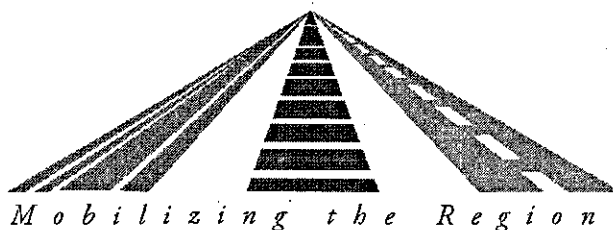


## TRI-STATE TRANSPORTATION CAMPAIGN



August 23, 2010

### **Testimony in support of Vornado's proposal for 15 Penn Plaza before the New York City Counsel Land Use Committee**

Thank you for the opportunity to testify today. My name is Kyle Wiswall, and I am the general counsel of the Tri-State Transportation Campaign, a regional non-profit working for a more sustainable transportation network.

I am here today to express the Tri-State Transportation Campaign's strong support for Vornado Realty Trust's transit improvements and development proposal for 15 Penn Plaza.

The Campaign is particularly excited about the prospect of reopening the Gimbels Passageway which connects the commuter rail lines and subways at Penn Station with subway and PATH service at Herald Square. As you know, surface streets in the area are very congested with pedestrian and vehicle traffic, and transit riders will welcome a safer and less congested route between these two busy hubs. New subway entrances, better signage and lighting, wider station platforms, wider sidewalks, and more street tree plantings will offer aesthetic and mobility improvements for visitors, commuters, and residents.

Vornado will make a significant contribution towards the transit improvements, which will allow the MTA to make these customer service enhancements even as it faces record budget deficits.

The Tri-State Transportation Campaign is a strong supporter of transit oriented development and believes the proposed office tower's proximity to Penn Station makes it an excellent location choice. There is no better place to encourage development than above transit facilities that provide easy access to Amtrak, NJTransit, LIRR, PATH, and fourteen subway lines. The specific design of the building is outside of our area of expertise, however.

We urge you to approve this measure, and work with Vornado to make this exciting proposal a reality. Thank you for your time.

Tri-State Transportation Campaign  
350 West 31<sup>st</sup> Street, Suite 802  
New York, NY 10001



Louis J. Coletti  
President & CEO

**BTEA: NEW YORK'S ALLIANCE OF UNION CONTRACTORS**  
1430 Broadway, Suite 1106 • New York, NY 10018 • [www.bteany.com](http://www.bteany.com)  
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**TESTIMONY OF HENRY C. KITA**  
**SENIOR VICE PRESIDENT**  
**BUILDING TRADES EMPLOYERS' ASSOCIATION OF NEW**  
**YORK CITY**

**PUBLIC HEARING OF NEW YORK CITY COUNCIL ZONING**  
**COMMITTEE**

**15 PENN PLAZA**

**AUGUST 23, 2010**



**Good morning.**

**I want to thank the Chair and the members of the New York City Council's Zoning Sub Committee for the opportunity to provide testimony today.**

**My name is Henry Kita and I am the Senior Vice President of the Building Trades Employers' Association of New York City (BTEA). The BTEA is an organization representing 27 union construction trade contractor associations comprised of over 1,700 construction management firms, general contractors and specialty subcontractors building here in New York City. The BTEA employs the approximately 100,000 tradesmen/women of the Building and Construction Trades Council of Greater New York (BCTC). The BTEA has over the past 10 years been joined in a partnership to advance the cause of union construction with the BCTC.**

**Simply put, the BTEA wholeheartedly supports the application of Vornado to build a new commercial tower at 15 Penn Plaza here in Manhattan. In the**

**view of our members, this is the right development project at exactly the right time.**

**The architectural firm of Pelli Clarke Pelli has designed a beautiful structure that would be an iconic addition to the skyline of New York City. We believe that the proposed structure would complement the Manhattan skyline just as major developments such as the New York Times Building and 1 Bryant Park have in recent years. New York has always prided itself as a dynamic city and the proposed development of 15 Penn Plaza represents the continued positive change of our urban landscape. This construction would also be a catalyst to the revitalization of the Penn Station area as a result of some of the greatly needed transit improvements that are included as a part of the proposed development.**

**It is an understatement to point out that New York City is in need of a strong development proposal at this point in time. Clearly, the management team at Vornado has been bold and innovative in bringing forth this application and the economic benefits that it will generate... just as the developers and owners**

**of the Empire State Building and Chrysler Buildings “thought big” in the boom years of the 1920’s and built during the Great Depression.**

**Some naysayers will argue that a major tenant will be difficult to find for a building the scale of 15 Penn Plaza. This type of argument is pure nonsense! New Yorkers and particularly this Administration are anticipating the future needs of our great City. Our national and local economies are slowing coming back and new financial and commercial industries will emerge from this recession... industries and entities that we never dreamed of! We know that we need to prepare for this new global economy as we begin to exit the recession. Vornado clearly understands this need and the associated economic opportunities that can be realized for our City from this project.**

**In all honesty, the proposed project at 15 Penn Plaza will provide a needed boost to the New York City construction industry. We are currently experiencing unemployment rates in the local unionized construction industry in excess of 30%. This project will be a significant help in lowering this high level of unemployment and in the process tremendously assist the local economy. The members of the unionized construction trades live here. Over**

**84% of the construction trades workforce lives in the five boroughs. We educate our children here and we want them to be able to live and work here in the future.**

**In closing, the unionized construction industry as represented by the BTEA and BCTC, is a major part of the core middle class of New York City. We take pride in our City and pride in our work. That's why we support quality, innovative projects like 15 Penn Plaza that "think big" and "think future". We at the BTEA, strongly urge that this committee likewise support the Vornado proposal at 15 Penn Plaza.**

**Testimony of Felix A. Ciampa, Senior Vice President for Government Affairs  
Madison Square Garden**

**New York City Council Subcommittee on Zoning and Franchises**

**Hon. Mark Weprin, Chair**

**15 Penn Plaza**

**August 23, 2010**

Good morning Chair Weprin and members of the Subcommittee on Zoning and Franchises. My name is Felix Ciampa and I am the Senior Vice President for Government Affairs for Madison Square Garden. Madison Square Garden is pleased to testify in support of the redevelopment of 15 Penn Plaza by Vornado Realty Trust, one of the largest, most respected owners and managers of real estate in the United States. Over the years Vornado has made a significant investment in the success and prosperity of New York City, where they own almost 22 million square feet of real estate that includes a mix of Class A office space, retail and residential development.

Vornado's redevelopment of 15 Penn Plaza will bring economic benefits not only to the immediate Penn Station area, but New York City as well. When the project is under way, the economic benefits will be wide ranging including many new construction jobs and transportation improvements, both of which will be welcome news for local businesses and New York City's economy.

Numerous transit improvements undertaken by Vornado as part of the project will benefit businesses, residents, commuters, and visitors to the Penn Station area for years to

come. The reconstruction and re-opening of the Gimbels Passageway under 33<sup>rd</sup> Street will do much to relieve the congestion that now plagues the east-west streets feeding both The Garden and Penn Station.

The proposed improvements to the subway system surrounding 15 Penn Plaza will also enhance access and circulation for subway riders. We believe the entire community, as well as our customers, will benefit greatly from the increase in capacity and rationalization of space represented by Vornado's subway improvement package.

As a member of the local community and a corporate neighbor that is embarking on its own redevelopment project – the transformation of the World's Most Famous Arena – Madison Square Garden is happy to lend its support to Vornado on behalf of our employees and the millions of fans who attend events at The Garden each year and who will undoubtedly enjoy the many benefits associated with this project.

Thank you for the opportunity to testify at today's subcommittee hearing.



# Regional Plan Association

## Statement by Regional Plan Association to the New York City Council on the proposed development of 15 Penn Plaza

August 23, 2010

Juliette Michaelson  
Senior Planner, Regional Plan Association  
jmichaelson@rpa.org, 212 253 5981

Regional Plan Association (RPA) has long been committed to the success of Penn Station and Midtown West. We believe that today's unattractive and confusing Penn Station has, in combination with other factors, prevented the district from experiencing the same level of revitalization in recent years that has been achieved in the rest of Midtown, including Bryant Park, Times Square and Columbus Circle. We have consistently called for the renovation and expansion of Penn Station and are happy to see that construction of Phase One is scheduled to begin soon.

RPA has also long advocated a new "Moynihan Station District" of dense new commercial development that takes advantage of Penn/Moynihan Station's unparalleled access to the region's workforce. Density belongs around transit hubs, and, while twice as many people travel through Penn Station every day than Grand Central, you wouldn't know it from looking at the skyline. In RPA's view, 15 Penn Plaza will bring us a step closer to building a new transit-oriented, economically efficient and, by virtue of its future dependence on mass transit, environmentally sustainable district.

We see the proposed project as an integral part of the 32<sup>nd</sup> to 34<sup>th</sup> Street corridor, a corridor that will guide the redevelopment of Midtown West from Herald Square, to Moynihan Station, and finally to the Far West Side – development, after all, proceeds incrementally. Three buildings of more than 2 million square feet already exist nearby (Macy's, Two Penn Plaza and the Empire State Building), and many more very large buildings are planned for the Hudson Railyards. In this context, a large building at the site of 15 Penn is precisely what is needed.

That the applicants have also committed to rebuilding and re-opening the Gimbels Passageway, providing real-time train information for travelers, and improving access to subway platforms will, in addition, be of great and immediate benefit to Penn Station's current 400,000 daily users and the 300,000 people who use the 34<sup>th</sup> Street stops on the Broadway, Sixth, Seventh and Eighth Avenue subway lines. In this fiscal environment, it seems highly unlikely that most of these improvements would occur without the transit bonus associated with the site.

RPA supports dense new development around Penn Station that takes advantage of the district's unparalleled access to transit. We also support improving the existing transit infrastructure in the area. The proposed project at 15 Penn Plaza, in our view, contributes to both goals.

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**NATIONAL  
TRUST  
FOR  
HISTORIC  
PRESERVATION®**

**Statement of the National Trust for Historic Preservation to the New York City Council Subcommittee on Zoning and Franchises on 15 Penn Plaza**

Chair Weprin and Members of the Subcommittee:

Thank you for this opportunity to comment. I am Lisa Ackerman, and I am speaking today on behalf of the National Trust for Historic Preservation to express our concerns about the proposed tower at 15 Penn Plaza. Chartered by Congress in 1949, the National Trust for Historic Preservation is the leader of the country's preservation movement, helping people protect, enhance, and enjoy the places that matter to them. I am a member of the National Trust's Board of Advisors.

As you know, the 15 Penn Plaza tower is proposed for a site in close proximity to the Empire State Building, one of the world's most recognized landmarks. Unfortunately, due to that proximity, the proposed height and massing of 15 Penn Plaza would significantly detract from the stunning visual experience of the Empire State Building – and New York City's skyline.

New York City's skyline will change over time, an evolution to be embraced. Yet that skyline is also fundamental to the city's image, instantly conveying New York City's powerful, dynamic essence. Just as the city works to balance new development with protection of its most treasured landmarks and neighborhoods, we urge City government to manage change on the skyline in a way that will conserve its most defining characteristics.

Shining in the sun and glowing at night, the Empire State Building has been both a distinguished architectural statement and one of the skyline's most immediately distinguishable features since its construction in 1931. Because of its distance from other very high buildings, viewers can see much of the height of the building clearly from places far and near. For New Yorkers, the chance view through their neighborhoods to the Empire State Building unites them with others throughout the metropolis, inspiring pride and reassurance. For visitors and newcomers approaching the city, the first sight of the Empire State Building on the skyline is an electrifying welcome. The beauty and power of the Empire State Building's iconic profile would be diminished if a tower of nearly equal height and significant bulk were constructed within such a close distance.

Midtown can and should be targeted for more intensive, transit-oriented development and improvements. Even in places where greater growth is appropriate, though, some limits are needed to protect important values. Midtown will still flourish if new towers are built in ways that are sensitive to the Empire State Building's distinct place on the skyline.

We are not suggesting that this project should not proceed at all, but simply that its height and massing should be reconsidered—particularly since the project in its current form depends on height and setback variances that would be granted as concessions to the developer. There is certainly precedent for this: Recently, in requiring that the height of the Jean Nouvel-designed tower proposed for 53<sup>rd</sup> Street be lowered by 200 feet, the Department of City Planning acknowledged the importance of managing the city's skyline, and protecting views of the Empire State Building. We think that a similar approach should be followed in this case, so that the 15 Penn Plaza tower will not detract from the Empire State Building and diminish one of the most treasured elements of the New York City skyline.

**THE NEW YORK  
LANDMARKS  
CONSERVANCY**

**August 23, 2010**

**STATEMENT OF THE NEW YORK LANDMARKS CONSERVANCY BEFORE THE  
SUBCOMMITTEE ON ZONING AND FRANCHISES OF THE CITY COUNCIL REGARDING 15  
PENN PLAZA, MANHATTAN**

Good day Chair Weprin and members of the City Council. I am Andrea Goldwyn speaking on behalf of the New York Landmarks Conservancy. The Conservancy is a private, non-profit, organization established in 1973. We advocate for landmarks and historic districts. We often testify on the impact of new construction on landmarked buildings, and there is no landmark better known than the Empire State Building. For nearly 80 years it has stood as one of the highest peaks on the Manhattan skyline. This singular visibility requires a thorough discussion of whether nearby development will enhance or obscure it.

As a founding member of the Friends of Moynihan Station, the Conservancy has been involved in a governmental review of the area around Moynihan Station noting both historic resources and potential development sites, so we know this area well, and know that several buildings in addition to 15 Penn Plaza are being contemplated.

We are not opposing a new building at this site. We recognize the logic of high-density development in business centers and near transportation hubs. But the Empire State Building, just two blocks away, is a very special landmark. It is hard to understand how the City Planning Commission could say that 15 Penn Plaza would not create an adverse impact on it. The CPC has already lowered a proposed building on 53<sup>rd</sup> Street, 20 blocks away, questioning "whether it merits being in the zone of the Empire State Building's iconic spire."

City Planning has approved the stacking of bonuses and waivers of height limitations and setback requirements, and thereby allowing a much taller, bulkier building than what the as-of-right zoning would allow. We would ask you to take a careful look at the discretionary waivers for height and setback, and the bonuses requested today, and consider whether they are appropriate under the circumstances. We think they are not because of the adverse impact they would have on the Empire State Building. A building that adheres to as-of-right zoning would be a far better neighbor.

Thank you for the opportunity to present the Conservancy's views.

## **15 Penn Hearing with City Council Testimony by Peter Riguardi**

When CEO's of major firms are evaluating a Real Estate Headquarter decision, the most important aspect of that decision for them is making sure that they are in a place that is attractive for their labor force for today and in the future. New York City has changed. For years, Grand Central Station was the center of the city's labor market, but when companies of scale look at their work force in New York today, typically they find that 80% or more of their employees reside in the five boroughs and New Jersey. This is quite different than 20 years ago, when the Northern Suburbs played a key role in the work force. The development of the five boroughs and affordable housing starts in New Jersey has created this new dimension. This is what makes Penn Station ideal for a corporate Headquarter. Today, it represents an unbelievable intersection for New Jersey, Long Island and New York City Commuters.

Very few locations in New York offer buildings of scale with large footprints. 15 Penn Plaza, with its 80,000 SF site, is very unique. This site is extremely attractive to large financial service companies who feel compelled to keep together their trading operations, research, investment banking and Headquarters in the same location. Absent the proposed development on the far West Side, 15 Penn, clearly, is one of the last remaining alternatives in Midtown of scale. Combining that with an existing stock in New York, that compared to any other city is aging, 15 Penn becomes an ideal alternative for a wide range of tenants.

Competition for these tenants will go beyond New York to places like London, Hong Kong and Singapore. To stay competitive in the global market, it is essential to New York to create large scale building opportunities connected to the Tri-State labor force for these global companies. It is no surprise that Bank of America and Goldman Sachs came up with headquarter solutions that they did; large buildings and big floor plates connected to the five boroughs and New Jersey labor force.

I have represented many of these tenants of scale on their Headquarters in New York. One of them had chosen 15 Penn as its Headquarter solution before the correction in the financial markets caused a change in their business plan. In any market cycle, and under any business climate, 15 Penn Plaza would be a ideal solution for any Headquarter requirement.

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# TESTIMONY OF THE LANDMARKS PRESERVATION COMMISSION BEFORE THE CITY COUNCIL SUBCOMMITTEE ON LANDMARKS, PUBLIC SITING AND MARITIME USES ON THE DESIGNATION OF THE SOHO-CAST IRON HISTORIC DISTRICT EXTENSION IN MANHATTAN.

August 23, 2010

Good morning Council Members. My name is Jenny Fernández, Director of Intergovernmental and Community Relations for the Landmarks Preservation Commission. I am here today to testify on the Commission's designation of the SoHo-Cast Iron Historic District Extension in Manhattan.

On October 27, 2009, the Landmarks Preservation Commission held a public hearing on the proposed designation of the SoHo-Cast Iron Historic District Extension. Twenty-four witnesses spoke in favor of the designation, including Councilmember Alan J. Gerson, as well as representatives of Manhattan Borough President Scott Stringer, State Senator Daniel Squadron, Manhattan Community Board 2, Society for the Architecture of the City, the New York Landmarks Conservancy, the Municipal Arts Society, and the Historic Districts Council. Fourteen speakers testified in opposition to the proposed designation, including the owners of several buildings and their representatives, as well as a representative of the Real Estate Board of New York. In addition, the Commission received numerous letters, e-mails, and post cards in support of designation. The Commission also received a number of communications opposed to the designation. On May 11, 2010, the Commission voted to designate the SoHo-Cast Iron Historic District Extension.

The SoHo-Cast Iron Historic District Extension consists of approximately 135 properties located on the blocks immediately adjacent to the east and west sides of the SoHo-Cast Iron Historic District. Many of the buildings date from the same period of development as those in the previously-designated historic district and exhibit similar architectural characteristics. There are several cast-iron-fronted buildings within the extension as well a large number of similarly styled masonry buildings. The boundaries of the extension were drawn so as to protect cohesive streetscapes along narrow Crosby Street and Howard Street as well as a number of notable cast iron buildings on West Broadway. Like their counterparts in the designated district, many of the structures within the SoHo- Cast Iron Historic District Extension were erected in the post-Civil War era as store and loft buildings for the wholesale dry goods merchants and the manufacturing businesses that transformed the once comfortable residential neighborhood into a bustling commercial zone in the mid- and late-nineteenth century. The extension displays a variety of architectural styles also present in the SoHo-Cast Iron Historic District, including Italianate, Second Empire, and Queen Anne, as well as the Romanesque and Renaissance Revival styles.

Today, the SoHo-Cast-Iron Historic District Extension still maintains the essence of its early industrial history, even as it continues to evolve into one of New York City's most attractive and popular residential neighborhoods and shopping destinations.

The Commission urges you to affirm this designation.

**TESTIMONY OF THE LANDMARKS PRESERVATION COMMISSION BEFORE THE CITY COUNCIL SUBCOMMITTEE ON LANDMARKS, PUBLIC SITING AND MARITIME USES ON THE DESIGNATION OF THE WILLIAM ULMER BREWERY OFFICE, MAIN BREWERY HOUSE AND ADDITION, ENGINE AND MACHINE HOUSE, AND STABLE AND STORAGE BUILDING IN BROOKLYN.**

**August 23, 2010**

Good morning Council Members. My name is Jenny Fernández, Director of Intergovernmental and Community Relations for the Landmarks Preservation Commission. I am here today to testify on the Commission's designation of the William Ulmer Brewery complex in Brooklyn.

On March 24, 2009 the Landmarks Preservation Commission held a public hearing on the proposed designation of the William Ulmer Brewery. Seven people spoke in favor of designation, including one of the buildings' owners, and representatives of Councilmember Diana Reyna, Municipal Arts Society, Society for the Architecture of the City, Waterfront Preservation Alliance, and the Historic Districts Council. In addition, one letter was received in support of designation. There were no speakers or letters in opposition to designation. On May 11, 2010, the Commission voted to designate this complex as a New York City individual landmark.

The Romanesque Revival style office building at 31 Belvidere Street is the focal point of the William Ulmer Brewery complex, a reminder of one of Bushwick's, and Brooklyn's, most prominent 19th- and 20th-century industries. The entire complex remains a largely intact example of a late-19th century brewery designed in the American round arch style, and includes, in addition to the office building, the main brew house (1872) and addition (c.1881), engine and machine houses (Theobald Engelhardt 1885), and stable and storage building (Frederick Wunder 1890). A German emigrant, William Ulmer (1833-1907) began working in a New York City brewery owned by his uncles in the 1850s and later became a partner in the Vigelius & Ulmer Continental Lagerbier brewery, founded in 1871. Within seven years, Ulmer became the sole proprietor of the brewery and under its new name – the William Ulmer Brewery – the business was expanded in the 1880s and 1890s. Designed by prominent Brooklyn architect Theobald Engelhardt and constructed in 1885, the two-story red brick office building was the architectural highlight of the complex, featuring arched and dormered windows, a squat mansard roof clad in slate, as well as terra-cotta ornament. The other buildings of the Ulmer brewery complex feature details commonly found on other 19th-century breweries.

Prior to Prohibition, there were at least 24 breweries in Brooklyn, many of which were located in Williamsburgh and Bushwick. Ulmer's was one of the more successful and in 1896 the *Brooklyn Eagle* described him as a millionaire. Like many other breweries, the enactment of Prohibition closed the Ulmer brewery. The factory buildings were sold and converted for light manufacturing use, but the family retained ownership of the office building until 1952, using it as an office for their real estate business. The buildings remain largely intact and retain the detailing that defines their history and use.

The Commission urges you to affirm this designation.

The New York City Council  
Subcommittee on Zoning and Franchises  
Monday, August 23, 2010, 9:30 am  
250 Broadway – Hearing Room, 16<sup>th</sup> Floor  
Re: Agenda Items: LU 0159-2010, LU 0160-2010, LU 0161-2010, LU 0162-2010  
LU 0163-2010



I'm Dan Biederman, President of the 34<sup>th</sup> Street Partnership. Our BID has supported, at Community Board 5 and the Planning Commission, the various land use applications requested by Vornado for the redevelopment of 15 Penn Plaza. If there is anywhere in Midtown where a proposed building of this size and bulk should be built, it is here, at this site, at Penn Station, at the nexus of a major mass transit network, at the center of a commercial district. Should the multi-tenant building scenario develop, it is here – a block from Macy's and down the street from JCPenney – where a major new retail space of almost 300,000 square feet would be in demand, and which will further add to the vitality of our shopping district. If a single-tenant building is the direction taken, and a financial services firm is the occupant, 10,000 new employees will occupy the building. We see that as a good thing. They'll need places to shop and dine, and we have many stores and restaurants surrounding the site.

The long-needed mass transit improvements will also provide benefits to our neighborhood. Overcrowded sidewalks at peak hours will be eased with a host of circulation improvements. We commend the reconstruction and reopening of the passageway under 33<sup>rd</sup> Street. Pedestrians will be able to move in a wide corridor between Penn Station and the Seventh Avenue subway station (the fifth busiest station in the entire subway system) to the 34<sup>th</sup> Street/Herald Square subway station (third busiest in the city). Easy access to PATH at Sixth Avenue, and in a few years, to New Jersey Transit's new station below 34<sup>th</sup> Street at Herald Square, will also be possible. The scope of

improvements is impressive: platform widening with six more feet on the northbound local Seventh Avenue line; a new stairway at the express platform to alleviate crowding; new and widened transit entrances from the street at the four corners of the block, with improved signage and wayfinding, and ADA-accessible ramps and a new elevator.

That said, we are aware that concerns have been raised, by neighbors, albeit very late in the review process, about the height of this tower, especially with regard to its impact on the Manhattan skyline as viewed from the Hudson.

The Empire State Building owners, who raise these objections, are owed more credence because of their enlightened role in improving our neighborhood: agreeing to an assessment formula for our BID that was disadvantageous to their own financial obligation, spending many volunteer hours helping form that BID, and much more. We also feel that they are arguing against their own financial interests here, because these two buildings will clearly compete for different types of tenants, and the Vornado tower, if built, will undoubtedly push up office rents in our area.

We're sure that we would be more pleased than any other civic group to see this dispute resolved. But we acknowledge that it may be too late in the approval process for dramatic changes in the building plans to be made.



## MANHATTAN COMMUNITY BOARD FIVE

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Vikki Barbero, Chair

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212.465.0907 f-212.465.1628

Wally Rubin, District Manager

### TESTIMONY OF WALLY RUBIN AT THE NEW YORK CITY COUNCIL SUBCOMMITTEE ON ZONING AND FRANCHISES, MONDAY, AUGUST 23<sup>rd</sup>, 2010

Good morning. My name is Wally Rubin and I am the District Manager for Community Board Five. Thank you for the privilege of addressing you today on the topic of 15 Penn Plaza, one of the most important development projects our Board has faced in years.

Community Board Five and its Land Use & Zoning Committee spent considerable time meeting with the applicant and reviewing every available document before we voted 36 to 1 to deny this application.

Obviously, our Board felt very strongly about this application and here are the reasons why:

First, we think that the transportation improvements Vornado has proposed are inadequate. Many of the improvements are ultimately either self-serving or mandated and wholly insufficient for the 474,000 square feet Vornado will receive in exchange. Indeed, as one of our Board members put it, they are akin to Vornado cleaning up its own basement.

Second, Community Board Five is deeply troubled by this applicant's request for a midblock up-zoning, adding yet another 266,000 square feet to a tower that is utterly lacking confirmed details, including building size, height, tenancy, construction timetable or financing plan. The applicant conceded to us that it could be many years – years - before any development scenario might move forward, which entirely demolishes the argument that we should approve this project now as a salve for our current economic troubles.

If the up-zoning were to be granted now, it would remain with the zoning lot permanently, regardless of future development plans or even if the lot is eventually sold. It is ill-advised from a proper planning perspective to approve such an up-zoning without a clear rationale for its request. This up-zoning, just blocks from the Empire State Building, will allow Vornado, or whoever might eventually own this site, to build a building that will change the iconic skyline of New York City forevermore. Such a change must be deeply considered and well thought out, both in terms of its design and, more broadly, its impact on future land use decisions in the immediate area.

Community Board Five is not opposed to development and we recognize that this site is appropriate for a large commercial building. We value the job creation that will result not only during construction but also after the proposed building is complete. But we are also acutely aware of how the area

surrounding Penn Station is poised to undergo enormous development, growth, and change in the coming decade. This means that each individual land use decision will cumulatively contribute to its transformation.

Therefore, we hope that the ladies and gentlemen on this committee and the Council as a whole will join us in asking Vornado to return to the table with their request for a permanent up-zoning when they have a rationale and a final, financed plan in place. Until such time, we urge the Council to join with City Planning, the Moynihan Station Community Advisory Committee and Community Boards Four and Five to begin to outline a Moynihan Station subdistrict zoning plan and a future for this area that is both well-considered and comprehensive.

Thank you for your time.



**BUILDING &  
CONSTRUCTION  
TRADES COUNCIL  
OF GREATER NEW YORK**

**GARY LaBARBERA**  
PRESIDENT

AFFILIATED WITH THE  
BUILDING CONSTRUCTION TRADES DEPARTMENT  
OF WASHINGTON D.C.

BUILDING AND CONSTRUCTION TRADES COUNCIL  
OF NEW YORK STATE

AMERICAN FEDERATION OF LABOR OF CONGRESS  
OF INDUSTRIAL ORGANIZATION

**BUILDING AND CONSTRUCTION TRADES COUNCIL OF GREATER NEW YORK**

**NEW YORK CITY COUNCIL**

**AUGUST, 23 2010**

**15 PENN PLAZA**

The Building and Construction Trades Council of Greater New York, an organization that consists of local affiliates of 15 national and international unions representing 100,000 members in New York City, is pleased to testify in support of the proposed 15 Penn Plaza development project on the current site of the Hotel Pennsylvania. This project would contribute substantially to creating the new commercial office space that is necessary to accommodate the future growth of New York City.

By virtue of its close proximity to Penn Station and the future Moynihan Station, it would do so in a manner that maximizes the economic and environmental efficiencies associated with mass transit access. Furthermore, the development of 15 Penn Plaza would include more than \$100 million of privately funded mass transit improvements at a time when the capital needs of the Metropolitan Transportation Authority's nearly \$10 billion underfunded by available public resources.



For the Building and Construction Trades, 15 Penn Plaza would represent an enormous

investment in private sector job creation at a time when few similarly large private projects are

advancing.

From April 2008-2010, monthly construction employment declined by more than 17,000 jobs in New York City. An optimistic view holds that some recovery may emerge in late 2011 or early 2012, with a fuller recovery to levels approaching peak employment levels of 2008 not occurring until as late as 2013 or 2014. That amounts to 5-6 years of underemployment for members of our industry.

We ask that the New York City Council, as well as all New York City residents, consider who the members of our industry are. 76% of those employed in the construction industry in New York City also reside here in the five boroughs. These individuals increasingly represent the diversity of the five boroughs. 64% of all new members of the unionized sector of the industry who reside in New York City are African American, Hispanic, Asian and other minorities. When they are working, they are strengthening the local communities throughout the five boroughs in which they reside. When they are not working, these local communities suffer.

By way of historical perspective, following the much shallower economic recession of the early

1990s, construction employment declined by approximately 30,000 jobs and did not fully recover until the end of that decade. If we are to avoid a repeat of that scenario, it is critical that, in addition to strong commitments to public building and infrastructure projects, we support major private projects like 15 Penn Plaza.

We therefore urge the New York City Council to support the zoning actions necessary to allow this project to proceed and will be pleased to work with you toward this goal. Thank you for your consideration.



August 19, 2010

The Honorable Christine C. Quinn  
Speaker of the Council  
250 Broadway, 18<sup>th</sup> Floor  
New York, New York 10007

Dear Speaker Quinn:

The New York City School Construction Authority (SCA) has undertaken its site selection process for the following proposed school:

- P.S./I.S. 312, Queens
- Block 21, Lot 30
- Southwest corner of 5th Street and 46th Avenue
- Community School District No. 30
- Queens Community Board No. 2

The project site contains a total of approximately 25,000 square feet (0.57 acres) of lot area located at the southwest corner of 46<sup>th</sup> Avenue and 5<sup>th</sup> Street in Long Island City on the eastern portion of Parcel 4 of the Queens West Development. The site is currently vacant. Under the proposed project, the SCA would acquire the site from the Queens West Development Corporation and construct a new, approximately 578-seat school facility serving students in Community School District No. 30.

The Notice of Filing of the Site Plan was published in the New York Post and the City Record on May 23, 2008. Queens Community Board No. 2 was notified on May 23, 2008 and was asked to hold a public hearing on the proposed Site Plan. Queens Community Board No. 2 held a public hearing on June 23, 2008, but did not submit written comments regarding the proposed site. The City Planning Commission was also notified on May 23, 2008, and recommended in favor of the proposed site.


The SCA has considered all comments received on the proposed project and affirms the Site Plan pursuant to §1731.4 of the Public Authorities Law. In accordance with §1732 of the Public Authorities Law, the SCA is submitting the enclosed Site Plan to the Mayor and the Council for consideration. Enclosed also are copies of the Environmental Assessment and Negative Declaration that have been prepared for this project.



The SCA looks forward to your favorable consideration of the proposed Site Plan. If you have any questions regarding this Site Plan or would like further information, please contact me at (718) 472-8001 at your convenience.

Thank you for your attention to this matter.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.

- c. Hon. Michael R. Bloomberg (w/o encl.)  
Hon. Leroy G. Comrie, Land Use Committee  
Hon. Bradford Lander, Subcommittee on Landmarks,  
Public Siting and Maritime Uses  
Hon. James G. Van Bramer, District Councilmember  
Kathleen Grimm, Deputy Chancellor



August 19, 2010



The Honorable Michael R. Bloomberg  
Mayor  
City Hall  
New York, New York 10007

Dear Mayor Bloomberg:

The New York City School Construction Authority (SCA) has undertaken its site selection process for the following proposed school:

- P.S./I.S. 312, Queens
- Block 21, Lot 30
- Southwest corner of 5th Street and 46th Avenue
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The SCA has considered all comments received on the proposed project and affirms the Site Plan pursuant to §1731.4 of the Public Authorities Law. In accordance with §1732 of the Public Authorities Law, the SCA is submitting the enclosed Site Plan to your Honor and the Council for consideration. Enclosed also are copies of the Environmental Assessment and Negative Declaration that have been prepared for this project.





The SCA looks forward to your favorable consideration of the proposed Site Plan. If you have any questions regarding this Site Plan or would like further information, please contact me at (718) 472-8001 at your convenience.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in cursive script that reads 'Lorraine Grillo'.

Lorraine Grillo  
Acting President & CEO

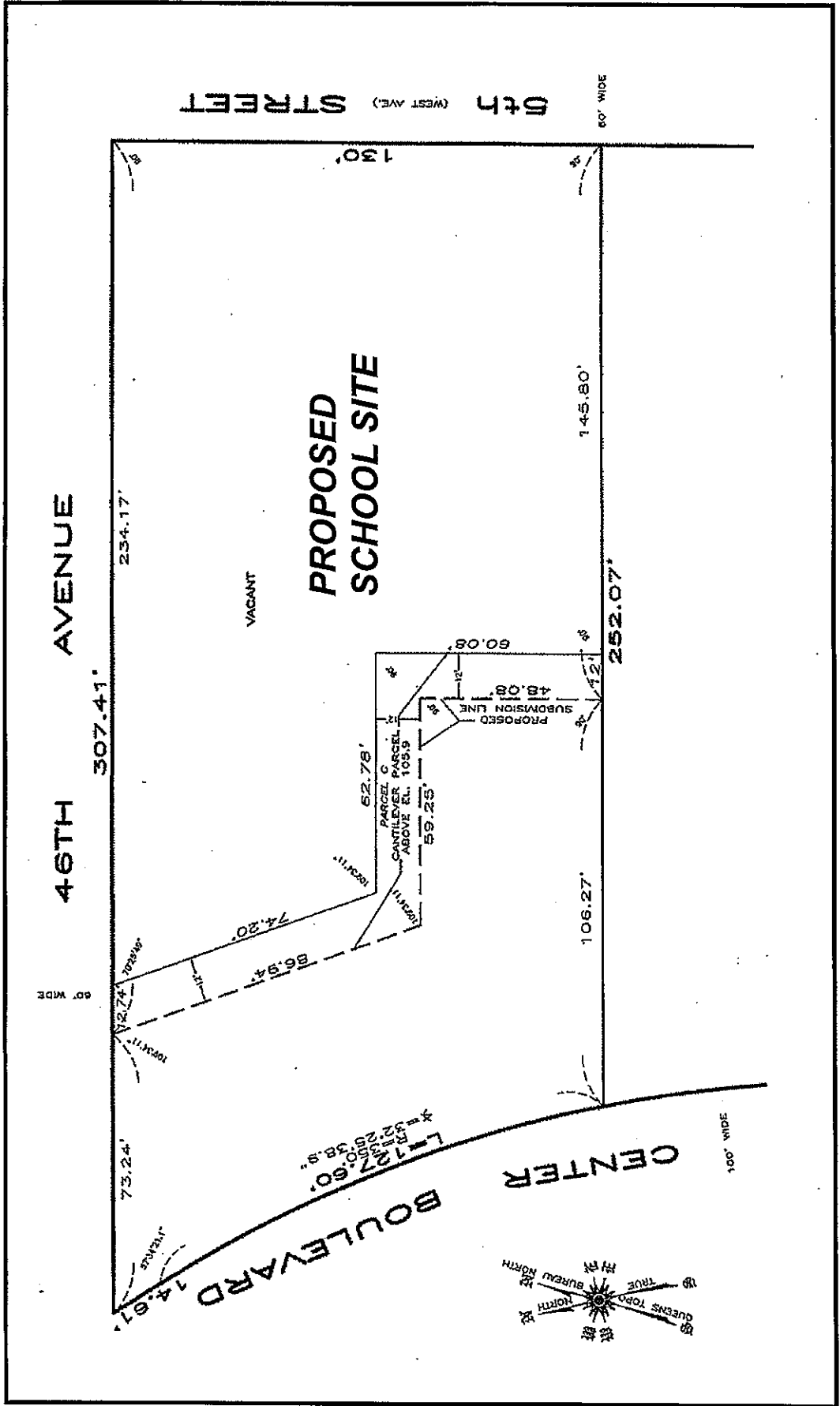
Encl.

- c. Hon. Christine C. Quinn (w/o encl.)  
Hon. Dennis M. Walcott  
Kathleen Grimm, Deputy Chancellor



**SITE PLAN FOR 665-SEAT PRIMARY/INTERMEDIATE SCHOOL, QUEENS**  
Queens Block 21, Lot 30 (Portion)  
Community School District No. 30

§1731: 05/23/08-07/07/08



## NOTICE OF FILING

### NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

Pursuant to §1731 of the New York City School Construction Authority Act, notice has been filed for the proposed site selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30.

The proposed site is located at the southwest corner of 46<sup>th</sup> Avenue and 5<sup>th</sup> Street, and contains a total of approximately 25,000 square feet of lot area (0.57 acres). The site is vacant and is owned by the Queens West Development Corporation. Site plans and a summary thereof for the proposed action are available at:

New York City School Construction Authority  
30-30 Thomson Avenue  
Long Island City, New York 11101

Attention: Ross J. Holden

Comments on the proposed actions are to be sent to the New York City School Construction Authority at the above address and will be accepted until July 7, 2008.

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For publication in the New York Post (5 Borough Edition) and the City Record on Friday, May 23, 2008.

**ALTERNATE SITES ANALYSES**  
**NEW, APPROXIMATELY 665-SEAT**  
**PRIMARY/INTERMEDIATE SCHOOL FACILITY**  
**Block 21, Lot 30 (Portion)**  
**School District No. 30, Queens**

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The General Project Plan for Queens West, within whose boundaries the proposed site is located, had previously contemplated the development of Site 4 (which consists of the northern portion of the block bounded by Center Boulevard to the west, 5<sup>th</sup> Street to the east, and 46<sup>th</sup> Avenue to the north) with a structure containing a public elementary school in the base of a residential tower.

Since that time, the General Project Plan has been amended to divide Site 4 into separate portions that would contain a standalone residential structure and standalone public school facility. The proposed site for the school consists of the eastern portion of Site 4.

Because the site is located in an area of need for additional primary and intermediate school seats in District No. 30, has been planned for public school development in the Queens West General Project Plan, and is owned by the Queens West Development Corporation, alternate sites are not being considered.

conversion  
cc: Kenneth  
Ross  
Lorraine  
lv



CITY PLANNING COMMISSION  
CITY OF NEW YORK  
OFFICE OF THE CHAIR

July 7, 2008

Sharon L. Greenberger  
President and CEO  
New York City School Construction Authority  
30-30 Thomson Avenue  
Long Island City, NY 11101-3045

Dear Ms. Greenberger:

This is in response to your letter of May 23, 2008 in which notice was given to the City Planning Commission of the proposed site selection of Block 21, Lot 30 (portion) in the borough of Queens (Community District 2) for the construction of a 655-seat Elementary/Intermediate school for Community School District 30.

In view of the need for additional elementary and intermediate school capacity in CSD 30, the City Planning Commission recommends in favor of the proposed site for a new school facility.

Very sincerely,

Amanda M. Burden

- c: Ross J. Holden
- Kathleen Grimm
- Betty Mackintosh
- John Young

Amanda M. Burden, AICP, Chair  
22 Reade Street, New York, NY 10007-1216  
(212) 720-3200 FAX (212) 720-3219  
nyc.gov/planning



NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY

May 23, 2008



Kathleen Grimm  
Deputy Chancellor for Finance and Administration  
NYC Department of Education  
52 Chambers Street  
New York, New York 10007

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Kathleen:

Pursuant to §1731 of the New York City School Construction Authority Act, notice is hereby given of the proposed site selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

By statute, the SCA is required to complete the site selection process before starting construction of new schools. This process begins with formal notifications to the Department of Education, City Planning Commission, and the affected Community Board. The notification initiates a thirty (30) day period within which the Community Board is required to hold a public hearing, after which it has an additional fifteen (15) days to submit written comments. Following completion of this 45-day period, the SCA can submit the proposed site for approval by the City Council and Mayor. Only after the City Council and Mayor approve the site can the SCA acquire the property.

Attached are copies of the Notice of Filing, the Site Plan, and the Alternate Sites Analyses for the proposed action. The SCA will accept public comments on this proposed action until July 7, 2008. All comments will be taken into consideration in the SCA's final decision regarding this matter. If you require any additional information, please do not hesitate to contact Ross at (718) 472-8220.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon L. Greenberger". The signature is fluid and cursive.

Sharon L. Greenberger  
President & CEO

NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY

May 23, 2008



The Honorable Christine C. Quinn  
Speaker of the City Council  
City Hall  
New York, New York 10007

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Speaker Quinn:

Attached please find copies of the site selection notification for the selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

This notification was sent to Queens Community Board No. 2 and the City Planning Commission. The Notice of Filing for this site selection will be published in the New York Post and City Record on May 23, 2008, and the SCA will continue to accept public comments until July 7, 2008.

I have also attached the Site Plan and Alternate Sites Analyses for your review. If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sharon L. Greenberger', written in a cursive style.

Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration  
Hon. Melinda Katz, Land Use Committee  
Hon. Jessica Lappin, Subcommittee on Landmarks, Public Siting & Maritime Uses  
Hon. Eric Gioia, District Councilmember  
Gail Benjamin, Director, Land Use Division  
Alonzo Carr, Land Use Division

30 - 30 Thomson Avenue  
Long Island City, NY 11101-3045  
TEL 718 472-8000  
FAX 718 472-8840  
Web Site: [www.nycsca.org](http://www.nycsca.org)

NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY



May 23, 2008

Amanda M. Burden, AICP  
Chairperson  
City Planning Commission  
22 Reade Street  
New York, New York 10007

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Ms. Burden:

Pursuant to §1731 of the New York City School Construction Authority Act, notice is hereby given of the proposed site selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

Attached please find copies of the Notice of Filing, Site Plan, and Alternate Sites Analyses for this proposed action. The Authority will accept public comments on this Site Plan until July 7, 2008. All comments will be taken into consideration in the Authority's final decision regarding this matter.

If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon L. Greenberger". The signature is fluid and cursive.

Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration  
Sarah Whitham, NYC Department of City Planning



NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY

May 23, 2008



Mr. Joseph Conley  
Chairperson  
Queens Community Board No. 5  
43-22 50<sup>th</sup> Street, 2<sup>nd</sup> Floor  
Woodside, New York 11377

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Mr. Conley:

Pursuant to §1731 of the New York City School Construction Authority Act, notice is hereby given of the proposed site selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

Section 1731.2 states that within thirty (30) days of this notice, a public hearing with sufficient public notice shall be held by each affected community board on any or all aspects of the Site Plan. You may request the attendance of representatives of the Authority or Department of Education at this hearing.

In addition, §1731.3 states that within forty-five (45) days of this notice, each affected community board shall prepare and submit to the Authority written comments on the Site Plan. Attached please find copies of the Notice of Filing, Site Plan, and the Alternate Sites Analyses for this proposed action. The Authority will accept public comments on this proposed Site Plan until July 7, 2008. All comments will be taken into consideration in the Authority's final decision regarding this matter.

If you require any additional information, please contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sharon L. Greenberger".

Sharon L. Greenberger  
President & CEO

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration  
Debra Markell-Kleinert, District Manager, Queens Community District No. 2

30 - 30 Thomson Avenue  
Long Island City, NY 11101-3045  
TEL 718 472-8000  
FAX 718 472-8840  
Web Site: [www.nycsca.org](http://www.nycsca.org)



May 23, 2008

The Honorable Helen Marshall  
President, Borough of Queens  
120-55 Queens Boulevard  
Kew Gardens, New York 11424

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Borough President Marshall:

Attached please find copies of the site selection notification for the selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

This notification was sent to Queens Community Board No. 2 and the City Planning Commission. The Notice of Filing for this site selection will be published in the New York Post and City Record on May 23, 2008, and the SCA will continue to accept public comments until July 7, 2008.

I have also attached the Site Plan and Alternate Sites Analyses for your review. If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration

NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY



May 23, 2008

The Honorable Catherine Nolan  
New York State Assembly, 37<sup>th</sup> District  
District Office  
45-25 47<sup>th</sup> Street  
Woodside, New York 11377

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Assemblywoman Nolan:

Attached please find copies of the site selection notification for the selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

This notification was sent to Queens Community Board No. 2 and the City Planning Commission. The Notice of Filing for this site selection will be published in the New York Post and City Record on May 23, 2008, and the SCA will continue to accept public comments until July 7, 2008.

I have also attached the Site Plan and Alternate Sites Analyses for your review. If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration

NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY



May 23, 2008

The Honorable George Onorato  
New York State Senate, 12<sup>th</sup> District  
District Office  
28-11 Astoria Boulevard  
Long Island City, New York 11102

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear State Senator Onorato:

Attached please find copies of the site selection notification for the selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

This notification was sent to Queens Community Board No. 2 and the City Planning Commission. The Notice of Filing for this site selection will be published in the New York Post and City Record on May 23, 2008, and the SCA will continue to accept public comments until July 7, 2008.

I have also attached the Site Plan and Alternate Sites Analyses for your review. If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration

NEW YORK CITY SCHOOL  
CONSTRUCTION AUTHORITY



May 23, 2008

Ms. Jeannie Basini  
President  
Community Education Council No. 30  
28-11 Queens Plaza North, Room No. 503A  
Long Island City, New York 11101

**Re: New 665-Seat Primary/Intermediate School Facility, Queens  
Community School District No. 30**

Dear Ms. Basini:

Attached please find copies of the site selection notification for the selection of Block 21, Lot 30 (portion), located in the Borough of Queens, for the construction of a new, approximately 665-seat primary/intermediate school facility in Community School District No. 30. The site consists of approximately 25,000 square feet of vacant land owned by the Queens West Development Corporation.

This notification was sent to Queens Community Board No. 2 and the City Planning Commission. We have requested that Queens Community Board No. 2 hold a public hearing on the proposed site selection within thirty (30) days of this notice, and the SCA will continue to accept public comments until July 7, 2008.

I have also attached the Site Plan and Alternate Sites Analyses for your review. If you require any additional information, please do not hesitate to contact Ross J. Holden, Vice President and General Counsel, at (718) 472-8220.

Sincerely,

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Sharon L. Greenberger  
President & CEO

Attachments

c: Kathleen Grimm, Deputy Chancellor for Finance & Administration

30 - 30 Thomson Avenue  
Long Island City, NY 11101-3045  
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Web Site: [www.nycsca.org](http://www.nycsca.org)



**STATE ENVIRONMENTAL QUALITY REVIEW  
NEGATIVE DECLARATION  
NOTICE OF DETERMINATION OF NON-SIGNIFICANCE**

**DATE:** August 18, 2010  
**SEQR PROJECT NO.:** 11-001  
**LEAD AGENCY:** New York City School Construction Authority  
30-30 Thomson Avenue  
Long Island City, New York 11101-3045

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law. Pursuant to §1730.2 of the Public Authorities Law, the New York City School Construction Authority (SCA) is SEQR Lead Agency.

The SCA, as Lead Agency, has determined that the proposed action described below will not have a significant effect on the quality of the environment, and a Draft Environmental Impact Statement (DEIS) will not be prepared.

**NAME OF ACTION:** P.S./I.S. 312, Queens  
New, Approximately 578-Seat  
Primary/Intermediate School Facility  
**LOCATION:** 46-00 5<sup>th</sup> Street  
Queens, New York  
Tax Block 21, Tax Lot 30  
**SEQR STATUS:** Unlisted

**NEGATIVE DECLARATION**

**Description of Action:**

On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes the site selection, acquisition, acceptance of construction funding, and construction of a new, approximately 578-seat primary/intermediate school facility in Long Island City, Queens. The proposed facility would serve students in pre-kindergarten through eighth grade. Acquisition, design and construction of this proposed facility would be conducted pursuant to DOE's Capital Plan for Fiscal Years 2010-2014.

The project site consists of approximately 25,000 square feet of vacant land located at the southwest corner of 46th Avenue and 5th Street (Block 21, Lot 30). The project site consists of a portion of the parcel identified as Parcel 4 in the



P.S./I.S. 312, Queens  
SEQR Project No. 11-001  
Negative Declaration  
August 18, 2010



Queens West Development General Project Plan (GPP). The GPP governs future development within its boundaries, setting forth specific controls for each parcel, including use, maximum bulk, massing (maximum height and required setbacks), and view corridor controls, and calls for the development of 343,000 square feet of residential use and a 100,000 square-foot "community facility" on Parcel 4. The site is currently owned by the Queens West Development Corporation (QWDC), which is a subsidiary of the Empire State Development Corporation (ESDC).

The purpose of the proposed project is to provide additional public school capacity at the primary and intermediate levels in Community School District No. 30. According to the Capital Plan, a total of 3,701 additional seats at the primary and intermediate levels are required in District No. 30 in order to address existing overcrowding and forecast changes in student enrollments. P.S. 78 is the only primary school operating in close proximity to the project site; it is located at 48th Avenue and Center Boulevard, approximately four blocks southwest of the project site, and operated at 111 percent of its facility's target capacity during the 2008-2009 school year. There are currently no intermediate schools located in close proximity to the project site. The closest intermediate school to the project site, I.S. 235, is located at 30-14 30<sup>th</sup> Street, which is approximately two miles away. The proposed project is expected to accommodate residents in newly-constructed and planned residential buildings in the area.

Under the proposed project, the SCA would acquire the site and construct a new primary/intermediate school facility on the site. The proposed new facility would contain approximately 93,846 gross square feet consisting of general education classrooms, specialized instruction rooms, gym, assembly space, library, cafeteria, kitchen, and administrative spaces. The site would also be developed with an approximately 3,000-square foot at-grade play area on 5th Street, adjoining the recently constructed Queens West Sportsfield. Transfer of the site from QWDC to the SCA is expected to occur in 2010 with construction to commence shortly thereafter. Student occupancy of the facility is currently anticipated to begin in 2013.

#### **Reasons Supporting This Determination:**

A comprehensive Environmental Assessment Form (EAF) and Supplemental Environmental Studies for this action were completed and issued on August 18, 2010. Based upon those documents (which are appended hereto), the SCA has determined that the proposed project will have no significant adverse impacts on environmental conditions related to the following areas: land use, zoning and public policy; community facilities and services; historic and cultural resources; urban design and visual resources; shadows; transportation; air quality; noise; and, soil and groundwater conditions.



P.S./I.S. 312, Queens  
SEQR Project No. 11-001  
Negative Declaration  
August 18, 2010



Soil And Groundwater

The proposed site is located within the larger Queens West Development, which has been the subject of extensive soil and groundwater investigations and environmental remediation activities. The key findings related to the analyses of the Soil and Groundwater Conditions in the Environmental Assessment with respect to the proposed school are discussed in greater detail below.

The proposed project would not result in significant adverse impacts from contaminated media and building materials, as significant remediation work will be completed as per New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) standards under the State's Brownfield Cleanup Program (Brownfield Cleanup Site No. C241096). The evaluation of the site's soil and groundwater conditions included review of a Phase I Environmental Site Assessment (ESA) dated July 3, 2008; a Remedial Action Work Plan (RAWP) dated August 2006; a Preliminary Geotechnical Engineering Study dated September 15, 2008; and a Remedial Investigation Report (RIR) dated January 2008. In addition, a draft Final Engineering Report (FER) and draft Site Management Plan (SMP) were prepared by TRC in March 2010 and submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) for approval. Prior to the start of work, the FER and SMP will be approved by the NYSDEC and NYSDOH.

Remediation was performed at the project site by TRC in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) between March and December 2008 and between November and December 2009. Remedial activities included excavation, off-site transportation and disposal of gross contamination and soil with contaminant levels exceeding the numeric Site-Specific Soil Cleanup Objectives ("SSSCOs") approved by the NYSDEC and NYSDOH. Subsurface structures including piping and USTs were also removed. At the conclusion of the remediation, post-excavation soil, soil gas and groundwater sampling were performed and the project site was backfilled with a minimum of two feet of imported clean fill. A Demarcation Layer was installed between the clean fill layer and residual soil.

The following activities were performed to achieve the objective of remediating the project site for future use as a community facility: site preparation including pre-excavation sampling; erection of negative-pressure enclosure (tents) with air handling and treatment equipment to control odors and vapors during excavation; installation of perimeter sheeting along 5th Street, facilitating excavation and minimizing the potential for off-site migration of groundwater and soil vapor, and preventing potential recontamination from off-site sources; installation of dewatering and water-treatment equipment for deep excavations; implementation of a site-specific Health and Safety Plan (HASP) to protect on-site workers and the surrounding community; excavation and off-site transportation and disposal





P.S./I.S. 312, Queens  
SEQR Project No. 11-001  
Negative Declaration  
August 18, 2010



of Gross Contamination; excavation and off-site transportation and disposal of soil with contaminant levels exceeding the numeric Site-Specific Soil Cleanup Objectives ("SSCOs"); removal of subsurface structures including piping and USTs; post-excavation soil, soil gas and groundwater sampling; backfilling and restoration with reusable material and/or Clean Fill or recycled concrete aggregate from other portions of the QWD site; installation of a Demarcation Layer between Clean Fill and Residual Soil; placement and compaction of a Barrier Layer consisting of a minimum two-foot thick layer of imported Clean Fill; and surveying and mapping of: the horizontal and vertical extent of excavations; the Demarcation Layer; post-excavation soil sampling locations; long term monitoring wells; sheeting; and final grading.

During construction, the SCA's contractor would properly manage excavated soil, dewatering, air quality control measures, and community air monitoring in accordance with the Site Management Plan (and all applicable local, State and Federal regulations). To minimize the potential for worker exposure, the HASP provisions of the SMP would be implemented during construction activities. The HASP would establish procedures for the protection of on-site workers and the community, and require soil gas, dust and odor suppression measures, as well as community air monitoring. Since residual contaminated soil, groundwater, and soil vapor would exist beneath the project site following completion of construction, Engineering and Institutional Controls ("ECs/ICs") would be implemented to prevent potential exposure to these impacted media. Long-term management of ECs/ICs and of residual contamination would be performed under the SMP.

The SCA would implement the following ECs at the project site: replacement of a Barrier Layer consisting of a minimum two-foot thick imported environmentally clean fill layer preventing contact with residual soil, and re-installation of a demarcation layer between residual soil and environmentally clean fill; the building would be constructed with a sub-slab vapor barrier and active sub-slab depressurization system (SSDS) to prevent intrusion of soil vapor; and the site would be covered with the building, pavement, and landscaping ("Final Site Development Cover") in accordance with the SMP, minimizing the potential for contact with residual soil.

The ICs would consist of an environmental easement placed on the project site as a precondition for approval of the SMP. The environmental easement would require implementation of all SMP activities; prohibit the use of site groundwater; prohibit the use of the property as a farm or vegetable garden; prevent the use of the property for a less restrictive use; and require groundwater monitoring to assess performance of the remedy.



P.S./I.S. 312, Queens  
SEQR Project No. 11-001  
Negative Declaration  
August 18, 2010



With these measures in place, no significant adverse impacts due to the presence of hazardous materials would be expected to occur either during or following construction at the site.

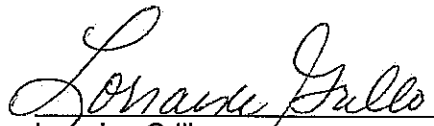
The proposed project would have the beneficial impact of providing approximately 578 additional seats of permanent public school capacity at the primary and intermediate levels in this section of District No. 30. The additional capacity would help address the current overutilization of the existing P.S. 78 facility and also the anticipated growth in local student population and enrollments as recently completed and planned residential developments in the area are occupied.

For further information contact:

Contact: Ross J. Holden  
Vice President and General Counsel

Address: New York City School Construction Authority  
30-30 Thomson Avenue  
Long Island City, New York 11101-3045

Telephone: (718) 472-8220

  
\_\_\_\_\_  
Lorraine Grillo  
Acting President and CEO

August 18, 2010  
Date



August 18, 2010



Kathleen Grimm  
Deputy Chancellor for Operations  
New York City Department of Education  
52 Chambers Street, Room No. 320  
New York, New York 10007

**Re: P.S./I.S. 312, Queens (New Building)  
SEQR Negative Declaration**

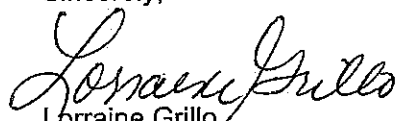
Dear Kathleen:

Enclosed please find copies of the Environmental Assessment Form and Negative Declaration issued by the New York City School Construction Authority (SCA) for the proposed development of P.S./I.S. 312 in Community School District 30. I have also included the document distribution list and copies of the cover letters to the Mayor, City Council Speaker, and Queens Borough President for your reference.

As required by Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), the SCA, as SEQR Lead Agency, has evaluated the environmental effects of this project. The SCA has determined that the proposed project will not have a significant adverse impact on the environment, and a Draft Environmental Impact Statement (DEIS) will not be prepared.

Please do not hesitate to contact Ross at (718) 472-8220 if you should require any additional information about this project or the environmental review process in general.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.



August 18, 2010

The Honorable Christine C. Quinn  
Speaker of the Council  
City Hall  
New York, New York 10007



Re: **P.S./I.S. 312, Queens (New Building)  
SEQR Negative Declaration**


Dear Speaker Quinn:

Enclosed please find copies of the Environmental Assessment Form and Negative Declaration issued by the New York City School Construction Authority (SCA) for the proposed development of P.S./I.S. 312 in Community School District 30 in the Borough of Queens.

Pursuant to the Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), the SCA, as SEQR Lead Agency, has reviewed the proposed project. The SCA has determined that the proposed project will not have a significant adverse impact on the environment.

Please contact Ross J. Holden, the SCA's Vice President and General Counsel, at (718) 472-8220 should you require any additional information.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.

c: Hon. Leroy G. Comrie, Jr., Land Use Committee  
Hon. Bradford Lander, Subcommittee on Landmarks,  
Public Siting & Maritime Uses  
Hon. James G. Van Bramer, District Councilmember  
Gail Benjamin, Director, City Council Land Use Division  
Alonzo Carr, City Council Land Use Division  
Kathleen Grimm, Deputy Chancellor



August 18, 2010



The Honorable Michael R. Bloomberg  
Mayor  
City Hall  
New York, New York 10007

Re: **P.S./I.S. 312, Queens (New Building)**  
**SEQR Negative Declaration**

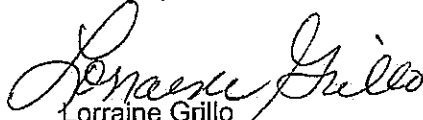
Dear Mayor Bloomberg:

Enclosed please find copies of the Environmental Assessment Form and Negative Declaration issued by the New York City School Construction Authority (SCA) for the proposed development of P.S./I.S. 312 in Community School District 30 in the Borough of Queens.

Pursuant to the Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), the SCA, as SEQR Lead Agency, has reviewed the proposed project. The SCA has determined that the proposed project will not have a significant adverse impact on the environment.

Please contact Ross J. Holden, the SCA's Vice President and General Counsel, at (718) 472-8220 should you require any additional information.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.

c: Hon. Dennis M. Walcott  
Kathleen Grimm, Deputy Chancellor



August 18, 2010



The Honorable Helen Marshall  
President, Borough of Queens  
120-55 Queens Boulevard  
Kew Gardens, New York 11424

Re: **P.S./I.S. 312, Queens (New Building)**  
**SEQR Negative Declaration**


Dear Borough President Marshall:

Enclosed please find copies of the Environmental Assessment Form and Negative Declaration issued by the New York City School Construction Authority (SCA) for the proposed development of P.S./I.S. 312 in Community School District 30 in the Borough of Queens.

Pursuant to the Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), the SCA, as SEQR Lead Agency, has reviewed the proposed project. The SCA has determined that the proposed project will not have a significant adverse impact on the environment.

Please contact Ross J. Holden, the SCA's Vice President and General Counsel, at (718) 472-8220 should you require any additional information.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.

c: Kathleen Grimm, Deputy Chancellor



August 18, 2010



Mr. Joseph Conley  
Chairperson  
Queens Community Board No. 2  
43-22 50th Street  
Woodside, New York 11377

**Re: P.S./I.S. 312, Queens (New Building)  
SEQR Negative Declaration**

Dear Mr. Conley:

Enclosed please find copies of the Environmental Assessment Form and Negative Declaration issued by the New York City School Construction Authority (SCA) for the proposed development of P.S./I.S. 312 in Community School District 30 in the Borough of Queens.

Pursuant to the Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act), the SCA, as SEQR Lead Agency, has reviewed the proposed project. The SCA has determined that the proposed project will not have a significant adverse impact on the environment.

Please contact Ross J. Holden, the SCA's Vice President and General Counsel, at (718) 472-8220 should you require any additional information.

Sincerely,

  
Lorraine Grillo  
Acting President & CEO

Encl.

c: Ms. Debra Markell-Kleinert, Queens Community District No. 2



## MEMORANDUM



**TO:** Involved and Interested Agencies

**FROM:** New York City School Construction Authority

**RE:** **P.S./I.S. 312, Queens  
New, Approximately 578-Seat  
Primary/Intermediate School Facility  
SEQR Negative Declaration**

**DATE:** August 19, 2010

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Please find enclosed the Environmental Assessment Form (EAF) and Technical Memorandum for the above-referenced project as completed and issued pursuant to Article 8 of the Environmental Conservation Law and 6 NYCRR Part 617. The proposed project is a SEQR Unlisted action. In accordance with Public Authorities Law §1730.2, the New York City School Construction Authority (SCA) is SEQR Lead Agency.

On behalf of the New York City Department of Education, The New York City School Construction Authority (SCA) proposes the site selection, acquisition, acceptance of construction funding, and construction of a new Primary/Intermediate School (P.S./I.S.) facility with the capacity of approximately 578 seats in the Long Island City section of Queens. The proposed project would be conducted pursuant to DOE's Five-Year Capital Plan for Fiscal Years 2010-2014.

The SCA has determined that the proposed action will not have a significant adverse impact on the environment. Accordingly, also enclosed is the Negative Declaration which has been issued for this project.

Any questions or comments concerning the proposed project should be directed to:

Ross J. Holden  
Vice President and General Counsel  
New York City School Construction Authority  
30-30 Thomson Avenue  
Long Island City, New York 11101  
  
Telephone: (718) 472-8220



**INVOLVED AND INTERESTED AGENCIES**

Ruth L. Pierpont, Director  
Historic Preservation Field Services Bureau  
NYSOPRHP  
Peebles Island, P.O. Box 189  
Waterford, New York 12188-0189

John K. Donohue, Esq.  
Deputy Chief Commanding Officer  
Office of Management Analysis and Planning  
New York City Police Department  
One Police Plaza, Room 1403  
New York, New York 10038

Angela Licata  
Environmental Planning & Assessment  
NYC Dept. of Environmental Protection  
59-17 Junction Boulevard  
Corona, New York 11368

Robert Kulikowski  
Director  
NYC Office of Environmental Coordination  
253 Broadway, 14<sup>th</sup> Floor  
New York, New York 10007

Amanda M. Burden, AICP  
Chairperson  
City Planning Commission  
22 Reade Street  
New York, New York 10007

Naim Rasheed  
Director, CEQR/Project Analysis  
NYC Department of Transportation  
55 Water Street, 6th Floor  
New York, NY 10041

Maura McCarthy  
Queens Borough Commissioner  
NYC Department of Transportation  
120-55 Queens Boulevard, 2nd Floor  
Kew Gardens, New York 11424

Ben Eliya  
Chief, School Safety Engineering  
NYC Department of Transportation  
28-11 Queens Plaza North  
Long Island City, New York 11101

John Cryan  
Regional Permit Director  
NYS Dept. of Environmental Conservation  
47-40 21<sup>st</sup> Street  
Long Island City, New York 11101

**TESTIMONY OF THE REAL ESTATE BOARD OF NEW YORK, INC. BEFORE THE CITY COUNCIL SUBCOMMITTEE ON LANDMARKS, PUBLIC SITING & MARITIME USES IN OPPOSITION TO THE SOHO HISTORIC DISTRICT EXTENSION.**

August 23, 2010

The Real Estate Board of New York, Inc. (REBNY) is a broadly based trade association of almost 12,000 owners, developers, brokers and real estate professionals active throughout New York City. We are opposed to the **extension of the SoHo-Cast Iron Historic District**. We believe that, collectively, these properties fail to meet the standards of the Landmarks Law and do not merit this designation. Therefore we are calling on the City Council to review the record and disapprove this designation. At a minimum, the Council must take a hard look at the extension boundaries and remove those properties that do not meaningfully contribute to preservation.

