

# Carolina Conductor



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Monthly Newsletter of the Carolina Railroad Heritage Association, Inc.

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## Preserving the Past Active in the Present Planning for the Future

**Web Site:** [hubcityrrmuseum.org](http://hubcityrrmuseum.org)

**Facebook:** Carolina Railroad Heritage Association & Hub City RR Museum

### Hub City Railroad Museum and SOU Rwy Caboose #X3115:

Spartanburg Amtrak Station

298 Magnolia Street

Spartanburg, SC 29301-2330

Wednesday 10-2 & Saturday 10-2

### Meeting Site:

Fountain Inn Presbyterian Church

307 North Main Street

Fountain Inn, SC 29644

Third Friday of the Month at 7:00 p.m.

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Articles can be submitted anytime.

# History of U.S. RR's

*Part 2 of the multipart series on  
US railroad history. ED.*

## Expansion and Consolidation (1878-1916)

By 1880 the nation had 17,800 freight locomotives carrying 23,600 tons of freight, and 22,200 passengers. The U.S. railroad industry was the nation's largest employer outside of the agricultural sector. The effects of the American railways on rapid industrial growth were many, including the opening of hundreds of millions of acres of very good farm land ready for mechanization, lower costs for food and all goods, a huge national sales market, the creation of a culture of engineering excellence, and the creation of the modern system of management.

On January 12, 1883, the southern section of the second transcontinental railroad line was completed as the SP tracks from Los Angeles met the Galveston, Harrisburg, and San Antonio Railway at a location 3 miles west of the Pecos River near Langtry, TX.

New York financier JP Morgan played an increasingly dominant role in consolidating the rail system in the late 19th century. He



**John Pierpont Morgan**

orchestrated reorganizations and consolidations in all parts of the United States. Morgan raised large sums in Europe, but instead of only handling the funds, he helped the railroads reorganize and achieve greater efficiencies. He fought against speculators interested in speculative profits and built a vision of an integrated transportation system. In 1885, he reorganized the New York, West Shore & Buffalo Railroad, leasing it to the NYC. In 1886, he reorganized the Philadelphia & Reading, and in 1888 the Chesapeake & Ohio (C&O). He was heavily involved with railroad

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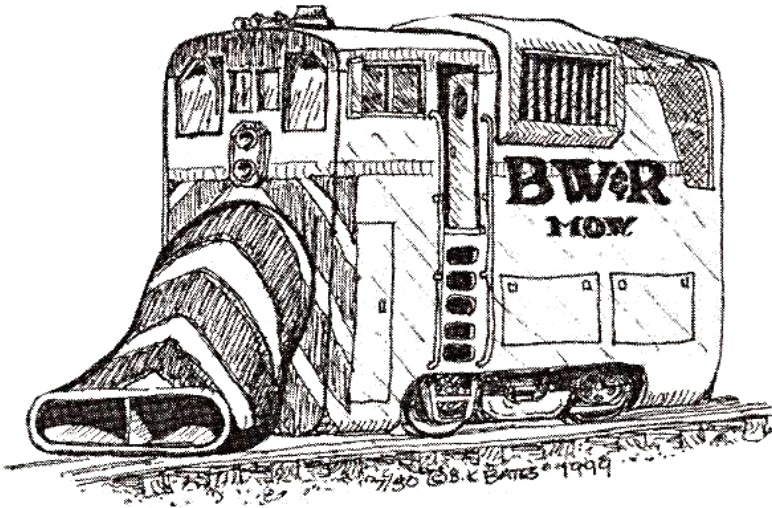
# Museum Happenings



Preparing for the arrival of a train by installing ear protection on those sensitive young ears.



Pat writes in train arrival times for 1970s on the newly installed train board in the museum.



We were ready for the recent snows at the museum!



Orchard Supply calendar of passenger train heading up Saluda Grade.

## Wanted—Articles for the Carolina Conductor

Submit an article of 200 words or more with some photos and captions and see them in print. Every one of us has some unique railroad experience that would make interesting reading for our membership. Your editor always needs more contributions of railway history and news.

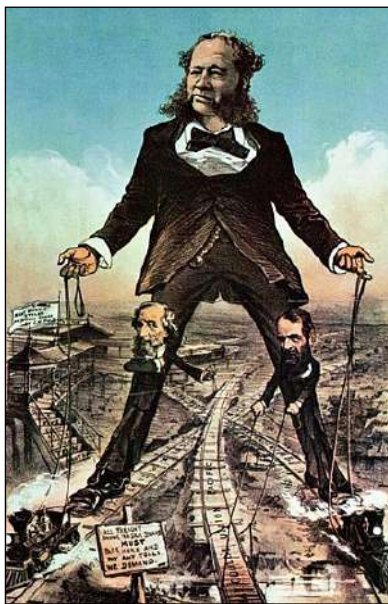


tycoon James J. Hill and the GN.

