Landmarks Preservation Commission May 16, 2006, Designation List 374 LP-2195

ESTEY PIANO COMPANY FACTORY, 112-128 Lincoln Avenue (aka 15-19 Bruckner Boulevard and 270-278 East 134th Street), Borough of the Bronx. Built 1885-86; A.B. Ogden & Son, architects; additions: John B. Snook & Sons, 1890; Hewlett S. Baker, 1895; S. Gifford Slocum, 1909; George F. Hogue, 1919.

Landmark Site: Bronx Borough Tax Map Block 2309, Lot 1, in part, consisting of the five-story building extending for 200 feet along the north side of Bruckner Boulevard east of Lincoln Avenue; 200 feet along the east side of Lincoln Avenue north of Bruckner Boulevard; and along a portion of the south side of East 134th Street east of Lincoln Avenue, including all adjoining elevator shafts, and the land on which it is sited.

On April 11, 2006, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of the Estey Piano Company Factory and the proposed designation of the related Landmark Site (Item No. 1). The hearing had been duly advertised in accordance with the provisions of the law. Two people, including a representative of the Historic Districts Council, spoke in favor of designation. The building had previously been heard by the Commission on June 2, 1992.

Summary

Featuring robust brick facades and a high corner clock tower, the former Estey Piano Company Factory is a distinguished monument to an industry that was once one of the Bronx's most important. Anchoring the northeast corner of Lincoln Avenue and Southern (now Bruckner) Boulevard since 1886, when its original portion was completed, the Estey building is the oldestknown former piano factory standing in the Bronx today. It is also one of the earliest large factories remaining in its Mott Haven neighborhood, dating from the period in which the area first experienced intensive industrial development. Today, as in decades past, the building's signature clock tower and expansive facades—simply but



elegantly detailed with terra cotta, patterned brick, and contrasting stone—are visible from the waterfront and nearby Harlem River bridges, making the Estey Factory a true neighborhood landmark.

Manufacturing blossomed in the Mott Haven section of the Bronx during the 1880s, when new factories started springing up in the area east of Third Avenue. Many of these produced pianos or their components, and by 1919, the Bronx had more than 60 such factories, making it one of America's piano-manufacturing centers. One of the city's first piano factories to be built in the Annexed District or North Side, as the western portions of the Bronx were known between 1874 and 1898, the Estey building was credited with providing "an unusual stimulus" for the movement of other piano makers there. Several of the manufacturers that followed Estey to the Annexed District, and later the Bronx, clustered within a few blocks of its factory, creating an important nucleus for the piano industry.

The Estey Piano Company was organized by Jacob Estey and John B. Simpson in 1885. Two decades before, Estey had established an organ works in Brattleboro, Vt. that had grown into one of the country's larg-

est producers of reed organs, thousands of which found their way into American parlors every year. Like other organ manufacturers in the late nineteenth century, Estey sought to diversify into the booming piano industry, and his partnership with Simpson—a pioneering North Side piano manufacturer—was a means to that end. When Estey Piano opened its factory, it manufactured upright and grand pianos that would become recognized for their "superior construction and workmanship."

The original portion of the Estey Piano Factory was designed by the architectural firm of A.B. Ogden & Son. Many of this building's features, including its L-shaped plan, flat roof, regular fenestration pattern and bay arrangement, and relatively narrow width to allow for daylight penetration, are characteristic of latenineteenth-century factory buildings. Its mixture of segmental- and round-headed window openings, and the Romanesque machicolations of its clock tower, place the Estey Factory within the tradition of the American round-arched style. Other features, including the factory's distinctive, red-orange brick, dogtoothed and zigzagging patterned-brick stringcourses, recessed brick panels, terra cotta tiles featuring festoons, lions' heads, and foliate motifs—and of course, its dramatic, projecting clock tower—speak of a building that sought to announce its presence on the urban landscape, projecting a strong public image for its owner. Indeed, the Estey Piano Company often included an illustration of this factory on its trade cards, which advertised the firm's products.

The original building was extended to the east along Southern Boulevard in 1890, with a harmonious five-story addition designed by John B. Snook & Sons, and to the north, along Lincoln Avenue, with one-story additions in 1895. The Lincoln Avenue additions appear to have been combined and expanded, and then raised to three stories in 1909, and by an additional two stories in 1919; the 1919 addition near the southeast corner of Lincoln Avenue and 134th Street features broad expanses of industrial sash that were characteristic of the "daylight factories" of the early twentieth century. Known today as the Clock Tower Building, the old Estey Piano Company Factory currently houses artists and their studios. With its historic fabric almost completely intact, the building remains, in the words of the *AIA Guide to New York City*, "the grande dame of the piano trade: not virgin, but all-together and proud."

DESCRIPTION AND ANALYSIS

The Industrial Development of Mott Haven¹

Well before the 1898 creation of the borough of the Bronx, industrial activity was occurring in the area that is now the Bronx's southernmost portion. In 1828, Jordan L. Mott, the inventor of a coal-burning iron cooking stove, opened a "modest little factory" on property he had purchased on the Harlem River near the present Third Avenue, in what was then the township of Morrisania. Mott started calling the area Mott Haven and, in 1850, seeking to attract additional industry to the area, he laid out the Mott Haven Canal, an artificial inlet from the Harlem River that would ultimately extend to just south of 144th Street. The canal, however, was slow to attract industrial firms, and by 1879, only a handful of substantial ones existed nearby, including a brass and iron works, a machine shop, and a few lumber and coal yards, all of which were below 138th Street. These were joined by a marble yard, lumber yard, and hotel west of the canal, near the tracks built by the New York & Harlem Railroad to connect Manhattan with what is now the Bronx, in 1841. Despite the presence of the large Harlem River & Port Chester Railroad yard, which stretched from Lincoln Avenue to Brown Place south of 132nd Street, few factories appear to have existed east of Third Avenue at the end of the 1870s.

In 1874, the townships of Morrisania, West Farms, and Kingsbridge—the sections of the present Bronx borough located west of the Bronx River—became part of New York City. Officially called the 23rd and 24th Wards, they were generally referred to as the "Annexed District" or "North Side," but they remained fairly isolated.⁷ At that time, few links existed between the southern portion of the District and Manhattan; among those that did was a cast-iron bridge at Third Avenue which, in 1860, had replaced an old wood dam-bridge built in the 1790s at that location.⁸ Soon after annexation, however, local residents, property owners, business owners, and booster groups like the North Side Association began agitating for improved infrastructure, including better connections with Manhattan.⁹ In the 1880s, new public works started to be built; among them was the Madison Avenue Bridge, completed in 1884, which spanned the Harlem River at 138th Street, about

five blocks north of the Mott Iron Works complex. By 1885, additional industrial concerns—including a planing mill, cabinet maker, and nickel works, and factories making carpets and surgical instruments—had sprung up in Mott Haven, near and below 138th Street, and close to Third Avenue. The expanded rail yard below 132nd Street, at that point operated by the New York, New Haven & Hartford Railroad, connected directly to new docks at the foot of Willis Avenue. A few factories had sprouted up in the area east of Lincoln Avenue, as the Estey Piano Company Factory, then under construction at the northeast corner of Lincoln Avenue and Southern (now Bruckner) Boulevard, shared a block with the expansive works of the New York Lumber and Woodworking Company.¹⁰

The 1886 opening of the Second Avenue Bridge just a few blocks from the Estey Factory provided a Harlem River crossing for the trains of the new Suburban Rapid Transit Company. The Suburban's line, which would come to be known in the Bronx as the Third Avenue El, was the first to bring rapid transit service to the Annexed District. With its southern terminus on the Manhattan side of the Harlem, where it met Manhattan's east-side elevated lines, the Suburban stopped at Southern Boulevard, before continuing northward; service on the line was expanded and improved between 1887 and 1902. While the Suburban was under construction, *Real Estate Record & Builders' Guide* predicted that it would have an enormous impact on the North Side, calling it, in 1885, "a great thing for the [Annexed District], as well as for New York City. It will furnish cheap homes for a poorer population, as well as choice rural habitations for the well-to-do. We may expect many light manufacturing industries to become naturalized on the other side of the Harlem." And the line did come to play a crucial role in Mott Haven's late-nineteenth-century development, spurring rowhouse construction in the late 1880s and 1890s. As new housing sprouted up, so too did industry; an 1894 drawing of the Harlem River east of Third Avenue shows a busy waterfront with docks and factories on both sides of the river, including the Estey Factory, with its distinctive clock tower clearly visible. In 1895, the *New York Times* noted that "that part of the 23rd Ward along the Harlem River"—that is, the southernmost portion of the Annexed District, including Mott Haven—was "a very busy manufacturing place."

Improved rapid transit connections with Manhattan aided Mott Haven's residential growth, but the area's industrial development was spurred by its Harlem River location and the expansion of its freight-rail infrastructure. By the beginning of the twentieth century, the New York, New Haven & Hartford—with a freight depot located one block south of the Estey Factory, at Lincoln Avenue and 132nd Street—connected with dozens of railroads providing service throughout the eastern and midwestern United States, and into Canada. The New York Central system, with extensive yards close by in Melrose, was just as far-reaching. And the southern Bronx retained these transportation advantages into the twentieth century. Writing in 1908 about the proliferation of piano factories, many of which were in the southern Bronx, lifelong piano man William P.H. Bacon pointed to the borough's "superior transportation and shipping facilities, both by water and land," as well as "the opportunity of getting land for the erection of commodious factories at reasonable figures." In experiencing strong manufacturing growth in the nineteenth and early twentieth centuries, Mott Haven was a microcosm of the Bronx and the city as a whole: by 1920, New York City had 12% of the country's factory workers, and by 1927, the Bronx had 2,700 plants with more than 100,000 employees.

Industrial growth had been rapid in the southern Bronx; Bacon wrote, in 1908, of "the busy hum of commerce where but a few years ago, the lowing of cattle and other sylvan sounds were the only noises heard." The end of World War II marked the apex of manufacturing in New York, as in 1947, more manufacturing jobs existed in the city than in Boston, Detroit, Los Angeles, and Philadelphia combined. But industrial activity in the Bronx would soon begin to decline, reflecting city-wide trends. By the 1950s, New York City was rapidly losing industrial jobs, with manufacturers leaving in droves for the suburbs, or departing the region entirely. Between 1969 and 1999, the number of manufacturing jobs in the city fell by two-thirds. Contributing to the decline of industry in the southern Bronx was the destruction of manufacturing space with the construction of broad new highways; the building of the earliest portions of the Major Deegan Expressway through Mott Haven between 1935 and 1939, for example, wiped out several industrial buildings on the block immediately to the north of the Estey Factory, including the former factory of the Brambach Piano Company. In 1997, the New York City Department of City Planning, citing an underutilization of industrial space in Mott Haven, rezoned a portion of Bruckner Boulevard including the block containing the former Estey Factory, to allow for residential uses and community facilities. This special mixed-use zoning was expanded to blocks to the east, west, and south in 2005.

As Mott Haven becomes increasingly residential, the former Estey Factory is a reminder of the neighborhood's early years of intensive industrial growth. Today, the Estey building is one of the oldest large factories standing in Mott Haven, and in the entire area of the southern Bronx below 149th Street.²⁴

The Rise and Fall of the American Piano Industry²⁵

The piano was virtually unknown in the American colonies in 1771, when Thomas Jefferson asked his agent to have a "forte-piano" sent to him from Europe. By the 1780s, however, piano imports were being supplemented with domestically produced instruments made by a handful of manufacturers in New York and Philadelphia. But despite the announcement in New York, in 1791, that one Mr. Kullin "would perform on a Grand Concert Pianoforte … just finished by Messrs. Dodds & Claus, of this city," American-made pianos were rare creatures at the turn of the nineteenth century. According to one estimate made in the 1790s, only 27 families in the entire city of Boston owned pianos at that time, and all of those instruments had been made in London.

For the first half of the nineteenth century, Boston was "the liveliest American center for the development of new piano-making ideas," as its makers pioneered crucial technological advancements that included the one-piece iron frame. But other cities were making pianos, too, and by 1829, with the industry on the rise, Philadelphia led the country in piano production, followed by New York, Boston, and Baltimore. By the 1840s and 1850s, with New York's ascendance as the nation's cultural and commercial capital, German piano makers began arriving in the city, including Heinrich E. Steinweg, whose name—later changed to Steinway—would become synonymous with the instrument. Many of the immigrants from this period—including Frederick Mathushek, Ernst Gabler, George Steck, Henry Behning, and Simon Krakauer—founded companies that would ultimately have large piano factories in the Annexed District, and later, the Bronx.

The 1850s "marked the domestic triumph of the American piano," as the nation's production doubled during the decade, and imports from England dwindled to virtually nothing.³⁰ Although the piano would never become, in the words of pianist and social historian Arthur Loesser, a "possession of the 'masses," its appearance in more and more American parlors led one popular writer to remark in 1867 that "almost every couple that sets up housekeeping on a respectable scale considers a piano only less indispensable than a kitchen range." Between 1870 and 1910, and especially, in the latter two decades of this period, the American piano industry boomed; per-capita consumption of pianos skyrocketed, with one American in every 252 purchasing a new piano in 1910, up from one in 1,540 in 1870. Falling prices and the growing availability of inexpensive, low-quality "thump-boxes" were factors in expanding the market for the piano, which was becoming an increasingly affordable status symbol.

In the mid-to-late nineteenth century, as the piano became a more common feature of the middle-class home, it began to carry considerable cultural freight. During this period and into the twentieth century, most piano players were women and girls; the ability to play even simple tunes on the instrument was a mark of a "cultivated lady" with good social graces, as piano music had become "an unavoidable feature of the small soiree." The piano was believed to be more suitable for a girl than the harp—which might bring bad posture—or the horn, violin, or cello, which were inappropriate for refined, modest young women and were thought to cause "detriment of their feminine attractions." But more importantly, the piano was viewed as an important feature of a home that was supposed to shelter its family from the uncertainties of an increasingly industrialized society, and to incubate moral and spiritual values that were believed to be under threat. Music was held to be morally uplifting "medicine for the soul"; a mother's duty to provide it to her family was intertwined with her responsibilities as keeper of the domestic hearth. The daughters of the house also shouldered this duty. By playing the piano at home, one 1909 article argued, a girl could "lighten the hours free from the cares of business and household," acting as "a boon to her father, to her mother, and to her brothers." In the words of historian Craig H. Roell, "The girl musician was not just cultivating a pastime or social grace; she was playing her proper role. She provided a musical oasis in a workaday world." "

The peak year for domestic pianos was 1909, when American manufacturers turned out nearly 365,000 of them. Several factors had contributed to the industry's rapid growth over the previous four decades, including the rise of the supply business, which provided keys, actions, cases, soundboards, and other ready-made parts to manufacturers that were too small to produce these components in-house.³⁶ The widespread use of

installment sales, broadened musical education, and sophisticated marketing techniques—including manufacturers' sponsorship of concerts and their construction of recital halls—also boosted sales. But by the turn of the twentieth century, changes were afoot that foreshadowed the industry's collapse. Around that time, the industry started to consolidate; multiple brand names were grouped under big corporate umbrellas, diluting the value of old, respected marques and squeezing out smaller manufacturers. The growth of the used-piano business undercut new piano sales. And while pedal-operated and electric player pianos boosted the industry between 1900 and 1925, manufacturers sowed the seeds of their own demise by emphasizing these instruments' ease of operation. "There is no question that for the industry as a whole, the appeal to the consumer's laziness was a very profitable but eventually disastrous path," Roell explains, noting that Steinway, which continued to make high-quality pianos requiring skilled human hands, was among the strongest survivors of the fierce industry shakeout to come.³⁷

The arrival of the phonograph around the turn of the twentieth century posed some threat to piano manufacturers, but radio devastated the industry. Not only did radios offer a wide variety of musical and other programming, but they were cheaper and smaller than pianos, came in attractive cabinets, and were seen as technological marvels. As radio production rose from 190,000 units in 1923 to almost five million in 1929, the piano industry experienced near-complete collapse. Between 1923 and 1933, the number of American piano manufacturers shrank from 160 to 36; the industry's workforce fell by 85%. Even the once-mighty American Piano Company, which became the first musical instrument manufacturer to be listed on the New York Stock Exchange following its 1908 formation, fell into receivership in 1929.

