

**Baltimore City
Commission for Historical and
Architectural Preservation**

**Landmark Designation Report
September 8, 2015**



Eastern Avenue Pumping Station

751 Eastern Avenue
Baltimore, Maryland



COMMISSION FOR HISTORICAL & ARCHITECTURAL PRESERVATION

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Significance Summary

At the start of the twentieth century, Baltimore City trailed behind other American cities in terms of public health and sanitation, because it lacked a municipal sewer system. Following the Great Baltimore Fire of 1904, the City quickly constructed a comprehensive and modern sewer and stormwater management system that connected the entire city. It was an engineering marvel that anticipated the needs of the city decades into the future. The Eastern Avenue Pumping Station, designed by Baltimore architect Henry Brauns and completed in 1912, is the most prominent structure constructed for this sewer system. The large Classical Revival building, located on the Jones Falls at Eastern Avenue in downtown Baltimore, still serves its original purpose of meeting the sanitation needs of the city.

History

Until the first decade of the 20th century, Baltimore was far behind other American cities in terms of adequate disposal of sewage, as it lacked a sewer system.¹ Citizens relied on privies, cesspools, and open drains for its sewage, which was a serious detriment to public health.² The 1895 Annual Report of the Health Department stated that “our privies are the most dangerous enemies to our lives and happiness...[and] are a fruitful source of disease,” and directed that legal recourse should be taken to develop a sewer system, “a practical idea which is carried out by many cities more enterprising than Baltimore.”³

The City formed the Baltimore Sewerage Commission in the first decade of the twentieth century to address the sanitary needs of a rapidly expanding city. The commission developed a comprehensive plan for a sewage and storm-water disposal and treatment system for the entire city.⁴ This was touted as the largest sewer construction and sewage disposal project ever completed in the world. Unlike other major cities that had constructed their sewer systems over a series of decades or centuries, Baltimore developed and undertook the planning and construction of the sewer system as a single project.⁵

The Baltimore Sewerage Commission hired consulting engineers from New York, Providence, and Boston to make recommendations based on the best engineering practices, so that Baltimore would have the most modern sewer system informed by the best standards of the time.⁶ In an article published in *National Geographic* in 1909, Chief Engineer of the Sewerage Commission Calvin Hendricks wrote that “The city of Baltimore is showing the same progressive spirit in handling this great sanitary problem that she has shown in many other enterprises of world-wide interest, causing cities all over the world to send committees and engineers to study the plans and methods of prosecuting the work, which in magnitude, character, and rapidity of execution stands unequalled.”⁷ Even in 1937, the city’s sewer system was still considered to be excellent and modern, and “superior in some respects to those in other large cities.”⁸

The impetus for the construction of a comprehensive sewer system came by way of calamity through the Great Fire of 1904, which devastated the majority of the business district. While the fire caused significant damage to the city physically and economically, it also afforded the City an opportunity to modernize its downtown and its infrastructure.⁹ In the same year, the Maryland legislature passed a law prohibiting the discharge of untreated sewage into the Chesapeake Bay or its tributaries.¹⁰ The creation of a city-wide sewer system took over a decade, with the main lines for the sewer system and approximately two-thirds of the lateral sewers completed by 1914.¹¹

The Eastern Avenue Pumping Station, originally called the Baltimore Sewage Pumping Station, served a significant role in the improved sanitary conditions of the city, and was a large, prominent and handsome symbol of the sewer system.¹² It was designed by Baltimore architect Henry Brauns, and constructed by the Noel Construction Company, overseen by Calvin W. Hendrick, Chief Engineer of the Baltimore Sewerage Commission.¹³ A wash drawing of Braun's design was published on the front page of the August 6, 1908 edition of the national journal *Engineering News*, along with detailed explanations of the proposed sewer system.¹⁴

