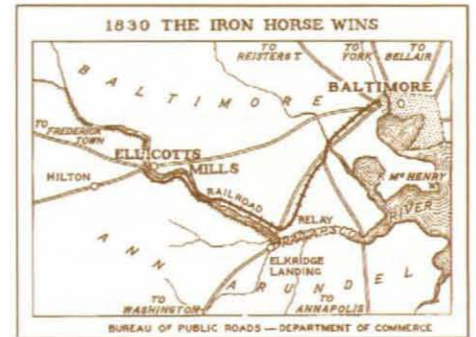
Shown is a fur-trading cabin on the east bank of the St. Joseph River, site of the future South Bend.



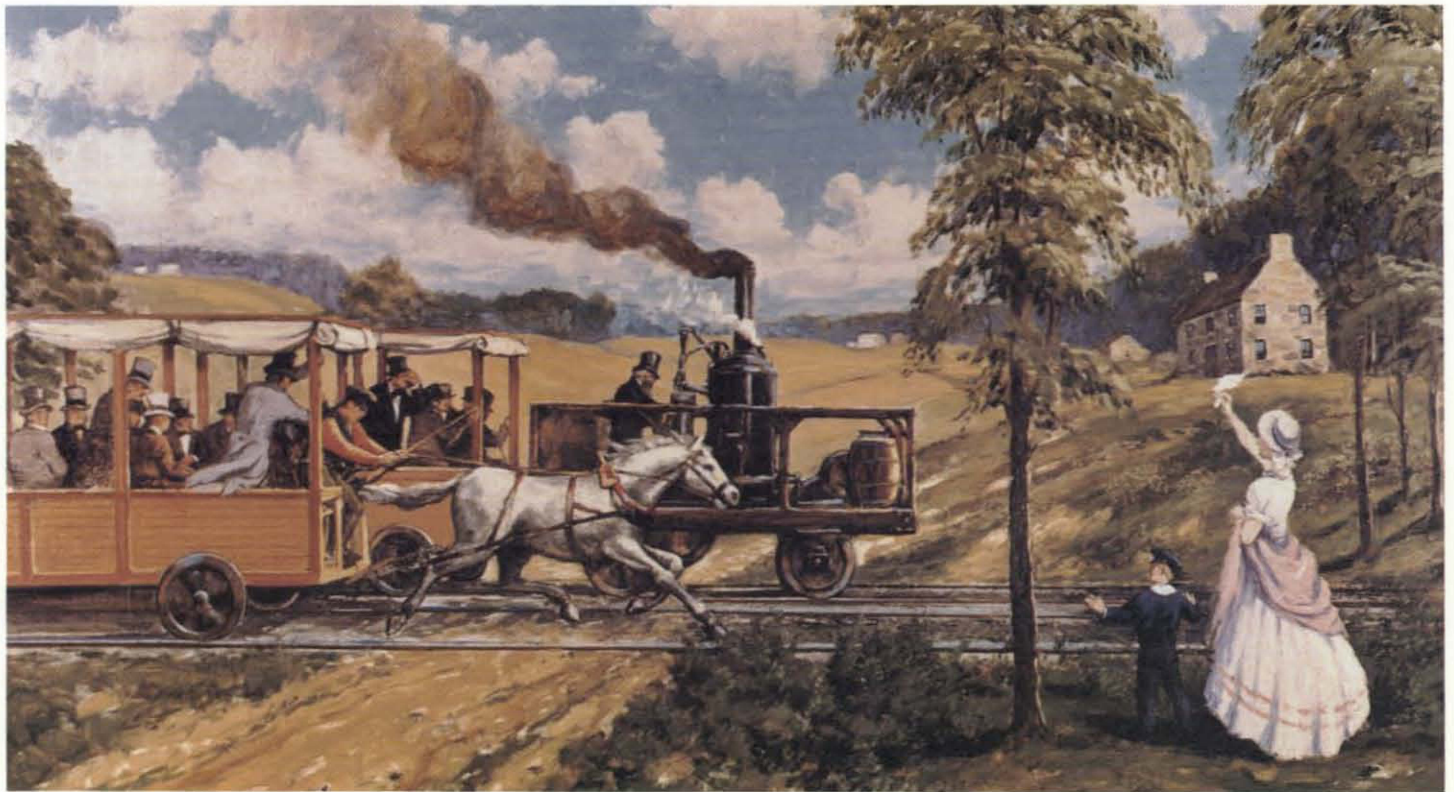
# 1830—THE IRON HORSE WINS

The race on August 28, 1830, between Peter Cooper's diminutive Tom Thumb locomotive and the horse-drawn Baltimore and Ohio (B&O) Railroad car demonstrated the superiority of steam power. Though the gallant horse won eventually when mechanical failure stopped the locomotive, the Tom Thumb had led the race, rounding curves at 15 miles an hour.