From the late nineteenth century on, piano manufacturing's growth in the Midwest—particularly in Chicago and Cincinnati—eroded the dominance in the industry that East Coast cities, particularly New York, Boston, and Philadelphia, once enjoyed. Nevertheless, New York remained a major center for piano making until the time of the industry's decline. In 1911, 120 of the 295 American piano manufacturers were headquartered in New York City, giving it, by a wide margin, the most manufacturers of any city in the United States; in 1924, just before the piano industry fell apart, "American piano production had reached phenomenal proportions," and New York was "one of the leading domestic centers for the production of pianos and other musical instruments." By the early twentieth century, most of the city's piano manufacturing was occurring in the Bronx.

Piano Manufacturing in the Bronx⁴⁰

Piano manufacturing in the Bronx predates the birth of the borough itself, and was occurring even before the 1874 creation of the Annexed District. According to William P.H. Bacon, the first important piano factory in what is now the Bronx was that of Dunham & Son, which was located at the northeast corner of 155th Street and Morris Avenue, east of the New York & Harlem Railroad tracks. Built around 1870, the plant was still operating in 1885, but by 1893, Dunham had vacated the plant because of its isolated location. By the late 1870s, a few other businesses associated with the piano trade existed in the Annexed District, including those of Gustavus de Nobriga, at Elton Avenue and 163rd Street; Peter C. Provost, at Third Avenue and 161st Street; and Charles A. Vinton, in Tremont. Among the most successful members of this small, far-flung community of North Side piano men was John Boulton Simpson. By 1879, Simpson's large Arion piano works—probably the biggest of its time in the entire Annexed District—spanned the north side of 149th Street, between Brook and St. Ann's Avenues.

The new Estey Piano Factory, built in 1885-86 at the northeast corner of Southern Boulevard and Lincoln Avenue, catalyzed the development of the area south of 149th Street into the city's most significant pianomanufacturing hub. Noting in 1889 that "the section of the city on the other side of Harlem and east of Third Avenue is destined to become a piano making center of unusual importance, judging from the manner in which piano firms are concentrating in that portion of the city," *Musical Courier* magazine credited the construction of the Estey Factory with giving this "movement an unusual stimulus." Indeed, within a decade, several large piano factories would exist within close distance of the Estey building. By 1897, Estey was sharing its block with the Kroeger Piano Company; one block south were the factories of the Henry Spies and Haines Brothers companies, and a block to the north was the factory of Schubert Piano. By 1900, piano factories were scattered throughout the area south of 149th Street, another manufacturer—Sturz Brothers—had moved to

the block north of Estey, and an additional nucleus of piano firms had developed on the east side of Southern Boulevard between 135th and 136th Streets, where Ludwig, Newby & Evans, and Decker had factories. 47

"The Bronx was a very good area to run a craft-oriented factory" because of its large number of German and Italian immigrants—many of them skilled craftsmen—according to historian Harvey Lubar. 48 And by the end of the nineteenth century, piano making had become one of the Bronx's signature industries. One 1895 New York Times article about the North Side noted that piano production there was "so large as almost to make it the center of this industry"; the 1897 booster publication The Great North Side, which opened its chapter on manufacturing with a picture of the Estey Factory, also featured pictures of at least four other piano factories, including those of the Wheelock, Ludwig, and Jacob Doll companies. 49 Over the following two decades, piano manufacturing in the southern Bronx would steadily increase. In 1908, according to a *Times* piece by Borough President Louis F. Haffen, 24 piano factories existed south of 149th Street; Haffen's text was accompanied by illustrations of four representative Bronx places, including the old Borough Hall (later destroyed by fire) in Crotona Park, and a "Bronx piano factory." In the same year, Bacon reported that the Bronx contained more than three-fifths of the city's piano factories, which accounted for more than two-thirds of New York's annual production.⁵¹ The American piano industry was "largely centered in the Bronx," according to one 1910 account;⁵² by 1913, the Bronx had 40 piano factories and an additional 14 manufacturers of piano components. "Instead of being injurious to business, this centralization of the makers of one product is proving beneficial," Borough President Cyrus Chace Miller wrote, arguing that it drew buyers to the area and gave piano manufacturers easy access to a large pool of skilled labor.⁵³ The presence of a large number of components suppliers also undoubtedly contributed to the Bronx's success as a piano center, making it easier for companies to enter the business with relatively small amounts of capital, and to compete with their larger rivals.⁵⁴

Piano manufacturing continued to grow in the Bronx through the 1910s. By 1919, the borough was, according to the *Times*, the "center of New York's piano industry"; in an industry with 191 companies and 23,000 employees nationwide, the Bronx had 63 piano factories employing more than 5,000 people, and producing approximately 115,000 units annually.⁵⁵ In that year, at least 55 firms classified as makers of pianos, including player pianos, were located in the Bronx, and 43 of them were in Mott Haven, in the area south of 149th Street and west of the Port Morris neighborhood.⁵⁶ These firms made all kinds of instruments, some cheap, and some expensive. As Lubar explains, "there is no one stereotype company that could be said to typify the Bronx piano industry. Some companies were more concerned with profits than others, while some produced much-higher-quality instruments than others."⁵⁷

Several of the companies that set up shop in the Bronx had moved from Manhattan, many from the upper part of the island.⁵⁸ Several others were previously located east of Third Avenue, between around 21st Street and the low 40s, and west of Eighth Avenue, between approximately 34th and 51st Streets.⁵⁹ Many piano factories remained on Manhattan's west side and in Astoria—the home of Steinway & Sons—during the Bronx's glory years, but after the Bronx developed into the city's major piano-making center, several firms set up shop there without stopping in Manhattan first.⁶⁰

By 1925, declining production and industry consolidation had shrunk the number of Bronx piano manufacturers to approximately 40, with about 32 located in Mott Haven. Although most were gone by the 1930s, a few hung on through the Depression. The final Bronx piano manufacturer was Krakauer, but by the mid-1970s, it was gone, too. Today, the Estey Piano Company Factory, which played a crucial role in the borough's rise to the position of "piano capital of the United States," is the oldest-known piano factory standing in the Bronx, a monument to an industry that played a significant role in the borough's history.

A.B. Ogden & Son⁶³

A New York State native, Alfred B. Ogden (c.1834-1895) established an architectural practice in New York City by 1878.⁶⁴ In that year—the first in which he was listed as an architect in a city directory—Ogden saw the completion of his Hahnemann Hospital, since demolished, on the east side of Fourth (now Park) Avenue between East 67th and 68th Streets. Featuring a distinctive, steeply pitched mansard roof with high corner towers, the four-story brick building with stone trim represented what may have been Ogden's first major commission.⁶⁵ It was also the work of a man who was already into his forties, and who had been associated, until that point, primarily with the woodworking business.⁶⁶

In 1885, Ogden welcomed his son, Samuel B. Ogden (c.1865-1925) into his firm, and changed its name to A.B. Ogden & Son. ⁶⁷ By that point, Alfred had built up a booming practice. Between 1884 and 1886 alone, Ogden's firm designed dozens of apartment, tenement, and flats buildings, many of them for the vast areas of Manhattan—including the Upper East and Upper West Sides, and Harlem—that had been opened up to intensive development with the recent extension of New York's elevated train lines. ⁶⁸ Most of the Ogdens' buildings were unpretentious, such as a group of four, five-story tenements constructed in 1885 at the southwest corner of First Avenue and 92nd Street, at a total cost of about \$50,000. ⁶⁹ While most of their mid-1880s residential buildings fell into the modest \$10,000 to \$25,000 range, the firm did design a handful of more luxurious buildings, such as a now-demolished, six-story apartment house on the north side of 86th Street, east of Fourth Avenue. ⁷⁰

While multiple dwellings—particularly, fairly inexpensive ones—represented the firm's bread and butter during these years, the Ogdens had gained considerable experience by the mid-1880s in designing buildings of diverse types, including rowhouses; stables; a store-and-lofts building with neo-Grec elements at 274 Canal Street (1883, within the Tribeca East Historic District); and industrial buildings, including a silk-finishing mill on the north side of 91st Street, east of First Avenue. Among the firm's most ambitious industrial designs was one for what the *Real Estate Record and Builders' Guide* called "an immense abattoir and refrigerator," since demolished, which covered the entire block east of First Avenue, between 45th and 46th Streets.

A.B. Ogden & Son designed numerous rowhouses and multiple dwellings that remain today within the Carnegie Hill, Upper West Side/Central Park West, Mount Morris Park, and Greenwich Village Historic Districts, and within the Hamilton Heights/Sugar Hill Historic Districts. The firm was experienced in designing housing in a variety of period styles; its work within the Upper East Side and Upper West Side districts consists primarily of rowhouses and flats buildings built between the early 1880s and early 1890s in the neo-Grec, Queen Anne, and Renaissance Revival styles, with some incorporating Romanesque Revival elements. The Renaissance Revival- and Classical Revival-style rowhouses in the Hamilton Heights/Sugar Hill districts—which were completed in 1894 and 1895, toward the end of Alfred's life—are among the Ogdens' most finely detailed residential work.

After Alfred died on Christmas Day of 1895, the firm's name changed to S.B. Ogden & Company, and in 1899 or 1900, Ogden's office moved to a new three-story, neo-Renaissance-style commercial building at 954 Lexington Avenue (within the Upper East Side Historic District) that his firm had designed. During the first decade of the twentieth century, Ogden's firm designed a diverse array of buildings, including stables, factories, tenements, flats, and warehouses. Among its most notable works were a twelve-story residential building completed c.1905 at 125 Riverside Drive, and the stately, neo-Renaissance style, eleven-story Alba Hotel at 203 West 54th Street.⁷³

By 1900, Samuel B. Ogden had started a family of his own, and was living at 186 MacDonough Street in Brooklyn. He appears to have closed his architectural firm, and left the practice, in 1909 or 1910.⁷⁴ As a Brooklyn resident, Ogden had at least one commission within that borough, a four-story apartment house with austere Classical detailing completed in 1907 at 886 Union Street that stands today within the Park Slope Historic District. Samuel B. Ogden died on September 26, 1925.

The Estey Piano Company and Its Factory⁷⁵

The Estey Piano Company had its roots in the firm of Manner & Company, which manufactured pianos on the Bowery between 1866 and 1869. Manner called his piano the "Arion," and in 1870, his firm's name changed to the Arion Piano-Forte Company. In 1872, the company's factory moved to 149th Street, in what is now the Bronx. John Boulton Simpson, who had been Arion's secretary since 1871, took control of the company in 1875; in that year, the company apparently moved to a new factory on St. Ann's Avenue and boasted that "Six years ago, there were none of our pianos in existence; to-day, there are over 7,500 in use." In the following year, the firm's name changed to Simpson & Company, although it also continued to be known by the Arion name. By the end of the 1870s, Simpson's factory—stretching from Brook to St. Ann's Avenues on the north side of 149th Street—was probably the largest piano factory in the Annexed District, but in 1880, it was sold to another piano maker, the William E. Wheelock Company.

While Simpson apparently continued to make "high grade pianos" following the Wheelock sale, the location of his factory in the early 1880s is unclear. Between 1881 and 1885, Simpson & Company continued to maintain a space, likely a showroom, at 5 East 14th Street—where it had been since 1876—but the company was also listed at 127 East 129th and 232 East 40th Streets, neither of which appears to have been the location of a substantial factory. These addresses do, however, link Simpson in the early 1880s with the respected tuner Stephen Brambach, who would play a crucial role in developing Estey's first pianos; Brambach was located next door to Simpson between 1881 and 1883, and in the same building in 1884.

In 1885, the Estey Organ Company of Brattleboro, Vt. was hitting its peak. ⁸⁰ By the end of the 1880s, the firm, which had been founded in 1866 by Jacob Estey, would be the world's largest producer of reed organs. Thousands of these instruments found their way into American parlors every year; they were also being distributed, by 1890, to Africa, Asia, Australia, and South America, and to major European cities. Despite the company's success—it was described, in 1886, as doing "an immense business, amounting to over one million dollars annually" and its rapid growth—production rose by a factor of seven between 1865 and 1886—the organ business was in decline. The piano business, however, was booming; and, likely noticing the 1882 entry of the renowned organ maker Mason & Hamlin into piano manufacturing, Estey and the company's other principals, including Levi K. Fuller and Jacob's son Julius, decided to take the same path. ⁸²

Estey became a piano manufacturer by forming a partnership with Simpson, who was named president of the new Estey Piano Company; the Simpson piano was essentially re-branded as the new Estey model. Simpson, of course, had been a pioneer in Bronx piano manufacturing, and this may have played a role in Estey's decision to build its plant on the North Side. A.B. Ogden & Son was hired to design the factory, but Simpson may have had some influence over its appearance and form, as he had dabbled in architecture, altering his home on West 129th Street in 1882 to give it a "picturesque exoticism." Work began on the "large factory with modern appliances," as it would later be described, in August of 1885; it was completed, at a cost of approximately \$40,000, in February of 1886. While the factory was under construction, Estey Piano decided to construct three more buildings that would extend its complex by an additional 80 feet along Southern Boulevard. These brick structures, designed by Ogden's firm and completed at the same time as the main factory, were a one-story extension, a one-story shed, and a two-story stable.

Estey Piano prospered in its early years, as "Estey grand and upright pianos soon became a dominant factor in the piano trade," according to Alfred Dolge, who added that they often "carried off highest awards for superior construction and workmanship." In 1887, the trade publication *Musical Courier* wrote that the Estey Piano Factory was "one of the most complete in the country"; two years later, it called the firm's upright "a most beautiful specimen of piano manufacturing," of which Estey would "find no difficulty in disposing ... in the best musical circles in the land." While trade journals' opinions should be considered with caution, those of the respected piano tuner and regulator Daniel Spillane may be more reliable. Five years after the Estey Factory opened, Spillane called its piano "a very excellent instrument," adding that "much of the technical and musical merit of these pianos is due to the competency and skill of [Stephen] Brambach, who is a gentleman of fine musical and mechanical sensibilities [and] ... one of the best tuners in New York." Although Brambach had apparently started his own piano company in 1885, he remained involved with Estey in 1890, originating "all new ideas in the mechanics and acoustics of the Estey piano." Brambach's brother Carl, "one of the most expert and artistic tuners and toners in the country," was also employed by Estey Piano, according to Spillane.

Business was good, and only four years after the Estey Piano Factory opened, it underwent a huge expansion. In May of 1890, work began on a 100-foot-long east addition that would result in the demolition of the extension, shed, and stable on Southern Boulevard, and create the unified five-story, 200-foot-long Bruckner Boulevard façade that remains essentially unchanged today. The architect of this addition, which was completed in October of 1890 at a cost of about \$23,000, was John B. Snook & Sons. This firm, then one of New York's most prolific, traced its origins to the arrival of John B. Snook (1815-1901) in the United States, from England, in 1835. By 1842, Snook was working with Joseph Trench, and the two helped introduce the Anglo-Italianate style to New York with buildings such as the A.T. Stewart Store at 280 Broadway (1845-46, a Designated New York City Landmark). One of Snook's best-known works was the first Grand Central Terminal (1869-71, demolished); in 1887, he took his three sons, James Henry (1847-1917), Samuel Booth (1857-1915), and Thomas Edward, and a son-in-law, John W. Boyleston, into his office, and changed his firm's name

to John B. Snook & Sons. Although Snook had designed a diverse array of buildings—including residential and commercial structures for some of New York's most prominent families—his firm designed several manufacturing lofts in the 1880s and 1890s that would have made it an appropriate choice for the Estey addition. These industrial buildings, now located in the SoHo-Cast Iron Historic District—including 8 Greene Street (1883-84), 12 Wooster Street (1883-84), 127 Spring Street/87-89 Greene Street (1886-87), 391-393 West Broadway/77-81 Wooster Street (1889), 151 Spring Street (1889-90) and 361 Canal Street (1891-92)—were utilitarian brick buildings; but like the Estey Factory, they were also designed with an eye toward detail, featuring patterned and textured brickwork, and contrasting stone trim that enliven their facades.

The Estey Factory continued to grow in the 1890s. In 1895, the company extended the building 50 feet along Lincoln Avenue with a one-story, 69-foot-deep brick addition that apparently provided a fireproof home for its woodworking department; at the same time, Estey constructed a new, one-story brick lumber room running for an additional 38 feet along Lincoln, where it met a small, one-story brick building then existing at the southeast corner of Lincoln Avenue and 134th Street. Both the extension and the new building—which appear to remain today as the base of the five-story portion of the factory north of the original building—were designed by Hewlett S. Baker of 492 East 138th Street. Little is known about Baker; he was described as "a property owner in the South Bronx" in a 1910 *New York Times* article, and as "a contractor and builder in the Bronx" in a 1912 article about his death. By 1900, the one-story buildings near the corner of Lincoln and 134th appear to have been extended to the east.