Henry Brauns was one of the founding members of the Baltimore chapter of the American Institute of Architects in 1870. Many of his known works were industrial buildings that were utilitarian in function, but were highly ornamental in architectural detail.¹⁵ His other works include the Northern District Police Station in Hampden (a Baltimore City Landmark), Brown's Arcade in downtown Baltimore, the Romanesque tower and facade of Holy Cross Polish National Catholic Church in Fells Point, the Gatehouse at Lorraine Park Cemetery in Baltimore County, and the Bryant Street Pumping Station in Washington, D.C.¹⁶ All except the Bryant Street Pumping Station are listed on the National Register of Historic Places. The majority of his works were industrial or for public utilities, and do not survive. Some of those that don't survive in Baltimore include the Mount Royal Pumping Station, Knabe Piano Works, and Gail & Ax Tobacco Warehouse.¹⁷

The pumping station was constructed on the banks of the Jones Falls, adjacent to the Inner Harbor and one block away from the President Street Station terminus of the Pennsylvania, Baltimore, and Washington Railroad. Its proximity to the harbor and railroad station gave it easy access for shipments of coal that powered the building, as well as machinery.¹⁸

The pumping station served the low-lying sections of the city, which comprised about one-third of the city's area and included the densely-populated downtown. While the majority of the sewer system functioned on gravity, this pumping station collected the sewage at a lower elevation, pumped it up a height of seventy-five feet to the purification plant in the pumping station, which then flowed via gravity to a treatment facility in Baltimore County.¹⁹ This was an important engineering solution for the public health of citizens that lived and worked in the low-lying sections of the city, which had long been plagued by diseases spread by poor sanitation.

A summary of the project in the August 6, 1908 edition of the national journal *Engineering News* described the building in this way:

“The station comprises an engine-room 180 ft. long, 54 ft. wide and 68 ft. high from the basement floor to the tie-beams of the trusses; a boiler-room 94 ft. long by some 50 ft. wide; and a brick chimney about 6 2/3 ft. in diameter at the top and 200 ft. high above the boiler-room floor. Coal bins with a capacity of 1,200 tons will be placed above the boilers... The foundations of the building will be carried to a depth of 23 ft. below mean low tide, or some 31 ft. below the surface. The walls of the building, to the height of the main floor, will be of granite, and above that level they will be composed of terra cotta moldings. A copper cornice will be provided, and the roof will be of slate on steel trusses carried by steel columns built into the walls. The columns will support a traveling crane.”²⁰

Along with the engine and boiler room, there was a screen chamber, a reception room, offices for the superintendent and others, a drafting room, storage rooms, and restrooms.²¹ It was described as being as “neat, clean, and odorless as any business office” by Chief Engineer Hendrick.²²

Construction of the pumping station began in 1908, but work was halted for several months while the City’s Building Inspector, Preston and the Chief Engineer of the Baltimore Sewerage Commission, Calvin Hendrick, engaged in a long debate over the appropriate material and depth for the building foundation, as it was going to be one of the heaviest buildings ever constructed in the city and there were concerns about the stability of the soil.²³ Arbitrators were brought in to settle the dispute, and in April 1909, the issue was resolved with the arbitrators upholding Hendrick’s determination regarding the depths, and the contractors were ordered to “work day and night” to make up for the four month delay.²⁴

The cornerstone of the building was placed in June 1910, and construction was completed in 1911, with foundations for five pumps, and installation of three Corbliss triple expansion pumping engines that each had a 27.5 million gallon capacity.²⁵

In 1908, the city had a population of approximately 700,000, and the pumping station was designed to serve a population of 1 million.²⁶ In 1931, a new pump with an even greater capacity was added, as at that time the station pumped half of the city’s daily volume of sewage from the southern portions of the city.²⁷ By 1960, the pumps were replaced with smaller turbine pumps, which only occupied the lower floor. As part of the upgrades, the smokestack was truncated and the obsolete exterior coal conveyors were removed.²⁸

In 1978, the Department of Public Works undertook a \$2 million restoration of the building, which included cleaning the façade, and replacing windows and copper cladding and frames. This work was approved by CHAP in its hearing on July 21, 1978.²⁹ This restoration received the Chapter Heritage Award from the Virginia-DC-Maryland Chapter, American Public Works Association.

