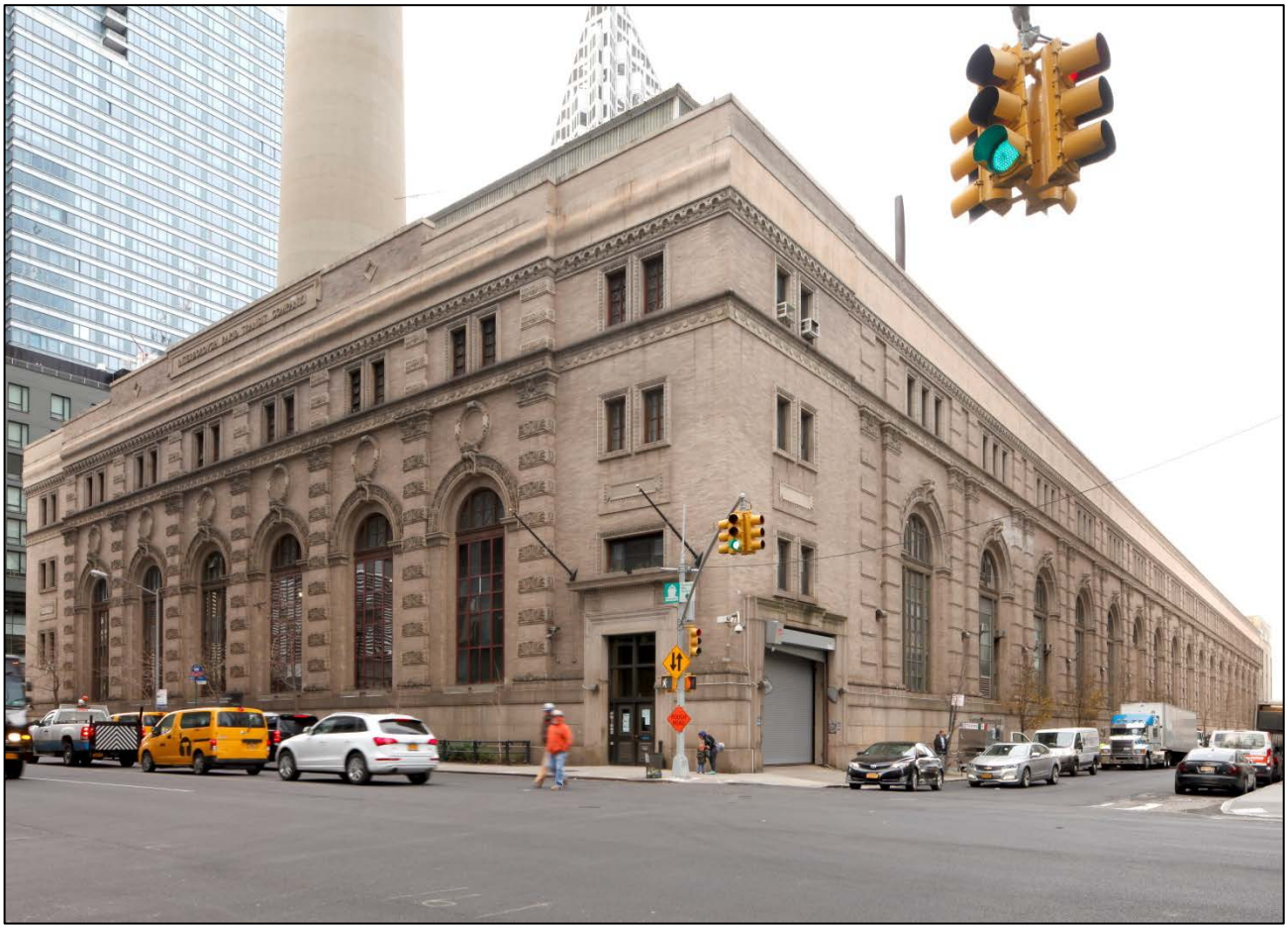
DESIGNATION REPORT

Interborough Rapid Transit Company Powerhouse



Landmarks Preservation Commission

Designation Report
IRT Powerhouse
December 5, 2017

Designation List 503
LP-2374

DESIGNATION REPORT

Interborough Rapid Transit Company Powerhouse

LOCATION

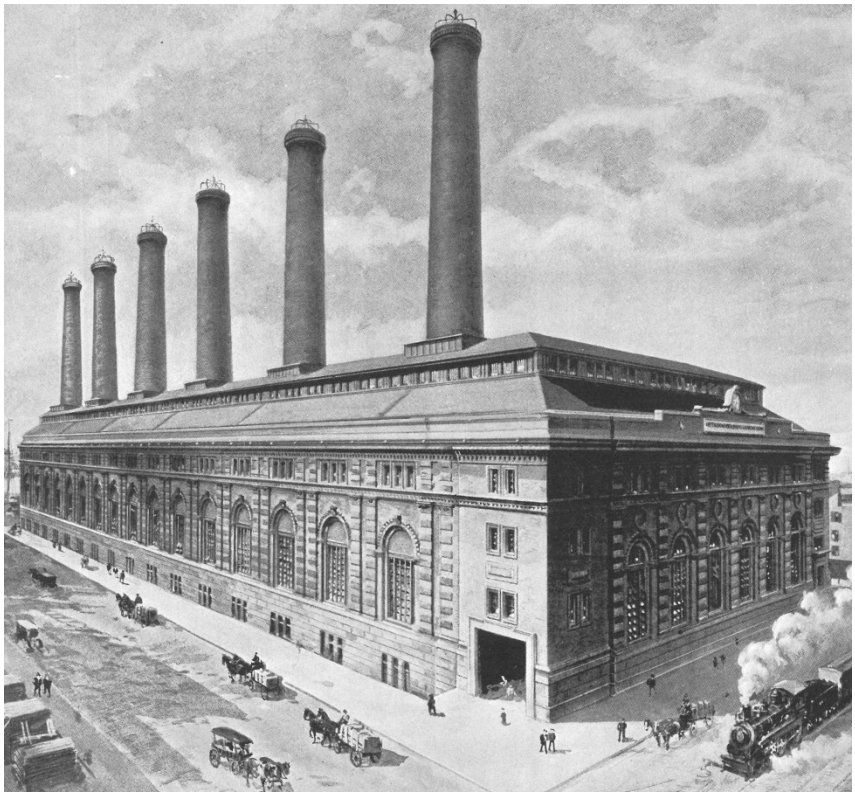
Borough of Manhattan
855-869 Eleventh Avenue
(aka 601-669 West 58th Street,
600-648 West 59th Street)

LANDMARK TYPE

Individual

SIGNIFICANCE

Opened in 1904 to power the pioneering IRT Subway, this immense powerhouse represents a unique integration of 20th-century engineering and classical architectural expression, featuring an opulent Neoclassical exterior designed by the renowned architect Stanford White.



IRT Powerhouse, Rendering, c. 1902
Interborough Rapid Transit, *The New York Subway: Its Construction and Equipment* (New York: IRT Company, 1904), 22

IRT Powerhouse, 1978
(David Sagarin, Historic American Engineering Record, 1978)

Interborough Rapid Transit Company Powerhouse

855-869 Eleventh Avenue
(aka 601-669 West 58th Street,
600-648 West 59th Street), Manhattan

Designation List 503
LP-2374

Built: c. 1902-05
Engineers: S. L. F. Deyo, Lewis B. Stillwell, and John Van Vleck
Architect: Stanford White of McKim, Mead & White

Landmark Site: Borough of Manhattan, Tax Map Block 1106, Lot 1 in part, consisting of the original circa 1902-05 building (and excluding the circa 1949-51 addition at the western portion of the lot), and the land upon which this portion of the improvement is sited.

On July 14, 2009, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Interborough Rapid Transit Company Powerhouse and the proposed designation of the related Landmark Site (Item No. 2).[1] The hearing had been duly advertised in accordance with the provisions of law. Thirty-three people testified in favor of the proposed designation, including Councilmember Gale Brewer and New York State Assemblymember Linda B. Rosenthal, as well as representatives of New York State Senator Tom Duane, Manhattan Borough President Scott Stringer, Manhattan Community Board 4, the American Institute of Architects, the Friends of Terra Cotta, Historic Districts Council, Hudson River Powerhouse Group, Landmark West!, Metropolitan Chapter of the Victorian Society in America, Municipal Art Society, New York Landmarks Conservancy, Riverside South Planning Corporation, Roebling Chapter of the Society for Industrial Archeology, Society for the Architecture of the City, and Women's City Club of New York, and 16 individuals. Two people, both representatives of the owner, spoke in opposition to the proposed designation. The Commission also received 203 written submissions in support of the proposed designation, including submissions from New York State Senator Bill Perkins, Manhattan Community Board 7, the Alliance for the Arts, the Beaux Arts Alliance, the Committee for Environmentally Sound Development, Friends of the High Line, the Institute of Classical Architecture and Classical America, and several individuals.

On November 5, 2015, the Landmarks Preservation Commission held a special public hearing on Backlog Initiative Items in the Borough of Manhattan, including the Interborough Rapid Transit Company Powerhouse (Item I-Borough of Manhattan Group A, 8). The hearing had been duly advertised in accordance with the provisions of law. Twenty-two people testified in favor of the proposed designation, including New York State Senator Brad Hoylman, New York State Assemblymember Linda B. Rosenthal, and Manhattan Borough President Gale Brewer, as well as representatives of Manhattan Community Board 4, the American Institute of Architects New York Chapter, Guides Association of New York City, Historic Districts Council, Hudson Powerhouse Group, Landmark West!, New York Landmarks Conservancy, Save Harlem Now!, Society for the Architecture of the City, and Victorian Society of New York, and nine individuals.

Two people, both representatives of the owner, spoke in opposition to the proposed designation. The Commission also received 43 written submissions in support of the proposed designation, including one from the City Club of New York, as well as a letter signed by officers of multiple organizations, including the Friends of Terra Cotta, Institute of Classical Architecture and Art, Municipal Art Society, and Society for Industrial Archeology. In addition, the Commission received a petition in favor of the proposed designation with 548 signatures. Between 2009 and 2017, the Commission received 521 postcards in favor of designating the Interborough Rapid Transit Company Powerhouse.

Statements about support for the Interborough Rapid Transit Company Powerhouse during the backlog process reflect specific testimony given or submitted during the hearing or while the record was open. In addition, the Commission received numerous more general communications about the backlog that were directed at all items on the backlog. These items were not specifically submitted while the record was open. Due to the volume and variety of these more general emails they are not tallied for individual buildings.

Summary

Interborough Rapid Transit Company Powerhouse

Opened in 1904 to provide electric power for the pioneering IRT Subway, the Interborough Rapid Transit Company Powerhouse represents a unique integration of 20th-century engineering and classical architectural expression. The largest generating station constructed up to that time, its exterior was designed by the renowned architect Stanford White in his typically opulent style, making it the system's preeminent monument reflecting the ideals of the City Beautiful movement.