The boundaries of the original district were set by city government after thorough research by preservationists and input given at public hearings. Those boundaries represent a consensus on what buildings belong in the district. The existing district preserves those buildings that best reflect the architecturally and historically significant features of SoHo's built environment. The Landmarks Law calls for a historic district to "constitute a distinct section of the City." The relative consistency of many of buildings in the original district in terms of time period and style might lead one to see it as a distinct section of the City. The Landmarks Preservation Commission considered the question of boundaries during the original designation process. A smaller district was heard at public hearing in June and July of 1970 and a larger boundary was heard in July of 1970 with the Commission deciding on the larger boundary in 1973. Their action protected about 500 buildings on 25 city blocks. By marking this distinct section of the City, the Landmarks Preservation Commission made a judgment as to what blocks belonged in the District. Nothing has changed in the last 37 years that suggest that additional blocks need to be added.

We are concerned that a number of the buildings now included are not of the same quality, are not of the same time period and have undergone significant alterations. They are not appropriate for inclusion in the historic district. While there are some noteworthy buildings in the extension, these few buildings do nothing to enhance the character of the district. More problematic, these boundaries take in many additional properties that are of lower quality and significantly dilute the quality of the District and the integrity of the Landmarks law. According to the designation report, at least a quarter of the buildings have undergone significant alterations, almost a fifth have been described as "style: none" and a dozen were built after 1970. A number of property owners spoke in opposition at the Landmarks Commission hearing and gave specific testimony as to lack of historic interest and the major alterations that had taken place. During the Landmarks Commission vote, one Commissioner even stated that some of these buildings were not what the Commission should be focusing on and that she feared that they were on a slippery slope towards using designation as a zoning tool.

We are submitting photographs of some of the buildings that undermine the character of the extension of the district. A significant percentage of the extension falls

into this questionable category. We wish to call to the Council's attention the northern end of Block 510 which is bounded by Houston Street, Lafayette Street, Jersey St and Crosby Street. These properties are on the perimeter of the extension area and lack any architecturally or historically significant features that merit designation and bear no resemblance to the properties in the existing district. This block should have been omitted from the extension of the district. The Council should remove it now, especially since it's on the edge of the district and its removal would not impact any important historic fabric. Here is a brief description of Block 510

- *137 Crosby Street* is a one-story gas station built in 1939, well after the period of development in the 19<sup>th</sup> century that is preserved in the existing SoHo District.
- *135 Crosby Street* is also a one story building that appears to be the remaining portion of a six-story building constructed before 1864. None of the prominent architectural elements from the original building, such as two recessed door openings and two plate glass windows both seen in a 1939 tax photo, exist today. It is currently an auto-repair shop.
- *133 Crosby Street* is also a one-story structure that was originally built in 1886 as a five story building. The building underwent a series of alterations in the first part of the twentieth century and it appears that little of the original facades remain. It is occupied by Puck Fair.
- *131 Crosby Street* is a seven story building whose architect is unknown. There were fires in the building in 1919 and 1924 and according to news accounts the upper six floors were completely burned. As a result it is likely that the building was substantially altered. In addition, based on historic tax photos, distinctive features on the façade have been removed.

However, this is not the only block that does not belong. *The Canal Street frontage from Howard Street almost to Lafayette Street* has several undistinguished taxpayers and other commercial buildings. The blockfronts along *Lafayette Street* also have a parking lot, plain one story commercial buildings, and standard 5-story buildings with storefronts on the ground floor. The blockfronts on the west side of West Broadway also do not stand out; many of the buildings having no special style. Examples include *448 West Broadway, 153 Prince St., 480 and 482 West Broadway*. These buildings could be found in many neighborhoods in Manhattan and in no way exemplify the distinct recognizable features of SoHo.

In addition, while the report from the City Planning Commission states that the designation does not conflict with any ongoing or anticipated planning efforts for the neighborhood, it seems obvious that by preserving vacant lots and soft sites the designation of this extension will limit any plans for the area, should SoHo come up for a neighborhood planning study sometime in the future. Even under existing zoning, the designation would preserve underbuilt, non-historic buildings, thus interfering with the planning decisions previously made for the area. This is unacceptable when a number of the buildings are clearly lacking in historic quality. It is not in the best interests of the City to restrict non-landmark quality properties in this way and we urge the City Council to exercise its authority based on the inadequate record assembled and disapprove all or most of this designation.

REBNY testimony to the NYC City Council  
August 23, 2010

## PHOTO ATTACHMENTS

Examples of properties in the SoHo-Cast Iron Historic District Extension that do not belong:

- 63 Spring and 236 Lafayette Sts.
- 137 Crosby
- 158 Grand Street
- 188 Lafayette St.
- 238 Lafayette St.
- 135 and 133 and 131 Crosby St.
- SoHo O Park, Prince and Lafayette Sts
- Parking Lot, Lafayette bet. Prince and Spring Sts.
- Vacant Lot, Lafayette and Grand Sts.
- Canal Street and Howard Street
- Canal Street between Howard and Lafayette Sts.
- 151-157 Prince Street
- 480-482 West Broadway



63 Spring and 236 Lafayette



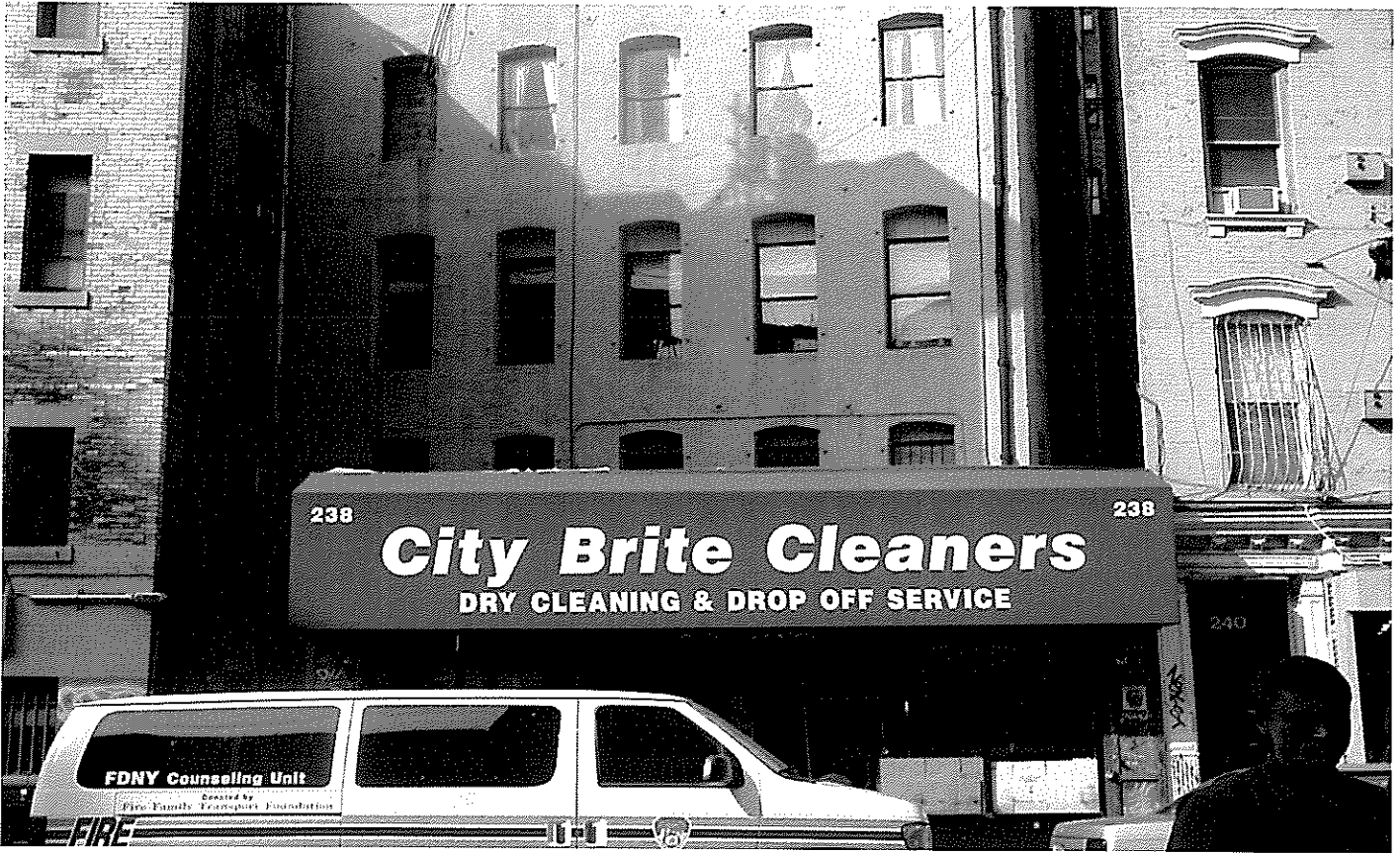
137 Crosby St BP Gas Station



158 Grand St.



188 Lafayette St.



238 Lafayette St.

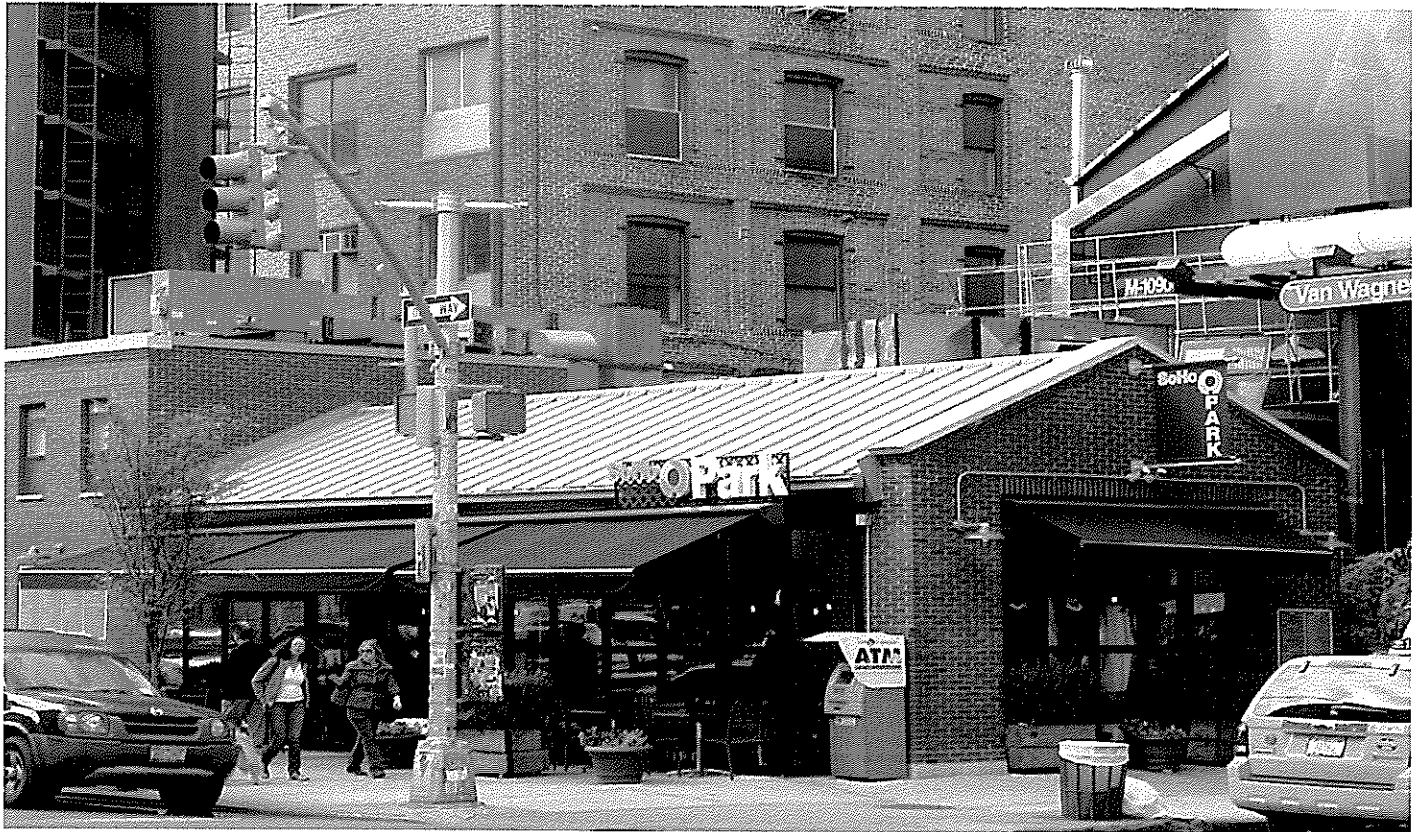


135 Crosby St. (300 Lafayette St.) Houston Car Care

133 Crosby St. Puck Fair



Houston Car Care, 135 Crosby St./300 Lafayette St.



SoHo O-Park, Prince and Lafayette Streets





**Parking Lot, Lafayette St. Bet. Prince and Spring Sts.**



**Vacant Lot, Lafayette St. and Grand Street**



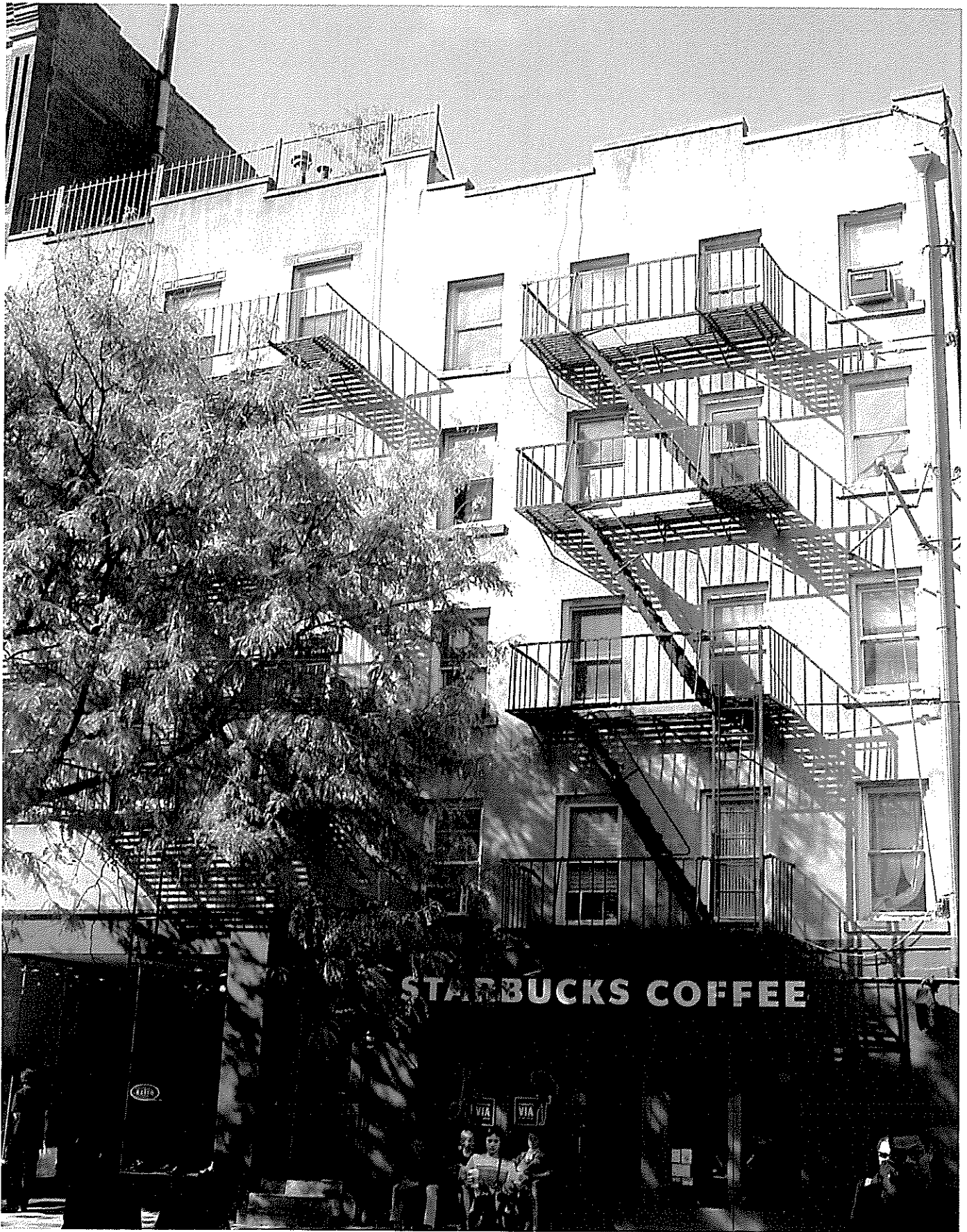
**Canal Street and Howard St.**



**Canal Street bet. Howard and almost to Lafayette St.**



151-157 Prince Street



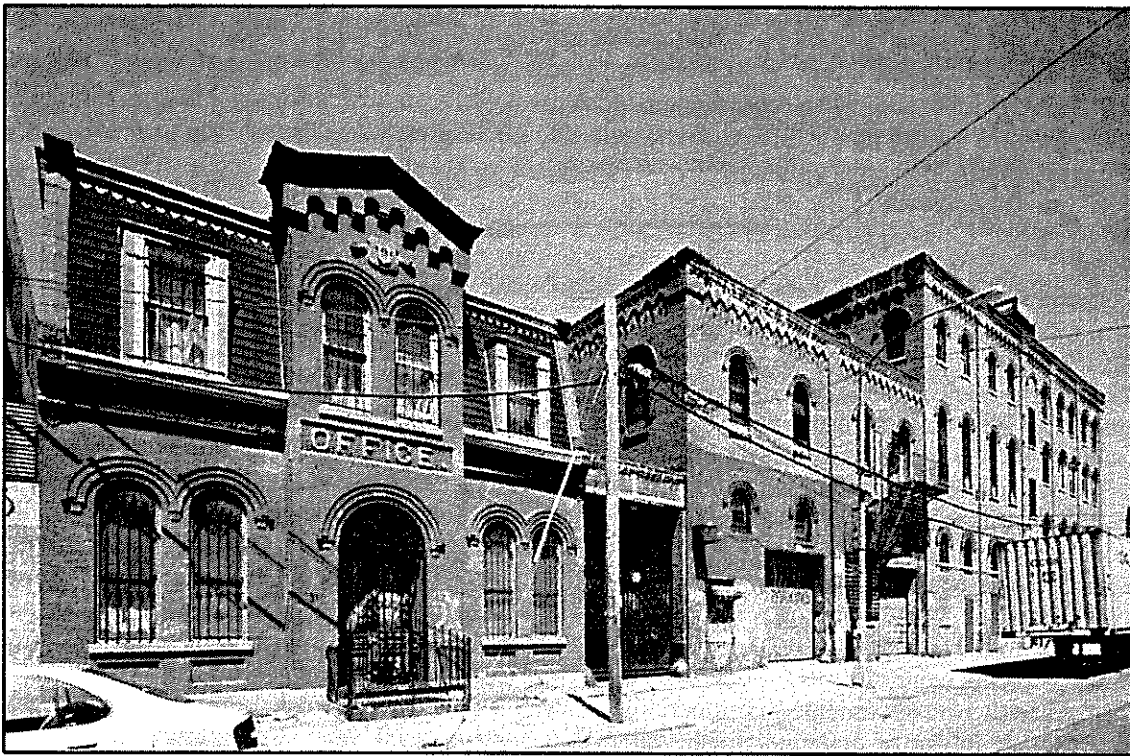
480-482 West Broadway

Landmarks Preservation Commission  
May 11, 2010, Designation List 429  
LP-2280

**WILLIAM ULMER BREWERY, Office, 31 Belvidere Street, Main Brew House and Addition, 71-83 Beaver Street (aka 45-47 Belvidere Street), Engine and Machine House, 35-43 Belvidere Street, Stable and Storage Building, 26-28 Locust Street, Brooklyn**  
Built: Office, 1885, architect, Theobald Engelhardt; Main Brew House and Addition, 1872, c.1881; Engine and Machine House, 1885, architect, Theobald Engelhardt; Stable and Storage Building, 1890, architect, Frederick Wunder.

Landmark Site: Borough of Brooklyn Tax Map Block 3135, Lots 34, 27, 16

On March 24, 2009 the Landmarks Preservation Commission held a public hearing on the proposed designation of the William Ulmer Brewery and the proposed designation of the related Landmark site (Item No. 7). The hearing had been duly advertised in accordance with provisions of law. Seven people spoke in favor of designation, including one of the buildings' owners, and representatives of Councilmember Diana Reyna, Municipal Arts Society, Society for the Architecture of the City, Waterfront Preservation Alliance, and the Historic Districts Council. In addition, one letter was received in support of designation. There were no speakers or letters in opposition to designation.



### Summary

The Romanesque Revival style office building at 31 Belvidere Street is the focal point of the William Ulmer Brewery complex, a reminder of one of Bushwick's, and Brooklyn's, most prominent 19<sup>th</sup>- and 20<sup>th</sup>-century industries. The entire complex remains a largely intact example of a late-19<sup>th</sup>-century brewery designed in the American round arch style, and includes, in addition to the office building, the main brew house (1872) and addition (c.1881), engine and machine houses (Theobald Engelhardt 1885), and stable and storage building (Frederick Wunder 1890).

A German emigrant, William Ulmer (1833-1907) began working in a New York City brewery owned by his uncles in the 1850s and later became a partner in the Vigelius & Ulmer Continental Lagerbier brewery, founded in 1871. Within seven years, Ulmer became the sole proprietor of the brewery and under its new name – the William Ulmer Brewery – the business was expanded in the 1880s and 1890s with the construction of ice house, engine-, machine- and wash-room additions, a large storage and stable building, and a handsome Romanesque Revival style office building. Designed by prominent Brooklyn architect Theobald Engelhardt and constructed in 1885, the two-story red brick office building was the architectural highlight of the complex, featuring arched and dormered windows, a squat mansard roof clad in slate, as well as terra-cotta ornament. Divided into three bays, the building's projecting center bay incorporates remarkably crisp red terra-cotta panels that identify the initial of the last name of the owner, the brewery's trademark, and the function of the building, as well as corbelled brickwork and a blind arcade. The office building was separated from the larger brewery by a passage with an elaborate iron gate. Though rusted, the richly embellished gate is historic and possibly original to the structure. The other buildings of the Ulmer brewery complex feature details commonly found on other 19<sup>th</sup>-century breweries, including round arch-headed and segmentally arch-headed window and door openings, projecting brick pilasters, pedimented parapets and corbelled, denticulated, zigzag-patterned, and channeled decorative brickwork, all characteristic of the American round arch style.

Prior to Prohibition, there were at least 24 breweries in Brooklyn, many of which were located in Williamsburgh and Bushwick. Ulmer's was one of the more successful and in 1896 the *Brooklyn Eagle* described him as a millionaire. Under Ulmer, beer production more than quadrupled, reaching over three million gallons annually. Upon his retirement in 1900, the brewery was run by Ulmer's sons-in-law, John W. Weber and John F. Becker. Like many other breweries, the enactment of Prohibition closed the Ulmer brewery. The factory buildings were sold and converted for light manufacturing use, but the family retained ownership of the office building until 1952, using it as an office for their real estate business. The buildings remain largely intact and retain the detailing that defines their history and use.

## DESCRIPTION AND ANALYSIS

### The History of Brewing in Brooklyn and New York<sup>1</sup>

"To speak of the origins of brewing in America is to speak of the origins of the nation itself,"<sup>2</sup> stated historian Stanley Baron in his book, *Brewed in America*. While the first European settlers were dependent on beer shipments brought from England, there are also late-16<sup>th</sup>- and early-17<sup>th</sup>-century references to brewers operating in the Massachusetts Bay and Virginia colonies.<sup>3</sup> In many early colonial accounts, beer was considered safer to drink than water, and was consumed by all ages at all times of the day. Sickness, death and failure of some settlements were often attributed to a lack of supplies, including beer. In New Amsterdam, the Dutch, who were "even more partial to beer than the English,"<sup>4</sup> discovered that the ingredients for beer could be grown in the new world in 1626, the year Peter Minuit "purchased" Manhattan from Native Americans.<sup>5</sup> Brewing was an active industry in New York City during the 17<sup>th</sup> century, with small-scale commercial, home, and municipal breweries, including one operated by The Dutch East India Company. By the 1770s, New York City and Philadelphia were established as the colonies' brewing centers.

At least two documented commercial brewers operated in Brooklyn during the 18<sup>th</sup> century, and despite the advantage of abundant fresh water, that number grew very slowly after the turn of the 19<sup>th</sup> century. Most brews were produced for home consumption or by common brewers for sale in nearby "ordinaries" or taverns. The few commercial brewers produced English style brews, such as ale, porter, stout, and common beer, using top-fermenting yeast. In 1840, a former brewer from Bavaria, John Wagner, who had brought lager beer yeast to this country, opened a small brewery in back of his house in Philadelphia to supply his nearby tavern. From these humble beginnings, the opening of small-scale breweries eventually led to a major switch in the American brewing industry, from English to German brewing techniques and brewery proprietors. While the industry did not change overnight, the introduction of lager beer to the American market coincided with a massive influx of German immigrants

in the 1840s that revolutionized the brewing industry in New York City, Brooklyn and other cities where they settled in large numbers. The Germans provided an increased market for beer, and they favored lager:

“Lager beer – An effervescent malt beverage, brewed by using the bottom-fermentation process, in which a special yeast settles as residue at the bottom of the brewing vats. The distinctly German beer was popular in German countries in the early nineteenth century, and was introduced in the U.S. probably in the 1840s by John Wagner. Because the process for making this light, sparkling brew involved storage while fermentation occurred [which required cool temperatures], it was termed ‘lager,’ which is derived from the German verb *lagern*, meaning to stock or store.”<sup>6</sup>

While two New York City breweries (George Gillig and F & M Schaefer) began to brew lager in the 1840s, S. Liebmann and Sons Brewery (later renamed Rheingold), founded in 1854, was one of the first to use the bottom fermenting process in Brooklyn. As lager gained popularity beginning in the mid-1850s, the cities where most German immigrants settled became the largest brewing centers in the country, including Cincinnati, Milwaukee and St. Louis, as well as Philadelphia, Baltimore, New York City and Brooklyn. Several articles in the *Brooklyn Eagle* from the 1860s and 1870s focused on the growing popularity of lager beer, calling it our “National Beverage,”<sup>7</sup> appealing to people of all classes. Using Long Island lake water supplied by a new gravity-fed water system, “by the 1870s Brooklyn had become a major force in American beer brewing, as numerous establishments, largely run by Germans, flourished in the borough’s Eastern District (Williamsburg, Greenpoint and Bushwick).” Between the 1850s and the 1880s, 11 separate breweries operated there in a 14-square block area known as “Brewer’s Row.” “By the 1880s, 35 breweries had been established in Brooklyn,”<sup>8</sup> generating an estimated \$8 million in revenue annually. The majority of these firms exclusively brewed lager beer, while the remainder brewed ale or weiss (wheat) beer.

Technology and increased demand, as well as taste, influenced the course of the brewing industry in the second half of the 19<sup>th</sup> century. Like many other industries, the use of steam power and mechanization were common by the second half of the 19<sup>th</sup> century, altering the earlier “hand-done” brewing process and allowing for greater and more consistent production with the use of less labor. While both processes required boiling and cooling, the German brewing technique differed from the English in requiring cooler temperatures to store the beer. Like the ale breweries, lager breweries operated seasonally (from October to April) but also employed extensive cellars for storage, taking advantage of cooler underground temperatures, and used large blocks of ice to regulate temperature. Changes in refrigeration technology, which was first employed in Brooklyn at S. Liebmann and Sons in 1870, hit most of the breweries in the 1880s, shortening the cooling stages of the brewing process and permitting a longer brewing season. Just as steam power had revolutionized the hand brewing process, in the last years of the 19<sup>th</sup> century electric power and machinery began to replace the large steam engines. Finally, pasteurization, bottling and later canning, in combination with expanded shipping methods, allowed brewers to branch out beyond local markets. These factors all made it possible for brewers to run larger breweries with greater production and profits, and tended to eliminate the smaller competitors.

While the number of breweries increased slowly in the 1880s and 1890s, production continued to steadily increase, driven both by an increased demand and technological advances. Prior to consolidation in 1898, Brooklyn was the fourth most populous city in the country and supported 45 breweries. The prosperity continued in the 20<sup>th</sup> century, and although the number of breweries declined, the quantity of beer produced continued to grow, reaching its peak, pre-Prohibition, output of 2.5 million barrels in 1907. Bushwick, which was considered a major brewing center from about 1890 until the late 1940s, was supplying almost 10% of all beer consumed in the United States during the height of its production.<sup>9</sup> Eventually, the technological advances that allowed Brooklyn brewers to greatly increase their production ultimately worked against them, as “cheap rail transportation and mechanical refrigeration allowed entrepreneurs in Milwaukee, St. Louis, and Cincinnati to make inroads into the local markets. Successful breweries made larger investments in production and distribution facilities, and small firms

disappeared.”<sup>10</sup> Still, at the close of the 1910s, there were at least 24 breweries in Brooklyn, and 70 breweries in all the boroughs combined.

In 1920, the 18<sup>th</sup> Amendment, the National Prohibition or Volstead Act closed many of the Brooklyn breweries,<sup>11</sup> while others continued to manufacture near beer (less than .05% alcohol,) soft drinks or other food products. With the repeal of Prohibition in 1933, only 23 of the New York City’s (including Brooklyn’s) breweries resumed business, with most targeting the local market. Over the next half of a century, brewing in the city declined.<sup>12</sup> Brooklyn’s last two breweries closed in 1976 (Rheingold and F & M Schaefer), marking the end of an era. However, about a decade later, during the micro-brewing revolution of 1980s, two Brooklyn entrepreneurs opened the Brooklyn Brewery in 1987. Although their first beers were contract brewed in Utica, New York, the opening of their new brewery in Williamsburg in 1996 revived an industry that once flourished in the borough. The Ulmer complex is a significant reminder of this once important and now reviving Brooklyn industry.

### The History of the Neighborhood<sup>13</sup>

The William Ulmer Brewery is located within the historic boundaries of the town of Bushwick, near the present boundary line between Brooklyn and Queens. Bushwick is one of the earliest colonial settlements in New York, first occupied in the 1630s. One of the original six towns in Brooklyn, it remained a rural farming area until the mid-19<sup>th</sup> century. The site of the center of the township, the village of Bushwick, is the present intersection of Bushwick Avenue, Old Woodpoint Road, Metropolitan Avenue, Maspeth Avenue, and Humboldt Street. In 1852, Williamsburgh, the western and most populous section of the township, became an independent city, however, its municipal status ended three years later in 1855 when it and all of Bushwick were incorporated within the City of Brooklyn. Thereafter, until Brooklyn’s consolidation into Greater New York in 1898, both areas and Greenpoint were known collectively as Brooklyn’s Eastern District.<sup>14</sup>

Located south of the center of Bushwick village, in the early 19<sup>th</sup> century, the land around the Ulmer Brewery site was owned by members of the Debevoise family.<sup>15</sup> Charles Debevoise purchased over 45 acres of property near the Bushwick-Newtown border from his brother Francis in 1823, and operated a farm.<sup>16</sup> Like many of his relatives and neighbors, Charles Debevoise was a slave owner. After his death in the 1850s, the Debevoise farm, which had been mapped and lotted in anticipation of subdivision, was transferred to Charles’ children, Jane Stockholm, Elizabeth Debevoise and Abraham Debevoise.

During the 1850s Bushwick began to lose its rural, agricultural landscape. Large numbers of Germans immigrated to New York following the political upheavals in central Europe in 1848. Many settled in Williamsburgh and Bushwick and began the development of the area’s most famous local industry, brewing. The area boasted a number of features attractive to the brewing industry: an abundant water supply, soil suitable for the construction of underground storage chambers, and convenient water and rail transportation, as well as sufficient local demand. Henry R. Stiles, the notable Brooklyn historian, wrote in 1870:

“That quarter of Brooklyn, the Eastern District irreverently designated as Dutchtown, has been for some time the centre of the lager bier manufacturing interest in the Metropolitan District. Here are located some of the largest breweries in existence in the country. Surrounded by a population almost exclusively German, they all enjoy a local patronage to a considerable extent...”<sup>17</sup>

A second wave of development in Bushwick began after the construction of the elevated railroad along Myrtle Avenue in 1888, making the area an attractive alternative to congested downtown Brooklyn and lower Manhattan.<sup>18</sup> Development, consisting primarily of three-and four-story multiple dwellings, spread eastward toward the Brooklyn-Queens border during the following decade. The population remained largely German until the 1930s and 40s, when Italian-Americans began moving in. Beginning with the brewery workers strike of 1949, the industry began a steady decline. The closing of factories, including the breweries, created an economic depression of the area. In the late 1950s and 1960s, African-Americans and Puerto Ricans immigrated to Bushwick, comprising more than half of its population by



1970. Under the encouragement of real estate agents, many houses changed hands, purchased by low-income families with Federal Housing Authority insured mortgages, who were not necessarily able to maintain their buildings or payments during the economic downturn of the 1970s. New York City's fiscal crisis tightened the budget during this period, cutting essential services to certain communities. Among them were cuts to fire department service in the area, at a time when buildings abandoned by foreclosure were subject to frequent fires, further devastating the neighborhood. Redevelopment efforts began in the 1980s and are still continuing today. According to a 2007 exhibit at the Brooklyn Historical Society, "today, Bushwick is one of Brooklyn's 'hottest' neighborhoods, abuzz with construction, renovation, and aspiration. With a burgeoning arts scene and convergence of Latin American people, Bushwick is truly one of Brooklyn's most dynamic communities."<sup>19</sup>

#### German Immigration, Brooklyn's Eastern District and Lager Beer<sup>20</sup>

From its founding in 1626 by Peter Minuit, a native of the German town of Wesel am Rhein, New York City has had a significant German population. During the 1820s, the first German neighborhood and commercial center developed in the area southeast of City Hall Park and by 1840 there were more than 24,000 Germans living in the city. During the next twenty years, their numbers increased dramatically as "mass transatlantic migration brought another hundred thousand Germans fleeing land shortages, unemployment, famine, and political and religious oppression,"<sup>21</sup> with over 1,350,000 immigrating to the United States. To accommodate this growth, new German neighborhoods, developed on the Lower East Side of Manhattan and the Eastern District of Brooklyn. In the 1870s and 1880s, dislocations caused by the growth of the German Empire brought more new immigrants to the United States while thousands of American-born children of German immigrants established their own homes in these neighborhoods. By settling in areas with such a high concentration of fellow countrymen, it was easy for Germans to maintain their culture and customs, which included German-speaking churches and synagogues, German newspapers, singing societies, *Turnvereine*,<sup>22</sup> and beer gardens.

In Williamsburgh and Bushwick, it was not uncommon for "Eastern District German-Americans to enrich their day with a brew or two. Lager tended to be the normal mealtime beverage, and it most certainly was served all around at picnics, Sunday outings, sporting events and all the other social gatherings that characterized German-American life everywhere these fun-loving people settled in the United States."<sup>23</sup> More than just a component of the German diet, lager beer was an integral part of the customs that new immigrants maintained in the United States. Lager was for socializing, recreating with family, and enjoyed at club meetings. While some of the clubs constructed their own buildings, such as the Eastern District Turnverein and the Arion Singing Society's Arion Hall, beer gardens were also popular meeting spots, providing entertainment and a family retreat, especially in the hot days of summer, unlike saloons, which were notorious for keeping workers away from their families after a day's labor.

#### The William Ulmer Brewery<sup>24</sup>

Born in Wurttemberg in 1833, William Ulmer immigrated to New York in the 1850s to work with his two uncles, Henry Clausen Sr. and John F. Betz, in the brewing industry,<sup>25</sup> eventually becoming the brewmaster for Clausen's very successful New York firm. In 1871, Ulmer partnered with Anton Vigelius to form the Vigelius & Ulmer Continental Lagerbier Brewery on Belvidere and Beaver Streets in Bushwick, Brooklyn. Born in Bavaria, Anton Vigelius immigrated to Brooklyn in 1840 at the age of 18 and was involved in the produce business prior to opening the brewery. He purchased land at the corner of Beaver and Belvidere Streets from Abraham and Anna Debevoise in 1869, selling a half-interest in the parcel to Ulmer shortly before the construction of the brewery.<sup>26</sup> As evidenced by the marble date stone in the center of its facade, the first building of the Vigelius and Ulmer Brewery was constructed at the site in 1872. Typical of this period, all of the early brewing operations would have taken place in this building, from the storage of grains, to malting, brewing and lagering (or storage) of the beer. Vigelius also constructed a large residence behind the brewery facing Belvidere Street in 1872, following the common practice of 19<sup>th</sup>-century brewers who lived in or very near their breweries. The early success of the firm was noted in an 1875 article in the *Brooklyn Eagle*, which cited the Vigelius & Ulmer Brewery

among the largest and most noted of the Williamsburgh breweries, and of the 30 to 40 breweries that were then operating in Brooklyn.<sup>27</sup>

In December of 1877, Anton Vigelius sold his share of the brewery to Ulmer and retired from brewing, leaving Ulmer the sole proprietor of what had "grown to be one of the largest breweries in Brooklyn."<sup>28</sup> Vigelius remained a well-known and active member of the German community as Vice President of the German Savings Bank, a Director of the Broadway (Williamsburg) Bank, and a member of the Arion Singing Society until his death in 1891.

Like many other breweries in Brooklyn, New York and throughout the country, the Ulmer brewery complex expanded over time to increase capacity and accommodate technological advances in the industry.<sup>29</sup> Around 1880, shortly after Ulmer purchased the lot at the corner of Beaver and Locust Streets, a large, storage-house addition to the main building was constructed on Beaver Street. A testament to the brewery's success, in 1885 a major building campaign was begun that included the brick office building and boiler and machine houses (designed by architect Theobald Engelhardt) facing Belvidere Street, as well as a large addition at the rear of the main brewery that served as a wash house and racking (keg-filling) room. Several years later, brewery architect Frederick Wunder designed a large wagon room, stable, and storage building to replace an existing frame stable building. This three-story brick building and its additions, constructed c.1890, was the last major building constructed at the brewery. By the late 1880s, the William Ulmer Brewery and John Becker (Ulmer's son-in-law who lived in Vigelius's former home adjacent to the brewery, demolished) owned more than half of the block bounded by Beaver Street, Belvidere Street, Broadway and Locust Street. Through the 1890s and first decade of the 20<sup>th</sup> century, the brewery continued to construct minor additions and interior alterations as needed, including the installation of steel framing for a new 236-barrel cooking tank in the main brew house in 1906, a year before Brooklyn reached its peak beer production. Although specific production statistics have not been found, the regular alterations to the buildings indicates that the Ulmer Brewery continued to be successful and expand production.

Upon his retirement in 1900, the William Ulmer Brewery was incorporated with Catharine Ulmer (his wife), John F. Becker and John W. Weber (Ulmer's sons-in-law) as directors and stockholders and his daughters, Catharine Becker and Caroline Weber as additional stockholders.<sup>30</sup> Weber, an attorney by trade, became president and Becker, who had been working for Ulmer for over 20 years as a brewer, was named treasurer. The brewery's success continued, allowing Weber to construct a large home at 101 Eighth Avenue in 1909 (within the Park Slope Historic District), while Becker continued to occupy Vigelius's former home behind the brewery. An active philanthropist who belonged to many charitable organizations, Ulmer died in 1907 at his home at 680 Bushwick Avenue. His wife died the following March, leaving a "large estate."<sup>31</sup>

Unlike other 19<sup>th</sup>- and early 20<sup>th</sup>-century lager breweries in Brooklyn, no evidence has been found that Ulmer operated an adjacent beer garden or that the brewery sold any bottled or canned beer. Instead, both for personal profit and beer distribution opportunities, Ulmer invested extensively in real estate. By purchasing or building taverns and installing a proprietor, brewers could guarantee that their beer was the only one sold. Advertisements and articles in the *Brooklyn Eagle* and other publications indicate that Ulmer owned several taverns.<sup>32</sup> In 1893, in consultation with Weber, he opened Ulmer Park along the waterfront in Gravesend. This large resort and hotel featured music, dancing, boating, bathing, a shooting gallery, bowling alley and other attractions, and mostly importantly served as a place for the sale of Ulmer's lager. In 1901 Ulmer purchased Dexter Park, a popular baseball and football stadium located in Woodhaven, Queens, where Sunday "blue laws" were less strictly enforced than in Brooklyn,<sup>33</sup> a clear advantage for lager sales. Additionally, in 1914 the William Ulmer Brewery constructed a pavilion with a restaurant and bar at the corner of Metropolitan Avenue and Union Turnpike in Forest Hills, Queens, at the edge of Forest Park.<sup>34</sup>

The William Ulmer Brewery closed with the passing of the Volstead Act, and its buildings were sold. The brewery retained ownership of the office and attached wagon house and storage additions, and maintained the buildings for use as a real estate office. Weber became president of the Ulmer Park Realty Company, owned by his wife and sister-in-law, while Becker, already in his 70s, likely retired. A few years prior to the repeal of Prohibition, in 1930, the company officially changed its name to William Ulmer Incorporated,<sup>35</sup> signifying the company's permanent departure from brewing.

### Brewery Design and Construction<sup>36</sup>

Early brewers, including many home brewers, worked in outdoor kitchens or non-specialized frame buildings and with devices that were not specifically made for the task, requiring only several large tubs, a kettle and an open flame. As larger commercial breweries began to be established, multi-story buildings were constructed to house all brewery operations. These buildings employed a gravity system, with raw ingredients raised to the top story and working their way down through the different stages of the brewing process. Mid-19<sup>th</sup>-century breweries generally had sections (grain storage, water, furnace, ice storage) and different processes (boiling, cooling, fermenting, storage) took place on different floor levels. The complexes also included stables and carriage houses for horse power and delivery of the product. Steam power was an early innovation applied to the brewing process, and influenced the architecture of breweries by requiring a separate machine or engine room. It was used to move materials within the brewery and provide a more precise heat source, which, in combination with a greater understanding of the brewing process, created a more consistent product. As cleanliness was also discovered as a factor in the quality of the final product, wash room areas, and later separate wash-room additions, became part of the brewery complex. With the introduction of lager brewing, cool temperatures were required for storage. Early buildings were constructed with extensive underground caverns for this purpose, taking advantage of the cooler, sub-grade climate that was supplemented by cool air from large blocks of ice, which also required a section of the brewery. As lager's popularity grew, a new industry was created, ice-harvesting, which influenced the location of successful lager breweries. The invention of mechanical refrigeration, although first applied to ice making rather than directly to brewing, had a major influence on both the brewing process and brewery architecture. Controlled cool air eventually shortened the cooling phase of the brewing process, lengthened the brewing season, and eliminated the damp cellar conditions created by melting ice, changing the interior requirements of the breweries. Pasteurization and bottling were the next innovations that changed brewery design, adding additional operations and buildings to factory complexes. While the earlier kegs were most suited for local consumption, bottling and advances in shipping allowed breweries to reach a broader market. Bottling houses were constructed in the complex or could be done by an outside company. Shortly before the passage of Prohibition, canning was employed as a lighter weight, and therefore an easier-to-ship alternative to bottles, which would later become a major contributing factor to the mid-20<sup>th</sup>-century growth of super-breweries and elimination of smaller local companies.

As technology allowed a more efficient process, brewing production and profitability grew. General building changes included a switch from early frame to masonry buildings, and as production increased, wood was virtually eliminated from the brewery interior as well. By the 1880s and 1890s, wood framing and flooring were replaced by steel beams that supported concrete floors. The new interior framing could support heavier equipment, required for increased production, and was not susceptible to rot caused by water used for cleaning the brewery floors or from melting ice. The 1903 history *One Hundred Years of Brewing* divides the evolution of brewery architecture into three distinct stages, the time period when top-fermenting beer was brewed, the period when bottom-fermenting lager beer was gaining popularity, and the "modern" (beginning c.1890) period, driven by a rapid increase in production. Although with technological advances in the first period more attention was paid to the interior design, "little importance was, as a rule, attached to the outward appearance" of the ale breweries.<sup>37</sup> In the last quarter of the 19<sup>th</sup> century, this early 20<sup>th</sup>-century account explains:

"Brewery architecture has become a special branch of the architect's profession during the past thirty years, owing to the wonderful progress made in the brewing industry, caused by the steadily growing demand for its product and the development of machinery and brewery engineering during the period."<sup>38</sup>

This time period includes the rapid growth of lager's popularity and the transition period of the 1880s, during which the major expansion of the Ulmer Brewery took place. While this period is not as heavily characterized by large, highly stylized buildings constructed during the "modern" period, there were

beginning attempts by the brewers' architects to "present an attractive architectural construction, corresponding with the magnitude of the business,"<sup>39</sup> often still using the practical American round arch style, and incorporating the latest interior technologies. The culmination of the brewer's success was found in the "modern" period, as identified by *One Hundred Years of Brewing*, when the exterior architectural form of the building became just as important as the interior operations. Because Brooklyn was already the fourth-most-populous city in the country by 1898, and many local breweries had already experienced tremendous growth prior to the "modern" period, the architecture was not designed to the same degree as was permitted in the later developing mid-west.<sup>40</sup>

Although *100 Years of Brewing* identifies no national brewery style, many of Brooklyn's brewery buildings exhibit characteristic features of late-nineteenth-century factories. Like other industrial buildings of the time, these buildings derived their appearance and form from 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."<sup>41</sup> Among these features are relatively narrow building widths arising 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. 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. Brick parapets were often built up to resemble gables to relieve the horizontality of the long rooflines; several such pediments were historically found on the Beaver Street facade of the Ulmer brew house and the stable building on Locust Street.

Many features, while rooted in function and chosen primarily for utilitarian purposes, also played an aesthetic role, enabling buildings to maintain the street wall and shield interior yards from public view, both of which were important to factory owners who wanted their buildings—their companies' "public facades"—to exhibit a neat appearance.<sup>42</sup> The 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."<sup>43</sup> Brick was usually chosen for factory walls and facades because it was among the most fire-resistant materials then available. Decorative brickwork—including stringcourses and corbels—were often used as a "relatively economical means of relieving plain brickwork."<sup>44</sup> This technique, including dogtoothing, recessed panels, channeling, pilasters, and corbelling, together with contrasting stone highlights, was used extensively on late-19<sup>th</sup> century brewery buildings in Brooklyn.<sup>45</sup>

Regular fenestration patterns and long, monumental brick facades would project a strong, solid, and attractive image for the 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. Similarly, the Ulmer Brewery employed an image of its brewery in advertising (see illustrations).<sup>46</sup> 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 Design of the Ulmer Brewery Buildings<sup>47</sup>

The Ulmer Brewery complex consists of the main brew house and addition, office, engine and machine house, and stable and storage building. These buildings and other mid- to late-19<sup>th</sup>-century Brooklyn breweries show a similarity in form and design and feature details of American round arch design. This American industrial interpretation of the German Renaissance Revival or *Rundbogenstil* ("round-arch style"), which evolved in Germany in the 1820s, "synthesized classical and medieval architecture—particularly the round-arched elements of those style," according to Bradley.<sup>48</sup> These simply designed factory buildings use corbelled and other decorative brickwork, projecting brick piers, round arch window openings, and had parapets that sometimes varied in height and featured pediments, rather than applied ornament for interest and decoration. (Despite its name, buildings constructed in the American version of the style often used economical segmentally arch-headed window openings.) The

style was particularly well-suited to industrial and commercial buildings because of its reliance on brick and locally available stones, simplicity of detail, and structural expressiveness, as well as rapidity of construction, economy of materials and workmanship, durability, ample fenestration, and ease of adding extensions without grossly violating the original building fabric. Brick was the material of choice for most industrial buildings. It was inexpensive, durable, and easily supplied. More important, machine-pressed brick remained “the most fire-resistant building material available prior to the widespread use of concrete.”<sup>49</sup> The American round-arch style was widely employed in the United States for factories, breweries, warehouses, and school buildings. Transmitted to this country through the immigration of German and Central European architects in the 1840s, as well as through architectural publications, the influence of the *Rundbogenstil* is clearly visible in the Ulmer Brewery buildings and other extant former brewery buildings in Brooklyn, many of which were located in the heavily German-populated Eastern District, owned by German immigrants and designed by German-immigrant architects or first generation German-Americans.<sup>50</sup>

The first building at the brewery, the main brew house constructed in 1872, features many details characteristic of the American round arch style, including round arch-headed window and segmentally-arch-headed door openings with corbelled brick archivolt, projecting pilasters, and corbelled brickwork. Historic photos and illustrations of the complex indicate that the main brew house also featured pedimented parapets at the Beaver Street façade and a two-and-a-half-story, mansard-roofed tower, which are typical of 19<sup>th</sup>-century brewery architecture. Between 1880 and 1885, shortly after Ulmer purchased the lot at the corner of Beaver and Locust Streets, a large, storage-house addition to the main building was constructed on Beaver Street. Similar in style to the original building, it featured a pedimented parapet, corbelled brickwork and round arch-headed window openings with corbelled brick archivolt. Like other 19<sup>th</sup>-century breweries, all of the operations likely took place in different sections of this four-story main building, which was divided into two buildings on the interior. As production expanded, the c.1881 addition along Beaver Street provided additional space for operations. By 1887, maps indicate that the mashing of the malt and boiling took place on different floors of the building at the corner of Beaver and Belvidere streets, while in the remainder of the main brew house and its addition, ice was used to maintain cooler temperatures for fermenting, a much longer process. For the final step of the brewing process, the Ulmer Brewery took advantage of underground storage; Department of Buildings permits indicate that both sections of the main brew house have deep cellars, 20- and 34-feet deep.

The Ulmer brewery began a major building campaign in 1885; construction was begun on the two-story, brick office building and two- and three-story boiler and machine houses facing Belvidere Street, as well as a large addition at the rear of the main brewery. Dictated by expanding brewing capacity and changing brewery technology, the additions were designed by Eastern District architect Theobald Engelhardt. Although not described specifically as brewery architect, Engelhardt worked on a number of brewery commissions and was also a prominent member of the German community. The new boiler and machine house building on Belvidere Street, which was connected to the southwest facade of the main brew house, was designed in the American round arch style, and features many details similar to its adjacent neighbor, including round arch-headed window openings with corbelled brick archivolt, projecting brick pilasters, and a decorative brick cornice. Although it is only three stories in height, the machine house section of the building extends to the height of the four-story brew house, and the brick cornice, which features corbelled, denticulated and zigzag-patterned brickwork, extends across both buildings. This decorative brick cornice, characteristic of the inexpensive ornament applied to American round arch style factories, also extends across the lower, two-story, boiler-house section of the building and its side and rear facades. Designed with practical mechanical needs in mind, to house boilers and machinery, the tall first and second stories of the new building do not align with the adjacent brewery. By 1887, maps indicate that an ice machine was located on the second story of the machine house, showing Ulmer’s efforts to keep up to date with the latest brewing industry advances. Although it was not specifically cited in the permit, it is possible that this building was partially designed and constructed to accommodate this new technology. Also included in this building campaign was the construction of one-story addition at the rear of the main brew house that served as a wash house and racking room.

Constructed of brick, this addition was demolished in 1923 to allow for the construction of a parking lot in the former brewery courtyard.

Brewery architect Frederick Wunder designed the large wagon house, stable and storage building that faces Locust Street for the brewery in 1890. This three-story brick building and its additions, constructed in a similar round arch design as the other brewery buildings, was the last major building constructed at the brewery.<sup>51</sup> The one- and two-story wagon room and stable additions of the same building campaign were constructed as a rear addition to the office building, linking the Belvidere Street building with the new building fronting Locust Street. Both the northwest, Locust Street façade and the northeast, courtyard-facing façade, which was originally visible from Locust and Beaver streets, of the building are fully developed with features characteristic of the American round arch style, including segmentally arch-headed windows and doors with projecting brick lintels at the first floor; round arch-headed window openings with corbelled brick archivolt at the upper stories; bluestone window sills and string coursing; brick pilasters; and denticulated, channeled and corbelled decorative brickwork. Also characteristic of the style, a tall, pedimented parapet extends above the facade on the Locust Street side of the building and features the remnants of what appears to have been a round, terra-cotta ornament. Original drawings (see illustrations) show that the courtyard-facing facade featured a two-story, central tower or monitor and a shorter tower at the building's northeast corner. (This shorter tower remains with an altered roof and attached fire escape.) The ground floor openings are raised at this facade, likely to accommodate horses, and the northeasternmost door opening (adjacent to the office) is large enough to permit the storage of wagons. By 1910, the Ulmer Brewery was using trucks for delivery, thereby diminishing the need for horses. The upper stories continued to be used for storage and later the third floor of the building was a cooperage.

While Ulmer's and other Brooklyn breweries display many *Rundbogenstil* characteristics, including Philadelphia brick facades with plain pilasters, decorative, patterned brickwork, and of course, round-arched openings accented with archivolt, the more elaborate office building complete with a terra-cotta company trademark, is the show piece of the brewing complex. By the mid-1880s brewers and their architects were already attempting to show the wealth and success of their businesses through their brewery complexes, by creating a highly-visible corporate symbols, which could be used in company advertising. An article in the *Brooklyn Eagle* from 1886 described the counting houses of the S. Leibmann and Sons, Obermeyer and Liebmann, and Ulmer breweries as "not surpassed by anything of the kind in Broadway or Wall Street."<sup>52</sup> Designed in 1885 by Theobald Engelhardt, the office building features round arch-headed window openings, facade symmetry and a central projecting bay that are all characteristic of the Romanesque Revival style, which was also inspired by French medieval sources and the German *Rundbogenstil*. Additional Romanesque Revival details include corbelled blind arches that decorate the pedimented parapet and corbelled archivolt. The terra cotta panels on the office building are of particular note. "OFFICE." above the front entry and the trademark "U" identify the original use and owner of the building, while a band of Queen Anne-inspired decorative panels separates the first and second floors. These floral- and foliate-motif panels were likely manufactured by the Perth Amboy Terra Cotta Company, as very similar tiles appear in an 1895 catalog issued by the company. Other decorative details include, at the second floor, a slate-clad, faux mansard roof and projecting dormers, which were historically more decorative, round arch-headed, copper dormers. The finely detailed iron gate, located to the north of the office building, which historically obscured the entry to the brewery courtyard, also features Queen-Anne inspired motifs and is likely original to the building. As previously described, the office was later expanded as part of the construction of the stable building on Locust, with one- and two-story wagon room, storage and stable additions, which were later partially raised one story to allow for additional storage.<sup>53</sup>

#### Theobald Mark Engelhardt<sup>54</sup>

Prolific architect Theobald M. Engelhardt was born in Brooklyn in 1851 to German parents. A leading family in their homeland, the Engelhardts, like many other families, immigrated to America after the failed revolutions in Germany. He received his early education at the Williamsburgh Turn Verein

school,<sup>55</sup> and later graduated from Brown's Business College and received a certificate in Architectural Drawing from Cooper Union. Engelhardt worked in the office of his father – a successful carpenter and builder – until he retired in 1877, at which time the younger Engelhardt opened an architectural practice. Among other buildings of various uses, Philip Engelhardt is credited with having built the original school building of the Williamsburgh Turn Verein, as well as a number of brewery-related buildings.<sup>56</sup> It seems probable that the younger Engelhardt worked with his father on some of these brewery projects. When he began his own practice in Bushwick, originally at 14 Fayette Street and later at 906 Broadway (in a building that he designed), although he did not bill himself as a “brewery architect,” Engelhardt worked on buildings for over ten different breweries, perhaps through connections made while working with his father. Among his brewery commissions documented at the Brooklyn Department of Buildings, besides those commissioned by Ulmer, are nine buildings for S. Leibmann and Sons Brewery; and several structures for the Leonard Eppig Brewery between 1880 and 1904.<sup>57</sup>

Engelhardt worked in various styles, including Gothic Revival, Romanesque Revival and Queen Anne, and also designed mansions, houses, tenements, factories, banks, and churches, many of which were located in Brooklyn's Eastern District. Several of his works are located in designated historic districts, including St. John's Evangelical Lutheran Church (1891) at 152-157 Milton Street, the Greenpoint Home for the Aged (1886-87) at 137 Oak Street, and the houses at 122 and 124 Milton Street (1889), all in the Greenpoint Historic District. He designed the former Maison au Candy Company (1885, reconstructed 1970s), now the Cadman Plaza Artists Houses at 22 Henry Street in the Brooklyn Heights Historic District and 60-64 Kent Street in the Eberhardt Faber Historic District. Engelhardt also designed the Eastern District Turnverein at Bushwick and Gates Avenues (1902), the clubhouse and addition for the Arion Singing Society (1886 and 1902) at 27 Arion Place, and St. Mark's Evangelical Lutheran German church and school (c.1890) at 626 Bushwick Avenue. As stated in a contemporary account, “During a period of over forty-five years of his professional activities, Mr. Engelhardt has designed and constructed many of the largest manufacturing and commercial buildings in the city of Brooklyn, as well as a number of hospitals and dispensary buildings, residences and modern homes,”<sup>58</sup> many of which remain throughout the Eastern District.

After graduating from the Pratt Institute and the University of Pennsylvania, his son, Theobald Henry Engelhardt, joined the architecture practice in 1908. In addition to the Eastern District Turnverein, Engelhardt was a member of the Arion Singing Society, where he was elected president in 1903, and associated with several banks. Around 1915, he relocated from Brooklyn to Richmond Hill, Queens and lived there until his death at the age of 84.

#### Frederick Wunder, Brewery and Maltsters Architect<sup>59</sup>

Designed by architect Frederick Wunder, the storage and stable building at 28 Locust Street and additions were constructed c.1890. German-born Wunder, a brewery and maltsters architect and millwright, lived and worked in the Eastern District. His office was located at 99 Broadway and his millworks at 589 Kent Street. Technological advances in the late 19<sup>th</sup> century allowed breweries to become more mechanized and efficient, requiring additional space for some processes and the consolidation of others. For this reason architects who understood the operations and needs of a brewery were hired to design buildings and additions. “Only a specialist in that branch, a brewery architect and engineer, who has made that work the exclusive study of his life, can undertake the building and practical equipment of such an establishment.”<sup>60</sup> Wunder's name is listed on several DOB permits for the Ulmer brewery from c.1890 until 1906. It does not appear that he was “officially” the Ulmer Brewery architect for those years as the brewery also used other architects for alterations after 1900. Although no information could be found about his training, Wunder had a number of other documented brewery commissions in Brooklyn, serving as the firm architect for the Eppig brewery and designing buildings for several other Brooklyn breweries, including: Otto Huber, Frank Ibert, and Joseph Fallert.<sup>61</sup> Additionally, Wunder designed a new brewery plant for George Grauer in Queens in 1892, and prepared plans for the conversion of a former brewery in Syracuse, NY into an ice plant. Frederick Jr. joined his father's practice around 1906 and together they used the firm name Frederick Wunder and Son. Despite a seemingly successful practice, Frederick Wunder and his son filed for business and personal bankruptcy in 1915, presumably closing the firm. Wunder relocated from Brooklyn to his summer home in South

Jamesport, Long Island and his son pursued a career with a Manhattan-based appliance company. In 1926, Frederick Wunder "died of fright" on his front doorstep at age 80, as he watched a forest fire roaring near his home, which had been extensively damaged under similar circumstances several years earlier. His obituary described him as a retired, prominent brewery architect in Brooklyn and throughout the country and a "jolly, kindly man."

#### Later Building History and Alterations<sup>62</sup>

The bulk of the brewery complex was sold in the early 1920s. The large stable and storage building on Locust Street was sold in 1921, and resold within two years to the Artcraft Metal Stamping Corp. A manufacturer of light fixtures, the company later changed its name to Artcraft Metal and Electrical Products and occupied the building as a factory until c.1940, at times sharing the space with other metal fabricators and lighting manufacturers. The full height addition to the building at its northeast corner is an elevator shaft that was probably constructed c.1932.<sup>63</sup> Alterations to the Locust Street fenestration, including the enlargement of several openings and the installation of square-headed windows, were completed by c.1940. Artcraft retained ownership of the building until 1944, after which it changed hands several times (likely between tenants) before it was sold to a realty company in 1949. Metal fabricators and clothing manufacturers are listed as occupants there until at least the 1980s. In 2002, a permit was issued by the Department of Buildings approving a change from factory to residential use. The building is currently divided into a several apartments per floor.

The main brewery building, including its additions and engine and machine houses along Belvidere Street, was sold in 1922. Brooklyn Department of Buildings records indicate that the Otis Elevator Company filed to install an elevator in the main brewery building a year earlier, perhaps in anticipation of its sale and reuse for another function. Marcus Leavitt, owner of M. Leavitt Flooring Co. purchased the property in 1923 and made alterations to convert the buildings from a brewery to light manufacturing. Among the changes were interior alterations, the replacement of the interior wooden stairs with fire proof equivalents, the installation of metal fire escapes on the Beaver Street and Locust Street-facing side façades, window replacement with steel sash and other fenestration changes. New fireproof stair cases were installed just behind the Beaver and Belvidere Street facades, as evidenced on the exterior by the offset window openings and stair bulkheads at the roof. The enlargement of several of the round arch-headed windows on the Beaver Street façade may have taken place at this time, as well as the bricking up of windows at the first floor of both facades and at the rear facade, and the lengthening of window openings along Belvidere Street for the installation of doors. The additions to the main brew house and storage addition, located to the rear of the Beaver Street façade, were demolished during this period to allow for the construction of the one-story parking garage that occupies most of the former brewery courtyard and has frontage on Locust and Beaver Streets. (This garage remained part of the same tax lot as the brewery buildings until c.1965, but is not included in this designation.)<sup>64</sup> The brewery building's parapet was reconstructed in 1936, replacing the pedimented and decorative brickwork with four-feet of plain brick. A sprinkler system was added in 1952, and the fire escapes and doors to reach them were replaced in 1958. Subsequent alterations have mainly focused on interior and plumbing, heating or other mechanical work.

Leavitt sold the property in 1924 to a realty company in which he was a partner and continued to occupy a warehouse there into the 1940s. Other building tenants included mainly clothing, shoe and handbag manufacturers, which occupied the building into the 1980s. Belvedere Improvement Company Inc. sold the property in 1931, and it changed hands again under foreclosure in 1937. It was purchased by Beaver Management Corp. in 1945. Since the 1960s, several deeds have been recorded against the lot, mostly between realty companies. An application, filed to convert part of the building from light manufacturing into residential units in 2001, was disapproved by the Department of Buildings; however, the Department of Finance currently classifies the building as an elevator apartment building with artists-in-residence. Its recent uses include a warehouse for an electronics importing company and studio space for an artist.

William Ulmer Incorporated, with Ulmer's grandson William Ulmer Becker as president, sold the office building to William H. Ludwig Inc. in 1952. The Ludwig company, an electrical appliance manufacturer located at 656 Bushwick Avenue, made several alterations to the building, including interior alterations and the construction of a small concrete block addition at the northwest corner of the lot, as



well as changing the use of the building from office and brewery to office, factory and storage.<sup>65</sup> William H. Ludwig Inc. retained ownership of the building for ten years before selling it to Twenty Starr Street Corporation, based next door at 21 Belvidere Street. Twenty Starr Street Corp. held the building for over twenty years, part of which time it is said to have been used for lamp manufacturing and storage.<sup>66</sup> The office building was sold to its current owner in 1985.

### Description

All of the main buildings of the Ulmer Brewery complex are extant, and occupy the northern portion of the block bound by Locust, Beaver, and Belvidere streets and Broadway in Bushwick. The complex consists of the main brew house and addition (71-83 Beaver Street), office (31 Belvidere Street), engine and machine house (35-43 Belvidere Street), and stable and storage building (28 Locust Street), occupying three separate tax lots. The buildings were historically situated around a central courtyard, which is now occupied by a one-story parking garage that is not included in this designation.

### Main Brew House and Addition

The main brew house and addition, along with the engine and machine house buildings, occupy an L-shaped lot with frontage along both Beaver and Belvidere Streets. Designed in the American round arch style, the brick building features round arch-headed window openings with corbelled brick archivolts; projecting brick pilasters; and a decorative brick cornice, as well as, cast-iron star ties and a stone water table. The flat-roofed, four-story building is over 150-feet long by 50-feet deep with its main facade facing Beaver Street.