The portion of the factory north of the original building remained at one story until 1909, when Simpson and architect S. Gifford Slocum raised it to three stories. Slocum, an architect of some note, is remembered primarily for his large residences for wealthy clients, including several fine Queen Anne-style residences built in the Saratoga Springs area in the 1880s. Born in Jefferson County, N.Y., Slocum studied architecture at Cornell University from 1873 to 1875, and by 1885, he had offices in Saratoga and Glens Falls, N.Y. In 1888, Slocum moved to Philadelphia while retaining his Saratoga office; between 1890 and 1909, he practiced architecture in New York City. Simpson hired Slocum to design an alteration to his residence at 117 East 83rd Street, in 1900. Slocum's two-story addition to the Estey Piano Factory was described as being of "similar construction to the present building" in its Buildings Department application, and it demonstrates continuity with the floor below and with the original building in its segmental-arch-headed window openings, and in its similar decorative details, including pilasters, stone sills supported by corbelled brick courses, and patterned-brick stringcourses. A drawing of the factory following the completion of Slocum's addition appeared in a 1917 Estey Piano Company advertisement.

Over the previous years, the Estey Piano Company had undergone several changes, weathering the deaths—in 1890, 1896, and 1902, respectively—of Jacob Estey, Levi K. Fuller, and Julius Estey. The firm's "warerooms" or showrooms, which had been at 5 East 14th Street since the time of the company's founding, were at 97 Fifth Avenue by 1900 and 7 West 29th Street by 1909. They would move again—in 1912 to the since-demolished "Estey Building" at 23 West 42nd Street—and by 1916 to 12 West 45th Street. By 1912, Estey pianos were being sold at Loeser's department store in Brooklyn; in its advertising, the company took advantage of its historical association with the Estey Organ Company, stating that "the world-renowned Estey Pianos ... are just as reliable as the Estey Organs made famous by the same firm in the days of our parents." On at least one occasion, the Estey Piano Factory witnessed strife between its employees and management, as in 1912, workers struck Estey and other Bronx piano manufacturers that would not recognize the piano makers' union and refused to close their shop floors to non-union employees. 103

In 1917, John B. Simpson's leadership of the Estey Piano Company came to an end, when George B. Gittins, the former president of piano manufacturer Kohler & Campbell, purchased a controlling interest in the firm. Gittins, an industry prodigy who was only 37 at the time he took Estey Piano's helm, appears to have begun revamping the company's product line almost immediately; an "at-the-factory" clearance sale held in November of 1917 was prompted by the company's intention "to concentrate on the large-scale production of a few standard models." Two years later, Gittins purchased M. Welte & Sons, Inc., which was originally the American arm of a German company that had invented the reproducing piano, a technologically advanced kind of player piano using special rolls that were able to express, to some extent, the subtleties of the renowned pianists who had "recorded" them. Following the 1907 introduction of Welte's "Mignon" reproducing piano in the United States, dozens of the world's most famous pianists made recordings for Welte, allowing Ameri-

cans to experience, for the first time, something close to having Paderewski, Saint-Saens, and other virtuosi play for them in their homes.

Soon after acquiring Welte, Gittins started shutting down the firm's Poughkeepsie, N.Y. plant—which had produced rolls, reproducing pianos with and without keyboards, Welte "Philharmonic" reproducing organs, orchestrions, and other products—and expanding the Estey Factory building and its complex. In 1919, architect George F. Hogue of 41 Union Square in Manhattan was hired to add two stories to the northern, three-story portion of the factory, and to add an elevator shaft. This alteration, which cost about \$25,000, featured broad expanses of industrial sash typical of the "daylight" factories that were then being constructed around the country. By 1921, Gittins had also constructed a two-story building (not part of this Designation) facing Southern Boulevard and adjoining Snook's 1890 addition, as well as a four-story factory for Welte (not part of this Designation) that remains today at 27 Bruckner Boulevard. In 1922, the Estey-Welte Corporation was created, which served as an umbrella organization for several Gittins holdings, including the Estey Piano Company and the Welte-Mignon Corporation. Estey, at that time, was manufacturing a variety of pianos, including an 88-note player piano, and manual and reproducing uprights and grands; the new four-story factory on Southern Boulevard made Welte-Mignon pianos and grands, actions for reproducing instruments, and Welte Philharmonic organs.

In 1925, perhaps sensing the end of the glory days for the piano and player piano, Gittins decided to diversify into the manufacture of pipe organs for churches, concert halls, theaters, and large residences. In the following year, Estey-Welte appeared to be perfectly healthy, but by January of 1927, a crash in its stock price brought the over-extended company to its knees. Estey-Welte was in serious trouble, and by summer of that year, it was reorganized as the Welte Company. Gittins was soon gone; by 1928 his old firm was reorganized again, as the Welte-Mignon Corp. This latest incarnation of the firm fell into receivership in 1929, when its chief assets were split up and its factory emptied; one investor, Donald F. Tripp, bought some of the organ business, and the Estey Piano Company was sold to the Settergren Piano Company of Bluffton, Ind. Tripp's firm was bankrupt within two years; in 1935, Settergren was renamed the Estey Piano Company.

The Estey Piano name continued on for decades. Estey spinets were being advertised in Chicago in 1948, and the firm's pianos appeared in Macy's advertisements in the early-to-mid 1960s. The Estey Piano Company was still operating in 1972, when it received a loan from the Commerce Department to assist it in starting production of a plastic piano. At that time, Estey was described as having "an office in Union, N.J., and an old plant in Bluffton, Ind."

After the old Estey Piano Company Factory was vacated in 1929, it passed through the hands of a number of different owners, and was occupied by many different industrial tenants. A sheet-metal works leased space there in 1932, and its occupants in 1937 included the Whitman Supply Company and Unique Balance Company. By 1939, the factory had been acquired by the Emigrant Industrial Savings Bank. In February of 1940, Emigrant sold the five-story Estey Factory building and the adjacent two-story building constructed by Gittins to the S.H. Pomeroy Company, a manufacturer of window sashes that had been located on the same block as Estey Piano since 1923 or before. One month later, however, the owner of the building was the 120 Lincoln Avenue Realty Corporation, which was leasing space to Alta Furniture Factories. Until at least 1945, 120 Lincoln Avenue Realty remained the owner of the building; in 1969, it was occupied by the Ranger Plastics Corporation, and in 1973, it was home to a draperies manufacturer. At the end of the 1970s, the old Estey Piano Company Factory housed a maker of textile products and its outlet store, along with manufacturers of wire and "novelty" products. In 1995, when the building was mostly vacant, it was purchased by Truro College, which planned to convert it into student dormitories or a home for a liberal arts and sciences program. Those plans fell through, however, and the college sold the former Estey Factory, now known as the Clock Tower Building, to Carnegie Management, which remodeled its interior to accommodate live-in artists' studios. It retains this use today.

Design of the Estey Piano Company Factory 120

The original, pre-1890 portion of the Estey Piano building—recognizable today as the three-bay clock tower, the twelve bays north of the tower on the Lincoln Avenue façade, and the twelve bays east of the tower on the Bruckner Boulevard façade—exhibits many characteristic features of a late-nineteenth-century factory.

Like other industrial buildings of its time, much of the Estey Factory's appearance and form is rooted in practical needs; "the aesthetic basis of American industrial building design," according to architectural historian Betsy Hunter Bradley, "was an ideal of beauty based on function, utility, and process." Among the original Estey building's features are its relatively narrow, 40-foot width and its L-shaped footprint, which arose from functional requirements; in industrial buildings, before the advent of artificial lighting, the need to bring ample natural light to the interior dictated a narrow width which, in turn, led the typical factory to take to form of an I, or of an amalgamation of wings in the shape of an L, U, H, or E. The Estey building's flat roof, similarly, was a practical feature that was characteristic of the era's industrial buildings. Gabled roofs had largely been supplanted by flat roofs on factories by the 1860s, as architects and other designers of industrial lofts sought to eliminate attic spaces within which dust might accumulate and spark fires. ¹²³

Many features, while rooted in function, also played an aesthetic role. While the original Estey Factory's footprint was chosen primarily for utilitarian purposes, it also enabled the building to maintain the streetwall and shield its interior yard from public view, both of which were important to factory owners who wanted their buildings—their companies' "public facades"—to exhibit a neat appearance. 124 The Estey Factory's regular pattern of window openings allowed for even interior illumination but, as on other industrial lofts, also provided "a sense of organization and, by extrapolation, dignity for the ... exterior." And, while Philadelphia brick was chosen for the factory's walls and facades because it was among the most fire-resistant materials then available, factory designers would often use distinctive brick—like the Estey Factory's redorange brick—to "provide architectural character with little additional expense." ¹²⁶ In the same vein, A.B. Ogden & Son, like other designers of industrial buildings, used decorative brickwork—including, at Estev. dogtoothed and zigzagging stringcourses, recessed brick panels, and corbelling below the window sills and at the clock tower cornice—as a "relatively economical means of relieving plain brickwork." This technique was also seen on residential buildings that were contemporary to the original Estey Factory, particularly on large multiple dwellings with similarly expansive facades. Many examples survive today within the Upper West Side/Central Park West Historic District of five-, six-, and seven-story flats from the 1880s and early 1890s displaying dogtoothing, recessed panels, channeling, pilasters, corbelling, and other forms of decorative brickwork, together with contrasting stone highlights, that break up and animate their lengthy Columbus Avenue facades. 128

The Estey Factory's ornament includes terra cotta tiles with foliate motifs on its roof parapets, and with alternating festoon and lions'-head motifs on the clock tower and on the projecting, easternmost portion of the south façade that was constructed as part of the 1890 addition. Terra cotta was an attractive material for the factory owner because of its inherent fire-resistance, but it also mimicked carved stone at a price that, in 1887, was about 35% cheaper; the use of terra cotta as a less-expensive substitute for decorative stone was wide-spread during the 1880s and 1890s. According to the historic preservationist Laura Buchner, the terra cotta tiles on the Estey Factory's parapets appeared in an 1885 catalog of the Perth Amboy Terra Cotta Company, and they must have continued to be available five years later, as the terra cotta of the 1890 addition matches that of the original Estey Factory.

Terra cotta's primary function, of course, was ornamental, and at the Estey Factory, it worked together with the building's other decorative features, regular fenestration pattern, and long, molded, and monumental brick facades to project a strong, solid, and attractive image for its company. This was important in an era in which a factory often served as an advertisement for its firm; companies typically produced bird's-eye renderings of their industrial complexes that appeared in their catalogs, in business directories, in advertisements, and on company letterhead. Generally, these depicted the factory as a hub of activity with smoke pouring from its chimneys, the home of a successful business that, by implication, made a desirable and dependable product. The Estey Organ Company often included an image of its Brattleboro works in its promotional materials, and when the Estey Piano Company formed, it started doing the same. One early Estey Piano trade card shows one of the company's instruments in a parlor, with the pre-1890 Estey Piano Factory—an American flag flying from atop its clock tower—visible through an open window. Another early trade card shows a well-dressed woman admiring a portrait of the building that hangs over the Estey piano in her parlor, and a later trade card with a whimsical illustration of four young girls has, on its reverse side, a drawing of the Estey Factory showing the building as it appeared between the completion of its 1890 Southern Boulevard addition, and its 1895 Lincoln Avenue additions.

In erecting a factory that would use its monumental and attractive design to help market its products, the Estey Piano Company took advantage of the building's prominent site and its ability to be seen from long distances. One early trade card noted its location on "Southern Boulevard near Harlem Bridge," pointing out the factory's setting on one of the North Side's most important thoroughfares, close to one of its earliest river crossings at Third Avenue. 136 The factory, indeed, was visible from the Third Avenue Bridge, as it is today; it was also likely visible, as it is now, from the more distant bridge carrying the New York Central—now Metro-North Railroad—over the Harlem, ¹³⁷ and could be seen looking south on Lincoln Avenue, from a point near 138th Street. 138 It was also clearly visible from the waterfront; one circa-1895 photograph taken from the Harlem River shows the Estey Factory rising from behind a paddlewheel steamboat moored on the Harlem's busy shore. 139 Significantly, during the time of the Estey Factory's planning and construction, its surrounding area was evolving into an important gateway to the Annexed District. The Second Avenue Bridge, under construction by 1884 and completed in 1886, would be the first bridge to bring an elevated railroad from Manhattan to the North Side; this line was expected to have a transformative effect on the area, and its arrival was eagerly anticipated, inspiring several articles on its progress in the Real Estate Record & Builders' Guide. 140 It seems likely that the Estey Piano Company's management would have expected its factory to be seen by the passengers of this new railroad as it curved high over the rail yards near Alexander Avenue and 132nd Street, 141 and responded with a building that was sure to be an eye-catching landmark at this key entry point to the growing North Side.

To make the most of the factory's location—and to get the most marketing value out of it—the Estey Piano Company and its architect endowed the building with an attention-grabbing, four-faced clock tower that remains its signature feature. It was not unusual for large buildings in New York to have noteworthy corner features like the Estey tower; these buildings' opposite corners were the only places from which pedestrians could take them in in their entirety, and early photographs of the Estey Factory make it clear that that angle, from which the building's symmetricality and large scale were apparent, was the one, above all others, from which it was meant to be seen. According to Bradley, architects tended to practice "rationalized placement" of ornament" in designing factory buildings, considering decoration to be most appropriate for entrances, towers, and other prominent features; 143 the Estey Factory's tower, which projects two stories above the adjacent roof parapets, and which contained one of the original building's two main entrances, was its most elaborately ornamented portion. The tower entrance, which featured a low stoop with what appear to have been cast-iron newel posts and railings, was located on the tower's south face at the second bay in from the corner, echoing a similar entrance two bays north of the clock tower, on the Lincoln Avenue façade. Broad segmental arches, each composed of three header courses of brick and contrasting springers in light-colored stone, spanned the entrance opening and seven large window openings that were set within two-story, corbelled brick recesses on the tower's south and west faces; these openings, and the stone trim wrapping the window heads at the third and fourth floors, were unique to the tower until they were complemented by identical openings and stone highlights at the eastern end of the 1890 addition. The vertically projecting, upper portion of the clock tower featured recessed panels with "Estey Piano Co." painted in large, uppercase lettering, and light-colored clock faces reading "Estey Piano," also in uppercase. 144 It was crowned by a machicolated cornice composed of repeating, small round arches beneath a parapet decorated either with terra cotta tiles, or with recessed panels similar to those of the building's other parapets.

The American factory clock tower had its roots in the cupola of the early-nineteenth-century New England mill. The cupola marked the factory, like the meetinghouse, as a structure of local importance; it similarly contained a bell, which played a crucial role in organizing people's daily activities. As historian William H. Pierson, Jr. explains, no architectural feature "was more expressive of the role that each building played in the life of the community than the bell which in the meetinghouse called the congregation to worship and in the factory called the workers to their tasks." By the 1830s, these cupolas were often placed atop towers that were attached to their buildings' facades; by providing exterior staircases, the towers prevented fires from spreading vertically through the interior of the building, while keeping the factory floor open for workers and machinery. The exterior tower, which would come to house water tanks, sprinkler systems, and other equipment, "would become standard in the fully developed nineteenth-century factory," but it played more than a functional role; towers and cupolas, like those of Boston's massive Chickering & Sons Piano Forte Works—which, upon its 1853 completion, was the country's largest industrial building—"provided a civic presence

that coincided with the mill's dominant role in a new industrial order." By the 1870s, the corner clock tower would become a feature of industrial complexes such as the large Manhattan works of R. Hoe & Company. 148

By the late nineteenth century, the clock was influencing the day-to-day activities of New Yorkers as it never had before. Americans were becoming "increasingly attentive to and accountable for living and working in synchronized ways," according to historian Carlene E. Stephens, and developments like the 1883 creation of time zones with the institution of Standard Time indicated that they were doing so. But the inexpensive watch had yet to arrive, so most Americans depended on a patchwork system of time balls, factory whistles and bells, and timepieces displayed in the windows of jewelry stores to stay on schedule. 151

They also depended on the publicly visible clocks that proliferated after the Civil War on the facades and towers of factories, commercial buildings, banks, railroad stations, courthouses, and schools. ¹⁵² These clocks, some publicly owned and some private, provided a valued service; the dedication of a new town clock could be cause for celebration with "music and cannon," and the failure of a clock that the public relied upon could inconvenience people in myriad, unexpected ways. ¹⁵³ More than this, these clocks symbolized "regularity, coordination, order, permanence, and reverence for the machine," according to historian Alexis McCrossen, who says that they were "at the heart of modernity and the modern nation state." Companies that erected clocks for public use "reassured the public that [they] were regular, dependable, and punctual," asserting their importance within the public sphere; 154 they also often used their clocks for direct marketing advantage. In 1880, for example, when the Washington Post installed a new public clock at its headquarters, it crowed on its front page about making its building "useful as well as ornamental," affording "the Post another opportunity of serving the public." By the early twentieth century, clock makers marketed their products with the promise that they would attract the public's attention—that they would be visible "from more than one thousand doors and windows"—and public clocks did become important local landmarks that were closely associated with the companies that owned and maintained them. 155 It seems likely that the clock tower of the Estey Piano Factory was intended to brand its company as an important, publicly minded member of its community, while drawing frequent attention to the firm's name, which was spelled out boldly on the tower and within the clock faces themselves.

