

North Point Water Tower
East end of East North Avenue
Milwaukee
Milwaukee County
Wisconsin

HABS No. WIS-249

HABS
WIS,
40-MILWA,
12-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
Office of Archeology and Historic Preservation
National Park Service
Department of the Interior
Washington, D.C. 20240

NORTH POINT WATER TOWER

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WIS,
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12-

Location: East end of East North Avenue (East North Avenue between North Lake Drive and North Terrace Avenue), Milwaukee, Milwaukee County, Wisconsin.

Present Owner and Occupant: Milwaukee Water Works.

Present Use: Ornament and landmark.

Statement of Significance: Part of the complex erected for the Milwaukee Water Works almost one hundred years ago, the lofty Victorian Gothic Water Tower stands on a bluff overlooking Lake Michigan and encloses an iron standpipe that originally served to relieve city water mains of pulsations from pumping engines housed in the lake-front pumping station. Modern equipment has made the facility unnecessary, but tower and standpipe have remained, little altered through the years. Long a notable feature of the city's skyline and often praised for its beauty, the Water Tower has recently been accorded official landmark status by the Milwaukee Landmarks Commission and the American Water Works Association.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1873-74. Work on the foundation had begun by May, 1873; and on September 14, 1874, the tower was put in service, though work continued through the end of that year. Total cost of the tower, including the standpipe, was \$53,017.93.
2. Architect and engineers: Charles A. Gombert, Milwaukee, architect; Moses Lane, Milwaukee, chief engineer; Charles MacRitchie and John Nichol, principal assistant engineers.
3. Original and subsequent owners: The tower was built for and has remained the property of the Milwaukee Water Works.
4. Builders and suppliers: The superintendent was Morgan E. Shinn; foreman of the stonecutters, George Robb; and foreman of the masons, John Firie. Richard Davis furnished and erected the wrought-iron standpipe, which was caulked by Harrison, Green, and Walker. Hornbach and Wagner sup-

plied and erected the iron stairway encircling the stand-pipe, the iron floor above the stairway, and the wrought-iron work of the roof. Biersach and Niedermeyer supplied galvanized iron for the roof. Brick came from C. and J. Burnham, lumber from Sands and Hilty, glass from Baumbach and Rosenthal, lime from Werner R. Trimborn, and stone from four sources--Story Bros., Schweikert and Hart, Cook and Hyde, and G. and C. Peterson. The Cook and Hyde firm handled cutting and dressing the stone; Jacob Mueller had the contract for painting the doors and window sashes and for glazing the windows; and grading of the site was carried out by Hoff and Casper.

5. Original Plans: The plans, placed on file in the office of the Water Department by 1875, apparently have not survived. Architect Gombert's main floor plan and east elevation of the Engine House (North Point Pumping Station) and an elevation of the Water Tower may have been the sources for the diminutive scale drawings signed "J. Knauber & Co. Lith. Milwaukee," which were published in the Board of Water Commissioners' Report of 1875. Gombert's perspective rendering of the Water Works plant (Engine House, Water Tower, and distant Reservoir), viewed from the southeast, comes down to us in several reproductions. The first version was printed by the American Oleograph Co. in April, 1873. One of their prints--the only one the recorder has yet located--hangs in the office of the Supervisor of Structures and Grounds, Milwaukee Water Works, Kilbourn Park Reservoir. It incorporates an inscription reading: "Entered According to Act of Congress in the Year 1873 by C. A. Gombert in the Office of the Library of Congress at Washington." Whether this refers to the original drawing or to a print from the 1873 edition has not been determined. In 1874 the Milwaukee Lith. & Eng. Co. prepared a second rendition of the same view, differing from its predecessor only in such minor details as the number and placement of pedestrians and horses in front of the Engine House and on the road leading up to the Water Tower. Henry Bleyer used this print in his Guide to Milwaukee of 1874 as did the Board of Water Commissioners in their Report of 1875, in which it decorates the frontispiece map.
6. Alterations and additions:
 - a. 1883: Addition to the iron stairway inside the tower, \$221.04.
 - b. 1964 and later: Tower refurbished (iron roof and trim painted) and lighted.

B. Historical Events and Persons Connected with the Structure:

The similarity between the North Point Water Tower and its more elaborate counterpart in Chicago, completed in 1869, may be noted here. There is no reason to suppose that Gombert was unaware of the celebrated Chicago tower, and one reliable source reports that his colleague Moses Lane, city engineer and chief engineer of the Milwaukee Water Works, had been, earlier in his career, an associate of Ellis Chesbrough, city engineer of Chicago.