The northeast-facing main facade of the brew house and addition is divided into three sections by projecting brick pilasters. The first two sections comprise the original brewery building and the third its c. 1881 addition. The first section is divided into six bays at the upper stories and features a central marble date stone, which reads "Vigelius & Ulmer's Continental Lagerbier Brewery Erected A.D. 1872." The second and third sections of the facade are divided into four and three bays (respectively) at the second and third floors, which have enlarged, square-headed window openings. There is a wood panel in the opening at the first bay of the second floor. In the fourth bay of the second section, the window openings are offset horizontally, corresponding to a fire proof stair whose black-painted bulkhead appears on the roof at this location. Retaining the historic round arch-headed shape and archivolts, although several have been closed up, both the second and third sections have eight bays at the fourth floor. Most of the masonry openings at the first floor have been modified, either bricked-in or enlarged to accommodate square-headed doors. Working across the facade at the first floor from east to west, there is brick infill in first four openings; the fifth and sixth bays contain a large opening with a metal roll gate; the seventh and ninth openings have small window with grilles and brick infill; there are doors and concrete steps in the eighth and tenth openings (with a metal grille and roll gate, respectively); the eleventh and 13<sup>th</sup> openings are obscured by painted wood or metal panels and the twelfth features a diamond plate door. Most openings feature one-over-one, double-hung aluminum or vinyl windows, some of which have additional infill within the openings. The decorative brickwork of the historic, pedimented parapet was removed during its reconstruction in 1936. Other alterations include the installation of red-painted metal fire escapes at the front and wrapping around from the side; some window grilles; and a security camera, set in a metal cage; light fixture; alarms; signage and wires attached to the facade. There is some graffiti at the building's base.

The southeast-facing side facade of the brew house has frontage on Belvidere Street and is divided into three sections by projecting brick pilasters. With the same detailing as the front facade and a decorative brick cornice, each section of the side features two window openings. The modified window openings in the first bay are offset horizontally, corresponding to a fireproof stair whose black-painted bulkhead appears on the roof at this location. Most openings feature one-over-one, double-hung aluminum or vinyl windows, some of which have additional infill within the openings. Wood panels cover the second and third openings at the second floor. The first bay at the ground floor has a non-historic, metal-and-glass door with roll gate, and the other openings at that level have been blocked with

brick infill or metal panels. There is a mailbox, intercom box, and signage near the entry, wires and graffiti at the facade, and a vent pipe through one of the third floor window openings.

The building's northwest facade faces Locust Street and is visible above the adjacent garage. Like the other side, this facade features a decorative brick cornice, round arch-headed window openings with corbelled brick archivolt, and cast-iron star ties. The fourth floor has eight window openings, while the second and third floors each have two, non-historic, square-headed openings. Attached to the facade is a red-painted metal fire escape, which features additional metal paneling at the upper section and extends to the roof. Most window openings feature single or paired one-over-one, double-hung aluminum or vinyl windows, some of which have additional infill within the openings. The third opening at the fourth floor has concrete-block infill, and the sixth has a metal door to provide access to the fire escape. Those at the third floor also have doors to access the fire escape. There is a multi-light steel window in the first bay of the second floor, and several of the windows have metal security grilles. A frame-and-metal-panel structure exists at the roof, and there is graffiti on this facade.

The upper portion of the building's rear facade is visible from Locust Street. Like the sides, this facade features a decorative brick cornice, round arch-headed window openings with corbelled brick archivolt, and cast-iron star ties. The fourth floor has retained most of the historic window openings, although some have been bricked-in, while the third floor has non-historic, square-headed openings. Most windows are single or paired one-over-one, double-hung aluminum or vinyl windows, some of which have additional infill within the openings. There is a multi-light steel window in third bay at the third floor. The frame-and-metal-panel structure of the Locust Street facing facade is visible at the roof, as well as a brick chimney, and brick and black-painted elevator and stair bulkheads.

#### Engine and Machine House Building

Although attached on the Belvidere Street side to the main brew house and currently sharing the same tax lot, the engine and machine house was constructed as a separate building. The two- and three-story brick building features details similar to those found on the main building, including projecting brick pilasters, round arch-headed window openings with corbelled archivolt, and a decorative brick cornice with corbelled, zigzag-patterned and projecting brickwork, which appears continuous from the brew house. The facade has several cast iron star ornaments, the exterior evidence of tie rods that support the internal framing. Although only three-stories, the northeasternmost portion of the building extends to the full height of the adjacent four-story brewery, due to high ceilings at the first and second floors. The two-story portion also features a tall first floor. The pilasters divide the facade into four bays, each with two window openings. Historically, the floor heights resulted in tall window openings at the first and part of the second floor. While those at the second floor remain, the openings at the first floor have been shortened with brick infill. Most openings feature one-over-one, double-hung aluminum or vinyl windows, some of which have additional infill within the openings, and several have security grilles. Other alterations include two large (garage-door-sized), and three standard door openings at the ground floor. The openings in the first three bays feature metal roll-down gates, while those in the last two bays have painted metal doors. There is a red-painted, metal fire escape in the second bay, and the corresponding masonry opening at the second floor features a metal and glass door. At the first floor of the two-story section of the building, the facade is painted red, with some graffiti at the building's base. A security camera, set in a metal cage, and wires are attached to the facade.

The southwest-facing, side facades of the building, which are partially visible, feature the decorative brick parapet and round arch-headed windows with archivolt and projecting stone sills found on the Belvidere Street facade. The upper portion of the rear facade is also partially visible, with the same decorative brickwork and window openings as the other facades.

#### Stable and Storage Building

The stable and storage building is located at 28 Locust Street, south of Beaver Street, on a mostly rectangular approximately 89 feet long by 97 feet deep. The flat-roofed building is set at the streetwall and occupies most of the lot, with a driveway along the northeast edge of the lot. This driveway, which

features cobblestone, is obscured from the street by a tall, gray-painted, metal roll gate, and also features an approximately ten-foot brick pier at the northwest corner of the site.

The three-story plus basement, brick building is divided into six bays on the Locust Street facade, with a one-bay elevator addition at the northeast corner of the building. This elevator shaft, constructed c. 1932, may have been built on an existing one-story structure visible on the 1918 Sanborn map. The decorative denticulated brick and projecting stone sill of the first floor cornice and second floor sill extend from the main facade across the addition, and the parapet of this portion of the building also features denticulated and corbelled brickwork. This first bay features an at-grade entry with a brown-painted, bracketed, pedimented hood and a reduced, recessed entry door. The metal door, surround infill and interior walls of the entry alcove are all painted grey. At the second and third floors, the existing masonry openings have been filled in with concrete block. The main portion of the facade is divided vertically into three sections by paired, projecting brick pilasters, and horizontally by a corbelled, denticulated brick and projecting stone cornice above the first floor and a denticulated brick and projecting stone string course at the second floor. Additional decorative brickwork at the facade includes corbelled archivolt at the second and third floor windows; denticulated and corbelled string coursing extending from the base of the archivolt; and projecting coursing, a corbelled blind arcade, and a corbelled, denticulated cornice at the parapet, which is pedimented at the central bay. A small circular terra-cotta ornament remains at the center of the parapet, but its central decorative element has been removed. There are five, square-headed window openings at the basement level (none in the first bay), all with projecting iron window grilles. At the first floor, there are segmentally-arched window openings in the first, second, fifth and sixth bays, while the central bay features a non-historic, enlarged, square-headed opening. There are six, round arch-headed masonry openings at the second and third floors; those in the second and third bays of the second floor have enlarged, square-headed openings. All openings have single or paired, square-headed, one-over-one, double-hung aluminum window sash, with metal panel inserts in the round arch-headed openings. There are security grilles at first, second, and third windows at the first floor. Other alterations include red paint at the base of the building and remnants of grey paint around the entry and throughout the facade. Vent pipes extend through the metal panels above several of the windows and there are two alarm boxes, a light fixture, a security camera in a metal cage, an alarm bell, conduit, and wires at the facade. There is an intercom box near the entry, and several signs and a fair amount of graffiti at the building's base.

The northeast-facing side facade of the building is partially visible from Locust and Beaver Streets, over the adjacent garage. Divided into ten bays, the last three of which are occupied by the elevator addition at the northwest corner of the building, the facade features decorative brickwork similar to that on the front facade, including by paired, projecting brick pilasters, corbelled archivolt at the second and third floor windows; denticulated and corbelled string coursing extending from the base of the archivolt; a denticulated brick and projecting stone string course at the second floor; and projecting coursing, a corbelled blind arcade, and a corbelled, denticulated cornice at the parapet. There are round arch-headed masonry openings in each of the first seven bays at the second and third floors. Most openings have single or paired, square-headed, one-over-one, double-hung aluminum window sash, with metal panel inserts in the round arch-headed openings. A short tower extends from the facade in the first bay and features similar round arch-headed window openings in the facade return. The window at the return, as well as those in the second and third bays of the third floor, have been filled in with brick or cement block. The tower has a non-historic, simplified hipped, metal roof, and its return features metal cladding and a metal door at its uppermost portion. A black-painted metal fire escape extends from the tower, obscuring the second and third bays of the facade. The side wall of the elevator addition in the last three bays is mainly solid brick with a single window opening at each the second and third floors. There is a fixed, multi-light metal window at the third floor and a one-over-one, double-hung aluminum window in the opening at the second floor. Alterations at this facade include vent pipes, which extend through the metal panels above several of the windows and a wooden beam which protrudes from the facade above the fifth bay. One round-headed window opening on the rear facade is visible from Belvidere Street.

## Office Building

The Romanesque Revival-style William Ulmer Brewery office building is located mid-block on Belvidere Street between Beaver Street and Broadway, adjacent to the former brewery. Set at the front and south side of its rectangular lot, 49' wide by 102' deep with a small cut-out at the southwest corner, the two-story 33' by 45' building has a two-story, brick rear addition, approximately 58' by 22', and a one-story cement block addition, 22' by 7' in the northwest corner of the lot. A black painted, elaborate metal gate marks the driveway (passageway) at the north side of the lot, originally used to access the brewery courtyard, wagon house and stable. The historic gate, although modified with the addition of solid metal panels and infill below the bulkhead, appears in the c.1940 tax photo and is probably original to the building. There is a painted wooden bulkhead constructed over the gate, with a light fixture and barbed wire attached. Both the main building and the additions have flat roofs, although the slate-clad, pitched second floor of the front facade gives the illusion of a mansard roof. Round arch-headed window openings with archivolt are found on the facades.

Set on a low bluestone base, the front façade is constructed of orange brick and matching terra-cotta block, articulated into three bays with a projecting central bay that extends above the roof line. The second floor of the facade is pitched backward and has slate-shingle siding, copper trim and two wood dormers flanking the central projection. These square-headed, wood-clad dormers with one-over-one double-hung wood windows replace the more ornate, round-headed copper dormers that were original to the building. All other fenestration retains its arched openings, and those at the center of the second floor retain the historic, arch-headed wood window sash. In the central bay, molded terra-cotta ornaments "Office." and the brewery's trademark "U" identify the building's original function and owner. Other decorative details include corbelled brick archivolt springing from small terra cotta panels, brick or terra-cotta beaded trim around the recessed panels below the first floor window and at the edges of the projecting central section, a terra-cotta cornice and brackets (complete with smaller trademark "U's") above the first floor, a corbelled brick blind arcade and terra-cotta cornice capping the central projection, and pressed copper trim above and below the slate cladding at the second floor. The recessed central entry, reached by a single stone platform from the sidewalk, features historic paneled wood-and-glass doors and an arched transom window. Historic window grilles with non-historic metal screening remain on the first floor windows, which are single pane plexi-glass in wood frames. The security grilles at the stoop, entry and second floor were added later. Both side facades of the building are constructed of dark red common brick and feature corbelled brick archivolt above the window openings and a corbelled brick cornice. At the northeast facade, the historic, arch-headed wood window sash and historic grille remain.

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## NOTES

<sup>1</sup> Information in this section is taken from Stanley Wade Baron, *Brewed in America, A History of Beer and Ale in the United States* (New York: Arno Press, 1972); Will Anderson, *The Breweries of Brooklyn: an Informal History of a Great Industry in a Great City* (Croton Falls, NY: Anderson, 1976); "'Lager' and 'Weiss,'" *Brooklyn Eagle*, June 23, 1873; "Lager Beer. Where and How the Beverage is Made. Brewers and Breweries in the Eastern District," *Brooklyn Eagle*, August 2, 1870; H. S. Corran, *A History of Brewing* (North Pomfret, VT: Newton Abbot, 1975); *One Hundred Years of Brewing, A Complete History of the Progress Made in the Art, Science and Industry of Brewing in the World, Particularly in the Nineteenth Century* (Chicago: H.S. Rich & Co., 1903); "Our Very Short History," available on-line (March 20, 2008) at: [www.brooklynbrewery.com/brewery/?subpage=history](http://www.brooklynbrewery.com/brewery/?subpage=history).

<sup>2</sup> Baron, 3.

<sup>3</sup> Beer is defined as a "beverage derived from the brewing and fermenting of malted grain or cereal, usually barley," generally flavored by hops. (Baron, 19).

<sup>4</sup> Baron, 19.

<sup>5</sup> Historian R. P. Bolton speculates that the land of lower Manhattan may have been occupied by the Mareckawick group of the Canarsee which occupied Brooklyn and the East River islands. Upper Manhattan was occupied the Reckgawawanc. The Native American "system of land tenure was that of occupancy for the needs of a group" and that those sales that the Europeans deemed outright transfers of property were to the Native Americans closer to leases or joint tenancy contracts where they still had rights to the property. Reginald Pelham Bolton, *New York City in Indian Possession*, 2d ed. (New York: Museum of the American Indian, Heye Foundation, 1920; reprint 1975), 7, 14-15; Robert Steven Grumet, *Native American Place Names in New York City* (New York: Museum of the City of New York, 1981), 69.

<sup>6</sup> William L. Downard, *Dictionary of the History of the American Brewing and Distilling Industries* (Westport, Connecticut: Greenwood Press, 1980), 106.

<sup>7</sup> "Lager Beer," *Brooklyn Eagle*, June 4, 1886, 2.

<sup>8</sup> Ellen M. Snyder-Grenier for The Brooklyn Historical Society, *Brooklyn! An Illustrated History* (Philadelphia: Temple University Press, 1996), 148.

<sup>9</sup> William Calabrese, "Beer with a side of history, Bushwick Beer," available on-line (February 5, 2008) at: [www.the-wick.com/feature\\_archive/beer.htm](http://www.the-wick.com/feature_archive/beer.htm).

<sup>10</sup> Kenneth T. Jackson (ed.), *The Encyclopedia of New York City* (New Haven: Yale University Press, 1995), 136.

<sup>11</sup> The Volstead Act stated that "no person shall manufacture, sell, barter, transport, import, export, deliver, furnish or possess any intoxicating liquor." Unlike previous attempts to limit "intoxicating" liquors (which led to debates regarding whether or not lager beer was intoxicating), the 18<sup>th</sup> Amendment defined intoxicating as over 0.5% alcohol, thereby prohibiting the manufacture and sale of lager beer. However, during the 14 years of prohibition, it is not likely that brewing (greater than 0.5% alcohol) stopped completely in New York City, which was home to an estimated 30,000 speakeasies. Brewing and distilling continued in some locations during this time, albeit as a radically different, illegal industry, operated by gangsters with the help of corrupt politicians and police officers, which eventually led to the repeal of the "unsuccessful" Volstead Act. (Calabrese).

<sup>12</sup> "A major strike in 1949, competition from national giants and their ad campaigns, skyrocketing costs, a lack of room for expansion, and inadequate rail transportation all contributed to the industry's decline." (Snyder-Grenier, 161-62).

<sup>13</sup> This section is based on Landmarks Preservation Commission, *Public School 86 (Irvington School) Designation Report* (LP-1808) (New York: City of New York, 1991).

<sup>14</sup> Henry Reed Stiles, *History of Kings County, including the City of Brooklyn, NY* (Brooklyn: W.W. Munsell & Co., 1884), 270-305.

<sup>15</sup> The Debevoise family is descended from Carel de Beauvois, a French protestant (Huguenot) who immigrated to Leyden, Holland and later to New Amsterdam in 1659. Highly respected and well-educated, de Beauvois served as a

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teacher, and later “chorister, reader and schoolmaster’ for the people of Brooklyn,” due to his knowledge of the Dutch language. As such an early settler, numerous branches of the family developed, many of whom became prominent citizens in Kings and Queens counties. Versions of the name include De Bevoise and De Be Voise. (History of Queens County with Illustrations, Portraits & Sketches of Prominent Families and Individuals. (New York: W.W. Munsell & Co., 1882), 317-318, 352); United States Census Records, 1800, 1810, 1820.

<sup>16</sup> Kings County, Office of the Register, Liber, Deeds, and Conveyances, Liber 23, 282 (May 1, 1823); Eugene L. Armbruster, *The Eastern District of Brooklyn* (New York: Eugene L. Armbruster, 1912), 50. An earlier deed, documenting Francis Debevoise’s purchase of the property, was not listed in the docket books.

<sup>17</sup> Henry Reed Stiles, *History of the City of Brooklyn, Including the old town and village of Brooklin, the town of Bushwick, and the village and city of Williamsburgh* (Brooklyn: Pub. by subscription, 1867-1870), cited in Amy P. Schlagel, "Nineteenth Century Brewery Architecture in America, With Specific Reference to Brooklyn, New York," M.S. thesis (Columbia University, 1976), 20.

<sup>18</sup> Joseph Cunningham and Leonard Dehart, *A History of the New York City Subway System, Part II, Rapid Transit in Brooklyn* (New York: 1977), 9-13.

<sup>19</sup> Adam J. Schwartz, Meryl Meisler, Josh Lapidus, and Tim Evans, *Up from Flames, Mapping the Recovery of Bushwick 1977-2007*, text from an exhibit at the Brooklyn Historical Society, May 23 to August 26, 2007, available on-line (February 25, 2010) at: <http://www.brooklynhistory.org/exhibitions/flames.html>. Additional information in this section from: [http://www.upfromflames.com/uff\\_path/uff\\_path.html](http://www.upfromflames.com/uff_path/uff_path.html).

<sup>20</sup> The following section on German Immigration, Brooklyn’s Eastern District and Lager Beer is based on LPC, (Former) *Scheffel Hall Designation Report* (LP-1959) (New York: City of New York, 1997), report prepared by Gale Harris; Stanley Nadel, *Little Germany: Ethnicity, Religion, and Class in New York City, 1845-1880* (Urbana: University of Illinois Press, 1990); Stanley Nadel, s.v. "Germans" and "Kleindeutschland" in the *Encyclopedia of New York City*; Jay P. Dolan, *The Immigrant Church: New York's Irish and German Catholics, 1815-1865* (1977; Rpt. Notre Dame: University of Notre Dame, 1983); Anderson; and Baron.

<sup>21</sup> Nadel, "Germans," *Encyclopedia of New York City*, 463.

<sup>22</sup> A Turnverein is a gymnastics society founded in Germany based on the teachings of Prussian nationalist, Friedrich Ludwig Jahn. In America, especially in cities where large German populations settled, “the principal German organizations, other than the churches, for maintaining cultural and social traditions were the singing and gymnastics societies known respectively as the “Gensang Vereins” and the “Turn Vereins” (Gesang = singing; turn = gymnastics; verein = club or society) established not long after the arrival of the first significant numbers of Germans in the late 1840s and early 1850s. These groups, which came to be known among the non-Germans in the community simply as the “Turners,” traced their origin to the work of Father Freidrich Ludwig Jahn who established the first Turn Verein in Berlin in 1809 at the time Germany was being suppressed by Napoleon. Father Jahn supposedly formed the groups to drill his followers in gymnastics and military tactics with the object of making them better soldiers. In later years, however, music, theatricals and oratory were added to the social function in the German community. ...The Turners included a healthy cross section of the entire German population, men and women, rich and poor, old and young alike-in their activities...The German groups were less concerned with justifying their activities as being ‘cultural’ or ‘educational,’ and therefore had no compunctions about holding their gatherings in the saloons.” (Robert L. Dyer, “The Boonville Turner” from *Boonville an Illustrated History*, available on-line (March 5, 2008) at: <http://www.undata.com/turnerhall/thhist.htm>.) Like in the fatherland, some of the American “Turner” societies, which were mainly comprised of political refugees, had strong political convictions. That fact, in combination with general racial discrimination against the Germans, a common sentiment surrounding large ethnic groups that immigrated in the mid-19<sup>th</sup> century, created an air of suspicion around these large societies, especially when groups from different cities united and held large Turnfeste. Preceding the Civil War, the Turnerbund or general association of American Turnvereine took an anti-slavery and pro-Lincoln political stand, which alienated some of the organization’s members, especially southern groups. During the draft riots of 1863, hundreds of black were given refuge from the violent mobs at the Williamsburg Turn Verein. Later, the political focus was abandoned for a renewed focus on the physical and social aspects of the societies. An article in the Brooklyn Eagle form 1856 describes that “the prejudices against the Turners have worn off, and they are now justly regarded as an honorable fraternity, having no political organization or impulses save the general love of liberty

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implanted in the German mind.” (Henry Metzler, History of the American Turners, “Establishment of the American Turners,” available on-line (March 5, 2008) at: <http://www.americanturners.com/establishment.htm>; No title, *Brooklyn Eagle*, December 31, 1856, 3; LPC, (Former) *Colored School No. 3, later Public School 69 Designation Report* (LP-1977) (New York: City of New York, 1998), prepared by Donald Presa.)

<sup>23</sup> Anderson, 27.

<sup>24</sup> Information in this section available from: Kings County, Office of the Register, Liber, Deeds, and Conveyances, Liber 1034, 69 (February 5, 1871); Liber 1041, 202 (March 28, 1872); Liber 1041, 205 (March 28, 1872); Liber 1067, 510 (September 18, 1872); Liber 1455, 36 (March 1, 1882); Liber 1485, 368 (November 1, 1882); Liber 1534, 457 (December 11, 1883); Liber 1934, 43 (December 17, 1889); “William Ulmer Dead,” *Brooklyn Eagle*, December 16, 1907, 20; “Obituary,” *New York Times*, March 18, 1891; “Sudden Death of Anton Vigelius,” *Brooklyn Eagle*, March 17, 1891; “Dwellings,” *Brooklyn Eagle*, July 26, 1872, 3; “18<sup>th</sup> Ward. A Territory Large Enough for a City,” *Brooklyn Eagle*, October 26, 1885, 4; “Over Half a Million Capital,” *Brooklyn Eagle*, May 15, 1900, 13; “A New Summer Resort,” *Brooklyn Eagle*, August 3, 1891, 4; “At Shady Ulmer Park,” *Brooklyn Eagle*, June 17, 1894, 16; “Left \$10,000 to Church,” *Brooklyn Eagle*, March 30, 1908, 22; “J. W. Weber Dies in Brooklyn Home,” *New York Times*, May 28, 1933, 14; “John F. Becker Dies: Old-time Brewer,” *Brooklyn Eagle*, April 16, 1921, 2; Brooklyn Department of Buildings, NB636/1885; NB638/1885; NB900/1890; NB370/1893; ALT1815/1897; New York City Department of Buildings, Brooklyn, ALT1847/1900; ALT3387/1906; ALT3409/1906; ALT6941/1910; ALT7262/1920; ALT2074/1961.

<sup>25</sup> Ulmer’s cousins, George C. and Henry C. Clausen Jr. and uncle John F. Betz (who may also have been a cousin rather than an uncle), learned the art of brewing at the Yuengling Brewery in Pottsville, Pennsylvania, the oldest brewery continually operating under the same family in the country and also one of the earliest lager breweries. The brewery connection was likely made by Betz, whose sister married the brewery’s founder David Gottlieb Yuengling thereby maintaining a lifelong relationship with the Pennsylvania brewing family. Henry C. Clausen Sr. and Betz both founded successful independent breweries in New York in the 1850s, and also a shared business, The Clausen & Betz Brewery, which only lasted a short time. Both the Clausen and Betz names became prominent in the brewing industries of New York and Philadelphia. Clausen’s brewery operated under the name Phoenix Steam Brewery from 1855-66, later using H. Clausen & Son to acknowledge his son’s role in the company. The successful brewery was the sixth largest in the country in 1877 and continued to operate until 1910, under various owners and names including H. Clausen & Son Brewing Co., New York Breweries Co., Clausen-Flanagan Brewery - Clausen Branch. As a brewer, Henry C. Clausen Jr. was a founding member and later served as president (1866-75) of the U.S. Brewers’ Association. Having already retired from brewing, Clausen Jr. died of the liver complications at the age of 55. After completing his apprenticeship at the Yuengling Brewery, Betz traveled to Europe to refine his brewing skills. His Eagle Brewery, aka Betz & Co., operated in New York City from 1853 until 1880, and continued to operate under different ownership until 1892. Betz also had an interest in the Bauer and Betz Brewery (1876-82) and a partnership with Henry Lembeck in a Jersey City brewery, but achieved most of his success in Philadelphia. Betz leased William Gaul’s Brewery in 1867 and added lager to the ales and porters already brewed there. Within two years, he purchased the brewery and changed the company name to John F. Betz, and later John F. Betz and Son. It was Philadelphia’s third largest of 85 breweries in 1878. In 1880 and 1886, the company expanded with the construction of a new brewery and the takeover of the Germania Brewing Company, respectively. Betz’s reinvestment of the wealth generated by brewing back into the business and in real estate led him become one of Philadelphia’s most prominent and wealthiest citizens. Although Betz died in 1900, the brewery continued in operation until 1939. (Information in this note available from Tavern Trove available on-line (February 8, 2008) at: [www.taverntrove.com](http://www.taverntrove.com); Mark A. Noon, *Yuengling: A History of America’s Oldest Brewery* (Jefferson, NC: McFarland & Company, Inc., 2005), 73-76; Downard; “Death of Henry Clausen, Jr.,” *New York Times*, December 19, 1893, 8; “John F. Betz, Brewer, Dead,” *New York Times*, January 17, 1908, 9.)

<sup>26</sup> Kings County, Office of the Register, Liber, Deeds, and Conveyances, Liber 874, 134 (February 23, 1869); Liber 1076, 243 (August 14, 1871). The price listed in the deed to Ulmer was \$4126.23.

<sup>27</sup> “Lager Beer. A Trip through the Breweries of Williamsburgh,” *Brooklyn Eagle*, August 12, 1875, 2.

<sup>28</sup> The deed lists the purchase price as “\$5500 and other considerations.” Kings County, Office of the Register, Liber, Deeds, and Conveyances, Liber 1298, 332 (December 1, 1877); “William Ulmer Dead.”

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<sup>29</sup> The brewery's early success allowed Ulmer to construct an Italianate Revival-style mansion c.1880 on Willoughby Street and Bushwick Avenue, which later became known for its "impeccable and stolid mansions, freestanding town palaces advertising the wealth and taste of local industrial magnates." (Norval White and Elliot Willensky, *ALA Guide to New York City, 4<sup>th</sup> Edition* (New York: Three Rivers Press, 2000), 748.) After many years of the neglect and a recent fire, the former Ulmer home was demolished in 2004, however the carriage house remains, converted into a residence with a later addition.

<sup>30</sup> "Over Half a Million Capital."

<sup>31</sup> "William Ulmer Dead;" "Left \$10,000 to Church."

<sup>32</sup> Based on an October 5, 1907 article in the *Brooklyn Daily Eagle*, Anderson claims that 75% of Brooklyn saloons were owned or somehow controlled by the brewers. (Anderson, 22) Examples of the William Ulmer Brewery's ownership of taverns can be found in an advertisement in the *Brooklyn Eagle* for "two first-class corner saloons in Brooklyn to let at very reasonable terms." ("Business Opportunities," *Brooklyn Eagle*, March 14, 1915, 14.) Another is found in the article, "From the Fresh Ponds to P.S. 88, The Ring Family was Always Nearby," *Times Newsweekly* available (March 3, 2008) at: <http://www.timesnewsweekly.com/Archives2002/Apr-Jun.2002/042502/NewFiles/OURNEIGH.html>.

<sup>33</sup> "Ruth Attracts Crowd of 16,500, Dexter Park," available on-line (November 5, 2007) at: <http://www.covehurst.net/ddyte/brooklyn/dexter.html>.

<sup>34</sup> "Building Permits," *The Newtown Register*, February 5, 1914, 8; Sanborn Fire Insurance Map of the Borough of Queens (1918), vol. 3, 99.

<sup>35</sup> "Corporate Changes" *New York Times*, March 25, 1930, 54.

<sup>36</sup> A portion of this section has been adapted from LPC, *Estey Piano Company Factory* (LP-2195) (New York: City of New York, 2006), prepared by Michael Caratzas, and draws upon the following sources: Betsy Hunter Bradley, *The Works: The Industrial Architecture of the United States* (New York: Oxford University Press, 1999) 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), 22-90. Other sources for this section include Schlagel; and *One Hundred Years*.

<sup>37</sup> *One Hundred Years*, 134.

<sup>38</sup> *One Hundred Years*, 134-5.

<sup>39</sup> *One Hundred Years*, 137.

<sup>40</sup> During the modern period, brew houses became significantly taller with more decorative detail, described as "high, lofty and airy, often richly adorned," and often included all brewing functions in one building, rather than spread between several buildings and/or additions. (*One Hundred Years*, 141.) Although most were constructed earlier, several of the extant former Brooklyn breweries, including the George Malcolm Brewery (Flushing and Franklin Avenues, expanded 1890s); Consumers' Park Brewery (Franklin Avenue and Montgomery Street, 1898); and F&M Schaefer Brewery (Kent Street, 1916) show the influence of the "modern" period of brewery design. Consumer's Park Brewery on Franklin Avenue and Montgomery Street was constructed in 1898 as a model facility. Much of the complex remains, but the upper stories and pyramidal roof of the brew house have been demolished. Designed by New York brewery architect C. F. Terney, prior to its construction, the *Brooklyn Eagle* stated "architecturally the brewery will be an ornament." Also constructed during the brewing industry's "modern" period of architecture, the large building at 396-408 Flushing Avenue was built in 1890 when George Malcolm began brewing lager beer in addition to ale and porter at his Malcolm Brewery. Although alterations have removed much of the detailing of the building, its grandeur is still discernable. The building was designed by Philadelphia architect Otto Wolf, a brewery specialist. Finally, the Schaefer Brewery, which moved from Midtown Manhattan to the Williamsburgh waterfront in 1916, constructing a brand new modern plant. Unfortunately, these 1916 buildings have been demolished. Those that remain at the Kent Avenue site were part of the 1930s, post-Prohibition expansion. (Anderson, 36, 112-116; Schlagel, 61, 77-79, 106.)

<sup>41</sup> Bradley, 202.



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<sup>42</sup> Bradley, 60.

<sup>43</sup> Bradley, 162.

<sup>44</sup> Bradley, 234.

<sup>45</sup> Decorative brickwork can be found on many of the other extant former brewery building found in Brooklyn, including those at the former Consumers Park, Bedford/Nassau, George Malcolm/Franklin, Joseph Fallert, Otto Huber, and Frank Ibert breweries. These details were also found on and on residential buildings that were contemporary to the Ulmer Brewery buildings, particularly large multiple dwellings with similarly expansive facades. Many residential 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 decorative brickwork that breaks up and animates their lengthy facades.

<sup>46</sup> Classified Advertisements: "Brewers," *Brooklyn Eagle*, January 2, 1898, 7. For other examples, see *King's Handbook of New York City* (Boston: Moses King, 1893), which contains a large section, spanning pp. 913-984, devoted to "notable manufacturers" that included many illustrations of factory complexes.

<sup>47</sup> This section has been adapted from *Estey Piano Company Factory Designation Report*; and LPC, *Eberhardt Faber Pencil Company Historic District Designation Report* (LP-2264) (New York, City of New York, 2007), prepared by Donald Presa. Information in this section is adapted from LPC, *Flatbush District No. 1 School Designation Report* (LP-2285) (New York, City of New York, 2007), prepared by Michael D. Caratzas; and LPC, *Standard Varnish Works Factory Office Building Designation Report* (LP-2250) (New York, City of New York, 2007), prepared by Gale Harris; Brooklyn Department of Buildings, NB636/1885; NB638/1885; NB900/1890; New York City Department of Buildings, Brooklyn, ALT1847/1900; ALT3387/1906; ALT3409/1906; ALT6941/1910; ALT7262/1920; ALT2074/1961; George Bromley, "Atlas of the Entire City of Brooklyn, Complete in One Volume," (New York: G. W. Bromley & Co., 1880), plate 20; Sanborn Fire Insurance Map of the City of Brooklyn (1887) vol. 3, 70; Sanborn Fire Insurance Map of the Borough of Brooklyn (1918), vol. 3, 47; Classified Advertisements, "Horses and Carriages," *New York Evening Telegram*, September-October 1918; B.F. Goodrich Company, *The Goodrich* (Akron, Ohio: B.F. Goodrich Company, 1911) vol. 1-2, 27; Perth Amboy Terra Cotta Company Catalog, 1895; New York City Department of Taxes, c.1939 photographs.

<sup>48</sup> Bradley, 235.

<sup>49</sup> Bradley, 136.

<sup>50</sup> Otto Huber, a German-immigrant brewer, operated a large brewery on Meserole Street and Bushwick Place beginning in the late 1860s. The extant buildings of the brewery, although some have alterations, feature many characteristics of the American round arch style, including: round- and segmentally-arched window openings, corbelled and other decorative brickwork and projecting pilasters. Huber employed first generation German-American architects John Platte and Charles Stoll, and later German-immigrant Frederick Wunder, among the architects of his brewery. Further west on Meserole Street, near Lorimer Street, the brewery constructed for Joseph Fallert also features characteristics of the American round arch style. Visible on the extant buildings are: round- and segmentally-arched window openings with corbelled archivolt, blind arcades, and castellated, decorative brickwork at the tower. Platte and Wunder are both credited with having designed several buildings at the complex. Like Ulmer, the office building of the Fallert brewery, designed in the Romanesque Revival style, is the focal point of the complex. (Schlagel, 52-55; 96-98). Other factory buildings that are also excellent, extant examples of the *Rundbogenstil* style include: Estey Piano Company Factory 112-28 Lincoln Avenue, Bronx (A.B. Ogden & Son, 1885-86); Havemeyers & Elder Filter, Pan & Finishing House, 292-314 Kent Avenue, Brooklyn (Theodore Havermeyer and others, 1881-84); Joseph Loth & Company Silk Ribbon Mill, 1828 Amsterdam Avenue, Manhattan, (Hugo Kafka, 1885-86); Standard Varnish Works Staten Island (1892-93); Flatbush District No. 1 School (1878, c.1890-94); Public School 34 in Greenpoint (1867, 1870, 1887-88); Public School 111 in Prospect Heights (1867, 1888); and Colored School No. 3 in Bushwick (1879-81), all of which are designated New York City Landmarks.

<sup>51</sup> However, the brewery still had other minor buildings constructed and alterations done. In 1893, Wunder designed a small, one-story frame addition to the Beaver Street storage building, which was later replaced with a two-story brick building. Four years later, Wunder was hired to replace wood beams and guiders with steel framing in the

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storage portion of the original 1872 brewery building and adjacent addition. The cast iron star ties on the building date from this alteration. Architect and mason, Michael Armendinger is listed on a permit in 1899 to construct a long, one-story frame wagon shed along the Locust Street side of the property, enclosing the central courtyard (which is now occupied by a parking garage). (Brooklyn Department of Buildings, NB370/1893; ALT1815/1897; New York City Department of Buildings, Brooklyn, ALT/1899.)

<sup>52</sup> "Brooklyn Breweries," *Brooklyn Eagle*, December 5, 1886, 7.

<sup>53</sup> In 1900, architect Benjamin Finkenseiper designed minor interior alterations to the office building and a second story storage addition above the attached wagon room. (New York City Department of Buildings, Brooklyn, ALT1847/00.)

<sup>54</sup> Information in this section is available from Carl Wilhelm Schlegel, *Schlegel's American Families of German Ancestry in the United States*, vol. 1 (Baltimore: Genealogical Publishing Co., 2003); Stiles; *Eberhardt Faber Pencil Factory Historic District Designation Report*, LPC, *Greenpoint Historic District Designation Report* (LP-1248) (New York: City of New York, 1982), prepared by James T. Dillon and the research staff; Schlagel; LPC research file, "Theobald Engelhardt."

<sup>55</sup> In 1856, Theobald M. Engelhardt is listed as the first scholar on the admission list of the Williamsburgh (later Eastern District) Turnverein School, where his family appears to have been very involved, his aunt as an instructor and his father as a member of the management committee. The school, which included primary, grammar, high school and later, preparatory or college classes, developed a high standard as an institution among the leading German-American families of the Eastern District. In 1873, Philip Engelhardt was the contractor and builder for the new Turnverein school building at 61-63 Meserole Street, with his son serving as his and the architect's assistant. Like his father, the younger Engelhardt later served as a member of the school's management committee, and was selected to design a new Turnverein building in 1902. (Schlegel 390-1; "Arion's New President," *Brooklyn Eagle*, March 23, 1903, 11).

<sup>56</sup> Among the buildings credited to Philip Engelhardt are: the Kips Bay malthouse, the Malcolm malthouses on Bergen Street and Franklin Avenue (later Nassau Brewery, extant), the Malcolm malthouses on Flushing Avenue and Skillman Street (later Franklin brewery, extant), the original brewing plant and later, large malthouse of S. Liebmann & Son's Brewing Company, part of the Lanzer Brewery on Liberty and Georgia Avenues (later Piel Brothers), and the Obermeyer & Liebmann brewery and malting plant on Bremen and Forrest Street in the Eastern District. (Schlegel, 392).

<sup>57</sup> Those brewery commissions include: an office building (1880, designed with William Wolf), an ice storage shed, boiler house and wash/machine house (1882), four, three-story brick houses (1882), a main brew house (1884), and a bottling house (1904) for S. Leibmann and Sons Brewery; and an engine room, a carriage house and ice house (1893) for the Leonard Eppig Brewery. The office building designed for S. Liebmann and Sons brewery featured a terra-cotta initial emblem "SLS," similar to the trademark "U" found on the Ulmer office building. (Brooklyn Department of Building permits and photos listed in Schlagel, 47-99.)

<sup>58</sup> Schlegel, 392.

<sup>59</sup> Schlagel, 113 ; United States Census Records, 1880, 1900, 1910, 1920; "George Grauer's New Brewery at Evergreen," *The Newtown Register*, January 7, 1892; "Artificial Ice Plant," *Syracuse Daily Standard*, 1894; "Bankruptcy Petitions," *Brooklyn Eagle*, December 10, 1915, 17; "Fright Over Forest Blaze Near Home Kills Aged Man," *Brooklyn Eagle*, April 20, 1926, 2; "F. H. Wunder, Was Boro Builder," *Brooklyn Eagle*, March 21, 1942; Brooklyn Department of Building permits listed in Schlagel, 47-99.

<sup>60</sup> *One Hundred Years*, 134-5.

<sup>61</sup> Wunder's brewery commissions include: a bottling house (1896) for Otto Huber, Schaefer's hay and feed storage building (related industry); a bottling house, pump house, carriage house, condenser house, storage building, and ice manufacturing plant (1894-1900), an elaborate Romanesque Revival office (1895), interior alterations (1893), and a wooden tower (1907) at Leonard Eppig brewery; the "Summer Garden" restaurant and beer garden (1889) at the Frank Ibert Brewery; and interior alterations (1889), a stable to bottling plant conversion (1896), and an office (c.1893) at the Joseph Fallert Brewery, according to Schlagel.

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<sup>62</sup> Information in this section is from the following sources, divided by building address:

28 Locust Street: Kings County Office of the Register, Liber, Deeds and Conveyances, Liber 4075, 197 (August 16, 1921); Liber 4232, 286 (March 16, 1923); Liber 4930, 490 (May 22, 1928); Liber 6630, 158, 162, 165 (December 2, 1944); Liber 6828, 494 (January 3, 1946); Liber 7031, 535 (November 18, 1946); Liber 7441, 290 (March 31, 1949); *The Metal Industry*, vol.18 (New York: The Metal Industry Publishing Company, 1920), 54; "2-Alarm Fire Damages Roof of Factory," *Brooklyn Eagle*, July 26, 1944, 12; New York City Department of Buildings, Brooklyn ELEV 10122/32; ELEV 1715/32; JOB #301073549 (in BIS); *New York City Telephone Directories, Brooklyn* (New York: New York Telephone Co., various years 1929-1986); Sanborn Fire Insurance Map of the Borough of Brooklyn (1918), vol. 3, 47; Sanborn Fire Insurance Map of the Borough of Brooklyn (1951), vol. 3, 47; New York City Department of Taxes, c.1939 photographs;

71-83 Beaver Street and 43-45 Belvidere Street: Kings County, Office of the Register, Liber, Deeds and Conveyances, Liber 4158, 285 (August 11, 1922); Liber 4303, 167 (August 30, 1923); Liber 4422, 383 (June 7, 1924); Liber 5176, 137 (January 23, 1931); Liber 5560, 499 (May 28, 1937); Liber 5625, 439 (July 15, 1938); Liber 6658, 329 (January 31, 1945); Reel 86, 119 (December 14, 1965); Reel 865, 1691 (June 14, 1976); Reel 1335, 1971 (March 25, 1983); New York City Department of Buildings, Brooklyn, ELEV 5238/1920; ALT 18302/1923; ALT 18303/1923; NB18/1924; ALT 2183/1936; ALT 1925/1952; ALT 2082/1958; "New Incorporations," *New York Times*, June 6, 1924, 29; *New York City Telephone Directories, Brooklyn*;

31 Belvidere Street: Kings County, Office of the Register, Liber, Deeds and Conveyances, Liber 7896, 320 (February 7, 1952); Liber 9035, 5 (July 18, 1962); Reel 1685, 523 (August 16, 1985); New York City Department of Buildings, Brooklyn, ALT 3477/56; ALT 2074/61; "Water Main Break Causes \$100,000 Loss in Bushwick," *Brooklyn Eagle*, July 7, 1928; "Building Plans Filed," *New York Times*, October 17, 1956, 58; *New York City Telephone Directories, Brooklyn*; New York City Department of Taxes, c.1939 photographs.

<sup>63</sup> The Department of Buildings on-line information system lists two elevators permits for 1932 (ELEV 10122/32; ELEV 1715/32). Although the permit files were not found, the tax photo confirms that the elevator addition was there prior to c.1939.

<sup>64</sup> The bulk of the garage was separated from the brewery lot by 1965, maintaining tax block 3135 lot 20, while the brewery building lot became tax lot 27. In 1983, a smaller corner section of the garage at Beaver and Locust Streets was subdivided from the remainder of the garage into tax lot 25. These garage lots, Tax Block 3135 lots 20 and 25 are not included in this designation. (Kings County, Office of the Register, Liber, Deeds and Conveyances, Reel 86, 119 (December 14, 1965); Reel 865, 1691 (June 14, 1976); Reel 1335, 1971 (March 25, 1983).

<sup>65</sup> New York City Department of Buildings, Brooklyn, ALT 3477/56 and ALT 2074/61. DOB records indicate that ALT 2074/61 was later withdrawn on March 22, 1963. The drawings for that permit show the one story addition at the rear of the lot (however, it is unclear if this addition was existing or proposed. They also show roofing over the driveway and much of the rear/side yard, which is no longer present. The bulkhead above the driveway gate likely dates from these alterations.

<sup>66</sup> Lisa Schachner, Email to LPC (April 6, 2010).

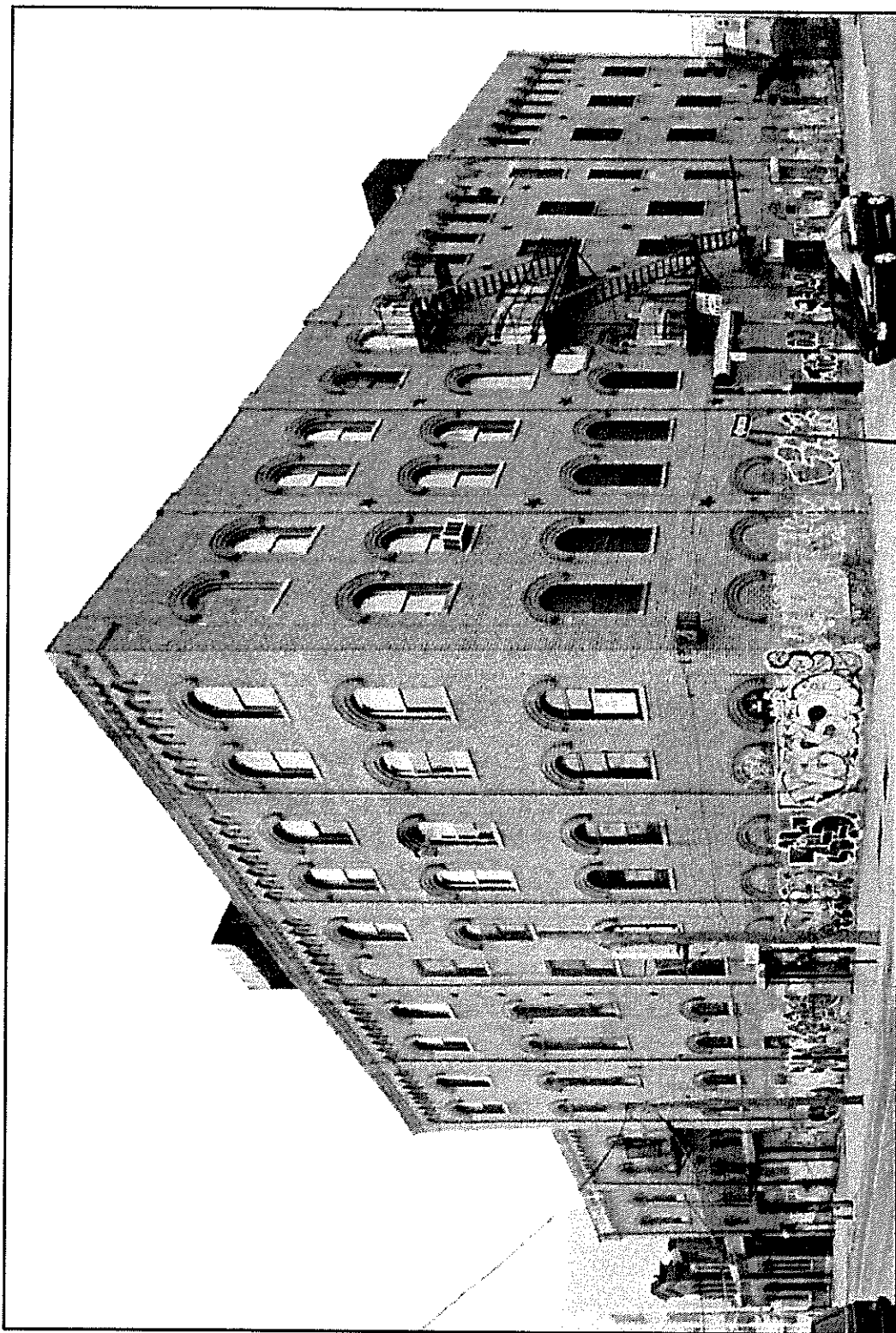
## FINDINGS AND DESIGNATION

On the basis of a careful consideration of the history, the architecture, and other features of these buildings, the Landmarks Preservation Commission finds that the William Ulmer Brewery 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.

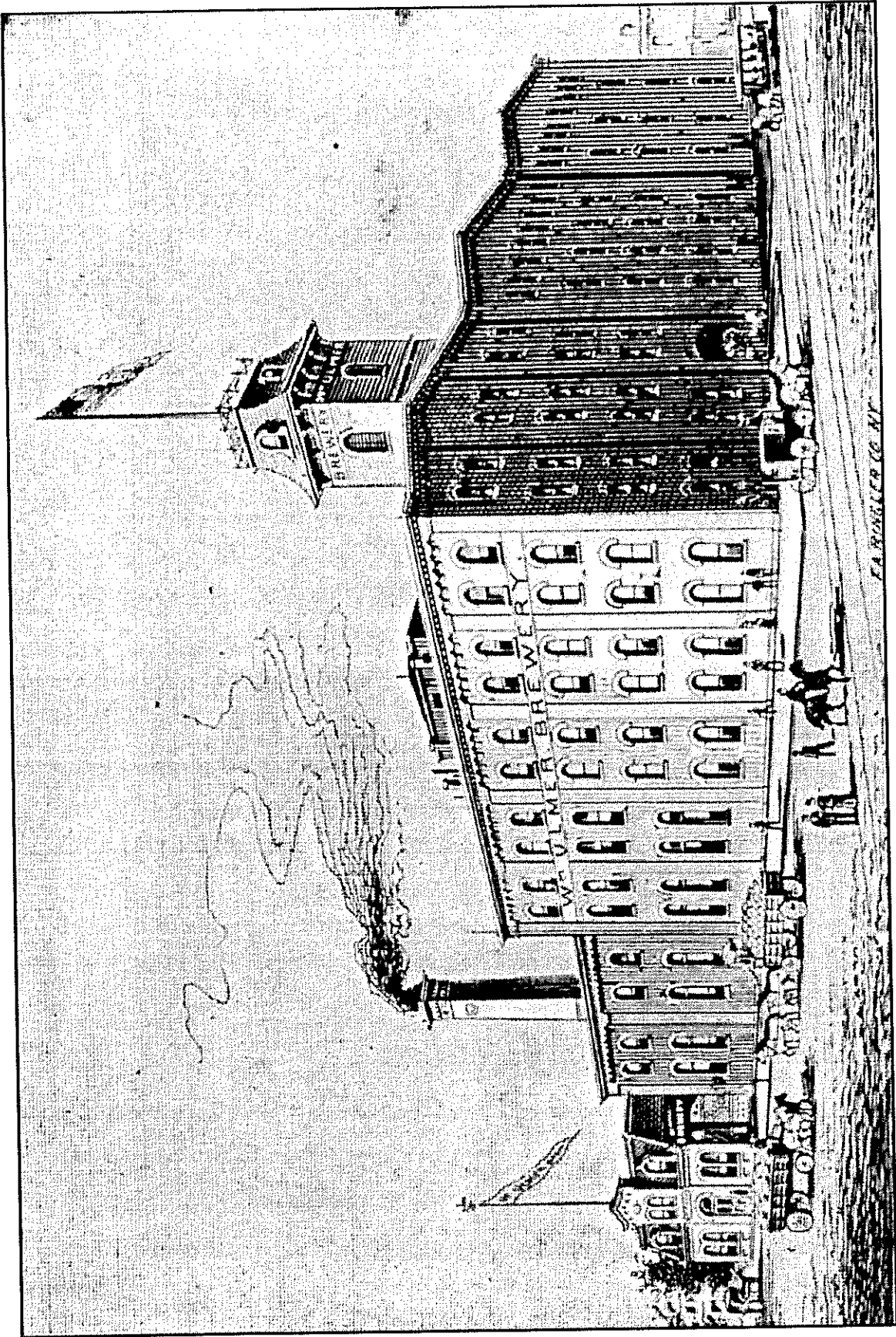
The Commission further finds that, among its important qualities, the William Ulmer Brewery is a reminder of one of Bushwick's, and Brooklyn's, most prominent 19<sup>th</sup>- and 20<sup>th</sup>-century industries; that the entire complex remains a largely intact example of a late-19<sup>th</sup>-century brewery designed in the American round arch style; that it includes the office building, the main brew house and addition, engine and machine houses, and stable and storage building; that the brewery was co-founded by German emigrant, William Ulmer in 1871; that within seven years, Ulmer became the sole proprietor of the brewery; that the business was expanded in the 1880s and 1890s with the construction of ice house, engine-, machine- and wash-room additions, a large storage and stable building, and a handsome Romanesque Revival style office building; that the red brick office building was the architectural highlight of the complex, designed by prominent Brooklyn architect Theobald Engelhardt and constructed in 1885; that the office features arched and dormered windows, a squat mansard roof clad in slate, and terra-cotta ornament; that the building's projecting center bay incorporates remarkably crisp red terra-cotta panels that identify the initial of the last name of the owner, the brewery's trademark, and the function of the building, as well as corbelled brickwork and a blind arcade; that the office building was separated from the larger brewery by a richly embellished, historic iron gate that is possibly original to the structure; that the other buildings of the Ulmer brewery complex feature details commonly found on other 19<sup>th</sup>-century breweries, including round arch-headed and segmentally arch-headed window and door openings, projecting brick pilasters, pedimented parapets and corbelled, denticulated, zigzag-patterned, and channeled decorative brickwork, all characteristic of the American round arch style; that the William Ulmer Brewery was one of the more successful breweries in operation in Brooklyn prior to Prohibition; that the enactment of Prohibition closed the Ulmer brewery; and that the buildings remain largely intact and retain the detailing that defines their history and use.

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 William Ulmer Brewery, Office, 31 Belvidere Street, Main Brew House and Addition, 71-83 Beaver Street (aka 45-47 Belvidere Street), Engine and Machine House, 35-43 Belvidere Street, Stable and Storage Building, 26-28 Locust Street, Brooklyn, and designates Borough of Brooklyn Tax Map Block 3135, Lots 34, 27, 16 as its Landmark Site.

Robert B. Tierney, Chair  
Pablo E. Vengoechea, Vice-Chair  
Frederick Bland, Stephen F. Byrns, Diana Chapin, Joan Gerner,  
Christopher Moore, Margery Perlmutter, Commissioners



**William Ulmer Brewery  
Office, 31 Belvidere Street,  
Main Brew House and Addition, 71-83 Beaver Street (aka 45-47 Belvidere Street),  
Engine and Machine House, 35-43 Belvidere Street,  
Stable and Storage Building, 26-28 Locust Street, Brooklyn  
Borough of Brooklyn Tax Map Block 3135, Lots 34, 27, 16**  
*Photo: Christopher D. Brazeel, 2009*



William Ulmer Brewery  
Photo: The Brooklyn Historical Society  
Eugene L. Armbruster Photograph and Scrapbook Collection

# SOHO-CAST IRON HISTORIC DISTRICT EXTENSION

Designation Report

May 11, 2010

LAND USE DIVISION  
200 MAY 19 P 3 53



**NYC**<sup>TM</sup>

Landmarks Preservation  
Commission

Cover Photograph:  
386-388 to 392-394 West Broadway  
*Christopher D. Brazee, 2010*



**SOHO-CAST IRON  
HISTORIC DISTRICT EXTENSION  
Designation Report**

Prepared by  
Donald G. Presa

Edited by  
Mary Beth Betts  
*Director of Research*

Photographs by  
Christopher D. Brazee and Donald G. Presa

Map by Jennifer L. Most

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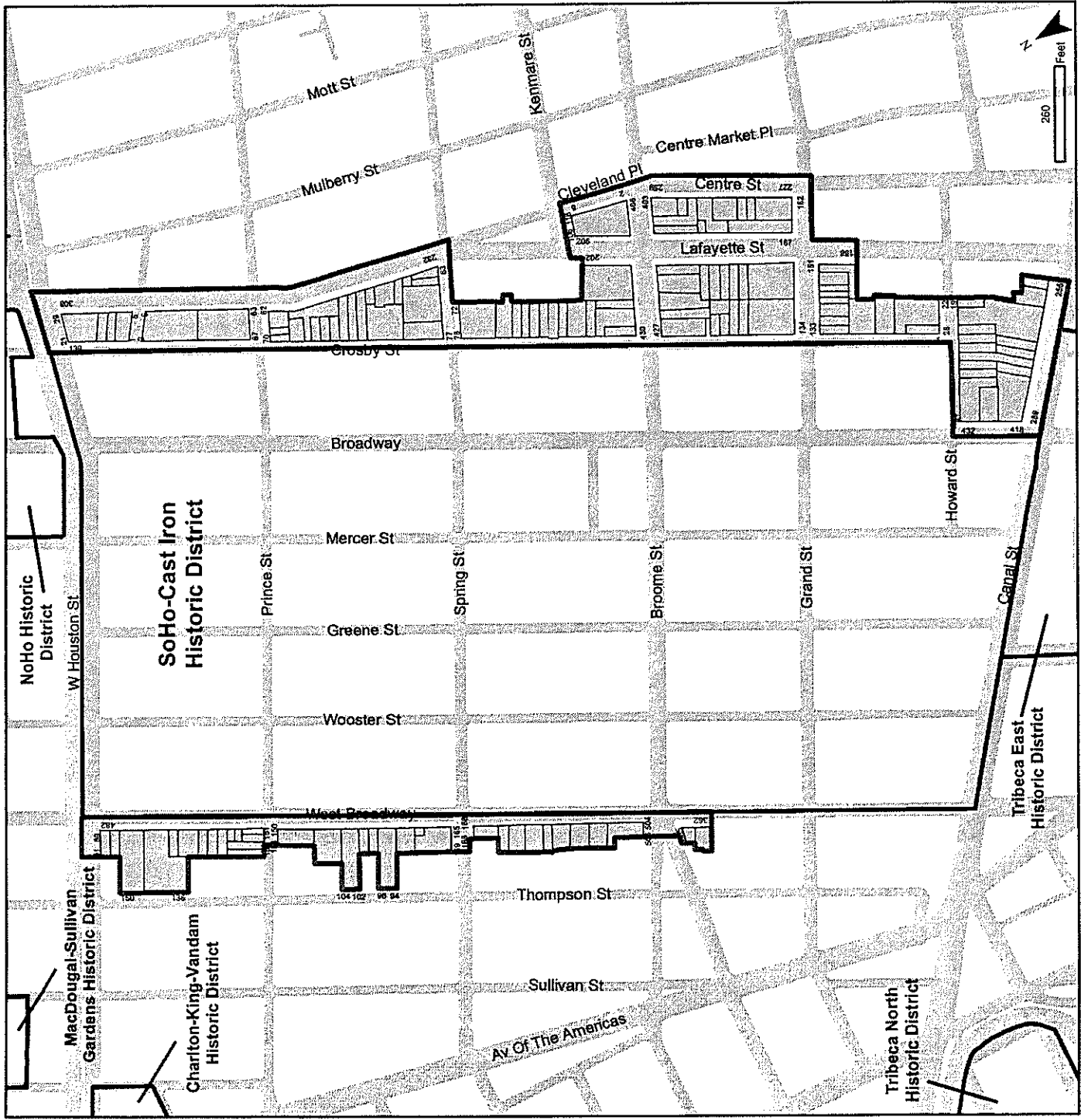
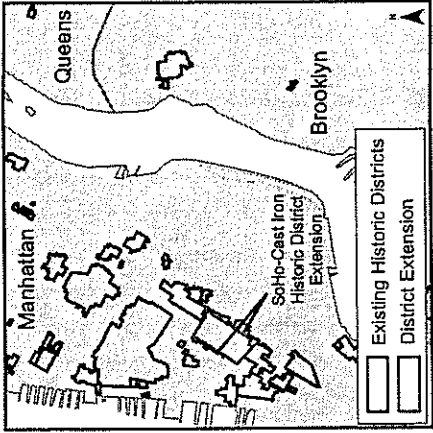
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# SoHo-Cast Iron Historic District Extension

SoHo-Cast Iron  
Historic District Extension  
Borough of Manhattan, NY  
Landmarks Preservation Commission

Calendared: June 23, 2009  
Public Hearing: October 27, 2009  
Designated: May 11, 2010

-  Boundary of Existing Districts
-  Boundary of District Extension
-  Tax Map Lots, District Extension



**Landmarks Preservation Commission  
May 11, 2010, Designation List 429  
LP-2362**

**TESTIMONY AT THE PUBLIC HEARING**

On October 27, 2009, the Landmarks Preservation Commission held a public hearing on the proposed designation of the SoHo-Cast Iron Historic District Extension (Item. No. 3). The hearing was duly advertised according to the provisions of law. Twenty-four witnesses spoke in favor of the designation, including Councilmember Alan J. Gerson, as well as representatives of Manhattan Borough President Scott Stringer, State Senator Daniel Squadron, Manhattan Community Board 2, Society for the Architecture of the City, the New York Landmarks Conservancy, the Municipal Arts Society, and the Historic Districts Council. Fourteen speakers testified in opposition to the proposed designation, including the owners of several buildings and their representatives, as well as a representative of the Real Estate Board of New York. In addition, the Commission received numerous letters, e-mails, and post cards in support of designation. The Commission also received a number of communications opposed to the designation.

**SOHO-CAST-IRON HISTORIC DISTRICT EXTENSION BOUNDARIES**

*Area 1:* The SoHo-Cast Iron Historic District Extension consists of the properties bounded by a line beginning at the southwest corner of West Broadway and West Houston Street, then extending westerly along the southern curbline of West Houston Street, southerly along the western property lines of 482 and 480 West Broadway, westerly along the northern property line of 474-478 West Broadway (aka 146 Thompson Street) to the eastern curbline of Thompson Street, southerly along the eastern curbline of Thompson Street to a point formed by its intersection with a line extending westerly from a part of the southern property line of 468-472 West Broadway (aka 138-150 Thompson Street), easterly along a portion of the southern property line of 468-472 West Broadway (aka 138-150 Thompson Street), southerly along the western property lines of 460 to 454 West Broadway and 157 Prince Street to the northern curbline of Prince Street, easterly along the northern curbline of Prince Street to a point formed by its intersection with a line extending northerly from the western property line of 150-154 Prince Street (aka 436-442 West Broadway), southerly across Prince Street and along the western property line of 150-154 Prince Street (aka 436-442 West Broadway), westerly along the northern property line of 430-436 West Broadway, southerly along the western property line of 430-436 West Broadway, westerly along the northern property line of 426-428 West Broadway (aka 102-104 Thompson Street) to the eastern curbline of Thompson Street, southerly along the eastern curbline of Thompson Street to a point formed by its intersection with a line extending westerly from the southern property line of 426-428 West Broadway (aka 102-104 Thompson Street), easterly along the southern property line of 426-428 West Broadway (aka 102-104 Thompson Street), southerly along the western property lines of 424 and 422 West Broadway, westerly along the northern property line of 418-420 West Broadway (aka 94-96 Thompson Street) to the eastern curbline of Thompson Street, southerly along the eastern curbline of Thompson Street to a point formed by its intersection with a line extending westerly from the

southern property line of 418-420 West Broadway (aka 94-96 Thompson Street), easterly along the southern property line of 418-420 West Broadway (aka 94-96 Thompson Street), southerly along the western property lines of 414-416 West Broadway and 169 Spring Street to the northern curblines of Spring Street, easterly along the northern curblines of Spring Street to a point formed by its intersection with a line extending northerly from the western property line of 166 Spring Street (aka 402-404 West Broadway), southerly across Spring Street and along the western property line of 166 Spring Street (aka 402-404 West Broadway), westerly along the northern property line of 400 West Broadway, southerly along the western property lines of 400 to 390 West Broadway, easterly along the southern property line of 390 West Broadway, southerly along the western property lines of 386-388 to 378-380 West Broadway and a portion of the western property line of 372-376 West Broadway (aka 504-506 Broome Street), easterly along a portion of the southern property line of 372-376 West Broadway (aka 504-506 Broome Street), southerly along a portion of the western property line of 372-376 West Broadway (aka 504-506 Broome Street) and across Broome Street (Watts Street) to the southern curblines of Broome Street (Watts Street), westerly along said curblines to a point formed by its intersection with a line extending northerly from the western property line of 505 Broome Street (aka 366-368 West Broadway and 1-3 Watts Street), southerly along the western property line of 505 Broome Street (aka 366-368 West Broadway and 1-3 Watts Street), westerly along a portion of the northern property line of 362-364 West Broadway, southerly along a portion of the western property line of 362-364 West Broadway, westerly along a portion of the northern property line of 362-364 West Broadway, southerly along a portion of the western property line of 362-364 West Broadway, easterly along the southern property line of 362-364 West Broadway to the centerline of West Broadway, northerly along the centerline of West Broadway to a point formed by its intersection with a line extending easterly from the southern curblines of West Houston Street, then westerly to the point of the beginning.

*Area 2:* The SoHo-Cast Iron Historic District Extension consists of the properties bounded by a line beginning at the southwest corner of Lafayette Street and East Houston Street, then extending southerly along the western curblines of Lafayette Street, across Prince Street and following the curve of Lafayette Street to the northwest corner of Lafayette Street and Spring Street, westerly along the northern curblines of Spring Street to a point formed by its intersection with a line extending northerly from the eastern property line of 72-78 Spring Street (aka 65-71 Crosby Street), southerly across Spring Street and along the eastern property line of 72-78 Spring Street (aka 65-71 Crosby Street) and a portion of the eastern property line of 61-63 Crosby Street, easterly along a portion of the northern property line of 61-63 Crosby Street, southerly along a portion of the eastern property line of 61-63 Crosby Street, westerly along the southern property line of 61-63 Crosby Street, southerly along the eastern property lines of 59 to 44-47 Crosby Street, easterly along the northerly property line of 416-422 Broome Street (aka 202 Lafayette Street) to the western curblines of Lafayette Street, northerly along said curblines to a point formed by its intersection with a line extending westerly from the southern curblines of Kenmare Street, easterly across Lafayette Street and along the southern curblines of Kenmare Street to the southwest corner of Kenmare Street and Cleveland Place, southerly along the western curblines of Cleveland Place, across Broome Street, and continuing southerly along the western curblines of Centre Street to the northwest corner of Centre Street and Grand Street, westerly along the northern curblines of Grand Street and across Lafayette Street to the northwest corner of Grand Street and Lafayette Street, southerly across Grand Street and along the western

curbline of Lafayette Street to a point formed by its intersection with a line extending easterly from the southern property line of 158-164 Lafayette Street (aka 151 Grand Street), westerly along the southern property line of 158-164 Lafayette Street (aka 151 Grand Street), southerly along the eastern property lines of 13-17 to 1 Crosby Street (aka 28 Howard Street), across Howard Street and continuing southerly along the eastern property line of 19 Howard Street and a portion of the eastern property line of 21-23 Howard Street (aka 261-267 Canal Street, easterly along a portion of the northern property line 257 Canal Street, southerly along a portion of the eastern property line of 257 Canal Street, easterly along a portion of the northern property line of 257 Canal Street and the northern property line of 255 Canal Street, southerly along the eastern property line of 255 Canal Street to the centerline of Canal Street, westerly along the centerline of Canal Street to the centerline of Broadway, northerly along the centerline of Broadway to the centerline of Howard Street, easterly along the centerline of Howard Street to the centerline of Crosby Street, northerly along the centerline of Crosby Street to the southeast corner of Crosby Street and East Houston Street, easterly along the southern curbline of East Houston Street to the point of the beginning.