The B&O, America's first common carrier railroad, was organized when Baltimore began to lose business to New York's Erie Canal. Because steam locomotives were experimental, the B&O intended to use horses. But failure to make expenses, and the lack of success of wind-driven sailing cars and horse-powered treadmill cars, opened the way for Peter Cooper's plan for steam power.



All horses on the B&O Railroad were replaced by steam locomotives on July 31, 1831.

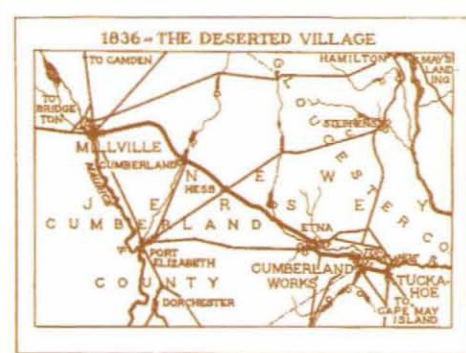


## 1836—THE DESERTED VILLAGE

As the U.S. population increased from 15.4 million in 1836 to 69.5 million in 1895, hundreds of rural towns declined in population and wealth. The painting illustrates a village that, like the later “ghost-towns” of the West, were abandoned because of changes in agriculture, industry, and transportation.

The depletion of raw materials was a common reason for abandoning settlements that grew up

around lumber and grain mills, foundries, mines, and similar activities. Likewise, when men traveled by horse, ox, or foot, the rural town became the new base of supplies for ongoing settlements. But the railway soon bridged distances for transporting goods and effectively replaced the country storehouse.

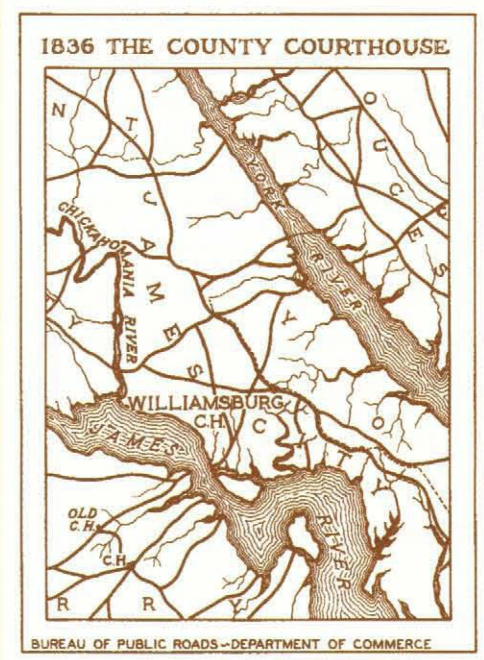




# 1836—THE COUNTY COURTHOUSE

The county courthouse, situated at the county “seat,” or capital, was the most important center of local government in the southern and western states. Court day was a date for public business and a holiday for farm families. While towns dominated in more densely settled New England, counties were more fitting for the sparser populations of America’s South and West.

The word “county” is derived from the French for a territory governed by a count. The term gained heavy use in America beginning with Colonial times. In Virginia, as early as 1769, the County Court was responsible for the conditions of the highways, causeways, bridges, and “church roads.”