By the 1890s, Manhattan's extreme traffic congestion and population density were threatening its leadership as a trade and business center. This led city leaders to push for an underground rapid-transit system that would free up its streets and open vast portions of the Upper West Side, Upper Manhattan, and the Bronx to intensive development. The Rapid Transit Commission's chief engineer, William Barclay Parsons, decided to run the new system using electricity, which was then in its infancy as a form of motive power. Given the unwillingness of private investors to finance such a risky project, the city took the novel approach of funding and maintaining ownership of the new subway line, which would be built and operated by a private company. This firm, headed by the banker August Belmont, was founded in 1902 as the Interborough Rapid Transit Company, or IRT. Upon its opening, the IRT Subway would be only the sixth subway in the entire world and the longest subway line completed up to that time as a single project.

The subway would need a powerhouse of unprecedented size, with a waterfront location facilitating the delivery of immense amounts of coal and the removal of mountains of waste ash. Its builders sought "as commanding a site as possible" for the structure, reflecting their belief that "the powerhouse of the city's great transit system will be something in which New Yorkers will take no little pride." The entire block bounded by Eleventh and Twelfth Avenues, and West 58th and 59th Streets, along with property extending to the Hudson River's bulkhead line, were acquired in 1901, and the planning and basic design of the building were undertaken by a team of distinguished engineers including S. L. F. Deyo, John Van Vleck, and Lewis B. Stillwell, who was a leader in developing alternating-current systems for urban railways. It would be a mammoth structure, filling the entire west blockfront of Eleventh Avenue and extending for almost 700 feet along West 58th and 59th Streets. As the powerhouse neared completion in 1904, it constituted the largest building operation underway in the entire city. Capable of producing 100,000 horsepower and holding more than 30 million pounds of coal, it was both massive and intricate, with coal delivery and ash removal largely automated through a system of conveyors and hopper cars. A railroad spur integrated into the design enabled freight trains to enter the building through large portals at its eastern end.

With the basic design of the powerhouse worked out by its engineers, Stanford White was called in to design its exterior. White at that time was one of the country's most celebrated architects, and his hiring testifies to the desire of the IRT's directors to transform a utilitarian structure into, in their words, "an architectural landmark." His design for the building's exterior masterfully concealed its disparate boiler house and generating station within elegant, unified facades. White cloaked the exterior in Milford granite, buff Roman brick, and creamy terra cotta, lavishing it with classical ornament incorporating French Neoclassical and Neo-Grec

influences. His design has been praised by numerous architects and historians; at the time of its opening, engineer J. C. Bayles, writing in the *New York Times*, called the powerhouse "an ornament to the west side…. But for its stacks, it might suggest an art museum or public library rather than a powerhouse." In 1940, the city's Board of Transportation took over the IRT's operations, and in 1959, the building was acquired by the Consolidated Edison Company. Today, the IRT Powerhouse retains its classical grandeur, memorializing in impressive form the engineering achievement of the original IRT system and serving as a prominent reminder of the city's industrial history. Over time, as technologies to produce and deliver energy have changed, the building has been adapted to meet evolving power needs. As an active steam and electric generating plant it is a critical part of Con Edison's energy system, which includes a steam system that is the largest in the United States and one of the largest in the world, and it continues to play a vital role in the city's infrastructure.

Building Description

Interborough Rapid Transit Company Powerhouse

The Interborough Rapid Transit (IRT) Company Powerhouse occupies the entire west blockfront of Eleventh Avenue between West 58th and 59th Streets and extends for approximately 694 feet along these streets. Constructed from approximately 1902 to 1905, its structure was designed by a team of engineers, including S. L. F. Deyo, John Van Vleck, and Lewis B. Stillwell. Its exterior, as well as its original smokestacks, which have been removed, were designed by Stanford White of McKim, Mead & White in the French Neoclassical style. Some features, such as the palmette motifs decorating the pilaster blocks on its Eleventh Avenue facade, draw upon the Neo-Grec style introduced in mid-19th-century Paris. Ornament within the pilaster capitals is symbolic of power generation and the subway system.

The building consists of two main sections, each running east to west along the building's entire length. The southern section was originally the boiler house containing coal hoppers and boilers, and the northern section was the "operating room" containing the engines and generating equipment. Although the building appears from surrounding streets to have a single large roof, it has separate pitched roofs with clerestories—set back from the facade, with a valley in between— over each of the two sections.

All three facades are faced in Milford granite at their basements with buff Roman brick and cream-colored terra cotta above. The building site slopes downward from Eleventh Avenue toward the Hudson River, making the basement that is below grade at the building's eastern end exposed at grade on the western end of the building. At its western end, the IRT Powerhouse adjoins a circa 1949-51 generating station that is not part of this designation.
Although the three facades are similar, they are not identical. All share such features as large round-arch-headed window openings with tripartite archivolts and console keystones; bays defined by pilasters; square-headed attic openings within elaborate surrounds; and a profusion of classical ornament. On all three facades, continuous classical friezes separate the lower portions from the attic and the attic from the parapet.

Despite their similarities, the east (Eleventh Avenue) facade is both the shortest and most elaborately decorated. It consists of eight bays, with the central six bays grouped within a projecting pavilion. Each of the six bays is defined by single pilasters composed of brick and terra cotta blocks ornamented with palmettes. The building's historic entrance is in the northernmost bay, within a hooded classical surround. As on the West 58th and 59th Street facades, the frieze above the attic originally supported a deep cornice that crowned all three facades, but has been removed. At the top of this facade is a stepped parapet containing two terra-cotta diamonds and a terra-cotta plaque announcing the name of the IRT Company.

The south (West 58th Street) and north (West 59th Street) facades are nearly identical. Each contains 19 bays. The main differences between them are that the south facade has basement openings grouped in threes, which the north facade lacks, and the round-arch windows of south façade windows have solid transom panels, while those on the north have glazed transoms. These facades are similar to the Eleventh Avenue facade, although their ornament is simpler. They lack the decorative pilaster blocks of the Eleventh Avenue facade and the pilasters separating their bays are paired rather than single.

Each facade has a portal at its eastern end, which originally allowed freight trains to enter the building from Eleventh Avenue. All of the bays contain round-arch-headed window openings except for the two outermost, which are similar in design to the two outermost bays of the Eleventh Avenue facade.
The roof was originally covered with terra-cotta tile. The building had five smokestacks at the time of its opening, with a sixth added early in its history. The existing smokestack at the building's eastern end was constructed in the late 1960s and is much taller than the original stacks. It does not share its location with any of the original smokestacks.

Most of the large round-arch-headed window openings on the three facades retain their historic window frames. These historic frames are tripartite, with classical decoration on their mullions, molded transom bars, and, on the Eleventh Avenue and West 59th Street facades, tripartite half-round transoms. Most of the original lattice sashes with awning operation remain on the West 58th Street facade, but most have been removed from the other facades. The West 58th Street facade did not originally have transom windows but transom panels composed of the same buff Roman brick used on the rest of the facade. These panels remain today.

An area in front of the Eleventh Avenue facade is enclosed by a historic iron railing. Now used as a planting bed, this area originally contained a sunken areaway in front of basement openings that no longer exist. A sunken areaway formerly in front of the West 58th Street facade has also been filled in.

East (Eleventh Avenue) Facade

Historic

Ashlar Milford granite basement, buff Roman brick, and decorative terra cotta; classical entrance surround with hood, and window opening above, at northern end of facade; projecting central pavilion containing six bays divided by rusticated pilasters with terra-cotta bases, blocks, and capitals, all with classical ornament; cartouches within pilaster capitals, each containing a pinecone cradled by two downward-pointing wings, surrounded by lightning bolts; round-arch-headed first-story window openings with gauged-brick arches, tripartite archivolts with guilloche and foliate motifs, and console keystones with eagles; garlanded wreaths with cartouches above keystones; tripartite window frames with classically decorated mullions at (reading left to right) first, second, and third bays on central pavilion; molded transom bars and tripartite transom windows with classically decorated mullions and some lattice sashes at all round-arch-headed window openings on central pavilion; frieze containing discs linked by garlands above pilaster capitals; decorative panels and paired window openings with foliated surrounds, some with lattice sashes, in bays flanking central pavilion and at attic level of all bays; machicolated frieze with inset scallop shells above attic; stepped parapet with tablet reading "INTERBOROUGH RAPID TRANSIT COMPANY" and two diamonds.

Alterations

Replacement infill within entrance opening; light fixtures, conduit, cameras, signage, and flagpoles at entrance; complete replacement of windows below transom bars within fourth, fifth, and sixth bays of central pavilion; selective replacement of awning lattice sashes with sashes of other types and with louvers; cornice removed, and original cornice location covered with cementitious material; original clock removed from above parapet.

South (West 58th Street) Facade

Historic

Similar to Eleventh Avenue facade, but with paired pilasters, no decorative pilaster blocks or wreaths, brick transom panels rather than transom windows,

and with attic-level window openings grouped in threes rather than paired; basement openings grouped in threes; possibly historic basement opening within first bay; railroad entrance portal with classical surround at eastern end of facade; tripartite window frames with classically decorated mullions; lattice sashes within most window frames.

Alterations

Roll-down gate and other infill within railroad portal; light fixtures with conduit adjacent to railroad portal and throughout facade; basement openings and areaway filled in; large square-headed basement openings with signage, gate boxes, and mirrors added within second, sixth, 10th, and 13th bays; 10th- and 13th-bay windows removed and replaced with brick; selective replacement of awning lattice sashes with sashes of other types and with louvers at other window openings; cornice removed, and original cornice location covered with cementitious material.

North (West 59th Street) Facade

Historic

Similar to West 58th Street facade, but without historic grouped basement openings; possibly historic basement opening within 19th bay; railroad entrance portal with classical surround at eastern end of facade; tripartite window frames with classically decorated mullions, molded transom bars, and tripartite transom windows; lattice sashes within some window frames.

Alterations

Roll-down gate and other infill within railroad portal; light fixtures with conduit adjacent to railroad portal and throughout facade; large square-headed basement opening with signage, gate box, mirror, and camera added within seventh bay; third-bay transom frame modified for installation of louver; seventh-bay window replaced with brick below transom; non-historic brick and other infill within 19th-bay basement opening; 19th-bay window opening filled with brick; selective replacement of awning lattice sashes with sashes of other types and with louvers; cornice removed, and original cornice location covered with cementitious material.

Roof

Historic

Pitched roof and clerestory form.

Alterations

Clerestory removed at southeast corner of building; roof (originally terra-cotta tile) and nine-pane awning sashes in clerestory replaced by, or covered with, metal; six historic smokestacks removed between the late 1960s and 2009; existing high smokestack installed in late 1960s in a different location from the original smokestacks; rooftop equipment visible over south facade.

Hell's Kitchen, San Juan Hill, and the Hudson River Waterfront[2]

The Interborough Rapid Transit (IRT) Company Powerhouse sits across Twelfth Avenue from the Hudson River at the northern edge of Hell's Kitchen, or Clinton, which extends from 30th to 59th Streets on Manhattan's far west side.[3] Until the mid-19th century, the surrounding area was sparsely built, containing scattered wood structures and a few country estates. In 1851, the Hudson River Railroad was completed between Chambers Street in Lower Manhattan and the city of Albany; running along Eleventh Avenue between 34th and 60th Streets, it was a major catalyst for the area's industrial and residential development. By the late 1860s, few piers had been constructed north of 40th Street, and the Hudson River shoreline remained largely in its natural state, forming a ragged edge to the neighborhood west of Eleventh Avenue. Even so, several industrial businesses had been established along the rail line, including coal yards, breweries, and a sawmill, along with factories producing drainpipes, carpet, and wood kindling. The neighborhood also contained an enormous live hog market, anticipating its future importance as a stockyard and meatpacking center.