The original portion of the Estey Piano Company Factory is an excellent example of the American round-arched style. This style was a domestic interpretation of the German *Rundbogenstil*, which developed in the 1830s and 1840s, "synthesized classical and medieval architecture—particularly the round-arched elements of those styles—and relied on brick and locally available stone," according to Bradley. Despite its name, buildings constructed in the American round-arched style, like the Estey Factory, often mixed economical segmental-headed window openings with round-headed ones, permitting the style to "express many of the ideals of the engineering aesthetic." They also utilized corbelling, patterning, and other forms of decorative brickwork, like the round arches of the Estey Factory's clock tower, to model and bring variety to their facades, and had parapets that varied in height and often featured pediments, bringing additional visual interest.

Additions to the original Estey Piano Factory complemented A.B. Ogden & Sons' building and, through 1909, continued to draw upon the American round-arched style. John B. Snook & Sons' 1890 addition expertly harmonized with the 1886 building, featuring brick, terra cotta, patterned brickwork, and stone trim, all of which matched the original; the expanded south façade terminated in an eastern, three-bay projection that echoed, in its fenestration and ornament, the clock tower at the façade's western end. The two-bay projection that had terminated the south façade of the original factory was doubled to four bays, becoming the central feature of the imposing, 200-foot-long, Bruckner Boulevard façade that remains largely intact today. On the Lincoln Avenue and north facades, the first three stories of the additions dating from 1895 and after feature segmental-headed window openings, corbelled brick below the window sills, and patterned-brick stringcourses that are similar to those of the Ogdens' building. The two-story, 1919 addition at the northwest corner of the building features large rectangular window openings with concrete lintels, filled with pivoting and fixed, multi-pane metal sashes that are typical of the "daylight factories" that appeared in the United States after the turn of the twentieth century. Daylight factories, which represented an effort, at that time, to bring additional natural light to the work floor, proliferated following the introduction of steel-sash windows by several American manufacturers around 1910. While the Lincoln Avenue additions do not complement the original factory as adroitly as the Bruckner Boulevard addition, they are significant in telling of the evolution and growth, over several decades, of an important Bronx firm that was engaged in an industry of local and national significance.

The Estey Piano Company Factory, an outstanding example of the American round-arched style, not only showcases many representative features of a factory building of its time, but exhibits—especially on the original factory building and the 1890 addition—a particularly elegant handling of these features, many of which, like the corner clock tower, are unusually distinctive. Altered only slightly since 1919, the Estey Piano Company Factory remains, in the words of the AIA Guide to New York City, "the grande dame of the piano trade: not virgin, but all-together and proud." ¹⁵⁸

Description

The Estey Piano Company Factory is an L-shaped, five-story building with a projecting clock tower at its southwest corner. Spanning the east side of Lincoln Avenue between Bruckner Boulevard and East 134th Street, the building has three primary street facades, all of which feature face brick laid in common bond: a 200-foot-long Bruckner Boulevard façade, a 200-foot-long Lincoln Avenue façade, and a façade on 134th Street that is approximately 69 feet in length and attached to an elevator shaft.

The original factory building, which was constructed in 1885-86, extended for 100 feet along Lincoln Avenue and for 100 feet along Southern (now Bruckner) Boulevard. Comprising the westernmost 15 upperstory bays on the south facade and the southernmost 15 upper-story bays on the west facade of the existing building, including the clock tower, this original portion of the Estey Piano Factory was extended by 100 feet to the east along Bruckner Boulevard with the construction of a five-story addition in 1890. (The construction of the 1890 addition resulted in the demolition of three buildings of one and two stories that were completed at the same time as the original factory, and which had a combined street frontage of 80 feet.) Before the construction of the 1890 addition, the five-story portion of the south façade terminated, at its east, with a two-bay projection featuring round-headed windows, all set within a corbelled recess, at the first through fifth floors. This projection—which was identical to the two-bay projection that originally terminated the Lincoln Avenue façade, and remains virtually unchanged today—extended above the adjacent portion of the façade, and, like the clock tower, outward from the façade plane. With the completion of John B. Snook & Sons' 1890 addition, the two-bay projection on the south facade was doubled in width—the two new bays matching the original two—and its parapet was raised to match, in height, the parapet above the then-new, three-bay projection at the eastern end of the extended façade. Both the raised and new parapets featured, just below their pressed-metal cornices, recessed square panels arranged in a row. Also at that time, the four-bay projection became the central feature of a broad, essentially symmetrical Southern Boulevard façade, with the new threebay projection at the eastern end of the façade balancing the three-bay, projecting clock tower at the building's corner.

The 1890 addition is virtually indistinguishable from the original portion of the factory, largely because it is faced in matching red-orange brick laid in common bond. It also features matching ornament, including stringcourses composed of decorative brick laid in a zigzagging pattern that align with the stringcourses on the original building; a dogtoothed, soldier-brick course just below the parapet that also aligns with the original; recessed, rectangular brick panels with corbelling, and terra cotta tiles arranged in a repeating three-tile pattern, with each of the three tiles featuring a different foliate design, at the roof parapets; projecting, molded sandstone stringcourses just below the parapets; and sandstone window sills, each supported by two courses of corbelled brick. The three-bay projection at the south façade's eastern end largely duplicates the fenestration and ornament of the clock tower's second through fifth floors, featuring segmental-headed window openings with arches composed of stone springers and three courses of header brick, set within a corbelled brick recess, at the second floor; square-headed windows at the third and fourth floors, and round-headed windows at the fifth floor; light-colored, contrasting stone trim, which wraps the heads of the rectangular openings and composes a short stringcourse at the springer level of the fifth-floor openings; and a belt course of terra cotta tiles that matches that of the clock tower, in an alternating festoon and lions'-head motif, just below a projecting stone sill course at the third floor. The easternmost three-bay projection, like the central four-bay projection on the south façade, is crowned by a stepped, pressed-metal cornice with a cyma profile at its top. The 1890 addition features seven basement-level openings with stone lintels that are larger than the five basement-level openings on the south façade of the original building; these five original openings retain their historic metal grilles. Aside from this difference, the addition continued the fenestration pattern of the original factory's south façade: except for the openings on the three-bay east projection, the central four-bay projection, and the

clock tower, all of the window openings on the Bruckner Boulevard façade are segmental-headed, each crowned by an arch composed of two header courses of brick.

The original part of the Lincoln Avenue façade not including the clock tower—the twelve-bay portion of this façade including, and south of, the five-story projection containing two bays of round-headed windows is essentially identical to the original part of the Bruckner Boulevard facade, although some minor changes have been made at the first floor. A metal rooftop bulkhead is visible near this façade's southern end, close to the clock tower. The later portions of the Lincoln Avenue façade north of the original factory, and the 134th Street façade, show evidence of their gradual construction between 1895 and 1919. Although the first through third floors of these facades show kinship with the original factory—particularly in their segmental-headed windows with sandstone sills supported by corbelled brick courses, and in the composition, of each window arch, of two courses of header brick—they also depart from the original façade in significant ways. The bay arrangement of the facades north of the original factory differs from the original bay arrangement, with the 134th Street façade and the northern half of the Lincoln Avenue façade each split into four bays of varying widths separated by austere brick pilasters. The fenestration is less regular than on the original buildings: it appears, for example, that no window opening ever existed at the second-floor, third-northernmost and tenthnorthernmost bays on the Lincoln Avenue façade, or at the easternmost and fifth-easternmost second-floor bays on the 134th Street façade. Although the brick of the oldest, first-floor portions of these facades comes close to matching that of the original factory in color, the face brick of the two later two-story additions above—one built in 1909 and one in 1919—is redder in color. On both the Lincoln Avenue and 134th Street facades of the earliest, first-floor addition, and of the second-and-third-floor 1909 addition, stringcourses composed of zigzagging patterned brick align with the patterned-brick stringcourses of the original factory; an exposed horizontal metal beam between the second- and third-floor window openings is slightly lower than the corresponding patterned-brick stringcourse on the original factory. The 1919 addition differs the most of any of the additions from the original factory, featuring large window openings filled with multi-pane metal windows and with concrete lintels and projecting sills. Each of the windows, which are grouped in threes, fours, or fives within their openings, has a total of 12, 16, or 20 panes, and has a central, horizontally pivoting sash of four or six panes. At the eastern end of the north, or 134th Street façade, is an elevator shaft built in 1919 that features, at its ground floor, a large loading bay with a projecting concrete sill.

In addition to the Bruckner Boulevard, Lincoln Avenue, and 134th Street primary facades, the Estey Piano Company Factory has two visible secondary facades. The east façade of the Bruckner Boulevard leg of the building features red face brick laid in common bond. A brick rooftop bulkhead and rooftop chain-link fence are visible above this façade. The façade apparently was once painted with the words "ESTEY PIANO MANUFACTORY"; this lettering has either faded, or been partially removed. Visible on the east, or rear façade of the Lincoln Avenue leg of the building, to the south of the brick elevator shaft, are grouped fourth-and fifth-floor, historic metal sashes, apparently dating from 1919, within openings with concrete lintels and sills that are framed by austere brick pilasters. A metal fire escape extends to the roof; roof access is made possible by a break in the parapet.

The clock tower projects slightly from the façade plane. Each of the south and west faces of the tower has four window openings set within a two-story corbelled recess, with each of these openings featuring stone sills and headed by a segmental arch composed of three courses of header brick and light-colored stone springers. One pair of recessed brick panels is located below each of the first-floor openings on the tower's west face, and a single recessed brick panel is located below each of the first-floor openings on its south face; stepped, recessed-brick panels are located below the second-floor openings on the west and south faces. A terra cotta stringcourse composed of terra cotta tiles with an alternating festoon and lions'-head motif above the second-floor windows is located below a projecting stone molding, which itself is just below the sill level of the third-floor window openings; these elements separate the lower two stories of the clock tower from its third through fifth floors. The vertically projecting top two stories of the clock tower are separated from the lower five stories by a projecting stone molding that has seen its profile softened over time. Above this, on each of the south and west faces of the clock tower, is a recessed, corbelled brick panel; faded lettering reading "ESTEY PIANO CO." is visible within the south panel. The panels are located below two paired courses of corbelled brick that wrap all four sides of the tower. Each of the four sides of the tower contains a round clock with metal hands, with a face of metal and glass, and with metal roman numerals and minute ring; each clock

face is surrounded by an inner soldier course of brick and an outer header course of brick, and is flanked by round-headed windows, each with a transom bar and stone sill. Above the clock faces, and wrapping all four sides of the tower, are a projecting stone molding; a terra cotta stringcourse similar to the one below the third-floor windows; four courses of corbelled brick; and a machicolated cornice composed of small, corbelled round arches. A parapet above this cornice is of concrete, or of stucco-covered brick. A segmental-headed opening at the sixth floor of the clock tower, on the tower's east face, appears to provide access to the roof. Square metal wall anchors, which appear to be original to the building, are present at the first through fifth floors on the tower's south and west faces, and on all four sides of the tower at the level of the clock faces.

Although the Estey Piano Company Factory remains remarkably intact for a building of its age, some alterations have occurred over time. On the 27-bay portion of the south facade east of the clock tower, the easternmost part of the ground floor has been altered with the installation of a three-bay brick projection containing two loading bays and an entrance set within a stepped recess. A projecting wall sign reading "PLUMBING SUPPLIES" on both of its display faces is attached at the easternmost portion of the second floor. The first-floor opening at the second-westernmost bay of the central four-bay projection has been enlarged to become a secondary entrance with a soldier-brick, round arch, and the westernmost first-floor window opening and second-easternmost window openings at the third, fourth, and fifth floors have been filled with brick. The westernmost first-floor window opening appears to be the only one on the south facade to have a concrete, rather than sandstone, sill. No historic windows appear to remain on this facade, except possibly at the easternmost second-, third-, and fourth-floor openings, which contain four-over-four, double-hung windows. These windows are paired at the second floor. The upper portions of the first-floor window openings have been filled with brick, as have the upper portions of the twelve second-floor openings immediately to the east of the clock tower; some of the infill panels at these windows have been punched through with rectangular or round openings. Non-historic metal grilles with lower privacy panels have been installed at the firstfloor windows. Three through-the-wall air conditioners are present at the second floor, and numerous vents, satellite dishes, and other non-historic items are attached to the façade and the window sills at the second through fifth floors. A chain-link fence, visible from Bruckner Boulevard, is located on the roof behind the parapet.

On the original, twelve-bay portion of the Lincoln Avenue façade immediately to the north of the clock tower, none of the historic windows remain, except at the first floor. All eight first-floor windows on this portion of the façade have wood frames and wood upper sashes; the third- and fourth-northernmost of these windows have two-pane upper sashes with vertical muntins, and the rest have four-pane upper sashes. The second-northernmost window on the original portion of the factory features a round-headed, four-pane upper sash that may be original to the building. Non-historic metal window grilles have been installed at all of these windows; all except the third-southernmost of these have lower privacy panels. The historic entrance, originally located at the second bay north of the clock tower, has been removed; north of the clock tower, a former window opening has been altered to allow for the installation of a non-historic entrance featuring a surround of curved brick in varying shades, a non-historic metal-and-glass door and side panel with a metal intercom, and a non-historic transom light reading "Clock Tower 112." The openings originally located south of this entrance have been filled with brick that does not match the original; the upper portions of the three southernmost, second-floor window openings have been filled with brick; a through-the-wall air conditioner is present below the second-southernmost, second-floor window opening; and numerous louvers, vents, signs, satellite dishes, and other non-historic items, including electrical conduit below the fourth-through-sixth-southernmost secondfloor window openings, are present on this facade. The base of the facade between the entrance and the clock tower is of concrete.

On the northern half of the Lincoln Avenue façade—those portions of the façade dating from 1895 and later—alterations include, at the first floor, the enlargement of an opening at the southernmost bay, and its modification into a loading bay; the filling of the second-southernmost opening with brick; the modification of the opening at the seventh-southernmost bay into a secondary entrance; and the infilling of the third-northernmost opening with brick. At the second floor, the second-southernmost opening has been partially filled with brick, and a narrow window has been installed within the reduced opening. At the third floor, the second-southernmost window opening has been filled with brick. The nine remaining first-floor windows on the northern portion of the Lincoln Avenue façade have wood frames and wood top sashes. Non-historic metal

grilles have been installed in front of all of these windows. The northernmost and second-, third-, and fifth-northernmost windows feature two-pane top sashes with vertical muntins; the fourth-northernmost window features a four-pane top sash; and the four southernmost of these windows feature four-pane upper and lower sashes, all of which are wood. The fourth and fifth floors appear to contain their historic, multi-pane metal windows with horizontally pivoting sashes, dating from 1919; five of the fourth-floor windows have been altered with the removal of panes for the installation of vents, air conditioners, and satellite dishes. The southernmost fifth-floor window has also been altered with the installation of an air-conditioning unit. Numerous vents, a satellite dish attached to the northernmost fifth-floor window sill, and other non-historic items are present on this façade.

The primary north, or 134th Street façade, has also seen alterations, with the filling of the fourth-westernmost first-floor window opening with brick. A non-historic metal gate with gate housing and exposed mechanism has been installed at the first floor, and four vents have been installed on this façade. Vertical wiring, wrapped in insulation, has been installed below the second floor. One window at the fourth floor, and one window at the fifth floor have been altered to allow for the installation of window air conditioning units. The fourth and fifth floors appear to contain their historic, multi-pane metal windows with horizontally pivoting sashes, dating from 1919. The five first-floor windows on the Lincoln Avenue façade have wood frames and wood top sashes; each of the easternmost, third-easternmost, and westernmost of these windows has a two-pane top sash with a vertical muntin, and the others feature four-pane upper sashes. Non-historic metal grilles with privacy panels have been installed in front of the first-floor windows. Two visible satellite dishes have been installed on top of the pilasters on the visible secondary east façade of the Lincoln Avenue leg of the building.