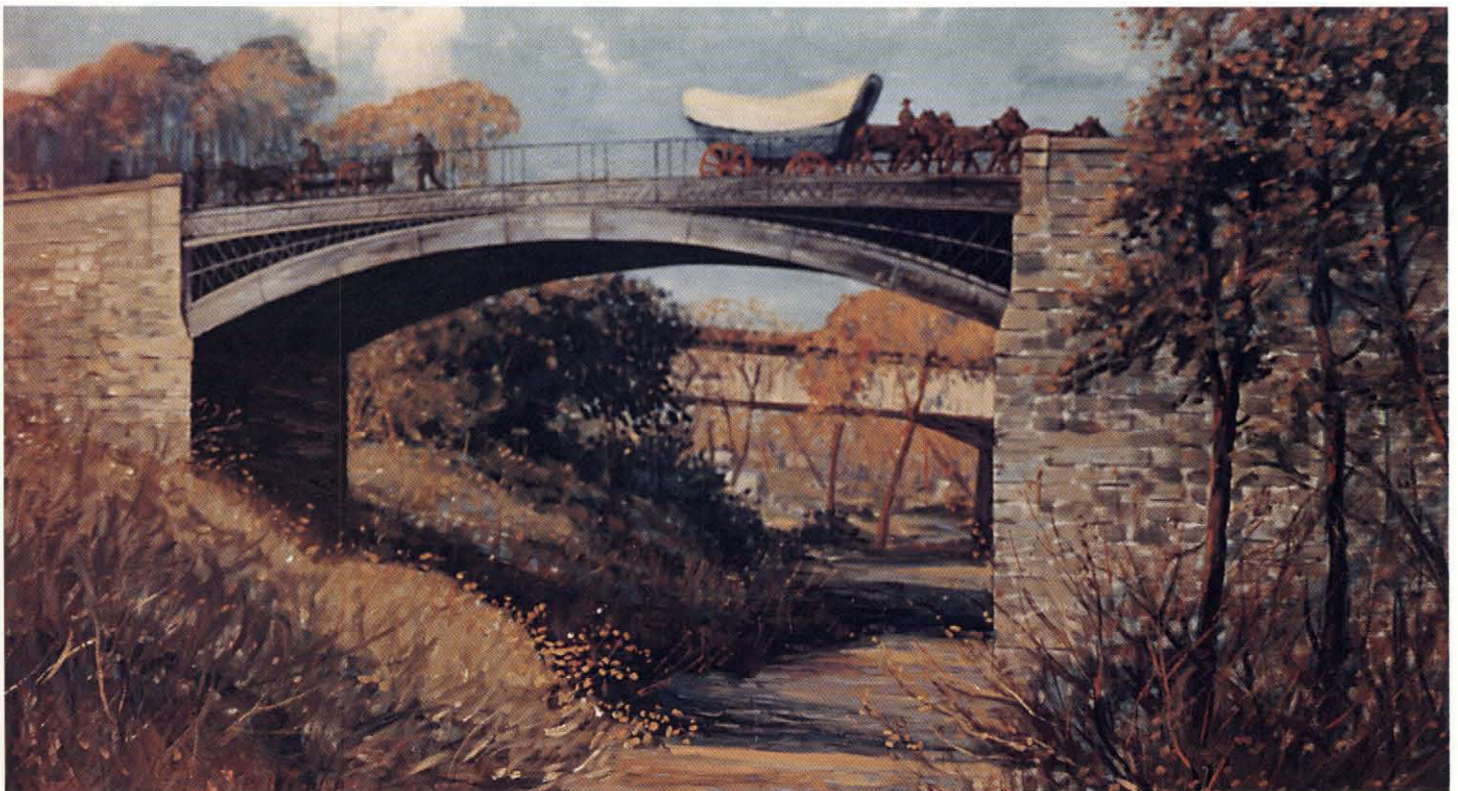
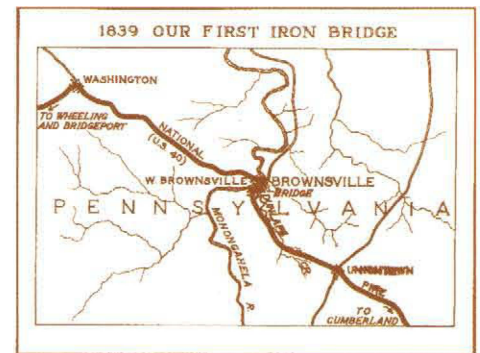
# 1839—THE FIRST IRON BRIDGE

Although a number had been built in Europe, the first iron bridge in the United States was not completed until 1839. This bridge succeeded a number of others built over Dunlap's Creek in Brownsville, Pennsylvania, on the National Pike.

Nearby foundries made it possible to build the bridge's cast-iron arch and open spandrels supporting the bridge floor, while the abutment and wingwalls were sandstone.

Stagecoaches and Conestoga freight wagons rolled over the bridge until 1853, when the B&O railroad opened to Wheeling. Traffic steadily disappeared, followed by nearly 50 years of disuse until the invention of the automobile.

Since then, vehicles have used this historic bridge at higher speeds and carrying heavier loads than ever anticipated by the designing engineers.



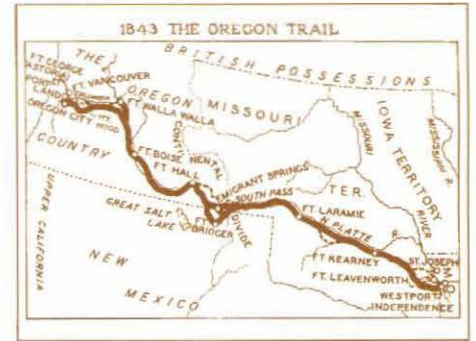
# 1843—THE OREGON TRAIL

The Oregon Trail was the first overland wagon road to the Pacific Coast. It began at Independence, Missouri, climbed 921 miles to the South Pass over the Continental Divide, and extended to the Columbia River in Oregon.