In 1869, the railroad was acquired by Cornelius Vanderbilt, who merged it with his existing lines to form the New York Central and Hudson River Railroad. Two years later, passenger service was diverted to the new Grand Central Depot, and the Eleventh Avenue line was reserved for freight, cementing its future as an industrial corridor. Although Twelfth Avenue remained uncompleted in the mid-1880s, extensive filling had occurred along the shoreline by that time and several piers had been constructed in the West 50s. Numerous factories occupied the blocks between Tenth Avenue and the Hudson River, and the Union Stockyards, which included large grain elevators and a hotel, stretched northward several blocks from 60th Street, adjoining an expansive waterfront rail yard.

While the blocks west of Tenth Avenue were primarily industrial and residential, the area to its east contained a mix of residences and institutions, including Roosevelt Hospital. Most of its residents were the families of Irish and German immigrants, many of whom worked in local factories, stockyards, and along the waterfront and lived in crowded tenements. The name Hell's Kitchen dates from the 1880s, and while its origins are disputed, it is likely connected to the neighborhood's notorious reputation for crime, gangs, and poverty; Jacob Riis described the neighborhood as a place of "wickedness" in his 1890 work *How the Other Half Lives*. The attention brought to Hell's Kitchen by Riis and other reformers led to civic improvements in the early 20th century, including the opening of DeWitt Clinton Park between 52nd and 54th Streets and Eleventh and Twelfth Avenues in 1906. Around that time, a new, largely African-American community was developing at the northern edge of Hell's Kitchen west of Tenth Avenue. Called San Juan Hill, its name may have referred to black veterans who moved to the area following the Spanish-American War, and its many nightclubs and theaters were crucial to the development of ragtime music and jazz. San Juan Hill remained New York's center of African-American life until Harlem's rise to preeminence in the 1910s and '20s.

The Interborough Rapid Transit Company and the City's First Subway[4]

At the time of its opening in 1904, New York's pioneering subway line—and the powerhouse that made it run—were operated by a private firm, the Interborough Rapid Transit Company, or IRT. Transportation had long been one of the city's major problems, exacerbated by Manhattan's island geography and long, narrow shape, and by its phenomenal growth, from 150,000 residents in 1820 to 3.4 million by 1900. Various transit improvements had been partially successful in dispersing the city's population over the course of the 19th century, including the introduction of ferry service between Lower Manhattan and Brooklyn in 1814; horse-drawn streetcars, which extended Manhattan's residential development northward to 42nd Street by the 1860s; and steam-powered elevated trains, which reached Upper Manhattan and the Harlem River by the early 1880s. Even so, in the 1890s, Manhattan's street congestion and extreme population density remained dire problems. Traffic was so unmanageable that large sections of Manhattan were nearly impassable for much of the day. Half of Manhattanites still lived below 14th Street, with some areas, like the Lower East Side, experiencing some of the highest population densities ever recorded in the United States. These problems were bad enough, city leaders feared, to threaten New York's status as one of the world's leading seaports and business centers. They believed that a high-speed underground transit system was needed to free up the city's streets and open up large sections of the Upper West Side, Harlem, and the Bronx to residential development, preventing the city from losing people, and business, to other American ports.

Underground transit was not a new idea. London had opened the world's first subway, powered by steam locomotives, in 1863, and between 1870 and 1874, the co-owner and editor of *Scientific American*, Alfred Ely Beach, operated a short railway under Broadway between Warren and Murray Streets. Beach's subway was little more than a novelty; powered by air pressure from a gargantuan blower, it could never have formed the basis for a citywide transit system. In 1888, Mayor Abram S. Hewitt proposed an underground rapid-transit system that would be privately built and operated but owned by the government—a radical idea at a time when government ownership of rail lines was unheard of. Hewitt believed that this system would be as important to securing New York's economic future as the Erie Canal had been in 1825. In 1891, the State Legislature created a Rapid Transit Commission to examine the possibility of building a subway system in New York City. The Commission laid out east- and west-side lines stretching from Lower Manhattan into the Bronx but concluded, unlike Hewitt, that government support was unnecessary. When it offered the franchise to build and operate the new system, private investors were uninterested, considering the subway too risky without government financing.

The Panic of 1893 made investors even more skittish and private funding more elusive. By this time, office buildings of unprecedented size, such as the 20-story American Tract Society Building (R. H. Robertson, 1894-95, a designated New York City Landmark) were being constructed in Lower Manhattan, intensifying the need for a modern rapid-transit system, and speculators who had purchased large tracts of Upper Manhattan real estate in anticipation of new rapid-transit lines were clamoring for action. In 1894, the state passed the Rapid Transit Act, which adopted the "Hewitt formula" of municipal ownership and private construction and operation, and set a $50 million limit on the subway's cost. Because of that limit, the plan for both east- and west-side lines was

scaled back to a single line beginning at City Hall, then turning westward at 42nd Street to Longacre (now Times) Square, and proceeding northward through the Upper West Side to 96th Street. There the line split into two branches, one along Broadway, and the other beneath Lenox Avenue, with both terminating in the Bronx.

It was still unclear how the new subway would be powered. In 1894, the Commission's chief engineer, William Barclay Parsons, toured railways throughout Europe. Parsons was most impressed by the City and South London Railway, which was the world's first electric-powered subway when it opened in 1890. Electricity at that time was a rapidly developing technology, still in its infancy as a source of motive power. The country's first truly successful electric street railway, in Richmond, Virginia, had opened only in 1888, and alternating current, which would supply the IRT Subway, had been introduced to New York City in 1889. The Adams Power Station at Niagara Falls, which was the world's first large-scale generating plant for alternating current, was still under construction at the time of Parsons' European tour and would open a year later, in 1895. Despite the nascent state of electric technology, Parsons was convinced that New York's subway would have to be powered by electricity.

In November of 1899, the Rapid Transit Commission opened bidding on the contract to build and operate the subway system. The winner was John B. McDonald, a seasoned contractor with more than 30 years' experience on railroad projects throughout the eastern United States. The contract required McDonald to purchase a $7 million bond, which he could not afford; this led him to turn for support to banker August Belmont, who had long been considering "the splendid opportunities for making a great deal of money out of schemes for improving the transportation of our large and growing cities."[5] In February of 1900, Belmont signed "Contract No. 1," receiving $35 million from the city to construct the subway system along with exclusive operating rights for the next 50 years. Belmont then formed two firms: the Rapid Transit Subway Construction Company, which would build the railroad, and, in 1902, the Interborough Rapid Transit Company, which would operate it.

Construction began in March of 1900 and was carried out in often brutally harsh and dangerous conditions by New Yorkers primarily of Irish, Italian, and African descent. It was dedicated and opened by Mayor George B. McClellan on October 27, 1904, a day celebrated throughout Manhattan. Although only partially completed at that time to 145th Street and Broadway, the IRT was an instant sensation. The sixth subway in the world, it was the second-largest after London's and, at 22 miles, the longest ever completed as a single project. In scope and sophistication it far surpassed Boston's subway, the only other of its type in the Western Hemisphere, and was technologically superior to London's; one British transit expert who toured the system in 1904 called the IRT "one of the great engineering achievements of the age."[6] The only rapid-transit system with dedicated local and express tracks in both directions, its cars ran at speeds of up to 40 miles per hour—three times faster than the elevated lines—making it feasible for residents of crowded Lower Manhattan to relocate to new, modern row houses and apartment buildings along its route. In 1908, the original IRT system was complete, including a section from City Hall, under the East River, to Flatbush Avenue Terminal in Brooklyn, which had been authorized by a separate contract and begun in 1902.

The Planning and Construction of the IRT Powerhouse[7]

The IRT Powerhouse was conceived as the world's largest electricity generating station. It was made possible by continuous improvements in generating technology since 1882, when Thomas Edison opened his pioneering Pearl Street Station in Lower Manhattan. One of the shortcomings of direct-current (DC) plants like Edison's was that they needed to be scattered throughout the city, within close proximity of their customers, because of DC's limited range. By the 1890s, largely through the work of Nikola Tesla and George Westinghouse, alternating-current (AC) stations were supplementing and displacing DC plants in New York and throughout the United States. Unlike DC, AC could be transmitted over long distances with minimal energy loss, permitting the construction of mammoth generating stations serving users, including transit systems, over a wide area. These stations were sited along the waterfront, which facilitated coal delivery and ash removal and provided unlimited quantities of water for their condensers. Between 1899 and 1902, three such stations had been constructed along the East River waterfront. One of these—New York Edison's Waterside station at East 38th Street—served commercial and residential customers, and the other two were constructed by transit companies to power their trolleys and elevated trains. These were the Metropolitan Street Railway Company powerhouse at East 96th Street, which opened in 1899; and the Manhattan Railway Company powerhouse at East 74th Street, which opened in 1902 to electrify the borough's formerly steam-powered elevated lines.[8]

Overseeing the planning, construction, and basic design of the IRT Powerhouse were the engineering staff of the Rapid Transit Subway Construction Company (RTSCC) and IRT, primarily chief engineer S. L. F. Deyo, construction engineer John Van Vleck, and electrical engineer Lewis B. Stillwell, all of whom were prominent in their fields. Deyo was a Union College graduate with three decades of experience in engineering railroad lines throughout New York and Pennsylvania. Van Vleck was a graduate of Stevens Institute of Technology who, in addition to his work on the IRT Powerhouse, oversaw the design and construction of the IRT's eight substations in Manhattan and the Bronx; prior to joining the project, he had been electrical and construction engineer for New York Edison, playing a key role in designing the Waterside plant. Stillwell was perhaps the most crucial of the three. A graduate of Wesleyan and Lehigh Universities, Stillwell had served as chief electrical engineer for the Westinghouse Electric Company, where he worked with Tesla and directed the development of the Niagara Falls hydroelectric plant. Historian Barbara Kimmelman has called Stillwell "one of the avant-garde involved in developing alternating current for use in urban railways."[9] When he was hired by August Belmont in 1900 to work on the subway, Stillwell was serving as consulting electrical engineer to the Manhattan Railway Company, advising the firm on its conversion from steam to electric power and on the design of its East 74th Street powerhouse.

