

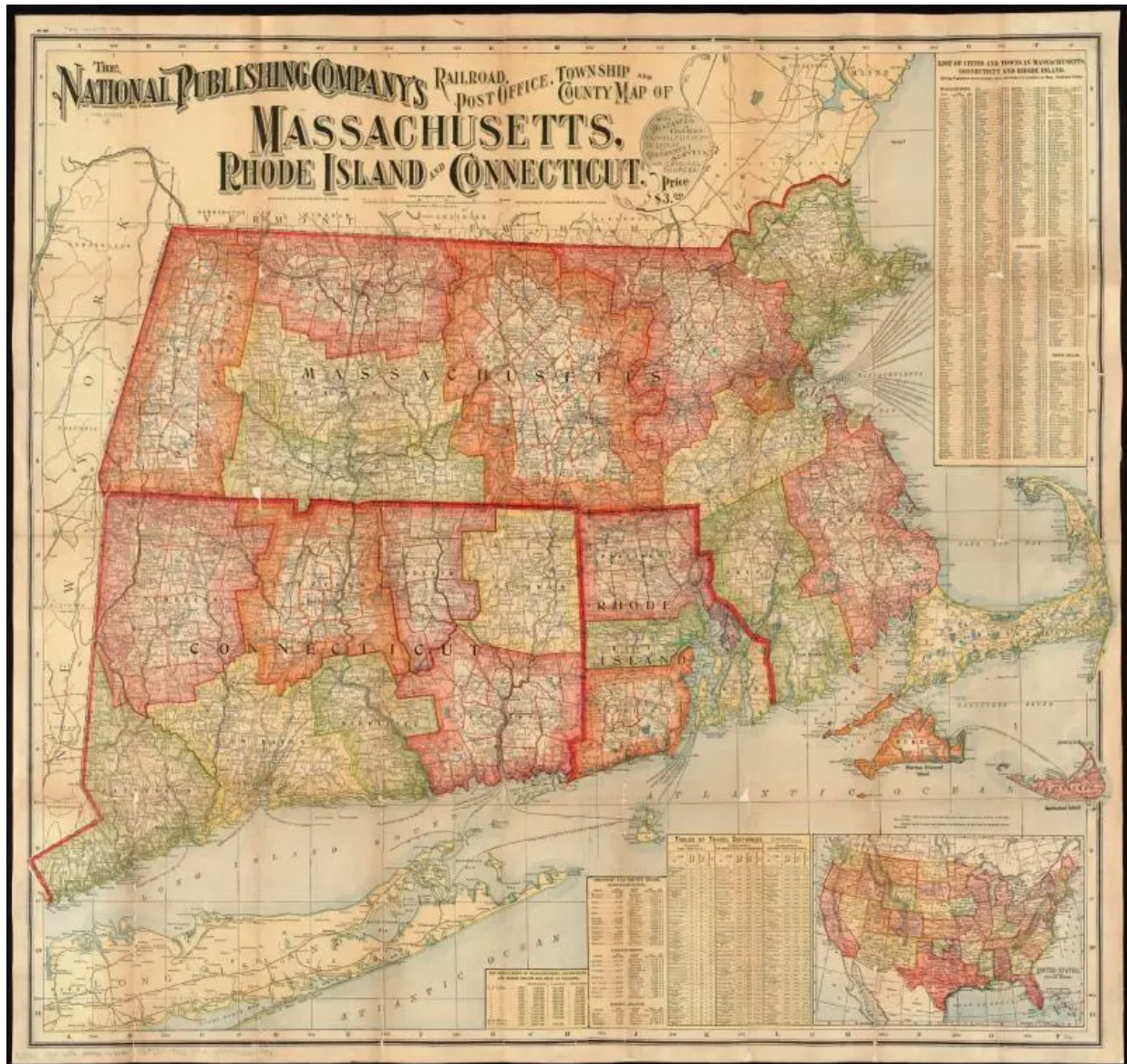
RAILROADS AND THE MILLS

Jamie H. Eves

The Industrial Revolution relied on cheap transportation of goods in bulk. The textile factories that dominated eastern Connecticut during its Industrial Age (c. 1800-1985) needed to haul in the raw cotton, wool, and silk from which they made their products, and carry away the finished thread and cloth, and after 1850 that would be done primarily by rail. The mills also needed rail to cart in wooden spools and bobbins from Maine, and the heavy steel mill machinery that was manufactured in Saco, Maine, and in Lowell, Hopedale, and Whitinsville, Massachusetts. Between 1870 and 1950 they needed railroads to transport the massive amounts of Pennsylvania and West Virginia coal they burned to produce steam energy, which had replaced water as their major source of power. And many of the thousands of immigrants from French Canada, Ireland, Poland, Britain, Sweden, Italy, the Middle East, Russia, Germany, and other places who came to work in the eastern Connecticut mills arrived by rail. From the mid-1800s to the mid-1900s, passenger trains linked eastern Connecticut's industrial communities to the information and culture of New York, Boston, Hartford, Providence, and other centers of learning, art, literature, and entertainment. In many ways, the Industrial Age was also the Age of Rail.

Willimantic Railroad Yard today. Although trains still come through Willimantic, most of the buildings -- including Union Station -- are long gone. You can learn more about railroads in Willimantic by visiting the Connecticut Eastern Railroad Museum on Bridge Street in Willimantic. Their website is <https://cteastrailroad.org/>.

One important artifact of the Age of Rail in Connecticut is a large-scale, cloth-backed, elegantly engraved 1902 wall map titled "The National Publishing Company's Railroad, Post Office, Township and County Map of Massachusetts, Rhode Island and Connecticut, with Distances in Figures Compiled from the Latest Government Surveys and Original Sources." It provides a snapshot of rail transportation at the turn of the century, when the railroads were at their height.



According to the map, a century ago a dense web of rail lines crisscrossed Connecticut. The “trunk line” (“main line”) was owned by the busy, prosperous New York, New Haven, and Hartford Railroad Company (N. Y. N. H. & H.), which snaked eastward along Long Island Sound from New York City to New Haven in a series of lazy, undulating loops. In New Haven, it split into two smaller trunks, one continuing east along the Sound to Providence, Rhode Island, the other heading north, first to Hartford and then