## SUMMARY

The SoHo–Cast Iron Historic District Extension consists of approximately 135 properties located on the blocks immediately adjacent to the east and west sides of the SoHo–Cast Iron Historic District. Many of the buildings date from the same period of development as those in the previously-designated historic district and exhibit similar architectural characteristics. There are several cast-iron-fronted buildings within the extension as well a large number of similarly-styled masonry buildings. The SoHo-Cast Iron Historic District Extension consists of two subsections. The larger eastern section encompasses all of the eastern side of Crosby Street and portions of Lafayette, Howard, and Centre Streets, while the smaller western section includes buildings on the western side of West Broadway, some of which go through the block to the east side of Thompson Street. The boundaries of the extension were drawn so as to protect cohesive streetscapes along narrow Crosby Street and Howard Street as well as a number of notable cast-iron buildings on West Broadway.

Like their counterparts in the designated district, many of the structures within the SoHo-Cast Iron Historic District Extension were erected in the post-Civil War era as store and loft buildings for the wholesale dry goods merchants and the manufacturing businesses that transformed the once comfortable residential neighborhood into a bustling commercial zone in the mid- and late-nineteenth century. The extension displays a variety of architectural styles also present in the SoHo-Cast Iron Historic District, including Italianate, Second Empire, and Queen Anne, as well as the Romanesque and Renaissance Revival styles. In many instances, these buildings were designed by the same prominent architects as those within the previously-designated district: Robert Mook (386-388 West Broadway, built 1871), Italianate style; D. & J. Jardine (28 Howard Street, built 1872, Italianate style), Detlef Lienau (22-26 Howard Street, built 1864-65, neo-Grec style), Renwick & Sands (29 Howard Street, built 1868, neo-Grec style), Samuel A. Warner (428-432 Broadway, built 1888-89, Queen Anne style), George F. Pelham (137-139 Grand Street, built 1911, neo-Classical style), Isaac F. Duckworth (428 Broome Street, built 1868-69, Italianate style), Griffith Thomas (426 Broome Street, built 1869, Italianate style; 419 421 Broome Street, built 1873, Italianate style), Henry Engelbert (424-426 Broadway, built 1868, Italianate style), John H. Whitenack (392-394 West Broadway, built 1872, Italianate style; 422 West Broadway, built 1873-74, Italianate style), and John B. Snook (158-164 Lafayette Street, built 1889-90, Queen Anne style). Other prominent architects and firms whose work is found in the proposed extension include Edward H. Kendall (425-427 Broome Street, built 1874), DeLemos & Cordes (241-249 Centre Street, built 1888-91, Romanesque Revival style; 403-405 Broome Street, built 1890-91, Renaissance Revival style), Albert Buchman (292-296 Lafayette Street, 1897 alteration, Renaissance Revival style), Charles Haight (275 Canal Street, built 1878, Queen Anne style), William Field & Son (134-140 Grand Street, built 1869, Second Empire style), John R. Thomas (278-290 Lafayette Street, built 1891-92 and 1898-99, neo-Grec style), Schneider & Herter (67-73 Spring Street, built 1889-90, Queen Anne style), and Oscar S. Teale (468-472 West Broadway, built 1885, Romanesque Revival style). A number of early residential buildings, dating to the early to mid-nineteenth century, have survived, such as the Federal style houses at 68 and 70 Prince Street, and 133 Grand Street, as well as Greek Revival style houses at 151-157 Prince Street, 19 Howard Street, 33 Howard Street, and 253 Centre Street.

The buildings in the SoHo-Cast-Iron Historic Extension have been occupied by a variety of commercial entities ranging from manufacturers of textiles and clothing in the mid-to-late



nineteenth century to drug wholesalers, toy manufacturers, and electrical and hardware suppliers in the early twentieth century, and paper warehouses and electronics fabricators in the mid-twentieth century. A major change in the type of occupancy occurred after World War Two. As the textile industry began to relocate to the southern United States and then, ultimately, to overseas destinations in search of cheaper labor, many printing plants and “dead storage” warehouses moved into SoHo’s large interior spaces. Many loft buildings were razed and replaced with gas stations, auto repair shops, parking lots, and one-story garages and car washes, producing many somewhat mottled streetscapes. By the late 1950s, the SoHo area was widely considered to be a depressed commercial slum known as “hell’s hundred acres.” But, by the 1960s, an up-and-coming generation of artists discovered large, high-ceilinged, and inexpensive spaces within lofts buildings of SoHo. Vacant warehouses and lofts were converted into studios, galleries and, often illegally, living quarters. The city amended zoning laws in 1971 to permit the movement of artists into the area while preserving the remaining businesses that still employed hundreds of semi-skilled and unskilled workers. For a time, the SoHo area was one of the most important creative centers of contemporary art in the nation. Among some of the notable artists and galleries located in the historic district extension were Keith Haring the A.I.R. Gallery, which was the city’s oldest women’s art cooperative, Leo Castelli, Ileana Sonnabend, John Weber, Andre Emmerich, Charles Cowles, Mary Boone, and Frank Gehry.

The threat of further demolition and large-scale redevelopment subsided greatly when the Landmarks Preservation Commission designated the SoHo-Cast Iron Historic District in 1973; the action protected about 500 buildings on 25 city blocks. By 1978, an estimated five thousand artists were living in SoHo; but around that time, rents and real estate values began a precipitous climb. The area was becoming more fashionable as a residential and commercial address, and many of the artists who had revitalized the once-neglected district were priced out of the gentrifying neighborhood. Upscale boutiques, galleries, restaurants, bars, clubs, hotels, and shops replaced studios and galleries, and most of the remaining small industrial businesses. Many new commercial buildings were constructed in the last two decades of the twentieth century on lots that had been vacant for decades. Late-twentieth-century development trends have continued and even accelerated in the early twenty-first century. Additional new buildings were constructed on many of the empty lots, and several buildings were increased in height.

Today, the SoHo-Cast-Iron Historic District Extension still maintains the essence of its early industrial history, even as it continues to evolve into one of New York City’s most attractive and popular residential neighborhoods and shopping destinations.

## THE HISTORIC AND ARCHITECTURAL DEVELOPMENT OF THE SOHO-CAST IRON HISTORIC DISTRICT EXTENSION<sup>1</sup>

### Early History and Colonial Development of the SoHo-Cast Iron Historic District Extension

Prior to the arrival of European fur traders and the Dutch West India Company, Manhattan and much of the modern-day tri-state area was populated by bands of Lenape Indians. The Lenape traveled from one encampment to another with the changes of the seasons. Fishing camps were occupied in the summer and inland camps were used during the fall and winter for harvesting crops and hunting. The main trail ran the length of Manhattan from the Battery to Inwood, following the course of Broadway adjacent to present-day City Hall Park before veering east toward the area now known as Foley Square. It then ran north with major branches leading to habitations in Greenwich Village and the Lower East Side at a place called Rechtauck or Naghtogack in the vicinity of Corlears Hook. In 1626, Dutch West India Company Director Peter Minuit “purchased” the island from the Lenape for sixty guilders worth of trade goods.<sup>2</sup>

Under the Dutch, most inhabitants of New Amsterdam lived south of Fulton Street where they could be close to each other for protection and close to the harbor for the essential shipping activities on which the colony depended. North of the settlement, many wealthy families owned large estates, which they used as farms and plantations and as country retreats, especially for those times when epidemics threatened the crowded population residing on the island’s tip. Although a narrow majority of New Amsterdam’s inhabitants were Dutch, it was actually a diverse population that included Walloons, English, French, Irish, Swedish, and Germans, among others.

The area that now makes up the SoHo-Cast Iron Historic District and District Extensions was the site of the first free African-American settlement on Manhattan Island. Slavery likely existed from the beginning of the colony, but records indicate that the first importation of slaves took place in 1625 or 1626. Under the Dutch West India Company, slaves, while still not considered the equals of the white colonists, shared the same legal rights, including the right to own property, marry in the Dutch Reformed Church and testify in court. In emergencies, they could also bear arms.<sup>3</sup>

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<sup>1</sup> The report is based on Landmarks Preservation Commission (LPC), *SoHo-Cast-Iron Historic District Designation Report* (LP-0768), prepared by the Research Department (New York, 1973), and includes the following additional sources: Edwin G. Burrows and Mike Wallace, *Gotham: A History of New York City to 1898* (New York: Oxford University Press, 1999); Thelma Wills Foote, *Black and White Manhattan: The History of Racial Formation in Colonial New York City* (New York: Oxford University Press, 2004); Richard Kostelanetz, *Soho: the Rise and Fall of an Artists’ Colony* (New York: Routledge, 2003), 3, 11, 14, 28, 32, 42, 61,80; LPC, *511 Grand Street House Designation Report* (LP-2269) (New York: City of New York, 2007), prepared by Marianne S. Percival; LPC, *Children’s Aid Society, Elizabeth Home for Girls Designation Report* (LP-2274) (New York: City of New York, 2008), prepared by Virginia Kurshan.

<sup>2</sup> Burrows and Wallace, 5-23; Historian R. P. Bolton speculates that the land of lower Manhattan may have been occupied by the Mareckawick group of the Canarsee which occupied Brooklyn and the East River islands. Upper Manhattan was occupied the Reckgawawanc. The Native American “system of land tenure was that of occupancy for the needs of a group” and that those sales that the Europeans deemed outright transfers of property were to the Native Americans closer to leases or joint tenancy contracts where they still had rights to the property. Reginald Pelham Bolton, *New York City in Indian Possession*, 2d ed. (New York: Museum of the American Indian, Heye Foundation, 1920; reprint 1975), 7, 14-15; Robert Steven Grumet, *Native American Place Names in New York City* (New York: Museum of the City of New York, 1981), 69.

<sup>3</sup> Burrows and Wallace, 31-32.

In 1644, the West India Company under Director Kieft granted “half-freedom” to some of the colony’s black slaves and set aside for them a number of lots on the outskirts of town, which became known as the “Free Negro Lots.”<sup>4</sup> Several of the lots were located west of the Bowery, extending north from modern-day Prince Street to about Astor Place, creating the “only separate enclave”<sup>5</sup> of free black landowners in the colonial period. The northern part of the land now within the SoHo-Cast Iron Historic District and its Extension was located in this area.

In 1667, the newly-established English colonial government relegated free blacks—including those who owned property at the Negro Lots—to alien status and denied them the privileges granted to white residents, including the right to own property. By the early 1680s, after a brief reprieve with the Dutch re-conquest and with the subsequent reestablishment of English rule, most of the African landowners lost their property and departed the island for Brooklyn, New Utrecht and New Jersey. The lots located in the SoHo Historic District and Extensions were deeded to wealthy white landowners, many of whom kept Africans as slaves to help manage the land.<sup>6</sup>

In the 1660s, Augustine Herrman (c.1605-1686) began to acquire land in and around the SoHo area.<sup>7</sup> Natives of Prague, Hermann’s family was forced to flee to Amsterdam in 1618 due to his father’s political activity. As an adult, Augustine joined the Dutch West India Company and traded for the company in Curacao, Brazil, and New Netherland. In 1643, he left the company and became the agent in New Netherland for the prominent Dutch mercantile firm of Peter Gabry & Sons. He built a large fortune through trading in furs, slaves, and indigo during his association with Gabry, and became the largest exporter of tobacco in America. Hermann bought extensive tracts of land on Manhattan Island and in New Jersey, not only for himself but for Govert Loockermans and his brother-in-law Nicholas Bayard. Peter Stuyvesant sent him to Maryland in 1659 to conduct negotiations with Lord Baltimore concerning the boundary between his territory and that of the Dutch. Hermann worked on the map of the Maryland territory for over ten years, and was rewarded by Lord Baltimore with over thirteen thousand acres of land in Maryland. Hermann died at Bohemia Manor, Maryland, in 1686. His land holdings in the SoHo area passed to his brother-in-law, Nicholas Bayard.<sup>8</sup>

Nicholas Bayard (c.1644-1707), a nephew of Peter Stuyvesant, was born in the Netherlands and brought to this country by his mother in 1647. He served the government of the Colony in a number of capacities including Surveyor of the Province and Mayor of the City. In 1686, while serving as mayor, he helped to draw the Dongan Charter which guaranteed the rights and privileges of colonial citizens. In 1689, Bayard fled the city during a popular rebellion that was instigated by a political rival and was imprisoned upon his return. He was tried and convicted of high treason, for which he was stripped of his properties and sentenced to be hanged and dismembered. But, he successfully appealed his conviction, which was annulled. All his

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<sup>4</sup> “Half-freedom” liberated the men and their wives in return for an annual payment of “‘thirty skepels of Maize or Wheat, Pease or Beans, and one Fat hog’.” The West India Company could still require their labor, for wages, when necessary. However, manumission only applied to the adults not their children. The lots conferred by the colony, also referred to as the Negro Lots or the Negroes’ Farms, would act as a buffer zone and advanced warning system for the colony in case of an Indian attack. *Ibid.*, 33.

<sup>5</sup> Foote, 149. “Negroes’ Farms” were also found north of City Hall and in Greenwich Village, Burroughs and Wallace, 33.

<sup>6</sup> Foote, 149.

<sup>7</sup> Stokes VI, 72.

<sup>8</sup> *Appleton’s’ Cyclopaedia of American Biography* III (New York: D. Appleton & Co., 1888), 188; Harry B. Yoshpe, *The Journal of Negro History*, Vol. 26, No. 1. (Jan., 1941), pp. 78-107.

lands which had been confiscated were restored to him, and he died quietly in New York City in 1707. His lands passed down to successive generations of Bayards. Both Nicholas Bayard and his heirs were known to have owned slaves.<sup>9</sup>

The SoHo-Cast Iron Historic District and Extension lie in part within the Bayard's East and West Farms, which retained their rural character through the eighteenth century.<sup>10</sup> The southern part of the block bounded by Broadway, Lafayette, Canal, and Howard Streets was part of the Rutgers Farm. Anthony Rutgers, a city Alderman and a member of the Colonial Assembly, purchased the large swampland north of the Collect Pond in 1723-25.<sup>11</sup> Rutgers' property was transferred after his death in 1746, by inheritance and sale, to Leonard Lispenard (1715-1790), who had married Rutgers' daughter, Alice. During the American Revolution, a series of fortifications and redoubts were built across Manhattan, including one at Crosby Street between Grand and Broome Streets.<sup>12</sup> Multiple sources indicate that Anthony Rutgers and his wife Cornelia owned enslaved persons.<sup>13</sup>

### SoHo in the post-Revolutionary War Period through 1850

Due to the financial fallout of the Revolutionary War, Nicholas Bayard III was forced to mortgage his inherited lands, including his West Farm, which was divided into lots at the end of the eighteenth century. Development of the area began in the first decade of the nineteenth century, after landowners petitioned the Common Council to drain and fill the Collect Pond, its outlet stream to the Hudson River, which later became the rout of Canal Street, and Lispenard's Meadow.<sup>14</sup> What was once a bucolic retreat for city residents had become a serious health hazard and an impediment to development. The shores of the Collect were strewn with garbage and the rotting carcasses of dead animals, the stream along Canal Street was a stagnant sewer of green water, and Lispenard's meadow had become a dangerous bog and breeding ground for the mosquitoes carrying yellow fever. Bayard's Hill, which stood above the present grade of Grand Street and other hills in the area were cut down and used, together with the city's rubbish, to fill in the pond, stream, and marsh.<sup>15</sup>

The Lispenard property was inherited in 1790 by Leonard's son, Anthony Lispenard, who began to plot the land in 1795. According to the 1800 Census, Anthony Lispenard owned five slaves. After his death in 1805, the Lispenard heirs in 1807 petitioned the Common Council of New York for, and were granted, the water lots opposite their holdings at Canal Street. In 1811, they also petitioned the Council for, and were granted, the right to dig a channel to drain their

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<sup>9</sup> *Appleton's*, I, 198; III; 681-682; *Dictionary of American Biography*, I, Part 2 (New York: Charles Scribner's Sons, 1964), 68; VI, Part 1, 156-157; Foote, 196; Stokes, IV, 348-372.

<sup>10</sup> Conveyance Records, Introductions and Block Histories (Office of the Register).

<sup>11</sup> This land was granted by Governor Kieft to Jan Jansen Damen in 1646. The property, known as Calk Farm, was divided among several individuals after Damen's death, and was reassembled by Rutgers.

<sup>12</sup> I.N. Phelps Stokes, *Iconography of Manhattan Island*. (New York: Robert H. Dodd, 1915-28) v. IV, pl. 84B-b.

<sup>13</sup> According to the 1703 Census of New York City, there was one Negro female in Anthony Rutgers' household; the census does not state whether she was an enslaved or free person. His will dated August 2, 1764 left his widow, Cornelia, if she remarried two Negroes and 50 pounds for the rest of her life. *The Abstract of Wills on File in the Surrogate's Office, City of New York*, vol. IV, 1744-1753, 91-92. Cornelia Rutgers ran an advertisement in *The New-York Gazette* on October 8, 1750 for a runaway slave named Hector requesting his return if he should be found.

<sup>14</sup> Conveyance Records, Introductions and Block Histories for properties within the Nicholas Bayard West farm (Office of the Register); also Foote, 86..

<sup>15</sup> D.T. Valentine, *Manual of the Corporation of the City of New York* (New York: City of New York, 1860), 562-567.

land between Canal and Spring Streets. Members of the Lispenard family were known to have owned slaves.<sup>16</sup>

Broadway had been extended north of Canal Street in 1775, but it was not until 1809 that Broadway was paved and sidewalks were constructed north from Canal Street to Astor Place. Serious development in the area soon followed. Canal Street was surveyed in 1805, opened in 1817, and had sewer lines installed in 1819.<sup>17</sup> Development in the area was slowed by the War of 1812, but after the economy recovered, construction activity briskly recovered. House after house was built for the city's growing population of middle-class families. The period between 1815 and 1825 was a decade of enormous growth for the Fourteenth Ward, in which sections of the existing historic district and extensions lie. Its population more than doubled, transforming it into the city's most populous ward.<sup>18</sup> Sections of the historic district extension were also located in the city's Sixth and Eighth Wards, which were also experiencing tremendous growth at the time.<sup>19</sup> By the 1820s, Canal Street had grown into a thriving retail district. A steam boat ferry to Hoboken was established at its west end in 1823.

There are several Federal-era houses remaining in the SoHo-Cast Iron Historic District Extension, all of which have undergone varying degrees of alterations later in the nineteenth century, including the insertion of storefronts, the addition of floors, conversion to industrial usage, and the installation of entirely new facades in later architectural styles. Two, three-story and attic Federal-style brick dwellings, built c.1827, are located at 68 and 70 Prince Street. The buildings display Federal-style elements, such as Flemish bond brick and low gabled roofs with dormers. Although both these buildings now have ground-floor storefronts and No. 70 had a rear extension built facing Crosby Street, they remain largely intact above their first stories. Furthermore, these houses avoided having their upper floors converted to loft space and have been in continual residential use since they were built, making them rare examples of Federal row houses in SoHo extension that have never been converted to industrial use.

A somewhat more altered Federal-style building is the four-story brick former dwelling at 133 Grand Street (aka 19 Crosby Street), which was built in c.1822 as part of a row of ten dwellings from 133 to 151 Grand Street. The building displays Flemish bond brick and paneled stone window lintels that are characteristic of the Federal style, but a fourth story, rear addition, and bracketed cornice displaying transitional elements of the Greek Revival and Italianate styles were probably added by around 1850. By the 1850s, when the area was becoming more commercial in character, this building was occupied by a carpentry shop. In addition, the arrest in 1856 of several men and women on the premises for "dancing and carousing in a noisy and disorderly manner" attest to the neighborhood's decline as a prime residential area and its establishment as the city's "red light" district. The building's first story was converted to a storefront in the mid-to-late nineteenth century, and at some point, the building's upper stories were converted to small manufacturing lofts. Currently housing an Asian retail food market on the ground floor, No. 133 Grand Street embodies nearly two-hundred years of SoHo's history,

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<sup>16</sup> According to the 1800 Census, Anthony Lispenard owned five slaves. LPC, *486 Greenwich Street House Designation Report* (LP-2225), prepared by Jay Shockley (New York, 2007).

<sup>17</sup> John A. Kouwenhoven, *The Columbia Historical Portrait of New York* (New York: Doubleday & Company, Inc., 1953), 94-95; Stokes, III, 995.

<sup>18</sup> Valentine (1868), 216.

<sup>19</sup> The Sixth Ward, most of which sat below Canal Street in the area that now contains the Tribeca East Historic District, straddled Canal Street in the area between Broadway and Centre Street, while the Fourteenth Ward, which made up most of what came to be known as Little Italy, comprised the sections of the District extension generally to the east of Crosby Street.

from its residential beginnings in the early 1800s to its present position on the fringe of New York City's Chinatown. Four of the original Federal-era houses in the row were later demolished and replaced by taller buildings, but those at 141, 143 and 145 retain Flemish bond brick at their mid-sections, although all three facades were made over in the mid-to-late nineteenth century. Nos. 147 and 149 Grand Street were given entirely new neo-Grec style facades in the 1880s; these alterations included replacement of the original Flemish bond brick and Federal style stone lintels. Other buildings in the SoHo-Cast Iron Historic District Extension that appear to have begun as Federal-era dwellings, but have been greatly altered, include 25 Howard Street (c.1802-10), 19 Howard Street (c.1809-14), 253 Centre Street (c.1815-16), 398 West Broadway (c.1819-20), 33 Howard Street (c.1824-25), 237 Centre Street (1827), 396 West Broadway (c.1829), and 482 West Broadway (c. 1829-30).

By 1850, the SoHo Historic District and Extension had developed into a stable residential community with a mix of row houses, a few free-standing dwellings, some small shops, and stables. A row of ten brick, Greek Revival style dwellings were built between 1841 and 1845 on the north side of Prince Street between West Broadway and Thompson Street, of which the four at Nos. 151 to 157 Prince Street remain extant and are included within the SoHo – Cast Iron Historic District Extension.<sup>20</sup> These houses have all undergone various alterations, including simplified surrounds at the main entryway, shaved lintels, cornice removals, the insertion of basement-level storefronts, and fenestration changes. These three buildings have remained in residential use on their upper stories since they were built, making them unusual examples of Greek Revival-era row houses that have never been converted to loft space. The present building at the corner of Prince Street and West Broadway, known as 151 Prince Street (aka 448 West Broadway) has suffered many alterations over time, including the loss of one bay on Prince Street and its stoop around 1870 when Laurens Street (now West Broadway) was widened, the construction of a new West Broadway facade with matching fenestration at the same time, and the insertion of a cast-iron storefront, possibly later in the nineteenth century. Another Greek Revival-era dwelling, built c.1839 at 390 West Broadway (then 77 Laurens Street), was given a completely new facade when the street was widened in 1870.

In addition, there are four earlier, possibly Federal-era residences that were given Greek Revival-style makeovers in the mid-nineteenth century. All of them appear to have been further altered after that by the removal of stoops and cornices, as well as lintel changes and insertion of ground-level storefronts. These buildings include 19 Howard Street, 25 Howard Street, 33 Howard Street, and 253 Centre Street. Of these buildings, 33 Howard Street and 253 Centre Street are the most intact, including their molded cornices with dentils, while 25 Howard Street has been drastically altered, including the removal of its upper stories.

The area around Canal Street and Broadway, near the St. Vincent de Paul Roman Catholic Church, also known as the French Church, which was located at 261-267 Canal Street, was the center of a French immigrant community in the early and mid nineteenth century. Many of the Federal- and Greek Revival-era row houses were owned and occupied by French families. By the 1850s, however, many of these families were joining the northward march of middle-class families to new residential areas, and the church moved to its present site in Chelsea at 127 West 23<sup>rd</sup> Street in 1857. Its former Canal Street site was sold and developed with an Italianate-style warehouse that remains extant.

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<sup>20</sup> Five were demolished and replaced by new buildings, while the house originally at No. 149 Prince Street at the northwest corner of West Broadway (then called Laurens Street) was demolished when that street was widened and renamed South Fifth Avenue in 1870.

## The Second Half of the Nineteenth Century

In the 1850s, the SoHo Historic District and Extension began a rapid transformation into a commercial district, beginning with the metamorphosis of Broadway from a street of small brick retail shops into a boulevard of marble, cast iron, and brownstone commercial palazzi. Lord & Taylor, Arnold Constable & Co., Tiffany & Co., E.V. Haughwout, and others established their stores on or near Broadway. Major hotels were opened: the Union Hotel, the City Hotel, the Prescott House, the Metropolitan, and the St. Nicholas. Many music halls and theaters were established, such as Broughams' Lyceum, the Chinese Rooms, Buckley's Minstrel Hall, the American Art Union, and American Musical Institute. Broadway between Canal Street and Houston Street became the entertainment center of the city.<sup>21</sup>

In addition, a notorious red light district had sprung up along the streets to the east and west of Broadway, featuring houses of prostitution and gambling halls. Guide books and directories to the area were published to steer clientele to the unsavory businesses that now populated many of the red brick Federal- and Greek Revival-style houses that middle-class families were abandoning.<sup>22</sup> Well-to-do families were being replaced by working-class Irish, Jews, and other immigrant groups. After the Civil War and through the mid-twentieth century, the area's Italian population increased dramatically. The Italian community was spread out from the Bowery, up to and along the Houston Street corridor to the southern part of Greenwich Village, becoming the city's largest Italian community.

Crowded, walk-up tenements were built on the side streets, such as the Italianate-style six-story apartment house at 35 Crosby Street (c.1849-50). Similar tenements were erected nearby at 37 Crosby Street (c.1856-57), and 31 and 33 Crosby Street (c.1860-61). A five-story, Italianate-style former flats building (now altered) with ground floor storefront was designed by architect Gustav Busch and built in 1870 at 462 West Broadway. Five-story, Italianate style tenement buildings, also with ground floor storefronts, were designed by architect William Jose and built at 400 West Broadway (1870-71) and at 184 Lafayette Street (1871-72). A Federal-era house at 240 Lafayette Street was enlarged and converted to a small apartment house in 1873; the alterations included a new Italianate style facade designed by architect John McIntyre. A five-story, Italianate style (now altered) tenement building with ground floor storefronts was designed by architect William E. Waring and built in 1878 for Henry Thole at 65 Spring Street. The notable architect Detlef Lineau designed a five-story Italianate style tenement at 176 Lafayette Street, which was built in 1879. All of these buildings housed multiple families per floor and lacked indoor plumbing when built, and were indicative of the area's declining fortunes.<sup>23</sup>

Small workshops and artisans also moved into the area, such as makers of glass, china, metal goods, ceramics, cabinets, and pianos. But, the presence of the freight depot of the new York & New Haven Railroad on the north side of Canal Street between Elm Street (now Lafayette Street) and Centre Street hastened the commercial development of the area. A number of lumber yards and supply houses opened up, as well as book publishers and printers.<sup>24</sup> Many of

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<sup>21</sup> Valentine (1865), 635-636; Tax Assessment Records; Conveyance Records.

<sup>22</sup> *Directory of the Seraglios in New York, Philadelphia, Boston & All the Principal City in the Union* (New York: Printed and Published for the Trade, 1859).

<sup>23</sup> Indoor plumbing was finally installed in most of these buildings in the early twentieth century; later in the twentieth century, the number of apartments per floors was generally reduced.

<sup>24</sup> William Perris, *Maps of the City of New York* (New York: William Perris, 1852-54, 1857); New York City Directories.

these businesses at first occupied converted Federal and Greek Revival style houses, but as commercial activity expanded, many small houses were replaced by much larger Italianate style loft buildings. In 1853-57, a six-story, Italianate style loft building with storefronts was built at 261-267 Canal Street (aka 21-23 Howard Street). The design of the building's marble façade took its cue from leading commercial palaces of the mid-nineteenth century, especially Trench and Snook's A.T. Stewart Store (1845-1853, a designated New York City Landmark), which was the city's first Italianate style commercial building. The building owes its unusually-large, through-the-block footprint to the fact that the site had been occupied by the St. Vincent de Paul Roman Catholic Church complex, which the parish sold when it moved to Chelsea. A smaller, but similarly-designed five-story, stone-fronted Italianate style loft building with storefront was built in c.1857-58 at 273 Canal Street for George L. Hyatt, who was the owner of the Hyatt Company, a long-established carpet business in New York City. Hyatt's business occupied the building for many decades. Other marble or brownstone stone-fronted, Italianate style loft buildings were constructed, including 255 Canal Street (architect not determined, c.1867-68), 424-426 Broadway (Henry Engelbert, 1868), 35 Howard Street (Edward Wall, 1868), 428 Broome Street (Isaac F. Duckworth, 1868-69), 426 Broome Street (Griffith Thomas, 1869), and 418-420 West Broadway (Robert Mook, c.1870). Italianate style loft buildings that combine brick, cast iron, and stone on the facades include 271 Canal Street (Henry Engelbert, 1867) and 269 Canal Street (Detlef Lienau, 1871). These buildings have Italianate style details, such as bracketed window sills and molded lintels, but the cornice at No. 269 displays more angular brackets suggestive of the neo-Grec style, while the cornice at No. 271 has scrolled brackets typical of the Italianate style.

A six-story, early neo-Grec style warehouse with storefronts was designed by architect Detlef Lienau and built at 22-26 Howard Street toward the end of the Civil War in 1864-65 for plate glass manufacturer Noel & Saurel. The design of the building's brick and stone façade features elements of the early neo-Grec period, such as incised floral patterns and crisp angles. Its segmental arches and simple brick piers express elements of French rationalism and is pioneering for its early date. A few years later, Noel & Saurel, which occupied the building until 1888, again engaged Lienau to design a narrower, similar if slightly more restrained addition facing Crosby Street. Although the first story has been unsympathetically painted, the building remains remarkably intact. Noel & Saurel. Other stone-fronted neo-Grec style buildings from this early, transitional period include No. 29 Howard Street (Renwick & Sands, 1868) and 61-63 Crosby Street (W. Joralemon, builder, 1873-74). These buildings display incised window surrounds, floral patterns and fluting, as well as bead moldings and cornices with angular brackets and rectangular frieze panels.

An imposing six-story, Second Empire style warehouse with cast-iron facades designed by architects William Field & Son was built in 1869 for Charles C. Hastings at 134-140 Grand Street at the northeast corner of Crosby Street on the site of what was Grand Street Presbyterian Church. The building's large, inset window openings flanked by Corinthian columns, its rusticated first-story piers, bracketed cornices, and large mansard roof are indicative of the Second Empire style as it was typically applied to large, cast-iron commercial buildings of its day. The eminent architect Griffith Thomas designed a spectacular cast-iron-fronted, Italianate style loft building at 419-421 Broome Street, built in 1873-74. The building's elaborate cast-iron facade features Corinthian columns, balustrades, segmental lintels, rusticated and paneled columns, bracketed cornice with urns, and a segmental pediment decorated with scrolled modillions. The building remains beautifully maintained and remarkably intact. A few doors



away at 425-427 Broome Street (aka 39 Crosby Street), the notable architect Edward H. Kendall designed a large cast-iron-fronted building, built in 1872. Its Crosby Street facade features an eight-bay-wide brick central section with alternating flat, curved, and angled cast-iron lintels and pediments on brackets above the fenestration, and flanking two-bay-wide cast-iron sections topped by pediments and featuring fluted columns and piers as well as chamfered lintels decorated with bead moldings. Other Italianate style, cast-iron-fronted loft buildings include 386-388 West Broadway (Robert Mook, 1871), 392-394 West Broadway (John H. Whitenack, 1872), 28 Howard Street (D. & J. Jardine, 1872), 378-380 West Broadway (Edward H. Kendall, 1873), and 422 West Broadway (John H. Whitenack, 1873-74).

The construction of these new loft buildings hastened the decline of the neighborhood's residential population. Between 1860 and 1865, the Eighth Ward lost twenty-five percent of its population, the highest rate of loss for any of the wards below 14<sup>th</sup> Street.<sup>25</sup> After the Civil War, the value of land in the Eighth Ward increased dramatically while New York flourished as the commercial and financial center of the country. At the close of the war, the value of land in the Eighth Ward had been assessed at a little more than \$18,000,000, but in 1868, it was assessed at nearly \$26,000,000 – an increase in three years greater than the increase over the twenty year period from 1845 to 1865. Undoubtedly, SoHo owed its success as a commercial district to its location close to the city's largest business market and to its proximity to the North River docks.<sup>26</sup>

In 1870, the City of New York embarked on a project to extend and widen Laurens Street<sup>27</sup> (now West Broadway) by about thirty feet from Canal Street to Waverly Place where it would traverse Washington Square Park and connect with Fifth Avenue.<sup>28</sup> The project required the condemnation and demolition of all or part of 127 properties on the west side of the street, and resulted in the street being renamed South Fifth Avenue, a name which itself was changed to West Broadway at the end of the century.<sup>29</sup> According to newspaper accounts at the time, the affected area was home to seven hundred people, mainly African Americans, living in the houses on the west side of Laurens Street that were reportedly in a state of disrepair.<sup>30</sup> Many of these African-Americans may have been descended from the blacks that lived in the area during colonial times. Nearby institutions serving the area's African-Americans were the (Colored) Public School #2 at 362-364 West Broadway and the First African Methodist Church at 214-216 Sullivan Street. Both sites are now occupied by six-story loft buildings. The area was already transitioning to commercial uses, and the rebuilding that took place during the process was almost completely industrial in nature. New buildings completed after the improvement was finished included loft buildings at 378-380, 382-384, 392-394, 400, 412, 418-420, 422, 462, and 480 West Broadway. Buildings that were partially demolished and given new or rebuilt facades

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<sup>25</sup> Valentine (1868), 216.

<sup>26</sup> *A History of Real Estate, Building and Architecture in New York* (New York: The Real Estate Record Association, 1898. Reprinted by Arno press, 1967), 45-129; Tax Assessment Records.

<sup>27</sup> Laurens Street was named for Henry Laurens, president of the Continental Congress.

<sup>28</sup> "Widening Laurens-Street – Progress of the Work," *New York Times*, Jul. 29, 1870, 3; "City Improvements-Extension of Fifth Avenue," *NYT*, Oct. 9, 1870, 6.

<sup>29</sup> The house numbering of South Fifth Avenue was unusual, running higher to the south from Washington Square; the normal south to north numbering was restored when the street name was changed to West Broadway in the 1890s.

<sup>30</sup> The materials and debris from the demolished buildings were sold to building contractors at an auction that took place in the vestibule of City Hall. "The Laurens-Street Extension – Sale of Building Materials," *New York Times* Jun. 8, 1870, 5.

included 390, 396, 398, 424, and 482 West Broadway. Two buildings had their east party walls exposed and new facades installed facing South Fifth Avenue: 503 Broome Street (now 366-368 West Broadway aka 503 Broome Street) and 448 West Broadway (aka 151 Prince Street).

Growth was somewhat inhibited in the mid-1870s due to the Panic of 1873, but by the late 1870s, the effects of the financial crises had greatly subsided. In the remaining years of the century, a great many large factories and store buildings were built along the streets around Broadway, transforming the area from the city's entertainment district to a center for the mercantile and dry good trade. Some of the most important textile and industrial firms in the country were located here; they conducted world-wide trade worth millions of dollars. The Metropolitan Elevated Railway opened the Sixth Avenue line in 1878, running from Rector Street to Central Park with a segment of elevated track running along South Fifth Avenue (now West Broadway) in the western part of the historic district extension.<sup>31</sup> Prevalent architectural styles during this period included neo-Grec, Queen Anne, Romanesque Revival, and Renaissance Revival. Many of them are excellent samples of these style and were designed by major late-nineteenth-century architects and architectural firms.

In 1880, the architectural team of D. & J. Jardine designed a brick, five-story neo-Grec style store and loft building at 474-478 West Broadway, extending through to Thompson Street, for owner Amos R. Eno. The building's projecting window sills, beveled lintels, and corbelled cornice with central pediment are characteristic of the neo-Grec style as applied to industrial buildings. A somewhat more elaborate neo-Grec style store and loft building was designed by architect Robert Mook and built at 426-428 West Broadway in 1883 for Amos R. Eno. This six-story, brick building, which extends through to Thompson Street, includes stone banding and iron tie plates that are also suggestive of the Queen Anne style. In 1885-86, an imposing six-story Romanesque Revival style store and loft building at 468-472 West Broadway, which also extends through to Thompson Street, was designed by architect Oscar S. Teale and built for W.B. Marvin. The building's broad, multi-story arched bays, solid massing, and corbelled cornice are characteristic of the Romanesque Revival style as applied to large industrial buildings of the time. The rapid industrialization of the SoHo area with large loft buildings, factories, and warehouses demanded increased fire protection and new fire houses opened in the area, including a brick, Queen Anne style fire house for Engine Co. 55 that was designed by architects Napoleon LeBrun & Son, which was built in 1886-87. The building's polychromatic facade, which features foliated capitals at the cast-iron first story columns, diaper pattern brickwork, terra-cotta rosettes, and corbelled brackets topped by small gables, is typical of Queen Anne style civic architecture of its day.

The noted architect Samuel A. Warner designed two buildings on Howard Street in 1888 to 1889. The earlier of them, No. 27 Howard Street, was built in 1888 and features a cast-iron facade that displays elements of both the neo-Grec and Queen Anne styles, while No. 428-432 Broadway, a corner building with a secondary facade on Howard Street, was constructed in 1888-89 and features a rich polychromatic facade mixing brick, terra cotta, and sandstone, the combination of which was typical of Queen Anne style commercial buildings of the 1880s.

The architectural firm DeLemos & Cordes designed two large loft buildings in 1888-89 and in 1895-96 that differed greatly in character, and are indicative of changing architectural tastes due to the City Beautiful and Beaux Arts movements. The earlier building, at 241-249 Centre Street, is a large, red brick seven-story Romanesque Revival style, through-block building

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<sup>31</sup> "elevated railways," *The Encyclopedia of New York*, ed. Kenneth T. Jackson (New Haven: Yale University Press, 1995) 368.

featuring grouped fenestration recessed within broad, multi-story arches and a corbelled parapet on its Centre Street facade. It exemplifies the use of that style on commercial buildings of the 1880s. A few doors to the north at 403-405 Broome Street (aka 255-257 Centre Street), the firm produced a design for an equally-imposing, seven-story tawny-colored brick and terra-cotta loft building employing the classical vocabulary of the Renaissance Revival style, such as rusticated brickwork, multi-story brick piers topped by Ionic capitals, elaborate cartouches, molded keystones, and a pressed-metal cornice decorated with dentils and scrolled brackets. In 1897, DeLemos & Cordes were again engaged by the owner of 241-249 Centre Street to rebuild the building's Lafayette Street facade when it was repositioned due to the widening of Lafayette Street (see below). The new, tawny-colored brick and terra-cotta facade displays a nearly identical classical vocabulary as 403-405 Broome Street.

A very elaborate, seven-story Renaissance Revival style loft building was designed by architect Louis Korn and constructed in 1896-97 for Henry Corn at 424 Broome Street. The building's two-story base with a heavily foliated spandrel and scrolled bracketing, multi-story rusticated piers topped by Ionic capitals, and pressed-metal cornice decorated with dentils and scrolled brackets is one of the more highly-decorated buildings in the SoHo-Cast Iron Historic District Extension.

Other significant loft and/or factory buildings constructed in the 1880s and 1890s include 406-412 Broome Street (Jobst Hoffman, 1881), 242-244 Lafayette Street (John Sexton, original wing built 1881-81), 458 West Broadway (Thom & Wilson, 1887), 53 Crosby Street (Horgan & Slattery, 1889), 158-164 Lafayette Street (John B. Snook & Sons, 1889-90), 67-73 Spring Street (Schneider & Herter, 1889-90), 278-290 Lafayette Street (John R. Thomas, 1891-92), 362-364 West Broadway (William H. Hume, 1892), 416-422 Broome Street (John T. Williams, 1893-94), 430 Broome Street (1894-95 alteration, Julius Kastner), 75-77 Spring Street (Robert Lyons, 1898), and 408-410 West Broadway (Franklin Baylies, 1898-99).

In 1887, the city began to plan for the widening and extension of Elm Street and Marion Street to Lafayette Place in order to facilitate access to the recently-completed Brooklyn Bridge.<sup>32</sup> In 1897, after the condemnation and demolition of hundreds of properties in whole or in part, the plan was finally carried and the wide new street was renamed Lafayette Street. Previously, the northern terminus of Marion Street was at Jersey Street and southern end of Lafayette Place was located few blocks to the north at Great Jones Street. The new street was to be much wider than the existing streets that it would incorporate, resulting in the partial demolition and rebuilding of many properties along the western side Marion Street north of Spring Street and the eastern side of Elm Street between Canal Street and Spring Street. The five-story, brick factory building at 292-296 Lafayette Street (aka 1-5 Jersey Street and 129-131 Crosby Street) was originally much larger than its current size when it was put up in 1883-84 in the Queen Anne style. At the time, Marion Street's terminus was across from the building's Jersey Street facade. As a consequence of the Elm Street project, the building's footprint was reduced to less than half its original size and the current Renaissance Revival style facade was constructed.

Other buildings had their Elm Street and Marion Street facades realigned on their now shallower lots. Some had completely-new facades installed, such as 179-183, 195-199, 250, and 252 Lafayette Street, as well as 63 Spring Street (aka 232-236 Lafayette Street). Other buildings had their existing facades repositioned and restored at the new building line. These included 167-171, 240, 242-244, and 284-290 Lafayette Street, as well as the Engine Co. 55 building at 185

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<sup>32</sup> "Elm Street New and Old," *New York Times*, Apr. 17, 1887, 6.

Lafayette Street. Other completely new buildings were constructed there around the time of the street improvement project, such as 173-179 and 278-282 Lafayette Street, as well as 87 Crosby Street (aka 248 Lafayette Street).

### SoHo in the Early and Mid-Twentieth Century

Construction in the SoHo Historic District and Extension slowed markedly after the turn of the century, but did not stop completely. The center of the city was moving steadily northward and with it went many prominent businesses. Marginal industries, such as dealers in textile and paper wastes, small apparel firms producing underwear and standard design clothing filled the vacancies left by the older businesses.<sup>33</sup> Still, a number of distinguished, albeit less elaborately-detailed, new loft buildings were put up in the SoHo-Cast Iron Historic District Extension in the early twentieth century.

The brick, seven-story Renaissance Revival style loft building at 13-17 Crosby Street was designed by architect Charles Abbott French in built in 1901 for Inga M. Olsen. It replaced three brick, early nineteenth-century buildings. Its multi-story brick piers, limestone banding, molded lintels, foliated keystones, and elaborate cornice are characteristics of the Renaissance Revival style as found on many early-twentieth century industrial buildings. Another notable building is the twelve-story, Renaissance Revival style loft at 72-78 Spring Street, which was designed by architect Charles Berg and built in 1907-08 for John E. Olsen. Replacing several brick nineteenth-century buildings, the building was one of the earliest buildings in the historic district extension to exceed ten stories in height. The opening of the IRT subway through the area in the first decade of the century increased land values and made taller buildings more desirable. This building's two-story rusticated stone base, paneled third-story piers, horizontal divisions formed by molded and bracketed cornices are characteristics of tall Renaissance Revival style industrial buildings of the period.

An unusual, terra-cotta loft building at 137-139 Grand Street was designed by architect George F. Pelham and built in 1911 for the 133 West 19<sup>th</sup> St. Company, Inc. This seven-story, neo-Classical style building replaced two brick, early nineteenth-century buildings. The façade displays oversized Greek frets and other exaggerated classical forms that are characteristic of the neo-Classical style. Other early-twentieth-century loft buildings in the SoHo-Cast Iron Historic District Extension include 251 Centre Street (Albert V. Porter, 1901-02), 409 Broome Street (Buchman & Fox, 1903-05), 115-119 Crosby Street (Charles E. Reid, 1904), 59 Crosby Street (Charles M. Straub, 1909), 414-416 West Broadway (Frederick Jacobsen, 1909-13), and 203-205 Lafayette Street (Max Epstein, 1911).

An unusual building type for the area was a six-story, Beaux Arts style powerhouse, designed and built in 1905 by the New York Edison Co. at 55 Crosby Street. This building, which replaced a brick nineteenth-century building, was constructed in association with another New York Edison plant directly behind it facing Lafayette Street (not located the historic district). The building's paneled spandrels, round and segmental fenestration with splayed keystones and molded cornice on blocks is indicative of the Beaux Arts style as commonly applied to industrial buildings. The New York Edison Company was one of several power companies founded in the nineteenth century to provide power and light to New York City. Over the decades, many of these companies would merge, forming larger power companies serving

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<sup>33</sup> Chester Rapkin, *The South Houston Industrial Area* (Prepared for the City of New York, City Planning Commission, Department of City Planning, 1963), 8-62.

greater numbers of people. It culminated in the giant merger in 1936, which created the modern-day Consolidated Edison Company, of which the New York Edison Company was a part.<sup>34</sup>

Residential buildings continued to be built in both the east and west sections of the SoHo-Cast Iron Historic District Extension in the first decade of the twentieth century. These buildings related more to the burgeoning residential neighborhoods that bordered SoHo, namely Greenwich Village and Little Italy. Among these buildings are a six-story, Renaissance Revival style tenement building with ground floor storefront at 178 Lafayette Street, which was designed by architects Horenberger & Straub and built in 1905-06 for Michele Briganti and a six-story, brick Renaissance Revival style tenement apartment house with storefronts, designed by architect Charles M. Straub and built in 1906 for Pasquale Lauria at 436-442 West Broadway (aka 150-154 Prince Street).

Additional street widening and extensions occurred around the area to facilitate vehicular movement to the new East River bridges, including the Williamsburg Bridge, complete in 1903, and the Manhattan Bridge, which was opened in 1909. Delancey Street was extended to the west from the Bowery to Lafayette Street at Cleveland Square around 1903-04.<sup>35</sup> At about the same time, Watts Street was cut through from Sullivan Street to West Broadway, forming a triangular intersection with Broome Street. One building in the historic district extension, 366-368 West Broadway (aka 503 Broome Street and 1 Watts Street), was profoundly affected by the street project. This five-story, altered Italianate style building may have begun as a small house that was constructed in c.1823-25. When Laurens Street (now West Broadway) was being widened in 1869-70, either an entirely new Italianate style loft building was constructed on the lot or the existing federal-era building was raised in height and given a new Italianate style facade and three additional stories. In 1903, during the Watts Street extension, the footprint of the building was reduced and a building's new, angled facade, overlooking the Watts Street/Broome Street junction, designed by architects Necarsulmer & West for then-owner the Estate of S. Stirn, was installed. Additionally, portions of the West Broadway facade were simplified during the alteration. Next door to this building, a new three-story, Renaissance Revival style store and office building, designed by architects P. Roberts & Co., was built in 1903 at 505 Broome Street (aka 3 Watts Street), replacing a much larger brick building that was demolished when most of the lot was cut off for the new street.

For the next four decades the district lay practically unchanged except for some partial or complete tear-downs, especially during the Depression of the 1930s when the area was plagued by numerous abandonments and foreclosures. Sunlight was restored to West Broadway when the 6th Avenue elevated line was abandoned by the city in 1938 and razed the following year.<sup>36</sup> A two-story, Art Deco style brick commercial building at 158-162 Grand Street (aka 227-235 Centre Street) was designed by architect David S. Lang and built in 1923-24 for the Cengrand Realty Co. It replaced six small, brick and wood buildings. The building's variegated brickwork and angular decoration are indicative of the Art Deco style as it was applied to modest commercial buildings and taxpayers of that period. The two-story, brick commercial building at 257-259 Canal Street was originally two mid-nineteenth-century, six-story commercial buildings (constructed between 1853 and 1857) that were reduced in height, joined internally, and redesigned in 1925 by architect Edward E. Bloodgood for then-owner Banyer Clarkson.

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<sup>34</sup> Con Edison continued to own No. 55 Crosby Street until 1971, after which it was converted to loft space.

<sup>35</sup> "Cutting New Street Through Four Blocks," *New York Times*, Dec. 27, 1903, 17.

<sup>36</sup> "elevated railways," *The Encyclopedia of New York*, 370.

The Art Deco style factory building at 270-276 Lafayette Street (aka 63-67 Prince Street and 107-113 Crosby Street) was designed by architects Sugarman & Berger and built in 1925-27 for the 63 Prince Street Corp., a few years after the area around Broadway and Houston Street was established as a major transportation hub by the opening of a station of the Brooklyn-Manhattan Transit line at Prince Street and Broadway, and in anticipation of the construction of the IND subway a few years later, which was to have a station at Houston and Lafayette Streets. The building's upper-story setbacks and its spare terra-cotta ornament are characteristics of the classicized form of the Art Deco style as found on many large industrial buildings.

The Renaissance Revival style commercial building and movie theater at 418-422 Broadway (aka 277-289 Canal St.) was built in 1927-28 by the D & D Land Improvement Company a few years after the area around Broadway and Canal Street was established as a major transportation hub by the opening of the Brooklyn-Manhattan Transit line under Broadway. This building included a subway entrance and passageway on Broadway. The new building application filed at the Department of Buildings listed David M. Oltarsh as the architect and general contractor, and applied lettering on the façade bears his name. Upon its completion, the theater was leased to the Major Theater Corp.

Gas stations, auto repair shops, parking lots, and one-story garages and car washes took the place of many loft buildings, producing many somewhat mottled streetscapes. A one-story brick building was built at 95 Crosby Street in 1928; it originally housed a car wash. Building renovations were mainly limited to those in response to stricter building code requirements concerning fire safety and structural stability. Most of the building permits during this period were for the installation of water towers, fire escapes, additional exits, safer elevators, and better plumbing, as well as interior alterations as new tenants reworked interior spaces to suit their needs. In the late 1940s, the city proposed a cross-town expressway that would connect the Holland Tunnel with the Williamsburg and Manhattan Bridges via Broome Street. This would have required the demolition of scores of cast-iron and masonry loft buildings in SoHo. Although the plan was never carried out thanks to budgetary limitations and vehement public opposition, the Lower Manhattan Expressway plan remains alive into the 1960s. The threat of eminent domain put a twenty year chill on investing in the repair and maintenance of many buildings in SoHo, resulting in much decay and dilapidation, but also kept many of the buildings enormously intact.

A one-story brick power station at 417 Broome Street was built c.1968 by the New York City Transit Authority on a site that had been vacant and used as a parking lot since a four-story, brick warehouse on the lot was demolished in 1951-52. A vacant lot, now a right-of-way to the City of New York's water supply system at 166-174 Lafayette Street (aka 142 Grand Street) was formerly a parking lot that was created when several nineteenth-century buildings were demolished between 1958 and 1966. The gas station at 302-308 Lafayette Street (aka 21-29 East Houston Street and 137-139 Crosby Street) was earlier the site of a seven-story, brick commercial building that was demolished c.1929-36 during the construction of the IND subway beneath Houston Street. The size of the gas station was reduced during the widening of Houston Street in 1957-63.

### Changes in Occupancy in the Twentieth Century

In general, the buildings in the SoHo-Cast-Iron Historic were occupied by a variety of commercial entities ranging from manufacturers of textiles and clothing in the mid-to-late nineteenth century to drug wholesalers, toy manufacturers, and electrical and hardware suppliers

in the early twentieth century, and paper warehouses and electronics fabricators in the mid-twentieth century. A number of firms that would later become nationally prominent had an early presence in the historic district extension. The Studebaker Brothers Manufacturing Company, carriage makers, occupied 261-267 Canal Street in the 1890s. The company later grew to become one of the country's largest producers of automobiles in the twentieth century. Philip Morris & Co. was located at 402-404 West Broadway around 1910. The company was one of the major producers of cigarettes and tobacco products. F.W. Woolworth had a store at 424-426 Broadway in the 1920s. The American Express Co. operated a large facility at 406-412 Broome Street from 1901 to 1919.

A major change in the type of occupancy occurred after World War Two. As the textile industry began to relocate to the southern United States and then, ultimately, to overseas destinations in search of cheap labor, many printing plants and "dead storage" warehouses moved into SoHo's large interior spaces.<sup>37</sup> The vacancy rate in the mid-1950s was over fifteen percent, rents had dropped to less than fifty cents per square foot, and many spaces could be had for less than \$100 per month. In one year from 1962 to 1963, the number of business establishments in the SoHo area declines from 651 to 459 and the number of workers employed from 12,671 to 8,394. Nevertheless, some manufacturing uses continued to thrive among the empty lofts and dead storage warehouses, such as the Zenith Electric Company, which produced the first portable radio in 1923, but later went on to be one of the largest producers of television sets and the inventors of electronic equipment. Its plant was located at 292-296 Lafayette Street in the 1940s and 50s. Also, the International Brotherhood of Teamsters had its headquarters and meeting hall at 418 and 428 Broadway from the 1940s through the 1960s, attesting to the continuing industrial prominence of the SoHo area.

By the late 1950s, the SoHo area was widely considered to be a depressed commercial slum known as "hell's hundred acres." But, by the 1960s an up-and-coming generation of artists discovered large, high-ceilinged, and inexpensive spaces within lofts buildings of SoHo, which had many vacancies as many industries moved to better-suited buildings in nearby suburbs and beyond. Vacant warehouses and lofts were converted into studios, galleries and, often illegally, living quarters. The city government amended zoning laws in 1971 to permit the movement of artists into the area without driving out the remaining industries that still employed hundreds of semi-skilled workers. For a time, the SoHo area was one of the most important creative centers of contemporary art in the nation. Among some of the notable artists and galleries located in the historic district extension were Frank Gehry's studio at 55 Crosby Street, Keith Haring at 292-296 Lafayette Street, and the A.I.R. Gallery, which was the city's oldest women's art cooperative, which was at 61-63 Crosby Street. The loft building at 420 West Broadway was the "weightiest building of all, artwise."<sup>38</sup> It held the galleries of Leo Castelli, Ileana Sonnabend, John Weber, Andre Emmerich, Charles Cowles and Mary Boone. In 1973, Trisha Brown's classic dance performance "Roof Piece" was performed on the roof of this building, while the audience watched it from nearby rooftops.<sup>39</sup> The threat of further demolition and large-scale redevelopment subsided greatly when the Landmarks Preservation Commission designated the SoHo-Cast Iron Historic District in 1973; the action protected about 500 buildings on 25 city blocks.

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<sup>37</sup> The term "dead storage" refers to "long-term warehousing of bulky, inexpensive materials such as rag and wastepaper bales." Kostelanetz, 3.

<sup>38</sup> Kostelanetz, p. 61.

<sup>39</sup> *Ibid.*, p.80. In 2001, the galleries were displaced by luxury condominiums and a rooftop addition was built.

By 1978, an estimated five thousand artists were living in SoHo; but around that time, rents and real estate values began a precipitous climb. The area was rapidly becoming fashionable as a residential and commercial address, and many of the artists who had revitalized the once-neglected district were priced out of the gentrifying neighborhood.<sup>40</sup> Upscale boutiques, galleries, restaurants, bars, clubs, hotels, and shops drove out many artists and most of the remaining small industrial businesses. Many new commercial buildings constructed in the last two decades of the twentieth century on lots that had been vacant for decades. These include retail buildings at 382-384 West Broadway (1984), 430-434 West Broadway(1986), 454 West Broadway (1990), 452 West Broadway (1990-91), and 456 West Broadway (1993-94), as well as an office building at 413 Broome Street (aka 186-192 Lafayette Street), a five-story brick office building built in c.1999 for Sing Tao Newspapers, NY, Ltd., which replaced a one-story garage. The Sing Tao building reflects the growing influence of Asian immigrants to the economy of lower Manhattan and New York City in general.

### The Early Twenty-first Century

Late-twentieth-century development trends continue and have even accelerated in the early twenty-first century. Additional new buildings were constructed on empty lots, and low buildings were increased in height. New construction during this period include an apartment and office building 51 Crosby Street (2004), an apartment building at 9-11 Crosby Street (2009-10), a restaurant at 62-66 Prince Street (aka 264 Lafayette Street) in 2004, retail buildings at 450 West Broadway (2000) and 372-374 West Broadway (2001), and a hotel at 79-85 Crosby Street (aka 246 Lafayette Street), which required the demolition of a brick, Queen Anne style nineteenth century building on Lafayette Street in 2008 for a below-grade entry plaza and dining pavilion. Today, the SoHo-Cast-Iron Historic District Extension retains the essence of its early industrial history, even as it continues to evolve into one of New York City's most attractive and popular residential neighborhoods and shopping destinations.

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<sup>40</sup> Joyce Gold, "SoHo," *The Encyclopedia of New York City*, 1088.



# P.S./ I.S. 312

**Environmental Assessment Form and Supplemental Environmental Studies**

**Prepared for:**  
New York City School Construction Authority

**Prepared by:**  
AKRF, Inc.

**August 2010**

617.20  
Appendix A  
State Environmental Quality Review  
FULL ENVIRONMENTAL ASSESSMENT FORM

**Purpose:** The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

**Full EAF Components:** The full EAF is comprised of three parts:

- Part 1:** Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.
- Part 2:** Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.
- Part 3:** If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

**DETERMINATION OF SIGNIFICANCE — Type 1 and Unlisted Actions**

Identify the Portions of EAF completed for this project:  Part 1  Part 2  Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

- A. The project will not result in any large and important impact(s) and, therefore, is one which will not have a significant impact on the environment, therefore a **negative declaration will be prepared.**
- B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore a **CONDITIONED negative declaration will be prepared.\***
- C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore a **positive declaration will be prepared.**

\* A Conditioned Negative Declaration is only valid for Unlisted Actions.

**P.S.I.S. 312**

Name of Action

**New York City School Construction Authority**

Name of Lead Agency

*KENRICK ON*  
**Ross J. Holden**

Print or Type Name of Responsible Officer in Lead Agency

*DIRECTOR, REAL ESTATE SERVICES*  
**Vice President and General Counsel**

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from responsible officer)

*AUGUST 18, 2010*  
Date

**PART I — PROJECT INFORMATION**

Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

NAME OF ACTION <b>P.S./I.S. 312</b>		
LOCATION OF ACTION (INCLUDE STREET ADDRESS, MUNICIPALITY AND COUNTY) <b>Block 21, Lot 30, Long Island City, Queens (southwest corner of 5th Street and 46th Avenue)</b>		
NAME OF APPLICANT/SPONSOR <b>New York City School Construction Authority</b>		BUSINESS TELEPHONE <b>(718) 472-8273</b>
ADDRESS <b>30-30 Thomson Avenue</b>		
CITY/PO <b>Long Island City</b>	STATE <b>NY</b>	ZIP CODE <b>11101</b>
NAME OF OWNER (IF DIFFERENT) <b>Queens West Development Corp.</b>		BUSINESS TELEPHONE <b>(212) 803-3600</b>
ADDRESS <b>633 Third Avenue, 36th Floor</b>		
CITY/PO <b>New York</b>	STATE <b>NY</b>	ZIP CODE <b>10017</b>
DESCRIPTION OF ACTION <b>The applicant proposes the site selection, acquisition, acceptance of construction funding and construction of a new school facility containing up to 665 seats for students in pre-kindergarten through eighth grades. The project site is located on part of Parcel 4 of the Queens West Development.</b>		

Please Complete Each Question—Indicate N.A. if not applicable

**A. Site Description**

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use:  Urban     Industrial     Commercial     Residential (suburban)     Rural (non-farm)  
 Forest     Agriculture     Other

2. Total acreage of project area: 0.57 acres.

APPROXIMATE ACREAGE	PRESENTLY	AFTER COMPLETION
Meadow or Brushland (Non-agricultural)	<u>0</u> acres	<u>0</u> acres
Forested	<u>0</u> acres	<u>0</u> acres
Agricultural (Includes orchards, cropland, pasture, etc.)	<u>0</u> acres	<u>0</u> acres
Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)	<u>0</u> acres	<u>0</u> acres
Water Surface Area	<u>0</u> acres	<u>0</u> acres
Unvegetated (Rock, earth or fill)	<u>0.57</u> acres	<u>0.57</u> acres
Roads, buildings and other paved surfaces	<u>0</u> acres	<u>0</u> acres
Other (Indicate type) _____	<u>0</u> acres	<u>0</u> acres

3. What is predominant soil type(s) on the project site? Urban
- a. Soil drainage:     Well drained \_\_\_\_\_ % of site     Moderately well drained \_\_\_\_\_ % of site.  
 Poorly drained \_\_\_\_\_ % of site

b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N/A Acres (see 1NYCRR 370)

4. Are there bedrock outcroppings on project site?     Yes     No  
 What is the depth to bedrock? (in feet) 25 to 35 feet

5. Approximate percentage of proposed project site with slopes:     0-10% 100 %     10-15% \_\_\_\_\_ %  
 15% or greater \_\_\_\_\_ %

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places?     Yes     No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks?     Yes     No

8. What is the depth of the water table? 10 to 15 feet (in feet)

9. Is site located over a primary, principal, or sole source aquifer?  Yes  No
10. Do hunting, fishing or shell fishing opportunities presently exist in the project area?  Yes  No
11. Does project site contain any species of plant or animal life that is identified as threatened or endangered?  Yes  No  
 According to: \_\_\_\_\_  
 Identify each species: \_\_\_\_\_
12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes or other geological formations?)  Yes  No  
 Describe: \_\_\_\_\_
13. Is the project site presently used by the community or neighborhood as an open space or recreation area?  Yes  No  
 If yes, explain: \_\_\_\_\_
14. Does the present site include scenic views known to be important to the community?  Yes  No
15. Streams within or contiguous to project area? N/A  
 a. Name of Stream and name of River to which it is tributary: \_\_\_\_\_
16. Lakes, ponds, wetland areas within or contiguous to project area: N/A  
 a. Name: \_\_\_\_\_  
 b. Size (in acres): \_\_\_\_\_
17. Is the site served by existing public utilities?  Yes  No  
 a. If YES, does sufficient capacity exist to allow connection?  Yes  No  
 b. If YES, will improvements be necessary to allow connection?  Yes  No
18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304?  Yes  No
19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617?  Yes  No
20. Has the site ever been used for the disposal of solid or hazardous waste?  Yes  No

**B. Project Description**

1. Physical dimensions and scale of project (fill in dimensions as appropriate).
- a. Total contiguous acreage owned or controlled by project sponsor 0 acres.
- b. Project acreage to be developed: 0.57 acres initially; 0.57 acres ultimately.
- c. Project acreage to remain undeveloped 0 acres.
- d. Length of project, in miles: N/A (If appropriate)
- e. If the project is an expansion, indicate percent of expansion proposed N/A %
- f. Number of off-street parking spaces existing 0; proposed 0
- g. Maximum vehicular trips generated per hour 59 (upon completion of project)?
- h. If residential: Number and type of housing units?
- |            | One Family | Two Family | Multiple Family | Condominium |
|------------|------------|------------|-----------------|-------------|
| Initially  | _____      | _____      | _____           | _____       |
| Ultimately | _____      | _____      | _____           | _____       |
- i. Dimensions (in feet) of largest proposed structure Approx. 90' (102' to top of mechanical space) height; Approx. 130' width; Approx. 236' length
- j. Linear feet of frontage along a public thoroughfare project will occupy is? Approx. 130' on 5th Street and Approx. 236' on 46th Avenue ft.
2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? TBD tons/cubic yards.
3. Will disturbed areas be reclaimed?  N/A  Yes  No
- a. If yes, for what intended purpose is the site being reclaimed? \_\_\_\_\_
- b. Will topsoil be stockpiled for reclamation?  Yes  No
- c. Will upper subsoil be stockpiled for reclamation?  Yes  No

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? 0 acres.
5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?  Yes  No
6. If single phase project: Anticipated period of construction Approx. 36 months months, (including demolition)
7. If multi-phased:
- Total number of phases anticipated \_\_\_\_\_ (number)
  - Anticipated date of commencement phase 1 \_\_\_\_\_ month \_\_\_\_\_ year, including (demolition)
  - Approximate completion date of final phase \_\_\_\_\_ month \_\_\_\_\_ year.
  - Is phase 1 functionally dependent of subsequent phases?  Yes  No
8. Will blasting occur during construction?  Yes  No
9. Number of jobs generated: during construction TBD ; after project is complete 56
10. Number of jobs eliminated by this project 0
11. Will project require relocation of any projects or facilities?  Yes  No  
If yes, explain: \_\_\_\_\_
- 
12. Is surface liquid waste disposal involved?  Yes  No
- If yes, indicate type of waste (sewage, industrial, etc) and amount Sewage<sup>1</sup>
  - Name of water body into which effluent will be discharged Sewage would be discharged into the city sewage system
13. Is subsurface liquid waste disposal involved? Type \_\_\_\_\_  Yes  No
14. Will surface area of an existing water body increase or decrease by proposal?  Yes  No  
If yes, explain: \_\_\_\_\_
15. Is project or any portion of project located in a 100 year flood plain?  Yes  No
16. Will the project generate solid waste?  Yes  No
- If yes, what is the amount per month? 1.9<sup>2</sup> tons
  - If yes, will an existing solid waste facility be used?  Yes  No
  - If yes, give name TBD ; location All waste is collected and sent to a designated waste facility by the Department of Sanitation
  - Will any wastes not go into a sewage disposal system or into a sanitary landfill?  Yes  No
  - If yes, explain: Recyclable materials collected at the school would be taken to a recycling facility for processing.
17. Will the project involve the disposal of solid waste?  Yes  No
- If yes, what is the anticipated rate of disposal? \_\_\_\_\_ tons/month
  - If yes, what is the anticipated site life? \_\_\_\_\_ years
18. Will project use herbicides or pesticides?  Yes  No
19. Will project routinely produce odors (more than one hour per day)?  Yes  No
20. Will project produce operating noise exceeding the local ambient noise levels?  Yes  No
21. Will project result in an increase in energy use?  Yes  No  
If yes, indicate type(s): Electric
22. If water supply is from wells, indicate pumping capacity N/A gallons/minute
23. Total anticipated water usage per day See footnote<sup>3</sup> gallons/day

<sup>1</sup> The proposed school would generate demand for 6,650 gallons per day (gpd) (665 students x 10 gpd). Absent the proposed project, the project site is expected to be developed with 100,000-sf community facility, which would generate demand for approx. 10,000 gpd of sewage (100,000 sf x 0.10 gpd/office uses = 10,000 gpd). Thus, the proposed school would result in a lesser demand for sewage treatment than the No Action condition (3,350 gpd less).