The North Point Water Tower was one of several structures built for the Milwaukee Water Works in 1872-75. Its contemporaries included:

1. The Engine House (North Point Pumping Station), located below the bluff on the Lake Michigan beach and comprising the coal shed, workroom, boiler room, and engine room--all in a single building, and a free-standing chimney. Altered in 1884, 1895, and 1927-29, the Engine House was razed in 1965, after completion of a new facility on the Lake Michigan Shore just to the north.
2. The North Avenue Bridge carried the main which extended from the Water Tower to the Reservoir across the Milwaukee River. Like the Engine House, the original bridge is gone.
3. The Reservoir is situated across the Milwaukee River some six thousand feet west of the Water Tower in what is now Kilbourn Park. This vast structure, with its small, brick guardhouse and wrought-iron fence, remains.

The Water Tower was designated a Milwaukee Landmark by the Milwaukee Landmarks Commission in 1968 and was one of five structures in the United States named historic landmarks by the American Water Works Association in 1969.

C. Sources of Information:

1. Old views: Early views are abundant. In addition to those already cited, one may list:
 - a. Photographic collections:
 - 1) Local History Room, Milwaukee Public Library--a collection including a photograph of the tower dating from 1875. This photo was published in John G. Gregory's History of Milwaukee, Wisconsin, Chicago and Milwaukee, 1931, II, 971.

- 2) Milwaukee County Historical Society--a group of views including one showing the Water Tower under construction. This collection also contains photos of the Engine House in its original form and with the various later additions.
 - 3) Milwaukee Water Works--a collection divided between the vault at the Water Works office, 402 Municipal Building and the office of the Supervisor of Structures and Grounds, Kilbourn Park Reservoir. The latter group of photos is particularly important and includes many views of the now-destroyed Engine House (exteriors and interiors) and auxiliary buildings that once stood at North Point, views revealing the progress of land fill and landscaping on the lake-front; and the like.
- b. Published views--photos and graphics:
- 1) In the 1875 Report mentioned above there are also drawings illustrating the outline of the pumping engines, profile of the North Avenue Bridge, profile of the Water Works from the lake to the Reservoir, plan of the Reservoir, and profile showing the elevation of the flow line of stand-pipe and Reservoir.
 - 2) "Milwaukee," The Milwaukee Monthly Magazine, IX, February, 1875, 47.
 - 3) Charles B. Harger (compiler), Milwaukee Illustrated, Milwaukee, 1877, 109.
 - 4) History of Milwaukee, Wisconsin, Chicago, 1881, 415.
 - 5) Andrew Morrison (editor and compiler), The City of Milwaukee and State of Wisconsin, Milwaukee, 1888, 11.
 - 6) Milwaukee Illustrated, Milwaukee, n.d. (c. 1889), 52, 53.
 - 7) Milwaukee Sentinel, An Illustrated Description of Milwaukee, Milwaukee, 1890, frontispiece and 1.

2. Bibliography:

a. Primary and unpublished sources:

Becker, Elmer W., letter to Richard W. E. Perrin, Chairman, Milwaukee Landmarks Commission, December 8, 1967 (on file with the Milwaukee Landmarks Commission).

Becker, Elmer W., letter to recorder, June 27, 1969.

Inspection of the tower, July 1 and 8, 1969.

Interview with Elmer W. Becker, Superintendent, Milwaukee Water Works, June 18, 1969.

Interview with Nate Miller, Assistant Superintendent, Milwaukee Water Works, June 30, 1969.

Interview with Robert Williams, Supervisor of Structures and Grounds, Milwaukee Water Works, July 1, 1969.

Milwaukee Sentinel Index, Local History Room, Milwaukee Public Library.

b. Secondary and published sources:

"AWWA Committee Selects Five Water Landmarks," Willing Water, XIII, No. 8, April 30, 1969, 2, 8-9.

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Boyle, Thomas. "Public Works, Public Buildings and Federal Offices," History of Milwaukee. Edited by Howard L. Conard, Chicago and New York: 1895. I, 288.

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Milwaukee's Leading Industries. New York: 1886. 136.

Morrison, Andrew (editor and compiler). The City of Milwaukee and State of Wisconsin. Milwaukee: 1888. 11.

Perrin, Richard W. E. The Architecture of Wisconsin. Madison: 1967. 81.

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Unidentified clippings in the collection of the Milwaukee County Historical Society.

"Water Supply," Milwaukee Sentinel, August 29, 1873, 8.

"Water-Works," Milwaukee Sentinel, August 12, 1873, 8.

"Water-Works," Milwaukee Sentinel, March 23, 1875, 2.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: The North Point Water Tower, designed in the Neo-Gothic style, is an unusual structure, one of the few such buildings still standing in the country today. It houses a standpipe designed to take the surge of water when the early-day pumps were turned on. In 1969 the building was selected as one of five Water Landmarks in the United States by the American Water Works Association. The tall structure of native limestone capped by a galvanized iron spire represents the successful synthesis of architecture and engineering.
2. Condition of fabric: Excellent.