across the state line to Springfield, Massachusetts. Numerous “branch lines” (“short lines”) – some owned by the N. Y. N. H. & H. and others by smaller companies – split off from the two trunks, linking all eight of Connecticut’s counties into one efficient, integrated system. All told, only 27 of the state’s 168 towns (16%) were without rail service – and every one of these was a small, rural, hill community like Goshen, Bethlehem, Voluntown, or Union. Well over 95% of the state’s residents lived within ten miles of a train station. Hartford, New Haven, Waterbury, and Willimantic were the state’s rail “hubs,” with eight, six, six and six “spokes,” respectively. Hartford was the state capital, an important river port, and a center for the

manufacture of precision machines. New Haven was a seaport. Waterbury was a center for metal manufacturing. And Willimantic produced cloth and thread. Bridgeport (machines and textiles), Manchester (textiles), and Norwich (textiles) also had important rail connections.

For about a century, from the mid-1800s to the mid-1900s, railroads and trolleys functioned as the chief means of moving large quantities of people and freight in Connecticut and the rest of the United States. The earliest American railroads were horse-drawn short lines, such as John Montross's "gravity road" around Niagara Falls and John Thompson's "tramroad" in Pennsylvania. But the invention of the coal-powered steam engine by the Scottish engineer James Watt in the 1760s, together with its successful application to riverboats by the New York inventor Robert Fulton in 1807, launched an eventual switch from horses to steam and made railroads practical. The first steam railroad in North America was the Baltimore and Ohio (B. & O.); construction on the B. & O. had begun in 1828, but the company switched from horses to steam in 1831. Other railroads quickly followed: the Mohawk and Hudson Railroad in 1832, the South Carolina Canal and Rail Road Company in 1833, the Columbia Railroad of Pennsylvania in 1834, and the Boston and Providence Railroad in 1835.

One of the first commercially successful railroads in America was the Boston and Lowell, which opened in 1837 to connect the great textile mills at Lowell, MA to the seaport of Boston. Soon other, similar, profitable "short lines" were constructed that linked the new industrial mills – most of which were located inland, along the waterfalls, frequently a dozen or more miles from the nearest navigable waterway – to river- and seaports. In eastern Connecticut, that meant connecting to Norwich, Hartford, or Providence, Rhode Island. Willimantic's first rail connection, to Norwich, opened in 1849.