Although final plans for the IRT Powerhouse were still being developed in the summer of 1901, the search for its site was well underway. Complicating the search was the lack of available parcels along Manhattan's waterfront of the size needed for the world's largest generating station. In mid-September of 1901, the RTSCC signed a $1.5 million contract with the Allis-Chalmers and Babcock & Wilcox companies for eight steam engines and 48 boilers to be housed in the plant, and later that month, it announced that it would pay $900,000 for the 200-by-800 foot lot

bounded by Eleventh and Twelfth Avenues and West 58th and 59th Streets, as well as the property extending westward from Twelfth Avenue to the Hudson River's bulkhead line. Adjoining the New York Central stockyards on its north, the parcel's former owner was the Eastman Company, which operated slaughterhouses and refrigerating plants there. Although the site was one of the more expensive ones being considered, it met several necessary criteria, according to an RTSCC spokesman:

> It had to be central; no plot less than 200 by 800 feet could be considered; it had to be on the waterfront to do away with any unnecessary rehandling of coal…. But in addition to all this, there was another consideration … and that was that the powerhouse of the city's great transit system will be something in which New Yorkers will take no little pride and that such a structure should have as commanding a site as possible. This result … has been attained so far as is possible under the conditions.[10]

As part of their planning, RTSCC engineers undertook a study of large powerhouses throughout the United States and Europe. In November of 1901, Deyo and Van Vleck, along with John McDonald and August Belmont, returned from a month-long tour of Europe, where they visited railways and large electrical systems in England, France, Germany, and Italy. After engineers completed their design of the building's structure and basic form, Stanford White of the prestigious architectural firm of McKim, Mead & White was commissioned to design its exterior except for the west facade, which was considered temporary, as the powerhouse was expected to expand westward over time to eventually fill its entire lot.[11] White completed study elevations by February of 1902, and plans for the powerhouse were filed with the Manhattan Department of Buildings in early May of that year, with S. L. F. Deyo listed as architect of record.[12]

The project benefitted from Lewis Stillwell's work on the Manhattan Railway powerhouse, for which he had analyzed nine potential power generation and delivery schemes. Stillwell decided that the same scheme would be followed for the IRT as had been implemented for the Manhattan Railway, consisting of a single large powerhouse developing alternating current. The IRT Powerhouse would also have the same basic form as the Manhattan Railway's plant, consisting of two main sections—a boiler house and "operating room"—running the building's entire length. Each section would be crowned by a series of roof trusses allowing for continuous open space and thus, maximum interior flexibility. The IRT's plant would be of unprecedented scale, however. Extending along the entire west blockfront of Eleventh Avenue between West 58th and 59th Streets, it was originally planned to extend for 586 feet along these streets but was lengthened, during construction, to 694 feet. This expansion was necessitated by the 1902 signing of "Contract No. 2," which would extend the IRT system into the Financial District and under the East River to Brooklyn. The powerhouse would be of fireproof construction, with a steel skeleton and self-supporting steel exterior walls faced with granite, buff brick, and terra cotta.

Construction was periodically slowed by a series of workers' strikes, but by April of 1904 structural work was complete and more than 400

workers were engaged at the site, laying brick, installing boilers, and finishing the roof over the building's western end.[13] Two months later, the *Record and Guide* reported that

> The largest building operation in the city now actually underway is the powerhouse for the Rapid Transit Railway Construction Company…. The structure is in various stages of completion, about two-thirds of it being enclosed and the unfinished end being boarded up. On the westerly end old buildings are being demolished and concrete foundations are being laid. The structure is more an engineering task than an architectural problem or design, though the enclosing walls of light cream brick are appropriately designed.[14]

Powerhouse Operations

The IRT Powerhouse officially opened with the rest of the subway system on October 27, 1904. It was essentially two buildings in one, an 83-foot-wide boiler house beside a 117-foot-wide operating, or generating, room to the north. The operating room consisted of three main sections, with its largest, central section containing the engines and generators. The operating room's narrower southern section contained pumps and steam pipes and was "quite shut off from the rest of the building" to prevent steam from entering the operating room in case a pipe burst.[15] Switching equipment was located along the operating room's north wall. From here, alternating current was distributed, at 11,000 volts, to eight IRT substations scattered along the line in Manhattan and the Bronx, where it was converted to the 625 volts of direct current that powered the trains' motors. The capacity of the station when completed was approximately 50,000 kilowatts and 100,000 horsepower, enough to run 800 train cars at the same time.

The powerhouse was as intricate as it was massive. Coal arrived on barges at a 700-foot-long pier at the foot of West 58th Street specially constructed for the facility by the city's Department of Docks.[16] There, an electrically powered traveling crane transferred the coal to conveyor belts that carried it along the pier, and under Twelfth Avenue, to the southwest corner of the boiler house. A series of conveyors within the building lifted the coal 110 feet to its top, where it was distributed by additional conveyors, at the rate of 200 tons per hour, to a series of attic bunkers. These bunkers could collectively hold more than 30 million pounds of coal. A chute in the bottom of each bunker dropped coal several stories into the boiler room, where workers shoveled it into the boilers. Ash from the combustion process filtered down into the basement and was taken by steel hopper cars to the pier to be loaded onto barges for disposal. Steam from the boilers fed into the operating room, where it ran piston engines and generators creating power for the trains, and turbines running smaller generators for the IRT stations' extensive lighting systems. Water flowed in and out of the facility through stacked tunnels extending under West 58th Street to the Hudson River, and a railroad spur was integrated into the building, with Eleventh Avenue freight trains entering and leaving the powerhouse through large bays at the eastern ends of the 58th and 59th Street facades.

Power operations consisted of individual "generating sections," each comprising 12 boilers, one smokestack, and their associated generating equipment. Among other advantages, this scheme made it easier to bring power on and offline

according to demand—for example, at the start and end of rush hour. Although the IRT Powerhouse was not the first plant to be designed this way, it represented an especially advanced application of the concept. Unlike earlier plants, like the Manhattan Railway Company's station, the IRT Powerhouse had all of its boilers on a single level, allowing for a higher, better-ventilated, and safer boiler room. This was made possible by Van Vleck's innovative chimney design, in which the smokestacks were supported by steel frames, providing additional room for boilers that would usually be occupied by thick masonry chimney bases. The building's mammoth size, moreover, allowed its engines and generators to be arranged in a single row, maximizing its operating efficiency. "The adoption of the unit plan, combined with Van Vleck's unique arrangement of the equipment, brought simplicity and flexibility to plant operation," according to Barbara Kimmelman.[17] At the time of its opening in October of 1904, five generating sections were operating. The westernmost portion of the building, which would contain the sixth section, was still under construction, and appears to have been completed in 1905.[18] Two years later, the 106-foot portion of the lot west of the IRT Powerhouse was unoccupied except for a small, separate storehouse.[19]

The success of the first IRT line led to overcrowding and almost immediate calls for its expansion. In 1913, city officials, along with officers of the IRT and the Brooklyn Rapid Transit Company (BRT), signed the so-called Dual Contracts, which required the two companies to add 123 miles of subway and elevated lines throughout Manhattan, the Bronx, Brooklyn, and Queens. These included, for the IRT, the Seventh Avenue Line south of Times Square and the Lexington Avenue Line north of 42nd Street; the Jerome Avenue, Pelham, and White Plains Road Lines in the Bronx; the Flushing Line in Queens; and the Eastern Parkway, Nostrand Avenue, and New Lots Lines in Brooklyn.[20]

Generating technology improved rapidly in the early 20th century, and during its ownership, the IRT boosted the plant's capacity through periodic upgrades to its equipment. Five new higher-capacity turbo-generators were installed in 1910, and the company undertook a major campaign to increase its coal-burning and generating capacity following the 1913 signing of the Dual Contracts. In 1917, it installed three new General Electric turbo-generators that, together, had twice as much generating capacity as the entire original plant. The IRT also installed a control station that centralized the service of this plant, the East 74th Street powerhouse—which the IRT had acquired with its purchase of the Manhattan Railway Company in 1905—and their substations. None of these developments resulted in substantial changes to the building's exterior.

By 1920, New York's transit system had surpassed London's to become the largest in the world. At the same time, the IRT Company was faltering, facing postwar inflation but held to the same nickel fare as in 1904. It went bankrupt in 1932, and in 1940, the City purchased its equipment and operating rights, along with those of the BRT's successor, and merged their operations with those of the city-owned Independent (IND) Subway Line.[21]

Design of the IRT Powerhouse

According to historian Clifton Hood, the IRT system was created "not merely as a pedestrian municipal service but as a civic monument."[22] The chief architects of its stations, Heins & LaFarge, endowed them with a variety of artistic features, including elegant entrance kiosks.[23] As the system's only generating station, the IRT Powerhouse would

be its largest above-ground structure, with a substantial impact on its surroundings and enormous symbolic significance for the IRT Company and the city itself. Historian David Framberger, who calls the IRT Powerhouse "the most high-style piece of design for the subway system," notes that the selection of Stanford White to design the building's three major facades "attests to the importance that the powerhouse held to the Interborough Company."[24] The firm addressed this issue in its official history of the subway's construction, published in 1904:

> The design of the facework of the powerhouse received the personal attention of the directors of the company, and its character and class of materials to be employed were carefully considered. The influence of the design on the future value of the property and the condition of the environment in general were studied, together with factors relating to the future ownership of the plant by the city. Several plans were taken up looking to the construction of a powerhouse of massive and simple design, but it was finally decided to adopt an ornate style of treatment by which the structure would be rendered architecturally attractive and in harmony with the recent tendencies of municipal and city improvements from an architectural standpoint.[25]

In accordance with City Beautiful precepts, the powerhouse was intended to exert a positive aesthetic influence, complementing other civic improvements then underway nearby including DeWitt Clinton Park, which was expected to lift up the neighborhood with its formal grandeur. Although the circumstances surrounding White's hiring are unclear, he was an inspired choice, bringing undeniable prestige to the project and to the IRT Company itself. Engaging an architect of White's stature to transform a utilitarian structure into, in the IRT's words, "an architectural landmark," would help brand the company as a civic-minded organization.[26] Three days after the subway's opening, engineer J.C. Bayles, writing in the *New York Times*, contrasted its handsome new powerhouse with the "unsightliness" of other structures of its type:

> The Interborough management is entitled to a compliment for the civic spirit shown in adopting a design for the powerhouse which makes it an ornament to the neighborhood in which it is placed. By reason of the attention given to the chaste and admirable scheme of decoration … the necessarily large cost of the plant was increased some $55,000. It cannot be doubted, however, that this liberality was repaid. The building is an ornament to the west side and enhances rather than diminishes the value of surrounding property. But for its stacks, it might suggest an art museum or a public library rather than a powerhouse.[27]

White's design supplanted an earlier proposal probably drawn up by one of the engineers, which was similar in its austere Romanesque design to

other early large power stations.[28] Such a scheme would have been oppressive on a building the size of the IRT Powerhouse, and White took little from it except for its hipped roof and its clerestory, which was essential to the building's function.

This was not Stanford White's first powerhouse; although McKim, Mead & White received relatively few industrial commissions, a decade earlier, he had designed the same Niagara Falls generating station that Lewis B. Stillwell had helped engineer.[29] That building was dressed in a rough-faced stone appropriate to its rugged, isolated site along the Niagara River. The IRT Powerhouse's location called for a more polished, urbane treatment. Although today, the IRT Powerhouse is often described as being "Beaux-Arts" in style, this term was not widely used until the 1960s, when it became popular shorthand for works by American architects who had studied at the Ecole des Beaux-Arts, and for other richly decorated, classically inspired works dating from the late 19th and early 20th centuries. At the time of its opening, the building was most often described as being "French Renaissance," although it is closer to French Neoclassical, with some features, such as the palmette motifs on its pilaster blocks indebted to the Neo-Grec style introduced in mid-19th-century Paris.[30]

White was masterful in uniting the boiler house and operating room, essentially separate structures of unequal size and with different roof shapes, into a single monumental building. He wrapped its facades with ashlar Milford granite at their basements, and buff Roman brick with terra-cotta trim above. White had previously used this brick on other projects including Madison Square Garden and Judson Memorial Church. To keep the powerhouse's exceptionally long facades from becoming monotonous, White lavished them with classical ornament and split them into units whose high windows and rusticated pilasters counteracted the building's horizontal expanse. He devoted the same level of care to the building's original smokestacks, incorporating entasis, a gentle curvature famously used in the design of the Parthenon to enhance its perceived straightness and height. These stacks, which had delicate iron caps, have all been removed.