<sup>2</sup> The proposed school would generate demand for:

410 elementary school students x 3 pounds per week (ppw) = 1,230 x 4 weeks = 4,920 pounds per month;

195 intermediate school students x 4 ppw = 780 x 4 weeks = 3,120 pounds per month;

60 District 7 5 students x 4 ppw = 240 x 4 weeks = 960 pounds per month, for a total of 9,000 pounds per month.

Absent the proposed project, the project site is expected to be developed with 100,000-sf community facility, which would generate demand for: 5,200 pounds per month (100 employees x 13 ppw = 1,300 x 4 weeks = 5,200 pounds per month). Thus, the incremental increase is 3,800 pounds per month (or 1.9 tons per month).

<sup>3</sup> The proposed school would generate water demand for: 23,412 gpd (665 students x 10 gpd = 6,650 gpd + (0.17 x 98,600 sf) = 23,412 gpd). Absent the proposed project, the project site is expected to be developed with 100,000-sf community facility, which would generate demand for: 27,000 gpd (100,000 sf x 0.10 gpd/sf = 10,000 gpd + (0.17 x 100,000 sf) = 27,000 gpd). Thus, the proposed school would result in a lesser demand for water than the No Action condition (3,588 gpd less).

24. Does project involve Local, State, or Federal funding?  Yes  No  
 If yes, explain: **Construction costs will be funded by the New York City Department of Education's Five Year Capital Plan for Fiscal Years 2010 to 2014**

25. Approvals Required:

	Yes	No	Type	Submittal Date
City, Town, Village Board	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
City, Town, Village Planning Board	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
City, Town, Village Zoning Board	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
City, County Health Department	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Other Local Agencies	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Other Regional Agencies	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
State Agencies	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Federal Agencies	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

### C. Zoning and Planning Information

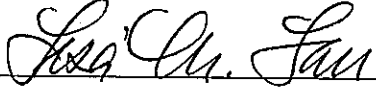
1. Does proposed action involve a planning or zoning decision?  Yes  No  
 If Yes, indicate decision required:
- Zoning amendment     Zoning variance     New/revision of master plan     Subdivision  
 Site plan     Special use permit     Resource management plan     Other
2. What is the zoning classification(s) of the site? **Manufacturing M3-1; however, the GPP governs development on the project site. The GPP calls for residential and community facility use (specifically, a school) on the project site (Parcel 4).**
3. What is the maximum potential development of the site if developed as permitted by the present zoning? **383,000 square feet (sf) of residential use, 1,150 sf of retail use, and 100,000 sf of community facility use on the project site (Parcel 4), as per the recently modified GPP.**
4. What is the proposed zoning of the site? **No zoning changes are proposed**
5. What is the maximum potential development of the site if developed as permitted by the proposed zoning? **No zoning changes are proposed**
6. Is the proposed action consistent with the recommended uses in adopted local land use plans?  Yes  No
7. What are the predominant land use(s) and zoning classifications within a 1/4-mile radius of proposed action? **Land use: Residential, commercial, industrial/manufacturing, and open space. Zoning: R6A, R6B, R7A, R7X, R8A, C1-5, M1-4, M1-5, M3-1, and Special Long Island City District.**
8. Is the proposed action compatible with adjoining/surrounding land uses with a 1/4 mile?  Yes  No
9. If the proposed action is the subdivision of land, how many lots are proposed? **N/A**
- a. What is the minimum lot size proposed? **N/A**
10. Will the proposed action require authorization(s) for the formation of sewer or water districts?  Yes  No
11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)?  Yes  No
- a. If yes, is existing capacity sufficient to handle projected demand?  Yes  No
12. Will the proposed action result in the generation of traffic significantly above present levels?  Yes  No
- a. If yes, is the existing road network adequate to handle the additional traffic?  Yes  No

## D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be an adverse impacts associated with your proposal, please discuss such impacts and the measures which you proposed to mitigate or avoid them.

## E. Verification

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name Lisa M. Lau, AICP Date August 18, 2010  
Signature  Title Vice President

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

## Part 2 - PROJECT IMPACTS AND THEIR MAGNITUDE

### Responsibility of Lead Agency

#### General Information (Read Carefully)

In completing the form the reviewer should be guided by the question: Have my responses and determinations been reasonable? The reviewer is not expected to be an expert environmental analyst.

The **Examples** provided are to assist the reviewer by showing types of impacts and wherever possible the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.

The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.

The number of examples per question does not indicate the importance of each question.

In identifying impacts, consider long term, short term and cumulative effects.

#### Instructions (Read Carefully)

- a. Answer each of the 20 questions in PART 2. Answer **Yes** if there will be any impact.
- b. **Maybe** answers should be considered as **Yes** answers.
- c. If answering **Yes** to a question, then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.
- d. Identifying that an Impact will be potentially large (column 2) does not mean that it is also necessarily **significant**. Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.
- e. If a reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3.
- f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the **Yes** box in column 3. A **No** response indicates that such a reduction is not possible. This must be explained in PART 3.

#### IMPACT ON LAND

1. Will the Proposed Action result in a physical change to the project site?  NO  YES

#### Examples that would apply to column 2

- Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.
- Construction on land where the depth to the water table is less than 3 feet.
- Construction of paved parking area for 1,000 or more vehicles.
- Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.
- Construction that will continue for more than 1 year or involve more than one phase or stage.
- Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.
- Construction or expansion of a sanitary landfill.
- Construction in a designated floodway.

#### Other impacts

2. Will there be an effect to any unique or unusual land forms found on the site? (i.e., cliffs, dunes, geological)  NO  YES

#### Other impacts

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO



### IMPACT ON WATER

3. Will Proposed Action affect any water body designated? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL)       NO     YES

**Examples that would apply to column 2**

- Developable area of site contains a protected water body.
- Dredging more than 100 cubic yards of material from channel of a protected stream.
- Extension of utility distribution facilities through a protected water body.
- Construction in a designated freshwater or tidal wetland.

Other impacts \_\_\_\_\_

4. Will Proposed Action affect any non-protected existing or new body of water?       NO     YES

**Examples that would apply to column 2**

- A 10% increase or decrease in the surface area of any body of water or more than a 10-acre increase or decrease.
- Construction of a body of water that exceeds 10 acres of surface area.

Other impacts \_\_\_\_\_

5. Will Proposed Action affect surface or ground water quality or quantity?       NO     YES

**Examples that would apply to column 2**

- Proposed Action will require a discharge permit.
- Proposed Action requires use of a source of water that does not have approval to serve proposed (project) action.
- Proposed Action requires water supply from wells with greater than 45 gallons per minute pumping capacity.
- Construction or operation causing any contamination of a water supply system.
- Proposed Action will adversely affect groundwater.
- Liquid effluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.
- Proposed Action would use water in excess of 20,000 gallons per day.
- Proposed Action will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.
- Proposed Action will require the storage of petroleum or chemical products greater than 1,100 gallons.
- Proposed Action will allow residential uses in areas without water and/or sewer services.
- Proposed Action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.

Other impacts \_\_\_\_\_

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO



**IMPACT ON AESTHETIC RESOURCES**

11. Will Proposed Action affect aesthetic resources? (If necessary, use the Visual EAR Addendum Section 617.20, Appendix B.)  NO  YES

**Examples that would apply to column 2**

Proposed land uses, or project components obviously different from or in sharp contrast to current surrounding land use patterns, whether man-made or natural.

Proposed land uses, project components visible to users of aesthetic resources which will eliminate or significantly reduce their enjoyment of the aesthetic qualities of that resource.

Project components that will result in the elimination or significant screening of scenic views known to be important to the area.

Other impacts

1  
Small to  
Moderate  
Impact

2  
Potential  
Large  
Impact

3  
Can Impact be  
Mitigated by Project  
Change

YES  NO

YES  NO

YES  NO

YES  NO

**IMPACT ON HISTORIC AND ARCHEOLOGICAL RESOURCES**

12. Will Proposed Action impact any site or structure of historic, prehistoric or paleontological importance?  NO  YES

**Examples that would apply to column 2**

Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Register of Historic places.

Any impact to an archeological site or fossil bed located within the project site.

Proposed Action will occur in an area designated as sensitive for archeological sites on the NYS Site Inventory.

Other impacts

YES  NO

YES  NO

YES  NO

YES  NO

**IMPACT ON OPEN SPACE AND RECREATION**

13. Will Proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities?  NO  YES

**Examples that would apply to column 2**

The permanent foreclosure of a future recreational opportunity.

A major reduction of an open space important to the community.

Other impacts

YES  NO

YES  NO

YES  NO

<b>IMPACT ON CRITICAL ENVIRONMENTAL AREAS</b>	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
<p>14. Will Proposed Action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6NYCRR 617.14(g)? ■ NO □ YES</p> <p>List the environmental characteristics that caused the designation of the CEA</p> <p><b>Examples that would apply to column 2</b>  Proposed Action to locate within the CEA? □  Proposed Action will result in a reduction in the quantity of the resource? □  Proposed Action will result in a reduction in the quality of the resource? □  Proposed Action will impact the use, function or enjoyment of the resource? □</p> <p>Other impacts _____ □</p>			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
<p align="center"><b>IMPACT ON TRANSPORTATION</b></p> <p>See Chapter 6, "Transportation."</p> <p>15. Will there be an effect to existing transportation systems? ■ NO □ YES</p> <p><b>Examples that would apply to column 2</b>  Alteration of present patterns of movement of people and/or goods. □  Proposed Action would result in major traffic problems. □</p> <p>Other impacts _____ □</p>			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
<p align="center"><b>IMPACT ON ENERGY</b></p> <p>16. Will Proposed Action affect the community's sources of fuel or energy supply? ■ NO □ YES</p> <p><b>Examples that would apply to column 2</b>  Proposed Action will cause a greater than 5% increase in the use of any form of energy in the municipality. □  Proposed Action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use. □</p> <p>Other impacts _____ □</p>			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO
<p align="center"><b>NOISE AND ODOR IMPACT</b></p> <p>See Chapter 8, "Noise."</p> <p>17. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action? ■ NO □ YES</p> <p><b>Examples that would apply to column 2</b>  Blasting within 1,500 feet of a hospital, school or other sensitive facility. □  Odors will occur routinely (more than one hour per day). □  Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures. □  Proposed Action will remove natural barriers that would act as a noise screen. □</p> <p>Other impacts _____ □</p>			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> NO

**IMPACT ON PUBLIC HEALTH**

18. Will Proposed Action affect public health and safety?  NO  YES  
 Examples that would apply to column 2

- Proposed Action may cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission.
- Proposed Action may result in the burial of "hazardous wastes" in any form (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.)
- Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.
- Proposed Action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.

Other impacts

1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO

**IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD**

19. Will Proposed Action affect the character of the existing community?  NO  YES

- Examples that would apply to column 2
- The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.
- The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.
- Proposed Action will conflict with officially adopted plans or goals.
- Proposed Action will cause a change in the density of land use.
- Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community.
- Development will create a demand for additional community services (e.g. schools, police and fire, etc.)
- Proposed Action will set an important precedent for future projects.
- Proposed Action will create or eliminate employment.

Other impacts

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> YES <input type="checkbox"/> NO

20. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts?  NO  YES

If Any Action in Part 2 is identified as a Potential Large Impact or If you Cannot Determine the Magnitude of Impact, Proceed to Part 3

### A. INTRODUCTION

The New York City School Construction Authority (SCA), proposes the site selection, acquisition, acceptance of construction funding and construction of P.S./I.S. 312, an approximately 665-seat primary and intermediate public school in the Long Island City section of Queens. The proposed school facility would be located in Community School District 30 and would serve students in pre-kindergarten through grade eight, including District 75 students. The project site is located on the southwest corner of 46th Avenue and 5th Street (Block 21, Lot 30), on the eastern portion of Parcel 4 of the Queens West Development. The proposed school would be six stories in height and approximately 98,600 gross square feet (gsf), with frontages on 5th Street and 46th Avenue. Both the main entrance and the proposed school's outdoor play area would be located on 5th Street.

The project site is currently vacant and enclosed by construction fencing. The site is surrounded to the north, south, and west by the cleared land that will be developed with residential and open space developments planned independently of the school as part of the Queens West Development. A 41-story residential tower would be constructed on the remaining portion of Parcel 4 that is directly west of the project site. Further west of the project site, a residential development on Parcel 5 was recently completed. The recently completed Queens West Sportsfield, a public park with a running track and multi-purpose field, is located south of the project site, and additional open space is planned for the area immediately south of the project site; once constructed, this open space would provide a connection to the network of open spaces to be developed along the waterfront. One block south of the project site, at 47-05 Center Boulevard, is a recently completed residential building. North of the project site, a 40-story residential tower and seven-story parking garage are planned. To the east of the project site are older, low-rise light-manufacturing buildings.

As stated above, the project site occupies a portion of the parcel identified as Parcel 4 in the Queens West Development General Project Plan (GPP). The GPP governs future development within its boundaries, setting forth specific controls for each parcel, including use, maximum bulk, massing (maximum height and required setbacks), and view corridor controls, and calls for the development of 343,000 square feet of residential use, 1,150 sf of retail space, and a 100,000 sf elementary school on Parcel 4.

The project site is located within an M3-1 manufacturing district where community facilities, including schools, are not permitted as-of-right. However, as described above, the Queens West site (including the project site) is subject to the provisions of the GPP, rather than the local zoning requirements. The project site is currently under the jurisdiction of the Queens West Development Corporation, which is a subsidiary of the Empire State Development Corporation (ESDC). In order for the SCA to undertake construction of the school, the site plan must be approved under the requirements of the SCA's enabling legislation, which is a discretionary action subject to State Environmental Quality Review (SEQR). SCA will serve as lead agency

for SEQR and ESDC will be an interested agency. Funding for design and construction of this project is available in the New York City Department of Education's (DOE's) Capital Plan for Fiscal Years 2010 to 2014.

For the purpose of this environmental review, it is assumed that construction would begin in 2010 and student occupancy would begin in 2013. Accordingly, 2013 has been selected as the Build Year for which the environmental assessment areas have been analyzed. Given that the GPP calls for 100,000 sf of community facility use on Parcel 4, and that ESDC and the Queens West Development Corporation are expeditiously proceeding with development on all remaining development parcels, it is assumed that absent the proposed project the project site would be developed with approximately 100,000 sf of another type of community facility space ("No Action" scenario).

## **B. PROBABLE IMPACTS OF THE PROPOSED PROJECT**

### **LAND USE**

The new school building would rise to six stories along 46th Avenue and would rise to four stories along 5th Street before setting back 30 feet and rising another two stories. Students would enter the building via a main entrance on 5th Street. The proposed school facility would include a 3,000-sf at-grade play area on 5th Street, which would adjoin a planned open space to the south, adjacent to the Queens West Sportsfield. The school facility would be constructed along the property line and would be compatible with surrounding building heights and uses expected to be developed in the area by 2013. Overall, the proposed school facility would be compatible with the mix of uses in the surrounding area. The new school facility would increase activity on the site and would provide a community facility use that would support existing residential uses and residential development that is planned throughout the study area. No significant adverse impacts to surrounding land uses would result from the proposed project.

### **ZONING AND PUBLIC POLICY**

As described above, future development on the project site is governed by the GPP, which supersedes the city's zoning regulations. The GPP identified Parcel 4 as an appropriate location for a school, and the design of the proposed school building conforms to the GPP design guidelines as most recently modified. Therefore, the proposed project would not adversely affect the urban design of the project site, and would not have any significant adverse impacts to zoning or public policy.

### **WATERFRONT REVITALIZATION PROGRAM**

New York City's WRP includes 10 policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. In each case, it was found that either the policy did not apply in this case, or that the proposed project would be consistent with the policy. Therefore, there would be no significant adverse impacts on the City's WRP as a result of the proposed project.

## COMMUNITY CHARACTER

The proposed facility would be shorter than the buildings that will be developed as part of the Queens West development, providing a transition to the lower-scale buildings located east of 5th Street. The increase in traffic volumes expected to result from the proposed project would not result in any significant adverse community character impacts.

## COMMUNITY FACILITIES

The Police and Fire Departments continually monitor conditions to determine how personnel are deployed. Decisions to alter existing deployment patterns would be made only in response to a demonstrated change in demand. Police and fire services would be adjusted as deemed necessary by both agencies, and no significant adverse impacts to police or fire services are expected to result from the proposed project.

## HISTORIC AND CULTURAL RESOURCES

A historic resources assessment of the project site was already completed for the Queens West Development—then known as the Hunters Point Development Project—in the 1990 *Hunters Point Waterfront Development Final Environmental Impact Statement* (FEIS) approved by New York City and New York State. The FEIS analyzed the 74-acre area (which encompasses the project site) located between Anable Basin to the north and Newtown Creek to the south, extending generally as far east as 5th Street north of 49th Avenue, and 2nd Street south of 49th Avenue. Upon review of the FEIS, there are no designated architectural resources or properties that meet the criteria of eligibility for State/National Register listing or New York City Landmark designation located on the project site or within the 400-foot study area. Overall, the proposed project would not result in any adverse physical or contextual impacts on architectural resources. Therefore, no further assessment of potential impacts on architectural resources is necessary. Furthermore, OPRHP has determined that the project site is not sensitive for archaeological resources. Therefore, the proposed project would have no adverse impacts on archaeological resources.

## VISUAL AND AESTHETIC CONDITIONS

The proposed project would improve the appearance of the project site and the surrounding area by replacing a vacant lot with a new school facility. The proposed project would be shorter than the recently developed and planned residential buildings of the surrounding Queens West Development and slightly taller than the low-rise industrial buildings of the nearby Hunters Point neighborhood. The building's design would be consistent with that of the new buildings of the Queens West Development, and would create a consistent streetwall in the study area. The new school facility would greatly enhance the streetscape of the project site and in the study area. The proposed project would not alter the street pattern, block shapes, or natural features of the study area, nor would it introduce an incompatible use. As there are no important visual elements in the study area, the proposed project would not adversely affect such elements. The proposed project would not result in any significant adverse impacts to visual resources in the study area. Overall, the proposed project would not have any adverse impacts on the visual and aesthetic conditions of the study area.



## SHADOWS

The shadows analysis considered shadows on four representative days of the year: March 21 (equivalent to September 21, the equinoxes); June 21, the summer solstice; May 6 (equivalent to August 6, the midpoints between the equinoxes and summer solstice); and December 21, the winter solstice.

The shadows analysis concluded that the proposed school's shadow would not be long enough to reach the existing park to the south (Queens West Sportfield) or the proposed esplanade to the west on any of the four representative days.

The proposed school's shadow would be long enough to reach a small section of Anable Basin to the northeast for the final 15 minutes of the December 21 analysis day. However, most of this small incremental shadow would likely be blocked from the water by the intervening building that is slated to be constructed just north of the project site. The proposed school's shadow would not be long enough to reach Anable Basin on the other three analysis days.

A portion of the planned open space, located immediately south of the project site and north of the existing Queens West Sportsfield, would experience shadow from the proposed school in the mornings of the June 21 and May 6/August 6 analysis days. On June 21, project-generated shadow would fall toward a section of the park between approximately 6:57 AM and approximately 10:15 AM. On May 6/August 6, the proposed building's shadow would fall towards a smaller section of the park from 7:27 AM to 9:30 AM. However, on both these analysis days, the 400-foot-high proposed residential building adjacent to the project site to the west would already cast shadow on much of the same area that would be affected by the proposed school; only a narrow stretch of the park would actually be in the school's shadow on the late spring and summer mornings.

The section of the proposed park that would be affected by incremental shadow will primarily contain a walkway providing access from Fifth Street through the block to Center Boulevard and the larger proposed park beyond. The small extent of incremental shadow would not be expected to cause a significant adverse impact to any vegetation at that location in the park or its users. Therefore, the proposed project would not result in any significant adverse shadow impacts.

## TRANSPORTATION

The future with the proposed project would result in increased transit and pedestrian trips. Primary pedestrian access to the proposed school would be provided on 5th Street between 46th Avenue and 46th Road. The analysis showed that pedestrian trips associated with the proposed project would result in increased volumes at the analysis locations, but that all sidewalks, crosswalks, and corner reservoir analysis locations would continue to operate at acceptable levels (minimum 19.5 square feet per pedestrian [SFP] for crosswalks and corners, maximum 8.5 pedestrians per minute per foot [PMF] platoon flows for sidewalks) during the AM and PM peak 15-minute periods. The proposed project would not result in any significant adverse pedestrian impacts during the AM and PM peak periods at any analysis location.

The proposed project would not result in an increment of more than 200 peak hour transit riders (the *CEQR Technical Manual* threshold for undertaking quantified transit analysis), and is not expected to result in significant adverse transit impacts. In terms of vehicle trips, the incremental increase in trips as compared to the No Action scenario is 59 and 57 vehicle trips during the morning and afternoon peak hours, respectively. Since the net vehicle trips are slightly above the *CEQR Technical Manual* threshold of 50 vehicle trips, a Level 2 Screening Assessment was

conducted to determine if assigning these net vehicular trips would result in more than 50 peak hour incremental vehicle trips at the intersections in the vicinity of the project site. Based on the results of Level 2 Screening Assessment it was determined that the proposed project would not result in more than 50 peak hour incremental vehicle trips at the intersections in the vicinity of the project site. Specifically, at the five intersections in the vicinity of the project site—including the intersections of Vernon Boulevard and Fifth Street at 46th Avenue and 46th Road—the proposed project would result in a maximum net vehicular increment of up to 37 vehicles per hour (vph) during any of the school-related morning and afternoon peak hours. Therefore, no further detailed analyses of traffic and parking conditions are warranted based on the CEQR criteria, and the proposed project is not expected to result in significant adverse traffic impacts.

### PEDESTRIAN SAFETY

Accident data for the study area intersections were obtained from the New York State Department of Transportation (NYSDOT) for the time period between April 1, 2007 and March 31, 2010. The data obtained quantify the total number of reportable accidents (involving fatality, injury, or more than \$1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related accidents at each location. According to the *2010 CEQR Technical Manual*, a high pedestrian accident location is one where there were five or more pedestrian/bicyclist-related accidents or 48 or more reportable and non-reportable accidents in any consecutive 12 months of the most recent three-year period for which data are available.

During the time period between April 1, 2007 and March 31, 2010, a total of 36 reportable and non-reportable accidents, zero fatalities, 21 injuries, and 2 pedestrian/bicyclist-related accidents occurred at the study area intersections. A rolling total of accident data identifies no study area intersections as high pedestrian accident locations in this period. Table S-1 depicts total accident characteristics by intersection during the study period, as well as, a breakdown of pedestrian and bicycle accidents by year and location.

**Table S-1  
Accident Data**

Intersection		Study Period						Accidents by Year								
North-South Roadway	East-West Roadway	All Accidents by Year				Total Fatalities	Total Injuries	Pedestrian				Bicycle				
		2007	2008	2009	2010			2007	2008	2009	2010	2007	2008	2009	2010	
5th Street	46th Avenue	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	46th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	47th Avenue	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0
5th Street	47th Road	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	48th Avenue	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0
Vernon Blvd	45th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	46th Avenue	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0
Vernon Blvd	46th Road	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0
Vernon Blvd	47th Avenue	2	3	1	0	0	1	0	0	0	0	0	0	0	0	0
Vernon Blvd	47th Road	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0
Vernon Blvd	48th Avenue	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0
11th Street	45th Road	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
11th Street	46th Avenue	2	0	2	0	0	4	0	0	0	0	0	0	0	0	0
11th Street	46th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
11th Street	47th Avenue	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
11th Street	47th Road	0	2	0	1	0	3	0	0	0	1	0	0	0	0	0

Source: NYSDOT — April 1, 2007 through March 31, 2010 accident data.

## AIR QUALITY

### *HVAC SYSTEM*

Potential impacts from the proposed school's HVAC system on the existing buildings in the study area and the planned adjacent residential tower were evaluated. Maximum predicted concentrations for NO<sub>2</sub>, SO<sub>2</sub>, CO, and PM<sub>10</sub>, including background concentrations were low, and when added to background concentrations, would comply with ambient air quality standards.

The air quality modeling analysis also determined the highest predicted increase in 24-hour and annual average PM<sub>2.5</sub> concentrations on existing buildings and operable windows or air intakes at the planned adjacent residential tower. The maximum 24-hour incremental impacts at any discrete receptor location would be in compliance with the New York City Department of Environmental Protection (NYCDEP) interim guidance criteria. On an annual basis, the projected PM<sub>2.5</sub> impacts would comply with the applicable interim guidance criterion of 0.3 µg/m<sup>3</sup> for local impacts, and the NYCDEP interim guidance criterion of 0.1 µg/m<sup>3</sup> for neighborhood scale impacts. Therefore, there is no potential for any significant impacts from the proposed school's HVAC systems on air quality.

### *INDUSTRIAL SOURCE SCREENING ANALYSIS*

The maximum predicted short-term and annual concentrations of pollutants from industrial sources at the proposed school would be within the acceptable range based on NYSDEC guidance. The impacts of existing industrial sources on the proposed school are not significant, and no adverse air quality impacts from industrial source activities are anticipated.

### *CHEMICAL SPILL ANALYSIS*

The recirculation analysis and dispersion analyses indicated that in case of a chemical spill of materials typically used in a school science laboratory, the resulting concentrations would occur at levels below the U.S. Occupational Safety and Health Administration (OSHA) and/or National Institute for Occupational Safety and Health (NIOSH) standards. Therefore, there would be no significant impact on air quality from potential spills in the school laboratory hoods.

## NOISE

Noise levels at the project site are likely to increase as a result of traffic associated with the Hunter's Point South project, which is located nearby. Therefore, the future noise levels at the project site were estimated taking the Hunter's Point South project into account, and the noise attenuation requirements were based on these estimates in order to ensure that sufficient attenuation would be provided. Of all the noise receptor sites included in that analysis, Site 3, located on 50th Avenue between Vernon Boulevard and 5th Street is closest to the proposed school, and its results were applied to the proposed project. The cumulative noise increases due to background growth and traffic associated with the Hunter's Point South project would be at most 4.7 dBA, so this amount would be added to the maximum L<sub>10(1)</sub> noise level measured at the project site to conservatively determine the maximum future L<sub>10(1)</sub> noise level at the project site. This level would be 74.4 dBA.

Based upon this L<sub>10(1)</sub> value, the proposed school would require at least 30 dBA of attenuation to achieve the CEQR interior noise level requirements of 45 dBA L<sub>10(1)</sub>.

The building design includes the use of well sealed double-glazed windows and central air conditioning (i.e., alternate means of ventilation). With these measures, the window/wall attenuation would be expected to provide approximately 35 dBA for all facades of the building, therefore meeting CEQR requirements of 45 dBA  $L_{10(1)}$ . In addition, the building mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations and to avoid producing levels that would result in any significant increase in ambient noise levels.

## SOIL AND GROUNDWATER

The following environmental investigation reports have been prepared for the site, including: a Phase I Environmental Site Assessment (ESA) by Dvirka and Bartilucci Consulting Engineers dated July 3, 2008; a Remedial Action Work Plan (RAWP) by TRC Engineers, Inc. (TRC) dated August 2006; a Preliminary Geotechnical Engineering Study by Yu & Associates Engineers, P.C. dated September 15, 2008; and a Remedial Investigation Report (RIR) by TRC dated January 2008. In addition, a draft Final Engineering Report (FER) and draft Site Management Plan (SMP) were prepared by TRC in March 2010 and submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) for approval. Prior to the start of work, the FER and SMP will be approved by the NYSDEC and NYSDOH.

The project site is located on Parcel 4 of the Queens West Development (QWD)-Stage 2 site, which encompasses a total of approximately 21 acres. The entire QWD-Stage 2 site is in various levels of development. The project site is located within the Brownfield Cleanup Program (BCP) Site No. C241096, which encompasses approximately 4.7 upland acres of the QWD-Stage 2 site. BCP Site No. C241096 was formerly in the Voluntary Cleanup Program (VCP) and was designated VCP Site No. V00505C-OU1.

The project site was historically developed by steam stills, condensers and track maintenance operations for oil distillation and condensers (refining) as part of the Standard Oil Company of New York ("SOCONY") from 1898 through 1915. The project site was also used for dry storage as part of PepsiCo from 1916 through 1950, and vehicle maintenance operations as part of PepsiCo from 1950 through 2002. Underground storage tanks (USTs) were also present on the project site.

Remedial investigations were performed on the site between September 2005 and April 2006 in accordance with the NYSDEC-approved Remedial Investigation Work Plan ("RIWP"). Additional limited investigations were performed between April-October 2009. The findings of the RIWP for the project site indicated elevated levels of petroleum in soil in the form of Gross Contamination at and below the water table with associated petroleum odor. Metals (particularly lead and arsenic) and semi-volatile organic compounds ("SVOCs") were found in soil at the project site. Volatile organic compounds (VOCs), SVOCs, and dissolved phase metals were present in groundwater, and VOCs and combustible gas were present in soil vapor.

Remediation was performed at the project site by TRC in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) between March and December 2008 and between November and December 2009. Remedial activities included excavation, off-site transportation and disposal of gross contamination and soil with contaminant levels exceeding the numeric Site-Specific Soil Cleanup Objectives ("SSSCOs") approved by the NYSDEC and NYSDOH. Subsurface structures including piping and USTs were also removed. At the conclusion of the remediation, post-excavation soil, soil gas and groundwater sampling were

performed and the project site was backfilled with a minimum of two feet of imported clean fill. A Demarcation Layer was installed between the clean fill layer and residual soil.

Post-excavation soil samples did not indicate any gross contamination or exceedances of the SSSCOs. Post-remediation groundwater samples indicated the presence of VOCs, SVOCs and metals above New York State Groundwater Quality Standards and Guidance Values; however, the remedial action objectives established by the RAWP were achieved. Post-remediation soil vapor samples indicated the presence of VOCs.

The proposed project would not result in significant adverse impacts from contaminated media and building materials. During construction, the Contractor would properly manage excavated soil, dewatering, air quality control measures, and community air monitoring in accordance with the Site Management Plan (and all applicable local, State and Federal regulations). To minimize the potential for worker exposure, the Health and Safety Plan (HASP) provisions of the SMP would be implemented during construction activities. The HASP would establish procedures for the protection of on-site workers and the community, and require soil gas, dust and odor suppression measures, as well as community air monitoring. Since residual contaminated soil, groundwater, and soil vapor would exist beneath the project site following completion of construction, Engineering and Institutional Controls ("ECs/ICs") would be implemented to prevent potential exposure to these impacted media. Long-term management of ECs/ICs and of residual contamination would be performed under the SMP.

The following ECs would be implemented at the project site: replacement of a Barrier Layer consisting of a minimum two-foot thick imported environmentally clean fill layer preventing contact with residual soil, and re-installation of a demarcation layer between residual soil and environmentally clean fill; the building would be constructed with a sub-slab vapor barrier and active sub-slab depressurization system (SSDS) to prevent intrusion of soil vapor; and the site would be covered with the building, pavement, and landscaping ("Final Site Development Cover") in accordance with the SMP, minimizing the potential for contact with residual soil.

The ICs would consist of an environmental easement placed on the project site as a precondition for approval of the SMP. The environmental easement would require implementation of all SMP activities; prohibit the use of site groundwater; prohibit the use of the property as a farm or vegetable garden; prevent the use of the property for a less restrictive use; and require groundwater monitoring to assess performance of the remedy.

With these measures in place, no significant adverse impacts due to the presence of residual contamination would be expected to occur either during or following construction at the site.

## **CONSTRUCTION IMPACTS**

Construction of the proposed project may be disruptive to the surrounding area for limited periods of time throughout the construction period. The proposed project's temporary effects on the following areas were analyzed: transportation systems, air quality, noise, historic and cultural resources, hazardous materials, natural resources, land use and neighborhood character, socioeconomic conditions, community facilities, open space, and infrastructure, as well as the economic benefits associated with the construction.

Although the proposed project was found have no potential for significant adverse construction impacts, standard construction safety and impact-reduction measures would be implemented for air quality, noise, hazardous materials, and infrastructure during construction of the proposed

project as outlined below. With these measures in place, the proposed project would not result in significant adverse impacts in the area of construction.

### *AIR QUALITY AND NOISE*

All necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. Appropriate fugitive dust control measures, including watering of exposed areas and dust covers for trucks, would be employed, and to reduce the resulting concentration increments at sensitive receptors, large emissions sources and activities, such as concrete trucks and pumps, would be located away from sensitive receptors to the extent practicable. Additional measures would be taken in accordance with applicable laws, regulations, and building codes. These include the restriction of on-site vehicle idle time to three minutes for all vehicles not using the engine to operate a loading, unloading, or processing device (e.g., concrete mixing trucks). While it is possible that the construction activities may exceed certain thresholds used for assessing the potential for significant adverse air quality impacts, any exceedance would be limited in extent, duration, and severity. Based on the limited duration of these potential exceedances above threshold values, potential increments greater than applicable thresholds are not expected to result in significant adverse impacts from construction activities.

A noise mitigation plan is required as part of the New York City Noise Control Code, and would include source controls; path controls; and receptor controls.

In terms of source controls (i.e., reducing noise levels at the source or during most sensitive time periods), the following measures for construction would be implemented:

- The contractors would use equipment that meets the sound level standards for equipment from the start of construction activities and use a wide range of equipment that produce lower noise levels than typical construction equipment.
- Where feasible, the project sponsors would use construction procedures and equipment that are quieter than that required by the New York City Noise Control Code.
- As early in the construction period as practicable, diesel-powered equipment would be replaced with electrical-powered equipment, such as electric scissor lifts and electric articulating forklifts.
- All contractors and subcontractors would be required to properly maintain their equipment and have quality mufflers installed.

In terms of path controls (e.g., placement of equipment and implementation of barriers between equipment and sensitive receptors), the following measures for construction would be implemented:

- Perimeter noise barriers would be constructed that satisfy New York City Noise Control Code requirements.
- To the extent feasible, noisy equipment, such as generators, cranes, trailers, concrete pumps, concrete trucks, and dump trucks, would be located away from and shielded from sensitive receptor locations.

In terms of receptors, the residential buildings in the immediate vicinity of the project site generally contain double-glazed windows and/or alternative ventilation (i.e., air conditioning), which would greatly reduce interior noise levels compared with exterior noise levels and may result in interior noise levels of 45 dBA or less.

On-site construction activities may generate elevated noise levels at nearby residential and open space areas during some parts of the construction period, and are expected to exceed CEQR impact criteria only during the heaviest construction activities (excavation, foundation construction, etc.). Such exceedances are not expected to occur in two or more consecutive years, and therefore construction of the proposed school would not result in a significant impact.

#### *HAZARDOUS MATERIALS*

Excavation activities could disturb hazardous materials and increase pathways for human exposure. The SCA and/or its contractors would develop management plans (e.g., soil management plan, groundwater management plan, construction health and safety plan, etc.) to address any hazardous materials that may be encountered during construction of the school, consistent with the NYSDEC-approved Site Management Plan. The management plans prepared or reviewed by SCA would include measures to protect the health and safety of construction workers, school staff and students, and the public in general during construction and at the time of occupancy.

Specific measures that would be implemented to avoid impacts are as follows: during construction, the Contractor would properly manage excavated soil, dewatering, air quality control measures, and community air monitoring in accordance with the SMP (and all applicable local, State and Federal regulations). To minimize the potential for construction workers' exposure, the Health and Safety Plan (HASP) provisions of the SMP would be implemented during construction activities. The HASP would establish procedures for the protection of on-site workers and the community, and require soil gas, dust and odor suppression measures, as well as community air monitoring. Since residual contaminated soil, groundwater and soil vapor would exist beneath the project site following completion of construction, Engineering and Institutional Controls ("ECs/ICs") would be implemented to prevent potential exposure to these impacted media. The specified engineering controls include installation of a vapor barrier and sub-slab depressurization below the foundation to address potential vapors. Long-term management of ECs/ICs and of residual contamination would be performed under the SMP. Transportation of all material leaving the site would be in accordance with applicable requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.

In addition, to minimize the potential for construction workers' exposure, standard industry practices, including appropriate health and safety measures, will be utilized.

#### *INFRASTRUCTURE*

Prior to the start of construction, all on-site utilities that may be affected by construction activities would be relocated in accordance with all applicable New York City regulations.

The proposed project would receive some combination of electric and gas service via extensions of the existing Con Edison distribution system. During the superstructure stage of construction, some sidewalk and on-street construction activities would be required to connect the proposed buildings to existing utility networks. This may require short-term sidewalk excavations ranging from approximately 50 to 150 feet in length. The construction activities that would be required to connect the proposed project to existing energy systems are part of Consolidated Edison's normal operations for providing services to new customers, and occur on a regular basis throughout the city. \*

**A. INTRODUCTION**

The New York City School Construction Authority (SCA) proposes to construct P.S./I.S. 312, an approximately 665-seat primary and intermediate public school in the Long Island City section of Queens. The proposed school facility would be located in Community School District 30 and would serve students in pre-kindergarten through grade eight, including District 75 students. The project site is located on the southwest corner of 46th Avenue and 5th Street (Block 21, Lot 30), on the eastern portion of Parcel 4 of the Queens West Development, described below. The proposed school would be six stories in height and approximately 98,600 gross square feet (gsf), with frontages on 5th Street and 46th Avenue. Both the main entrance and the proposed school's outdoor play area would be located on 5th Street (see Figures 1-1 through 1-4).

The project site is currently vacant and enclosed by construction fencing. The site is surrounded to the north, south, and west by the cleared land that will be developed with residential and open space developments planned as part of the Queens West Development. A 41-story residential tower would be constructed on the remaining portion of Parcel 4 that is directly west of the project site. Further west of the project site, a residential development on Parcel 5 was recently completed. The recently completed Queens West Sportsfield, a public park with a running track and multi-purpose field, is located south of the project site, and additional open space is planned for the area immediately south of the project site; once constructed, this open space would provide a connection to the network of open spaces to be developed along the waterfront. One block south of the project site, at 47-05 Center Boulevard, is a recently completed residential building. North of the project site, a 40-story residential tower and seven-story parking garage are planned. To the east of the project site are older, low-rise light manufacturing buildings.

As stated above, the project site occupies a portion of the parcel identified as Parcel 4 in the Queens West Development General Project Plan (GPP) (see Figure 1-5). In 1990, New York City and New York State approved the Queens West project—then known as the Hunters Point Development Project—for the 74-acre area located between Anable Basin on the north and Newtown Creek on the south, extending generally as far east as 5th Street north of 49th Avenue, and 2nd Street south of 49th Avenue. The Queens West project was approved by New York State (the Board of Directors of the Urban Development Corporation (UDC), now the Empire State Development Corporation [ESDC]) and New York City (the Board of Estimate). The UDC Board of Directors adopted the original GPP for the area, which established a total of 20 development parcels. The GPP has been amended several times, as specific development projects have been proposed and advanced. The GPP was recently modified to remove parcels 12 through 20; these parcels now comprise the recently approved Hunter's Point South development plan. Currently, Parcels 1 through 11 constitute the Queens West site. Build-out of the Queens West site (Parcels 1-11) is well under way in accordance with the GPP.



Development has generally been proceeding from south to north, with the southernmost buildings completed and occupied.

The GPP governs future development within its boundaries, setting forth specific controls for each parcel, including use, maximum bulk, massing (maximum height and required setbacks), and view corridor controls. As stated above, the GPP has been amended several times. Subject to the currently approved GPP, Parcel 4 is to be developed with 343,000 square feet (sf) of residential use, 1,150 sf of retail space, and 100,000 sf of community facility use. More specifically, the GPP use controls call for development of a 100,000 sf elementary school on Parcel 4.

The project site is located within an M3-1 manufacturing district where community facilities, including schools, are not permitted as-of-right. However, as described above, the Queens West site (including the project site) is subject to the provisions of the GPP, rather than the local zoning requirements. The project site is currently under the jurisdiction of the Queens West Development Corporation, which is a subsidiary of ESDC. In order for the SCA to undertake construction of the school, the site plan must be approved under the requirements of the SCA's enabling legislation, which is a discretionary action subject to State Environmental Quality Review (SEQR). SCA will serve as lead agency for SEQR and ESDC will be an interested agency. Funding for design and construction of this project is available in the New York City Department of Education's (DOE's) Capital Plan for Fiscal Years 2010 to 2014.



For the purpose of this environmental review, it is assumed that construction would begin in 2010 and student occupancy would begin in 2013. Accordingly, 2013 has been selected as the Build Year for which the environmental assessment areas have been analyzed. Given that the GPP calls for 100,000 sf of community facility use on Parcel 4, and that ESDC and the Queens West Development Corporation are expeditiously proceeding with development on all remaining development parcels, it is assumed that absent the proposed project the project site would be developed with approximately 100,000 sf of another type of community facility space ("No Action" scenario).

## **B. PURPOSE AND NEED**

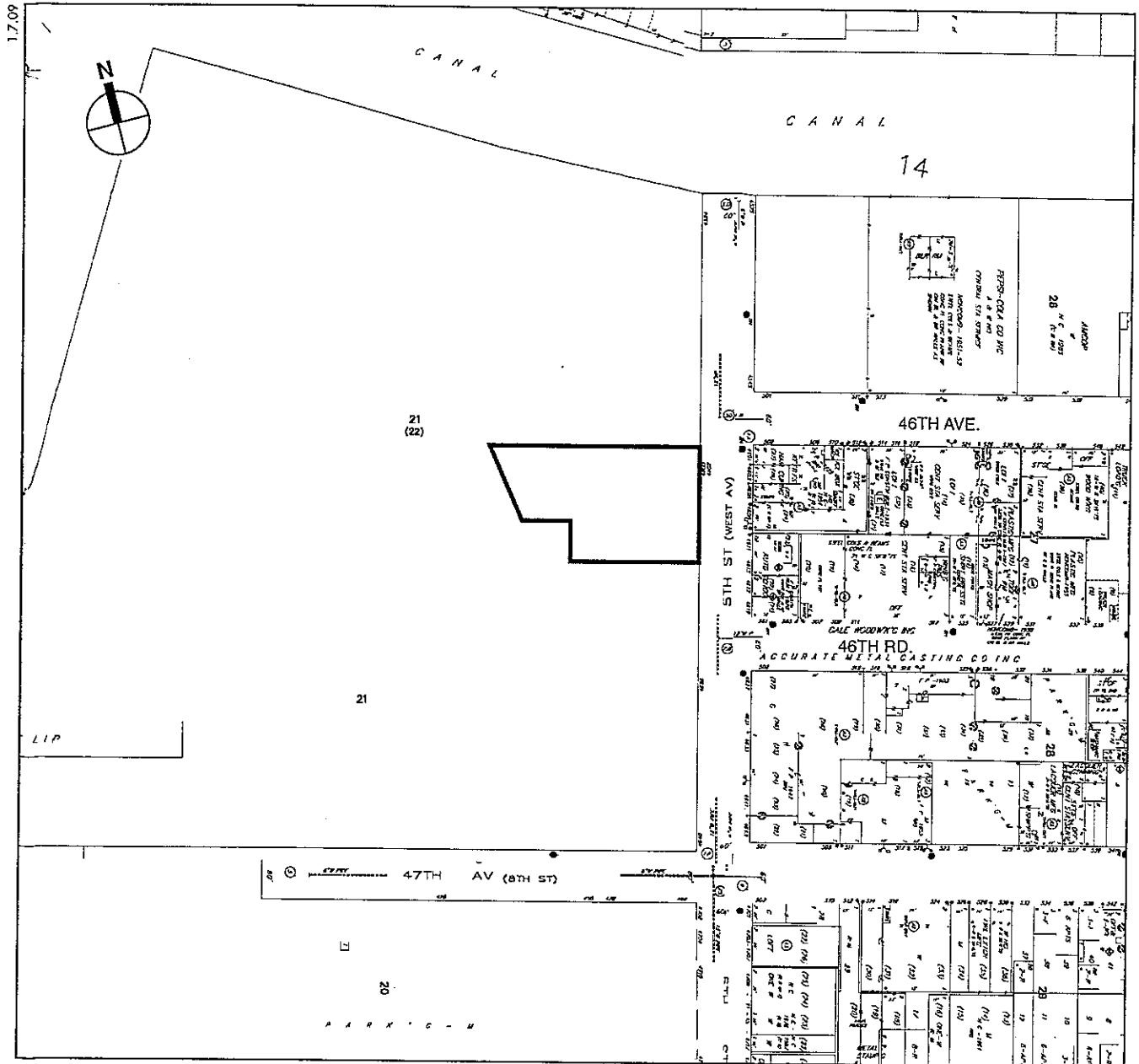
Construction of the new school facility has been proposed to provide additional public school capacity at the primary and intermediate levels in CSD 30. The new school would provide relief from the overcrowding at primary and intermediate schools in the district and would also support anticipated growth in student enrollments due to the residential developments that are both planned and currently under construction in the Queens West Development.

According to the latest DOE school utilization profile for 2008 to 2009, primary schools in CSD 30 are operating at 89 percent capacity, with a district-wide capacity of 14,663 and a district-wide enrollment of 13,023. Intermediate schools in CSD 30 are operating at 85 percent capacity, with a district-wide capacity of 7,305 and a district-wide enrollment of 6,217. P.S. 78 is the only primary school operating in close proximity to the project site; it is located at 48th Avenue and Center Boulevard, approximately four blocks southwest of the project site. While this school currently has 296 seats, with an enrollment of 255 students, and is operating at 86 percent capacity, it is operating at 111 percent utilization of its target capacity. There are currently no intermediate schools located in close proximity to the project site. The closest intermediate school to the project site, I.S. 204, is located at 36-41 28th Street, which is 1 ½ miles away. This school is currently operating at 58 percent capacity.

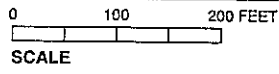


 Project Site  
 Unbuilt Streets

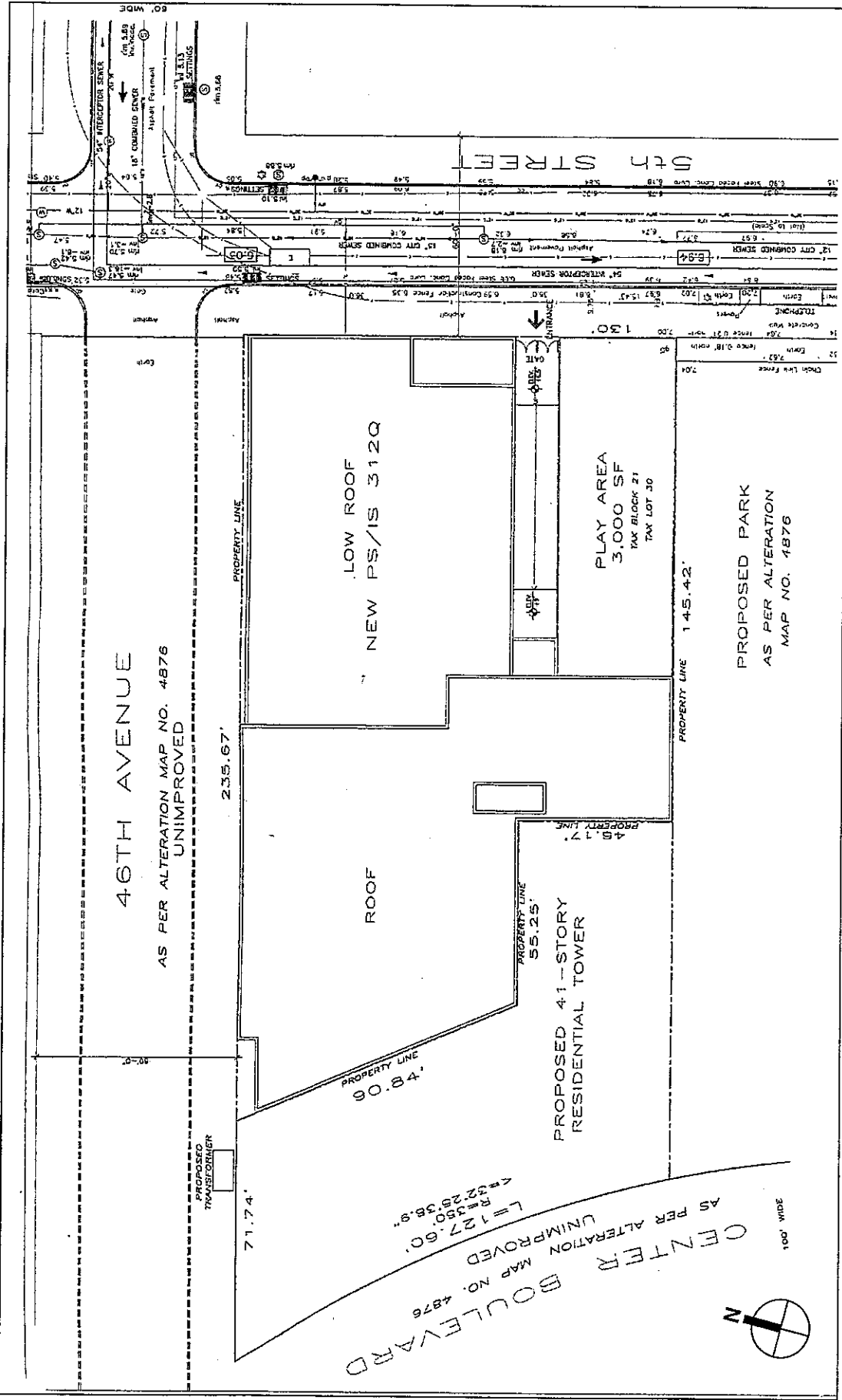
0 500 1000 FEET  
 SCALE



— Project Site Boundary



1.9.09

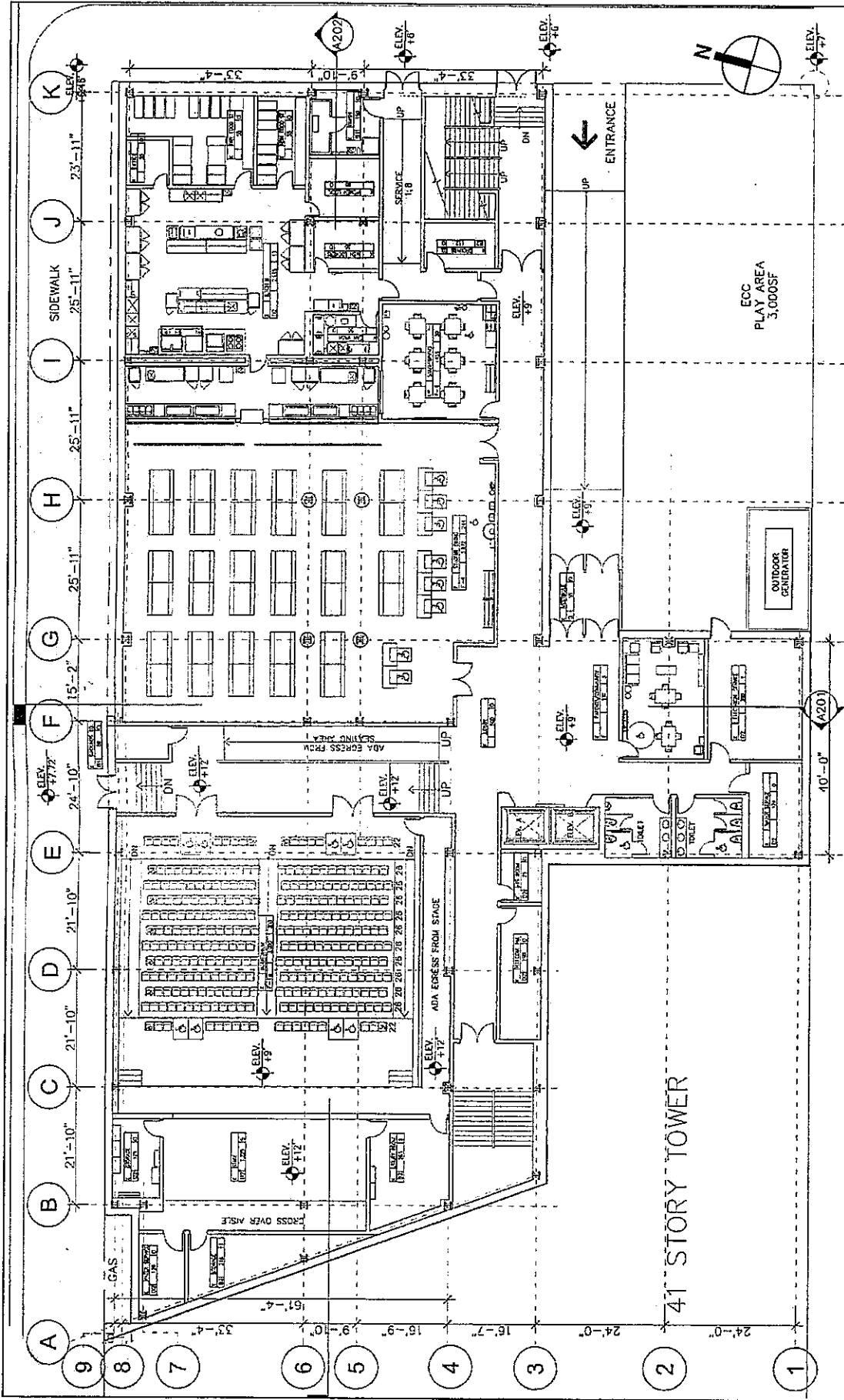


AS PER ALTERATION  
UNIMPROVED  
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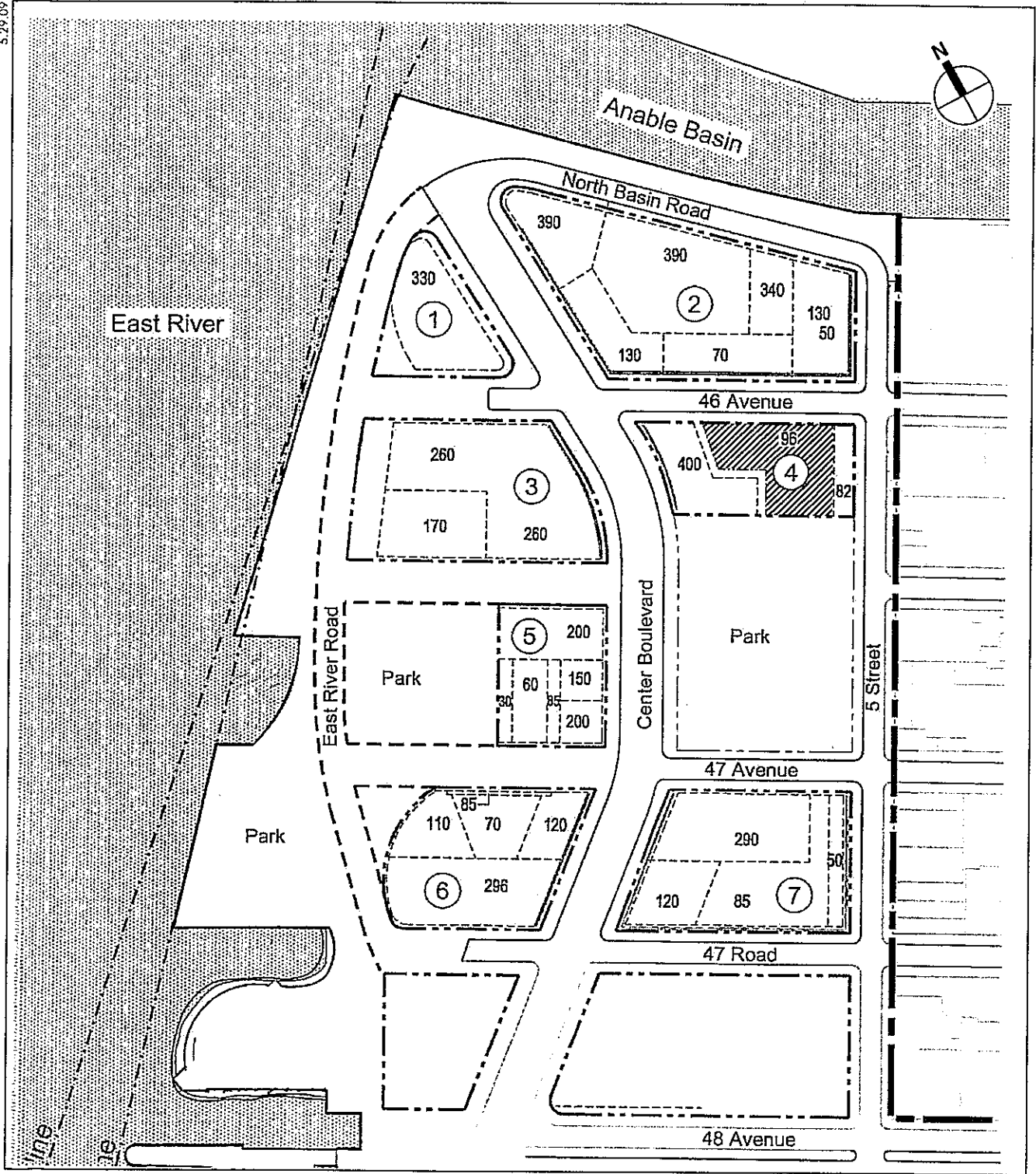
Site Plan  
Figure 1-3






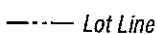
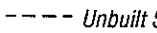
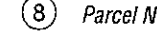
P.S. / I.S. 312

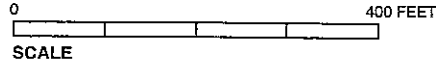
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Ground Floor Plan  
Figure 1-4



-  Project Site
-  296 Height Restriction (in feet)
-  Required Street Wall
-  Height Control Line
-  Queens West Project Boundary
-  Lot Line
-  Unbuilt Street
-  Parcel Number



By 2013, the numerous residential projects that are planned within a half mile of the project site would introduce an estimated 662 elementary students and 284 intermediate students. Absent the proposed project, these elementary students would be zoned for the existing P.S. 78 elementary school. Additionally, a recently-opened annex for P.S. 78 has increased the existing school capacity by approximately 61 seats, resulting in a total of 357 seats. The addition of the estimated 662 future elementary students to the available seats at P.S. 78 and the annex would result in a shortfall of 556 seats.

### **C. PROJECT SITE AND PROPOSED SCHOOL**

The approximately 25,000-sf, irregularly-shaped project site is located at the southwest corner of 46th Avenue and 5th Street (Block 21, Lot 30) on Parcel 4 of the Queens West Development. The project site is currently vacant and immediately surrounded to the north, west, and south by cleared land that is intended to be developed as part of the on-going construction of the Queens West Development.

Adjacent to the project site to the west, a 41-story residential tower will be constructed. That property would have a cantilever easement beginning at 100 feet above the site, which would allow projecting bay windows to cantilever over the proposed school. Queens West Sportsfield, a public park with a running track and multi-purpose field, is located to the south of the project site. This park is fenced on four sides. An additional open space is planned for construction in the area between the existing park and the proposed school, and would adjoin the proposed school's at-grade play area. North of the project site, a 40-story residential tower and seven-story parking garage will be constructed. The surrounding blocks contain the newer, high-rise residential buildings of the Queens West Development to the west and south, and the predominantly older, low-rise manufacturing and residential buildings of the Hunters Point neighborhood to the east.

The proposed project involves the construction of an approximately six-story, 98,600-gross-square-foot (gsf) school on the project site. The proposed school would accommodate 665 primary and intermediate students in grades pre-kindergarten through eight, including approximately 60 seats for District 75 students. The school's main entrance would be located on 5th Street and would be adjacent to an at-grade approximately 3,000-sf outdoor play area. In addition to classrooms, the school would include a gymnasium, 300-seat auditorium, cafeteria, science, and art and music rooms. Both the cafeteria and auditorium would be located on the ground floor to facilitate use by the community. The new school would employ approximately 56 teachers, administrators, and support staff. The school would operate during normal school hours, 7:00 AM to 4:30 PM from September to June. \*

**A. INTRODUCTION**

This analysis of land use, zoning, and community character considers the existing conditions of the project area, anticipates and evaluates those changes in land use and zoning that are expected to occur independently of the proposed project, and identifies and addresses any potential impacts to land use, zoning, and community character associated with the proposed school project. The project site is located within the City's coastal zone boundaries, therefore, this chapter also addresses the project's consistency with the policies of the New York City Waterfront Revitalization Program.

To determine existing conditions and assess the potential for impacts, the land use study area has been defined as the area roughly bounded by the Anable Basin and 45th Avenue to the north, Vernon Boulevard to the east, 47th Road to the south, and the East River to the west (see Figure 2-1). This is the area in which the project has the potential to affect land use or land use trends. Various sources have been utilized to prepare a comprehensive analysis of land use, zoning, and community character, including field surveys, evaluation of land use and zoning maps, and consultation of other sources, such as municipal documents and regulations.

**B. EXISTING CONDITIONS**

Existing land use patterns and trends are described below for the project site and the study area. This is followed by a discussion of zoning and community character for both areas.

**LAND USE***PROJECT SITE*

As described in Chapter 1, "Project Description," the project site is part of the Queens West Development, a large-scale project being developed on the blocks from 50th Avenue to the Anable Basin, west of 5th Street in the Long Island City section of Queens. The project is being developed by the Queens West Development Corporation, a subsidiary of the Empire State Development Corporation (ESDC), in accordance with a General Project Plan (GPP) that sets forth the specific uses and building bulk and massing permitted on each project parcel. In total, when completed, the Queens West Development will include more than 4,800 apartments, as well as retail use, community facility space, and park space.

The project site is located on Block 21, Lot 30, at the southwest corner of the 46th Avenue and 5th Street (see Figure 2-1). The project site, which is located on the eastern end of a large undeveloped parcel bounded by 5th Street to the east, 47th Avenue to the south, the East River to the west and the Anable Basin to the north, comprises an area of approximately 25,000 square feet. The project site occupies the eastern portion of Parcel 4 of the Queens West Development. Currently, the project site is vacant and surrounded by a chain link fence.

The Queens West GPP originally established a total of 20 development parcels. Currently, Parcels 1 through 11 constitute the Queens West site; Parcels 12 through 20 are now what make



up the recently approved Hunter's Point South Development Plan. Subject to the currently approved Queens West GPP, Parcel 4 is to be developed with 343,000 square feet of residential use, 1,150 sf of retail space, and 100,000 sf of community facility use. More specifically, the GPP use controls allow for development of a 100,000 sf elementary school on Parcel 4.