Industrialists such as Morgan, Cornelius Vanderbilt, and Jay Gould became wealthy through railroad ownerships, as large railroad companies such as the Grand Trunk Railway and the Southern Pacific Transportation Company spanned several states. In response to monopolistic practices and other excesses



James J. Hill



Cornelius Vanderbilt



Jay Gould

of some railroads and their owners, Congress passed the *Interstate Commerce Act* and created the Interstate Commerce Commission (ICC) in 1887. The ICC indirectly controlled the business activities of the railroads through the issuance of extensive regulations.

Morgan set up conferences in 1889 and 1890 that brought together railroad presidents in order to help the industry follow the new laws and write agreements for the maintenance of "public, reasonable, uniform, and stable rates." The conferences were the first of their kind, and by creating a community of

interest along competing lines paved the way for the great consolidations of the early 20th century. Congress responded by enacting antitrust legislation to prohibit monopolies of railroads, beginning with the *Sherman Antitrust Act* in 1890.

The *Panic of 1893* was the largest economic depression in US history at that time. It was the result of railroad overbuilding and shaky railroad financing, which set off a series of bank failures. One-quarter of US railroads had failed by mid-1894, representing over 40,000 miles. The failed lines included the NP, the UP, and the ATSF. Acquisitions of the bankrupt companies led to further consolidation of ownership. As of 1906, two-thirds of the rail mileage in the US was controlled by seven entities, with the New York Central (NYC), PRR, and Morgan having the largest portions. James J. Hill joined forces with Morgan and



others to gain control of the NP. Hill formed the Northern Securities Company to consolidate the operations of the NP with Hill's own GN, but President Theodore Roosevelt, a trust-buster, strongly disapproved and took it to court. In 1904 the federal courts dissolved the Northern Security company, and the railroads had to go their separate, competitive ways. By that time Morgan and Hill had ensured the NP was well-organized and able to survive easily on its own.

In 1901 the UP acquired all of the stock of the SP. The federal government charged UP with violating the Sherman Act, and in 1913 the Supreme Court ordered UP to divest itself of all SP stock. This ruling was received with considerable alarm throughout the industry, as UP and SP were widely considered at that time not to be significant competitors. Later in the 20th century, with different economic conditions and changes in the law, UP successfully acquired the SP.



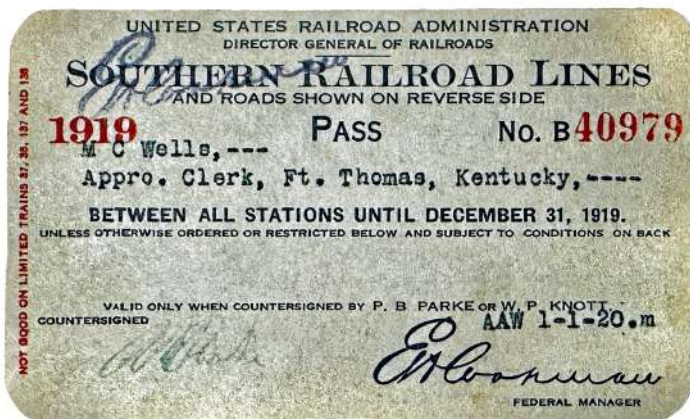


**Sherman Antitrust Act of 1890.**

Continuing concern over rate discrimination by railroads led Congress to enact additional laws, giving increased regulatory powers to the ICC. The 1906 *Hepburn Act* gave the ICC authority to set maximum rates and review the companies' financial records. The *Mann-Elkins Act* of 1910 strengthened the ICC's authority over railroad rates. Subsequently, railroads had difficulty securing revenue sufficient to keep pace with their rising costs, and by 1915 one-sixth of the railroad trackage in the country belonged to roads in receivership. US railroads were at their peak length of trackage in 1916 with 254,037 miles of tracks.

