

WASHBURN & MOEN MANUFACTURING COMPANY,
QUINSIGAMOND IRON & WIRE WORKS, GALVANIZING HOUSE
(Washburn & Moen Manufacturing Company, South Works,
Galvanizing House)
753 Millbury Street
Worcester
Worcester County
Massachusetts

HAER MA-134-B
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
NORTHEAST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
U.S. Custom House, 3rd Floor
200 Chestnut Street
Philadelphia, PA 19106

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Location: 753 Millbury Street
Worcester
Worcester County, Massachusetts

UTM Coordinates: 19.269191.4679687
USGS Quadrangle: Worcester South, Massachusetts

Date of Construction: 1886-1892

Engineer: Unknown
Architect: Unknown

Present Owner: Massachusetts Highway Department

Present Use: Vacant

Significance: This building is significant as one of three remaining buildings of the Washburn & Moen Manufacturing Company's Quinsigamond Iron & Wire Works, or South Works, complex. From about 1886 the mid 1930s, the building housed an operation for galvanizing ferrous metal wire. The building's brick exterior construction with granite-silled segmental arch windows, brick-arched loading bays, and corbelled brick cornices is typical of late nineteenth century mill buildings.

Project Information: This documentation was undertaken as a mitigation measure in compliance with the 1994 Memorandum of Agreement between the Massachusetts State Historic Preservation Office and the Federal Highway Administration in connection with the construction of the Route 146/Massachusetts Turnpike Interchange Project. This documentation was prepared between 1995 and 2000 by:

Stanley F. Moss; Michael J. DeLacey; Pauline Chase Harrell;
Sally P. Hild; Jeffrey C. Howry; John K. Nanian
Boston Affiliates, Inc.
156 Milk Street
Boston, Massachusetts 02109

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Galvanizing House

The Galvanizing House, constructed between 1886 and 1892, is a one-story iron rod reinforced brick building with a raised central monitor. Built to the limits of a site constrained by the channel of the Blackstone River to the south, Millbury Street to the west, and a railroad spur and siding to the east, the building has an irregular footprint, a nearly flat roof and is surmounted by a rectilinear monitor with approximately seven foot (7') high windows capped by a low pitched roof. A railroad siding closest to the building connected the Galvanizing House to an adjoining spur line that linked the main railroad line located just northwest of the Wire Rope Building, to the main facilities of the Quinsigamond plant immediately across the Blackstone River to the south.

The Galvanizing House retains its original footprint except for the removal of the accumulator and a one hundred foot chimney stack which at the northwest corner of the building's north wall adjacent to Millbury Street as indicated on 19th Century plans. The accumulator housed in a small structure attached to the north wall of the Galvanizing House, served essentially as a very large storage battery to store the electric power used in the galvanizing process. The building is in a deteriorated condition, with large areas of roofing and flashing missing at the top of the exterior walls and significant loss of mortar visible in the brickwork of the walls.

The Galvanizing House was built to supplement Washburn & Moen's existing galvanizing facilities to the south on the opposite bank of the Blackstone River. Galvanizing creates a zinc metal coating on iron or steel products that inhibits the oxidation (rust) that causes the deterioration of the material and also reduces its electrical conductivity. It was a multi-step process that includes: 1) degreasing of the metal to remove any machine lubricants; 2) 'pickling' or immersion in hydrochloric or sulfuric acid to remove any surface oxidation, i.e. rust; 3) rinsing with water or a fluxing agent; 4) zinc immersion at 450°C in a 'kettle'; and 5) quenching in a water or chromate solution. Upon cooling, the galvanized wire was re-wound onto drums for transport.

The Galvanizing House is constructed on a random ashlar foundation that is visible along the south wall of the building where a portion of it also serves as the retaining wall for the Blackstone River channel. The exterior walls of the Galvanizing House are red brick laid in common bond with a header-stretcher-header bonding course every eighth course. Portions of the building retain the original dentillated brick corbelled cornice. The building walls are pierced at regular and frequent intervals by tall, narrow window openings with brick segmental-arch heads and granite sills. Many of these window openings have been filled in with brick or concrete block while some are boarded up and others are missing sash and

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leave the building open to the weather. On the building's southwest elevation along Millbury Street, some wood window sash remain that appear to be a triple hung window assembly. These windows appear to be twelve-over-two-over-two configuration. Four window openings (two each on the north and east elevations) have been lowered and made into doorways. On the building's east elevation next to the railroad spur line were the openings for the two original brick-arched loading doors, the one to the north nearly twice the height of the other. These openings have been filled in with concrete block, and two later openings have been cut into the northwest façade and sectional overhead doors have been installed in these openings. The remains of a painted American Steel Division sign are evident on the north elevation.