### *STUDY AREA*

As described above, the land use study area is defined by the Anable Basin and 45th Avenue to the north, Vernon Boulevard to the east, 47th Road to the south, and the East River to the west. The project site is immediately surrounded to the north, west, and south by cleared land that is intended to be developed as part of the on-going construction of the Queens West Development. Queens West Sportsfield, a public park with a running track and multi-purpose field, is located to the south of the project site. This park is fenced on four sides.

The area in which the proposed project is located is primarily defined by the new, high-rise residential buildings of the Queens West Development to the south, and undeveloped parcels where additional Queens West development projects are planned to the north, west and south of the project site. The most prominent residential uses are the residential towers located south of the project site on Parcels 6 and 7 of the Queens West Development. These buildings, East Coast I and East Coast II, are located on either side of Center Boulevard between 47th Road and 47th Avenue. East Coast I, located on the west side of Center Boulevard, is a 31-story building that was completed in 2006 and contains approximately 650 residential units. A wine store, restaurant, and sales office are located on the ground floor of this building. East Coast II, located on the east side of Center Boulevard, is a 30-story building containing 395 residential units, a pharmacy, and a 900-car garage.

The eastern portion of the study area contains older, low-rise, industrial, mixed-use, and residential buildings of the Hunters Point neighborhood. Manufacturing uses are concentrated in the midblock area between Vernon Boulevard and Fifth Street. Representative manufacturing uses include a plastic manufacturer, a design center, a paint factory, auto repair shops, and taxi garages. These uses are typically housed in two- to three-story buildings with loading bays along the street. Residential uses in the eastern portion of the study area are found in smaller three- to four-story residential buildings, primarily along Vernon Boulevard as well as the side streets. Commercial uses within the study area are concentrated along Vernon Boulevard and typically found on the ground floor of mixed-use residential buildings. The commercial uses are local and intended to serve the surrounding neighborhood. Representative commercial uses include delis, restaurants, bars, a veterinarian office, sales offices, and clothing shops.

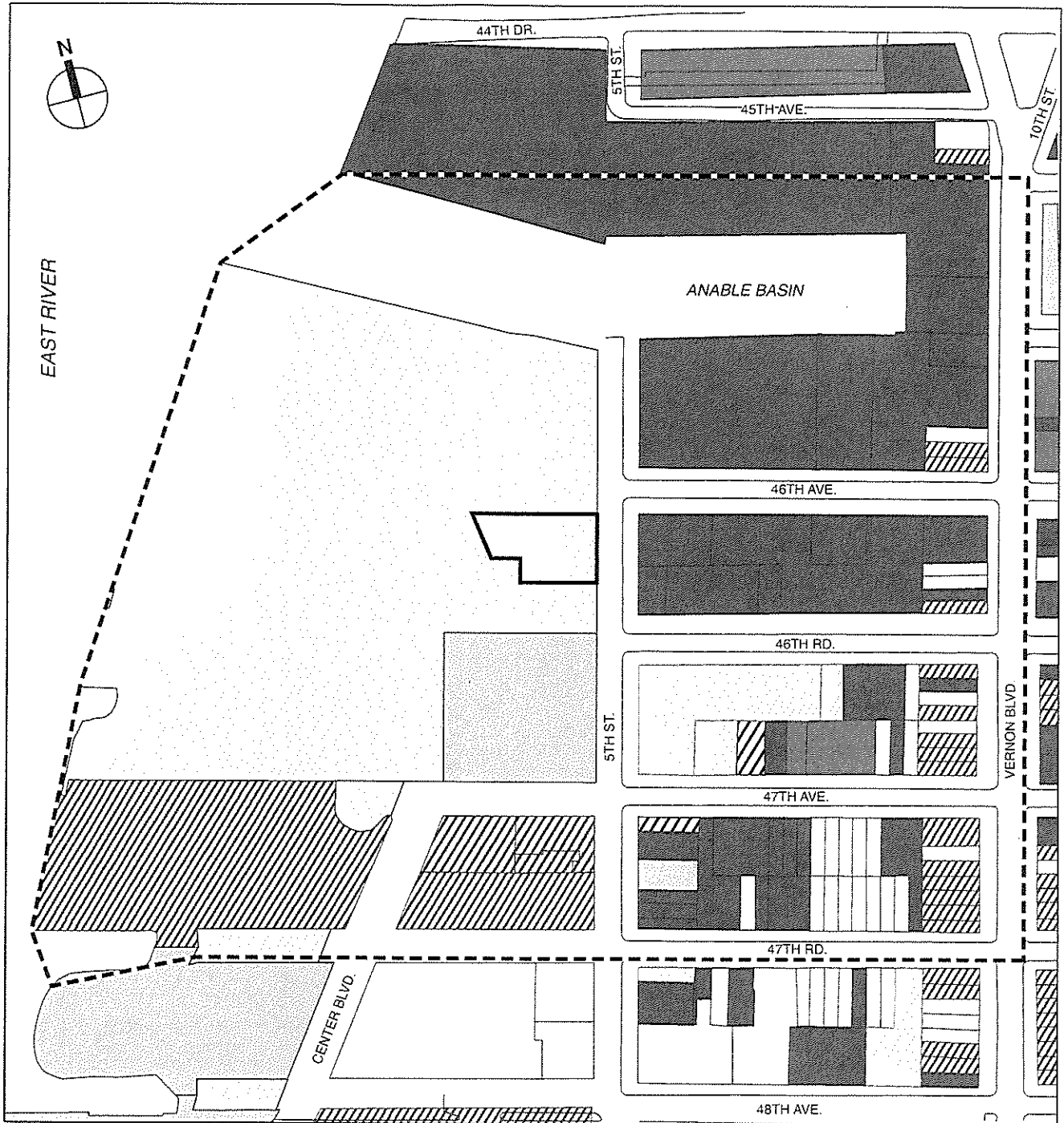
## **ZONING AND PUBLIC POLICY**

### *PROJECT SITE*

#### *Zoning*

As shown in Figure 2-2, the project site is located in an M3-1 manufacturing district. M3 districts have lower performance standards than other manufacturing districts, and generally allow for heavy industrial uses that generate noise, traffic, or pollutants. M3-1 districts allow a maximum floor area ratio (FAR) of 2.0 for manufacturing and commercial uses; community facilities, including schools, are not permitted as-of-right within M3-1 districts.

However, the Queens West site (including the project site) is subject to the provisions of the GPP, rather than the local zoning requirements (see Appendix A). The GPP sets forth specific controls to guide the future development on each parcel, including use, maximum bulk, massing



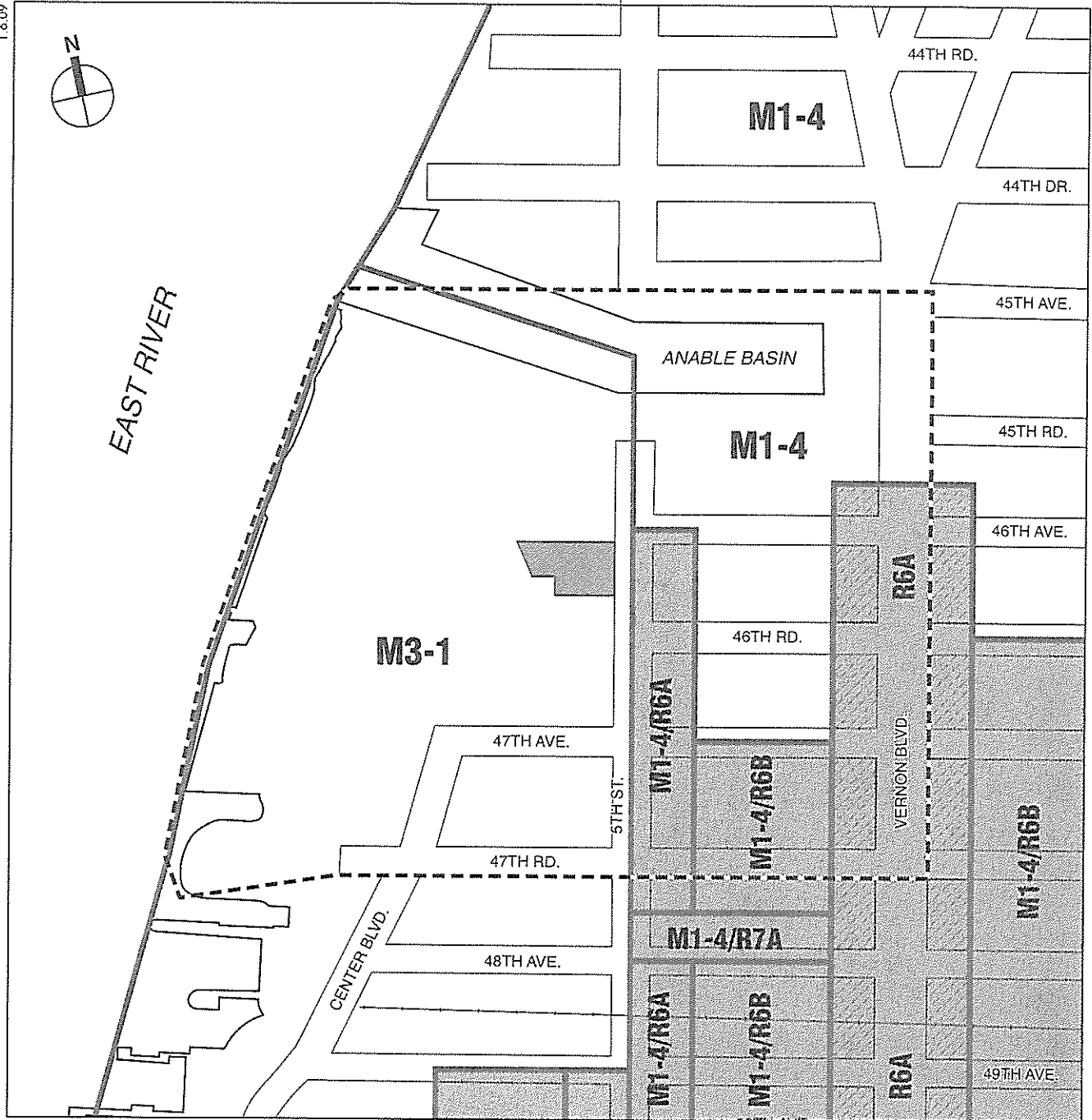
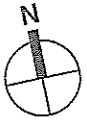
— Project Site Boundary  
 - - - Land Use Study Area Boundary






0 100 250 FEET  
 SCALE

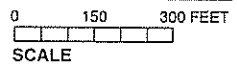
**LAND USE**

Residential	Public Facilities and Institutions
Residential with Commercial Below	Open Space and Outdoor Recreation
Commercial and Office Buildings	Parking Facilities
Industrial and Manufacturing	Vacant Building
Transportation and Utility	Under Construction

1.6.09



-  Project Site
-  Land Use Study Area Boundary
-  Zoning District Boundary
-  C1-5 Overlay
-  Special Long Island City District



(maximum height and required setbacks), and view corridor controls (see Figure 2-3). On the project site (located on Parcel 4), the GPP allows a maximum height of 400 feet. The maximum height of the street wall on 5th Street must be 82 feet above the curb level and then set back 30 feet. On 46th Avenue, the GPP permits a maximum street wall height of 96 feet above the curb level, and then a set back of 5 feet.

### *Public Policy*

As described above, the GPP governs future development within the Queens West area. The GPP has been amended several times, as specific development projects have been proposed and advanced.

In addition, as described below, the project site is located within the New York City Coastal Zone Boundary and thus governed by the New York City Waterfront Revitalization Program (WRP). The WRP contains 10 major policies, each with several objectives focused on improving public access to the waterfront, reducing damage from flooding and other water-related disasters, protecting water quality, sensitive habitats, such as wetlands, and the aquatic ecosystem, reusing abandoned waterfront structures, and promoting development with appropriate land uses.

### *STUDY AREA*

#### *Zoning*

The study area is zoned primarily with manufacturing and mixed-use districts, although residential districts and commercial overlays are also mapped within the study area (see Table 2-1). Additionally, a portion of the study area falls within the Hunters Point Subdistrict of the Special Long Island City Mixed Use District.

The M3-1 manufacturing district is mapped in the area west of 5th Street. However, as described above, the GPP also covers this area and its controls supersede the City's zoning regulations. An M1-4 manufacturing district is mapped east of the project site, approximately in the mid-block portion of the study area between 46th Road and the Anable Basin. M1 districts are light manufacturing districts which are often mapped next to residential districts. M1-4 districts allow light industrial uses that comply with stringent performance standards; office and most retail uses are also permitted. Manufacturing and commercial uses are permitted at 2.0 FAR and community facility uses are permitted at 6.5 FAR.

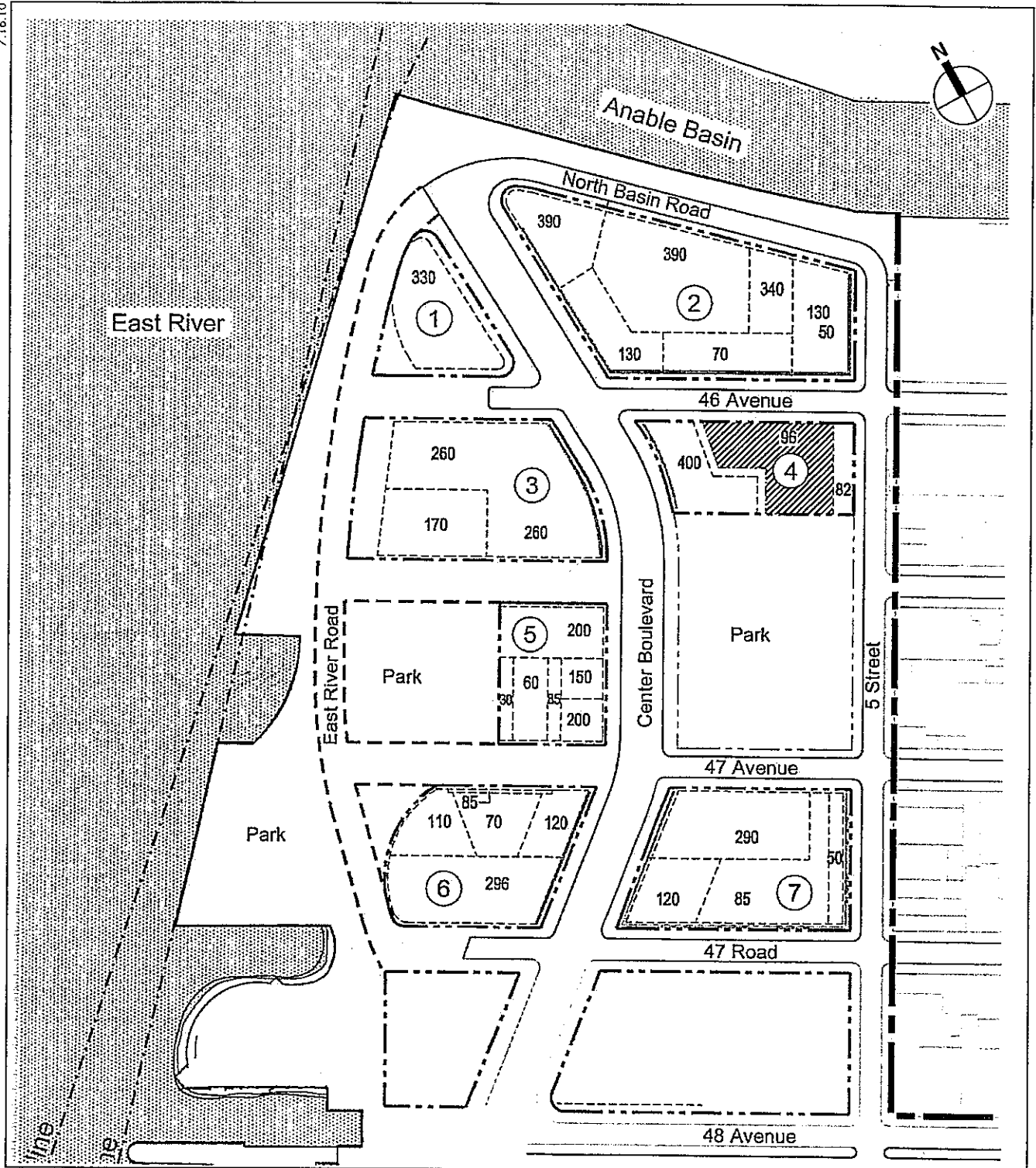
The Special Long Island City Mixed Use District is also mapped within the study area. Specifically, the Special District is mapped to within 100 feet of both sides of Vernon Boulevard to 46th Avenue, in the area south of 47th Avenue, and within 100 feet of the western blockface of 5th Street to 46th Avenue. The Special District was established in 1981 and initially named the Special Hunters Point Mixed Use District. The district was intended to regulate the existing and evolving mix of residential, commercial, and industrial uses in the neighborhood. The special district regulations allowed new manufacturing uses as-of-right and allowed commercial uses in limited circumstances. In 2001, the City renamed the Special Hunters Point Mixed Use District to the Special Long Island City Mixed Use District (LIC) and its boundaries were extended. In addition, the provisions of the City's most recent Special Mixed Use District, adopted in 1997, were applied to the Hunters Point Subdistrict.

**Table 2-1  
Zoning Districts**




Zoning District	Maximum FAR <sup>1,2</sup>	Uses/Zone Type
<b>Residential Districts</b>		
R6A	R: 3.0; CF: 3.0	Contextual residence district, allowing medium-density housing, low-rise buildings with greater lot coverage
<b>Commercial Districts<sup>3</sup></b>		
C1-5	C: 2.0 (in R6 to R10) follows bulk residential and community facility regulations of mapped residential district	Local shopping and services
<b>Manufacturing Districts</b>		
M1-4	M: 2.0; C: 2.0; CF: 6.5	Light manufacturing and most commercial uses, older industrial areas, strict manufacturing performance standards
M3-1	M: 2.0; C: 2.0	Heavy manufacturing and most commercial uses, minimum manufacturing performance standards
<b>Mixed-Use Districts</b>		
M1-4/R6A	R: 3.0, M: 2.0; C: 2.0; CF: 3.0	These districts are paired in the Special Long Island City Mixed Use District, Hunters Point Subdistrict, to allow a range of uses as of right. Mixed-use buildings in these districts shall have a maximum FAR not exceeding the maximum FAR for residential, commercial or manufacturing uses, whichever is greatest.
M1-4/R6B	R: 2.0; M: 2.0; C: 2.0; CF: 2.0	
<b>Special Districts</b>		
Special Long Island City Mixed Use District, Hunters Point Subdistrict	FAR is governed by underlying zoning districts	Use and bulk is governed by the M/R zone pairings described above, which in most cases allow residential, commercial, and light manufacturing uses as-of-right, to further the intent of the district, which is to foster a vibrant, mixed-use neighborhood (NYC Zoning Resolution Article XI, Chapter 7).
<b>Notes:</b> 1 Floor area ratio (FAR) is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 square feet with a FAR of 1 has an allowable building area of 10,000 square feet. The same lot with an FAR of 10 has an allowable building area of 100,000 square feet. 2 R-Residential; C-Commercial; CF-Community Facility; M-Manufacturing 3 Commercial overlay districts are often mapped with residential districts (R5 and above) along the study area's heavily traveled roadways. <b>Source:</b> New York City Zoning Resolution.		

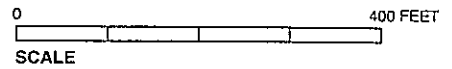
Two Special Mixed Use Districts—M1-4/R6A and M1-4/R6B—are mapped in the Special Long Island City Mixed Use District. The City’s Special Mixed-Use District zoning designation was created to allow as-of-right residential, community facility, commercial, and manufacturing uses (with some exceptions) in mixed-use residential and industrial neighborhoods. The M1-4/R6A mixed use district is mapped between 47th Road and 46th Avenue to 100 feet east of 5th Street. Residential and community facility development are permitted to 3.0 FAR. Commercial and manufacturing uses are permitted to 2.0 FAR. The M1-4/R6B mixed use district is mapped in the midblock area between 47th Road and 47th Avenue from 5th Street to Vernon Boulevard. Residential, commercial, community facility, and manufacturing uses are all permitted to 2.0 FAR.

The area along both sides of Vernon Boulevard is zoned R6A with a C1-5 overlay. R6A regulations typically produce high lot coverage residential buildings set on or near the lot line. Residential and community facility development are permitted to 3.0 FAR. C1-5 commercial districts are commercial overlay districts mapped within residential neighborhoods. Commercial development is permitted to 2.0 FAR and residential and community facility developments are permitted to 3.0 FAR.



-  Project Site
-  296 Height Restriction (in feet)
-  Required Street Wall
-  Height Control Line
-  Queens West Project Boundary

-  Lot Line
-  Unbuilt Street
-  Parcel Number



*Public Policy*

The portion of the study area to the east of 5th Street is within the Long Island City Industrial Ombudsman Area (IOA). An IOA is typically designated over mixed-use neighborhoods adjacent to industrial zones. IOAs are designed to assist businesses that exist within these mixed-use areas and are designated where Industrial Business Zone regulations may not be appropriate due to existing residential use. An ombudsman is provided to assist businesses as necessary.

In 2006, the New York City Department of City Planning (NYCDCP) and New York City Department of Transportation (NYCDOT) developed the Queens East River and North Shore Greenway Master Plan. This plan proposed a 10.6-mile urban shared use trail intended to provide access to the shoreline in Queens and improve non-motorized commuter options. As set forth in the plan, a shared-use path would be located along the waterfront esplanade and signed bike lane (Class 3) would be located along Center Boulevard. In addition, Vernon Boulevard would also contain a signed bike lane (Class 3) under the plan.

**NEW YORK STATE COASTAL ZONE MANAGEMENT PROGRAM**

This analysis assesses the compliance of the proposed project with the City's Waterfront Revitalization Program. The Coastal Zone Management (CZM) Act of 1972 was established to support and protect the distinctive character of the waterfront, and set forth standard policies for reviewing proposed development projects along coastlines. The program addressed local, state, and federal concerns about the deterioration and inappropriate use of the waterfront.

In response, New York State adopted its Coastal Management Program, designed to balance economic development and preservation by promoting waterfront revitalization and water-dependent uses while protecting fish and wildlife, open space and scenic areas, public access to the shoreline, and farmland; and minimizing adverse changes to ecological systems and in erosion and flood hazards. The program provides for local implementation when a municipality adopts a local waterfront revitalization program, as is the case in New York City.

The New York City Waterfront Revitalization Program (WRP) encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. The New York State Department of State (NYSDOS) administers the program at the state level, and the New York City Department of City Planning (DCP) administers it in the City.

Because the project site is located within the City's coastal zone (see Figure 2-4), it is subject to the City's Coastal Zone Management Program. The WRP is the City's principal coastal zone management tool. The original WRP, originally adopted in 1982, included 44 state policies and 12 City policies. It established the City's policies for development and use of the waterfront and provided a framework for evaluating discretionary actions in the coastal zone. A revised WRP was approved by the City Council in October 1999. The overhaul of the WRP was the result of the numerous plans and studies focusing on New York City's waterfront that led to a better understanding of the conditions and issues facing the waterfront. The goal was to simplify and to clarify the review process. Section D, "The Future With the Proposed Project," below, reviews the 10 New York City coastal zone policies, which constitute the new WRP, and assesses, where applicable, the general consistency of the proposed project with those policies. A completed New York City Waterfront Revitalization Program Consistency Assessment Form is provided (see Appendix B).

## **COMMUNITY CHARACTER**

Community character is defined as an amalgam of a number of traits, including land use, urban design and visual resources, traffic, and noise. These elements are considered together to create a sense of the neighborhood in which a project is proposed, so that the compatibility of the project within its community setting can be presented and assessed.

### *PROJECT SITE AND STUDY AREA*

The area's community character, located in the northern section of the Queens West Development, is generally a mixture of recent high-density mixed-use development, cleared sites that await development, and low-rise manufacturing and industrial uses. Within the study area, 5th Street generally separates the older industrial buildings of the Hunters Point neighborhood to the east and the taller and modern residential buildings of the new Queens West Development to the west. Development in Queens West has generally been proceeding from south to north, with the southernmost buildings completed and occupied. As described above, the area immediately surrounding the project site has been cleared in anticipation of construction associated with the Queens West development. In the larger neighborhood, open spaces are concentrated along the East River and institutional uses are scattered. The entrance roads to the Queens Midtown Tunnel and Pulaski Bridge are located to the south, and the Long Island Rail Road tracks are located to south of 51st Avenue.

The New York Blood Services operate a large facility on much of the block between 11th Street and Vernon Boulevard between 45th Avenue and 45th Road. St. Mary's Roman Catholic Church is located on Vernon Boulevard at 48th Avenue. As described above, the New York City Police Department and Fire Department operate facilities in the surrounding area.

While high-rise residential uses are concentrated in the area south of the project site, low-rise manufacturing and residential uses are concentrated in the eastern portion of the study area. Manufacturing uses are concentrated in the area between 5th Street and Vernon Boulevard, and are less prevalent in the area to the east of Vernon Boulevard. Vernon Boulevard is defined by mixed-use buildings within manufacturing uses. This road forms the area's commercial core and includes the most commercial uses and a lively mix of street life.

Open spaces are located to the south of the project site, just beyond the study area boundary. The Gantry Plaza State Park and Peninsula Park form a large waterfront park along the East River waterfront with public piers, a fishing pier, sitting areas, a lawn area, and a tot lot. The Hunters Point Community Park occupies much of the southern portion of 48th Avenue between Vernon Boulevard and 5th Street. This open space includes a playground, basketball courts, handball courts, and a sitting area. Views of the east side of Manhattan are available from the open spaces, and include the United Nations, the Chrysler building, and the Empire State Building.

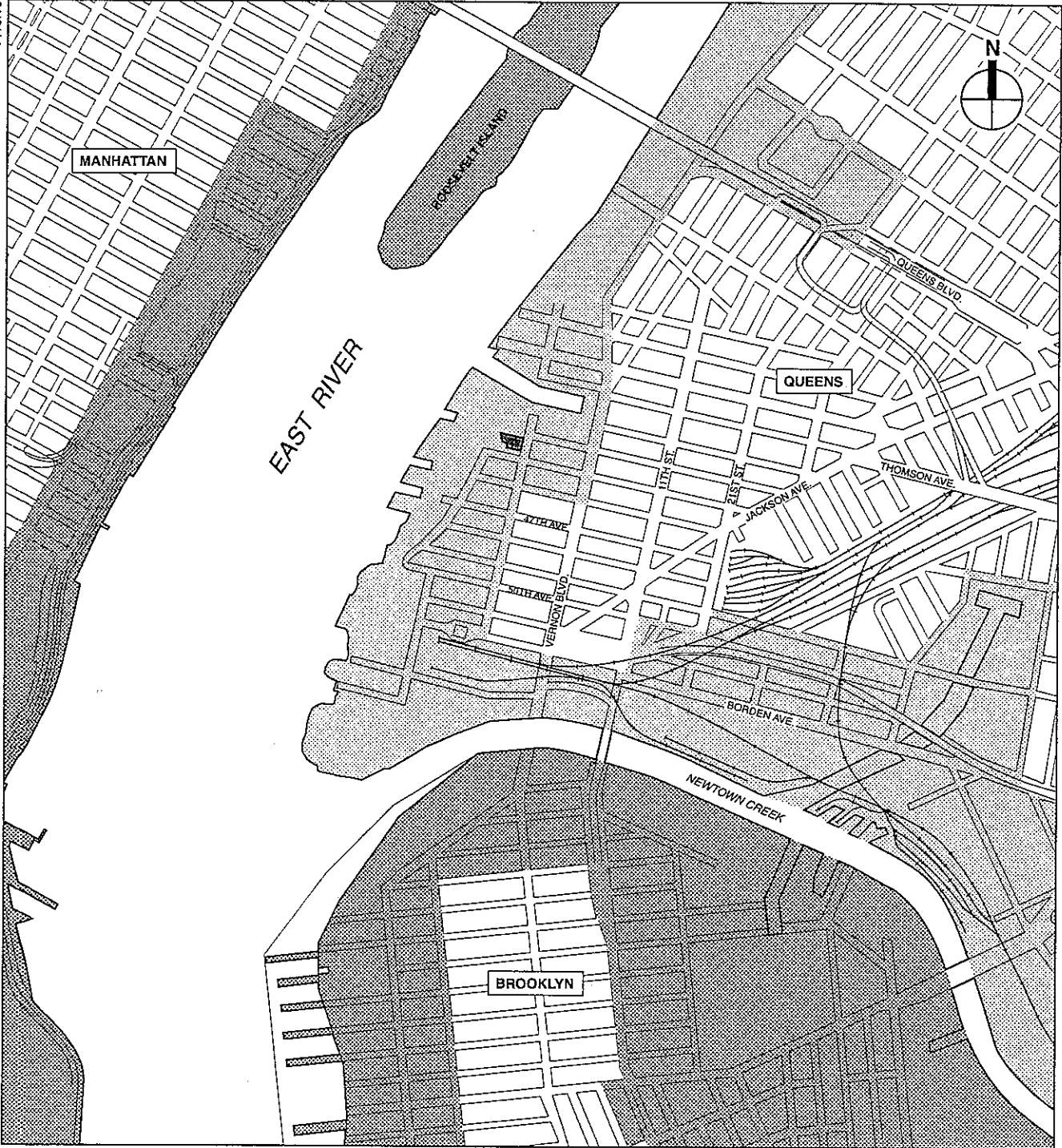
## **COMMUNITY FACILITIES**

A new school would provide an additional community resource for area residents and is not expected to place additional demands on hospital and other health care facilities, libraries, or public day care facilities. This analysis focuses, therefore, on police and fire protection services.

The project site is located in the New York City Police Department (NYPD) 108th Police Precinct. The 108th Police Precinct house is located at 5-47 50th Avenue, approximately a quarter mile south of the project site.



7.16.10



-  Project Site
-  Coastal Zone

0 500 1500 FEET  
SCALE

The project site is served primarily by the Fire Department of the City of New York (FDNY) Engine 258, Ladder 115, located approximately a quarter-mile east of the project site at 10-38 47th Avenue.

## **C. THE FUTURE WITHOUT THE PROPOSED PROJECT**

### **LAND USE**

#### *PROJECT SITE*

In the future without the proposed project, it is assumed that the project site would be developed by 2013 in accordance with the GPP, which calls for 100,000 sf of community facility use to be constructed on Parcel 4 of the Queens West Development. By 2013, it is anticipated that a 41-story residential tower with retail space will be completed on the western portion of Parcel 4.

#### *STUDY AREA*

Six new residential developments are expected to be completed in the study area by the 2013 build year. As stated above, adjacent to the project site to the west (also on Parcel 4), a 41-story residential tower is planned for construction. This building will contain 368-residential units. At the northwest corner of 46th Avenue and the planned Center Boulevard, the Queens West 1 parcel will be developed with a 344-unit residential building. East of that project, on the full block to the north of the project site, a 737-residential unit building with retail space will be constructed on Queens West Parcel 2. Queens West Parcel 3, located on the planned Center Boulevard between 46th Avenue and 46th Road, will be developed with a 361-unit residential building with retail space. Queens West Parcel 5, to the southwest of the project site, was recently developed with a 184-unit residential building with retail space.

In addition, a 400-residential unit building will be constructed at 5-11 47th Avenue. The residential units in this building will be divided between 200 market-rate rental apartments, 12 faculty apartments, and 188 dormitory rooms for university students. Finally, an annex was recently opened for P.S. 78 that has increased the existing school capacity by approximately 61 seats.

### **ZONING AND PUBLIC POLICY**

No changes to zoning or the GPP are currently anticipated to occur on the project site or in the study area by the 2013 build year. There are no known public policy initiatives that would affect the project site and surrounding study area in the future without the proposed project.

### **NEW YORK STATE COASTAL ZONE MANAGEMENT PROGRAM**

No changes to the project site's existing consistency with New York State CZM policies are expected to occur in the future without the proposed project.

### **COMMUNITY CHARACTER**

As described above, the area surrounding the project site to the north, west, and south will be developed with high-rise residential buildings as part of the continued development of the Queens West project. The area to the east of the proposed project will continue to include a mix of manufacturing and residential uses, although the area is undergoing a transition as manufacturing uses are gradually being replaced with new residential and commercial development. Vernon Boulevard will continue to serve as the commercial corridor in the area;

however, new retail and commercial will be located on the ground floor of some of the planned residential towers to serve the needs of the growing residential neighborhood.

### **COMMUNITY FACILITIES**

In the future without the proposed project, it is expected that a new, approximately 25,000-sf library will be constructed on Parcel 8, in accordance with the current GPP.

The Police Department has no plans for any changes that will affect law enforcement services in this portion of the 108th Precinct. Similarly, there are no significant projects or changes in fire protection services or equipment expected by the 2013 build year.

## **D. FUTURE WITH THE PROPOSED PROJECT**

### **LAND USE**

#### *PROJECT SITE*

The proposed project involves the construction of an approximately 98,600-gross-square-foot (gsf) school building on the project site, with capacity for approximately 665 students in pre-kindergarten through grade eight. The new school building would rise to six stories along 46th Avenue and would rise to four stories along 5th Street before setting back 30 feet and rising another two stories. Students would enter the building via a main entrance on 5th Street. The proposed school facility would include a 3,000-sf at-grade play area on 5th Street, which would adjoin a planned open space that would also connect to the existing Queens West Sportsfield to the south. The school facility would be constructed along the property line and would be compatible with surrounding building heights and uses expected to be developed in the area by 2013.

#### *STUDY AREA*

Overall, the proposed school facility would be compatible with the mix of uses in the surrounding area. The new school facility would increase activity on the site and would provide a community facility use that would support the residential development occurring throughout the study area. No significant adverse impacts to surrounding land uses would result from the proposed project.

### **ZONING AND PUBLIC POLICY**

As described above, future development on the project site is governed by the GPP, which supersedes the city's zoning regulations. The GPP identified Parcel 4 as an appropriate location for a school and the design of the proposed school building conforms to the GPP design guidelines as most recently modified. Therefore, the proposed project would not adversely affect the urban design of the project site, and the proposed project would not have any significant adverse impacts to zoning or public policy.

### **NEW YORK STATE COASTAL ZONE MANAGEMENT PROGRAM**

New York City's WRP includes 10 policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. Each policy is presented below, followed by a discussion of the consistency of the proposed project with the policy.

**Policy 1:** Support and facilitate commercial and residential redevelopment in appropriate coastal zone areas.

*Policy 1.1: Encourage commercial and residential redevelopment in appropriate coastal zone areas.*

*Policy 1.2: Encourage non-industrial development that enlivens the waterfront and attracts the public.*

*Policy 1.3: Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.*

The proposed project would develop a new 665-seat public elementary/intermediate school to provide relief from the overcrowding at schools in the community school district and support a growing residential community near the waterfront. Therefore, the proposed project is consistent with these policies.

**Policy 2:** Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

*Policy 2.1: Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.*

*Policy 2.2: Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.*

*Policy 2.3: Provide infrastructure improvements necessary to support working waterfront uses.*

The project site is not located directly on the waterfront, nor is it located within a Significant Maritime and Industrial Area. Therefore, these policies do not apply.

**Policy 3:** Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

*Policy 3.1: Support and encourage recreational and commercial boating in New York City's maritime centers.*

*Policy 3.2: Minimize conflicts between recreational, commercial, and ocean-going freight vessels.*

*Policy 3.3: Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The project site is not located directly on the waterfront and the proposed project would not involve any type of boating activities. Therefore, these policies do not apply.

**Policy 4:** Protect and restore the quality and function of ecological systems within the New York City coastal area.

*Policy 4.1: Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes and Significant Coastal Fish and Wildlife Habitats.*

*Policy 4.2: Protect and restore tidal and freshwater wetlands.*

*Policy 4.3: Protect vulnerable plant, fish, and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

*Policy 4.4: Maintain and protect living aquatic resources.*

The project site is not located within a Special Natural Waterfront Area, Recognized Ecological Complex, or Significant Coastal Fish and Wildlife Habitat, nor is it located within any tidal or freshwater wetland areas. Therefore, the proposed project would not degrade or fragment any natural ecological communities or affect any living aquatic resources. Therefore, these policies do not apply.

**Policy 5:** Protect and improve water quality in the New York City coastal area.

*Policy 5.1: Manage direct or indirect discharges to waterbodies.*

*Policy 5.2: Protect the quality of New York City's waters by managing activities that generate non-point source pollution.*

*Policy 5.3: Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes or wetlands.*

*Policy 5.4: Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The proposed project would not result in any new sources of non-point discharges, and therefore would not result in any adverse impacts to fish and wildlife habitats, nor would it generate any nutrients or pollutants to wetland areas. The proposed project would neither excavate nor place fill in any wetland areas. Therefore, these policies do not apply.

**Policy 6:** Minimize the loss of life, structures, and natural resources caused by flooding and erosion.

*Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

*Policy 6.2: Direct public funding for flood prevention or erosion control measures in those locations where the investment will yield significant public benefit.*

*Policy 6.3: Protect and preserve non-renewable sources of sand for beach nourishment.*

The proposed project would not result in any flooding or erosion hazards and does not involve public funding for flood prevention or erosion control measures. In addition, the project area is set back from the waterfront and does not contain any non-renewable sources of sand. Therefore, these policies do not apply.

**Policy 7:** Minimize environmental degradation from solid waste and hazardous substances.

*Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.*

*Policy 7.2: Prevent and remediate discharge of petroleum products.*

*Policy 7.3: Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

The proposed project would include measures to ensure that no significant adverse impacts due to the presence of any hazardous or petroleum-contaminated materials would occur either during or following construction at the project site. Among these measures would be the installation of a vapor barrier and an active sub-slab depressurization system (SSDS) and, where exposed soils may exist (e.g., landscaped areas), a 24-inch-thick layer of environmentally clean fill would be placed over these soils. In addition, an environmental easement would be placed on the project site requiring implementation of a Site Management Plan, including a Health and Safety Plan, to be approved by the New York State Department of Environmental Conservation.

Solid waste generated by the construction of the proposed project would be hauled by a licensed waste hauler according to applicable laws and regulations. The proposed project would not involve the siting of solid or hazardous waste facilities. For these reasons, the proposed project is consistent with these policies.

**Policy 8:** Provide public access to and along New York City's coastal waters.

*Policy 8.1: Preserve, protect and maintain existing physical, visual, and recreational access to the waterfront.*

*Policy 8.2: Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

*Policy 8.3: Provide visual access to coastal lands, waters, and open space where physically practical.*

*Policy 8.4: Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

*Policy 8.5: Preserve the public interest in and use of lands and waters held in public trust by the state and city.*

The proposed project would not impede physical or visual access to coastal lands or waters. The project site is set back approximately 550 feet from the East River and approximately 250 feet from the Anable Basin. The proposed school would be six-stories high and considerably smaller than the intervening residential buildings between the project site and the waterfront as well as the proposed residential buildings that will be developed in the surrounding area. Therefore, these policies do not apply.

**Policy 9:** Protect scenic resources that contribute to the visual quality of the New York City coastal area.

*Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.*

*Policy 9.2: Protect scenic values associated with natural resources.*

As stated above, the project site is set back from the waterfront, and would not affect the visual quality of the City's historic and working waterfront. The proposed school would not impede or alter any views of natural resources, nor would it affect the scenic value of any natural areas. For these reasons, these policies do not apply.

**Policy 10:** Protect, preserve, and enhance resources significant to the historical, archaeological, and cultural legacy of the New York City coastal area.

*Policy 10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.*

*Policy 10.2: Protect and preserve archaeological resources and artifacts.*

No designated historic resources, archaeological resources, or other cultural resources have been identified within the vicinity of the project site. Therefore, these policies do not apply.

Based on the project's consistency with the 10 policies of the WRP, the proposed project would be consistent with WRP policies and would not result in significant adverse impacts to the City's waterfront.

## **COMMUNITY CHARACTER**

The proposed project would develop a new, approximately 665-seat public elementary and intermediate school. The proposed facility would be generally similar in height to the buildings that will be developed as part of the Queens West development. The increase in traffic volumes expected to result from the proposed project would not result in any significant adverse community character impacts.

## **COMMUNITY FACILITIES**

The Police and Fire Departments continually monitor conditions to determine how personnel are deployed. Decisions to alter existing deployment patterns would be made only in response to a demonstrated change in demand. Police and fire services would be adjusted as deemed necessary by both agencies, and no significant adverse impacts to police or fire services are expected to result from the proposed project. \*

**A. INTRODUCTION**

This chapter assesses the potential of the proposed project to affect historic resources. The project site is located at the southwest corner of 46th Avenue and 5th Street in the Long Island City section of Queens (see Figure 4-1 of Chapter 4, "Visual and Aesthetic Conditions"). It is located on Block 21, Lot 30, and occupies a portion of Parcel 4 of the Queens West Development. The site is currently vacant and enclosed by fencing.

Historic resources include both archaeological and architectural resources. The study area for archaeological resources is the project site, which is the area that could be disturbed by the project construction. Study areas for architectural resources are determined based on the area of potential effect for construction-period impacts, such as ground-borne vibrations, and the area of potential effect for visual or contextual effects, which is usually a larger area. The architectural resources study area for this project is defined as being within an approximately 400-foot radius of the project site (see Figure 4-1).

Known architectural resources include properties listed on the State and National Registers of Historic Places (S/NR) or properties determined eligible for S/NR listing, National Historic Landmarks (NHLs), New York City Landmarks (NYCLs) and Historic Districts (NYCHDs) and properties determined eligible for landmark status. Potential architectural resources are properties that may meet the criteria of eligibility for S/NR listing or NYCL designation.

**B. PRINCIPAL CONCLUSIONS**

The proposed project would involve the construction of a new six-story, approximately 98,600-gross-square-foot (gsf) school on the project site. A historic resources assessment of the project site was already completed for the Queens West Development—then known as the Hunters Point Development Project—in the 1990 *Hunters Point Waterfront Development Final Environmental Impact Statement* (FEIS) approved by New York City and New York State. The FEIS analyzed the 74-acre area (which encompasses the project site) located between Anable Basin to the north and Newtown Creek to the south, extending generally as far east as 5th Street north of 49th Avenue, and 2nd Street south of 49th Avenue. As discussed below, the proposed project would have no adverse effects on historic resources on the project site or within the 400-foot study area.

**ARCHAEOLOGICAL RESOURCES**

The potential archaeological sensitivity of the project site was assessed in the *Hunters Point Waterfront Development FEIS* approved by New York City and New York State in 1990. As part of the environmental review for the Hunters Point Development Project, a Phase 1A Archaeological Documentary Study was completed by Historical Perspectives, Inc. in 1988 entitled *Phase 1A Archaeological Assessment Report for the Hunters Point Site, Queens, New*



*York, CEQR 85-134Q*. The Phase 1A concluded that due to extensive previous disturbance on the site, the project site was not sensitive for archaeological resources.

Although the project site was previously analyzed in a Phase 1A Archaeological Documentary Study, the standards regarding the evaluation of potential archaeological resources have changed since the report was written. The School Construction Authority (SCA) contacted the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to confirm the project site's lack of archaeological sensitivity. In a comment letter dated December 30, 2008, OPRHP determined that the project site was not sensitive for archaeological resources (see Appendix B). Therefore, the proposed project would have no adverse impacts on archaeological resources.

### **ARCHITECTURAL RESOURCES**

Upon review of the 1990 *Hunters Point Waterfront Development FEIS*, there are no designated architectural resources or properties that meet the criteria of eligibility for S/NR listing or NYCL designation located on the project site or within the 400-foot study area. Overall, the proposed project would not result in any adverse physical or contextual impacts on architectural resources. Therefore, no further assessment of potential impacts on architectural resources is necessary. \*

**A. INTRODUCTION**

This chapter considers the potential of the proposed project to affect visual and aesthetic conditions.

The following analysis was prepared in accordance with the 2001 *New York City Environmental Quality Review (CEQR) Technical Manual*. According to the recently-published 2010 *CEQR Technical Manual*, an urban design and visual resources analysis is not required for a project that would be constructed within the existing zoning envelope and that would not result in physical changes beyond the bulk and form permitted “as-of-right.” The Queens West project—including the proposed school building—is being developed by the Queens West Development Corporation, a subsidiary of the Empire State Development Corporation (ESDC), in accordance with a General Project Plan (GPP). Therefore, the project site is subject to the provisions of the GPP, rather than the local zoning requirements. The GPP sets forth specific controls to guide the future development on each parcel, including use, maximum bulk, massing (maximum height and required setbacks), and view corridor controls. The design of the proposed school building conforms to the GPP design guidelines as most recently modified. Thus, the proposed project meets the new threshold of the 2010 manual, and therefore an urban design and visual resources analysis is no longer warranted under CEQR.

However, an analysis of the potential effects of the proposed project on visual and aesthetic conditions must be prepared in accordance with the State Environmental Quality Review Act (SEQRA). The following analysis therefore considers the visual environment, including its visual character and important views, of the project site and its surrounding area. This analysis describes the existing visual and aesthetic setting of the project site and surrounding area and assesses the proposed project’s effects on that setting. The visual character of an area consists of the natural and built features that contribute to the physical appearance of the area (for example, dominant building types and sizes, building shapes and arrangement on blocks, street pattern, and notable streetscape elements). It also considers noteworthy views and important visual elements, such as historic resources or important natural features that give the area its distinctive character. A key to the photographs in this chapter is provided in Figure 4-1.

The assessment of visual and aesthetic conditions for the proposed project considers a study area that includes the project site and views from the surrounding area, defined as the area within 400 feet of the project site. This study area, which is shown in Figure 4-1, includes the vantage points from which the project site is visible and would be visible upon the completion of the proposed project. The following analysis addresses the existing conditions and the future without and with the proposed project for the project’s Build year.

As described below, the proposed project would improve the appearance of the project site and the surrounding area by replacing a vacant lot with a new school facility. The proposed project would be shorter than the recently-developed and planned residential buildings of the

surrounding Queens West Development and slightly taller than the low-rise industrial buildings of the nearby Hunters Point neighborhood. The building's design would be consistent with that of the new buildings of the Queens West Development, and would create a consistent streetwall in the study area. The new school facility would greatly enhance the streetscape of the project site and in the study area. The proposed project would not alter the street pattern, block shapes, or natural features of the study area, nor would it introduce an incompatible use. The proposed project would not result in any significant adverse impacts to noteworthy views or important visual elements in the study area. Overall, the proposed project would not have any adverse impacts on visual and aesthetic conditions.

## **B. EXISTING CONDITIONS**

### **PROJECT SITE**

#### *VISUAL CHARACTER*

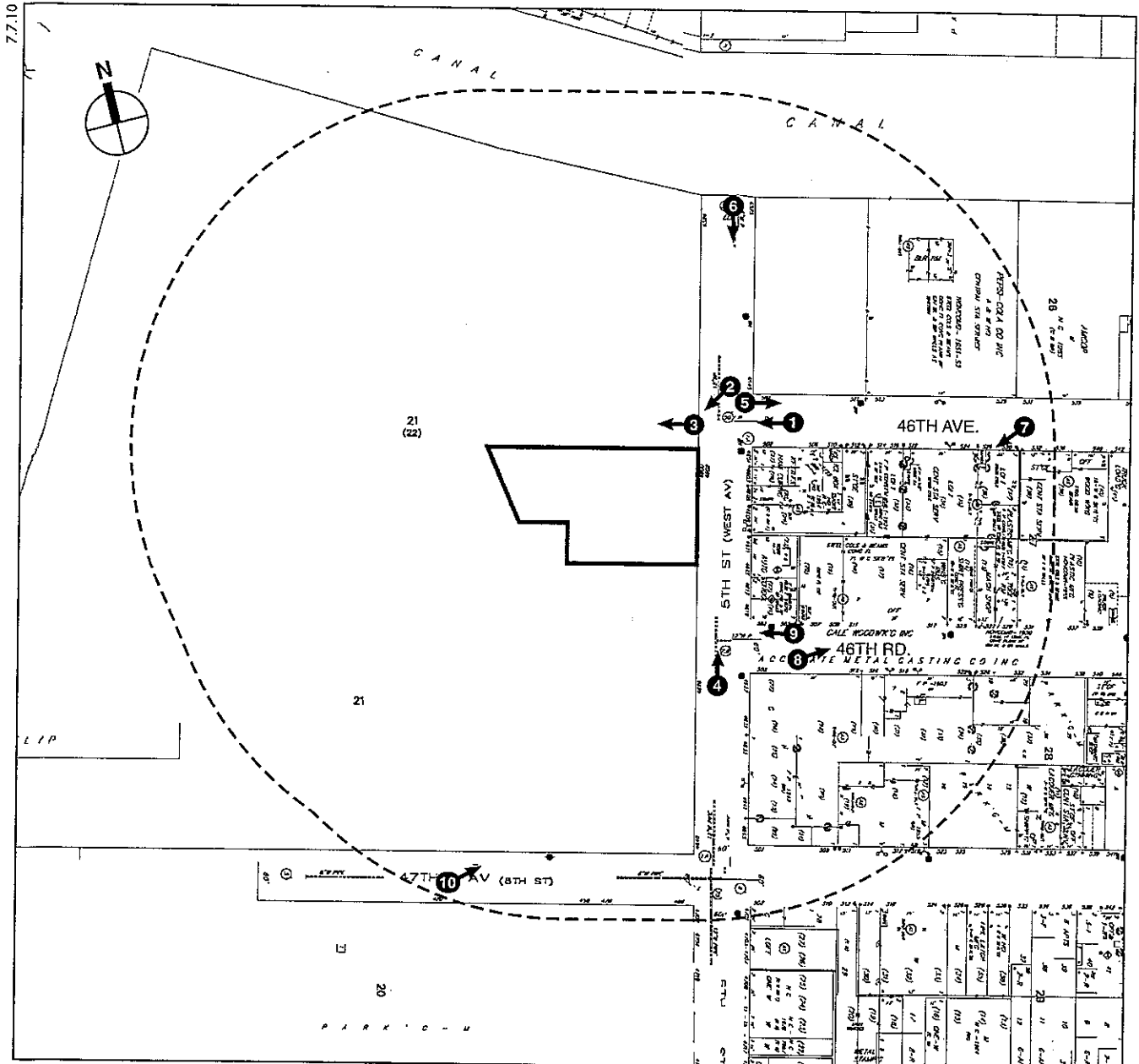
The project site, which is located at the southwest corner of 46th Avenue and 5th Street in Long Island City, is currently vacant and surrounded by chain-link fencing (see views 1 and 2 of Figure 4-2). It is situated on a superblock that is roughly bounded by Anable Basin to the north, 5th Street to the east, 47th Avenue to the south, and the East River waterfront to the west. The superblock is primarily occupied by cleared land that is intended to be developed as part of the Queens West Development. The 25,000-square-foot project site occupies a portion of Parcel 4 of the Queens West Development (see Figure 1-5 of Chapter 1, "Project Description").




#### *NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

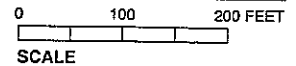
There are no important visual elements located on the project site. Due to the site's proximity to the East River waterfront and the lack of development on the project site and the surrounding superblock, views west from the 5th Street sidewalk adjacent to the project site provide direct, unobstructed views of the Midtown Manhattan skyline. Most prominent in these views are such iconic visual resources as the United Nations Secretariat Building, the Empire State Building, and the Chrysler Building (see view 3 of Figure 4-3). Views north along 5th Street adjacent to the project site include views of the Queensboro Bridge (see view 4 of Figure 4-3), another important visual element located outside of the study area. Due to the low-rise scale of the Hunters Point neighborhood located east of 5th Street, views east on 46th Avenue from 5th Street adjacent to the project site prominently feature the tall and modern Citibank Building (see view 5 of Figure 4-4). Views south on 5th Street adjacent to the project site reflect the visual divide between the older, low-rise buildings of the Hunters Point neighborhood to the east of 5th Street, and the new, modern, glass and steel-clad high-rise residential buildings of the Queens West Development to the west of 5th Street (see view 6 of Figure 4-4).

### **STUDY AREA**

The study area is primarily defined by construction sites and the new, high-rise residential buildings of the Queens West Development to the north, south, and west of the project site, and the older, low-rise, industrial and residential buildings of the Hunters Point neighborhood to the east of the project site. The Queens West Development buildings are of a modern design and clad in glass and steel, and the older buildings in Hunters Point are clad in brick, masonry, and

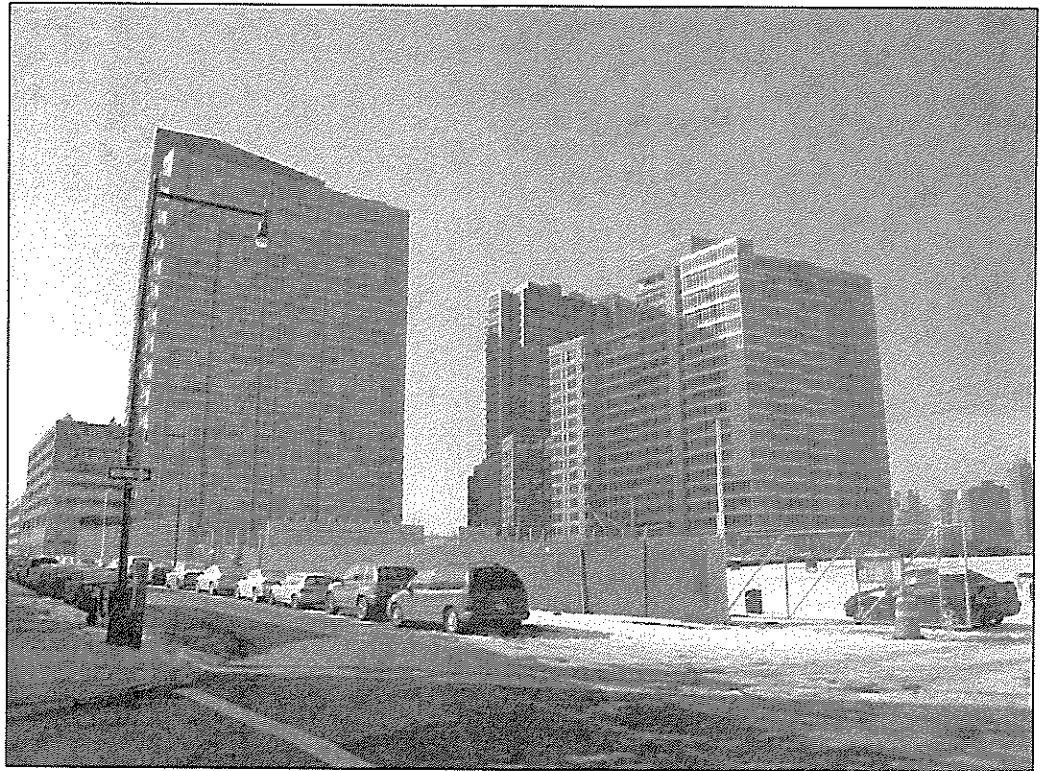


-  Project Site Boundary
-  Study Area Boundary (400-Foot Perimeter)
-  Photograph View Direction and Reference Number

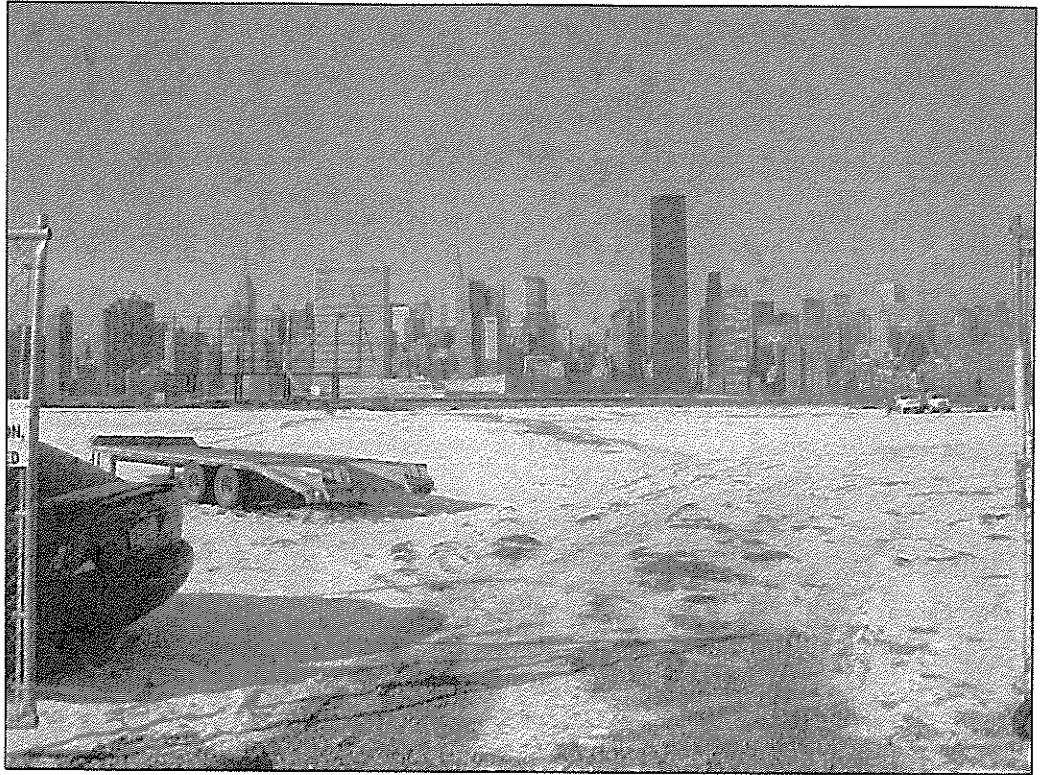




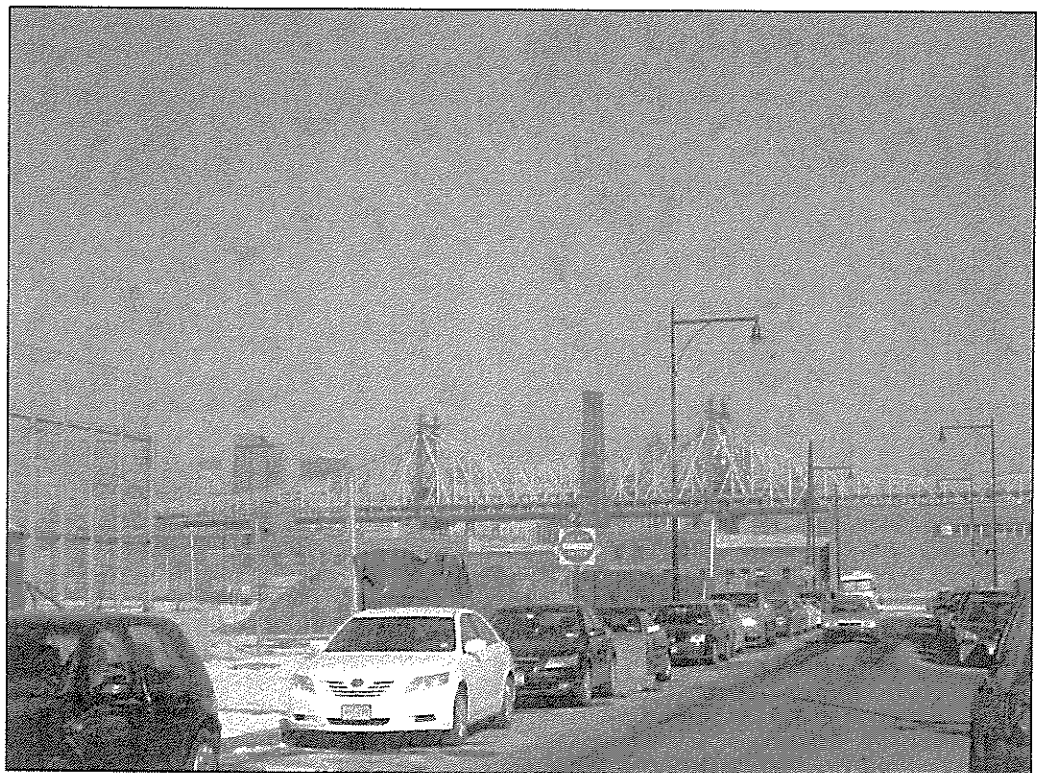
View west to project site from 46th Avenue and 5th Street 1



View southwest to project site from 46th Avenue and 5th Street 2



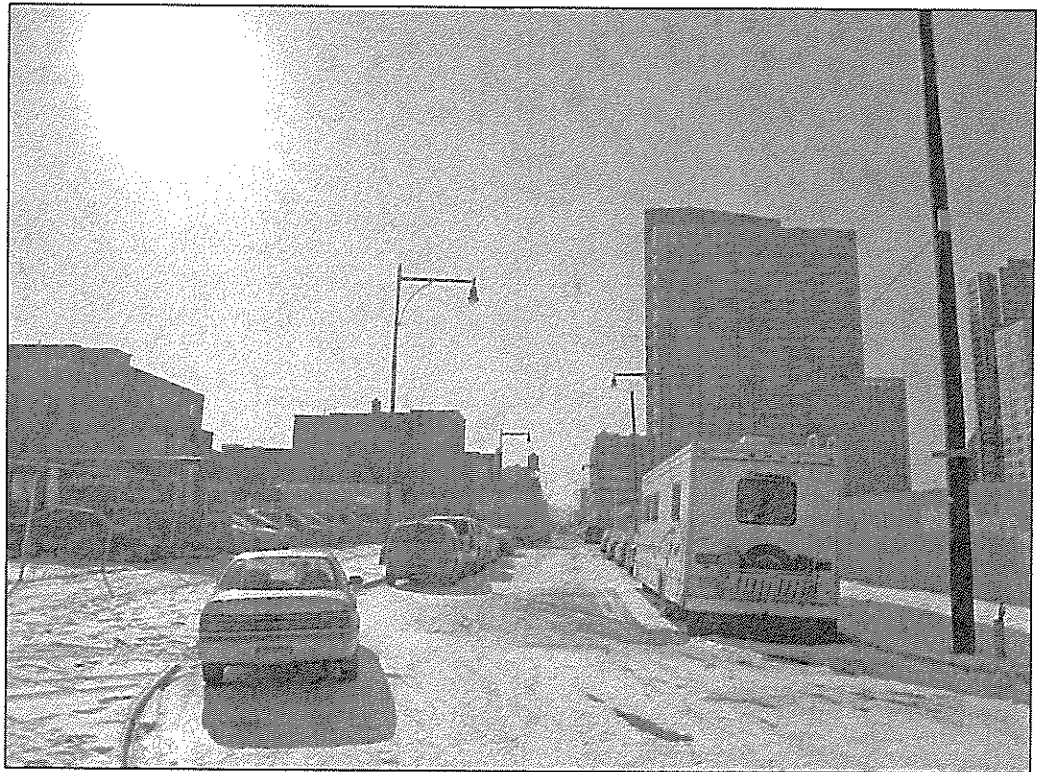
View west over project site of Midtown Manhattan skyline from 5th Street at 46th Avenue 3



View north of Queensboro Bridge from 5th Street at 46th Road 4



View east from project site on 46th Avenue from 5th Street 5



View south on 5th Street from Anable Basin 6

concrete. The discussion below focuses first on the area's visual character (its basic layout and structures) and then describes its noteworthy views and important visual elements.

### *VISUAL CHARACTER*

#### *Natural Features, Street Patterns, and Block Shapes*

The topography of the study area is relatively flat. The northern boundary of the study area is defined by the Anable Basin, a 500-foot-long canal off the East River and the only natural feature in the study area. The East River is an important natural feature, which is located just outside of the study area to the west. The regular street grid of the study area is interrupted west of 5th Street by the large superblock on which the project site is situated. 5th Street is currently the only north-south thoroughfare in the study area; it is wider than the other east-west streets and carries one lane of traffic in each direction until 46th Road. Between 46th Road and Anable Basin, 5th Street becomes a one-way southbound street, terminating to the north in a cul-de-sac at Anable Basin. The east-west streets in the study area—46th Avenue, 46th Road, and 47th Avenue—are narrow, one-way streets, which each carry one lane of traffic. Both 46th Avenue and 46th Road terminate at 5th Street; however, 47th Avenue continues west of 5th Street and terminates halfway to the East River.

Blocks east of 5th Street are regularly shaped; however, blocks west of 5th Street are irregularly formed due to the irregular land formations along the East River waterfront, the project site's large superblock, and the remaining undeveloped parcels of the Queens West Development.

Buildings on the blocks east of 5th Street are set slightly back from their lot lines and vary in footprint size. In comparison, buildings within the Queens West Development are generally built to the lot line, and have large footprints, some of which occupy an entire block.

#### *Streetscape*

The streetscape of the study area is primarily residential and industrial in character, with construction sites located throughout. The low-rise industrial buildings located east of 5th Street provide an inconsistent streetwall with various curb cuts and loading bays (see views 7 and 8 of Figure 4-5). Construction sheds and fencing are a common streetscape element throughout the study area, separating construction sites, open-air parking lots, and a public park from adjacent streets. All of the streets in the study area are paved in asphalt, excluding 46th Road, which contains a combination of Belgian blocks and asphalt. Parallel parking lines both sides of each street in the study area.