A portion of the building became home to the Baltimore Public Works Museum in 1982, which was the first museum of its kind when it opened, educating the public about public infrastructure such as plumbing, roads, and rail tunnels.³⁰ The museum was funded by the City of Baltimore, and closed in 2010 due to budget shortfalls.³¹

In September 2005, CHAP approved plans to rehabilitate the exterior, update lighting, landscaping, and construct a new generator building on the site. The Pumping Station still serves its original purpose, meeting the sanitation needs of the city by pumping sewage.

The property is listed on the Maryland Inventory of Historic Places, and was determined to be eligible for listing on the National Register of Historic Places in 2006 by the Maryland Historic Trust.

Architectural Description

(Architectural Description reproduced from “Eastern Avenue Pumping Station” Maryland Historical Trust Determination of Eligibility Form, completed by Katherine Larson Farnham, John Milner Associates, 1/25/2006.)

The Eastern Avenue Pumping Station, now housing the Public Works Museum, is a monumental Classical Revival municipal building. It faces north on a small extension of Eastern Avenue between President Street and the channel between it and Pier 6 of the Inner Harbor. It is a three-and-one-half-story structure faced with orange brick and trimmed with sandstone and granite stonework. There are four primary sections running north to south: the front main block, the hyphen, the rear wing, and a smokestack structure attached to the rear wing. The main block is eleven bays wide and three bays deep; the hyphen between the main block and rear wing is two-and-one-half-stories in height and two bays deep; and the rear wing is the same height as the main block and five bays wide and three bays deep. The smokestack is a round brick structure set atop a two-story square base which echoes the architecture of the main building. The granite foundation and striated brick first floor are identical to the main building, and classical blind arches adorn the three exposed sides of the base on the second-floor level. A brick passageway on this level connects the stack to the main building.

The main building's sections have a rusticated granite-block foundation surmounted by a smooth granite water table at the level of the first floor windowsills. The first floor level is ornamented by horizontal striations in the orange brick cladding, with dramatic flared hoods above the window openings. Paired windows with transoms light this floor, and the center entrance on the north facade of the main block features an elaborate stone surround. Double-lead five-panel wooden doors with a round-arched fanlight

are recessed within an arched surround with a carved keystone. The surround is set within a stone entrance hood with side panels supporting paired scroll brackets on either side. The top of the porch is actually a balcony with a solid stone parapet pierced by round holes. This entrance is at the center of a three-bay-wide, one-by-deep, two-and-one-half-story projecting section with a gabled pediment. The pediment has full returns, dentil trim, and an oculus gable window with four keystones. A sandstone cornice denotes the base of the second floor, which universally features paired windows with shared Roman-arched transoms and hood moldings, set in small recesses between brick pilasters. A wide brick entablature and heavy dentiled cornice mark the top of this floor.

The third level of the main block and rear wing could be construed as one or two stories. It consists of a short brick half-story with paired four-light windows and four-sided corner turrets with curved-pyramidal roofs clad in slate shingles, above which is the main hipped roof, also clad in slate. On the main block, this roof is punctuated by numerous front-gabled copper-clad dormers, each containing a four-light window, and the top of the roof is occupied by an oblong hip-roofed copper-clad monitor with horizontal bands of four-light windows. The rear wing's roofline lacks dormers but its top is surmounted by a tall square tower with a curved pyramidal roof similar to those on the turrets. The tower has copper cladding and has paired four-light windows at its base surmounted by enclosed vents above.

Staff Recommendations

The property meets CHAP Landmark Designation Standards:

B. A Baltimore City Landmark may be a site, structure, landscape, building (or portion thereof), place, work of art, or other object which:

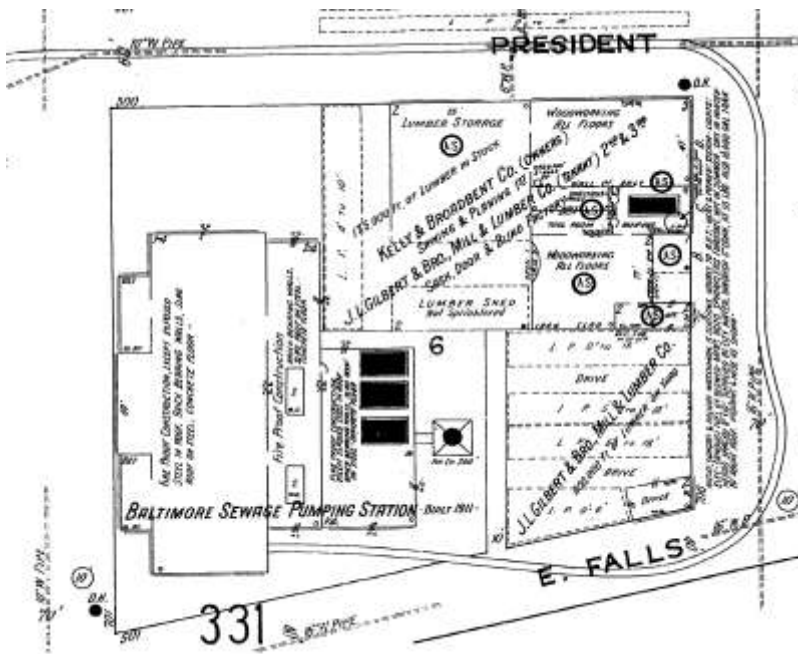
1. Is associated with events that have made a significant contribution to the broad patterns of Baltimore history;
3. That embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
4. That have yielded or may be likely to yield information important in Baltimore prehistory or history.

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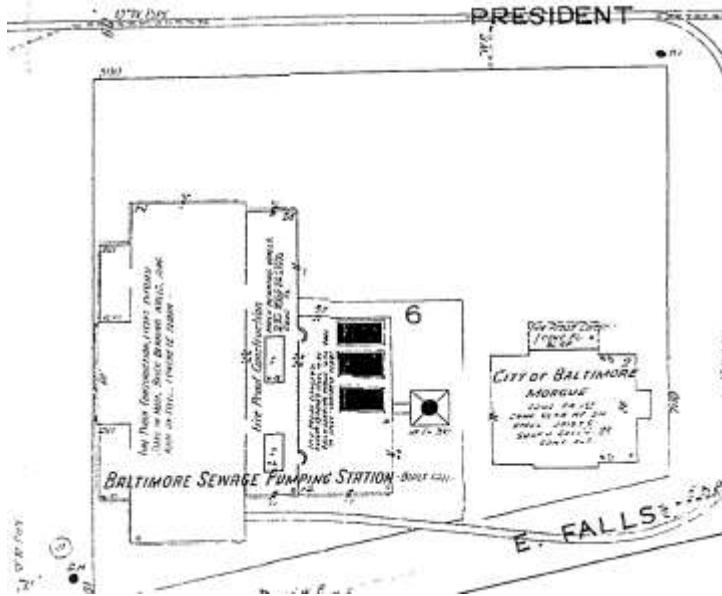
Locator Map



