

# The Bulletin



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## ***The Bulletin***

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For general inquiries, contact us at nydiv@electricrailroaders.org or by phone at (212) 986-4482 (voice mail available). ERA's website is www.electricrailroaders.org.

**Editorial Staff:**  
*Editor-in-Chief:*  
Bernard Linder  
*News Editor:*  
Randy Glucksman  
*Contributing Editor:*  
Jeffrey Erlitz

**Production Manager:**  
David Ross

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## **RAPID TRANSIT ON THIRD AVENUE BEGAN 130 YEARS AGO**

Construction started on Whitehall Street, Hanover Square, and Third Avenue to 42<sup>nd</sup> Street on November 1, 1877. A month later, the company started building the 42<sup>nd</sup> Street Branch.

A few test trains started operating on August 12, 1878, and revenue service between South Ferry and Grand Central began on August 26, 1878. Trains ran from 5:30 AM to 8:00 PM and were composed of one engine and two coaches. On the first day, 20,000 passengers rode on the entire line and 3,000 entered at Grand Central. Trains continued running from South Ferry to Grand Central for about a year, after which shuttles operated on 42<sup>nd</sup> Street between Third Avenue and Grand Central until December 6, 1923. The line was extended to 67<sup>th</sup> Street on September 16, 1878 and 129<sup>th</sup> Street on December 30, 1878.

The original line was a two-track line. When riding increased, the company was able to provide rush hour express service by installing a third track on portions of the line. Several years later, the company was able to increase service again by making the third track continuous from Canal Street to Fordham Road and building express stations at busy intersections. To carry the new express track across the Harlem River, it was necessary to replace the old single-deck double-track drawbridge with a new double-deck bridge supporting four tracks.

The original Harlem River bridge was designed by J.J.R. Croes, Chief Engineer of the Suburban Rapid Transit Company, as a center-bearing single-deck drawbridge, and was built 1883-86 by the New Jersey Steel and

Iron Company. When work began on October 24, 1883, a pier was built on private property on the north shore of the Harlem River. Other piers were built partly on the Suburban's pier in Manhattan. Work was completed on November 29, 1886. When the wrought iron bridge was built, it was described as, "one of the handsomest, if indeed, not the handsomest in the vicinity of New York City." The drawspan was rim-bearing and was hydro-pneumatically operated. Instead of turning the span by gears, the old span was turned by cables fastened to a circular channel, which held the turning wheels in place and passed over large diameter sheaves to four hydraulic rams. The old bridge was opened and closed faster than the newer bridges.

The new bridge was center-bearing and was operated by four 35-horsepower motors. The span could be swung through 90 degrees in about 60 seconds.

This Manhattan Elevated Improvement, third-tracking the Second, Third, and Ninth Avenue elevateds, was accomplished with hardly any delays to service. But Third Avenue elevated service between Manhattan and the Bronx was suspended for several hours when the Harlem River bridge was replaced.

The tide was utilized in floating the new spans from the falsework on which they were erected, in floating the old spans off their piers, and in aiding the lower the new spans into place. To forecast the height the tide would rise on the days the spans were placed, a study of the tide in the Harlem River was made over a period of months.

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**NEXT TRIP — CONEY ISLAND SHOP TOUR, SEPTEMBER 13**