

Cultural Resources

▶ Discovering New Jersey's Transportation Past

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Digest

Governor Phil Murphy

May 2018

Acting Commissioner Diane Gutierrez-Scaccetti

> location:

city of south amboy
middlesex county

> resource types:

railroad terminal

> action:

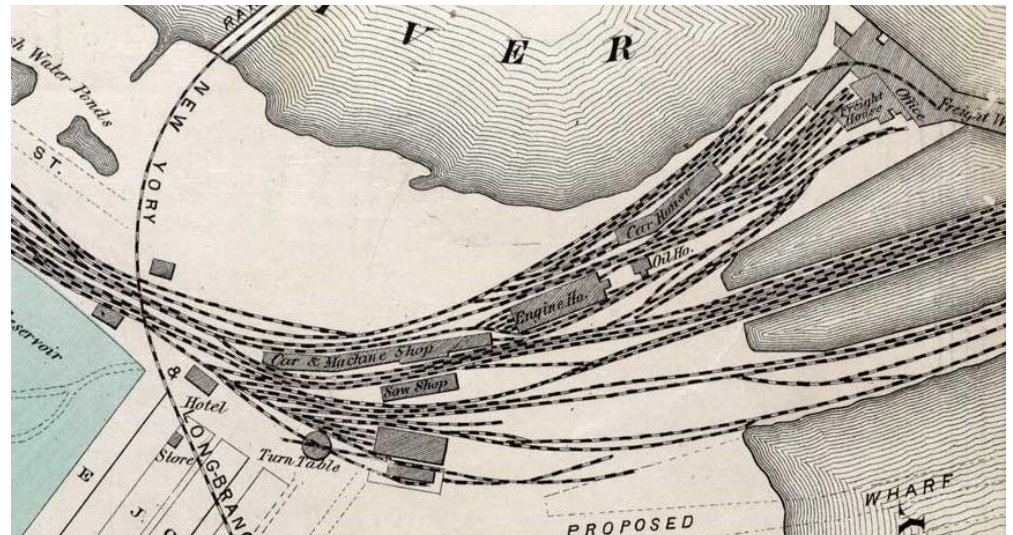
archaeological monitoring



City of South Amboy
Middlesex County

The *Cultural Resources Digest*, published by the New Jersey Department of Transportation, summarizes information from professional studies in archaeology, history and historic architecture conducted during the development of transportation projects. Visit us at <http://www.state.nj.us/transportation/works/environment/overview.htm>.

The Intermodal Ferry Transportation Center New Jersey's First Tidewater Railroad Terminal Archaeological Monitoring Supplement



This 1876 detail from a map of South Amboy shows the substantial number of buildings and rail tracks located at the South Amboy ferry terminal and depot. [Source: Everts and Stewart, *Detail Map of South Amboy*, from *Combination Atlas Map of Middlesex County*. 1876].

In late 2016 and early 2017 archaeological monitoring was undertaken in connection with remediation of contaminated soils at the site of the proposed Intermodal Ferry Transportation Center (IFTC), a combined bus, rail, ferry and pedestrian transportation center in South Amboy, Middlesex County. The IFTC is located on the site of the former ferry terminals and rail yard facilities of the Camden and Amboy Railroad (later the Pennsylvania Railroad) on the Raritan Bay shoreline. The specific location where remediation work occurred is also referred to as the former Conrail and Spectraserve sites. Archaeological monitoring was performed in partial fulfillment of the requirements of a

Memorandum of Agreement (MOA) developed under Section 106 of the National Historic Preservation Act of 1966 (as amended) for the larger IFTC project. Given the long history of the site and the large number of buildings and landscape features known to have been there, it was not surprising that the soil remediation work and monitoring encountered multiple below-ground remains of buildings and features associated with the early railroads on the site. These included a mid-19th century turntable and associated approach track; a late 19th/early 20th century turntable and its associated approach track; and the gravel base and stone sleepers of a portion of the original Camden and Amboy Railroad rail bed.

The Turntables

The principal and most significant discovery during the archaeological monitoring was the substantial masonry foundations of a mid-19th-century, Camden and Amboy Railroad-era turntable and one of its approach tracks sealed beneath the floor and ash pits of a late 19th century engine house. Constructed mostly in mortared brick, but including a massive stone central base for the turntable pivot, the 50-foot-diameter turntable structure was set on a foundation of wood pilings driven into the underlying sands and tidal marsh. On the basis of archaeological and archival analysis, this turntable is thought to date from no earlier than the mid-1850s until 1887, when the structure was apparently superseded by a larger, 60-foot-diameter turntable installed a short distance to the northeast. Both turntables are believed to have operated outdoors in the rail yard and it is hypothesized that an engine house was extended northeastward over the earlier turntable in the late 1880s when the latter went out of use.

Turntables were an essential component of all railyards and their sophistication and size increased over time as larger, heavier and more powerful locomotives were put into service. The turntable foundations unearthed beneath the engine house floor indicate that the turntable itself would have been 50 feet in diameter, which is of a size commonly constructed in the period *circa* 1850-80. The brick masonry of the floor suggest that the table made use of balance wheels both under its perimeter and also

beneath its mid-section. Its central pivot was supported by a noticeably substantial stone foundation set on wood pilings driven into the underlying sand and marshland.

Masonry remains of the later 60-foot-diameter turntable and another approach track, which remained in operation into the 1920s, were also documented, as were fragmentary brick foundations of an oil/waste house and carpenter's shop, both dating from the early 20th century.