Originally, the freight entrances on the east facade of the Galvanizing House permitted the transfer of wire and other products in and out of the building from the adjacent spur line. The Sanborn insurance map for 1892 shows a schematic layout for the galvanizing process which included four rows of tanks (three rows of three tanks and one row of four) on an east-west axis perpendicular to the rail spur. The Sanborn map indicates two treatments prior to galvanizing (most likely degreasing and acid treatment) at three of the process locations. The fourth row of tanks included an additional tank used for quenching. All equipment (tanks etc.) has been removed, but their locations are evident in the layer of concrete poured around the process tanks and over much of the Galvanizing House's original brick floor at some point after original construction. Evidence of the location of galvanizing kettles and other tanks used in the galvanizing process survives in the form of brick footprints in the concrete where the equipment has been removed.

At present, the interior on the north side of the Galvanizing House is divided by sheetrock-on-stud partitions to form a large (15'x45') entrance space flanked by offices. This entry area leads to the main interior space where four-piece riveted (almost circular) steel columns with wood braces support the perimeter framing for the large rectangular monitor, which has a roof supported on wood trusses. The flat roof of the main building and the pitched roof of the monitor are framed with 4" x 14" wood timbers. The monitor windows are eight-over-eight, double-hung wood frame windows. The roof and monitor configuration allowed the ventilation of heat and noxious fumes from the building while in providing natural light for the workmen in the building. The steel columns and heavy timber construction surrounding the rectangular monitor roof provided a degree of fire resistance and would have permitted the installation of an internal crane system to suspend wire and other products as they moved from tank to tank in the galvanizing process.

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This building was used for galvanizing from 1892 until 1976. Following the closure of the Quinsigamond plant by the American Steel & Wire Company of United States Steel in 1977, ownership of the Galvanizing House passed to Starr Scrap Metal. The building is now vacant.

Sources

Beers, F.W. & Co. Atlas of the City of Worcester, Worcester County, Massachusetts. New York: F.W. Beers & Co., 1870.

Ceccacci, Susan M. and Brian Pfeiffer. Washburn & Moen North Works Manufacturing District Area "A" Form, 1979. Inventory of the Historical and Architectural Assets of the Commonwealth. On file at the Massachusetts Historical Commission, Boston, MA.

Fitch, Virginia H. and Andrew C. Winters. Public Archaeology Laboratory, Inc. Building Inventory Forms: Washburn and Moen Manufacturing Buildings, 1900. On file at the Massachusetts Historical Commission, Boston, MA.

Hopkins, G.M. Atlas of the City of Worcester, Massachusetts. Philadelphia: G.M. Hopkins, 1886.

Nutt, Charles A. A History of Worcester and Its People, 3 Vols. New York: Lewis Historical Publishing Co., 1919.

Public Archaeology Laboratory, Inc. Historic and Architectural Survey Report, Route 146 Improvements, Worcester and Millbury, Massachusetts. Pawtucket, Rhode Island: PAL, Inc., 1991.

Public Archaeology Laboratory, Inc. Historic and Architectural Survey Report, Route 146 Improvements, Worcester and Millbury, Massachusetts, Appendix C. Pawtucket, Rhode Island: PAL, Inc., 1991.

Public Archaeology Laboratory, Inc. Addendum to: Historic and Architectural Survey Report, Route 146 Improvements, Worcester and Millbury, Massachusetts. Pawtucket, Rhode Island: PAL, Inc, 1992..

Richards, L.J. & Co. Topographical Atlas of the County of Worcester, Massachusetts. Springfield: L.J. Richards & Co., 1896.

Richards Map Company. Topographical Atlas of the County of Worcester, Massachusetts. Springfield: Richards Map Co., 1922.

Sanborn Map Company. Insurance Maps of Worcester, Massachusetts, 1892 updated to 1905. New York: Sanborn Map Co., 1905.

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Sanborn Map Company. Insurance Maps of Worcester, Massachusetts. New York: Sanborn Map Co., 1910.

Sanborn Map Company. Insurance Maps of Worcester, Massachusetts. New York: Sanborn Map Co., 1937.

Stebbins, H. Map of Worcester, 1831. From actual surveys by Caleb Butler and H. Stebbins. Boston: C. Harris, 1831.

Stone, Orra L. History of Massachusetts Industries: Their Inception, Growth and Success, Vol. II. Boston: The S.J. Clarke Publishing Co., 1930.