B. Description of Exterior:

1. Over-all dimensions: 24 feet 9 inches square with buttresses at the four corners. From center line to center line of the buttresses, the structure measures 29 feet 6 inches square. The base rises 65 feet and from it rises the circular tower to a total height of over 175 feet.
2. Foundation: Limestone, extending 17 feet below grade and 4 feet below the base of the standpipe, according to a newspaper account of 1873 describing the early stages of construction.
3. Wall construction: The walls are buff-colored, rock-face, Wauwatosa limestone, with trim, caps and ornament of dressed Wauwatosa limestone. Buttresses define the corners of the square base of the tower.
4. Structural system: Load-bearing masonry walls of limestone backed with Milwaukee cream-colored brick.
5. Chimneys: None.
6. Openings:
 - a. Doorways and doors: The only entrance is a Gothic arched doorway on the southeast facade trimmed with dressed native limestone. The two large panelled doors have a wooden panelled, hinged transom imitating the window heads of the lower-level windows.

- b. Windows: A large window in a Gothic arch like that of the entry is centered on each of the other three walls of the base block. Above the windows and door, on each of the four sides of the base block, there are paired, round-headed, fixed-sash units with dressed stone trim. Placed around the shaft of the tower at regular intervals to illuminate the open interior are a number of single, round-headed windows with simple dressed stone trim. At the observation deck level beneath the spire, four windows, similar to those on the ground level, but smaller, are centered in the small gables of the roof. All window sashes are white pine.

7. Roof:

- a. Shape: An eight-sided spire rises above the four steep-pitched gable roofs of the four observation level windows, in between which there are four small pinnacles. A weathervane surmounts the spire.
- b. Covering: Galvanized iron.
- c. Framing: Wood with cast-iron supports (probably for the four small pinnacles).

C. Description of Interior:

- 1. Floor plans: The floor plan is a single circular compartment 13 feet 9 inches in diameter. The walls are more than six feet thick in this area. The tower tapers slightly upward to the level of the wooden observation deck 134 feet 7 inches above the floor level. An iron, spiral staircase wraps around the standpipe to the upper levels. The lower windows in the circular shaft (about 65 feet 3 inches above base level) are connected to the steps by an iron catwalk and brace. An iron-plate floor with a brace to the pipe is located 17 feet below the observation deck and 2-1/2 feet below the grill cap of the standpipe.

The wrought-iron standpipe is four feet in diameter and rises 120 feet above the floor level. According to a Water Commission report of 1875, the pipe has a total height of 130 feet, with a base of cast iron. The size of the base is unknown, but the report indicated that it has three openings 36 inches in diameter, one for the force main connection, one for the main leading to the reservoir, and the other capped.

2. Stairways: A circular staircase winds around the standpipe. Made of cast iron, it was furnished and installed by Harnbach and Wagner -- the firm that also did the galvanized ironwork of the roof. The average height of the risers is 7-1/2 inches.
3. Flooring: The floor is made up of iron plates for the main level and intermediate level (near the top of the standpipe). The observation deck floor is wood.
4. Wall finish: Cream-colored brick form the inner structural core of the tower.
5. Interior trim: White pine is used for the windows and doors. No other trim is utilized.
6. Hardware: Only the hinges on one small opening sash of an observation-level window appear to be original. The door hardware is much newer.
7. Lighting: One single electric light is at grade level; this is a later addition.
8. Heating: None.

D. Site:

The structure is centered on a raised plat of land 83 feet square. A 5-foot sidewalk and a flight of steps with five risers leads to the entrance of the tower. Trees and shrubs have been planted at the base. The site is situated at the east end of East North Avenue, forming a traffic circle.

Prepared by John N. DeHaas, Jr.
Supervisory Architect
National Park Service
July 15, 1969

PART III. PROJECT INFORMATION

These records were made during the 1969 Milwaukee Project which was sponsored by the Historic American Buildings Survey, Office of Archeology and Historic Preservation, National Park Service, Department of the Interior, and the Milwaukee Landmarks Commission of the City of Milwaukee, Richard W. E. Perrin, Chairman. The project was done under the direction of James C. Massey, then Chief of HABS, and the

team members included architect John N. DeHaas, Jr. (Montana State University), Project Supervisor, Mary Ellen Wietczykowski--now Mary Ellen Young--(Milwaukee Landmarks Commission), Project Historian, and student architects Larry Hermsen (Iowa State University), Roger Little (Kansas University), Thomas Sanford (Washington State University), and Donna Woodrum (Virginia Polytechnic Institute). The drawings were edited by HABS architect John Burns and the data prepared for transmittal to the Library of Congress by HABS editors Carolyn R. Heath, Mary Farrell, Candace Reed and Philip Hamp. Photographs were taken by HABS staff photographer Jack Boucher.