Nationwide, the faster pace of rail travel siphoned traffic away from the older, slower canal boats and riverboats. By the 1850s a loose network of railroads totaling a little more than 3,000 miles (still only half of Great Britain's total) crisscrossed most of the northeastern states, including Connecticut. Rail lines connected New Haven to New York and Hartford to Boston. Water-borne transportation declined. The Age of Rail had come.



The “Helen B” was a narrow gauge train that carried materials around the mill yard of the American Thread Company’s mammoth plant at Willimantic. It was named for Helen Boss, the daughter of General Eugene S. Boss, the Company’s agent. This photo is c. 1910. Mural painted by Gordon Macdonald. Photo by Jamie Eves.

In Connecticut, the Age of Rail commenced in the 1840s with the construction of the New York and New Haven Railroad (N. Y. & N. H.), the forerunner of the N. Y. N. H. & H. The company received its state charter in 1844, was organized in 1846, and opened in 1849. Like most American railroads, the N. Y. & N. H. was a privately owned business – a corporation – but it nevertheless relied on government subsidies for survival. Indeed, without government support, long-distance railroads rarely made a profit. The N. Y. & N. H.’s 450-mile looping route along Long Island Sound from New Haven to New York – with stops in West Haven, Milford, Stratford, Bridgeport, Fairfield, Southport, Westport, Norwalk, Darien, Stamford, and Greenwich – can be viewed on an elegant, detailed 1845 “Map Exhibiting the Experimental and Located Lines for the New-York and New-Haven Railroad,” at the Library of Congress’s superb “American Memory” website at <http://memory.loc.gov>. In 1872 the New York and New Haven merged with the New Haven and Hartford Railroad to form the giant N. Y. N. H. & H. It continued to grow, and by the early 1900s had absorbed more than twenty-five other railroad companies, owned 2,047 miles of track in Connecticut, New York, Rhode Island, and Massachusetts, and was an

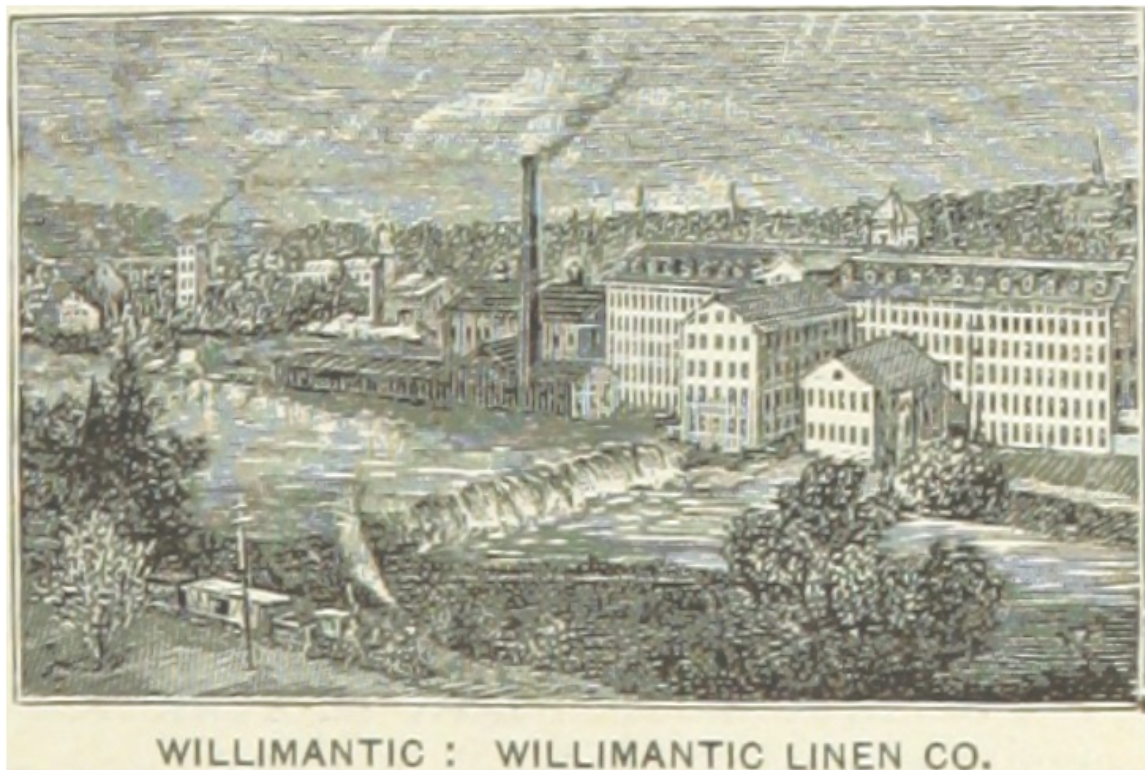
important cog in the corporate empire of the Connecticut-born tycoon J. P. Morgan. A good map of the mature, turn-of-the-century Connecticut railroad network – “Map of the Railroads of Connecticut to Accompany the Report of the Railroad Commissioners, 1893” – can be viewed at the “American Memory” website.