Sverdrup/Parsons Brinckerhoff. Base Map, Former Site of Washburn & Moen Manufacturing Company and American Steel & Wire Company. Boston: Sverdrup/Parsons Brinckerhoff, 1998.

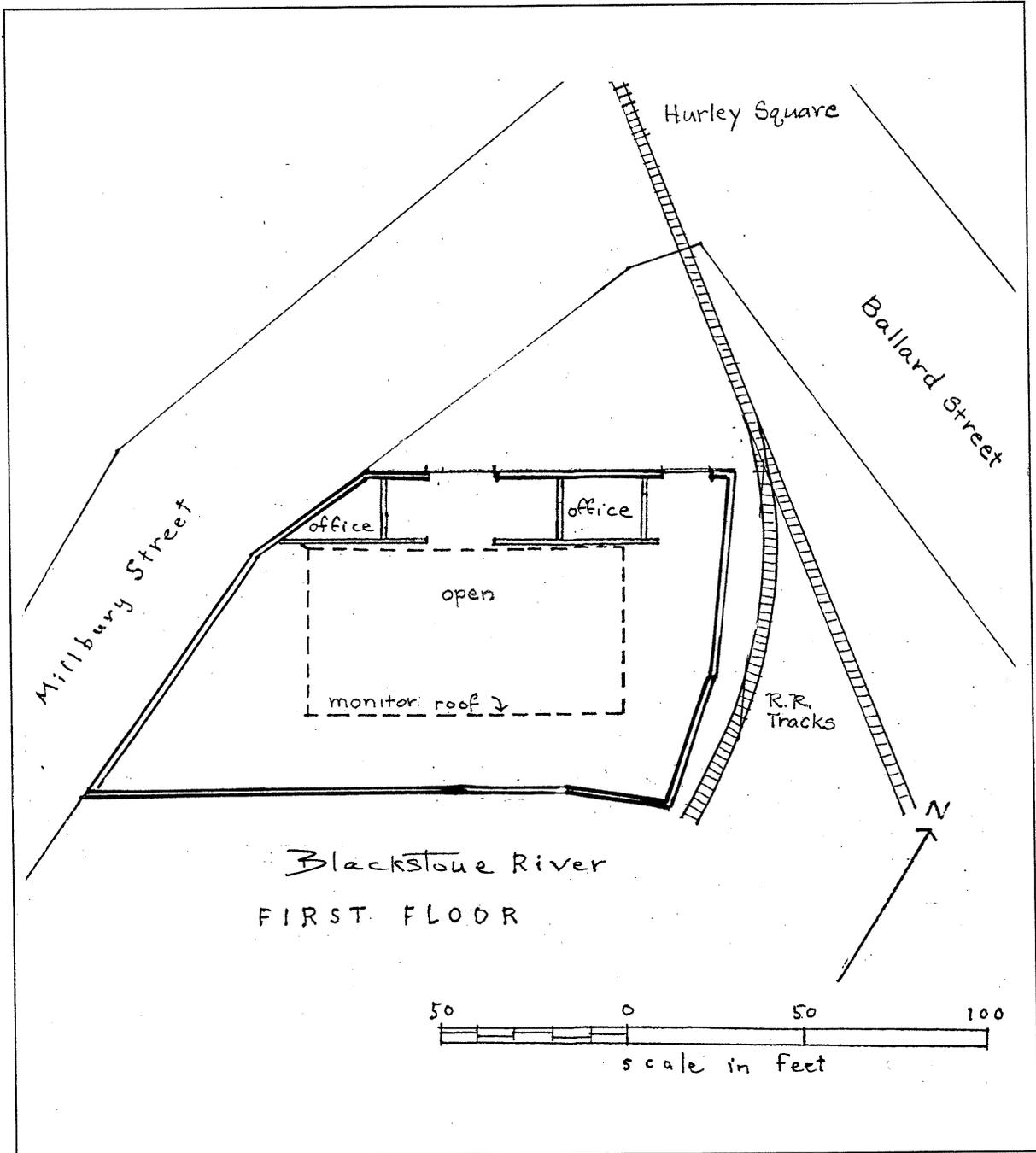
“The Wiring of America,” The Economist (December 19, 1998), pp.39-42.

United States Geological Survey. Topographic Map of Worcester South, Massachusetts. Denver: United States Geological Survey, 1983.

Walker, George H. Atlas of the City of Worcester, Massachusetts. Boston: George H. Walker, 1878.

Worcester Historical Society Archives, Miscellaneous Drawings and Sketches.

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Schematic Plan , 1998