Street furniture in the study area includes modern lampposts, traffic signs, fire hydrants, trash cans, and few street trees. There is one open space in the study area—Queens West Sportsfield—a public park with a running track and multi-purpose field, which is located south of the project site on 5th Street between 46th Road and 47th Avenue. The park is slightly elevated from street level and enclosed on all sides by tall, chain-link fencing.

#### *Building Uses, Shapes, and Forms*

Within the study area, 5th Street visually separates the smaller and older industrial buildings of the Hunters Point neighborhood to the east and the taller and modern residential buildings of the new Queens West Development to the west. Along the east-west streets east of 5th Street, older industrial buildings are one to three stories in height and clad in brick, concrete, and masonry (see views 7 and 8 of Figure 4-5). These buildings have little to no ornamentation and commonly



have loading bays on the ground floor. Buildings on these streets are slightly set back from the sidewalk and generally rise to their full heights without setbacks.

West of 5th Street, the recently-constructed high-rise apartment buildings of the Queens West Development are clad in modern materials such as glass and steel. South of the project site, a 30-story building and adjacent eight-story external parking garage occupy the entire block between 47th Avenue and 47th Road between 5th Street and Center Boulevard. Southwest of the project site, a 200-foot-tall apartment tower occupies the northwest corner of Center Boulevard and 47th Avenue. These buildings have large footprints and generally rise to their full height from the lot line without setbacks. They are of varying heights and are articulated with balconies (see view 2 of Figure 4-2). Some of the buildings have ground-floor retail uses.

#### *NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

There are no important visual elements located in the study area; however, a number of iconic visual landmarks are located outside of the study area, yet visible from within the study area. View corridors are long along the east-west streets in the study area, due to the low height buildings east of 5th Street and the lack of development on the project site and its superblock. Views west along these streets offer unobstructed views across the East River to the diverse and unique skyscrapers of the Midtown Manhattan skyline. Particularly notable in these views are the United Nations Secretariat Building, the Chrysler Building, and the Empire State Building (see view 9 of Figure 4-6). Views east along the east-west streets in the study area continue for long stretches and prominently feature the Citibank Building (see view 10 of Figure 4-6). Views north along 5th Street feature the steel towers of the Queensboro Bridge, a visual landmark located outside of the study area (see view 4 of Figure 4-3).

### **C. FUTURE WITHOUT THE PROPOSED ACTIONS**

#### **PROJECT SITE**

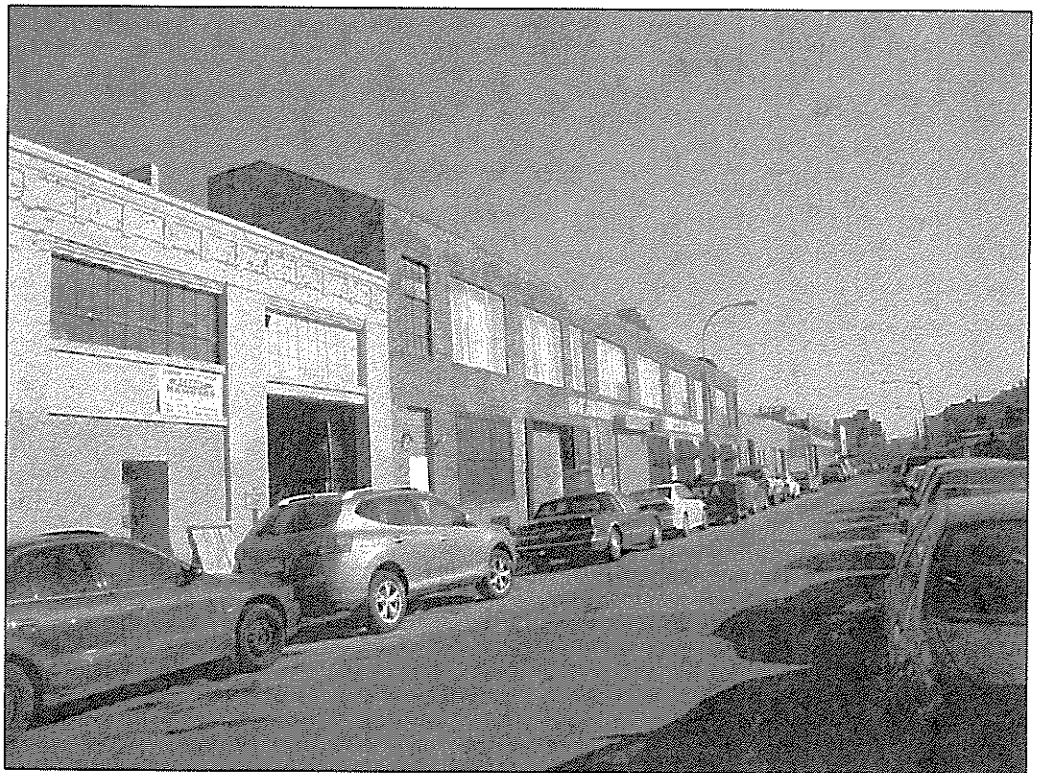
##### *VISUAL CHARACTER*

Absent the proposed actions, the project site is expected to be developed according to the GPP adopted by New York City and New York State in 1990 for the Queens West Development—then known as the Hunters Point Development Project—and currently controlled and regulated by the Queens West Development Corporation (QWDC). The Hunters Point (now Queens West) project was the subject of the *Hunters Point Waterfront Development Final Environmental Impact Statement* (FEIS), which included an analysis of the project’s potential effects on urban design and visual resources.

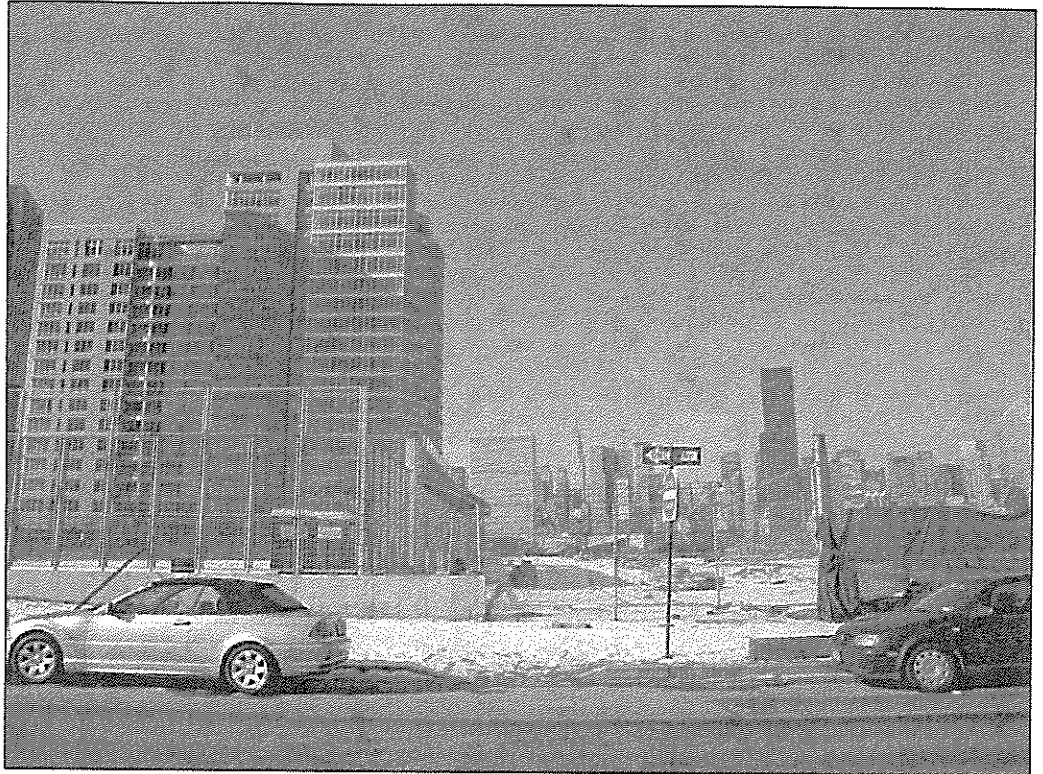
The modified GPP calls for up to approximately 343,000 square feet (sf) of residential use, 1,150 sf of retail use, and 100,000 sf of community facility use to be constructed on Parcel 4, on which the project site is located. As described above, development on this site under the GPP would be subject to specific zoning and urban design controls. Such design guidelines include a maximum building height of 400-feet; required street wall setbacks of five feet along the building’s 5th Street and 46th Avenue frontages; and a maximum streetwall height before setback of 82 feet along 5th Street and 96 feet along 46th Avenue. These controls were proposed to create a cohesive urban design scheme for the entire Queens West Development. The FEIS, which analyzed this development, concluded that such development on Parcel 4 will not result in any significant adverse impacts to the urban design of the project site. By 2013, it is anticipated



View west on 46th Avenue from the midblock between 5th Street and Vernon Boulevard 7



View east on 46th Road from 5th Street 8



View west on 46th Road at 5th Street 9



View east along 47th Avenue between 5th Street and Center Boulevard 10

that a 41-story residential tower with retail space will be completed on the western portion of Parcel 4. In the future without the proposed project, it is assumed that the project site would be developed with approximately 100,000 sf of another type of community facility space (“No Action” scenario).

#### *NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

As described above, there are no important visual elements on the project site. Although views west through the project site will be partially obstructed with the construction of the No Action building, the 46th Avenue view corridor adjacent to the project site will continue to provide views to the iconic skyscrapers in Midtown Manhattan. As analyzed in the FEIS, view corridors, such as 46th Avenue, will be enhanced with its continuation west of 5th Street. The No Action Building will have no effect on views north along 5th Street to the Queensboro Bridge. As concluded in the FEIS, the projected development on the project site will not have any significant adverse impacts to noteworthy views or important visual elements on the project site.

#### **STUDY AREA**

##### *VISUAL CHARACTER*

Portions of the Queens West Development are not yet developed. All of Queens West Parcels 1, 2, 3, and 4, on which the project site is located, remain undeveloped. As can be seen in Figure 1-5, the completion of these remaining portions of the Queens West Development by 2013 will substantially change the urban design of this portion of the study area from its current condition. The extension of Center Boulevard north of 47th Avenue and the continuation of 46th Avenue west of 5th Street will improve pedestrian and vehicular circulation in this portion of the study area. The construction of new high-rise residential buildings with ground-floor retail will greatly improve the streetscape of the study area by replacing inactive vacant lots and sites lined with chain-link fencing and construction sheds with active uses.

The completion of the Queens West Development will also greatly increase the density of the study area. As discussed in Chapter 2, “Land Use, Zoning, and Community Character,” five new Queens West residential buildings are planned for completion in the study area by the 2013 build year. Immediately west of the project site (on Parcel 4), a 41-story, 400-foot-tall residential tower is planned. This property has a cantilever easement beginning at 100 feet above the project site, which will allow projecting bay windows to cantilever over the proposed school. North of the project site and across 46th Avenue, a 30-story, 390-foot-tall residential building with a large footprint and an attached seven-story parking garage are planned for completion on Queens West Parcel 2. At the northwest corner of 46th Avenue and Center Boulevard, Queens West Parcel 1 will be developed with a 330-foot-tall residential building. Queens West Parcel 3, located on the west side of Center Boulevard between 46th Avenue and 46th Road, will be developed with a 260-foot-tall residential building. The 200-foot-tall residential development on Queens West Parcel 5, located at the northwest corner of Center Boulevard and 47th Avenue, was recently completed and will be occupied with ground floor retail uses. In addition to the Queens West buildings, a 400-residential unit building at 5-11 47th Avenue, southeast of the project site, is planned for completion as market-rate rental apartments and a dormitory for university students and faculty.

These planned developments are expected to positively affect the visual character of the study area by extending the study area’s street grid onto a large superblock that is currently

inaccessible and vacant, and through the construction of residential buildings with active ground-floor retail uses. The streetscape of the study area will greatly improve with added street trees and a waterfront esplanade along the currently inaccessible East River waterfront in this portion of the study area. The FEIS concluded that the Queens West Development will greatly increase the density of the study area with the construction of a large-scale complex of buildings; however, the GPP and its design controls were intended to better relate the Queens West Development to the surrounding area. The higher rise buildings will stand farther away from the adjacent low-rise neighborhood of Hunters Point, and the lower-rise buildings, like the project site, will front onto 5th Street.

#### *NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

With the planned completion of the Queens West Development by the 2013 analysis year, the density of the study area will be greatly increased and will probably result in the partial obstruction of views north and west to the important visual elements located outside of the study area. As concluded in the FEIS, the Queens West Development will enhance view corridors by extending east-west views along a more traditional street grid. Views along the east-west streets in the study area will be more limited in the future with the new developments; however, the extension of the street grid will frame these views and create new view corridors.

As concluded in the FEIS, the Queens West Development will not result in any significant adverse impacts to important visual elements or view corridors. In addition, the construction of an esplanade and waterfront park along the East River waterfront will provide unobstructed views west to the iconic buildings of the Midtown Manhattan skyline and views north to the Queensboro Bridge.

### **D. FUTURE WITH THE PROPOSED PROJECT**

#### **PROJECT SITE**

##### *VISUAL CHARACTER*

The proposed project would involve construction of a six-story, approximately 90-foot-tall (102 feet to the top of the mechanical space), 98,600-gross-square-foot (gsf) primary and intermediate public school on the project site. The proposed school would have frontages on 46th Avenue and 5th Street, with its main entrance located on 5th Street. The main entrance would be set back behind a fence at the property line, and there would be a long ramp from the front gate to the main entrance. The building would occupy a majority of its 25,000 sf site, with a 3,000 sf outdoor play area located at the southeast corner of the lot and enclosed by fencing. The school would contain classrooms, a gymnasium, a 300-seat auditorium, a cafeteria, and science, art, and music rooms. Both the cafeteria and auditorium would be located on the ground floor to facilitate use by the community.

The proposed building would comply with the GPP's maximum building height and maximum streetwall heights before setback of 82 feet along 5th Street and 96 feet along 46th Avenue, as required for Parcel 4. Also, as with the No Action development scenario, the proposed building would create a consistent streetwall in the study area, and would have no effect on the topography, block shape, or street pattern of the project site.

*NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

As there are no important visual elements on the project site, no such elements would be adversely affected by the proposed project. In comparison to the future without the proposed actions, the future with the proposed actions would have no effect on noteworthy views or important visual elements in the study area. As with the future without the proposed actions, views west to important visual elements located outside of the study area and visible in views through the project site would be partially obstructed with the construction of the proposed school facility. Further, these views will already be obstructed in the future without the proposed actions, with the construction of the No Action building and the adjacent 41-story residential tower. However, views west to the Midtown Manhattan skyline would be preserved along the 46th Avenue view corridor adjacent to the project site, and the continuation of the street grid west of 5th Street would frame views west along this extended view corridor.

**STUDY AREA**

*VISUAL CHARACTER*

*Natural Features, Street Patterns, and Block Shapes*

The proposed actions would not alter any natural features, street patterns, or block shapes in the study area. As described in the future without the proposed actions, by 2013 the superblock on which the project site is located will be separated into smaller blocks, and the street grid of the surrounding area will be extended.

*Streetscape*

As described above, the proposed building would comply with the GPP's maximum streetwall heights before setback of 82 feet along 5th Street and 96 feet along 46th Avenue. As with the construction of the No Action building, the streetscape of the study area would be greatly improved with the development of the proposed project, as the streetscape along 5th Street would be enlivened with the development of the school along this currently inactive street corridor. The proposed project would result in new street trees in the study area, particularly along the 5th Street and 46th Avenue frontages adjacent to the project site. The proposed fencing along the school's 5th Street frontage would be contextual to the chain-link fencing that currently separates the adjacent Queens West Sportsfield from its 5th Street and 47th Avenue frontages. The proposed 3,000 sf outdoor play area of the proposed project would further create a cohesive streetscape along the site's 5th Street frontage, as it would adjoin a planned open space that would also connect to the Queens West Sportsfield to the south.

*Building Uses, Shapes, and Forms*

The bulk, use, and type of the proposed building would be consistent with other buildings found in the study area. The building's height would be slightly taller than the one- and two-story industrial buildings located in the eastern portion of the study area, but much shorter than the recently constructed and planned high-rise residential developments of Queens West. By 2013, these high-rise buildings would be much more prevalent in the study area, and would dominate the context of the proposed building. Similarly, the building's proposed modern design and materials would be consistent with the new Queens West Development buildings surrounding the project site. Although the proposed project would introduce a new community facility use

into the study area, the use would be compatible with the growing residential character of the surrounding area.

*NOTEWORTHY VIEWS AND IMPORTANT VISUAL ELEMENTS*

As there are no important visual elements in the study area, the proposed project would not adversely affect such elements. In comparison to the future without the proposed actions, the proposed project would have no effect on noteworthy views to important visual elements located outside of the study area. As in the future without the proposed actions, the proposed project would result in framed views west of important visual elements through new view corridors created by the extended street grid west of 5th Street, which would differ from the currently open views that exist through the project site and the large, undeveloped superblock that it occupies. \*

A screening analysis was performed to determine whether the shadow cast by the proposed 90-foot- primary and intermediate school would be long enough to reach any nearby sun-sensitive resources at any time of year. According to the 2010 *New York City Environmental Quality Review (CEQR) Technical Manual*, sun-sensitive resources include publicly accessible open spaces, architectural resources with sunlight-dependent features, and important natural features and scenic landscapes.

Following the guidelines of the *CEQR Technical Manual*, the analysis considered shadows on four representative days of the year: March 21 (equivalent to September 21, the equinoxes); June 21, the summer solstice; May 6 (equivalent to August 6, the midpoints between the equinoxes and summer solstice); and December 21, the winter solstice.

Using the height and footprint of the proposed school, the full extent of the area that could be reached by project shadow was calculated for each of the analysis days and delineated on a street map. The screening analysis accounted for existing open spaces, water bodies, and historic resources, as well as buildings and open spaces planned as part of the Queens West Development. These features were also delineated on the map, as shown in Figure 5-1.

The analysis concluded that the proposed school's shadow would not be long enough to reach the existing park to the south (Queens West Sportfield) or the proposed esplanade to the west on any of the four analysis days.

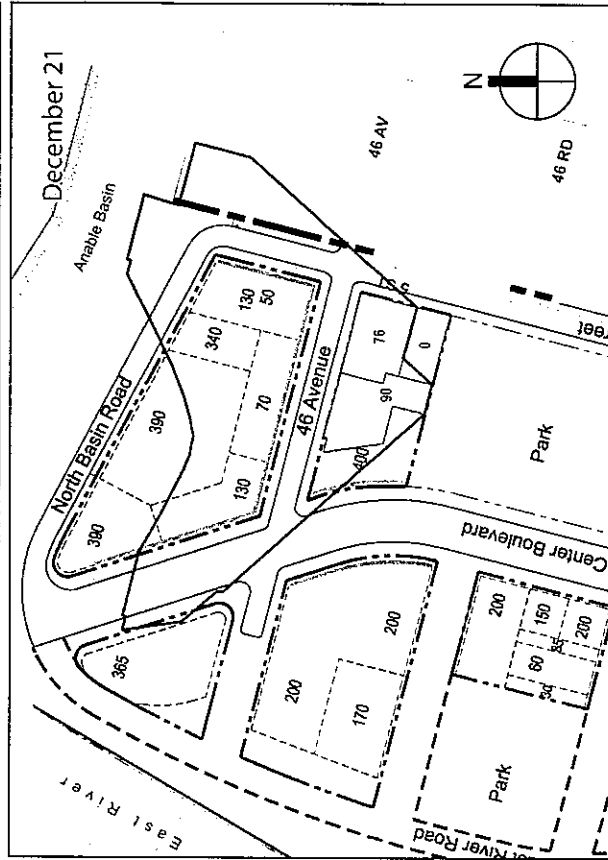
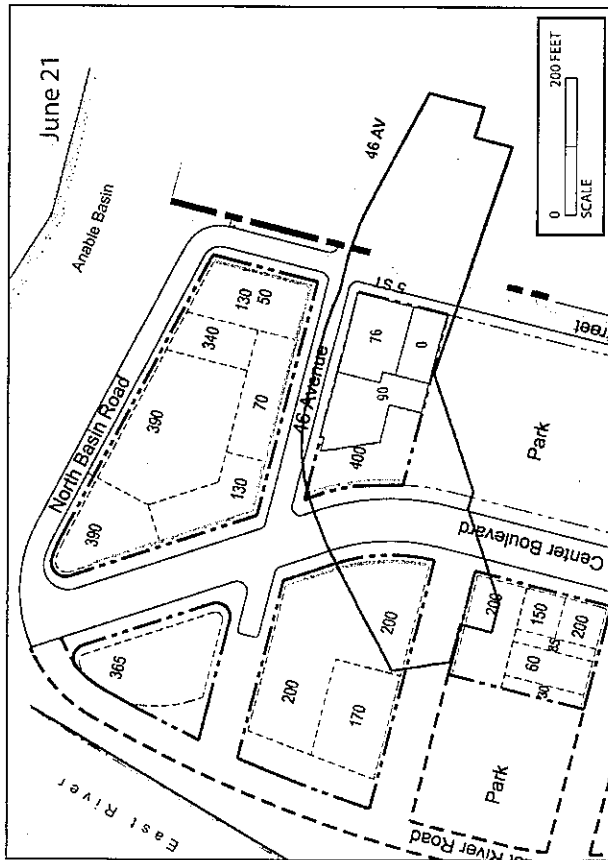
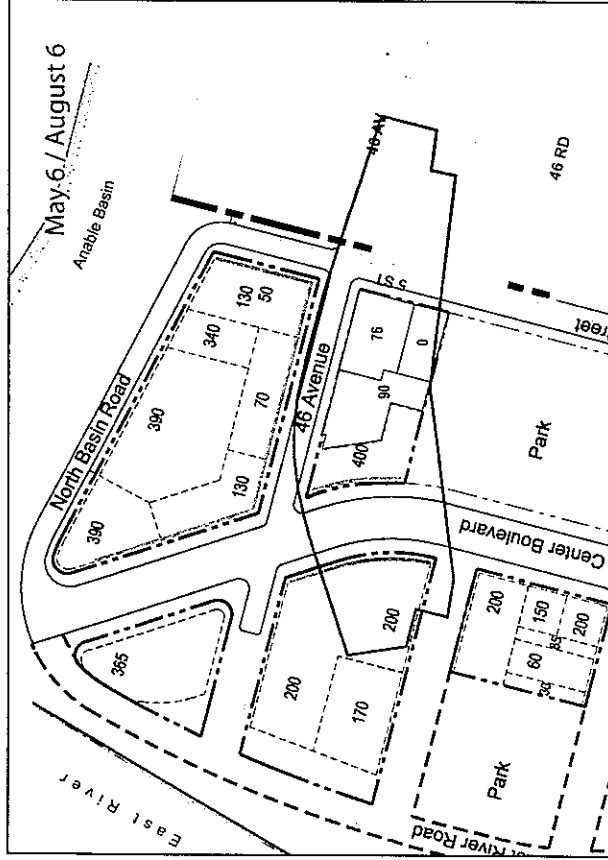
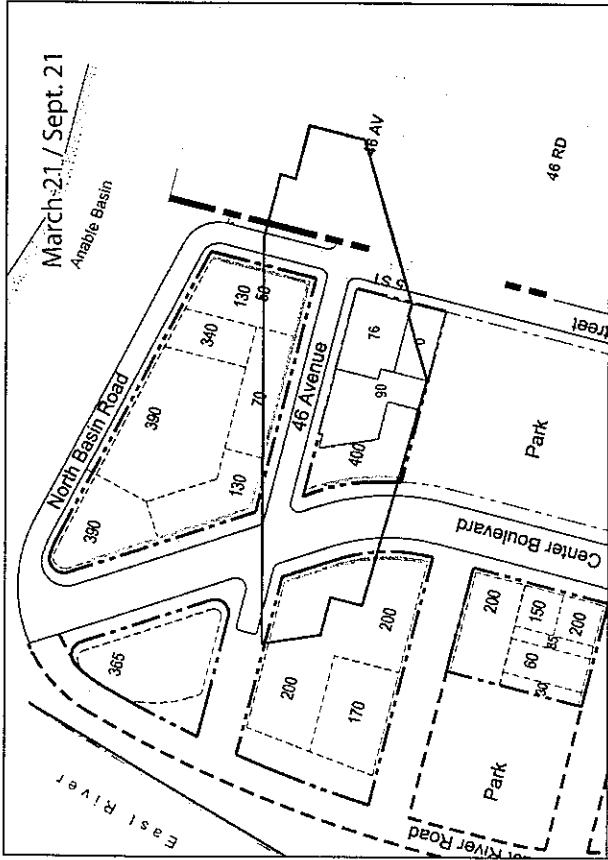
The proposed school's shadow would be long enough to reach a small section of Anable Basin to the northeast for the final 15 minutes of the December 21 analysis day (see Figure 5-1). However, most of this small incremental shadow would likely be blocked from the water by the intervening building that is slated to be constructed just north of the project site. The proposed school's shadow would not be long enough to reach Anable Basin on the other three analysis days.

A portion of the planned open space, located immediately south of the project site and north of the existing Queens West Sportsfield, would experience shadow from the proposed school in the mornings of the June 21 and May 6/August 6 analysis days, as shown in Figure 5-1. On June 21, project-generated shadow would fall toward a section of the park between approximately 6:57 AM and approximately 10:15 AM. On May 6/August 6, the proposed building's shadow would fall toward a smaller section of the park from 7:27 AM to 9:30 AM. However, on both these analysis days the 400-foot-high proposed residential building adjacent to the project site to the west would already cast shadow on much of the same area that would be affected by the proposed school; only a narrow stretch of the park would actually be in the school's shadow on the late spring and summer mornings.

The section of the proposed park that would be affected by incremental shadow will primarily contain a walkway providing access from Fifth Street through the block to Center Boulevard and the larger proposed park beyond. The small extent of incremental shadow would not be expected to cause a significant adverse impact to any vegetation at that location in the park or its users. Therefore, the proposed project would not result in any significant adverse shadow impacts. \*



6.5.09



Project Site  
 Perimeter Showing Longest Possible Shadow Length  
 Numbers in Building Footprints Indicate Heights

Shadow Screening Analysis  
 Figure 5-1

## A. INTRODUCTION

As discussed in Chapter 1, “Project Description,” the New York City School Construction Authority (SCA) proposes to construct P.S./I.S. 312 in the Long Island City section of Queens. The proposed school facility would provide approximately 665 seats for students in pre-kindergarten through grade eight, including 60 District 75 students, and would be staffed by approximately 56 teachers and administrative personnel. The proposed school is part of the Queens West Development project and would occupy the eastern portion of Parcel 4 of the Queens West Development, located on the southwest corner of 46th Avenue and 5th Street.

The Queens West Development is a large-scale project being developed on the blocks from 50th Avenue to the Anable Basin, west of 5th Street. The Queens West Development Corporation, a subsidiary of the Empire State Development Corporation, oversees development of the Queens West Development, which proceeds in accordance with a General Project Plan (GPP) that sets forth the specific uses and building bulk and massing permitted on each project parcel. It is expected that absent the proposed project, in the future conditions, the project site would be developed with approximately 100,000 sf of another type of community facility space, in accordance with the GPP (the “No Action” scenario).

## B. CEQR SCREENING ANALYSIS

The *2010 City Environmental Quality Review (CEQR) Technical Manual* identifies procedures for evaluating the proposed action’s potential impacts on traffic, parking, transit, and pedestrian conditions. This methodology begins with the preparation of a trip generation analysis to determine the volume of person and vehicle trips associated with the proposed action. The results are then compared to *CEQR* specified thresholds to determine whether additional quantified analyses are warranted. Specifically, the *2010 CEQR Technical Manual* identifies a two-tier screening process to determine whether a quantified analysis of transportation conditions is warranted. The screening process is discussed as follows:

### LEVEL 1 (PROJECT TRIP GENERATION) SCREENING ASSESSMENT

This assessment determines the number of peak hour person and vehicle trips expected to be generated by the proposed action. If the proposed action would result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted and the proposed action is unlikely to result in significant adverse traffic, parking, transit and pedestrian impacts.

**LEVEL 2 (PROJECT GENERATED TRIP ASSIGNMENT) SCREENING ASSESSMENT**

This assessment is undertaken if the proposed action results in more than 50 peak hour vehicle trips and more than 200 peak hour transit or pedestrian trips. For Level 2 Screening Assessment, project-generated trips are assigned to specific intersections, transit routes and pedestrian elements. If the result of this assessment determines that the proposed action would generate more than 50 peak hour vehicle trips per intersection, more than 200 transit trips per route/station element or more than 200 pedestrian trips per pedestrian element, further quantified analyses would be warranted to assess the potential impacts on transportation conditions.

In conformance with the 2010 *CEQR Technical Manual*, a screening analysis was performed to determine if the proposed project would warrant quantified transportation analyses. The screening analysis compared projected trips generated by the proposed school with the projected trips that would be generated by the No Action development scenario. The total projected peak hour person and vehicle trip increment is the net difference of trips between what would be generated by the proposed school and the No Action development.

**TRIP GENERATION**

*NO ACTION SCENARIO*

Trips generated by the No Action scenario were estimated using *Hunter's Point South Rezoning and Related Actions FEIS (2008)* as a reference. Trip generation factors for the No Action development scenario are summarized in Table 6-1.

**Table 6-1  
No Action Scenario—Travel Demand Assumptions**

Use	Community Facility	
Person Trip Rate <sup>1</sup>	34.0 / 1,000 Square Feet	
Temporal Distribution <sup>1</sup>	AM	PM
In / Out <sup>1</sup>	94% / 6%	45% / 55%
Modal Split <sup>1</sup>	AM	PM
Auto	12.0%	12.0%
Taxi	1.0%	1.0%
Subway	28.0%	28.0%
Bus	2.0%	2.0%
Railroad	0.0%	0.0%
Walk	57.0%	57.0%
Total	100%	100%
Occupancy		
Auto <sup>2</sup>	1.13	1.13
Taxi <sup>1</sup>	1.50	1.50
Delivery Trip Rate <sup>1</sup>	0.38/1,000 sq. ft	
Delivery Temporal <sup>1</sup>	AM	PM
	6.0%	11.0%
<b>Notes:</b>		
1. <i>Hunter's Point South Rezoning and Related Actions FEIS (2008)</i>		
2. 2000 U.S. Census Data		

The total person and vehicle trips generated by the No Action development scenario during the weekday morning and afternoon peak hours are summarized in Table 6-2.

**Table 6-2**  
**Total Person and Vehicle Trips**  
**No Action Scenario**

Type of Trip	AM			PM		
	In	Out	Total	In	Out	Total
Person Trips	230	14	244	108	133	241
Vehicle Trips	27	5	32	16	18	34

### *PROPOSED PROJECT*

As discussed in Chapter 1, "Project Description," the proposed school would consist of an elementary school with a pre-kindergarten program, as well as an intermediate school, and would also serve District 75 special-education students. Person and vehicle trips generated by the proposed school were estimated based on the travel demand assumptions used in the *P.S./I.S. 276M EAF* (2008).

#### *Catchment Area: Students Expected to Attend the Proposed School*

The proposed school is expected to be operational by 2013 and would primarily accommodate the demand generated by the Queens West Development surrounding the project site. The school would also accommodate the demand generated by other developments in the immediate area that are expected to be completed by 2013. There are eight developments within a ¼-mile radius of the project site and an additional six developments between ¼-mile and a ½-mile radius of the project site that are expected to be completed by 2013. These residential developments ("No Build" projects) are expected to add approximately 1,895 dwelling units (DUs) within a ¼-mile radius of the site and an additional 360 DUs between a ¼-and ½-mile radius of the project site, and would introduce an estimated 631 elementary, 271 middle and 316 high school students to the surrounding area by 2013.<sup>1</sup>

Currently, the study area is served by one elementary school (P.S. 78) which is located at 48th Avenue and Center Boulevard, approximately four blocks southwest of the project site. This school serves grades pre-kindergarten through fifth and has a capacity for 296 students. Under current conditions, P.S. 78 operates at approximately 85 percent capacity with an enrollment of approximately 251 students. An annex for P.S. 78 was recently completed, which increased the existing school capacity by approximately 61 seats, resulting in a total of 357 seats. The elementary school students introduced by the No Build projects are zoned for the existing P.S. 78 elementary school. However, if all of the elementary students introduced by the No Build projects were to attend P.S. 78, that school would have a shortfall of 501 seats. Therefore, it is anticipated that many of these students would attend the proposed P.S./I.S. 312, which would contain approximately 410 elementary school seats. For middle school, it is anticipated that many middle school students from No Build projects in the immediate area would attend the proposed school (which would contain approximately 195 middle school seats), since there are

<sup>1</sup> Student trip generation based on New York City Department of Education/School Construction Authority public school trip generation rates. The rates estimate that each new housing unit in Queens generates 0.28 elementary, 0.12 middle, and 0.14 high school students.

no middle schools located within a ¼-mile of the project site. Therefore, it is evident that there would be sufficient demand within the immediate vicinity of the proposed project to fill the proposed 665 P.S./I.S. seats. Moreover, since nearly all the future student population would reside in the immediate vicinity of the project site (within a ¼-mile radius), a vast majority of the students are expected to walk to and from the proposed school, which is reflected in the modal split percentages presented below.

*PRE-KINDERGARTEN*

The pre-kindergarten program in the elementary school would serve approximately 59 students. To accurately estimate the number of student trips on a typical day, a 10 percent absentee rate was assumed, yielding a total of 53 students attending. In addition, it is estimated that approximately 90 percent or about 48 students would arrive and depart during the morning and afternoon peak hours. The trip generation and modal splits for the proposed pre-kindergarten are presented in Table 6-3.

**Table 6-3  
Trip Generation  
Pre-Kindergarten Students**

Travel Mode	Students		
	Percent	Person Trips	Vehicle Trips
<b>AM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	10%	5	8
School Bus/Van*	0%	0	0
Public Transit	0%	0	---
Walk	90%	43	---
<b>PM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	10%	5	8
School Bus/Van*	0%	0	0
Public Transit	0%	0	---
Walk	90%	43	---
<b>Notes:</b>			
* Both inbound and outbound vehicle trips take place during the same peak hour.			
Student Vehicle Occupancy = 1.2			
School Bus/Van Occupancy = 17			

*ELEMENTARY SCHOOL*

The elementary school would serve approximately 351 students. To accurately estimate the number of student trips on a typical day, a 10 percent absentee rate was assumed, yielding a total of 316 students attending school. In addition, it is estimated that approximately 90 percent or about 284 of the students would arrive and depart during the AM and PM peak hours. The trip generation and modal splits for the proposed elementary school are presented in Table 6-4.

*INTERMEDIATE SCHOOL*

The intermediate school would serve approximately 195 students. To accurately estimate the number of student trips on a typical day, a 10 percent absentee rate was assumed, yielding a total of 176 students attending school. In addition, it is estimated that approximately 90 percent or about 158 of the students would arrive and depart during the morning and afternoon peak hours. The trip generation and modal splits for the proposed intermediate school are presented in Table 6-5.

**Table 6-4**  
**Trip Generation**  
**Elementary School Students**

Travel Mode	Students		
	Percent	Person Trips	Vehicle Trips
<b>AM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	5%	14	22
Taxi	0%	0	0
School Bus/Van*	0%	0	0
Public Transit	5%	14	—
Walk	90%	256	—
<b>PM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	5%	14	22
Taxi	0%	0	0
School Bus/Van*	0%	0	0
Public Transit	5%	14	—
Walk	90%	256	—
<b>Notes:</b>			
* Both inbound and outbound vehicle trips take place during the same peak hour. Student Vehicle Occupancy = 1.3			

**Table 6-5**  
**Trip Generation**  
**Intermediate School Students**

Travel Mode	Students		
	Percent	Person Trips	Vehicle Trips
<b>AM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	5%	8	12
Taxi	0%	0	0
School Bus/Van*	0%	0	0
Public Transit	5%	8	—
Walk	90%	142	—
<b>PM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	5%	8	12
Taxi	0%	0	0
School Bus/Van*	0%	0	0
Public Transit	5%	8	—
Walk	90%	142	—
<b>Notes:</b>			
* Both inbound and outbound vehicle trips take place during the same peak hour. Student Vehicle Occupancy = 1.3			

#### *DISTRICT 75 STUDENTS*

The proposed school campus would serve approximately 60 District 75 special education students. To estimate accurately the number of student trips on a typical day, a 10-percent absentee rate was assumed, yielding a daily total of 54 students attending school. In addition, it is estimated that about 90 percent or approximately 49 students would arrive and depart during the AM and PM peak hours. The trip generation and modal splits for the special education students are presented in Table 6-6.

**Table 6-6  
Trip Generation  
District 75—Special Education Students**

Travel Mode	Students		
	Percent	Person Trips	Vehicle Trips
<b>AM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	25%	12	18
School Bus/Van*	75%	36	4
Public Transit	0%	0	---
Walk	0%	0	---
<b>PM PEAK HOUR</b>			
Automobile (drop-offs/pick-ups)*	25%	12	18
School Bus/Van*	75%	36	4
Public Transit	0%	0	---
Walk	0%	0	---
<b>Notes:</b>			
* Both inbound and outbound vehicle trips takes place during the same peak hour.			
Student Vehicle Occupancy = 1.3			
School Bus/Van Occupancy = 17			

**TEACHERS AND ADMINISTRATIVE STAFF**

The school facility would be staffed by approximately 56 teachers and administrative staff. The trip generation and modal splits for the teachers and administrative staff are presented in Table 6-7.

**Table 6-7  
Trip Generation  
Teachers and Administrative Staff**

Travel Mode	Staff		
	Percent	Person Trips	Vehicle Trips
<b>AM PEAK HOUR</b>			
Automobile (Drive)	50%	28	25
Taxi	1.5%	1	2
Subway	39%	22	---
Local Bus	6%	3	---
Walk	3.5%	2	---
<b>PM PEAK HOUR</b>			
Automobile (Drive)	50%	28	25
Taxi	1.5%	1	2
Subway	39%	22	---
Local Bus	6%	3	---
Walk	3.5%	2	---
<b>Note: Staff Vehicle Occupancy = 1.2</b>			

As shown in Table 6-8, the proposed school would generate a total of 594 person trips and 91 vehicle trips during both the weekday AM and PM peak hours.

**Table 6-8  
Trip Generation Summary: Proposed Project**

	AM			PM		
	In	Out	Total	In	Out	Total
Peak Hour Person Trip	594	0	594	0	594	594
Peak Hour Vehicle Trip	58	33	91	33	58	91

*Net Increment*

Net differences in trip generation between the No Action scenario and the proposed school are presented in Table 6-9 for the AM and PM peak periods.

**Table 6-9  
Net Increments: Proposed Project vs. No Action Scenario**

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<b>Peak Hour Person Trip</b>						
Auto	39	-2	37	-13	51	38
Taxi	-1	0	-1	-1	0	-1
Subway	-20	-4	-24	-30	7	-23
Bus	-2	0	-2	-2	0	-2
School Bus	36	0	36	0	36	36
Walk	312	-8	304	-62	367	305
Total	364	-14	350	-108	461	353
<b>Peak Hour Vehicle Trip</b>						
Auto	31	28	59	18	41	59
Taxi	-1	-1	-2	-1	-1	-2
Delivery/School Bus	1	1	2	0	0	0
Total	31	28	59	17	40	57

Overall, the proposed school would result in net increments of 350 and 353 person trips and 59 and 57 vehicle trips during the AM and PM peak hours, respectively. Since the net vehicle trips are slightly above the *CEQR Technical Manual* threshold of 50 vehicle trips, a Level 2 Screening Assessment was conducted to determine if assigning these net vehicular trips would result in more than 50 peak hour incremental vehicle trips at the intersections in the vicinity of the project site. Based on the results of Level 2 Screening Assessment it was determined that the proposed project would not result in more than 50 peak hour incremental vehicle trips at the intersections in the vicinity of the project site. Specifically, at the five intersections in the vicinity of the project site—including the intersections of Vernon Boulevard and Fifth Street at 46th Avenue and 46th Road—the proposed project would result in a maximum net vehicular increment of up to 37 vehicles per hour (vph) during any of the school related morning and afternoon peak hours. Therefore, no further detailed analyses of traffic and parking conditions are warranted based on the CEQR criteria, and the proposed project is not expected to result in significant adverse traffic impacts.

In terms of transit trips, the proposed project would not result in an increment of more than 200 peak hour transit riders (the *CEQR Technical Manual* threshold for undertaking quantified transit analysis), and is not expected to result in significant adverse transit impacts.

With respect to pedestrian trips, the proposed project could result in more than 200 pedestrian trips per hour when compared to the No Action Scenario. Therefore, in accordance with the *2010 CEQR Technical Manual* guidelines, a Level 2 Screening Assessment was conducted to determine if the pedestrian activity generated by the proposed project would result in more than 200 peak hour incremental pedestrian trips at the intersections in the vicinity of the project site. Based on the results of Level 2 Screening Assessment, it was determined that certain pedestrian elements at up to four intersections in the vicinity of the project site could experience 200 or more peak hour incremental pedestrian trips during the school related morning and afternoon peak hours. Therefore, a quantified pedestrian analysis has been prepared for these four locations and is discussed in detail in the preceding sections. The pedestrian analysis results, as discussed



in detail later in the chapter, show that new trips associated with the proposed project would not result in any significant pedestrian impacts at any analysis location.

## C. METHODOLOGY

A detailed travel demand projection was developed to identify the transportation elements likely to be affected by the proposed project as discussed above. Based on criteria specified in the *2010 CEQR Technical Manual*, it was determined that a quantified assessment of pedestrian conditions would be required. Since the net estimated trips generated by the proposed project would not exceed impact thresholds for traffic and transit operations, these elements were not analyzed.

### PEDESTRIAN OPERATIONS

The adequacy of the study area's sidewalks, crosswalks, and corner reservoir capacities in relation to the demand imposed on them was assessed using the methodologies presented in the *2000 Highway Capacity Manual (HCM 2000)*. Sidewalks were analyzed in terms of pedestrian flow. The calculation of the average pedestrians per minute per foot (PMF) of effective walkway width is the basis for *Level of Service (LOS)* analysis.

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities is the net area of the corner (in square feet) multiplied by the cycle length, which is expressed in square feet per minute. The analysis then determines the total circulation time for all pedestrian movements at the corner (expressed as pedestrians per minute). The ratio of net time-space divided by pedestrian circulation time provides the LOS measurement of square feet per pedestrian (SFP).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet per minute. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the average crossing time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk.

Table 6-10 shows the LOS standards for sidewalks, corner reservoirs, and crosswalks.

The *2010 CEQR Technical Manual* specifies that a mid-LOS D condition or better is considered reasonable for sidewalks, corner reservoirs, and crosswalks within the Central Business District (CBD) areas, which include Midtown and Lower Manhattan, Downtown Brooklyn, Long Island City, Downtown Flushing and Downtown Jamaica, and other areas having CBD type characteristics, while acceptable LOS elsewhere in the city (non-CBD areas) is LOS C or better for the aforementioned pedestrian elements.

**Table 6-10**  
**Level of Service Criteria for Pedestrian Elements**

LOS	Sidewalks – Non Platoon Flow	Sidewalks – Platoon Flow	Corner Reservoirs and Crosswalks
A	5 PMF or less	0.5 PMF or less	60 SFP or More
B	5 to 7 PMF	0.5 to 3 PMF	40 to 60 SFP
C	7 to 10 PMF	3 to 6 PMF	24 to 40 SFP
D	10 to 15 PMF	6 to 11 PMF	15 to 24 SFP
E	15 to 23 PMF	11 to 18 PMF	8 to 15 SFP
F	More than 23 PMF	More than 18 PMF	Less than 8 SFP

Notes: PMF = pedestrians per minute per foot. SFP = square feet per pedestrian.  
Source: New York City Mayor's Office of Environmental Coordination, CEQR Technical Manual (May 2010).

Since the project site is located in Long Island City (a CBD area), mid-LOS D conditions require a minimum of 19.5 SFP for corner reservoirs and crosswalks, while for sidewalks, mid-LOS D conditions require a maximum of 8.5 PMF for platoon flow.

The determination of whether project-related sidewalk impacts are considered significant and require examination of mitigation depends on the type of sidewalk pedestrian flow (non-platoon or platoon) and the study area type (CBD or non-CBD). For each pedestrian flow type in each study area type, determination of significant sidewalk impacts is based on a sliding scale that varies with the No Build average pedestrian flow rates.

For platoon flows in CBD's, the criteria<sup>1</sup> include:

- An increase in the pedestrian flow rate to greater than 8.5 PMF (mid-LOS D) in Build conditions is considered a significant impact on sidewalks with No Build pedestrian flow rates of less than 6.3 PMF.
- The sliding scale subsequently groups sidewalks with No Build pedestrian flow rates between 6.3 and 19.0 PMF in ranges of 0.7 PMF (the first group being 6.3 to 7.0 PMF), with corresponding determinations of significant impacts based on a range of Build increment PMF values diminishing by 0.1 PMF for each group down the scale (beginning with equal to or greater than 2.2 PMF). Above No Build flow rates of 19.0 PMF, sidewalks are considered to be significantly impacted by Build flow rate increments of equal to or greater than 0.6 PMF.

The determination of whether project-related corner and crosswalk impacts are considered significant and require examination of mitigation depends on the study area type (CBD or non-CBD). For each study area type, determination of significant corner or crosswalk impacts is based on a sliding scale that varies with the No Build pedestrian space. In CBD's, the criteria<sup>2</sup> include:

- A reduction in pedestrian space to less than or equal to 19.5 SFP (mid-LOS D) in Build conditions is considered a significant impact on corners or crosswalks with No Build pedestrian space of greater than 21.6 SFP.

<sup>1</sup> Since the project site is located in a CBD area, the criteria for platoon flows in non-CBD is not provided.

<sup>2</sup> Since the project site is located in a CBD area, the criteria for crosswalk and corner impacts in non-CBD is not provided.

- Build pedestrian space reductions greater than or equal to 2.1 SFP are considered significant impacts on corners or crosswalks with No Build pedestrian space of between 21.6 and 21.3 SFP.
- The sliding scale subsequently groups corners or crosswalks with No Build spaces between 21.2 and 5.1 SFP in ranges of 0.8 SFP (the first group being 21.2 to 20.4 SFP), with corresponding determinations of significant impacts based on a range of Build reductions in SFP values diminishing by 0.1 SFP for each group down the scale (beginning with equal to or greater than 2.0 SFP). Below No Build pedestrian space of 5.1 SFP, corners and crosswalks are considered to be significantly impacted by Build space reductions of equal to or greater than 0.2 SFP.

## D. EXISTING CONDITIONS

The project site is currently vacant and is enclosed by construction fencing. As shown in Figure 1-1 in Chapter 1, “Project Description”, the site is located on 5th Street and is surrounded to the north, south, and west by cleared land that will be developed with residential and open space developments planned as part of the Queens West Development. A large portion of the street and sidewalk network that would be used by students accessing the proposed school has not yet been built.

### TRANSIT STUDY AREA

The project site is located in an area served by three subway stations and four bus routes as shown in Figure 6-1. A description of each of these transit modes that would be affected by trips associated with the proposed project is provided below.

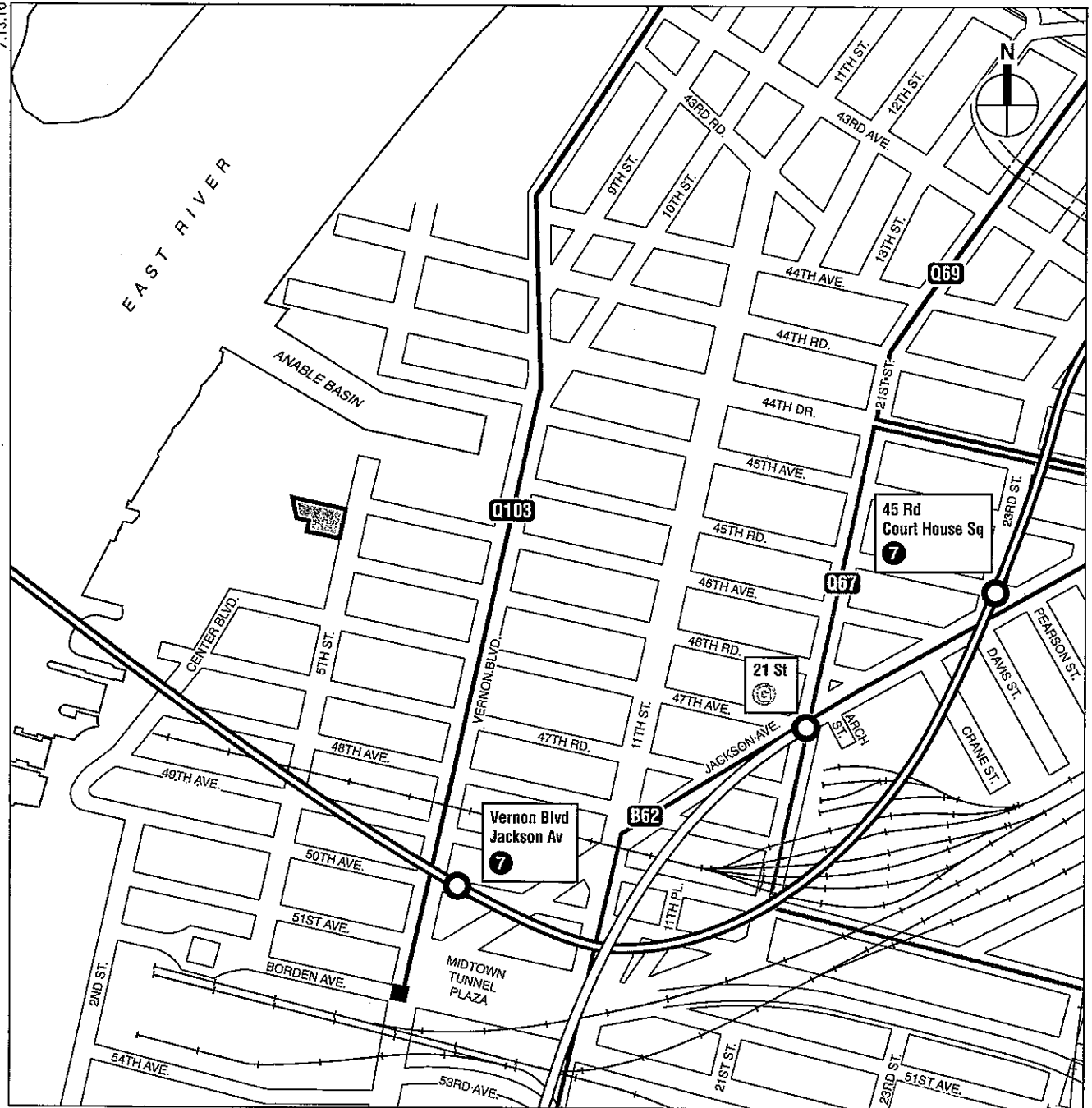
#### *SUBWAY SERVICE*




Based on the travel demand estimates detailed earlier in this chapter, it was determined that the project-generated peak hour subway trips would be spread across several station elements at three nearby stations (Vernon Blvd/Jackson Station and 45th Road/Court House Square Station – No. 7 line and 21st Street Station – G line) during each of Morning and Afternoon peak hours.

As specified by the 2010 *CEQR Technical Manual*, if the proposed project is considered unlikely to create any noticeable constraints on any subway station elements or to produce a significant transit impact, a quantitative analysis is not required. Consequently, the proposed project is not expected to create any operational constraints on transit.

#### *BUS SERVICE*

Based on the travel demand estimates detailed above, and the availability of Q67, Q69, Q103, and B62 bus routes near the proposed project, it was determined that no individual bus route would experience an increase of 200 or more project generated bus trips—the CEQR recommended threshold for undertaking quantified bus analysis. Consequently, it is expected that the project would not create a noticeable constraint on bus capacity; therefore, a quantitative bus analysis is not warranted. Table 6-11 provides a summary of the NYCT local bus routes, which provide regular service to the study area and their weekday frequencies of operation. These routes use standard buses with a guideline capacity of 54 passengers per bus.



-  Project Site
-  Subway Line
-  Bus Route

0 500 1000 FEET  
SCALE

**Table 6-11**  
**NYCT Local Bus Routes Serving The Study Area**

Bus Route	Start Point	End Point	Routing	Frequency of Bus Service (Headway in Minutes)	
				AM	PM
Q67	Ridgewood	Long Island City	Borden Avenue	8	30
Q69	Long Island City	Jackson Heights	44th Drive	5	12
Q103	Astoria	Hunters Point	Vernon Blvd	30	60
B62	Queens Plaza	Downtown Brooklyn	Jackson Avenue	8	8

Source: New York City Transit, Queens and Brooklyn Bus Schedules (2009/2010).

### PEDESTRIAN STUDY AREA

The pedestrian study area considers the sidewalks, corner reservoirs, and crosswalks that would be most affected by new trips generated by the proposed project. Since transit trips also contain a walking component, the pedestrian network considers the major routes from subway stations. Figure 6-2 shows the resultant study area which includes two signalized intersections and two unsignalized intersections closest to the project site, as listed below:

#### *SIGNALIZED INTERSECTIONS*

- Vernon Boulevard and 46th Avenue, and
- Vernon Boulevard and 46th Road.

#### *UNSIGNALIZED INTERSECTIONS*

- 5th Street and 46th Avenue, and
- 5th Street and 46th Road.

### ANALYSIS RESULTS

#### *STREET-LEVEL PEDESTRIAN OPERATIONS*

As described above, the study area sidewalks, corner reservoirs, and crosswalks were assessed for the morning and afternoon peak periods. Existing peak 15-minute volumes were developed for the four intersections identified above based on field surveys conducted over two mid-weekdays in June, 2010 during the hours of 7:00 to 9:00 AM and 2:00 to 4:00 PM.

As shown in Tables 6-12 through 6-14, all analyzed pedestrian elements are currently operating at acceptable levels (minimum 19.5 SFP for crosswalks and corners, maximum 8.5 PMF platoon flows for sidewalks) during the AM and PM peak 15-minute periods.

**Table 6-12**  
**2010 Existing Conditions: Pedestrian LOS Analysis for Sidewalks**

Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
				PMF	LOS
<b>AM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	11	0.06	A
5th Street between 46th Avenue and 46th Road	West	9.8	4	0.03	A
5th Street between 46th Road and 47th Avenue	West	9.8	15	0.10	A
46th Road between 5th Street and Vernon Blvd	North	11.3	7	0.04	A
<b>PM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	11	0.06	A
5th Street between 46th Avenue and 46th Road	West	9.8	5	0.03	A
5th Street between 46th Road and 47th Avenue	West	9.8	11	0.07	A
46th Road between 5th Street and Vernon Blvd	North	11.3	8	0.05	A

Note: PMF = pedestrians per minute per foot

**Table 6-13**  
**2010 Existing Conditions: Pedestrian LOS Analysis for Corner Reservoirs**

Locations	Corner	AM Peak Period		PM Peak Period	
		SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	Northwest	997.9	A	1020.3	A

Note: SFP = square feet per pedestrian

**Table 6-14**  
**2010 Existing Conditions: Pedestrian Crosswalk LOS Analysis**

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles			
				AM		PM	
				SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	North	44.8	13.8	1373.1	A	1373.1	A
	West	31.3	12.5	459.5	A	457.5	A
Vernon Blvd and 46th Avenue	South	45.3	12.3	1422.3	A	1068.5	A

Note: SFP = square feet per pedestrian

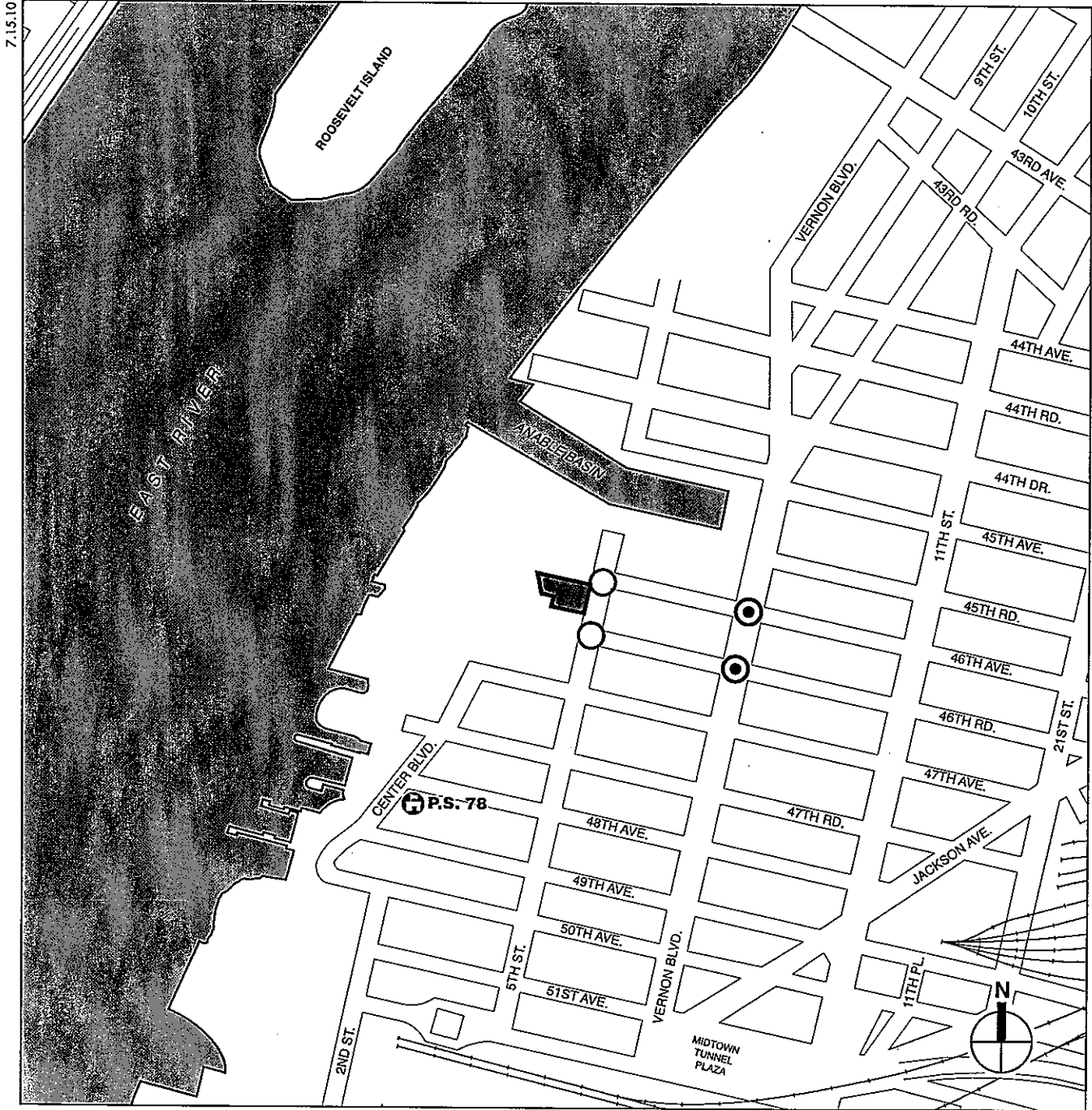
**E. THE FUTURE WITHOUT THE PROPOSED PROJECT**

Transit and pedestrian conditions in the future without the proposed project were assessed to establish a baseline No Build condition against which to evaluate the potential project impacts. The No Build network incorporates general background growth, effects of background development projects and includes the trips generated by No Build developments within a ¼-mile of the project site expected to be completed by 2013.

In the future, both with and without the proposed project, the street and sidewalk network surrounding the project site will have been finished. Figure 1-5 in Chapter 1, "Project Description" shows the completed street network surrounding the site where Center Boulevard has been extended north to North Basin Road and 46th and 47th Avenues have been extended west to the East River Road.

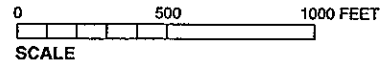
**TRANSIT AND PEDESTRIAN VOLUME PROJECTIONS**

Future No Build peak hour transit and pedestrian levels were estimated by applying a background growth rate of 0.25 percent per year (as recommended by the *CEQR Technical*



7.15.10

- Project Site
- Signalized Pedestrian Analysis Location
- Unsignalized Pedestrian Analysis Location



Manual), for a total compounded growth of approximately 0.75 percent by the year 2013 (the proposed project's anticipated build year).

The future without the proposed project condition includes pedestrian trips generated by the 100,000 sf community facility No Action scenario as well as from planned projects in the vicinity of the development site that would use the same pedestrian facilities that would be used by the future school students and staff. Trips generated by these No Build projects were assigned to pedestrian analysis locations described earlier. In addition, in the future without the proposed project, an annex is planned for P.S. 78 that would increase the existing school capacity by approximately 61 seats to a total of 326 seats.

**ANALYSIS RESULTS**

*STREET-LEVEL PEDESTRIAN OPERATIONS*

The No Build peak period volume projections were applied to the pedestrian analysis networks described previously. As shown in Tables 6-15 through 6-17 all sidewalks, crosswalks, and corner reservoir analysis locations would continue to operate at acceptable levels (minimum 19.5 SFP for crosswalks and corners, maximum 8.5 PMF platoon flows for sidewalks) during the AM and PM peak 15-minute periods.

**Table 6-15**  
**2013 No Build Conditions: Pedestrian LOS Analysis for Sidewalks**

Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
				PMF	LOS
<b>AM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	38	0.2	A
46th Avenue between 5th Street and Center Blvd	South	12.4	76	0.4	A
5th Street between 46th Avenue and 46th Road	West	9.8	122	0.8	B
5th Street between 46th Road and 47th Avenue	West	9.8	68	0.5	A
46th Road between 5th Street and Vernon Blvd	North	11.3	22	0.1	A
<b>PM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	29	0.2	A
46th Avenue between 5th Street and Center Blvd	South	12.4	59	0.3	A
5th Street between 46th Avenue and 46th Road	West	9.8	126	0.9	B
5th Street between 46th Road and 47th Avenue	West	9.8	95	0.6	B
46th Road between 5th Street and Vernon Blvd	North	11.3	18	0.1	A
<b>Note:</b> PMF = pedestrians per minute per foot					

**Table 6-16**  
**2013 No Build Conditions: Pedestrian LOS Analysis for Corner Reservoirs**

Locations	Corner	AM Peak Period		PM Peak Period	
		SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	Northwest	610.2	A	593.5	A
<b>Note:</b> SFP = square feet per pedestrian					



**Table 6-17**  
**2013 No Build Conditions: Pedestrian Crosswalk LOS Analysis**

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles			
				AM		PM	
				SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	North	44.8	13.8	434.5	A	639.5	A
	West	31.3	12.5	333.2	A	269.8	A
Vernon Blvd and 46th Avenue	South	45.3	12.3	851.5	A	711.5	A

Note: SFP = square feet per pedestrian

## F. THE FUTURE WITH THE PROPOSED PROJECT

The future with the proposed project would result in increased transit and pedestrian trips as compared to the No Build condition. This section describes the projected travel patterns of the site-related trips and assesses their potential impacts on nearby pedestrian facilities. (Detailed travel demand estimates are provided earlier in the chapter.)

### TRIP DISTRIBUTION AND ASSIGNMENT

Primary pedestrian access to the proposed school would be provided on 5th Street between 46th Avenue and 46th Road. The following assumptions were used to assign auto, transit, and walk-only pedestrian trips to the school campus.

- Auto drop-off/pick-up trips, school bus trips, and taxi trips were assumed to utilize the sidewalk adjacent to the entrance of the project site on 5th Street as they enter or exit the school campus. As described in detail above, 39 project-generated auto trips, 36 school bus trips, and 1 taxi trip were estimated during both the AM and PM peak hours.
- Staff-related auto trips were assumed to utilize parking facilities located in the vicinity of the project site. These trips were then assigned to the pedestrian facilities leading to the site entrance on 5th Street. In total, 28 staff-related auto drive-in/out trips were estimated for both the AM and PM peak hours.
- The assignment of the subway trips is based on the available routes within the study area and transfer opportunities within the New York City subway system. In total, 44 project-generated subway trips were projected during both the AM and PM peak hours and were assigned to two stations near the project site.
- As with the subway person trips, bus person trips would be distributed to the three bus routes available in the study area. In total, 3 project-generated bus trips were estimated during both the AM and PM peak hours. The assignment of bus person trips began with designating specific bus stops at which users would access the nearby bus routes, then tracing these trips through logical walking routes to the project site.
- While all trips would require a walking component that connects the origins and destinations with their respective mode of transportation, a portion of the trips are made only by walking. These trips were estimated at 443 total walk only project-generated trips during both the AM and PM peak hours. The assignment of these trips accounted for the area's pedestrian network.