To find out more about trains and Willimantic, I visited the Thomas R. Dodd Research Center at the University of Connecticut, where I looked through old train schedules of the New York, New Haven, and Hartford Railroad (N.Y.N.H.&H.) that are preserved as part of the Dodd Center’s Connecticut Electric Railway Association Collection. Although these schedules applied only to passenger trains and not to freight trains, they nevertheless provided insight into the history of railroads in Willimantic.

According to the schedules, in the 1920s and 1930s, as many as twelve N.Y.N.H.&H. passenger trains left Willimantic each day. One route – which in January, 1927, departed twice a day, at 6:45 and 11:00 AM – was a local, heading southwest to Middletown, with stops along the way at Chestnut Hill, Leonard’s Bridge, Amston, Westchester, Lyman Viaduct, East Hampton, Cobalt-Middle Haddam, and Portland.

The 6:45 train chugged into Middletown at 7:45. That was the end of its run, but passengers could transfer to an express (the wait was only 34 minutes) that took them to New Haven, Bridgeport, and New York, arriving at Grand Central Station at 11:40 AM, only a five-hour trip from Willimantic.

The later, 11:00, train stopped briefly at Middletown and then continued on to New York as a local, with stops at Rockfall, Middlefield-Durham, East Wallingford, Northford, New Haven, Bridgeport, South Norwalk, and Stamford, before arriving at Grand Central Station at 3:35 PM, only a four-and-a-half-hour trip, and that despite a fourteen-minute detour on the way to Middletown from Amston to Colchester and back to pick up more passengers. All told, the later train made 21 stops between Willimantic and New York and traveled 126 miles at an average speed of 28 miles an hour.



Nineteenth-century engraving of a steam train with the Willimantic Linen Company in the background. Mill cities like Willimantic became rail hubs in the 19th century. Public domain.

A second route in 1927, departing Willimantic only once a day, at 9:25 AM, traveled east to Pomfret and Putnam before crossing the state line into Rhode Island. It arrived at Providence at 11:47 and Boston at 12:09, covering 140 miles in about two hours and forty-five minutes, an average speed of about 50 miles an hour.

A third route in 1927, to Hartford, was the busiest, with seven trains departing daily, at 7:10, 10:08, and 11:29 AM, and at 2:23, 3:45, 6:11, and 8:09 PM. The morning trains were locals, with regular stops at Andover, Bolton, and Manchester, and whistle stops (the train stopped only if someone requested it) at Hop River, Rockville Junction, Talcottville, Buckland, and Burnside. The afternoon trains had fewer stops. After a brief layover in Hartford (between 20 and 30 minutes), the train continued on to Meriden, New Haven, and New York. The trip from Willimantic to Hartford took about an hour; the journey to New York lasted about four hours and 30 minutes. Unlike the other two routes, this one also operated on Sundays, although with fewer runs.

The passenger trains that stopped in Willimantic featured a combination of parlor cars and coaches, but no sleepers. Sleepers did run on the other Boston-to-Hartford-to-New York

route – the one that went through Springfield, Massachusetts, instead of Willimantic – but passengers were told that their berths would not be available until 9:00 at night, and that they had to be out of them by 6:40 in the morning.

As I looked through the schedules, I noticed that the number of trains arriving and departing Willimantic began to decline in the late 1930s. By 1942 the Willimantic-to-Middletown route no longer ran, and while two trains now departed daily for Providence and Boston, only two went to Hartford and New York. Even before the Interstate Highway System, the automobile was edging out the locomotive.

Connecticut's railroads declined after World War II, superceded by the newly formed Interstate Highway System. For better or worse, after 1950 the Age of Rail gave way to the Automobile Age.



Railroad tracks passing next to the Smithville Manufacturing Company cotton mill in Willimantic, Connecticut. Public domain.