Land explorers, seeking fur-trading profits, searched for the best route to the Northwest Coast and used the trail from about 1745 to 1833. But just after this time,

missionary colonists and farmer-emigrants began traveling it in large numbers.

The painting depicts a raft of emigrants typical of the Great Migration of 1843, when travelers began to settle the Northwest before gold-seekers crowded the trail from 1849 to 1852.



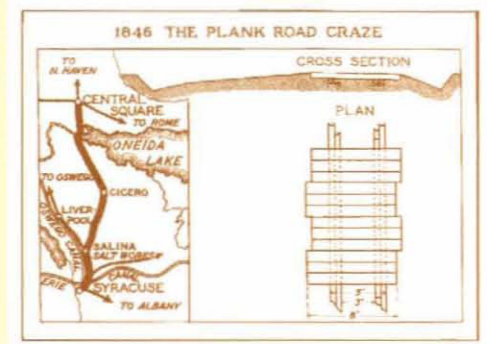
# 1846—THE PLANK ROAD CRAZE

The first plank road in the United States opened on July 18, 1846, between Syracuse and Oneida Lake, New York. It was built by the privately owned Salina and Central Square Plank Road Company, a toll corporation.

Advocates of plank roads made extravagant comparisons to macadam, claiming it was inexpensive and easy to maintain and had no peer for smooth-riding qualities.

This new road surfacing technique struck the popular fancy, and thousands of miles were built during the next decade—although, as shown in the painting, the narrow track required going “off-road” to pass, and drainage and breakage were problems. By the mid-1850s, when the first wooden planks began to rot away, travelers and builders were realizing that the life of any

road is based on the lasting qualities of its construction materials.



# 1858—BUTTERFIELD'S OVERLAND MAIL

As early as 1849, both traveling passengers and U.S. mail moved from the east coast to the west by a combination of steamboat, canoe, and mule—on a route from New York City through Panama to San Francisco. Starting in 1855, railroads were also used, but trips still lasted about 25 to 30 days.

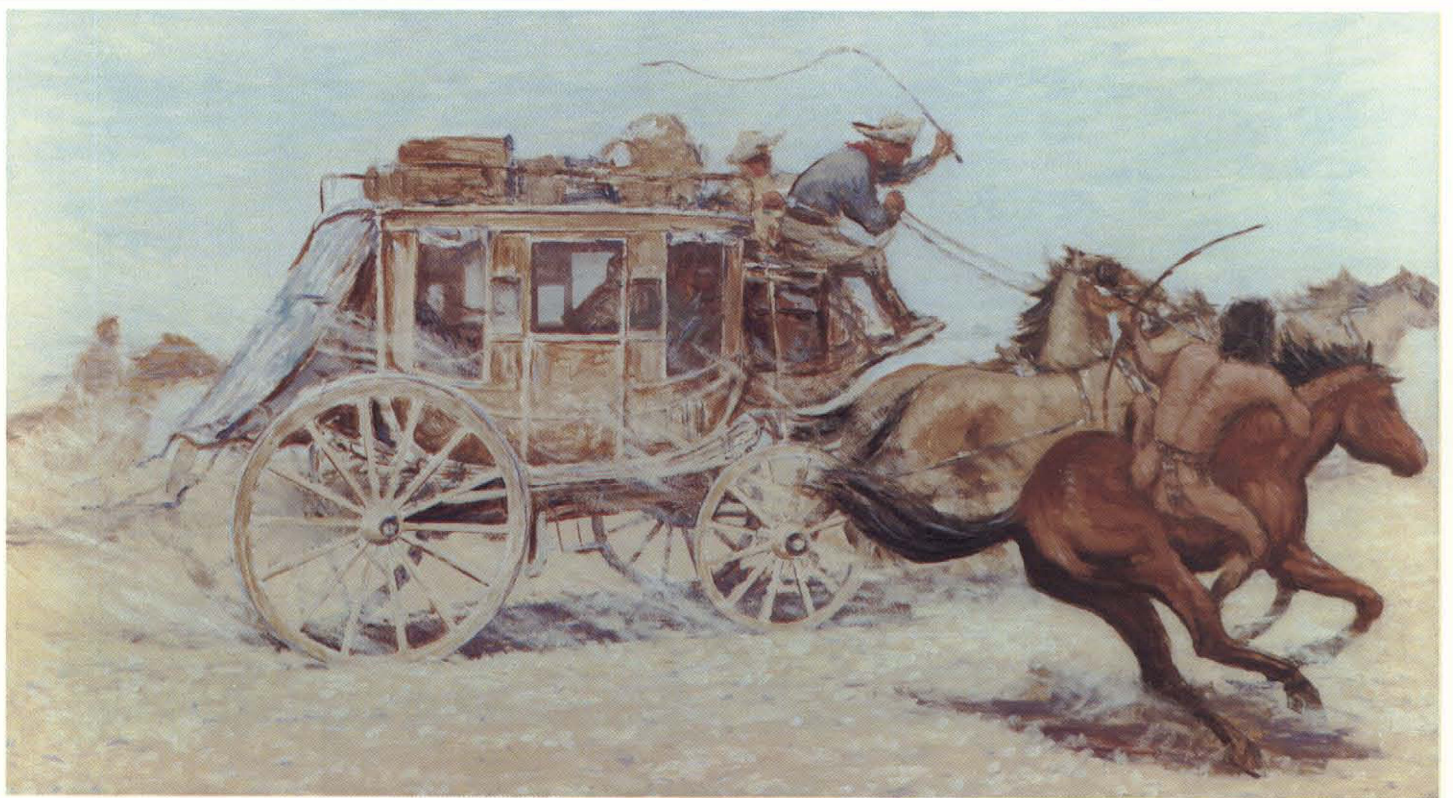
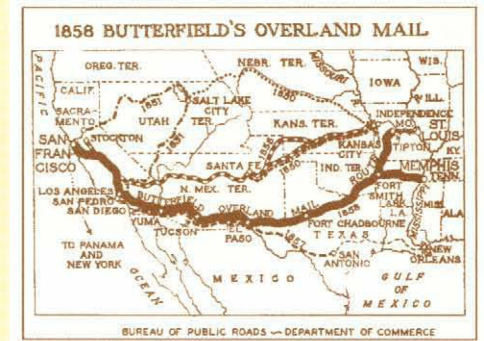
Local stage lines, which began running during this period, were boosted by the passing of the