The main public face of the IRT Powerhouse is its Eleventh Avenue facade, which is crowned by a stepped parapet announcing the company's name. This facade's central portion is divided into six bays defined by its pilasters, which collectively support a frieze containing discs linked by garlands. Each window is crowned by an elaborate arch composed of gauged bricks, tripartite archivolts with guilloche and foliated moldings, and a console keystone supporting a garlanded wreath; dignified eagles perch on each of the consoles. Among the building's most unusual decorative elements is a cartouche within each pilaster capital containing a pinecone cradled by a pair of downward-facing wings and surrounded by lightning bolts. The wings and lightning bolts recognized the speed of the electrically powered underground system—and this building as the source of its power—while the pinecone, an ancient symbol of rejuvenation and fecundity, was appropriate for a project expected to revitalize a city choked by traffic and develop outward-lying sections of New York that had formerly lain fallow.[31]

The bays flanking the central pavilion contain the building's main entrance as well as paired openings within foliated surrounds, which also occupy each bay's attic level. A machicolated frieze with inset scallop shells surmounting the attic originally supported a deep cornice that wrapped the building's three main sides. The West 58th and 59th Street facades are almost identical to each

other, and are similar to that of Eleventh Avenue. Given the length of these facades, White widened their bays by doubling their pilasters and changing their attic openings from paired to tripartite. Every three bays corresponded to one of the powerhouse's original generating sections, each of which had its own smokestack. Simple but heavy molded surrounds frame the square-headed railroad portals at the eastern end of each facade.

Numerous members of the city's art, architecture, and historic preservation communities have praised the design of the IRT Powerhouse. Architect and historian Robert A. M. Stern has hailed its "compelling industrial beauty," calling it "the only building of its stature in the city— an incomparable monument to the age of coal and steam."[32] Columbia University professor Barry Bergdoll, the former curator of architecture and design at the Museum of Modern Art, has described the IRT Powerhouse as "part of the uplifting, civic-minded architecture of the City Beautiful movement on a par with … [the] Columbia University campus, New York Public Library, Metropolitan Museum of Art, and Farley Post Office."[33] Columbia historic preservation professor Andrew Scott Dolkart has called the IRT Powerhouse "not only a major work of architecture, but ... a prominent symbol of New York City's early-20th-century prowess as America's leading city," while historian and White biographer David Garrard Lowe has stated that "it would be difficult to name an industrial structure in New York City that is more beautiful than the powerhouse designed by Stanford White for the Interborough Rapid Transit Company."[34] Artist Chuck Close has also praised the building for its "massive scale and glorious Beaux-Arts terra-cotta detail," calling it "among the very best 20th century industrial structures still standing."[35]

Stanford White of McKim, Mead & White[36]

When Stanford White was hired to design the facades of the IRT Powerhouse, both he and the firm of McKim, Mead & White were at the height of their prestige and renown. One of the most prolific, influential, and celebrated firms in American architectural history, McKim, Mead & White traced its roots to a loose partnership formed in 1872 between Charles Follen McKim (1847-1909) and William Rutherford Mead (1846-1928). Both men had apprenticed with the New York architect Russell Sturgis, with McKim receiving further instruction at the Ecole des Beaux-Arts in Paris. The firm was enlarged in 1877 to include the Beaux-Arts-trained William B. Bigelow; when Bigelow left in 1879, Stanford White was invited to replace him "as a specialist in drafting and interior design."[37]

Stanford White was born in New York City in 1853. He initially considered studying painting, but at the age of 16, in 1870, he entered the office of Gambrill & Richardson as an apprentice. Two years later, White succeeded McKim as the firm's head draftsman, working first on sketches for Trinity Church, Boston, which he prepared under the supervision of H. H. Richardson. In 1878, he left the firm to travel to Europe, accompanied for part of the time by McKim, and living for a period with the sculptor Augustus Saint-Gaudens, who was collaborating with White on the Farragut Memorial (1876-81) for Madison Square.

McKim, Mead & White initially specialized in the design of Shingle style resort and suburban houses. By the early 1880s, the firm was shifting to a more ordered, classicizing form of design, represented by, among other works, the Italian Renaissance style Villard Houses on Madison Avenue between East 50th and 51st Streets (1882-85, a designated New York City Landmark). This trend in the firm's work solidified

and intensified through the 1880s, and by the end of that decade, McKim, Mead & White had entered its "high classical period," which lasted through the first decade of the 20th century. Its work during this time established McKim, Mead & White as the quintessential architects of the so-called American Renaissance, an intensely nationalistic period between the 1876 Centennial and World War I in which Americans perceived and promoted the idea that their country—with its imperial reach, industrial might, technological prowess, and democratic heritage—was the world's true heir to ancient Greek, Roman, and Renaissance ideals.

Although the firm's work was rooted in Italian Renaissance, it cultivated an eclectic stylistic approach including English, French, and German Renaissance architecture, colonial American works, Jeffersonian Neoclassicism, and the Greek Revival. This broad-based classicism served the firm well in its adaptability to a virtually limitless range of building types, many of which were unique to modern life. In addition to the IRT Powerhouse, designated buildings in New York City reflecting the diversity of the firm's output include the James Hampden Robb and Cornelia Van Rensselaer Robb House (1888-92); Judson Memorial Church, Tower, and Hall (church, 1888-93; tower and hall, 1895-96); Brooklyn Institute of Arts and Sciences (1893-1915); Pierpont Morgan Library (1902-07); Tiffany & Company Building (1903-06); and the U.S. General Post Office (1908-13).

According to architectural historian Richard Guy Wilson, "Materialism and self-aggrandizement were always present in McKim, Mead & White's work, yet also present was an idealistic belief that through architecture the general level of culture and civilization could be raised."[38] The firm first gained widespread renown as a designer of major civic works with its Boston Public Library (1887-98), primarily designed by McKim. McKim, Mead & White's role in the planning and design of the 1893 World's Columbian Exposition helped create a demand across the United States for the kind of classical architecture that was the firm's signature and placed it at the forefront of the City Beautiful movement. It also led to an increased role for the firm in urban design projects and the planning of large complexes, such as Columbia University (1893-1902), which contains the McKim-designed Low Library (1894-97, a designated New York City Landmark). By this time, McKim, Mead & White was the country's largest architectural firm, with a staff of more than 100.

Although McKim, Mead, and White insisted that their projects were collaborative efforts, they did reflect the differing training, temperaments, and stylistic preferences of the various partners in charge. The work of the Ecole-trained McKim generally exhibited a solidity and academic clarity reflecting his scholarly bent and background; Mead was responsible for few of the firm's designs but was considered its "rudder and anchor" for his skillful office management and valued critiques of McKim's and White's designs. Stanford White, meanwhile, was "the mercurial firebrand of energy and motion, a specialist of the quick effect," and "one of the greatest decorative talents America has ever produced."[39] His work was often characterized by its lightness, ebullient ornament, and, at times, frivolity. In addition to the Robb House, Judson Memorial Church, and the Tiffany & Company Building, designated New York City Landmarks attributed to White include the Century Association Clubhouse (1888-91); King Model Houses on West 139th Street (1891-92, within the St. Nicholas Historic District); Metropolitan Club (1892-94); Bowery Savings Bank (1893-95); New York University (now Bronx Community College) campus (1894-1912); Joseph

and Kate Pulitzer House (1900-03, within the Upper East Side Historic District); and the triple-arched entrance portal of St. Bartholomew's Church (1900-03; church by Bertram Goodhue, 1914-19).

The IRT Powerhouse would be one of the last works of Stanford White, who was famously shot to death in 1906 on the roof of one of his most notable designs, Madison Square Garden (1887-91, demolished). Despondent at the loss of his friend and the sensationalistic press coverage of the shooting and subsequent trial, McKim retired in 1907. Mead gradually withdrew from the firm until his official retirement in 1919, leaving it in the hands of a talented group of junior partners, including William M. Kendall, William Symmes Richardson, and Bert L. Fenner. Under their guidance, the firm completed such notable New York City works as the Municipal Building (1907-14) designed by Kendall, and the Racquet and Tennis Club (1916-19) designed by Richardson, both of which are designated New York City Landmarks.

McKim, Mead & White's impact was felt far beyond its thousand or so completed projects. It served as a training ground for major American architects such as Cass Gilbert, Henry Bacon, John Carrère and Thomas Hastings, and Edward York and Philip Sawyer, and its *Monograph* showcasing the firm's work—including the IRT Powerhouse—was one of the most influential books in American architectural history. Published between 1915 and 1920, the *Monograph* was distributed to architects throughout the country, who "replayed its forms, details, and styles in hometown libraries, banks, commercial structures, colleges and schools, monuments, and statues, public buildings and houses," spreading the firm's classical aesthetic across the United States. [40]

Consolidated Edison[41]

Consolidated Edison's history begins with the New York Gas Light Company, which was founded in 1823 to provide gas for street lamps and houses in Lower Manhattan. Over subsequent decades, several additional firms received franchises to lay mains and provide gas service in Manhattan, and in 1884, six of these companies, including New York Gas Light, merged to form the Consolidated Gas Company. This firm would later acquire additional utilities, and by 1922, it controlled the entire gas business in New York City except for Brooklyn.

By the 1880s, electricity had emerged as a stiff competitor to gaslight. Thomas Edison filed his patent for the electric light bulb in 1879, and in 1882, he opened the country's first public generating station for incandescent lighting on Pearl Street in Lower Manhattan. Edison soon began building additional generating stations throughout New York and Brooklyn, and numerous other electric utilities were established to compete with Edison's firm. In the late 1890s, Anthony N. Brady, who owned a controlling interest in several electric companies in the Albany area, began buying up small utilities in New York City, merging them in 1898 into the New York Gas & Electric Heat, Light & Power Company. Fearful of competition from electric utilities, Consolidated Gas, in 1899, purchased controlling interests in Brady's firm, in Edison Electric Illuminating, and in United Electric Light and Power, which had been founded by Edison's chief rival, George Westinghouse. These were merged in 1901 into the New York Edison Company, which by 1910, was the primary provider of electric service to Manhattan and the western Bronx.

By 1932, Consolidated Gas, through New York Edison, was "providing more electricity to consumers than any other power company in the world."[42] Four years later, the two firms officially merged, forming the Consolidated Edison Company

of New York. After World War II, Con Edison continued to acquire new affiliates and power plants—including the former IRT Powerhouse, in 1959—and by the 1960s, it was providing electricity to the entire city except for the Rockaways, and gas service in Manhattan, the Bronx, and a portion of Queens. Con Edison also furnished most of Westchester County with electricity and was among the first companies to embrace the new technology of atomic power, opening the Indian Point plant in northern Westchester in 1962.