Nevertheless, railroad's relicts remain on the land, inviting historical inspection. Several passenger and freight lines still run, including the Amtrack commuter line along Long Island Sound, which uses the old N. Y. N. H. & H. tracks. Most of the bed of the old branch line from Hartford to Providence still exists, too, converted by the state into a horse,

bicycle, and walking trail. It is a venerable route. According to Hans DePold, the town historian of Bolton, one of the towns along the trail, a group of Connecticut businessmen first drew up plans for a Hartford-to-Providence railroad in 1833, at the very dawn of the Age of Rail. Fifteen years later in 1847, they chartered the Hartford & Providence Railroad, renamed the Hartford, Providence & Fishkill when they decided to extend the line west to Fishkill, New York, on the Hudson River. Construction began almost immediately, and by 1849 – the same year that the New York and New Haven opened for business – the railroad connected Hartford to Willimantic. However, like most of the early railroads, it struggled financially. Eventually, the larger, wealthier New Haven and Hartford Railroad Company absorbed it. Now part of a larger system, the line remained in operation until 1956.

Today, hikers routinely walk along portions of the old H. P. & F. bed between Bolton and Willimantic, a distance of about 14 miles. Relict evidence shows that, like other railroads, the H. P. & F. significantly altered the environment through which it passed. Although all of the steel rails and most of the heavy wooden ties have been removed, the bed and other artifacts remain, providing ample evidence of the railroad's impact. The top of the bed was approximately ten feet wide, and amazingly level. To save fuel, the steep, craggy Connecticut hills were graded into gentle slopes, and the route was laid out with straight lines and wide, easy turns. Rather than detour around the hills, the construction crews dynamited deep "cuts" through hilltops and rocky outcrops, creating artificial gorges that remain cool, moist, and shady even on hot summer days. To cross the "lows," the crews built high, sloping, raised beds, often several hundred feet wide at the base, which tower above the land. Even when the terrain was relatively level, beds were still elevated several feet above the surface, to make sure the tracks remained dry. In the cuts, deep ditches running along each side of the track drained excess water. Elsewhere, the beds sloped slightly to one side, where a single ditch disposed of the runoff. Mosses grow on the craggy, gray shale walls of the cuts. In the spring rivulets of cold, clear meltwater trickle noisily over the exposed rocks.

Immense amounts of fill were needed to construct these beds – far more than would have been supplied from the limited amounts of rock and gravel the crews removed from the cuts. Where had it all come from? Hikers see little evidence of trackside borrow pits. Indeed, numerous stone fences indicate that farmers' fields and pastures occupied most of the land beyond the railroad's right-of-way, and these seem unlikely sources of fill. Scooping out parts of the bed with your hands, a hiker can unearth numerous gravel-sized particles of red sandstone, common enough in the Connecticut Valley around Hartford, but rare in the eastern hills around Bolton and Willimantic. Perhaps the company had commenced constructing the railroad at Hartford and, inching eastward, used their trains and newly laid tracks to haul the fill from the Valley. If so, they had reversed the pattern of nature, moving earth from lower to higher elevations.

Other relicts are also visible. Chunks of coal lay in the ditches. A few gaunt, silver-gray telegraph poles pitch at eccentric angles, most with five crosstrees, indicating that, in addition to the telegraph wires, they possibly carried telephone and even electric wires as well. Although the surrounding countryside is thickly wooded, ample evidence exists that such was not the case a hundred years ago. The stone fences that snake through the woods indicate that the entire area was once open farmland. This means that the railroad would have had to make accommodations for those farmers whose fields lay on both sides of the tracks. Indeed, at several locations old farm roads, now abandoned, cross the railroad, their locations marked by rusty steel gates.

The historian Leo Marx characterizes railroads, trains, and other nineteenth-century technologies as “machines in the garden.” Hikers walking along the old railroad bed, climbing into the high, flinty hills surrounding Bolton Notch, may reflect that he is right. One imagines the countryside as it must have looked a century ago – an open, undulating land of farms and fields, with only a few trees, and the great sweeping vistas of the Hop River Valley below. The green, pastoral landscape would have offered a compelling contrast to the sooty black trains, the billowing clouds of coal smoke, the piercing whistle of the steam engines, the loud chuffing of gears, and the rhythmic clacking of the steel wheels on the rails.