Overland Mail Bill in 1857, as Congress reacted to concerns about the monopolies of the steamship companies and the susceptibility of Panama to foreign powers.

The painting shows the Butterfield Overland Mail, the first through-service between the Mississippi River and the Pacific Coast.

Butterfield's began in 1858, and was an immediate success. By 1860,

more mail was carried by overland coach than by steamboat.



# 1860—THE PONY EXPRESS

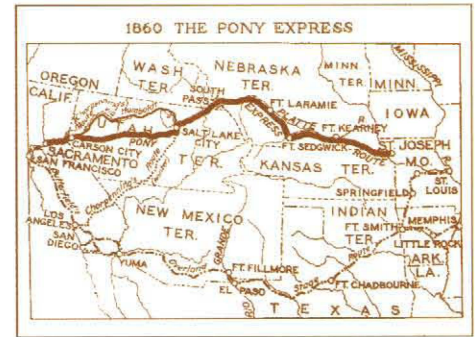
The Pony Express was the first fast overland mail service to the Pacific Coast. During the Civil War, it helped preserve the Union by providing rapid communication between California and Washington, DC.

Although the Pony Express was proposed to Congress in 1855, it was not established until 1860, when the impending Civil War put one of three transcontinental mail routes in danger.

The Pony Express opened on April 3, 1860, with riders leaving St. Joseph, Missouri, and Sacramento, California, simultaneously to race the route's 1,966 miles. The eastbound trip took almost 10 days, and the westbound trip took 11 days—about half the travel time of stagecoaches.

Although California relied almost entirely upon the Pony Express for news early in the Civil War, the line was never financially successful.

It lasted only 19 months until the Pacific Telegraph line, shown under construction in this painting, ended the need for its existence.



## 1866—DUDGEON'S STEAM CARRIAGE

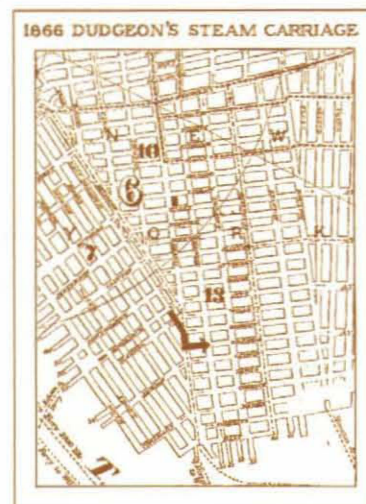
In 1855, inventor Richard Dudgeon astounded New Yorkers by driving from his home to his place of business in a steam carriage. The noise and vibration generated by the "Red Devil Steamer" frightened horses so badly that city authorities confined it to one street.

After losing the original in a fire, Dudgeon constructed a second steamer in 1866. After encountering more opposition to the vehicle, he

moved his family, and the steam carriage, to Long Island to escape city officials. Here he and his carriage became a familiar site, often with a young boy running ahead to warn travelers of the danger that followed.