Con Edison's steam system—the largest in the country—traces its origins to the pioneering New York Steam Company which, in 1882, began delivering steam through a system of mains in Lower Manhattan to heat buildings and power elevators and other machinery.[43] Today, the firm is "one of the nation's largest investor-owned energy delivery companies."[44] Con Edison's offices remain in its historic headquarters on Irving Place; constructed in stages between 1910 and 1929 to the designs of Henry Hardenbergh and Warren & Wetmore, this signature feature of the Manhattan skyline was designated an official New York City Landmark in 2009.

Later History[45]

Until World War II, Hell's Kitchen remained a place of "freight yards, factories, garages, warehouses, stock pens, and tenements" according to the 1939 *WPA Guide to New York City*.[46] But its economic foundation was crumbling as trucks replaced ships and railroads as the region's dominant form of freight transportation. In the 1930s, as part of the West Side Improvement—a far-reaching project that included the construction of the Henry Hudson Parkway and expansion of Riverside Park—the Eleventh Avenue railroad tracks were rerouted into an underground tunnel between West 30th and 60th Streets. Despite the opening of a new Hudson River steamship terminal in 1935, Manhattan's working waterfront was undergoing a decline that would only accelerate with the coming of super freighters, containerization, jet travel, and air freight in the 1950s and '60s. A few blocks north of the IRT Powerhouse block, San Juan Hill was largely obliterated when the Amsterdam Houses opened in 1948, and by its inclusion in the Lincoln Square Renewal Area in the 1960s.

In 1949, the City's Board of Transportation, which had taken over subway operations nine years earlier, began work on a new generating structure adjoining the original powerhouse on its block's far western end.[47] Although it had long been expected that the plant would expand to occupy this space, the new station was markedly different from Stanford White's original in both its scale and architectural treatment, and it is excluded from this designation.

Operation of the IRT Powerhouse passed to the newly formed New York City Transportation Authority in 1953. In the following year, it was described in a study by the J. G. White Engineering Company as "an engineering museum piece," with much of its equipment dating from the building's opening a half-century earlier. This equipment was inefficient and outmoded, and the powerhouse was notorious for the plumes of sooty black smoke issuing from its stacks during the morning rush hour. At that time, the city estimated that it would cost nearly $200 million to upgrade its three transit powerhouses, including this plant, the East 74th Street station, and the Kent Avenue generating station, a former BRT facility in Brooklyn.[48] The Consolidated Edison Company expressed interest in acquiring these plants, and in 1959, it purchased them for $125 million with a requirement to sell their electricity back to the City's transit system at an agreed-upon rate.[49] The utility company

embarked on a modernization program almost immediately, and upgraded generating equipment was installed by 1960.

By 1968, the former IRT Powerhouse was converted from coal to low-sulfur oil, and a new 500-foot chimney had replaced its original easternmost smokestack, although not in the same location. Around this time, the building's cornice was also removed and large openings were added to its north and south facades to facilitate the installation and removal of equipment. These openings, at the ground floor level, were created based on the functions within and tend not to align with existing fenestration; in three locations on the north and south facades where a new opening overlaps with an existing arched opening, the historic opening has been infilled with brick. The remaining chimneys were removed over time, with the last coming down in 2009. Other alterations include the removal of the original clock over the Interborough Rapid Transit Company tablet on the Eleventh Avenue facade; the replacement of the historic terra-cotta roofing material with metal; and the removal of the historic clerestory windows and covering of their openings. Many of the building's large round-arched openings retain their historic tripartite window frames with decorated mullions and molded transom bars, but historic glazing, operation, and latticework in many windows have been altered, removed or reconfigured, in particular on the north elevation.

In recent years, Hell's Kitchen, like many of the city's formerly industrial neighborhoods, has become a desirable residential area. Shipping and industrial uses along the Hudson River have largely been replaced by upscale housing and recreation, including Hudson River Park, a popular riverfront greenway between Battery Park and West 59th Streets. The former New York Central freight yard north of West 60th Street has been replaced with skyscraper apartments, and glassy residential buildings, along with a new tower for John Jay College of Criminal Justice, have filled the blocks surrounding the IRT Powerhouse. With these new towering buildings the IRT Powerhouse's presence in the neighborhood has changed, but it remains a prominent reminder of its neighborhood's industrial past and a magnificent work of the City Beautiful Era.

Conclusion

Powered by the boilers, engines, and generators within the IRT Powerhouse, the subway system launched by the IRT Company in 1904 catalyzed the development of the Upper West Side, Upper Manhattan, the Bronx, and ultimately, outlying sections of Brooklyn and Queens. Completed soon after the 1898 consolidation that created modern New York City, the subway was, according to Clifton Hood, "the last of the great urban public works projects … that New York built itself," responsible, like no other transportation improvement before or since, for knitting the city into a unified whole.[50] Its ability to move crowds of people rapidly made possible New York's development into the country's premier skyscraper city, and its 24-hour operation fueled New York's image as "the city that never sleeps." The powerhouse is a lasting monument to the subway system that revolutionized life in New York City. Furthermore, as a work of complex engineering and elegant architectural design, it is a significant example of the successful integration of 20th century engineering technology and classical architectural expression.

Over time, the IRT Powerhouse has changed to meet evolving power needs, from its start as a generating plant for the subway, to its current use as a steam and electric production facility, and it continues to play a vital role in

energy production. Today, it generates steam for the city's steam system—the largest in the country—which includes over 100 miles of subterranean pipes supplying 2,000 buildings including the Empire State Building and United Nations.[51] An architecturally significant structure designed for the production of power, it has remained in continued use as a power station.

Report researched and written by
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Statement of Regulatory Intent

Interborough Rapid Transit Company Powerhouse

Designed to provide power for New York City's new era of rapid transit at the turn of the 20th century and still in active use as a power station, the IRT Company Powerhouse is significant for its complex engineering and its elegant architectural design.

The Commission recognizes that the building has been adapted over the years to accommodate new technologies to meet the City's changing infrastructure needs, and that the building will need to continue to adapt in the future. Many of these changes have been made on the interior of the building to accommodate new equipment; exterior alterations include the removal of smokestacks, the addition of a new smoke stack and rooftop equipment, new ground floor openings, and alterations to windows. The Commission recognizes that the building has a history of such changes to accommodate functional requirements and that historically, exterior elements related to interior functions have been placed in locations where they were most directly related to interior uses, including the original smokestacks along the southern portion of the roof. Further, the roof itself was designed to accommodate functional needs of powerhouse's equipment and operations.

The Commission also recognizes that the current owner and the building's use are highly regulated by other local, state, and federal agencies and will need to adapt to new technologies, regulations, and infrastructure related to its primary function as a power plant. As a regulated energy company, the owner is obligated to reliably serve its customers. Accordingly, the owner has long-term planning, approval and construction processes that are extensive and lengthy. The owner must determine the need for the new equipment – could be electric or steam – and what the best long-term solution is for serving its customers. To that end, the owner must seek and obtain regulatory approvals from the Public Service Commission and environmental agencies through their respective decision-making processes. These projects take years to plan and develop, prior to any formal submission for approval. Therefore, the owner must have the flexibility and reasonable certainty that projects it designs and proposes will meet LPC guidelines. In addition, the design, procurement, and construction steps can be extensive, especially when installing new equipment in an existing operating power structure. The owner does not have many options in Manhattan to site projects as technologies change, given this is the only site of this size with the zoning required to perform these operations and its location is critically linked to other supporting infrastructure. Finally, the owner must have the flexibility to respond swiftly and properly to emergency situations.

In support of the continued productive use of this building in a manner consistent with its original use, the Commission will consider all these factors when reviewing applications for changes related to the functional, technological, and life-safety requirements of an operational power station.

Endnotes

[1] The property was heard under two previous LP numbers; the entirety of Lot 1 was heard in 1979 as LP-1092. On September 11, 1979, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Interborough Rapid Transit Company Powerhouse and the proposed designation of the related Landmark Site (Item No. 6). The hearing had been duly advertised in accordance with the provisions of law. Two people, including the historian and cartographer John Tauranac, spoke in favor of the proposed designation. A representative of the owner requested a 60-day adjournment, which was granted, to permit the owner to prepare its response to the proposed designation. On October 15, 1979, the owner submitted a memorandum along with a statement prepared by the architect Walker O. Cain in opposition to the proposed designation but in favor of designating the building's Eleventh Avenue facade and a short portion of the adjoining West 58th and 59th Street facades. Lot 1 in part, excluding the circa 1949-51 addition at the western end of the lot, was heard in 1990 as LP-1803. On July 10, 1990, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Interborough Rapid Transit Company Powerhouse and the proposed designation of the related Landmark Site (Item No. 20). The hearing had been duly advertised in accordance with the provisions of law. Three people, including representatives of the Municipal Art Society and New York Landmarks Conservancy, spoke in favor of the proposed designation, and two representatives of the owner spoke in opposition to the proposed designation. The Commission also received a letter in support of the proposed designation from Manhattan Community Board 4.

[2] The major source for this section is Gillian Connell, Emilie Evans, Justin Greenawalt, Kate Husband, Tom Rinaldi, and Barbara Zay, *Preserving the IRT Powerhouse: A Preservation Plan* (Master's Program Studio Project: Columbia University Graduate School of Architecture, Planning and Preservation, 2009), 31-39. On Hell's Kitchen, see Lisa Keller and George Winslow, "Hell's Kitchen," in Kenneth T. Jackson, ed., *The Encyclopedia of New York City Second Edition* (New Haven, Connecticut: Yale University Press, 2010), 589-90; and Federal Writers' Project, *New York City Guide* (New York: Random House, 1939), 155-60. On San Juan Hill, see Mario Charles, "San Juan Hill," in Jackson, ed., 1150. Historic maps showing the general development of the area in the late-19th and early-20th centuries include I. C. Buckhout, *Maps of the Wharves and Piers from the Battery to 61st Street on the Hudson River and from the Battery to 41st Street on the East River, New York* (unknown publisher, 1860); Matthew Dripps, *Plan of New York City from the Battery to Spuyten Duyvil Creek* (New York: M. Dripps, 1867); E. Robinson and R. H. Pidgeon, *Robinson's Atlas of the City of New York* (New York: E. Robinson, 1885); George W. and Walter S. Bromley, *Atlas of the City of New York, Manhattan Island* (Philadelphia: G. W. Bromley & Company, 1891); Sanborn Map Company, *Insurance Maps of the City of New York (Borough of Manhattan)* (New York: Sanborn Map Company, 1892); George W. and Walter S. Bromley, *Atlas of the City of New York, Borough of Manhattan* (Philadelphia: G. W. Bromley & Company, 1899); and Sanborn Map Company, *Insurance Maps of the City of New York Borough of Manhattan* (New York: Sanborn Map Company, 1907).

[3] In 1959, local organizations began working to change the neighborhood's name from Hell's Kitchen to Clinton in an effort to improve its image. The name refers to DeWitt Clinton Park. Although Clinton is the neighborhood's official name today, it is not widely used by residents. See Sewell Chan and Bobby Allyn, "Hell's Kitchen, Not Clinton, Still Simmers," *New York Times* (August 28, 2009), accessed online at https://cityroom.blogs.nytimes.com/2009/08/28/hells-kitchen-not-clinton-still-simmers/?mcubz=3.