Alterations at the clock tower include the removal of the historic entrance on the tower's south face, at the second-westernmost first-floor bay, and its modification into a window opening; the installation of a metal drainage pipe, which penetrates a terra cotta tile on the east face of the clock tower, above the clock face; and changes to the parapet, which appears to have originally been brick with rectangular, corbelled brick recesses. None of the windows on the clock tower appear to be historic except for the third-southernmost, four-overfour, double-hung wood window at the fourth floor on the west face of the tower; one pane of this window has been removed to allow for the installation of a vent. Brick infill has been installed within the upper portions of the first- and second-floor window openings. Through-the-wall air conditioners have been installed below the second-westernmost opening on the south face, and below the second-southernmost opening on the west face of the tower.

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¹ For information on the history of Mott Haven, see North Side Board of Trade, *The Great North Side; or, Borough of the Bronx, New York* (New York: Knickerbocker Press, 1897); Stephen Jenkins, *The Story of the Bronx, 1639-1912* (New York: G.P. Putnam's Sons, 1912), pp. 366-371; Harry T. Cook, *Borough of the Bronx, 1639-1913* (New York: Harry T. Cook, 1913), pp. 20-21; James L. Wells, Louis F. Haffen, and Josiah A. Briggs, Eds., *The Bronx and Its People: A History, 1609-1927* (New York: Lewis Historical Publishing Co., 1927), pp. 330-331; Lloyd Ultan, "The Story of the South Bronx, 1776-1940," in *Devastation/Resurrection: The South Bronx* (Bronx, N.Y.: Bronx Museum of the Arts, c.1979), pp. 14-36; LPC, *Mott Haven Historic District Designation Report* (LP-0451) (New York: City of New York, 1969); LPC, *Bertine Block Historic District Designation Report* (LP-1900) (New York: City of New York, 1994), prepared by Andrew S. Dolkart; and LPC, *Mott Haven East Historic District Designation Report* (LP-1899) (New York: City of New York, 1994), prepared by Katherine E. Kahn.

² The Borough of the Bronx came into being in 1898, with New York City's consolidation. It was part of New York County until 1914, when Bronx County was created. See Gary D. Hermalyn and Lloyd Ultan, "Bronx," in *The Encyclopedia of New York City* (New Haven, Conn.: Yale University Press, 1995), pp. 142-146.

³ *The Story of the Bronx*, p. 366.

⁴ The canal would remain navigable until it was filled in in 1965, according to John McNamara, "The Bronx in History," Bronx Press Review, March 1, 1984. In this report, "Mott Haven" refers to the area below 149th Street and west of the neighborhood of Port Morris, as defined by several contemporary maps, including the Metropolitan Transportation Authority's Bronx Bus Map (November 2005; accessed online at http://www.mta.info/nyct/maps/ busbx.pdf), and Hagstrom's New York City Five Borough Atlas (Maspeth, N.Y.: Hagstrom Map Company, 1989). While historian Evelyn Gonzalez considers Mott Haven today to encompass the entire area below 149th Street, in 1879, Mott Haven referred to the area west of Third Avenue; the area east of Third, at that time, was called North New York. Although "North New York" has since faded from use, Port Morris, the historical name for the easternmost portion of this area, remains current in referring to the area east of the Bruckner Expressway. See Evelyn Gonzalez, "Mott Haven"; Lloyd Ultan, "North New York"; and Gary D. Hermalyn, "Port Morris," in The Encyclopedia of New York City, pp. 776, 854, and 926; G.W. Bromley & Company, Atlas of the Entire City of New York (New York: G.W. Bromley & E. Robinson, 1879); Elisha Robinson, Atlas of the City of New York (New York: E. Robinson, 1885); and E. Robinson, Map of the 23rd and 24th Wards, New York (New York: E. Robinson, 1890). The 1890 Robinson map is reprinted in Evelyn Gonzalez, "From Suburb to City: the Development of the Bronx, 1890-1940," in Building a Borough: Architecture and Planning in the Bronx, 1890-1940 (Bronx, N.Y.: Bronx Museum of the Arts, 1986), p. 9. Incidentally, the name "South Bronx" was also applied to this area as early as c.1910. Nearly 100 years ago, Bronx Borough President Louis F. Haffen wrote of "the territory south of 149th Street and east of Third Avenue—the section known as South Bronx" in Borough of the Bronx: A Record of Unparalleled Progress and Development (New York, 1909?), p. 59; a 1910 New York Times article referred to "the South Bronx below 149th Street and between the Harlem and East Rivers" ("Bronx Subway Protest," July 10, 1910, p. 3). This use of "South Bronx" should not be confused with the more recent use of the term, which the Encyclopedia of New York City calls "an imprecise term used after 1950 to designate an area of shifting boundaries in the southwestern Bronx The widespread use of the name has done much to obscure the diversity of the neighborhoods of the South Bronx, which many residents do not regard as being a neighborhood itself" (p. 1098).

⁵ In 1869, Cornelius Vanderbilt consolidated the New York & Harlem and New York & Hudson River Railroads to form the New York Central & Hudson River Railroad, according to the *Encyclopedia of New York City*, p. 983. In 1885, the railroad built an impressive Romanesque Revival station in Mott Haven, since demolished, that was designed by R.H. Robertson; see "The New Up-Town Railroad Depot," *Real Estate Record & Builders' Guide*, October 31, 1885, p. 1189.

⁶ 1879 Bromley *Atlas of the Entire City of New York*.

⁷ See Gary D. Hermalyn, "Annexed District" and "North Side," *Encyclopedia of New York City*, pp. 39 and 854.

⁸ The cast-iron bridge, which was supported by iron cylinders that had been filled in with ballast, "was considered ... a most remarkable piece of engineering," and "a great and ingenious advance in bridge-building" according to *Story of the Bronx*, p. 196. The current Third Avenue Bridge was completed in 2005, according to Steve Anderson's "New York Area Roads, Crossings, and Exits" website (accessed online at www.nycroads.com). Starting in the 1860s, the Third Avenue bridge was crossed by horse-drawn cars, but service on the line was so poor that it came to be known as the "Huckleberry Line," apparently because passengers on its lethargic cars had time to jump off, pick berries, and hop back onto the same car, according to John Lewis, "Mott Haven Cornerstone of Bronx History," *Daily News*, January 17, 1982.

⁹ By 1902, booster groups pushing for improved rapid transit connections with Manhattan included the North Side Board of Trade, Twenty-Third Ward Property Owners' Association, South Bronx Association, University Heights Association, and Bronx East Side Association. See "Rapid Transit for the Bronx," *New York Times*, August 26, 1902, p. 3.

¹⁰ 1885 Robinson Atlas of the City of New York.

¹¹ "Elevated Railways [Els]," *Encyclopedia of New York City*, pp. 368-369; William Fullerton Reeves, *The First Elevated Railroads in Manhattan and the Bronx of the City of New York* (New York: The New-York Historical Society, 1936), pp. 34-41.

¹² "Suburban Rapid Transit," Real Estate Record & Builders' Guide, December 12, 1885, p. 1362.

¹³ "The New Bridge Across the Harlem River at Third Avenue, New York," *Harper's Weekly*, February 3, 1894.

¹⁴ "Advantages of the Great North Side," New York Times, March 24, 1895, p. 20.

¹⁵ "There is no advantage necessary for the successful operation of manufacturing industries that is not to be found on the North Side," one North Side manufacturer and local booster, John C. La Vergne wrote in 1897, pointing out its "well-established convenience for the receipt of goods to be used in the manufacture of articles of merchandise, and for their transportation to consignees by rail or water." See John C. De La Vergne, "A Manufacturing Centre," in *The Great North Side*, pp. 89-91. See also Bronx Board of Trade, *The Bronx: New York's Fastest Growing Borough* (Bronx, N.Y.: Bronx Board of Trade, 1922), p. 5, which argued that, in the Bronx, "in the matter of railroad freight facilities there is little to be desired. Every trunk line entering New York, except the Pennsylvania R.R., has a terminal in the Bronx. The Pennsylvania R.R. terminal is, however, just across the Harlem River, and is easily accessible from the Bronx. Water-borne freight facilities are also available, and sites are to be had where shipments may be made, or raw material received, by either rail or water, directly, eliminating extra hauling expense."

¹⁶ "A Manufacturing Centre," pp. 99-103. The New York, New Haven & Hartford freight depot is shown on E. Belcher Hyde, *Atlas of the Borough of the Bronx, City of New York* (Brooklyn: E. Belcher Hyde, 1900).

¹⁷ With the Bronx's excellent rail links, "every great freight line of the east" was "running its cars full of pianos direct from the factory doors," Bacon wrote. See William P.H. Bacon, "Piano Factories Crowd the Bronx," *New York Times*, May 17, 1908, p. B3. Bacon was associated with the Bacon Piano Company, which traced its roots back to one of New York's oldest piano manufacturers, Dubois & Stodart. On the Bacon company, see Alfred Dolge, *Pianos and Their Makers: A Comprehensive History of the Development of the Piano* (originally published 1911; reprinted New York: Dover Publications, 1972), p. 277.

¹⁸ *The Bronx and Its People*, pp. 716-17.

^{19 &}quot;Piano Factories Crowd the Bronx."

²⁰ Joshua B. Freeman, Working-Class New York: Life and Labor Since World War I (New York: The New Press, 2000), pp. 8, 143.

²¹ Federal Reserve Bank of New York, "Declining Manufacturing Employment in the New York-New Jersey Region: 1969-99," *Current Issues in Economics and Finance, Second District Highlights*, January 2001.

²² Construction dates for the Mott Haven portion of the Major Deegan come from the "New York Area Roads, Crossings, and Exits" website. The Brambach Piano Company is shown on E. Belcher Hyde, *Atlas of the Borough of the Bronx, City of New York* (Brooklyn: E. Belcher Hyde, 1907, updated to 1912). In 1932, the former Brambach building was labeled simply as a warehouse on G.W. Bromley & Company, *Atlas of the City of New York, Borough of the Bronx, South of 172*nd *Street* (Philadelphia: G.W. Bromley & Company, 1923, updated to 1932).

²³ New York City Department of City Planning, "Port Morris/Bruckner Boulevard Rezoning" (c.2005; accessed online at www.nyc.gov/html/dcp/html/port_morris/index.shtml).

²⁴ This was determined using the 1885 Robinson *Atlas of the City of New York*, which shows a handful of large brick industrial buildings—including the Estey Piano Factory, which was then under construction—existing below or near 149th Street at that time. Among these were the Edward Tausky Feather and Trimmings building at the northeast corner of 144th Street and Railroad Avenue; the Poillon & Staples varnishes factory at the northeast corner of 148th Street and Railroad Avenue; and the James & Kirtland foundry and machine shop between 149th Street and Westchester Avenue, near Brook Avenue. By checking these locations against the 2005 *Sanborn Landbook: The Bronx, N.Y.* (Weehawken, N.J.: First American Real Estate Solutions), it was found that these three buildings have been demolished. While the Estey Factory may not be the oldest large industrial building remaining in Mott Haven today (the Mott Iron Works building at 2401 Third Avenue appears to be older), it is certainly among the oldest well-preserved large factories still standing in the neighborhood. Information about the Mott Iron Works building and other late-nineteenth- and early-twentieth-century industrial buildings in Mott Haven is included in *Harlem River Preservation Plan: Southern Section* (Unpublished report of the Columbia University Graduate Program in Historic Preservation, 2004).

²⁵ This section draws upon *Pianos and Their Makers*; Arthur Loesser, *Men, Women and Pianos: A Social History* (New York: Simon & Schuster, 1954); Harvey Lubar, "An Overview and History of the Bronx Piano Manufacturing Industry" (Unpublished: Collection of the Bronx County Historical Society, Bronx, N.Y.); Craig H. Roell, *The Piano in America, 1890-1940* (Chapel Hill, N.C.: University of North Carolina Press, 1989); and Daniel Spillane, *History of the American Piano-Forte: Its Technical Development and the Trade* (Originally published 1890; reprinted New York: Da Capo Press, 1969).

²⁶ John Jacob Astor was importing pianos into New York by 1786, according to *Men Women and Pianos*, p. 443.

²⁷ Men, Women and Pianos, p. 458.

²⁸ Men, Women and Pianos, p. 462. The Babcock frame, which was a cast-iron, one-piece frame for square pianos, was developed in Boston and patented in 1825; The Boston manufacturer Jonas Chickering patented a one-piece iron frame for grand pianos in 1843. The iron frame was crucial in permitting the use of thicker, higher-tension strings, enabling a fuller sound.

²⁹ On the Steinway company, see LPC, *Steinway Hall Designation Report* (LP-2100) (New York: City of New York, 2001), prepared by Jay Shockley.

³⁰ Men, Women and Pianos, p. 509.

³¹ Men, Women and Pianos, p. 540; James Parton, "The Piano in the United States," Atlantic Monthly, July 1867, p. 82, cited in *The Piano in America*, p. 23.

³² The Piano in America, p. 24.

³³ The Piano in America, p. 15.

³⁴ The Piano in America, p. 5.

³⁵ The Piano in America, p. 25.

³⁶ Loesser explains that, by the late nineteenth century, "the American piano-making industry had become, to a greater or lesser degree, an assembly of separately, independently made parts. As early as 1880 Steinway & Sons advertised in a trade paper that they were 'the only manufacturers who make every part of their pianofortes—including the casting of the full iron frames—in their manufactories.' They continued making this claim for decades; it was never challenged as long as it was made" (*Men, Women & Pianos*, p. 525). Dolge wrote in 1911 that "perhaps no other class of manufacturing depends more largely upon auxiliary industries … than the piano industry" (*Pianos and Their Makers*, p. 115).

³⁷ The Piano in America, p. 160.

³⁸ These numbers were arrived at by the author using Alfred Dolge's list of American piano manufacturers, which appears on pp. 454-464 of *Pianos and Their Makers*. Dolge lists the city and state of each manufacturer's headquarters.

³⁹ The Bronx and Its People: A History, pp. 725, 727.

⁴⁰ Sources for this section include Bronx County Historical Society, "Bronx Piano Factories" (accessed online at www.bronxhistoricalsociety.org/newsletter/articles/bronxpiano.html) and "An Overview and History of the Bronx Piano Manufacturing Industry."

⁴¹ Bacon, in "Piano Factories Crowd the Bronx" calls this company "the Dunham firm"; "Dunham & Son" is the name that appears on the 1879 Bromley *Atlas of the Entire City of New York*.

⁴² "Piano Factories Crowd the Bronx"; G.W. Bromley & Company, *Atlas of the City of New York*, 23rd and 24th Wards (Philadelphia: G.W. Bromley & Company, 1893).

⁴³ "Bronx Piano Factories" calls de Nobriga Augustus Denobrica, and says he was a "small-time piano maker" operating at Elton Avenue and 159th Street in 1878. The address and name shown here are as he was listed in the 1879-80 edition of *Wilson's Business Directory of New York City* (New York: Trow City Directory Company).

⁴⁴ 1879 Bromley *Atlas of the Entire City of New York*. The Arion factory appears to be the Annexed District's largest piano factory to be labeled as such on this map. The 1879-80 *Wilson's Business Directory* does not list any North Side piano businesses other than those mentioned above.

⁴⁵ "Across the Harlem," *Musical Courier*, January 16, 1889, p. 52. This article states that "the Wheelock factory was the first building used for piano manufacturing" in this section. By this point, Wheelock had taken over Arion's former factory on 149th Street; thus, the article is actually referring to the former Arion factory. (The Dunham factory was located west of Third Avenue.)

⁴⁶ G.W. Bromley & Company, *Atlas of the City of New York, Borough of the Bronx, 23rd and 24th Wards* (Philadelphia: G.W. Bromley & Company, 1897).

⁴⁷ 1900 Hyde *Atlas of the Borough of the Bronx, City of New York.*

- ⁵² "Scores of High Class Apartments Under Construction in Bronx Borough," *New York Times*, August 14, 1910, p. X6.
- ⁵³ "Seek Bronx Sites: Borough Gaining in Popularity, Particularly with Makers of Pianos," *New York Times*, June 22, 1913, p. XX8.

⁴⁸ "An Overview and History of the Bronx Piano Manufacturing Industry," p. 5.

⁴⁹ "Advantages of the Great North Side"; "A Manufacturing Centre."