Historic Map

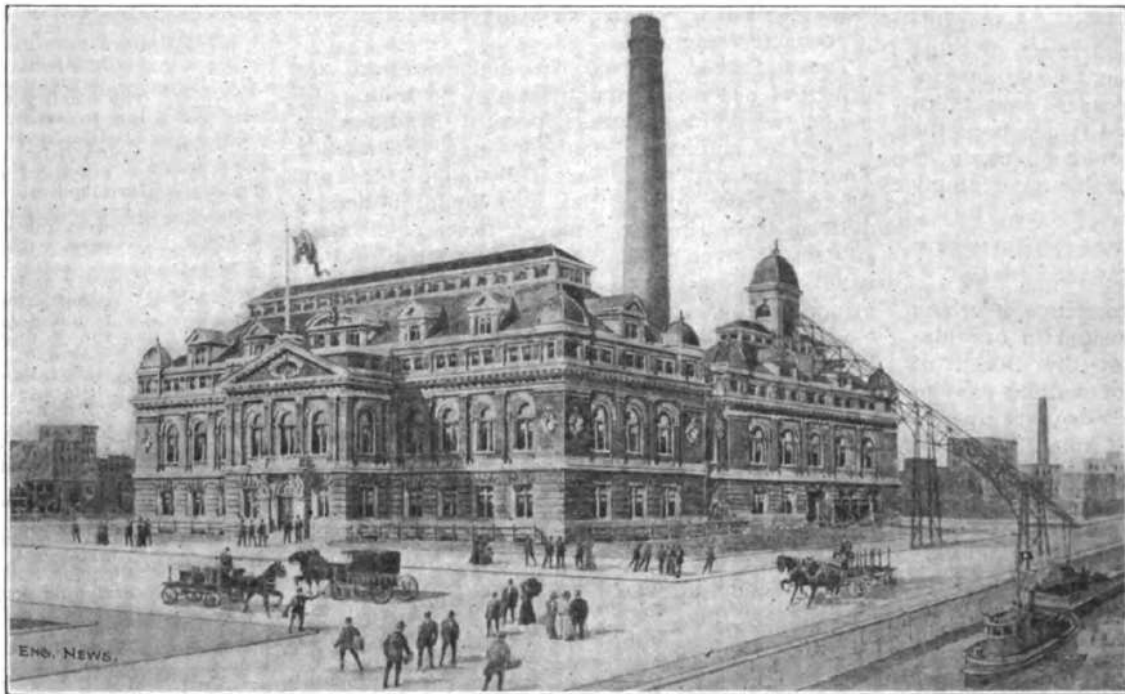


1914 Sanborn Fire Insurance Map



1953 Sanborn Fire Insurance Map

Historic Image

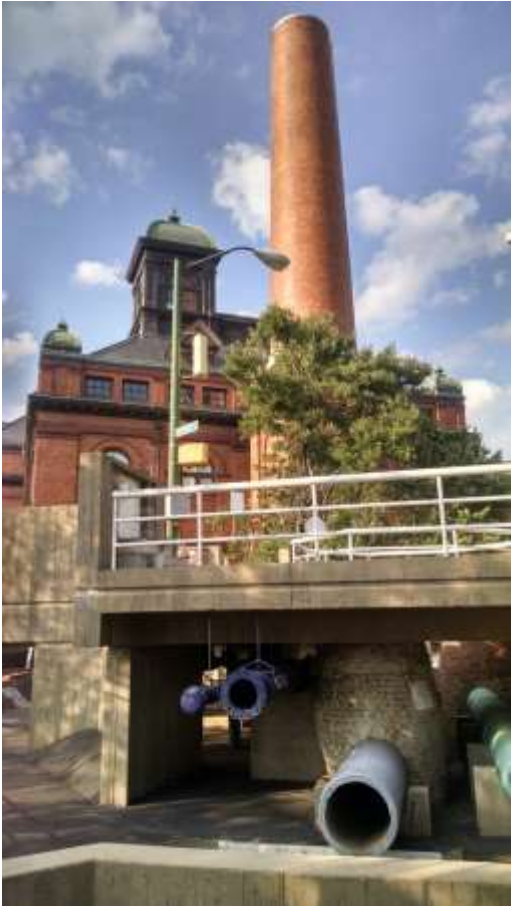


NEW SEWAGE PUMPING STATION FOR BALTIMORE, MD.

An image of the Pumping Station as designed by Henry Brauns, published in *Engineering News* in 1908. (*Engineering News*, Vol. 60, No. 6, August 6, 1908, pg. 137.)