[4] Portions of this section are adapted from New York City Landmarks Preservation Commission, *IRT Subway System Underground Interior Designation Report* (LP-1096) (New York: City of New York, 1979), 3-5. The major source for this section is Clifton Hood, *722 Miles: The Building of the Subways and How They Transformed New York* (Baltimore: Johns Hopkins University Press, 2004). Other sources include Hood, "Interborough Rapid Transit Company," in Jackson, ed., 650; Peter Derrick, "Subways," in Jackson, ed., 1259-63; and Connell, et al., 18.

[5] Cited in Hood 2004, 70.

[6] Cited in Hood 2004, 93.

[7] Portions of this section relating to early use and generation of electric power in New York City are adapted from LPC, *Excelsior Steam Power Company Designation Report (LP-0962)* (New York: City of New York, 2016),

prepared by Michael Caratzas, 5-6. Sources for this and the following section include Connell, et al.; Barbara Kimmelman, "Design and Construction of the IRT: Electrical Engineering," in *Interborough Rapid Transit Subway (Original Line) (NY-122)* (Washington, D.C.: Historic American Engineering Record, 1979), 283-364; Interborough Rapid Transit Company, *Interborough Rapid Transit: The New York Subway* (New York: Arno Press, 1904); "Some Features of the New York Rapid Transit Power-House," *Power* (December 1902), 1-7; "The Power House of the Interborough Rapid Transit Company, New York," *Engineering Record* (January 23, 1904), 98-100; "The Power House of the Interborough Rapid Transit Company," *Power* (September 1904), 511-8; "The Power House of the Subway Division, Interborough Rapid Transit Co., New York—I," *Engineering Record* (October 1, 1904), 384-8; John Van Vleck, "The Steam Generating and Engine Equipment of the Power Plant," and L. B. Stillwell, "The Electric Generating Equipment and Power Distribution System of the New York Rapid Transit Subway," *Street Railway Journal* (October 8, 1904), 601-18, 619-33; William N. Stevens, "John Van Vleck," *Cassier's Magazine* (October 1905), 519-20; "Sites for Power Houses," *New York Times*, June 6, 1901, 8; "Tunnel Contracts Awarded," *NYT*, September 12, 1901, 10; "Power House Site for Rapid Transit," *NYT*, September 27, 1901, 14; "Underground Railway Systems of Europe," *NYT*, November 7, 1901, 7; "First of Subway Tests," *NYT*, November 14, 1903, 5; "M'Donald Fails to Turn Over Subway," *NYT*, August 2, 1904, 12; "Story of the Subway and Experts Who Built It," *New York Globe and Commercial Advertiser*, October 27, 1904, 4; J. C. Bayles, "New Power Plant of Interborough Rapid Transit Company," *NYT*, October 30, 1904, SM6; and Christopher Gray, "Old, Massive, Illustrious, and Somehow Overlooked," *NYT*, May 20, 2012, RE8.

[8] The Waterside and Metropolitan Street Railway plants have been demolished; the Manhattan Railway Company powerhouse still stands.

[9] Kimmelman, 305.

[10] "Power House Site for Rapid Transit."

[11] Various accounts exist regarding Stanford White's hiring. The IRT's official account of subway construction states that White "volunteered his services to the company as an adviser on the matter of the design of the facework." In this context, "volunteered" more likely means that he offered his services rather than donated them, as multiple sources note the existence of records showing that White was paid $3,500 for his services. According to David Garrard Lowe, White was hired at the request of Charles T. Barney, a banker and real-estate speculator who also served as one of the IRT Company's directors; Barney's banks had extended several loans to White since the 1890s to save him from financial ruin following a series of bad financial investments. See Interborough Rapid Transit Company, 74; Connell et al., 21; and David Garrard Lowe, *Stanford White's New York* (New York: Doubleday, 1992), 294-6.

[12] New York City Department of Buildings, New Building Dockets, Plan No. 288 (May 8, 1902).

[13] "Of Interest to the Building Trades," *RERBG* (April 9, 1904), 793.

[14] "Change in the Money Situation," *RERBG* (June 11, 1904), 1372.

[15] Bayles.

[16] The West 58th Street pier is not part of this designation.

[17] Kimmelman, 315.

[18] A photo on page 22 of Connell, et al. from the archives of the Metropolitan Transportation Authority shows the building's westernmost portion under construction in December of 1904.

[19] Sanborn Map Company, 1907.

[20] The Seventh Avenue Line south of Times Square includes portions of the current 1, 2, and 3 lines; the Lexington Avenue Line north of Grand Central includes portions of the current 4, 5, and 6 lines; the Jerome Avenue Line is part of the 4 line; the Pelham Line is part of the 6 line; the White Plains Road Line is part of the 2 and 5 lines; the Flushing Line is the 7 line; the Eastern Parkway and New Lots lines include the 2, 3, 4, and 5 trains; and the Nostrand Avenue line, the 2 and 5 trains. In today's subway system, numbered lines are generally former IRT lines while lettered lines are former BMT and IND lines.

[21] The IND lines at that time included the Sixth (today's B, D, and F) and Eighth Avenue (A, C, and E) Lines in Manhattan; the Grand Concourse (D) Line in the Bronx, the Queens Boulevard (E) Line, and the Crosstown Local (G train) between Brooklyn and Queens.

[22] Hood 2004, 93.

[23] All of the original kiosks have been demolished; a recreation has been installed at Astor Place.

[24] David Framberger, "Architectural Designs for New York's First Subway," in *Interborough Rapid Transit*

Subway (Original Line) (NY-122), 381.

[25] Interborough Rapid Transit Company, 74.

[26] Ibid., 77.

[27] Bayles.

[28] This scheme is shown in an undated elevation, titled "58th Street Elevation," provided to LPC by the building's current owner, Con Edison.

[29] On the Niagara Falls project, see Leland M. Roth, *McKim, Mead & White Architects* (New York: Harper & Row, 1983), 204-5.

[30] "The general style of the facework is what may be called French Renaissance, and the color scheme has, therefore, been made rather light in character," according to the IRT Company. Interborough Rapid Transit Company, 74.

[31] On the symbolism of the pinecone, see William Tronzo, *St. Peter's in the Vatican* (Cambridge, England: Cambridge University Press, 2005), 31.

[32] Robert A. M. Stern letter to Meenakshi Srinivasan, October 6, 2015.

[33] Barry Bergdoll letter to Meenakshi Srinivasan, October 20, 2015.

[34] Andrew Scott Dolkart testimony at November 5, 2015 LPC public hearing; David Garrard Lowe letter to Robert Tierney, October 10, 2008.

[35] Chuck Close testimony at November 5, 2015 public hearing.

[36] Portions of this section are adapted from LPC, *(Former James Hampden and Cornelia Van Rensselaer Robb House Designation Report (LP-2026)* (New York: City of New York, 1998), prepared by Gale Harris, 3-4. Other sources include Roth 1983; Lowe 1992; Leland M. Roth, "McKim, Mead & White," in Adolf K. Placzek, ed., *Macmillan Encyclopedia of Architects, Volume 3* (New York: Free Press, 1982), 140-51; Brendan Gill, "Stanford White," in Placzek, ed., 390-4; and Richard Guy Wilson, *McKim, Mead & White Architects* (New York: Rizzoli, 1983, 9-63.

[37] Cited in LPC 1998, 3.

[38] Wilson, 54.

[39] Wilson, 10; Richard Guy Wilson, introduction to *The Architecture of McKim, Mead & White in Photographs, Plans and Elevations* (New York: Dover Publications, 1990), x.

[40] Wilson 1990, ix.

[41] This section is primarily adapted from LPC, *Consolidated Edison Building Designation Report (LP-2313)* (New York: City of New York, 2009), prepared by Gale Harris.

[42] Anne Epstein, "Consolidated Edison," in Kenneth T. Jackson, ed., *The Encyclopedia of New York City Second Edition* (New Haven, Connecticut: Yale University Press, 2010), 305.

[43] On early steam service in Manhattan, see LPC, *Excelsior Steam Power Company Building Designation Report*.

[44] Consolidated Edison, Inc., "Con Edison Reports 2017 Third Quarter Earnings" (Press Release) November 2, 2017, 5.

[45] Sources for this section include Connell et al., Keller and Winslow, and Kimmelman.

[46] Federal Writers' Project, 155.

[47] "Huge New Turbine to Power Subway," *NYT*, September 9, 1950, 19.

[48] "Power Unit Smoke Is Here to Stay," *NYT*, September 18, 1954, 17.

[49] "Con Edison Offers to Buy City Plants," *NYT*, January 27, 1957, 1; "T.W.U. Fights Sale of Power Plants," *NYT*, May 9, 1958, 1; "Con Edison Buys Plants Supplying Subways' Power," *NYT*, May 20, 1959, 1.

[50] Hood 2004, 8.

[51] Greg Moyer, "Miles of Pipes Snake Beneath New York," *New York Times Online*, October 9, 2014 (www.nytimes.com/2014/10/10/nyregion/miles-of-steam-pipes-snake-beneath-new-york.html).

Findings and Designation

Interborough Rapid Transit Company Powerhouse

On the basis of a careful consideration of the history, the architecture, and other features of the building and site, the Landmarks Preservation Commission finds that the Interborough Rapid Transit Company Powerhouse has a special character and special historical and aesthetic interest and value as part of the development, heritage, and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Interborough Rapid Transit Company Powerhouse opened in 1904 to provide electric power for the pioneering IRT Subway; that it represents a unique integration of 20th-century engineering and classical architectural expression; that, when it opened, it was the largest generating station ever constructed; that its exterior was designed by the renowned architect Stanford White in his typically opulent style; that it is the IRT system's preeminent monument reflecting the ideals of the City Beautiful movement; that it was conceived as part of an underground rapid-transit system that would free up Manhattan's crowded streets and open vast portions of the Upper West Side, Upper Manhattan, and the Bronx to intensive development; that at the time of the building's planning, electricity was in its infancy as a form of motive power; that the Interborough Rapid Transit, or IRT, Company, was founded in 1902 and headed by banker August Belmont; that it was constructed to power the IRT Subway, which was only the sixth subway in the world at the time of its opening and the longest subway line completed up to that time as a single project; that its site resulted from the need to have a waterfront location facilitating the delivery of immense amounts of coal and the removal of waste ash, and that it also reflected the desire of its builders to place it on "as commanding a site as possible" and their belief that "the powerhouse of the city's great transit system will be something in which New Yorkers will take no little pride"; that the building's planning and basic design were undertaken by a team of distinguished engineers including S. L. F. Deyo, John Van Vleck, and Lewis B. Stillwell, who was a leader in developing alternating-current systems for urban railways; that it is a mammoth structure, filling the entire west blockfront of Eleventh Avenue and extending for almost 700 feet along West 58th and 59th Streets; that as it neared completion in 1904, it constituted the largest building operation underway in the city; that it was both massive and intricate, capable of producing 100,000 horsepower and holding more than 30 million pounds of coal, with coal delivery and ash removal largely automated through a system of conveyors and hopper cars and with a railroad spur integrated into the design that enabled freight trains to enter the building through large portals at its eastern end; that its exterior was designed by Stanford White, one of the country's most celebrated architects of the time; that White's hiring testifies to the desire of the IRT's directors to transform a utilitarian structure into, in their words, "an architectural landmark"; that White's design masterfully concealed the building's disparate boiler house and generating station within elegant, unified facades cloaked in Milford granite, buff Roman brick, creamy terra cotta, and classical ornament incorporating French Neoclassical and Neo-Grec influences; that White's design has been praised by numerous architects and historians; that at the time of its opening, it was called, in the *New York Times*, "an ornament to the west side…. But for its stacks, it might suggest an art museum or public library rather than a powerhouse"; that in 1959, it was acquired by

the Consolidated Edison Company, which continued to use it to generate power for the transit system before converting it to a generating plant for the city's steam system; that over time, as technologies to produce and deliver energy have changed, the building has been adapted to meet evolving power needs; that these adaptations have resulted in changes to the building's exterior; that, despite its evolution over time to meet changing power needs, it retains its classical grandeur, memorializing in impressive form the engineering achievement of the original IRT System and serving as a prominent reminder of the city's industrial history; and that it plays a vital role in the city's infrastructure.