Dudgeon ran the steam carriage many hundreds of miles and once covered a mile in under two minutes. Although the inventor claimed the carriage could carry 10 people at 14 m.p.h. on one barrel of anthracite

coal, it was too far ahead of its time and failed to gain popular favor.

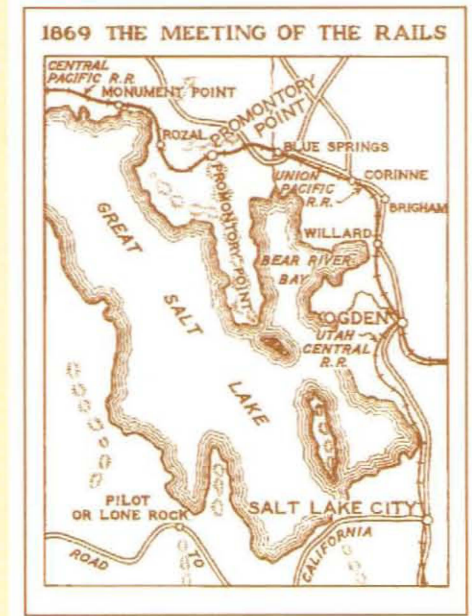


# 1869—THE MEETING OF THE RAILS

The Last Spike, driven on May 10, 1869, at Promontory Point (near Ogden, Utah), joined the Central Pacific and Union Pacific railroads into the nation's first transcontinental railway.

This historic event was conceived in 1861, when President Lincoln signed the Pacific Railroad Act, designating two companies to build and operate a combined railroad and telegraph line between the Missouri

River and Sacramento, California. The Central Pacific started construction in California in January 1863. The Union Pacific started the following December, at Omaha, Nebraska. The painting shows the junction of the rail lines—known as Concord coaches, because they were manufactured in that New Hampshire city—and the Chinese laborers who made the construction of the railroad possible during a period of labor scarcity.





# 1896—RURAL FREE DELIVERY

The first experimental routes for rural free delivery of U.S. mail were established in three West Virginia towns. Congress authorized the operation in 1893, but it was delayed by opponents worried about “such a great expense.”

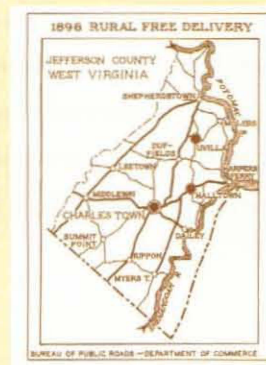
The enterprise soon proved successful. In its 1899 Annual Report, the Post Office Department stated that “there has been nothing in the history of the postal service of

the United States so remarkable as the growth of the rural free delivery system.” The report then cited five benefits of rural free delivery:

1. Increased income (from a greater volume of letters and periodicals).
2. Enhanced farm values.
3. Improved rural road conditions.
4. Better prices for farm products “due to producers being brought into daily touch with the state of the markets.”

5. “Relieving the monotony of farm life through ready access to wholesome literature” and keeping residents fully informed.

The painting shows how eagerly people in rural areas awaited the postal carrier.



# 1909—RURAL CONCRETE ROADS

Credit for first surfacing a rural U.S. public road with Portland Cement Concrete pavement is generally given to Wayne County, Michigan. A one-mile section of Woodward Avenue was opened on July 4th. As shown in the painting, motorists, farmers, and others users seemed to approve.

Before preparing specifications, Wayne County commissioners visited Windsor, Ontario, Canada, the first

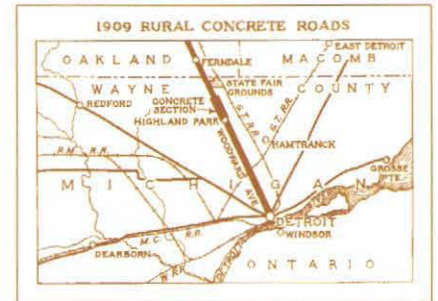
North American city to pave streets extensively with Portland Cement Concrete.

The Wayne County “first” was also preceded by:

- The Long Island Motor Parkway Company, which laid the first concrete pavement on a private right-of-way for an auto racing course in 1908.

- Bellefontaine, Ohio’s first concrete street pavement in the Western Hemisphere in 1891.
- Connersville, Indiana’s small stretch of concrete alley in 1890.

The earliest ever Portland Cement Concrete pavement is attributed to Inverness, Scotland, in 1865.