Current Photographs





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- ⁷ Calvin W. Hendrick “Colossal Work in Baltimore” *National Geographic*, Vol. 20, April, 1909, pg. 373.
- ⁸ William F. Conhurst “Where the Storm Waters Disappear: BALTIMORE'S GREAT DRAINS ARE BUILT FOR ANY EMERGENCY”, *The Sun* (1837-1989); Jul 11, 1937; ProQuest Historical Newspapers: The Baltimore Sun, pg. M10
- ⁹ Mary Ellen Hayward and Charles Befoure. *The Baltimore Rowhouse* (New York: Princeton Architectural Press), 127.
- ¹⁰ Chapter 349 of the Acts of the General Assembly of 1904
- ¹¹ Fox, 1546.
- ¹² 1914 Sanborn Fire Insurance Map, Volume 4, Page 341.
- ¹³ *Engineering News*, Vol. 60, No. 6, August 6, 1908, pg. 137. Published by Google and available here: https://books.google.com/books?id=SDRKAQAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- ¹⁴ *Engineering News*, Vol. 60, No. 6, August 6, 1908, pg. 137.
- ¹⁵ Baltimore Architecture Foundation “Henry F. Brauns” <http://baltimorearchitecture.org/biographies/henry-f-brauns/>
- ¹⁶ Baltimore Architecture Foundation; Justin Kockritz, “The Bryant Street Pumping Station and the McMillan Park Reservoir Historic District: A Question of Boundaries” Masters Thesis, Graduate Program in Historic Preservation, University of Maryland, 2009.
- ¹⁷ Baltimore Architecture Foundation; Justin Kockritz.
- ¹⁸ *The Engineering Record*, Vol. 60, No. 18, October 30, 1909, pg. 491. Published by Google and available here: <https://books.google.com/books?id=UuA1AQAAAMAAJ>
- ¹⁹ *The Engineering Record*, Vol. 60, No. 18, October 30, 1909, pg. 491.
- ²⁰ *Engineering News*, Vol. 60, No. 6, August 6, 1908, pg. 137. Published by Google and available here: https://books.google.com/books?id=SDRKAQAAMAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false
- ²¹ *The Engineering Record*, Vol. 60, No. 18, October 30, 1909, pg. 491.
- ²² “RAPID WORK ON SEWERS: 100,000 HOUSES CONNECTED WITH SYSTEM IN A FEW ...”, *The Sun* (1837-1989); Jul 19, 1915; ProQuest Historical Newspapers: The Baltimore Sun, pg. 9
- ²³ “TO BUILD ON CONCRETE PILES: MR. PRESTON HAS HIS WAY ABOUT PUMPING STATION FOUNDATIONS”, *The Sun* (1837-1989); Dec 23, 1908; ProQuest Historical Newspapers: The Baltimore Sun, pg. 7; “PUMP STATION WORK STOPPED: WILL AWAIT DECISION AS TO FOUNDATION MATERIAL”, *The Sun* (1837-1989); Jan 6, 1909; ProQuest Historical Newspapers: The Baltimore Sun, pg. 7; “AT ODDS OVER FOUNDATION: MESSRS. PRESTON AND HENDRICK DIFFER OVER PUMPING STATION WORK”, *The Sun* (1837-1989); Feb 14, 1909; ProQuest Historical Newspapers: The Baltimore Sun, pg. 12
- ²⁴ “MR. HENDRICK UPHELD: ARBITRATORS DECIDE PUMPING STATION DEPTHS ARE ...” *The Sun* (1837-1989); Apr 22, 1909; ProQuest Historical Newspapers: The Baltimore Sun, pg. 14
- ²⁵ Katherine Larson Farnham; “\$10,515,032 FOR SEWERS: HENDRICK REPORTS \$4,596,881 MORE WILL BE ...” *The Sun* (1837-1989); Feb 14, 1912; ProQuest Historical Newspapers: The Baltimore Sun, pg. 9
- ²⁶ *The Engineering Record*, Vol. 60, No. 18, October 30, 1909, pg. 491.
- ²⁷ Gerald Griffin, “Ridding A City Of Its Wastes 24 Hours Each Day: Baltimore Plant At ...” *The Sun* (1837-1989); Aug 30, 1931; ProQuest Historical Newspapers: The Baltimore Sun, pg. HT1
- ²⁸ Katherine Larson Farnham,
- ²⁹ CHAP Hearing Summary, Eastern Avenue Pumping Station File, On file at CHAP office.
- ³⁰ Linell Smith, “Looking beneath the streets: Museum explores city's underpinnings”, *The Sun* (1837-1989); May 21, 1988; ProQuest Historical Newspapers: The Baltimore Sun, pg. 1E; Jacques Kelly, “PUBLIC WORKS MUSEUM ABRUPTLY SHUTTERED: CITY'S BUDGET SHORTFALL BLAMED FOR 'REGRETTABLE' DECISION” *The Baltimore Sun* [Baltimore, Md] 04 Feb 2010: A.2.
- ³¹ Jacques Kelly