Accordingly, pursuant to the provisions of Chapter 74, Section 3020 of the Charter of the City of New York and Chapter 3 of Title 25 of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Interborough Rapid Transit Company powerhouse and designates Manhattan Tax Map Block 1106, Lot 1 in part, consisting of the original circa 1902-05 building (and excluding the circa 1949-51 addition at the western portion of the lot), and the land upon which this portion of the improvement is sited, as its Landmark Site.

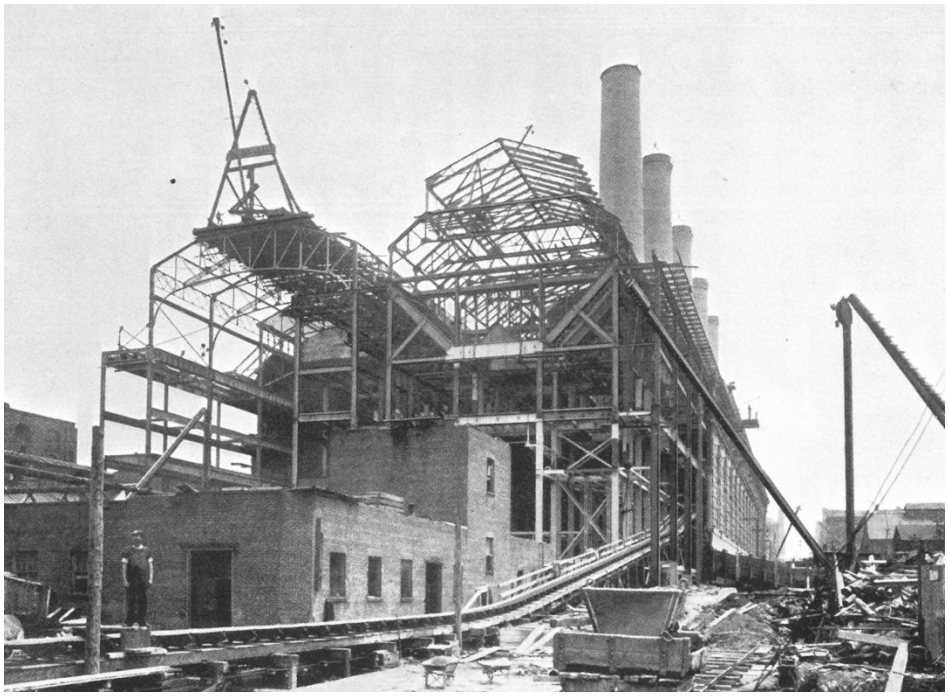
Meenakshi Srinivasan, Chair

Adi Shamir-Baron
Frederick Bland
Diana Chapin
Michael Goldblum
John Gustafsson
Jeanne Lutfy
Kim Vauss
Commissioners

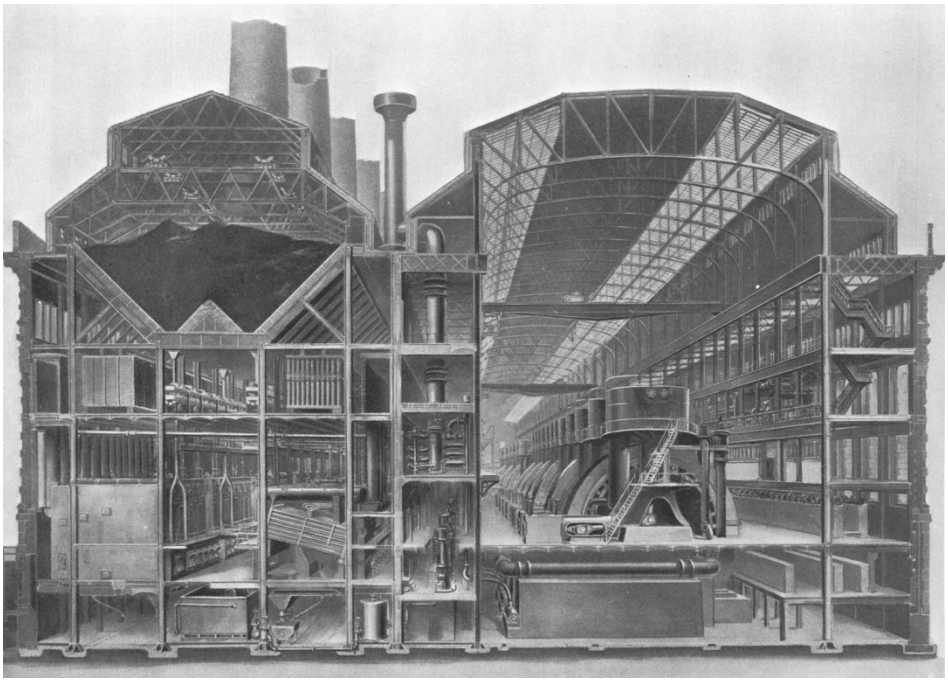
Interborough Rapid Transit Company Powerhouse
855-869 Eleventh Avenue (aka 601-669 West 58th Street, 600-648 West 59th Street), Manhattan
Sarah Moses (LPC), November 2017

IRT Powerhouse, West 58th Street Facade
Sarah Moses (LPC), November 2017

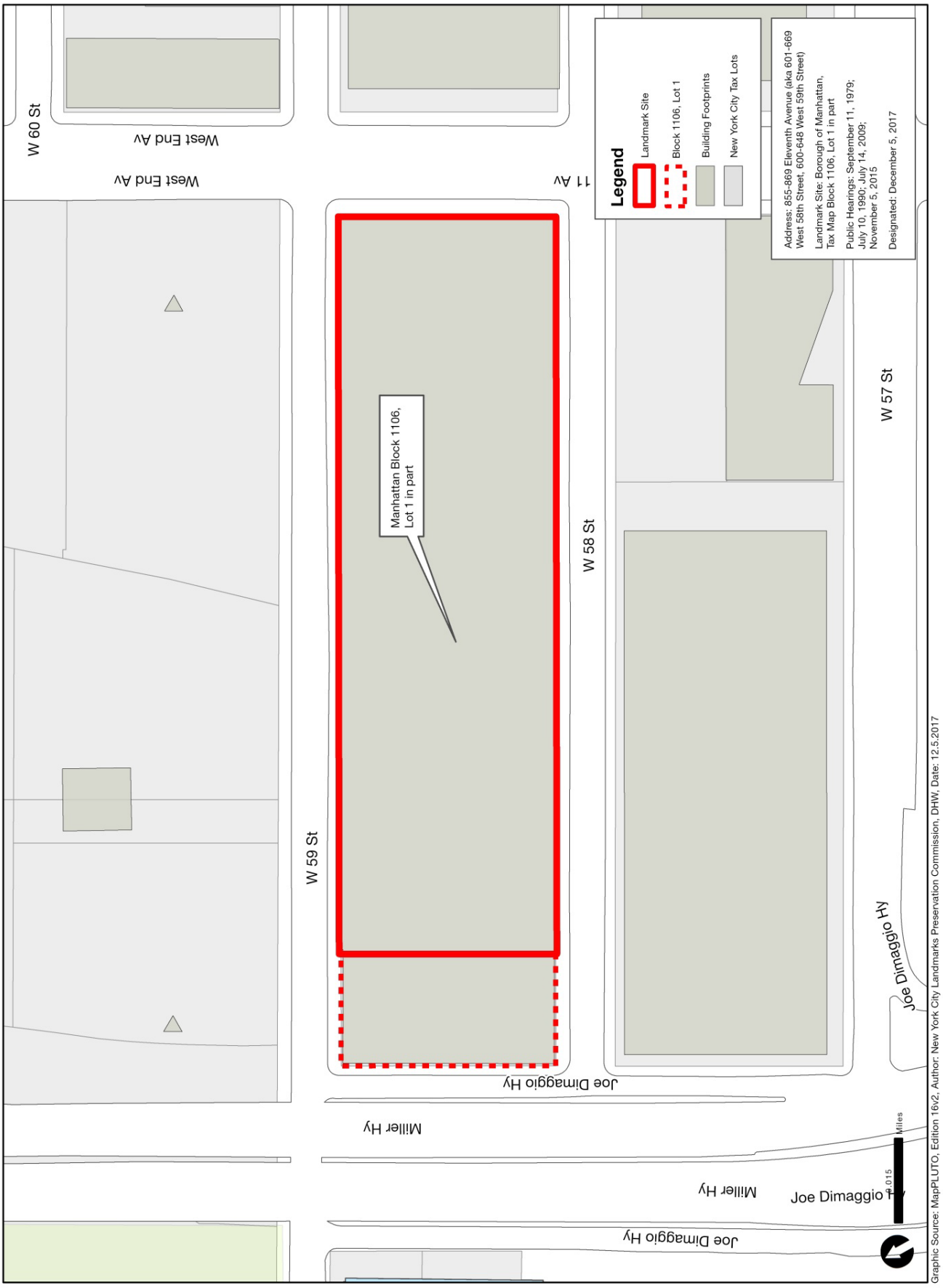
IRT Powerhouse, Facade details
Sarah Moses (LPC), November 2017



IRT Powerhouse nearing completion, c. 1904
Interborough Rapid Transit, *The New York Subway: Its Construction and Equipment* (New York: IRT Company, 1904), 79



IRT Powerhouse, section drawing showing boiler house (left) and operating room (right), c. 1904
The New York Subway: Its Construction and Equipment, 68.


Legend
Landmark Site
Block 1106, Lot 1
Building Footprints
New York City Tax Lots
Address: 855-869 Eleventh Avenue (aka 601-669 West 58th Street, 600-648 West 59th Street)
Landmark Site: Borough of Manhattan, Tax Map Block 1106, Lot 1 in part
Public Hearings: September 11, 1979; July 10, 1990; July 14, 2009; November 5, 2015
Designated: December 5, 2017
Manhattan Block 1106, Lot 1 in part
W 60 St
West End Av
11 Av
W 57 St
W 58 St
W 59 St
Joe Dimaggio Hy
Miller Hy
0 0.015 Miles
Graphic Source: MapPLUTO, Edition 16v2, Author: New York City Landmarks Preservation Commission, DHW, Date: 12.5.2017