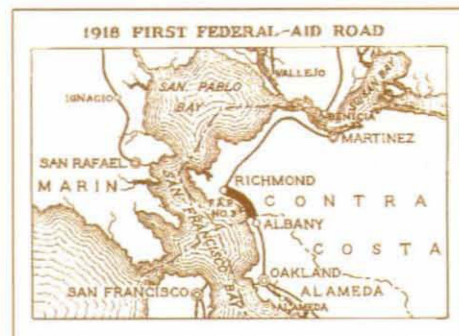
## 1918—FIRST FEDERAL-AID ROAD

The first unit completed under the Federal Aid Road Act, approved by President Woodrow Wilson in 1916, was 2.5 miles long and ran from Albany to Richmond along the San Francisco Bay in California.

The Act was intended to promote the improvement of a national system of free roads. A state highway

department with trained engineers was a prerequisite to Federal-aid funds.

To ensure equitable distribution, the Act provided for the division of funds based on a state's physical size, population, and route mileage.



# 1922—SNOW REMOVAL

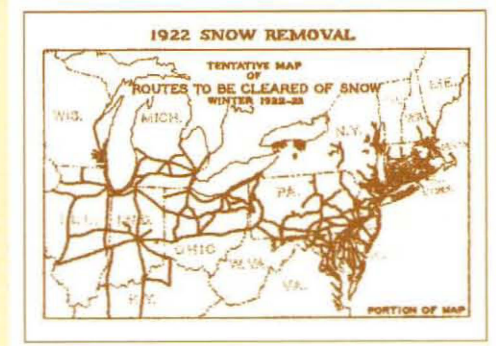
Snow removal from major U.S. highways with motor-driven equipment began in earnest during the winter of 1922–23, when 27,096 miles were cleared by state highway departments. Previously, most of this work was performed with hand shovels or horse-drawn wooden plows.

The rapid increase in motor vehicle registrations after World War I created a demand for systematic, nationwide snow

removal. Mileage of highways cleared in the 36 heavy-snowfall states (see map) increased by 50 percent each year up through the 1925–26 winter season.

Over time, comparatively simple measures, such as erecting snow fences and raising road grades above surrounding surfaces, were found to minimize drifting and the need for snow removal.

The painting shows a snow shovel clearing the Snoqualmie Pass in Washington's Cascade Mountains.

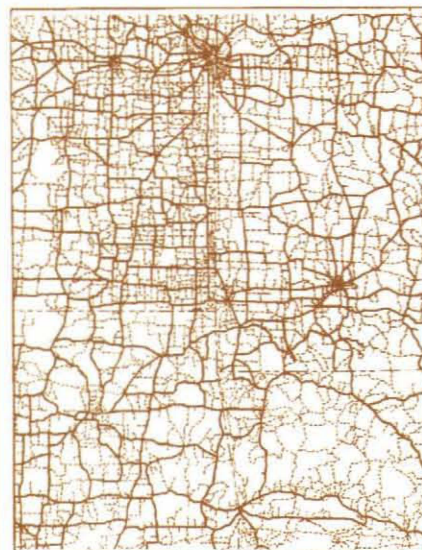


# 1933—ROADS TO SERVE THE LAND

Recognizing that roadwork was an effective method of bringing work “to the doors” of the unemployed, the National Recovery Act of 1933 assigned \$400 million in federal road improvement grants to the states for highway construction. About \$95 million was specified for secondary or “farm-to-market” roads, the first major federal action of this kind.

This Act was one of several measures initiated by the newly elected Roosevelt Administration to turn the tide of the Depression. It followed the Industrial Recovery Bill, which authorized \$3.3 billion for public works and the mobilization of 275,000 men into a Civilian Conservation Corps.