⁵⁰ Louis F. Haffen, "Subway Needed on East Side," New York Times, May 17, 1908, p. B2.

⁵¹ "Piano Factories Crowd the Bronx."

⁵⁴ On this point, see *The Piano in America*, pp. 81-85.

⁵⁵ "An Overview and History of the Bronx Piano Manufacturing Industry," pp. 30, 37; "Piano Workers May Strike," *New York Times*, August 29, 1919, p. 2.

⁵⁶ Phillips Classified Directory of Greater New York and Surrounding Territory (New York: Phillips Directories, 1919).

⁵⁷ "An Overview and History of the Bronx Piano Manufacturing Industry." p. 4.

⁵⁸ The Behning, Janssen, and Mathushek companies, for example, had earlier had factories across the Harlem River from Mott Haven, in a largely industrial area between 128th and 130th Streets, east of Lexington Avenue. In 1887, Behning was located at 157 East 128th Street, and Mathushek was at 216 East 128th Street; Janssen, which would move to Brown Place and 132nd Street in the Bronx in 1910, was located at 168 East 129th Street in 1903, according to the 1887 *Trow City Directory Company's Business Directory of New York City* (New York: Trow City Directory Company) and the 1903 *Trow's Business Directory of Greater New York* (New York: Trow Directory, Printing & Bookbinding Company). The Laffargue piano company, which, by 1903, had its factory in the Bronx at 134th Street and Cypress Avenue, had previously been located on 124th Street between Fourth (now Park) and Lexington Avenues. Laffargue was at 107 East 124th Street in 1900, according to the 1900 *Trow Business Directory of Manhattan and the Bronx* (New York: Trow Directory, Printing & Bookbinding Company).

⁵⁹ The firms formerly located east of Third Avenue included the Francis Connor, Frederick, Gabler, James & Holmstrom, Haines Brothers, and Krakauer companies. Connor was located at 239 East 41st Street in 1887; Frederick was at 508 First Avenue, between 29th and 30th Streets, in 1903; Gabler had its factory at 214 East 22nd Street, between Second and Third Avenues, in 1887; James & Holmstrom had a factory at 233 East 21st Street, between Second and Third Avenues, in 1887; Haines Brothers was at 362 Second Avenue, at the corner of 21st Street, in 1887; and Krakauer had its factory at 729 First Avenue between 41st and 42nd Streets in 1887. Also in 1887, Newby & Evans was located at 528 West 43rd Street, Pease was at 320 West 43rd Street, Schubert was at 423 Eleventh Avenue, and Steck's factory was at 512 West 34th Street. See the 1887 *Trow City Directory Company's Business Directory of New York City*; the 1903 *Trow's Business Directory of Greater New York*; and "Piano Workers May Strike."

⁶⁰ Among these, apparently, were the Bogart, Cambridge, Ebe, Faber, Kirchhoff, and Rudolf companies. Bogart, established in 1898, was at 511 East 137th Street by 1900; Cambridge, established in 1909, was at 89 Southern Boulevard by 1912; Ebe, established in 1916, was at 168 Southern Boulevard by 1916; Faber, established in 1912, was at 351 Rider Avenue by 1915; Kirchhoff, established in 1901, was at 486 East 139th Street by 1903; Rudolf, established in 1903, was at 460 East 144th Street by 1904. See the 1900 *Trow Business Directory of Manhattan and the Bronx*; the 1903 *Trow's Business Directory of Greater New York*; the 1904 *Trow's Business Directory of Greater New York* (New York: Trow Directory, Printing & Bookbinding Company); and the 1912, 1915, and 1916

editions of the *Phillips Business Directory of New York City* (New York: John F. White). Companies' dates of founding are from "An Overview and History of the Bronx Piano Manufacturing Industry."

⁶¹ Phillips Classified Directory of New York and Surrounding Territory (New York: John F. White, 1925). Between 1914 and 1925, the number of piano manufacturers in the United States shrank from 255 to 142; the number of employees fell from 24,000 to 20,000. By 1933, the industry was at its low point: only 36 manufacturers, employing 2,700 people, remained in the United States.

⁶² The "piano capital" quote is from "Bronx Piano Factories." The two piano factories in the Annexed District that are known to have predated the Estey Factory—Dunham, at the northeast corner of 155th Street and Morris Avenue, and Arion/Wheelock, on the north side of 149th Street between Brook and St. Ann's Avenues—have both been demolished.

⁶³ This section draws upon *Trow's New York City Directory* for the years 1869, 1870, 1873, 1874, 1878, 1879, 1880 through 1895, 1897, 1898, 1900, 1906, 1910, and 1918. Published in New York by John F. Trow in 1869, the directory was published by the Trow City Directory Company by 1874, by the Trow Directory, Printing & Bookbinding Company by 1900, and by R.L. Polk & Company by 1918. The directory's title changed to Trow's General Directory of the Boroughs of Manhattan and Bronx, City of New York in 1899. By 1918, it was called R.L. Polk & Company's Trow's New York City Directory, Boroughs of Manhattan and Bronx. This section also draws upon the 1877 Goulding's New York City Directory (New York: L.G. Goulding); Upington's General Directory of Brooklyn and the Brooklyn City Directory (Brooklyn: Brooklyn Directory Company) for 1903, 1905, 1907, 1909, 1912, and 1913; United States Census records for 1870, 1880, 1900, and 1910; New York City Death Index (accessed online at the New York Public Library); Dennis Steadman Francis, Architects in Practice in New York City, 1840-1900 (New York, 1979), p. 58; James Ward, Architects in Practice in New York City, 1900-1940 (New York, 1989), p. 58; LPC Architects' Files; and the Architects' Appendices for the following LPC Designation Reports, all published in New York by the City of New York: Greenwich Village Historic District (LP-0489) (1969); Park Slope Historic District (LP-0709) (1973); Upper East Side Historic District (LP-1051) (1981); Upper West Side/Central Park West Historic District (LP-1647) (1990); Tribeca East Historic District (LP-1711) (1992); Expanded Carnegie Hill Historic District (LP-1834) (1993); Hamilton Heights/Sugar Hill Historic District (LP-2064) (2000); and Hamilton Heights/Sugar Hill Northwest Historic District (LP-2105) (2002).

⁶⁴ Ogden was shown in the 1870 and 1880 censuses as having been born in New York State. A search of the familysearch.org website finds an Alfred B. Ogden born in 1834 in Jerusalem Township, Yates County, New York, who may have been the same person.

⁶⁵ On Hahnemann Hospital, see Robert A.M. Stern, Thomas Mellins, and David Fishman, *New York 1880: Architecture and Urbanism in the Gilded Age* (New York: Monacelli Press, 1999), pp. 241, 266; and *King's Handbook of New York City* (Boston: Moses King, 1892), p. 435.

⁶⁶ Ogden's profession was listed in the 1870 Census as "planing mills," and in an 1873 directory, as "sawmills"; in other years between 1869 and 1877, city directories listed Ogden's profession simply as "moldings," and showed an apparent partnership in the moldings concern of Ogden & Carpenter, which was located at 409 East 53rd Street. Even after becoming a full-time architect, Ogden kept his office at that location, before moving to 1031 Madison Avenue in 1887.

⁶⁷ Samuel's birth date is difficult to determine. In the 1880 census, he is listed as being 20 years old; the 1900 census gives his birth date as August of 1866.

⁶⁸ By the end of 1878, the Third Avenue Elevated connected South Ferry with East 129th Street, and the Second Avenue El connected Chatham Square with East 129th Street. By 1881, the Ninth Avenue El had been extended from Lower Manhattan to 155th Street, according to "Elevated Railways," *The Encyclopedia of New York City*, pp. 368-369. During these years, the Ogdens' projects were frequently mentioned in the "Out Among the Builders" column of *Real Estate Record and Builders' Guide*; a survey of these columns from 1884 to 1886 found reports of

the Ogdens' completion of plans for at least 50 flats buildings, 33 tenements, and 16 apartment houses. Some of these buildings, of course, may not have ultimately been built, and many have been demolished. See "Out Among the Builders" for the following dates: January 5, 1884, p. 7; July 5, 1884, p. 722; July 12, 1884, p. 743; September 20, 1884, p. 953; October 11, 1884, p. 1027; November 1, 1884, p. 1106; November 15, 1884, p. 1152; December 6, 1884, p. 1226; December 13, 1884, p. 1255; June 27, 1885, p. 734; July 11, 1885, p. 785; September 12, 1885, p. 1000; September 26, 1885, p. 1050; October 17, 1885, p. 1136; November 7, 1885, p. 1225; December 5, 1885, p. 1338; January 2, 1886, p. 11; January 23, 1886, p. 102; February 20, 1886, p. 225; March 6, 1886, pp. 287-88; March 20, 1886, p. 355; April 10, 1886, pp. 458-59; April 17, 1886, pp. 495-96; April 24, 1886, pp. 535-36; May 1, 1886, p. 569-70; May 8, 1886, p. 605; May 22, 1886, p. 679; May 29, 1886, p. 713; June 12, 1886, p. 774; and June 26, 1886, p. 833.

⁶⁹ "Out Among the Builders," September 26, 1885. For the purpose of comparison, the average value of a three- or four-story "second-class" multiple dwelling in the 1870s was about \$10,000, according to Elizabeth Cromley, *Alone Together: A History of New York's Early Apartments* (Ithaca, N.Y.: Cornell University Press, 1990), p. 66.

⁷⁰ At a cost of approximately \$50,000, the building, according to the *Real Estate Record and Builders' Guide*, would be "cabinet trimmed in the parlors and dining rooms, and have an elevator, steam heat, electric bells, and all conveniences" ("Out Among the Builders," May 22, 1886).

A.B. Ogden & Son designed a row of three houses at 51, 53, and 55 East 91st Street that were constructed in 1884 and sit today within the Carnegie Hill Historic District. Also within the Carnegie Hill District are 48, 50, 52, and 54 East 91st Street, three rowhouses by Ogden's firm that were constructed in 1885-86. For stables designed by the Ogdens, see "Out Among the Builders" in *Real Estate Record & Builders' Guide* for July 12, 1884, January 2, 1886, and April 17, 1886. The store-and-lofts building is described in the *Tribeca East Historic District Designation Report*. Industrial structures designed by the firm during these years included the five-story silk-finishing factory mentioned above ("Out Among the Builders," December 13, 1884); a six-story store building at 184 Chrystie Street ("Out Among the Builders," October 17, 1885); a six-story store building at 33½ Stanton Street ("Out Among the Builders," March 20, 1886); a five-story factory on the north side of 56th Street, 300 feet west of Second Avenue ("Out Among the Builders," April 17, 1886); and a five-story silk factory on the south side of 91st Street, 221 feet east of First Avenue ("Out Among the Builders," June 26, 1886). Again, although it was reported in the *Record and Builders' Guide* that the Ogdens had designed these buildings, they may not, of course, have ultimately been built, and many have likely been demolished.

⁷² "Out Among the Builders," February 20, 1886. This building was completed, according to the New York City New Building dockets, on July 27, 1887 (NB 1886-645).

⁷³ Construction date for 125 Riverside Drive is from the Office for Metropolitan History's Manhattan Building Permits Database (accessed online at www.metrohistory.com); information on the Alba Hotel is from LPC, *Midtown West Survey* (New York: City of New York, December 1979), p. 148.

⁷⁴ While Ogden's office remained listed at 954 Lexington Avenue in Brooklyn city directories until 1912, his profession was not listed as "architect" in the 1910 Census. *The Architects' Directory and Specification Index* (New York: William T. Comstock) lists S.B. Ogden & Company in its 1905 edition, but the firm does not appear in the Directory's 1913-14 edition. According to the Office for Metropolitan History's Manhattan Building Permits Database, S.B. Ogden & Company submitted its last filing for a Manhattan building in 1909.

⁷⁵ Sources for this section include *Pianos and Their Makers*, *History of the American Piano-Forte*, and Nancy Groce, *Musical Instrument Makers of New York: A Directory of Eighteenth- and Nineteenth-Century Craftsmen* (Stuyvesant, N.Y.: Pendragon Press, 1991). Much of the information in this section relating to the Welte Company, George B. Gittins, and the history of the Estey Piano Company between approximately 1917 and 1929 is drawn from pp. 51-101 of the exhaustive book by Charles Davis Smith, *The Welte Mignon: Its Music and Musicians* (Vestal, N.Y.: Vestal Press for the Automatic Musical Instrument Collectors' Association, 1994).

⁷⁶ 1875 catalog of Simpson & Company, cited on p. 5 of *Musical Instrument Makers of New York*. Although directories indicate an address change from 149th Street near Third Avenue to St. Ann's in that year, it is possible, given the vague nature of addresses in the Annexed District at that time and the close proximity of both addresses, that the firm did not actually move, but simply changed its listed address. Simpson may have been the son of William Simpson, "who began business in a New-York shanty and amassed a fortune of \$3 million," according to William's obituary, which noted that he had owned property in West Farms (which is now within the Bronx) and that, in 1869, he had "built a piano manufactory, in which one of his sons became a partner" ("William Simpson's Death," *New York Times*, April 10, 1879, p. 9). The 1885 Robinson *Atlas of the City of New York* shows the former Arion factory at 149th Street and St. Ann's as being on property belonging to the estate of "W. Simpson."

⁷⁷ "Arrest of a Piano Dealer," *New York Times*, March 12, 1878, p. 1 refers to "Simpson & Co. (the Arion Piano Manufacturing Company)."

⁷⁸ The 1879 Bromley *Atlas of the Entire City of New York* shows the buildings on the north side of 149th Street between Brook and St. Ann's Avenues as "Arion Piano Mfg." For information on Wheelock and its acquisition of the Arion factory, see *Pianos and Their Makers*, p. 325; and *History of the American Piano-Forte*, p. 287.

⁷⁹ According to *Pianos and Their Makers*, p. 366, Simpson "manufactured high grade pianos until 1885," when he joined with Estey. The 14th Street, 129th Street, and 40th Street addresses are from *Musical Instrument Makers of New York*. In 1885, according to that year's Robinson *Atlas of the City of New York*, the 129th Street address was the location of a narrow brick building; the 40th Street address was a vacant lot.

⁸⁰ On the Estey Organ Company, see Dennis G. Waring, *Manufacturing the Muse: Estey Organs and Consumer Culture in Victorian America* (Middletown, Ct.: Wesleyan University Press, 2002). See also "Jacob Estey," *National Cyclopedia of American Biography* (New York: James T. White Company, 1898), p. 215.

^{81 &}quot;Estey, Jacob & Co.," in F.O. Jones, Ed., A Handbook of American Music and Musicians (Canaseraga, N.Y.: F.O. Jones, 1886), p. 55.

⁸² On the decline of the organ business and Mason & Hamlin's movement into piano manufacturing, see *Men*, *Women and Pianos*, p. 551. Alfred Dolge, in *Pianos and Their Makers*, noted in 1911 that "All the pioneers in the organ trade of the United States have eventually turned to piano making, in most instances discarding the organ altogether" (p. 363). Fuller, who was Estey's son-in-law, would become one of Vermont's most prominent citizens, serving, at one point, as the state's Governor, according to *Pianos and Their Makers*, p. 365.

⁸³ Christopher Gray, "Changeling Resists Landmark Status," *New York Times*, July 14, 1991, p. R6. It was not uncommon for factory owners or managers, with their manufacturing expertise, to work with architects or builders in designing new factories the late nineteenth century, according to Betsy Hunter Bradley, *The Works: The Industrial Architecture of the United States* (New York: Oxford University Press, 1999), pp. 17-18.

⁸⁴ Pianos and Their Makers, p. 366; New York City New Building Docket No. 1885-961.

⁸⁵ New York City New Building Docket No. 1885-1666.

⁸⁶ Pianos and Their Makers, pp. 365-366. Because Dolge was one of the country's major piano components manufacturers, his statements concerning the reputations of piano makers and their products should be taken with a grain of salt. Nevertheless, according to the "Blue Book of Pianos" (accessed online at www.bluebookofpianos.com/agese.htm#ESTEY), Estey pianos won awards at the 1876 Philadelphia Centennial Exposition; the 1893 World's Columbian Exposition in Chicago; the 1911 Turin International Exposition; and the Pan-American Exposition, which was held in San Francisco in 1915.

⁸⁷ Musical Courier, January 14, 1887 and January 2, 1889, cited in Manufacturing the Muse, p. 162.

⁸⁸ History of the American Piano-Forte, pp. 283-84.