This second, larger 60-foot-diameter steel turntable was manufactured by the Philadelphia Bridge Works in January 1887 and would appear to have been put in place that same year. It went out of use at some point between 1918 and 1930 and the site had been filled and graded by this latter date. Sixty-foot-diameter turntables were rapidly becoming obsolete in the early 1920s following the Pennsylvania Railroad's introduction of the Ten-Wheeler Class G5 locomotive, which was well in excess of 60 feet in length. Details of the turntable are documented in a field notebook of the Pennsylvania Railroad Company compiled in 1910 and more exhaustively in Interstate Commerce Commission records of 1916. The structure may well have been steam-powered and perhaps resembled the turntables designed and installed by the Pennsylvania Railroad for their Altoona shops.

Portions of both turntables remain in place today, including most of the critical pivot base for the earlier turntable, but site remediation activity necessitated the removal of large parts of both structures.



Left: View looking west showing the southern portion of the mid-19th-century turntable pit beneath the concrete floor of the engine house. **Right:** View looking southwest showing the mortared brick and stone foundation supporting the approach track leading into the mid-19th-century turntable. [Source: Hunter Research, Inc.]



View looking east showing the junction of the two lines of stone sleepers. [Source: Hunter Research, Inc.]

The Camden and Amboy Rail Bed

Supplementary archaeological monitoring and excavation also addressed remains relating to the long and complex sequence of rail lines in the railyard, focusing on the tracks that ran along the ridge of the spit-like landform extending out to the historic ferry terminal site. These excavations revealed traces of what are thought to be an earlier segment of rail bed associated with the Camden and Amboy Railroad, laid down in 1832, and also found more stone blocks, evidently arranged as a corner foundation, some 50 feet to the northeast of the originally discovered lines of stone blocks. This foundation defied certain interpretation, but may have supported a “deadman” at the end of a short siding.

The supplementary archaeological work allowed for a more thorough examination of the stone sleepers. Approximately 50 of these stone sleepers, all dry-laid, were observed in place. Several of them displayed the typical characteristics of original Camden and Amboy Railroad stone sleepers, bearing either two or four holes. Most of the stones were fashioned in gneiss or

marble and probably extracted from quarries in the Hudson valley or northern New Jersey.

Since the stone sleepers with the drill holes form no pattern when viewed as a group and their surfaces with drill holes randomly face in multiple directions, it was concluded that they are not in their original positions. Clearly, these stone sleepers, while originally forming part of the original Camden and Amboy railroad rail bed somewhere nearby, were later re-used in a reconfiguration and upgrading of tracks in the railyard.

The true purpose of the two lines of re-used stone sleepers is not entirely understood. They are thought to represent a substructure or reinforcing linear foundation for a rail track, now removed, that may have been at an elevation several inches higher than that of the top surface of the stones. The V-shaped relationship between the two lines of stones may signify the location of a switch or frog and a need for additional foundational support, although the angle is somewhat acute. The relationship of the more northerly line of stones to the corner foundation is uncertain, but if these features did support a track, it may have been only a short siding.

Project: Archaeological Monitoring at the South Amboy Rail Terminal
Location: City of South Amboy, Middlesex County
Date: 2016-2017
Consultant: Hunter Research, Inc., 120 West State Street, Trenton, NJ 08608

For More Information...

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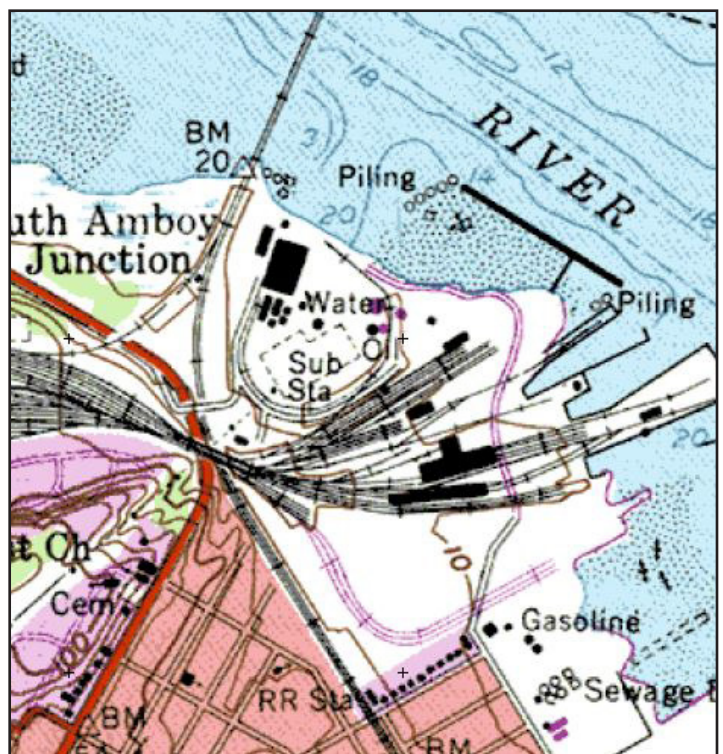
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Additional information on transportation projects and historic preservation is available from the New Jersey Department of Transportation (<http://www.state.nj.us/transportation/works/environment/overview.htm>), the Federal Highway Administration (<http://www.fhwa.dot.gov/environment/archaeology/index.htm>), the New Jersey Historic Preservation Office (<http://www.state.nj.us/dep/hpo/2protection/njrreview.htm>), and the Advisory Council on Historic Preservation (<http://www.achp.gov/work106.html>).



Project vicinity map



Area of detail