## Nationalized Management (1917-1920)

The United States Railroad Administration (USRA) temporarily took over management of railroads during World War I to address inadequacy in critical facilities throughout the overall system, such as terminals, trackage, and rolling stock. President Woodrow Wilson issued an order for nationalization on December 26, 1917. Management by USRA led to standardization of equipment, reductions of duplica-



**USRA pass for the Southern Railway.**

Bo Brown

tive passenger services, and better coordination of freight traffic. Federal control of the railroads ended in March 1920 under the *Esch-Cummins Act*.

## Railroads in the Early Auto/Trucking Era (1921-1945)

Following the war, some members of Congress, the ICC, and some railroad executives developed concerns about inefficiencies in the American railroad system. Memories of the 1893 panic, the continuing proliferation of railroad companies, and duplicative facilities, fueled this concern. To an extent, the need to nationalize the system during the war was an example of this inefficiency. These concerns were the impetus for legislation to consider improvements to the system. The *Esch-Cummins Act* directed the ICC to prepare and adopt a plan for the consolidation of the railroad companies into a limited number of systems.



**The ICC policing the railroads.**

During the 1920s the railroad industry, with its rates and routes continuing to be set by the ICC, was facing increasing competition from other modes of transportation: trucking and airplanes. These competing modes were basically unregulated at the time and this competition was not acknowledged in the railroad legislation. The newer transport modes also received extensive financial assistance from government, such as in the construction of highways and rural roads, and the construction of airports. The competition contributed to the railroads' eventual decline in the 1920s and beyond, and which was amplified in the 1930s during the Great Depression.

In 1929 the ICC published its proposed *Complete Plan of Consolidation*, also known as the *Ripley Plan*, after its author, William Z. Ripley of Harvard University. The agency held hearings on the plan, but none of the pro-

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posed consolidations were ever implemented. Many small railroads failed during the Great Depression. Of those lines that survived, the stronger ones were not interested in supporting the weaker ones. In 1940 Congress formally abandoned the *Ripley Plan*.

## Modern Era (1946-Present)

During the post WWII boom many railroads were driven out of business due to competition from airlines and interstate highways. The rise of the automobile led to the end of passenger train service on most railroads. Trucking businesses had become major competitors by the 1930s with the advent of improved paved roads, and after the war they expanded their operations as the interstate highway network grew, and acquired increased market share of freight business. Railroads continued to carry bulk freight such as coal, steel and other commodities. However, the ICC continued to regulate railroad rates and other aspects of railroad operations, which limited railroads' flexibility in responding to changing market forces.



In 1966, Congress created the Federal Railroad Administration (FRA), to issue and enforce rail safety regulations, administer railroad assistance programs, and conduct research and development in support

of improved railroad safety and national rail transportation policy. The safety functions were transferred from the ICC. The FRA was established as part of the new federal Department of Transportation.

Two of the largest remaining railroads, the PRR and the NYC, merged in 1968 to form the Penn Central (PC). At the insistence of the ICC the New York, New Haven and Hartford Railroad (NYNH&H) was added to the merger in 1969. In 1970 the PC declared



bankruptcy, the largest bankruptcy in U.S. history at the time. Other bankrupt railroads included the Ann Arbor Railroad (AA) (1973), Erie Lackawanna Railway (EL) (1972), Lehigh Valley Railroad (LV) (1970), Reading Company (RDG) (1971), Central Railroad of New Jersey (CNJ) (1967) and Lehigh and Hudson River Railway (L&HR) (1972).

In 1970 Congress created a government corporation, Amtrak, to take over operation of PC passenger lines and selected inter-city passenger services from other private railroads, under the *Rail Passenger Service Act*. Amtrak began operations in 1971.



Congress passed the *Regional Rail Reorganization Act* of 1973 (sometimes called the 3R Act) to salvage viable freight operations from the bankrupt PC and other lines in the northeast, mid-Atlantic and midwestern regions, through the creation of the Consolidated Rail Corporation (CR), a government-owned corporation. CR began operations in 1976. The 3R Act also formed the United States Railway Association (USRA), another government corporation, taking over the powers of the ICC with respect to allowing the bankrupt railroads to abandon unprofitable lines.

Amtrak acquired most of the right-of-way and facilities of the PC Northeast Corridor from Washington, DC. to Boston, MA, under the *Railroad Revitalization and Regulatory Reform Act* (the 4R Act) of 1976.

In addition to freight railroads, CR inherited commuter rail operations from several predecessor railroads in the northeast, and these operations continued to be unprofitable. State and local government transportation agencies took over the passenger operations and acquired the various rights-of-way from CR in 1983, pursuant to the *Northeast Rail Service Act* of 1981. To replace the loss of commuter passenger rail service outside of the



northeast region, state and local agencies established their own commuter systems in several metropolitan areas, generally by leasing rail lines from Amtrak or freight railroads.