⁸⁹ Musical Instrument Makers of New York, p. 19.

⁹⁰ History of the American Piano-Forte, pp. 283-84.

⁹¹ A factor in the company's success may have been its ability to benefit from Estey Organ's outstanding distribution network. An 1888 "article" in the *Atlanta Constitution*—apparently, a thinly veiled advertisement—stated that "the name of Estey is fast becoming a household word throughout the South, and the whole Union as for that matter, and for prospective buyers there is no instrument that can be more highly recommended than the Estey Piano. It is going to be the piano of the future." See "Verified: A Statement Formerly Made to a Representative of the Constitution," *Atlanta Constitution*, September 2, 1888, p. 5.

⁹² New York City New Building Docket No. 1890-564.

⁹³ LPC, *SoHo-Cast Iron Historic District Designation Report* (LP-0768) (New York: City of New York, 1973); LPC, *Gansevoort Market Historic District Designation Report* (LP 2132) (New York: The Commission, 2003), prepared by Jay Shockley, pp. 49-50; LPC Architects' Files.

⁹⁴ New York City New Building Docket No. 1895-230 and Alteration Docket No. 1895-233. A sketched map included with the alteration application shows the one-story office then existing at the corner of Lincoln Avenue and 134th Street.

⁹⁵ Because no evidence has been found in Department of Buildings records to indicate that the new building and extension from 1895 were later torn down and replaced with a new building, it seems safe to assume that the addition and building north of the original factory on Lincoln Avenue were later expanded and served as the base of the second- and third-floor addition built in 1909, and the fourth- and fifth-floor addition built in 1919. Changes in the one-story portion may be tracked using the 1900 Hyde *Atlas of the Borough of the Bronx, City of New York* and G.W. Bromley & Company, *Atlas of the City of New York, Borough of the Bronx* (Philadelphia: G.W. Bromley & Company, 1907). On the former map, the one-story portions of the factory along Lincoln Avenue and 134th Street are shown as three separate buildings; by 1907, they appear as a single structure.

⁹⁶ "Bronx Dwellers Demand Subways," *New York Times*, July 31, 1910, p. X6; "Followed Husband in Death: Hewlett S. Baker and Wife Buried Together from Bronx Home," *New York Times*, December 28, 1912, p. 1.

⁹⁷ 1900 Hyde Atlas of the Borough of the Bronx, City of New York.

⁹⁸ "The Building Department," *New York Times*, March 17, 1900, p. 12. On Slocum, see "Philadelphia Architects and Buildings" (accessed online at www.philadelphiabuildings.org); and Elizabeth Lambeth Gereau, "S. Gifford Slocum: Upstate New York Architect," *Preservation League of New York State Newsletter*, November-December 1983, pp. 4-5.

⁹⁹ New York City Alteration Docket No. 1909-32. The 1907, updated to 1912 Hyde *Atlas of the Borough of the Bronx, City of New York* shows that Slocum's two-story addition had apparently been completed by 1912. "Estey Piano Sale" (Advertisement), *New York Times*, November 18, 1917, p. X6.

¹⁰⁰ Pianos and Their Makers, p. 365: "Death of Julius J. Estev." Chicago Tribune, March 8, 1902, p. 2.

¹⁰¹ "Estey Player Piano" (Advertisement), *New York Times*, December 29, 1916, p. 4. By the mid-1860s, the area around Union Square had become the city's musical and theatrical center; many major piano manufacturers maintained showrooms there in the late nineteenth century. See *Steinway Hall Designation Report*, p. 3.

¹⁰² "Frederick Loeser & Co." (Advertisement) *New York Times*, October 13, 1912, p. X11. It appears, as late as 1917, that Loeser's was the only New York City retail outlet for Estey pianos other than the company's showrooms. A 1917 Estey Piano advertisement referred to "our show rooms at 12 West 45th Street, New York City, and the display ... at Frederick Loeser & Company's store in Brooklyn." See "Estey Piano Sale" (Advertisement).

- ¹⁰³ "Pianomakers Call a Strike for To-Day," *New York Times*, September 23, 1912, p. 8; "4,000 Pianomakers go out on Strike," *New York Times*, September 24, 1912, p. 8.
- ¹⁰⁴ Simpson remained involved, to some extent, with the company after Gittins took over; he is listed as the Estey Piano Factory's owner in New York City Alteration Docket No. 1919-204 from 1919.
- ¹⁰⁵ "Five Final Days" (Advertisement), *New York Times*, November 25, 1917, p. X2. Both this ad and the "Estey Piano Sale" advertisement feature illustrations of the Estey Factory as it appeared at that time.
- ¹⁰⁶ The Poughkeepsie plant had opened in 1912. The orchestrion, which may be considered a precursor to the jukebox, consisted of a large cabinet typically containing pipes and percussion instruments; these automatically operated machines played music recorded on rolls, and were often installed in saloons, restaurants, ice-cream shops, dance halls, and rinks; they were also installed within merry-go-rounds. Citing M. Welte & Sons' "alien ownership," the Federal Government seized the company during World War I; it was then auctioned to an investment group, which sold it to Gittins. Whether or not the seizure of Welte and other firms during the war was justified by security concerns is addressed in *The Welte Mignon*; Edwin Welte, who was president of the company until it was taken by the government, later lamented having to return to Germany, writing of "the fine factory building I built in Poughkeepsie I thought Poughkeepsie would be my final home" (*The Welte Mignon*, p. 48).
- ¹⁰⁷ New York City Alteration Docket No. 1919-204; this work was apparently completed by 1921, according to G.W. Bromley & Company, *Atlas of the Borough of the Bronx* (Philadelphia: The Company, 1921).
- ¹⁰⁸ 1921 Bromley *Atlas of the Borough of the Bronx*. A letter dated January 5, 1922 in the New York City Department of Buildings file associated with current Block 2309, Lot 1 features letterhead showing the Welte-Mignon complex as it appeared at that time. The two-story building has since been substantially altered.
- ¹⁰⁹ "Estey Pianos" (Advertisement), *Chicago Daily Tribune*, February 15, 1948, p. NW6; "Macy's Half-Million Dollar Sale" (Advertisement), *New York Times*, December 3, 1961, p. 39; "Macy's Great Sale of Console Pianos by Estey and Hardman & Peck" (Advertisement), February 11, 1962, p. 70; "Macy's Great Piano Sale" (Advertisement), February 17, 1965, p. 33.
- ¹¹⁰ "U.S. Aid for Plastic Piano Set, to Tune of \$944,000," Wall Street Journal, December 14, 1972, p. 42.
- ¹¹¹ "Loft Space Leased," *New York Times*, August 4, 1932, p. 35; "Leasing Here Shows Business Expansion," *New York Times*, February 9, 1937, p. 41.
- ¹¹² New York City Application for Drop Curbs, No. 1939-73.
- ¹¹³ "Window Sash Firm Buys Bronx Plant," *New York Times*, February 6, 1940, p. 41. The S.H. Pomeroy Company appears on the same block as Estey Piano on G.W. Bromley & Company, *Atlas of the City of New York, Borough of the Bronx* (Philadelphia: The Company, 1923).
- ¹¹⁴ New York City Application for Minor Structures, Minor Alterations, and Repairs No. 1940-232.
- ¹¹⁵ New York City Application for Minor Structures, Minor Alterations, and Repairs No. 1945-538.

¹¹⁶ E. Belcher Hyde Company, *Atlas of the Borough of the Bronx*, 23rd Ward, City of New York (Brooklyn: E. Belcher Hyde Company, 1907, updated to 1969).

^{117 &}quot;Shopping Suggestions," New York Times, January 19, 1973, p. 30.

¹¹⁸ New York City Certificate of Occupancy No. 52049. This Certificate dates from March of 1979.

¹¹⁹ "A Bronx Antiques Row Brings Hope for Renewal," *New York Times*, December 29, 1996, p. R1; "With Lofts Scarce, the Bronx Beckons and Artists Notice," *New York Times*, July 28, 2002, p. CY6; "Artists Canvassing for Space," *New York Times*, October 13, 2002, p. K1.

¹²⁰ This section draws upon *The Works: The Industrial Architecture of the United States*; and William H. Pierson, Jr., *American Buildings and Their Architects: Technology and the Picturesque; the Corporate and Early Gothic Styles* (Garden City, N.Y.: Anchor Books, 1980), pp. 22-90.

¹²¹ The Works, p. 202.

¹²² In some cases, the factory took the form of a K, as at the Joseph Loth & Company Silk Ribbon Mill (Hugo Kafka, 1885-86), which is a Designated New York City Landmark. See LPC, *Joseph Loth & Company Silk Ribbon Mill* (LP-1860) (New York: City of New York, 1993), prepared by Betsy Bradley.

¹²³ On this point, in addition to *The Works*, p. 179, see Brigitte Cook, "Preserving Design Objectives Found in Industrial Architecture of Mott Haven" (Unpublished Columbia University class paper, c.2004), p. 3.

¹²⁴ The Works, p. 60.

¹²⁵ The Works, p. 162.

¹²⁶ The Works, p. 234.

¹²⁷ The Works, p. 234.

¹²⁸ Among these are 171-79 Columbus Avenue (Thom & Wilson, 1885-87); 200-208 Columbus Avenue (Thom & Wilson, 1886-87); 201-207 Columbus Avenue (Hubert & Pirsson, 1886-87); 220-228 Columbus Avenue (Thom & Wilson, 1885-86); 221-223 Columbus Avenue (Arthur Donovan Pickering, 1887-90); 230-238 Columbus Avenue (Thom & Wilson, 1885-86); 270-276 Columbus Avenue (Thom & Wilson, 1884-85); 286-294 Columbus Avenue (Thom & Wilson, 1886-87); and 301-303 Columbus Avenue (Gilbert A. Schellenger, 1890-91). For more information on these buildings, see *Upper West Side/Central Park West Historic District Designation Report*.

¹²⁹ The 35% figure comes from Laura Buchner, "Ornamental Terra Cotta Along the Harlem River" (Unpublished Columbia University class paper, c.2004), p. 3. See also Susan Tunick, *Terra Cotta Skyline: New York's Architectural Ornament* (New York: Princeton Architectural Press, 1997), p. 17.

¹³⁰ Perth Amboy Terra-Cotta Company, *Catalogue and Price List* (New York: 1885), Plate VIII, cited in "Ornamental Terra Cotta Along the Harlem River," p. 6.

¹³¹ For example, *King's Handbook of New York City* (Boston: Moses King, 1893) contained a large section, spanning pp. 913-984, devoted to "notable manufacturers" that included many illustrations of factory complexes.

¹³² *Manufacturing the Muse*, pp. 37 and 39 shows a circa-1885 Estey Organ trade card depicting a parlor gathering around an Estey Organ with the company's complex visible in the distance, as well as a circa-1880 Estey Organ promotional poster showing the Brattleboro works with smoke pouring from its chimney.

¹³³ "The First Music Lesson" (Estey Piano Company Trade Card, c. 1885-1890), collection of the author. The rear of the card describes the Estey Piano Factory as "the most noted structure yet erected for the development of this branch of musical industry."

¹³⁴ Untitled Estey Piano Company Trade Card, c. 1885-1890, collection of the author.

¹³⁵ "Prospective purchasers of Estey Pianos" (Estey Piano Company Trade Card, c. 1890-1895), collection of the author.

¹³⁶ This trade card may be viewed at "The Estey Organ: A Virtual Museum" (accessed online at www.esteyorgan.com/piano.html). The prominence of the stretch of Southern Boulevard (now Bruckner Boulevard) near the Estey Factory around the turn of the twentieth century is reflected in the richly ornamented facades of its industrial buildings. Among those remaining are the former Mott Iron Works building (c.1883) at 2401 Third Avenue; the round-arched former Henry Spies Building (C.C. Buck, 1888) at 82-96 Lincoln Avenue, which once featured impressive, pyramidal corner towers; the former Haines Brothers Piano factory (Kreitler & Hebbard, 1888) at 26 Bruckner Boulevard; and the former Borden milk distribution center (1901) at 40-50 Bruckner Boulevard. Construction dates and architects for these buildings are from Harlem River Preservation Plan: Southern Section. Page 6 of the Harlem River Preservation Plan has a c.1890-1900 view of Mott Haven from the Harlem River waterfront showing the Estey Factory and its clock tower, and the then-existing towers of the Spies Building. The finely detailed industrial buildings along Southern Boulevard may be compared with an extant former piano factory built between 1900 and 1912, away from major thoroughfares, at the southwest corner of Willow Avenue and 136th Street. Other than its modest pilasters and corbelled brick cornice, this building has little ornament. The approximate construction date for this building was determined using the 1900 Hyde Atlas of the Borough of the Bronx, City of New York and the 1907, updated to 1912 Hyde Atlas of the Borough of the Bronx, City of New York, which shows the building to have been a piano factory in 1912.

¹³⁷ The existing bridge carrying Metro-North over the Harlem River was completed in 1956, according to the "New York Area Roads, Crossings, and Exits" website (www.nycroads.com). The first railroad bridge at that location was constructed by the New York & Harlem Railroad in 1840, according to "Railroads," *Encyclopedia of New York City*, p. 977.

¹³⁸ An image on the "Digital Metro New York" website (accessed online at www.metro.org:8080/index.php) shows that the Estey clock tower was visible from that location. This view is now partially blocked by the Major Deegan Expressway.

¹³⁹ Harlem River Preservation Plan: Southern Section, p. 6.

¹⁴⁰ See, for example, the following articles in *Real Estate Record & Builders' Guide*: "The Suburban Rapid Transit Company and its Future," January 5, 1884, pp. 4-5; "Our Prophetic Department," November 15, 1884, pp. 1148-49; "Movements Beyond the Harlem," July 4, 1885, pp. 753-54; "Rapid Transit in North New York," October 10, 1885, pp. 1,103; and "A Good Permanent Investment," November 21, 1885, pp. 1277-78.

¹⁴¹ A good historic picture of the elevated railroad structure within the Harlem River rail yards appears on p. 126 of *First Elevated Railroads in Manhattan and the Bronx of the City of New York*.

¹⁴² The pre-1890 photo of the factory on p. 163 of *Manufacturing the Muse* shows the Estey building from this angle, as do the two trade cards, noted above, that have illustrations of the pre-1890 factory. Other buildings in New

York with prominent corner features that were built around the same time as the Estey Piano Factory include the Consolidated Stock and Petroleum Exchange at Broadway and Exchange Place (1887-88, demolished); the New-York Cotton Exchange at William and Beaver Streets and Hanover Square (1883-84, demolished); Manhattan Storage and Warehouse Company on Seventh Avenue between 52nd and 53rd Streets (1892, demolished); and the Jefferson Market Courthouse at 425 Sixth Avenue (Vaux & Withers, 1874-77, a Designated New York City Landmark). Pictures of these buildings appear on pp. 793, 799, 811, and 839, respectively, of *King's Handbook of New York*.

¹⁴³ The Works, p. 232.

¹⁴⁴ According to a website entitled "Howard Tower Clocks" (accessed online at members.aol.com/indexnawcc/howard.html), the clock of the Estey Piano Factory was built by the E. Howard Clock Company. This site does not include any information about its primary sources or authorship.

¹⁴⁵ *American Buildings and Their Architects*, pp. 43-44.

¹⁴⁶ American Buildings and Their Architects, p. 61.

¹⁴⁷ Men, Women and Pianos, pp. 495-496; *The Works*, p. 119. The Kohler & Campbell piano factory in the Bronx at East 163rd Street between Melrose and Courtland Avenues (Charles Steinmetz & C.S. Clark, 1885-1908, demolished) also featured a clock tower. See LPC, *Bronx Survey* (New York: City of New York, 1978), pp. 85-86.

¹⁴⁸ An illustration of the Hoe factory appears on p. 67 of *The Works*.

¹⁴⁹ In 1854, the *New York Daily Times* lamented the inaccuracy of the City Hall clock, writing of the "shame that a city like ours, the great center of commerce, the metropolis of our great and growing country, should be without a decent clock to regulate its movements" ("The City Hall Clock – Necessity of a Better Time-Keeper," *New York Daily Times*, March 15, 1854, p. 2); twenty-four years later, in a piece arguing for better public availability of accurate time, the *Times* observed that "the community seem to be coming rapidly to an appreciation of the value of correct time In these days of railroads and railroad-like ways of doing business, a man whose time is money to him must attend not only to his hours and minutes, but also to his seconds" ("Time Distribution," *New York Times*, December 7, 1878, p. 4).