1933 ROADS TO SERVE THE LAND



# 1934—RAILROAD CROSSINGS BRIDGED

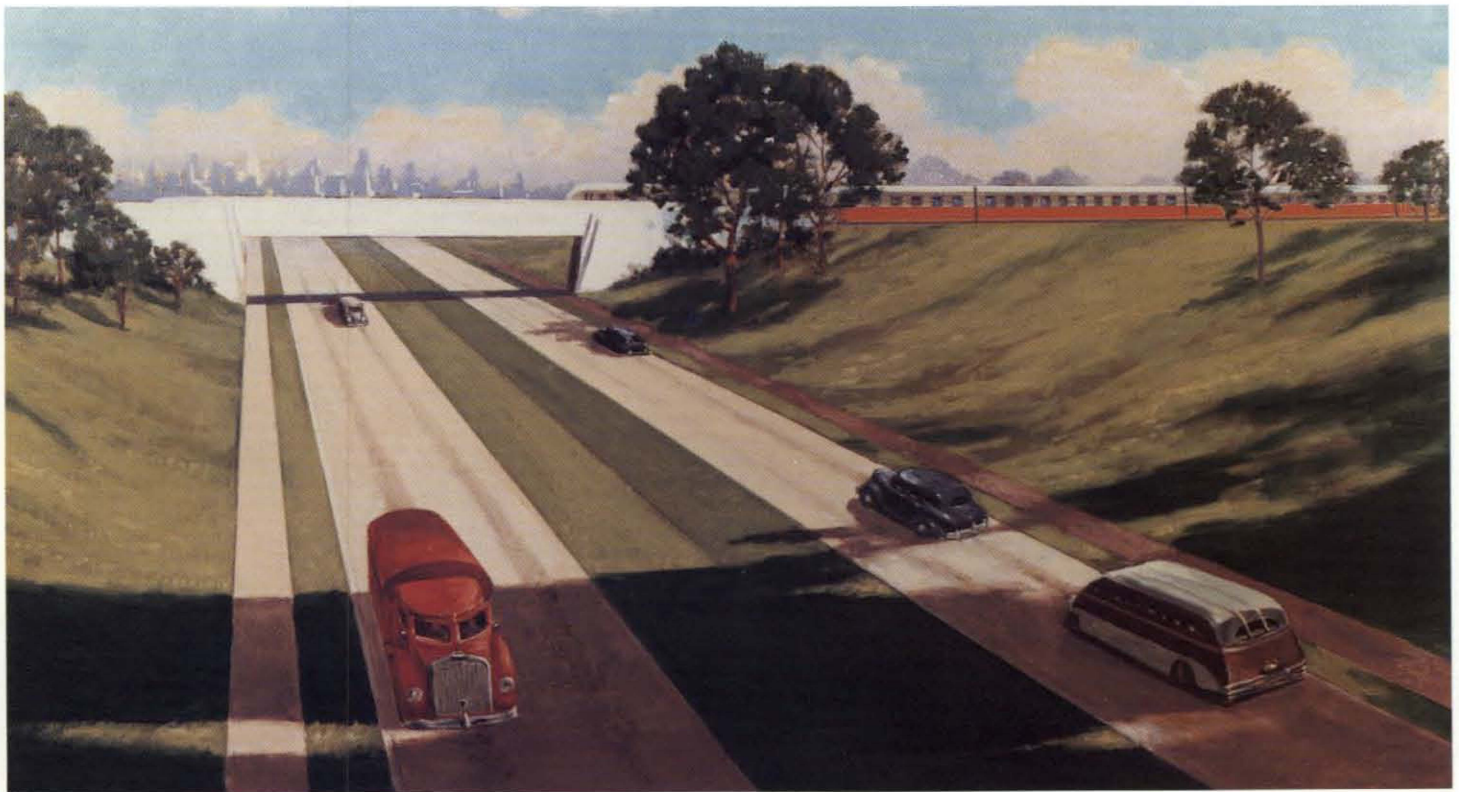
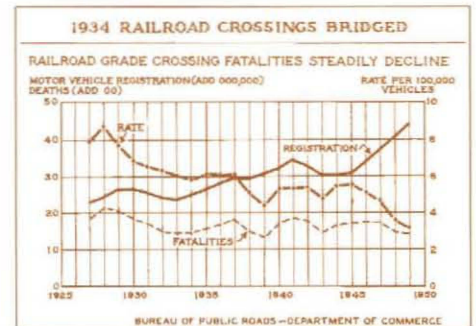
When the death toll from motor vehicle accidents passed 30,000 in 1929, highway administrators and auto manufacturers increased their efforts to make travel safer.

Although they represented only 5 percent of fatalities, accidents at railway grade crossings were often so gruesome that the public called for elimination of these at-grade crossings. But estimates of the national cost to do so added up to a stupendous

\$48 billion. The best alternative was a long-range program to eliminate, one-by-one, crossings that were most dangerous and caused the greatest delays. Each crossing would be separated, as shown in the painting, or the highway would be relocated.

The National Industrial Recovery Act of 1934, which provided work for the unemployed, included funds for separating 70 at-grade crossings. Next the Emergency Relief

Appropriation Act of April 1935 allocated \$200 million for grade-crossing work. The task of making railroad crossings safer continues to this day.



# 1945—A RURAL INTERSTATE HIGHWAY

In April 1941, President Franklin D. Roosevelt appointed a committee to study the need for a system of national highways to improve interregional transportation. The Federal Aid Highway Act, approved in December 1944, incorporated findings from this and earlier studies.

The committee emphasized the need for controlled access to highways to improve safety and traffic flow. They suggested closing

unimportant rural crossroads and diverting their traffic to more convenient crossings. Where traffic on interregional highways was light, at-grade crossing could be permitted. As shown in the painting, intersections were to be designed so that through-traffic would be apparent to entering vehicles.