The National Association of Railroad Passengers (NARP), a non-profit advocacy group, was organized in the late 1960s to support the operation of passenger trains.



Beginning in the late 1970s Amtrak eliminated several of its lightly traveled lines. Ridership stagnated at roughly 20 million passengers per year amid uncertain government aid from 1981 to about 2000. Ridership increased during the first decade of the 21st century after implementation of capital improvements in the Northeast Corridor and rises in automobile fuel costs.

## Resurgence of Freight Railroads in the 1980s



**Jimmy Carter signs the Staggers Rail Act.** In 1980 Congress enacted the *Staggers Rail Act* to revive freight traffic, by removing restrictive regulations and enabling railroads to be more competitive with the trucking industry. The *Northeast Rail Service Act* of 1981 authorized additional deregulation of northeast railroads. Among other things, these laws reduced the role of the ICC in regulating the railroads and allowed the carriers to discontinue unprofitable routes. More railroad companies merged and consolidated their lines in order to remain successful. These changes led to the current system of fewer, but profitable, Class I railroads covering large

er regions of the United States.

Since the beginning of the current deregulatory era, the following Class I railroads have been involved in mergers: UP acquired the Missouri Pacific (MP) and Missouri-Kansas-Texas Railroad (MKT) in the 1980s, the Chicago and North Western (CNW) in 1995, and the SP in 1996. Norfolk Southern (NS) was formed in 1982 from the Norfolk and Western (N&W) and Southern Railway (SOU). CSX Transportation (CSX) was formed in 1986 from the Chesapeake System (which was a holding company not a railroad) and the Seaboard System (SBD). BNSF Rail-



way (BNSF) was formed in 1996 from the ATSF and Burlington Northern (BN). CSX and NS acquired most of the CR freight rail assets in 1997. Canadian Pacific (CPKC) acquired the Delaware and Hudson (D&H) in 1991, and purchased the Kansas City Southern Railway (KCS) in 2021. Canadian

National (CN) acquired the Illinois Central (IC) in 1999.

In 1995, when most of the ICC's powers had been eliminated, Congress finally abolished the agency and transferred its remaining functions to a new agency, the Surface Transportation Board (STB).

## 21st Century

In the early 21st century, several of the railroads, along with the federal government and various port agencies, began to reinvest in freight rail infrastructure, such as intermodal terminals and bridge and tunnel improvements. These projects are designed to



SC Inland Port at Greer.

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increase capacity and efficiency across the national rail network. Two examples are the Heartland Corridor and the National Gateway.

Both the Bill Clinton and Barack Obama administrations had announced plans for new high-speed rail lines in their first terms. In the case of the Clinton era, the only tangible outcome was the introduction of Amtrak's Acela Express, serving the Northeast Corridor, in 2000.



**Acela Express at speed on the Northeast corridor.**

Obama even mentioned his rail plans in his State of the Union address, the first time in decades a President had done so. While several small scale improvements to rail lines were financed by federal money, more ambitious plans in Florida, Ohio and other states failed when newly elected Republican governors stopped existing high-speed rail plans and returned federal funding.

In 2015 construction began on the California High-Speed Rail line. The Phase I portion, which would link Los Angeles and San Francisco in under three hours, was originally projected to be completed in 2029 at a cost of \$40 billion. By 2018 however, the project experienced numerous delays and cost miscalculations, with an estimated completion date of 2033 and a cost of \$98.1 billion.

Brightline (BLFX) is the only privately owned and operated intercity passenger railroad in the US. Its development started in March 2012 as All Aboard Florida by Florida East Coast Industries. This same



**Brightline train service in Florida.**

company is constructing Brightline West as a privately run high-speed rail route, currently under construction, to link the Las Vegas Valley and Rancho Cucamonga, CA in the Greater Los Angeles area through the California high desert.

The *Infrastructure Investment and Jobs Act*, in 2021, provides a major funding increase for passenger rail systems, including new rail lines and replacement of level crossings. Improvements to the Northeast Corridor funded by the law include bridge replacements and the construction of new rail tunnels under the Hudson River.

## Technology

The B&O established its Mount Clare Shops in Baltimore in 1829. This was the first railroad manufacturing facility in the US, and the company built locomotives, railroad cars, iron bridges and other equipment there. Following the B&O example, US railroad companies soon became self-sufficient, as thousands of domestic machine shops turned out products and thousands of inventors and tinkerers improved the equipment.