¹⁵⁰ Carlene E. Stephens, On Time: How America has Learned to Live by the Clock (Boston: Bulfinch, 2002), p. 109.

of Western Union's New York City headquarters. Like other time balls around the country, it was actuated by a daily signal telegraphed from Washington, D.C.; onlookers would use the time ball to synchronize their watches. See *On Time*, p. 117. Incidentally, time balls likely inspired one of New York City's most beloved and famous traditions—the annual lowering of a flagpole-mounted ball atop the old *New York Times* tower to mark the arrival of the new year. The basis for the New Year's ball "was probably the gold-plated 'time balls' that were once lowered at noon every day in seaports throughout the world to enable ships' navigators to set their chronometers," according to Tama Starr and Edward Hayman, *Signs and Wonders: The Spectacular Marketing of America* (New York: Currency/Doubleday 1998), p. 267. The inexpensive "dollar watch," which dramatically expanded watch ownership, did not become available until 1896, according to *On Time*, p. 135.

¹⁵² On this topic, see Alexis McCrossen, "Hands and Faces: Public Clocks in the United States After the Civil War" (accessed online at epsilon3.georgetown.edu/~coventrm/asa2001/panel9/mccrossen.html). Public clocks had appeared on American churches and meetinghouses by the early eighteenth century, according to Frederick Shelley, *Early American Tower Clocks* (Columbia, Penn.: National Association of Watch and Clock Collectors, 1999), pp. ix-xv.

¹⁵³ "Happy Chicopee: With Music and Cannon She Celebrates, and Looks with Delight at Her New Clock," *Boston Daily Globe*, September 24, 1887, p. 4. When a privately maintained clock used by the public on Chicago's North Side stopped working in 1893, it affected everything from the business of a local dentist, to the work of a housewife who "[couldn't] tell when to cook dinner," according to "Clock to Run Again: Yerkes' North Side Timepiece Undergoing Repairs," *Chicago Tribune*, November 27, 1893, p. 7.

^{154 &}quot;Hands and Faces: Public Clocks in the United States After the Civil War."

^{155 &}quot;The Post's New Clock: Our Building Made Useful to the Public as well as Ornamental," *Washington Post*, October 24, 1880, p. 1. The "from more than one thousand doors and windows" quote is from "Hands and Faces: Public Clocks in the United States After the Civil War." One newspaper account from 1901 described how an argument over the correct time led a group of men on a hansom cab ride around Manhattan as they sought out, by name, the Western Union time ball, the clocks of the Tiffany, Hudnut, and New York Life Insurance companies, and the clocks of the *Times* and *Tribune* ("What Time Is It?" *New York Times*, July 7, 1901, p. SM3). For decades after watch ownership first became common, people continued to rely on public clocks. When Trinity Church's clock was stopped for repairs in 1947, it confused the "tens of thousands of 'Street' employees who several times a day turn their eyes to the gilded hands of the clock's ... dials," according to "Time Stands Still in Trinity's Clock," *New York Times*, February 27, 1947, p. 23.

¹⁵⁶ The Works, p. 235.

¹⁵⁷ The Works, p. 237.

¹⁵⁸ Norval White and Elliot Willensky, AIA Guide to New York City (New York: Three Rivers Press, 2000), p. 547.

FINDINGS AND DESIGNATION

On the basis of a careful consideration of the history, the architecture, and the other features of this building, the Landmarks Preservation Commission finds that the Estey Piano Company Factory has a special character and a 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 Estey Piano Company Factory, which features robust brick facades and a high corner clock tower, is a distinguished monument to the piano industry, which was once of the Bronx's most important; that it has anchored the northeast corner of Lincoln Avenue and Southern (now Bruckner) Boulevard since 1886, when its original portion was completed; that it is the oldest-known former piano factory standing in the Bronx today; that it is one of the earliest large factories remaining in its Mott Haven neighborhood, dating from the period in which the area first experienced intensive industrial development; that today, as in decades past, the building's signature clock tower and expansive facades, simply but elegantly detailed with terra cotta, patterned brick, and contrasting stone, are visible from the waterfront and nearby Harlem River bridges, making it a true neighborhood landmark; that manufacturing blossomed in the Mott Haven section of the Bronx during the 1880s, when new factories started springing up in the area east of Third Avenue; that many of these factories produced pianos or their components, and that by 1919, the Bronx had more than 60 such factories, making it one of America's piano manufacturing centers; that, as one of the city's first piano factories to be built in the Annexed District or North Side, as the western portions of the Bronx were known between 1874 and 1898, the Estey Factory was credited with providing "an unusual stimulus" for the movement of other piano makers there; that several of the piano manufacturers that followed the Estey company to the Annexed District, and later the Bronx, clustered within a few blocks of its factory, creating an important nucleus for the industry; that the Estey Organ Company of Brattleboro, Vermont was one of the country's largest producers of reed organs in 1885, when it joined with John B. Simpson, a pioneering North Side piano manufacturer, to form the Estev Piano Company; that Estev upright and grand pianos were recognized for their "superior construction and workmanship"; that the original portion of the Estey Piano Company Factory was created by the architectural firm of A.B. Ogden & Son; that many of the original building's features, including its L-shaped plan, flat roof, regular fenestration pattern and bay arrangement, and relatively narrow width to allow for daylight penetration to the interior, are characteristic of late-nineteenth-century factory buildings; that its mixture of segmental- and round-headed window openings, and the Romanesque machicolations of its clock tower, place it within the tradition of the American round-arched style; that other features, including its distinctive, red-orange brick, dogtoothed and zigzagging patterned-brick stringcourses, recessed brick panels, terra cotta tiles featuring festoons, lions' heads, and foliate motifs, and its dramatic, projecting clock tower, speak of a building that sought to announce its presence on the urban landscape, projecting a strong public image for its owner; that the Estey Piano Company often included an illustration of this factory on its trade cards, which were used to promote its products; that the original building was extended to the east along Southern Boulevard in 1890, with a harmonious five-story addition designed by John B. Snook & Sons, and to the north, along Lincoln Avenue, with one-story additions in 1895; that the Lincoln Avenue additions appear to have been combined and expanded, and then raised to three stories in 1909, and by an additional two stories in 1919; and that the 1919 addition near the southeast corner of Lincoln Avenue and 134th Street features broad expanses of industrial sash that were characteristic of the "daylight factories" of the early twentieth century; that its historic fabric remains almost completely intact; and that it has been described by the AIA Guide to New York City as "the grande dame of the piano trade: not virgin, but all-together and proud."

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 Estey Piano Company Factory, 112-128 Lincoln Avenue (aka 15-19 Bruckner Boulevard and 270-278 East 134th Street), Borough of The Bronx, and designates, as its Landmark Site, Bronx Tax Map Block 2309, Lot 1, in part, consisting of the five-story building extending for 200 feet along the north side of Bruckner Boulevard east of Lincoln Avenue; 200 feet along the east side of Lincoln Avenue north of Bruckner Boulevard; and along a portion of the south side of East 134th Street east of Lincoln Avenue, including all adjoining elevator shafts, and the land on which it is sited.

Robert B. Tierney, Chair Christopher Moore, Richard M. Olcott, Thomas F. Pike, Jan Pokorny, Elizabeth Ryan, Commissioners



Estey Piano Company Factory, Lincoln Avenue (west) façade at left; Bruckner (formerly Southern) Boulevard (south) façade at right. *Photo: Carl Forster*



Estey Piano Company Factory, Bruckner Boulevard façade. ${\it Photo: Michael \ Caratzas}$



Estey Piano Company Factory, 134th Street, or north (left) and Lincoln Avenue (center and right) facades. *Photo: Carl Forster*



Estey Piano Company Factory, westernmost portion of the Bruckner Boulevard façade. The original, 1885-86 portion of this façade comprises the clock tower, the ten bays immediately to the east of the tower, and the two westernmost bays of the round-arched, four-bay projection.

Photo: Carl Forster



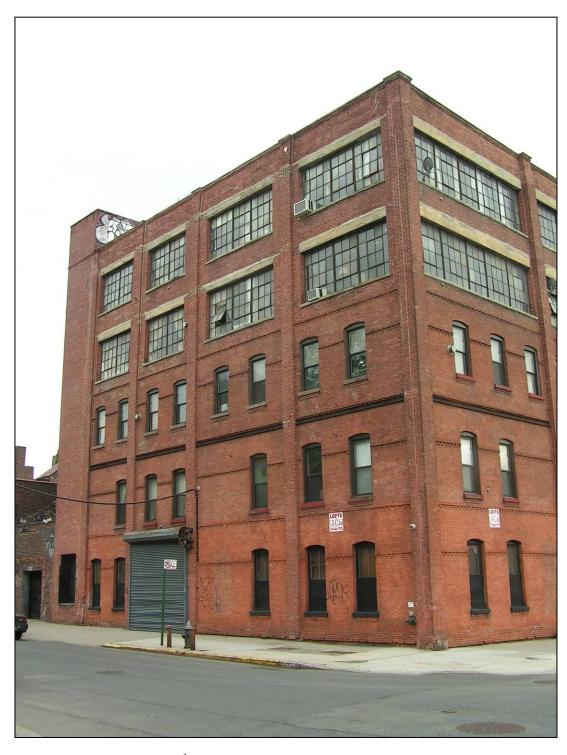
Estey Piano Company Factory, southernmost portion of the Lincoln Avenue façade. The original, 1885-86 portion of this façade comprises the clock tower, the ten upper-story bays immediately to the north of the tower, and the round-arched, two-bay projection.

Photo: Carl Forster



Estey Piano Company Factory, Lincoln Avenue façade, showing the first-floor addition apparently dating from 1895 and later expanded; the second- and third-floor additions dating from 1909; and the fourth- and fifth-floor additions dating from 1919.

Photo: Carl Forster



Estey Piano Company Factory, 134th Street (north) façade. The elevator shaft at the eastern end of this façade was built at the same time as the top two stories, in 1919.

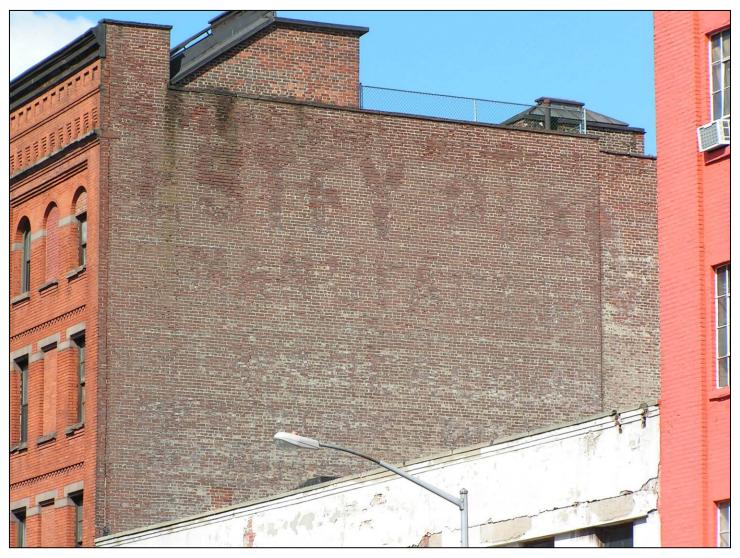
Photo: Michael Caratzas



Estey Piano Company Factory, portion of the 134th Street façade (right) and portion of the east (rear) façade of the Lincoln Avenue leg of the building (center).

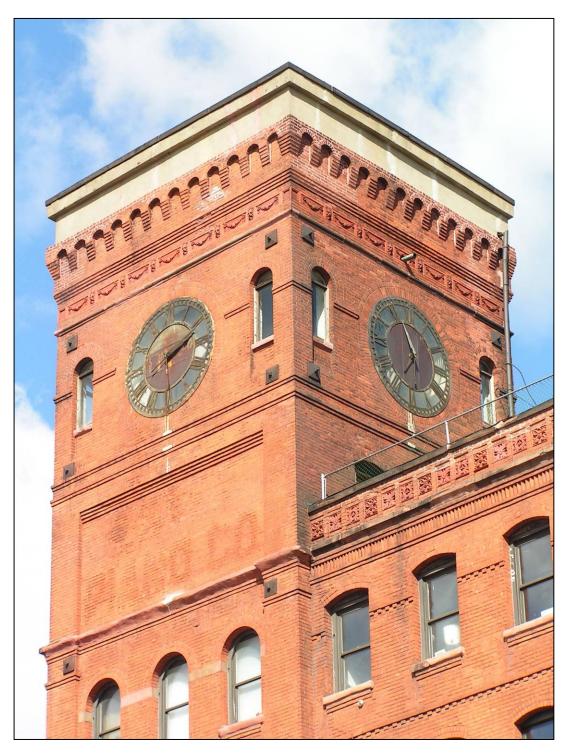
The buildings to the left of the elevator shaft are not included in this Designation.

Photo: Michael Caratzas

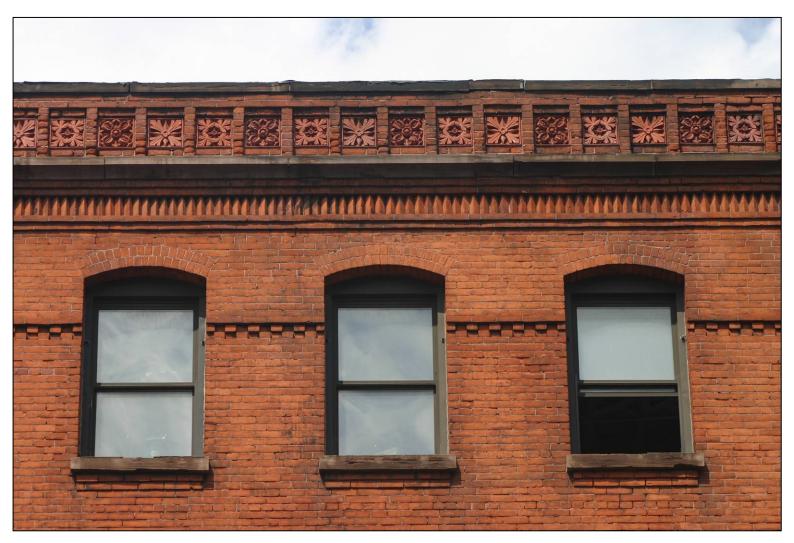


Estey Piano Company Factory, east façade of the Bruckner Boulevard leg of the building. The white building at lower-center and the building at far-right are not included in this Designation.

Photo: Michael Caratzas



Estey Piano Company Factory, south (left) and east (right) faces of the clock tower. *Photo: Michael Caratzas*



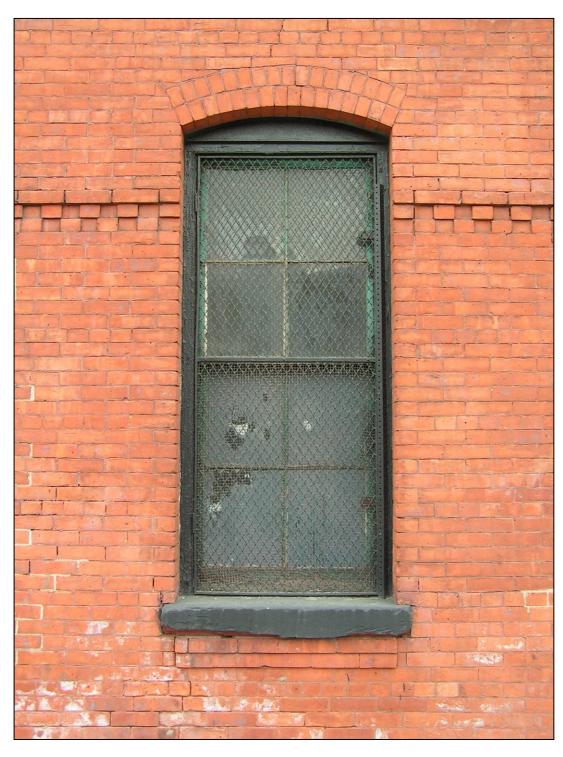
Estey Piano Company Factory, parapet and top story. *Photo: Carl Forster*



Estey Piano Company Factory, parapet. *Photo: Michael Caratzas*



Estey Piano Company Factory, terra cotta belt course. *Photo: Carl Forster*



Estey Piano Company Factory, typical four-over-four double-hung wood window with wood frame. ${\it Photo: Michael \ Caratzas}$



Estey Piano Company Factory, first-floor windows on Lincoln Avenue façade. *Photo: Michael Caratzas*



Estey Piano Company Factory, typical windows on 1919 addition. *Photo: Michael Caratzas*