**B&O Mount Clare shops buildings.**

## Rail Manufacturing

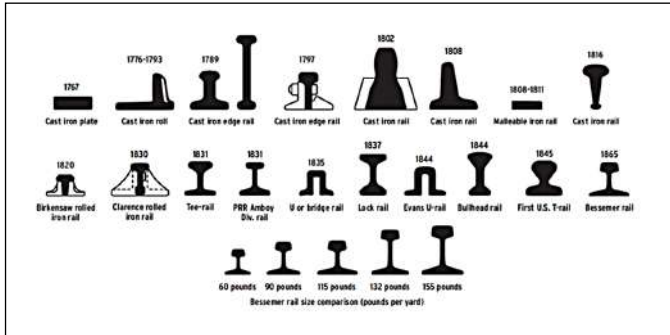
In general, US railroad companies imported technology from Britain in the 1830s, particularly strap iron rails, as there were no rail manufacturing facilities in the United States at that time. Heavy iron "T" rails were first manufactured in the US in the mid-1840s at Mount Savage, MD and Danville, PA. This improved rail design permitted higher train speeds and more reliable operation. Discovery of high-quality iron ores in the mid-19th century, particularly in the Great Lakes region, led to the fabrication of better-quality rails.

Steel rails began to replace iron later in the

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19th century. Several railroads imported steel rails from England in the 1860s, and the first commercially available steel rails in the US were manufactured in 1867 at the Cambria Iron Works in Johnstown, PA. By the mid-1880s US railroads were using more steel rails than iron in building new or replacement tracks.



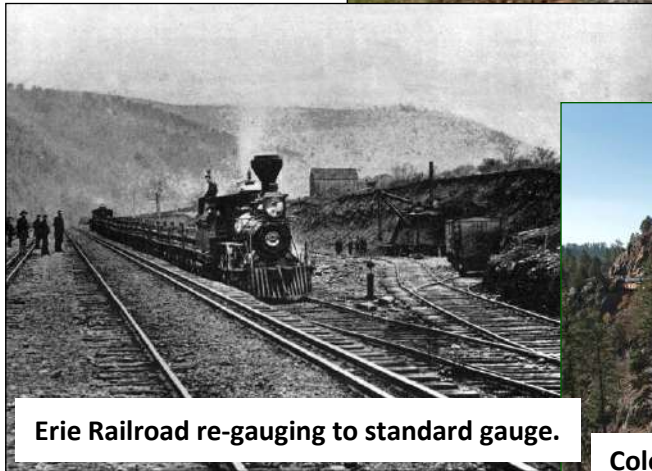
## Track Gauge

Through the 1830s, 1840s, and 1850s, not only local projects, but long-distance links, were completed, so that by 1860 the eastern half of the continent, especially the Northeast, was linked by a network of connecting railroads. However, although Great Britain had early adopted a standard gauge of 4 feet 8½ inches, once

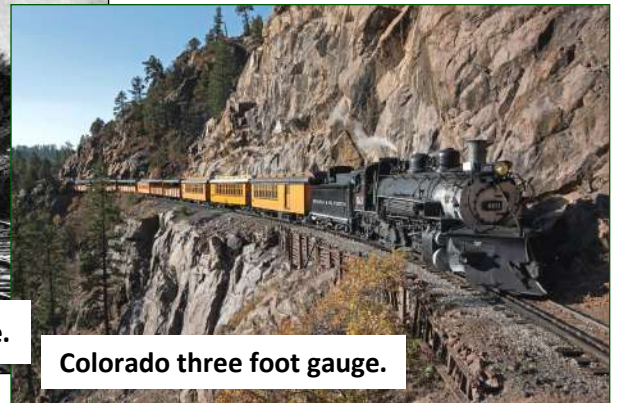
Americans started building locomotives, they experimented with different gauges, resulting in the standard gauge, or a close approximation, being adopted in the Northeast and Midwest, but a 5 foot gauge was used in the South, and a 5 foot 6 inch gauge was used in Canada. In addition, the Erie Railway (ERIE) was built to 6 foot broad gauge, and in the 1870s a widespread movement used the cheaper 3 foot narrow gauge.

The *Pacific Railway Act* of 1863 established standard gauge for the first transcontinental railroad. Except for narrow gauge, gauges were standardized across North America after the end of the Civil War in 1865.

Two foot gauge track laid on standard gauge ties!



Erie Railroad re-gauging to standard gauge.



Colorado three foot gauge.



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