## ANALYSIS RESULTS

## STREET-LEVEL PEDESTRIAN OPERATIONS

Pedestrian trips associated with the proposed project would result in increased volumes at the analysis locations. The analysis conducted for the Build conditions accounts for the distribution of project-generated trips overlaid onto the No Build network's sidewalks, corner reservoirs, and crosswalks. Tables 6-18 to 6-20 present the future Build operating conditions for the analysis elements. All sidewalks, crosswalks, and corner reservoir analysis locations would continue to operate at acceptable levels (minimum 19.5 SFP for crosswalks and corners, maximum 8.5 PMF platoon flows for sidewalks) during the AM and PM peak 15-minute periods. The proposed project would not result in any significant adverse pedestrian impacts during the AM and PM peak periods at any analysis location.

Table 6-18  
2013 Build Conditions: Pedestrian LOS Analysis for Sidewalks

Location	Sidewalk	Effective Width (ft)	15 Minute Two-Way Volume	Platoon Flow	
				PMF	LOS
<b>AM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	67	0.4	A
46th Avenue between 5th Street and Center Blvd	South	12.4	213	1.1	B
5th Street between 46th Avenue and 46th Road	West	9.8	529	3.6	C
5th Street between 46th Road and 47th Avenue	West	9.8	203	1.4	B
46th Road between 5th Street and Vernon Blvd	North	11.3	59	0.3	A
<b>PM Peak Period</b>					
46th Avenue between 5th Street and Vernon Blvd	South	12.0	58	0.3	A
46th Avenue between 5th Street and Center Blvd	South	12.4	197	1.1	B
5th Street between 46th Avenue and 46th Road	West	9.8	534	3.6	C
5th Street between 46th Road and 47th Avenue	West	9.8	231	1.6	B
46th Road between 5th Street and Vernon Blvd	North	11.3	55	0.3	A

Note: PMF = pedestrians per minute per foot

Table 6-19  
2013 Build Conditions: Pedestrian LOS Analysis for Corner Reservoirs

Locations	Corner	AM Peak Period		PM Peak Period	
		SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	Northwest	402.2	A	392.9	A

Note: SFP = square feet per pedestrian

Table 6-20  
2013 Build Conditions: Pedestrian Crosswalk LOS Analysis

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles			
				AM		PM	
				SFP	LOS	SFP	LOS
Vernon Blvd and 46th Road	North	44.8	13.8	244.6	A	297.7	A
	West	31.3	12.5	232.3	A	198.1	A
Vernon Blvd and 46th Avenue	South	45.3	12.3	338.5	A	315.9	A

Note: SFP = square feet per pedestrian

## G. PEDESTRIAN SAFETY

Accident data for the study area intersections were obtained from the New York State Department of Transportation (NYSDOT) for the time period between April 1, 2007 and March 31, 2010. The data obtained quantify the total number of reportable accidents (involving fatality, injury, or more than \$1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related accidents at each location. According to the *2010 CEQR Technical Manual*, a high pedestrian accident location is one where there were five or more pedestrian/bicyclist-related accidents or 48 or more reportable and non-reportable accidents in any consecutive 12 months of the most recent three-year period for which data are available.

During the time period between April 1, 2007 and March 31, 2010, a total of 36 reportable and non-reportable accidents, zero fatalities, 21 injuries, and 2 pedestrian/bicyclist-related accidents occurred at the study area intersections. A rolling total of accident data identifies no study area intersections as high pedestrian accident locations in this period. **Table 6-21** depicts total accident characteristics by intersection during the study period, as well as, a breakdown of pedestrian and bicycle accidents by year and location.

**Table 6-21**  
**Accident Data**

Intersection		Study Period						Accidents by Year									
North-South Roadway	East-West Roadway	All Accidents by Year				Total Fatalities	Total Injuries	Pedestrian				Bicycle					
		2007	2008	2009	2010			2007	2008	2009	2010	2007	2008	2009	2010		
5th Street	46th Avenue	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	46th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	47th Avenue	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0
5th Street	47th Road	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5th Street	48th Avenue	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	45th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	46th Avenue	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0
Vernon Blvd	46th Road	0	1	2	0	0	2	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	47th Avenue	2	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	47th Road	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
Vernon Blvd	48th Avenue	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
11th Street	45th Road	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
11th Street	46th Avenue	2	0	2	0	0	4	0	0	0	0	0	0	0	0	0	0
11th Street	46th Road	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11th Street	47th Avenue	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0
11th Street	47th Road	0	2	0	1	0	3	0	0	0	1	0	0	0	0	0	0

Source: NYSDOT — April 1, 2007 through March 31, 2010 accident data.

\*

## A. INTRODUCTION

This chapter identifies and analyzes the potential for significant air quality impacts associated with the proposed school. Air quality impacts can be either direct or indirect. Direct impacts stem from emissions generated by stationary sources at a proposed development site, such as emissions from fuel burned on site for heating, ventilation, and air conditioning (HVAC) systems. Indirect impacts are caused by emissions from nearby existing stationary sources (impacts on the proposed project) or by emissions from on-road vehicle trips generated by a project or other changes to future traffic conditions due to the project.

The proposed school is not expected to significantly alter traffic conditions. The maximum hourly incremental traffic from the proposed actions would not exceed the *New York City Environmental Quality Review (CEQR) Technical Manual* air quality screening threshold of 160 peak hour trips at nearby intersections in the study area, nor would it exceed the particulate matter emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a quantified assessment of on-street mobile source emissions is not warranted.

The proposed school would include natural gas-burning heat and hot water systems. Therefore, a stationary source analysis was conducted to evaluate potential future pollutant concentrations with the proposed heat and hot water systems.

This chapter also describes the expected use of potentially hazardous materials and the procedures and systems that would be employed in the proposed school to ensure the safety of staff, students and the surrounding community in the event of a chemical spill in one of the proposed laboratories. In addition, potential effects of stationary source emissions from existing nearby industrial facilities on the proposed school are assessed.

## B. POLLUTANTS FOR ANALYSIS

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of carbon monoxide (CO) are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide, NO and nitrogen dioxide, NO<sub>2</sub>, collectively referred to as NO<sub>x</sub>) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO<sub>x</sub>, sulfur oxides (SO<sub>x</sub>), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO<sub>2</sub>) are associated mainly with stationary sources, and sources utilizing non-road diesel such as diesel trains, marine engines, and non-road vehicles (e.g., construction engines). On-road diesel vehicles currently contribute very little to SO<sub>2</sub> emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is

extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include  $\text{NO}_x$  and VOCs.

### **CARBON MONOXIDE**

CO, a colorless and odorless gas, is produced in the urban environment primarily by the incomplete combustion of gasoline and other fossil fuels. In urban areas, approximately 80 to 90 percent of CO emissions are from motor vehicles. Since CO is a reactive gas which does not persist in the atmosphere, CO concentrations can vary greatly over relatively short distances; elevated concentrations are usually limited to locations near crowded intersections, heavily traveled and congested roadways, parking lots, and garages. Consequently, CO concentrations must be predicted on a local, or microscale, basis.

The proposed school is not expected to significantly alter traffic conditions. Since the proposed school would result in fewer new peak hour vehicle trips than the *CEQR Technical Manual* screening threshold of 160 trips at nearby intersections in the study area, a quantified assessment of on-street CO emissions is not warranted.

### **NITROGEN OXIDES, VOCS, AND OZONE**

$\text{NO}_x$  are of principal concern because of their role, together with VOCs, as precursors in the formation of ozone. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow, and occur as the pollutants are advected downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of  $\text{NO}_x$  and VOC emissions from all sources are therefore generally examined on a regional basis. The contribution of any action or project to regional emissions of these pollutants would include any added stationary or mobile source emissions; the change in regional mobile source emissions of these pollutants would be related to the total vehicle miles traveled added or subtracted on various roadway types throughout the New York metropolitan area, which is designated as a moderate non-attainment area for ozone by the U.S. Environmental Protection Agency (EPA).

The proposed school would not have a significant effect on the overall volume of vehicular travel in the metropolitan area; therefore, no measurable impact on regional  $\text{NO}_x$  emissions or on ozone levels is predicted. An analysis of project-related emissions of these pollutants from mobile sources was therefore not warranted.

In addition to being a precursor to the formation of ozone,  $\text{NO}_2$  (one component of  $\text{NO}_x$ ) is also a regulated pollutant. Since  $\text{NO}_2$  is mostly formed from the transformation of NO in the atmosphere, it is has mostly been of concern further downwind from large stationary point sources, and is not a local concern from mobile sources. ( $\text{NO}_x$  emissions from fuel combustion consist of approximately 90 percent NO and 10 percent  $\text{NO}_2$  at the source.) However, with the promulgation of the 2010 1-hour average standard for  $\text{NO}_2$ , local sources including vehicular emissions may become of greater concern for this pollutant. Potential impacts on local  $\text{NO}_2$  concentrations from the fuel combustion for the proposed school's heat and hot water boiler systems were evaluated.

### **LEAD**

Airborne lead emissions are currently associated mainly with industrial sources. At the beginning of 1996, the Clean Air Act (CAA) banned the sale of the small amount of leaded fuel that was still available in some parts of the country for use in on-road vehicles, concluding the

25-year effort to phase out lead in gasoline. Even at locations in the New York City area where traffic volumes are very high, atmospheric lead concentrations are far below the 3-month average national standard of 0.15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

No significant sources of lead are associated with the proposed school and, therefore, analysis was not warranted.

#### **RESPIRABLE PARTICULATE MATTER— $\text{PM}_{10}$ AND $\text{PM}_{2.5}$**

PM is a broad class of air pollutants that includes discrete particles of a wide range of sizes and chemical compositions, as either liquid droplets (aerosols) or solids suspended in the atmosphere. The constituents of PM are both numerous and varied, and they are emitted from a wide variety of sources (both natural and anthropogenic). Natural sources include the condensed and reacted forms of naturally occurring VOC; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and material from live and decaying plant and animal life; particles eroded from beaches, soil, and rock; and particles emitted from volcanic and geothermal eruptions and from forest fires. Naturally occurring PM is generally greater than 2.5 micrometers in diameter. Major anthropogenic sources include the combustion of fossil fuels (e.g., vehicular exhaust, power generation, boilers, engines, and home heating), chemical and manufacturing processes, all types of construction, agricultural activities, as well as wood-burning stoves and fireplaces. PM also acts as a substrate for the adsorption of other pollutants, often toxic and some likely carcinogenic compounds.

As described below, PM is regulated in two size categories: particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ( $\text{PM}_{2.5}$ ), and particles with an aerodynamic diameter of less than or equal to 10 micrometers ( $\text{PM}_{10}$ , which includes  $\text{PM}_{2.5}$ ).  $\text{PM}_{2.5}$  has the ability to reach the lower regions of the respiratory tract, delivering with it other compounds that adsorb to the surfaces of the particles, and is also extremely persistent in the atmosphere.  $\text{PM}_{2.5}$  is mainly derived from combustion material that has volatilized and then condensed to form primary PM (often soon after the release from an exhaust pipe or stack) or from precursor gases reacting in the atmosphere to form secondary PM.

Diesel-powered vehicles, especially heavy duty trucks and buses, are a significant source of respirable PM, most of which is  $\text{PM}_{2.5}$ ; PM concentrations may, consequently, be locally elevated near roadways with high volumes of heavy diesel powered vehicles. The proposed school would not result in any significant increases in truck or school bus traffic near the project site or in the region, and therefore, an analysis of potential impacts from PM was not warranted.

#### **SULFUR DIOXIDE**

$\text{SO}_2$  emissions are primarily associated with the combustion of sulfur-containing fuels (oil and coal). Monitored  $\text{SO}_2$  concentrations in New York City are lower than the national standards. Due to the federal restrictions on the sulfur content in diesel fuel for on-road vehicles, no significant quantities are emitted from vehicular sources. Vehicular sources of  $\text{SO}_2$  are not significant and therefore, an analysis of  $\text{SO}_2$  from mobile sources was not warranted.

#### **NONCRITERIA POLLUTANTS**

In addition to the criteria pollutants discussed above, noncriteria pollutants are of concern. Noncriteria pollutants are emitted by a wide range of man-made and naturally occurring sources. Emissions of air toxics from industries are regulated by EPA. Federal ambient air quality standards

do not exist for noncriteria pollutants; however, the New York State Department of Environmental Conservation (NYSDEC) has issued standards for certain noncriteria compounds, including beryllium, gaseous fluorides, and hydrogen sulfide. NYSDEC has also developed guideline concentrations for numerous noncriteria pollutants. The NYSDEC guidance document DAR-1 (September 2007) contains a compilation of annual and short term (1-hour) guideline concentrations for these compounds. The NYSDEC guidance thresholds represent ambient levels that are considered safe for public exposure.

The potential impact from nearby industrial sources of noncriteria pollutant concentrations at the proposed school was assessed.

## **C. AIR QUALITY REGULATIONS, STANDARDS, AND BENCHMARKS**

### **NATIONAL AND STATE AIR QUALITY STANDARDS**

As required by the CAA, primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: CO, NO<sub>2</sub>, ozone, respirable PM (both PM<sub>2.5</sub> and PM<sub>10</sub>), SO<sub>2</sub>, and lead. The primary standards represent levels that are requisite to protect the public health, allowing an adequate margin of safety. The secondary standards are intended to protect the nation's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary and secondary standards are the same for NO<sub>2</sub> (annual), ozone, lead, and PM, and there is no secondary standard for CO and the 1-hour NO<sub>2</sub> standard. The NAAQS are presented in Table 7-1. The NAAQS for CO, annual NO<sub>2</sub>, and SO<sub>2</sub> have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only. New York State also has standards for total suspended particulate matter (TSP), settleable particles, non-methane hydrocarbons (NMHC), and ozone which correspond to federal standards that have since been revoked or replaced, and for beryllium, fluoride, and hydrogen sulfide (H<sub>2</sub>S).

EPA has revised the NAAQS for PM, effective December 18, 2006. The revision included lowering the level of the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup> and retaining the level of the annual standard at 15 µg/m<sup>3</sup>. The PM<sub>10</sub> 24-hour average standard was retained and the annual average PM<sub>10</sub> standard was revoked.

EPA has also revised the 8-hour ozone standard, lowering it from 0.08 to 0.075 parts per million (ppm), effective in May 2008. On January 6, 2010, EPA proposed a change in the 2008 ozone NAAQS, lowering the primary NAAQS from the current 0.075 ppm level to within the range of 0.060 to 0.070 ppm. EPA is also proposing a secondary ozone standard, measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation. EPA intends to complete this reconsideration of the 2008 ozone NAAQS by August 31, 2010.

EPA lowered the primary and secondary standards for lead to 0.15 µg/m<sup>3</sup>. Effective January 12, 2009, EPA revised the averaging time to a rolling 3-month average and the form of the standard to not-to-exceed across a 3-year span. The current lead NAAQS will remain in place for one year following the effective date of attainment designations for any new or revised NAAQS before being revoked, except in current non-attainment areas, where the existing NAAQS will not be revoked until the affected area submits, and EPA approves, an attainment demonstration for the revised lead NAAQS.

**Table 7-1**  
**National Ambient Air Quality Standards (NAAQS)**

Pollutant	Primary		Secondary	
	ppm	$\mu\text{g}/\text{m}^3$	ppm	$\mu\text{g}/\text{m}^3$
<b>Carbon Monoxide (CO)</b>				
8-Hour Average <sup>(1)</sup>	9	10,000	None	
1-Hour Average <sup>(1)</sup>	35	40,000		
<b>Lead</b>				
Rolling 3-Month Average <sup>(2)</sup>	NA	0.15	NA	0.15
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
1-Hour Average <sup>(3)</sup>	0.100	188	None	
Annual Average	0.053	100	0.053	100
<b>Ozone (O<sub>3</sub>)</b>				
8-Hour Average <sup>(4,5)</sup>	0.075	150	0.075	150
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>				
24-Hour Average <sup>(1)</sup>	NA	150	NA	150
<b>Fine Respirable Particulate Matter (PM<sub>2.5</sub>)</b>				
Annual Mean	NA	15	NA	15
24-Hour Average <sup>(6,7)</sup>	NA	35	NA	35
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>				
Annual Arithmetic Mean <sup>(8)</sup>	0.03	80	NA	NA
Maximum 24-Hour Average <sup>(1,8)</sup>	0.14	365	NA	NA
1-Hour Average <sup>(9)</sup>	0.075	197	NA	NA
Maximum 3-Hour Average <sup>(1)</sup>	NA	NA	0.50	1,300
<p><b>Notes:</b>  ppm – parts per million  <math>\mu\text{g}/\text{m}^3</math> – micrograms per cubic meter  NA – not applicable  All annual periods refer to calendar year.  PM concentrations (including lead) are in <math>\mu\text{g}/\text{m}^3</math> since ppm is a measure for gas concentrations. Concentrations of all gaseous pollutants are defined in ppm and approximately equivalent concentrations in <math>\mu\text{g}/\text{m}^3</math> are presented.</p> <p><sup>(1)</sup> Not to be exceeded more than once a year.  <sup>(2)</sup> EPA has lowered the NAAQS down from 1.5 <math>\mu\text{g}/\text{m}^3</math>, effective January 12, 2009.  <sup>(3)</sup> 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective April 12, 2010.  <sup>(4)</sup> 3-year average of the annual fourth highest daily maximum 8-hr average concentration.  <sup>(5)</sup> EPA has proposed lowering this standard further to within the range 0.060-0.070 ppm.  <sup>(6)</sup> Not to be exceeded by the annual 98th percentile when averaged over 3 years.  <sup>(7)</sup> EPA has lowered the NAAQS down from 65 <math>\mu\text{g}/\text{m}^3</math>, effective December 18, 2006.  <sup>(8)</sup> EPA revoked the 24-hour and annual primary standards, replacing them with a 1-hour average standard. Effective August 23, 2010.  <sup>(9)</sup> 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective August 23, 2010.</p> <p>Source: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.</p>				



EPA established a new 1-hour average NO<sub>2</sub> standard of 0.100 ppm, effective April 12, 2010, in addition to the annual standard. The statistical form is the 3-year average of the 98th percentile of daily maximum 1-hour average concentration in a year.

EPA established a new 1-hour average SO<sub>2</sub> standard of 0.075 ppm, replacing the current 24-hour and annual primary standards, effective August 23, 2010. The statistical form is the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour concentrations (the 4th highest daily maximum corresponds approximately to the 99th percentile for a year.)

### **NAAQS ATTAINMENT STATUS AND STATE IMPLEMENTATION PLANS**

The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as non-attainment by EPA, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA.

In 2002, EPA re-designated New York City as in attainment for CO. The CAA requires that a maintenance plan ensure continued compliance with the CO NAAQS for former non-attainment areas. New York City is also committed to implementing site-specific control measures throughout the city to reduce CO levels, should unanticipated localized growth result in elevated CO levels during the maintenance period.

Manhattan has been designated as a moderate NAA for PM<sub>10</sub>. On December 17, 2004, EPA took final action designating the five New York City counties, Nassau, Suffolk, Rockland, Westchester, and Orange counties as a PM<sub>2.5</sub> non-attainment area under the CAA due to exceedance of the annual average standard. New York State has submitted a final SIP to EPA, dated October 2009, designed to meet the annual average standard by April 5, 2010. Based on recent monitoring data (2006-2009), annual average concentrations of PM<sub>2.5</sub> in New York City no longer exceed the annual standard.

As described above, EPA has revised the 24-hour average PM<sub>2.5</sub> standard. In October 2009 EPA finalized the designation of the New York City Metropolitan Area as nonattainment with the 2006 24-hour PM<sub>2.5</sub> NAAQS, effective in November 2009. The nonattainment area includes the same 10-county area EPA designated as nonattainment with the 1997 annual PM<sub>2.5</sub> NAAQS. By November 2012 New York will be required to submit a SIP demonstrating attainment with the 2006 24-hour standard by 2014 (EPA may grant attainment date extensions for up to five additional years).

Nassau, Rockland, Suffolk, Westchester, Lower Orange County Metropolitan Area (LOCMA), and the five New York City counties had been designated as a severe non-attainment area for ozone (1-hour average standard). In November 1998, New York State submitted its *Phase II Alternative Attainment Demonstration for Ozone*, which was finalized and approved by EPA effective March 6, 2002, addressing attainment of the 1-hour ozone NAAQS by 2007. These SIP revisions included additional emission reductions that EPA requested to demonstrate attainment of the standard, and an update of the SIP estimates using the latest versions of the mobile source emissions model, MOBILE6.2, and the nonroad emissions model, NONROAD—which have been updated to reflect current knowledge of engine emissions and the latest mobile and nonroad engine emissions regulations.

On April 15, 2004, EPA designated these same counties as moderate non-attainment for the 8-hour average ozone standard which became effective as of June 15, 2004 (LOCMA was moved

to the Poughkeepsie moderate non-attainment area for 8-hour ozone). EPA revoked the 1-hour standard on June 15, 2005; however, the specific control measures for the 1-hour standard included in the SIP are required to stay in place until the 8-hour standard is attained. The discretionary emissions reductions in the SIP would also remain but could be revised or dropped based on modeling. On February 8, 2008, NYSDEC submitted final revisions to a new SIP for the ozone to EPA. NYSDEC has determined that achieving attainment for ozone before 2012 is unlikely, and has therefore made a request for a voluntary reclassification of the New York nonattainment area as “serious”.

In March 2008 EPA strengthened the 8-hour ozone standards. SIPs will be due three years after the final designations are made. On March 12, 2009, NYSDEC recommended that the counties of Suffolk, Nassau, Bronx, Kings, New York, Queens, Richmond, Rockland, and Westchester be designated as a non-attainment area for the 2008 ozone NAAQS (the NYMA MSA nonattainment area). NYSDEC also recommended that the Dutchess, Orange, Ulster, and Putnam counties be designated as a nonattainment area for the 2008 ozone NAAQS (the Poughkeepsie, NY nonattainment area). EPA has proposed to determine that the Poughkeepsie nonattainment area (Dutchess, Orange, Ulster, and Putnam counties) has attained the 2008 one-hour and eight-hour NAAQS for ozone. It is unclear at this time what the attainment status of these areas will be under the newly proposed standard due to the range of concentrations proposed.

New York City is currently in attainment of the annual-average NO<sub>2</sub> standard. EPA has promulgated a new 1-hour standard, but it is unclear at this time what the City’s attainment status will be due to the need for additional near road monitoring required for the new standard. The existing monitoring data indicate background concentrations below the standard. It is likely that New York City will be designated as “unclassifiable” at first (January 2012), and then classified once three years of monitoring data are available (2016 or 2017).

EPA has established a new 1-hour SO<sub>2</sub> standard, replacing the 24-hour and annual standards, effective August 23, 2010. Based on the available monitoring data, all New York State counties currently meet the 1-hour standard. Additional monitoring will be required. EPA plans to make final attainment designations in June 2012, based on 2008 to 2010 monitoring data and refined modeling. SIPs for nonattainment areas will be due by June 2014.

#### **DETERMINING THE SIGNIFICANCE OF AIR QUALITY IMPACTS**

The State Environmental Quality Review Act (SEQRA) regulations and the *City Environmental Quality Review (CEQR) Technical Manual* state that the significance of a likely consequence (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.<sup>1</sup> In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS (see Table 7-1) would be deemed to have a potential significant adverse impact. In addition, in order to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, threshold levels have been defined for

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<sup>1</sup> *CEQR Technical Manual*, Chapter 17, section 400, May 2010; and State Environmental Quality Review Act § 617.7

certain pollutants; any action predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

## **D. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS**

### **HVAC SOURCE ANALYSIS**

An analysis was conducted to evaluate potential impacts from the proposed project's HVAC systems—a boiler and hot water heater that would run on natural gas. In the future, independently from the proposed school, a residential tower would be built adjacent to the proposed site to the west. Since the distance between the residential tower and the proposed school HVAC exhaust would be less than 10 meters (approximately 33 feet), the minimum distance for which the *CEQR Technical Manual* HVAC screening analysis can be used, a refined dispersion modeling analysis was performed.

### *DISPERSION MODELING*

The potential for impacts from the HVAC systems was evaluated using the EPA/AMS AERMOD dispersion model<sup>1</sup>. The AERMOD model was designed as a replacement to the ISC3 model by EPA. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. Hourly meteorological data collected at the LaGuardia Airport station during the years 2003 through 2007 were used in this analysis. The analyses of potential impacts from exhaust stacks were conducted assuming stack tip downwash, urban dispersion and surface roughness length, without building downwash, and with elimination of calms.

### *Receptor Placement*

Discrete receptors (i.e., locations at which concentrations are calculated) were chosen on the proposed adjacent residential tower and other nearby buildings for the HVAC system modeling analysis. The model receptor network consisted of locations at operable window, intake vents, and otherwise accessible locations. Rows of receptors were modeled at spaced intervals on the buildings at multiple elevations. Based on the most recent plans for the adjacent residential tower, the windows along the easternmost portion of the southern facade of the tower, below the 16th floor level, would be inoperable. Therefore, receptors were not modeled along that building facade.

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<sup>1</sup> EPA, *AERMOD: Description Of Model Formulation*, 454/R-03-004, September 2004; and EPA, *User's Guide for the AMS/EPA Regulatory Model AERMOD*, 454/B-03-001, September 2004 and Addendum December 2006.

*Emission Estimates and Stack Parameters*

Natural gas consumption was conservatively based on the capacity of the HVAC units and expected hours of operation. Emission factors from the natural gas combustion section of EPA's AP-42 were used to calculate the emission rates shown in Table 7-2. The NO<sub>x</sub> emission rate reflects the use of low-NO<sub>x</sub> burners and other proposed HVAC system features designed to reduce emissions. The PM<sub>10</sub> emission rates were used as a conservative estimate of PM<sub>2.5</sub> emission rates (almost all PM emitted from natural gas is smaller than 2.5 micrometers). The stack parameters were based on manufacturer's data for the selected boiler and hot water heater units.

**Table 7-2**  
**Stack Parameters and Emission Rates for Proposed HVAC Units**

Parameter	Boiler	Hot water heater
Stack Height	93 feet*	93 feet*
Stack Diameter	0.66 feet	0.66 feet
Stack Exit Velocity	0.2 feet/second	0.2 feet/second
Stack Exit Temperature	113 °F	113 °F
SO <sub>2</sub> Emission Rate	4.73 x 10 <sup>-5</sup> grams/second	3.71 x 10 <sup>-5</sup> grams/second
NO <sub>x</sub> Emission Rate	3.94 x 10 <sup>-3</sup> grams/second	3.09 x 10 <sup>-3</sup> grams/second
CO Emission Rate	6.62 x 10 <sup>-3</sup> grams/second	5.19 x 10 <sup>-3</sup> grams/second
PM Emission Rate**	5.99 x 10 <sup>-4</sup> grams/second	4.69 x 10 <sup>-4</sup> grams/second
<b>Notes:</b>		
* Assumes a 3-foot stack above the building roof, based on the proposed school plans.		
** The PM <sub>10</sub> emission rates were used as a conservative estimate of PM <sub>2.5</sub> emission rates.		

*Background Concentrations*

To estimate the maximum expected pollutant concentration at a given receptor, the predicted impacts from proposed sources must be added to a background value that accounts for existing pollutant concentrations from other sources that are not directly accounted for in the model.

Concentrations measured at the nearest NYSDEC background monitoring station were added to the predicted contributions from the proposed sources (see Table 7-3) to determine the maximum predicted total pollutant concentrations; it was conservatively assumed that the highest monitored concentrations would occur at the same time as the highest predicted increments from modeled sources. The most recent five years of reported data from the Queens College 2 air monitoring station (2005 to 2009) were used for developing the background level for each of the pollutants. The annual concentrations represent the five-year maximum annual average concentration. The short-term SO<sub>2</sub> concentrations represent the second highest five-year maximum. The PM<sub>10</sub> background represents the second highest 24-hour concentration over the 2008 to 2009 monitoring period. There are no reports prior to 2008 for the Queens College 2 monitoring station.

The development of the background values is consistent with New York City Department of Environmental Protection (NYCDEP) recommendations.

**Table 7-3**  
**Background Pollutant Concentrations**

Pollutant	Averaging Period	Concentration ( $\mu\text{g}/\text{m}^3$ )	NAAQS ( $\mu\text{g}/\text{m}^3$ )
NO <sub>2</sub>	Annual	47	100
SO <sub>2</sub>	3 hour	128	1,300
	24 hour	66	365
	Annual	16	80
CO	1 hour	3,550	40,000
	8 hour	2,290	10,000
PM <sub>10</sub>	24 hour	51	150
Sources: 2005-2009 Annual New York State Air Quality Report Ambient Air Monitoring System, NYSDEC for the Queens College 2 air monitoring station.			

## INDUSTRIAL SOURCE SCREENING ANALYSIS

To assess air quality impacts of emissions from nearby industrial sources on the proposed school, a screening analysis was performed using the methodology described in the *CEQR Technical Manual*. The first step in this analysis is to perform a field survey in order to identify any processing or manufacturing facilities located within 400 feet of the project site. Once identified, information regarding the release of air contaminants from these facilities is obtained from the NYCDEP Bureau of Environmental Compliance (BEC). A comprehensive search is also performed to identify NYSDEC Title V permits and permits listed in the EPA Envirofacts database.<sup>1</sup> In the next step, the potential ambient concentrations of each noncriteria pollutant are determined using a screening database in the *CEQR Technical Manual*, which provides factors for estimating maximum concentrations given emissions levels at the source. The screening database factors were derived from generic AERMOD dispersion modeling for the New York City area. Estimates of worst-case short-term (1 hour) and annual averages are predicted and then compared with the short-term (SGC) and annual (AGC) guideline concentrations. The guideline concentrations are established by the NYSDEC and represent levels that are considered safe for inhalation exposure by the public. A significant impact occurs if the predicted concentration exceeds an SGC or AGC.

## CHEMICAL SPILL ANALYSIS

### INTRODUCTION

Emissions from the proposed school's fume hood exhaust system, in the event of an accidental chemical spill in the school's science laboratory, were analyzed. Impacts were evaluated using information, procedures, and methodologies contained in the *CEQR Technical Manual*. Maximum concentrations were compared to the short-term exposure levels (STELs) or to the ceiling levels recommended by the U.S. Occupational Safety and Health Administration (OSHA) for the chemicals examined. It is assumed that the types and quantities of materials that are to be used in the proposed school facility are those typically used in school science laboratories at New York City Department of Education schools.

The following section details the expected usage of potentially hazardous materials, as well as the systems that would be employed at the proposed school to ensure the safety of the students,

<sup>1</sup> EPA, Envirofacts Data Warehouse, [http://oaspub.epa.gov/enviro/ef\\_home2.air](http://oaspub.epa.gov/enviro/ef_home2.air), 1/8/2008

staff, and the surrounding community in the event of an accidental chemical spill in the science laboratories. A quantitative analysis employing mathematical modeling was performed to determine potential impacts on nearby places of public access (dispersion modeling) and potential impacts due to recirculation into school's air intake systems (recirculation modeling).

#### *LABORATORY FUME HOOD EXHAUSTS*

All school laboratories in which hazardous chemicals would be used will be equipped with fume hoods. Fume hoods are enclosures that are maintained under negative pressure and continuously vented to the outside. Their function is to protect teachers, staff, and students from potentially harmful fumes. By providing a continuous exhaust from laboratory rooms, they also prevent any fumes released within the laboratory from escaping into other areas of the building, or through windows to the outside.

To the extent available, design information for the fume hood exhaust system for the proposed school laboratories was used. The fume hood exhaust stack would be 10 feet above the lower roof of the proposed school and would have a one foot diameter. An exhaust fan sufficient to maintain a minimum exit velocity of 1,500 feet per minute was assumed, as was a 1.11 square meter lab spill area.

#### *PLANNED OPERATIONS*

An inventory of chemicals that may be present in a typical laboratory in the proposed school was examined. From the chemical inventory, 10 chemicals were selected for further examination, based on their toxicity and potential for air quality impacts. Common buffers, salts, enzymes, nucleotides, peptides, and other bio-chemicals were not considered in the analysis since they are not typically categorized as air pollutants. Nonvolatile chemicals (having a vapor pressure of less than 10 mm Hg) were excluded as well. Table 7-4 shows the hazardous chemicals selected. The vapor pressure shown for each chemical is a measure of the material's volatility—its tendency to evaporate, or to form fumes or vapors, which is a critical parameter in determining potential impacts from chemical spills. The exposure standards (OSHA permissible exposure limit [PEL], National Institute for Occupational Safety and Health [NIOSH], immediately dangerous to life or health [IDLH], and OSHA and/or NIOSH short-term exposure level [STEL] and ceiling values) are measures of the material's toxicity—more toxic substances have lower exposure standards.

#### *ESTIMATES OF WORST-CASE EMISSION RATES*

The dispersion of hazardous chemicals from a spill within a proposed laboratory was analyzed to assess the potential for exposure of the general public and of students and staff within the school to hazardous fumes in the event of an accident. Evaporation rates for volatile hazardous chemicals expected to be used in the proposed laboratories were estimated using the model developed by the Shell Development Company<sup>1</sup>. The Shell model, which was developed specifically to assess air quality impacts from chemical spills, calculates evaporation rates based on physical properties of the material, temperature, and rate of air flow over the spill surface. Room temperature conditions (20° C) and an air-flow rate of 0.5 meters/second were assumed for calculating evaporation rates.

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<sup>1</sup> Fleischer, M.T., An Evaporation/Air Dispersion Model for Chemical Spills on Land, Shell Development Company, December 1980.

**Table 7-4  
Expected Hazardous Materials in the Proposed Laboratories**

Chemical [CAS #]	Vapor Pressure mm Hg	PEL PPM	STEL PPM	IDLH PPM	Ceiling PPM
Acetic Acid [64-19-7]	11	10	15	50	10
Acetone [67-64-1]	180	1,000	-	2,500	250
Cyclohexene [110-83-8]	67	300	-	2000	300
Ether [60-29-7]	440	400	-	1,900	-
Ethyl Alcohol [64-17-5]	44	1,000	-	3,300	1,000
Hydrofluoric Acid [7664-39-3]	25	3	-	30	6
Methyl Alcohol [67-56-1]	96	200	250	6,000	200
Nitric Acid [7697-37-2]	48	2	4	25	2
Petroleum distillates (Naphtha) [80002-05-9]	40	500	-	1,100	1,800
Toluene [108-88-3]	21	200	150	500	300

**Notes:**  
 PEL—Permissible Exposure Limit; Time Weighted Average (TWA) for up to a 10-hour workday during a 40-hour workweek.  
 STEL—Short-Term Exposure Limit is a 15-minute TWA exposure that should not be exceeded at any time during a workday.  
 IDLH—Immediately Dangerous to Life or Health.  
 Ceiling—Level set by NIOSH or OSHA not to be exceeded in any working exposure.  
 PPM = parts per million.  
 Where a hyphen (-) appears there is no recommended corresponding guideline value.

Based on relative STELs and the vapor pressures of the chemical listed in Table 7-4, the most potentially hazardous chemical, shown in Table 7-5, was selected for the “worst-case” spill analysis. Besides the relative toxicities, other factors such as molecular weight, container size, and frequency of use were also considered. Chemicals with high vapor pressures evaporate most rapidly. The chemical selected also has the lowest STEL. Since the chemical selected for the detailed analysis is most likely to have a relatively higher emission rate and the lowest exposure standards, if the analysis of this chemical resulted in no significant impacts, it would indicate that the other chemicals listed in Table 7-4 would also not present any potential for significant impacts.

**Table 7-5  
Chemicals Selected for Worst-Case Spill Analysis**

Chemical	Quantity (liters)	Evaporation Rate (gram/meter <sup>2</sup> /sec)	Emission Rate* (gram/sec)
Nitric Acid	0.17	0.26	0.29

**Note:** \* Average emission rate

The analysis conservatively assumes that a full container of the chemical would be spilled in a fume hood. For a spill area of approximately 1.1 square meters, the emission rates were determined using the evaporation rates. For modeling purposes, the emission rate shown in Table 7-5 is calculated for a 15-minute time period. The vapor from the spill would be drawn into the fume hood exhaust system and released into the atmosphere via the roof exhaust fans. The high volume of air drawn through this system provides a high degree of dilution for hazardous fumes before they are released above the roof.

### *RECIRCULATION MODELING*

The potential for recirculation of the fume hood emissions back into the building air intakes was assessed using the Wilson method<sup>1</sup>. This empirical procedure, which has been verified by both wind-tunnel and full-scale testing, is a refinement of the 1981 ASHRAE Handbook procedure, and takes into account such factors as plume momentum, stack-tip downwash, and cavity recirculation effects. The procedure determines the worst-case, absolute minimum dilution between exhaust vent and air intake. Three separate effects determine the eventual dilution: internal system dilution, obtained by combining exhaust streams (i.e., mixing in plenum chambers of multiple exhaust streams, introduction of fresh air supplied from roof intakes); wind dilution, dependent on the distance from vent to intake and the exit velocity; and dilution from the stack, caused by stack height and plume rise from vertical exhaust velocity. The critical wind speed for worst-case dilution is dependent on the exit velocity, the distance from vent to intake, and the cross-sectional area of the exhaust stack.

### *DISPERSION MODELING*

The study performed also considered the impact of an accidental spill on nearby receptors, such as open windows on nearby buildings. Maximum concentrations at elevated receptors downwind of the fume exhausts were estimated using the EPA INPUFF model, version 2.0<sup>2</sup>. This is the only EPA model designed to estimate impacts from short-term releases and was used to develop the EPA guidelines<sup>3</sup>. INPUFF assumes a Gaussian dispersion of a pollutant. "puff" (a brief release, as opposed to a continuous one) as it is transported downwind of a release point. Stable atmospheric conditions and a 1-meter/second wind speed were assumed. A series of elevated receptors were placed on the buildings to be analyzed. Since the emissions resulting from chemical spills are short-term releases, a worst-case assumption of the wind blowing the exhaust directly to the window or air intake receptors was made for modeling purposes.

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<sup>1</sup> D.J. Wilson, A Design Procedure for Estimating Air Intake Contamination from Nearby Exhaust Vents, ASHRAE TRAS 89, Part 2A, pp. 136-152, 1983.

<sup>2</sup> Peterson, W.B., A Multiple Source Gaussian Puff Dispersion Algorithm—Users Guide, EPA, 600/8-86-024, August 1986.

<sup>3</sup> EPA, Chemical Emergency Preparedness Program, Interim Guidance, November 1985.



### E. EXISTING CONDITIONS

Most recent relevant short-term and annual average concentrations of CO, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, lead, and ozone available from NYSDEC are shown in Table 7-6.

**Table 7-6**  
**Most Recent Monitored Ambient Air Quality Data**

Pollutants	Location	Units	Period	Concentration	Exceeds Federal Standard?	
					Primary	Secondary
CO	Queens College 2	ppm	8-hour	2.0	N	N
			1-hour	3.1	N	N
SO <sub>2</sub>	Queens College 2	µg/m <sup>3</sup>	Annual	9 <sup>(1)</sup>	N	-
			24-hour	50	N	-
			3-hour	89	-	N
Respirable particulates (PM <sub>10</sub> )	Queens College 2	µg/m <sup>3</sup>	24-hour	46	N	N
Respirable particulates (PM <sub>2.5</sub> )	Queens College 2	µg/m <sup>3</sup>	Annual	10.7	N	N
			24-hour	30	N	N
NO <sub>2</sub>	Queens College 2	µg/m <sup>3</sup>	Annual	39 <sup>(2)</sup>	N	N
Lead	J.H.S. 126, Brooklyn	µg/m <sup>3</sup>	3-month	0.02	N	-
Ozone (O <sub>3</sub> )	Queens College 2	ppm	1-hour	0.094 <sup>(2)</sup>	-	-
		ppm	8-hour	0.074	N	N

**Notes:**  
<sup>1</sup> EPA revoked the 24-hour and annual primary SO<sub>2</sub> standards, replacing them with a 1-hour average standard. Effective August 23, 2010.  
<sup>2</sup> EPA established a 1-hour NO<sub>2</sub> standard, effective April 12, 2010.  
<sup>3</sup> The 1-hour ozone NAAQS has been replaced with the 8-hour standard; however, the maximum monitored concentration is provided for informational purposes.

**Source:** NYSDEC, 2009 New York State Ambient Air Quality Data.

### F. PROBABLE IMPACTS OF THE PROPOSED PROJECT

#### HVAC SYSTEM

Potential impacts from the proposed school’s HVAC system on the existing buildings in the study area and the planned adjacent residential tower were evaluated. Maximum predicted concentrations for NO<sub>2</sub>, SO<sub>2</sub>, CO, and PM<sub>10</sub>, including background concentrations, are presented in Table 7-7, along with the relevant background concentrations from Table 7-3, the total predicted concentrations, and the applicable ambient standard concentration.

As shown in the table, the maximum concentrations from the proposed school’s HVAC systems are low, and when added to background concentrations, would comply with ambient air quality standards.

The air quality modeling analysis also determined the highest predicted increase in 24-hour and annual average PM<sub>2.5</sub> concentrations on existing buildings and operable windows or air intakes at the planned adjacent residential tower. As shown in Table 7-8, the maximum 24-hour incremental impacts at any discrete receptor location would be in compliance with NYCDEP’s interim guidance criteria. On an annual basis, the projected PM<sub>2.5</sub> impacts would comply with the applicable interim guidance criterion of 0.3 µg/m<sup>3</sup> for local impacts, and the NYCDEP interim guidance criterion of 0.1 µg/m<sup>3</sup> for neighborhood scale impacts.

**Table 7-7  
Maximum Predicted Pollutant Concentrations  
From the HVAC Systems ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Period	Maximum Predicted Increment	Maximum Background Concentration	Total Concentration	NAAQS
NO <sub>2</sub> <sup>1</sup>	Annual	0.85	47	48	100
SO <sub>2</sub> <sup>2</sup>	3-hour	0.5	128	129	1,300
	24-hour	0.2	66	66	365
	Annual	0.01	16	16	80
CO	1-hour	131	3,550	3,681	40,000
	8-hour	40	2,290	2,330	10,000
PM <sub>10</sub> <sup>3</sup>	24-hour <sup>2</sup>	1.8	51	53	150

**Notes:**  
<sup>1</sup>NO<sub>2</sub> concentration was conservatively assumed to be equal to the predicted NO<sub>x</sub> concentration. EPA established a 1-hour NO<sub>2</sub> standard, effective April 12, 2010. There is currently no guidance for project-level analysis with respect to this standard. The proposed school's low-NO<sub>x</sub> HVAC systems would not result in significant adverse impacts.  
<sup>2</sup>EPA revoked the 24-hour and annual primary SO<sub>2</sub> standards, replacing them with a 1-hour average standard. Effective August 23, 2010.  
<sup>3</sup>EPA revoked the annual NAAQS for PM<sub>10</sub>, effective December 18, 2006.

**Table 7-8  
Maximum Predicted PM<sub>2.5</sub> Concentration Increments**

Pollutant	Averaging Period	Maximum Increment	Incremental Threshold ( $\mu\text{g}/\text{m}^3$ )
PM <sub>2.5</sub>	24-hour	1.8	2 to 5
	Annual (discrete)	0.12	0.3
	Annual (neighborhood)	0.0024	0.1

Therefore, there is no potential for any significant impacts from the proposed school's HVAC systems on air quality.

### INDUSTRIAL SOURCE SCREENING ANALYSIS

A field survey was conducted on September 25, 2008 to determine whether there are any industrial sources within 400-feet of the project site and to identify potential sources that might have NYCDEP permits. A request for permit information for addresses identified was made to NYCDEP on October 1, 2008 and the Envirofacts database was searched for entries at those addresses.

Permit information was obtained for the facilities found in the study area. The emission rates from the analyzed permits and the distances of the sources to the proposed school were used in the screening analysis. Table 7-9 shows the air pollutants emitted by the facilities, the calculated concentrations at the proposed school, and the short-term (1-hour) and annual guideline concentrations for the pollutants.

As shown in Table 7-9, the maximum predicted short-term and annual concentrations of pollutants from industrial sources at the proposed school would be within the acceptable range based on NYSDEC guidance. The impacts of existing industrial sources on the proposed school are not significant, and no adverse air quality impacts from industrial source activities are anticipated.

**Table 7-9**  
**Pollutant Concentrations Resulting from Sources With BEC Permits**

Potential Contaminants	Estimated Short-term Impact ( $\mu\text{g}/\text{m}^3$ )	SGC <sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )	Estimated Long-term Impact ( $\mu\text{g}/\text{m}^3$ )	AGC <sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )
Particulates	215	380	$7.18 \times 10^{-3}$	45
Hexane	0.5	N/A	$2.88 \times 10^{-3}$	700

Notes:  
<sup>a</sup> NYSDEC DAR-1 (Air Guide-1) AGC/SGC Tables, September 2007.  
 AGC-Annual Guideline Concentrations  
 SGC-Short-term Guideline Concentrations

**CHEMICAL SPILL ANALYSIS**

*RECIRCULATION ANALYSIS*

Assuming a 10-foot high 12-inch diameter stack and an exhaust velocity of 1,500 feet per minute, the recirculation analysis indicates that the minimum potential dilution factor between the fan exhausts and the nearest air intake is over 1000 (i.e., pollutant concentrations at the nearest intake to the exhaust fan would be 1/1000th the concentration at the fan). Thus, a nitric acid spill in a fume hood as described above would produce a maximum concentration at the nearest intake location of about 0.2 parts per million (ppm).

The results of the recirculation analysis are presented in Table 7-10. The results indicate that a spill in a fume hood as described above would produce a maximum concentration at the nearest intake location below the corresponding STELs set by OSHA and/or NIOSH for any of the chemicals in Table 7-4.

**Table 7-10**  
**Fume Hood Recirculation Analysis**  
**Maximum Predicted Concentration (ppm)**

Chemical	STEL	15-Minute Average
Nitric Acid	4	0.2

*DISPERSION ANALYSIS*

The results of the analysis of emissions from the proposed school's fume hood exhaust system are shown below in Table 7-11. The maximum concentration at elevated receptors downwind of the fume hood exhausts was estimated using the methodology previously described, and was determined to be well below the STEL levels. As shown, the maximum concentrations found at the receptor of highest impact would be lower than the corresponding impact thresholds. Therefore, there would be no significant impact on air quality from potential spills in the school laboratory hoods.

**Table 7-11**  
**Maximum Predicted Concentration (ppm)**

Chemical	STEL	15-Minute Average
Nitric Acid	4	1.47

\*

**A. INTRODUCTION**

The proposed school would not generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [Noise PCEs] which would be necessary to cause a 3 dBA increase in noise levels). The principal impacts of the proposed school on ambient noise levels would result from the use of the proposed school's playground. An analysis of these potential impacts is presented, along with an analysis to determine the level of building attenuation necessary to ensure that interior noise levels satisfy applicable interior noise criteria.

**B. NOISE FUNDAMENTALS**

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities, such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider such factors as loudness, duration, time of occurrence, and changes in noise level with time.

**"A"-WEIGHTED SOUND LEVEL (DBA)**

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound pressures fluctuate in a cycle over a given quantity of time, and is measured in Hertz (Hz), where 1 Hz equals 1 cycle per second. Frequency defines sound in terms of pitch components. One of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network known as A-weighting in the measurement system, to simulate response of the human ear. For most noise assessments the A-weighted sound pressure level in units of dBA is used in view of its widespread recognition and its close correlation with perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in Table 8-1.

**Table 8-1  
Common Noise Levels**

Sound Source	(dBA)
Military jet, air raid siren	130
Amplified rock music	110
Jet takeoff at 500 meters	100
Freight train at 30 meters	95
Train horn at 30 meters	90
Heavy truck at 15 meters	80
Busy city street, loud shout	80
Busy traffic intersection	70
Highway traffic at 15 meters, train	70
Predominantly industrial area	60
Light car traffic at 15 meters, city or commercial areas or residential areas close to industry	60
Background noise in an office	50
Suburban areas with medium density transportation	50
Public library	40
Soft whisper at 5 meters	30
Threshold of hearing	0
<b>Note:</b> A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness. <b>Source:</b> Cowan, James P. Handbook of Environmental, Acoustics. Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.	

**COMMUNITY RESPONSE TO CHANGES IN NOISE LEVELS**

The average ability of an individual to perceive changes in noise levels is well documented (see Table 8-2). Generally, changes in noise levels less than 3 dBA are barely perceptible to most listeners, whereas 10 dBA changes are normally perceived as doublings (or halvings) of noise levels. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

**Table 8-2  
Average Ability to Perceive Changes in Noise Levels**

Change (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound
<b>Source:</b> Bolt Beranek and Neuman, Inc., <i>Fundamentals and Abatement of Highway Traffic Noise</i> , Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.	

It is also possible to characterize the effects of noise on people by studying the aggregate response of people in communities. The rating method used for this purpose is based on a statistical analysis of the fluctuations in noise levels in a community, and integrates the fluctuating sound energy over a known period of time, most typically during 1 hour or 24 hours. Various government and research institutions have proposed criteria that attempt to relate changes in noise levels to community response. One commonly applied criterion for estimating this response is incorporated into the community response scale proposed by the International Standards Organization (ISO) of the United Nations (see Table 8-3). This scale relates changes in noise level to the degree of community response and permits direct estimation of the probable response of a community to a predicted change in noise level.

**Table 8-3**  
**Community Response to Increases in Noise Levels**

Change (dBA)	Category	Description
0	None	No observed reaction
5	Little	Sporadic complaints
10	Medium	Widespread complaints
15	Strong	Threats of community action
20	Very strong	Vigorous community action
Source: International Standards Organization, Noise Assessment with Respect to Community Responses, ISO/TC 43 (New York: United Nations, November 1969).		

### NOISE DESCRIPTORS USED IN IMPACT ASSESSMENT

Because the sound pressure level unit of dBA describes a noise level at just one moment and very few noises are constant, other ways of describing noise over extended periods have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level,"  $L_{eq}$ , can be computed.  $L_{eq}$  is the constant sound level that, in a given situation and time period (e.g., 1 hour, denoted by  $L_{eq(1)}$ , or 24 hours, denoted as  $L_{eq(24)}$ ), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors such as  $L_1$ ,  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$ , and  $L_x$ , are sometimes used to indicate noise levels that are exceeded 1, 10, 50, 90 and x percent of the time, respectively. Discrete event peak levels are given as  $L_1$  levels.  $L_{eq}$  is used in the prediction of future noise levels, by adding the contributions from new sources of noise (i.e., increases in traffic volumes) to the existing levels and in relating annoyance to increases in noise levels.

The relationship between  $L_{eq}$  and levels of exceedance is worth noting. Because  $L_{eq}$  is defined in energy rather than straight numerical terms, it is not simply related to the levels of exceedance. If the noise fluctuates very little,  $L_{eq}$  will approximate  $L_{50}$  or the median level. If the noise fluctuates broadly, the  $L_{eq}$  will be approximately equal to the  $L_{10}$  value. If extreme fluctuations are present, the  $L_{eq}$  will exceed  $L_{90}$  or the background level by 10 or more decibels. Thus the relationship between  $L_{eq}$  and the levels of exceedance will depend on the character of the noise. In community noise measurements, it has been observed that the  $L_{eq}$  is generally between  $L_{10}$  and  $L_{50}$ . The relationship between  $L_{eq}$  and exceedance levels has been used in this analysis to characterize the noise sources and to determine the nature and extent of their impact at all receptor locations.

For the purposes of this project, the maximum 1-hour equivalent sound level ( $L_{eq(1)}$ ) has been selected as the noise descriptor to be used in the noise impact evaluation.  $L_{eq(1)}$  is the noise descriptor used in the City Environmental Quality Review (CEQR) standards for vehicular traffic noise impact evaluation, and is used to provide an indication of highest expected sound levels.  $L_{10(1)}$  is the noise descriptor used in the CEQR noise exposure standards for vehicular traffic noise. Hourly statistical noise levels (particularly  $L_{10}$  and  $L_{eq}$  levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

### C. NOISE STANDARDS AND CRITERIA

#### NEW YORK CITY NOISE CODE

In December 2005 the New York City Noise Control Code was amended. The amended noise code contains: prohibitions regarding unreasonable noise; requirements for noise due to construction activities (including noise limits from specific pieces of construction equipment, noise limits on total construction noise, limits on hours of construction [weekdays between 7 AM and 6 PM], and requirements for adopting and implementing noise mitigation plans for each construction site prior to the start of construction); and specifies noise standards, including plainly audible criteria, for specific noise sources (i.e., refuse collection vehicles, air compressors, circulation devices, exhausts, paving breakers, commercial music, personal audio devices, sound reproduction devices, animals, motor vehicles including motorcycles and trucks, sound signal devices, burglar alarms, emergency signal devices, lawn care devices, snow blowers, etc.). In addition, the amended code specifies that that no sound source operating in connection with any commercial or business enterprise may exceed the decibel levels in the designated octave bands shown in Table 8-4 at the specified receiving properties.

**Table 8-4**  
**New York City Noise Codes**

Octave Band Frequency (Hz)	Maximum Sound Pressure Levels (dB) as Measured Within a Receiving Property as Specified Below	
	<i>Residential receiving property for mixed use building and residential buildings (as measured within any room of the residential portion of the building with windows open, if possible)</i>	<i>Commercial receiving property (as measured within any room containing offices within the building with windows open, if possible)</i>
31.5	70	74
63	61	64
125	53	56
250	46	50
500	40	45
1000	36	41
2000	34	39
4000	33	38
8000	32	37

Source: Section 24-232 of the Administrative Code of the City of New York, as amended December 2005.

**NEW YORK CEQR NOISE STANDARDS**

The New York City Department of Environmental Protection (NYCDEP) has set external noise exposure standards. These standards are shown in Table 8-5 and 8-6. Noise Exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards shown are based on maintaining an interior noise level for the worst-case hour  $L_{10}$  less than or equal to 45 dBA. Mitigation requirements are shown in Table 8-5.

**Table 8-5  
Noise Exposure Guidelines  
For Use in City Environmental Impact Review<sup>1</sup>**

Receptor Type	Time Period	Acceptable General External Exposure	Airport <sup>3</sup> Exposure	Marginally Acceptable General External Exposure	Airport <sup>3</sup> Exposure	Marginally Unacceptable General External Exposure	Airport <sup>3</sup> Exposure	Clearly Unacceptable General External Exposure	Airport <sup>3</sup> Exposure
1. Outdoor area requiring serenity and quiet <sup>2</sup>		$L_{10} \leq 55$ dBA	Ldn $\leq 60$ dBA		60 < Ldn $\leq 65$ dBA		(1) 65 < Ldn $\leq 70$ dBA, (II) 70 $\leq$ Ldn		Ldn $\leq 75$ dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
3. Residence, residential hotel or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only <sup>4</sup>	Note 4	Note 4	Note 4	Note 4	Note 4				

**Notes:**

(1) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more; Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

<sup>2</sup> Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheatres, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.

<sup>3</sup> One may use the FAA-approved  $L_{dn}$  contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

<sup>4</sup> External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: New York City Department of Environmental Protection (adopted policy 1983).



Table 8-6					
Required Attenuation Values to Achieve Acceptable Interior Noise Levels					
Noise Level With Proposed Action	Marginally Acceptable				Clearly Unacceptable
	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$L_{10} < 80$
Attenuation*	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)^B$ dB(A)
<b>Notes:</b> <sup>A</sup> The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation. <sup>B</sup> Required attenuation values increase by 1 dB(A) increments for $L_{10}$ values greater than 80 dBA.					
<b>Source:</b> New York City Department of Environmental Protection					

In addition, the *CEQR Technical Manual* uses the following criteria to determine whether a proposed project would result in a significant adverse noise impact. The impact assessments compare the proposed project's Build condition  $L_{eq(1)}$  noise levels to those calculated for the No Build condition, for receptors potentially affected by the project.

If the No Build levels are less than 60 dBA  $L_{eq(1)}$  and the analysis period is not a nighttime period, the threshold for a significant impact would be an increase of at least 5 dBA  $L_{eq(1)}$ . For the 5 dBA threshold to be valid, the resultant Build condition noise level would have to be equal to or less than 65 dBA. If the No Build noise level is equal to or greater than 62 dBA  $L_{eq(1)}$ , or if the analysis period is a nighttime period (defined in the CEQR standards as being between 10 PM and 7 AM), the incremental significant impact threshold would be 3 dBA  $L_{eq(1)}$ . (If the No Build noise level is 61 dBA  $L_{eq(1)}$ , the maximum incremental increase would be 4 dBA, since an increase higher than this would result in a noise level higher than the 65 dBA  $L_{eq(1)}$  threshold.)

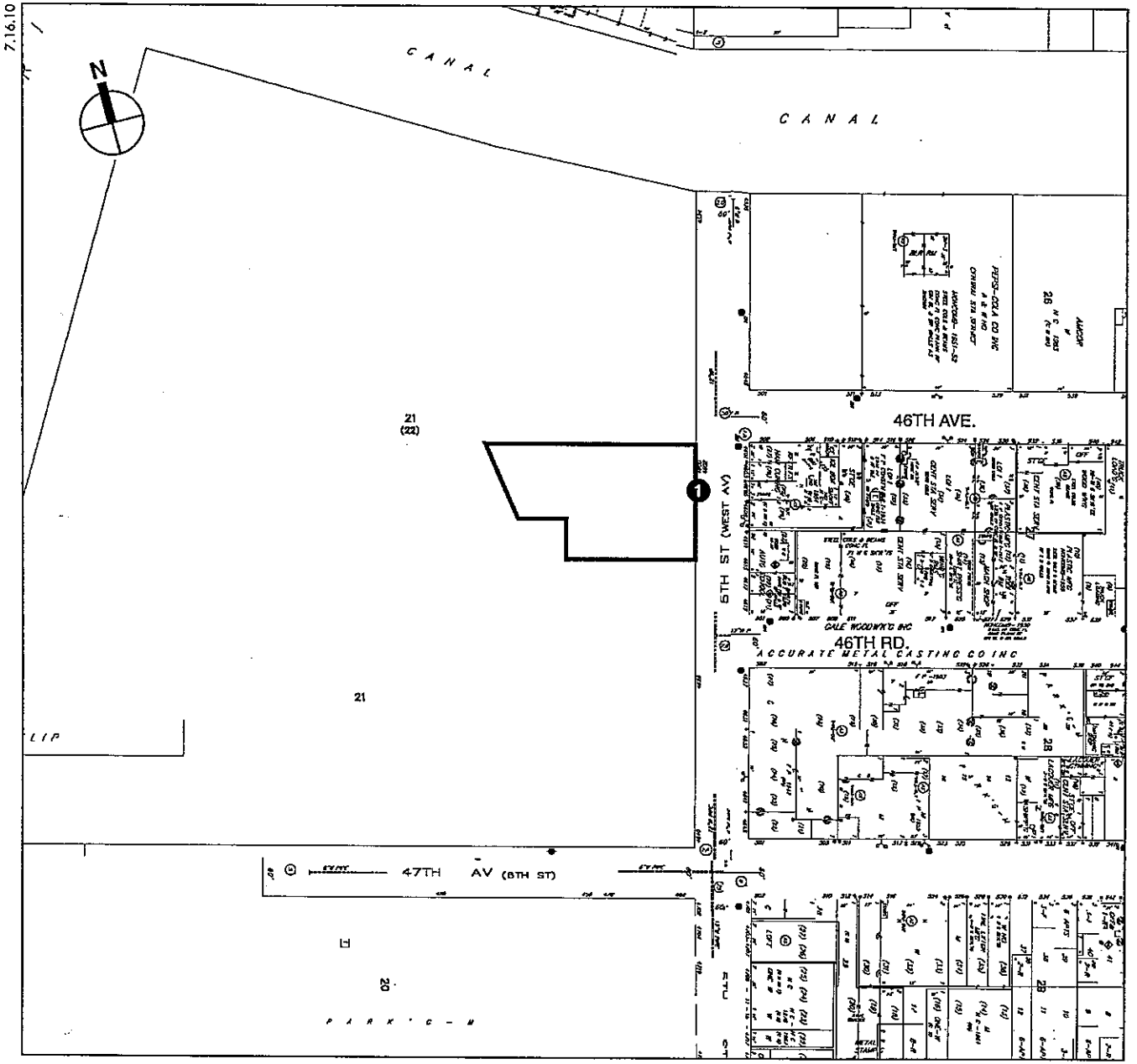
#### SCHOOL CONSTRUCTION AUTHORITY (SCA) NOISE IMPACT CRITERIA



For purposes of impact assessment, this report will utilize the SCA noise impact criteria which considers project-related increases in  $L_{eq(1)}$  noise levels over future conditions without the project of greater than 5.0 dBA as significant impacts. The 5.0 dBA relative criteria is consistent with increases in noise levels that the public considers noticeable and likely to result in complaints. The  $L_{eq(1)}$  descriptor is used in this document to quantify and describe both playground and traffic noise. In this way, the different noise sources can be combined to produce a total predicted noise level. The impact assessments compare the proposed project's Build condition  $L_{eq(1)}$  noise levels to those calculated for the No Build condition, for receptors potentially affected by the project. This criterion will be used in this document for the purposes of identifying noise impacts.

#### D. EXISTING NOISE LEVELS

Existing noise levels were measured for 20-minute periods during the two weekday peak periods—AM (7:30– 9:00 AM), and PM (3:00 – 4:30 PM) peak periods on September 4, 2008 at a receptor site adjacent to the project site. Site 1 was located on 5th Street between 46th Avenue and 46th Road (see Figure 8-1).

The instrumentation used for the 20-minute noise measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2260 Type 1 (according to ANSI



-  Project Site Boundary
-  Noise Receptor Location

Standard S1.4-1983[R2006]) sound level meter. This assembly was mounted at a height of five feet above the ground surface on a tripod and at least six feet away from any large sound-reflecting surface to avoid major interference with sound propagation. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included  $L_{eq}$ ,  $L_1$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ . A windscreen was used during all sound measurements except for calibration. All measurement procedures conformed with the requirements of ANSI Standard S1.13-2005.

The results of the measurements of existing noise levels are summarized in Table 8-7.

**Table 8-7**  
**Existing Noise Levels (dBA)**

Site	Measurement Location	Time		$L_{eq}$	$L_1$	$L_{10}$	$L_{50}$	$L_{90}$
1	5th Street between 46th Avenue and 46th Road	WD	AM	68.3	77.2	69.7	66.8	66.2
			PM	65.5	71.4	66.5	64.5	63.9
<b>Notes:</b> Field measurements were performed by AKRF, Inc. on September 4, 2008.								

At the monitoring sites, traffic noise was the dominant noise source. Measured noise levels were moderate and reflect the level of vehicular activity on the adjacent streets. In terms of the CEQR criteria, the existing noise levels at Site 1 would be in the “marginally acceptable” category.

## E. NOISE FROM THE SCHOOL PLAYGROUND

Table 8-8 shows the maximum hourly playground boundary noise levels for the two time periods analyzed. These values are based upon measurements made at a series of New York City school playgrounds for the New York City School Construction Authority (SCA)<sup>1</sup>. Geometric spreading and the consequent dissipation of sound energy with increasing distance from the playground decreases noise levels at varying distances from the playground boundary.

**Table 8-8**  
**Maximum Hourly Playground Boundary  $L_{eq(t)}$  Noise Levels (dBA)**

Time Period	Elementary Schools	Intermediate Schools	High Schools
AM	69.3	64.9	68.2
PM	62.9	64.3	64.3
<b>Sources:</b> SCA Playground Noise Study, Allee King Rosen & Fleming, Inc., October 23, 1992			

A screening analysis was performed for the AM and PM peak periods at the selected noise receptor sites based upon the estimated playground noise levels for an elementary school shown in Table 8-9. Based upon measurements and acoustical principles, hourly noise levels were assumed to decrease by the following values at the specified distances from the playground boundary: 4.8 dBA at 20 feet, a 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet. For all distances between 40 and 300 feet, a 4.5-dBA drop-off per doubling of distances from the playground boundary was assumed.

<sup>1</sup> SCA Playground Noise Study, Allee King Rosen & Fleming, Inc., October 23, 1992.

**Table 8-9**  
**Noise Levels due to School Playground (dBA)**

Site	Time	Existing L <sub>eq</sub>	Receptor Distance (feet)	Max Playground L <sub>eq</sub> at Receptor	Combined L <sub>eq</sub>	Change
1	AM	68.3	40	60.2	68.9	0.6
	PM	65.5	40	55.2	65.9	0.4
Sources: SCA Playground Noise Study, Allee King Rosen & Fleming, Inc., October 23, 1992						

The nearest noise-sensitive land use would be the planned residential tower immediately west of the project site. The noise levels at this location were assumed to be the same as those measured at Site 1. Table 8-9 shows the results of combining the projected playground noise levels with the measured existing levels. Using measured existing levels as a baseline is conservative and would tend to maximize impacts, because future noise levels without the proposed school would be higher due to development in the area.

The increases in noise level would all be less than 2 dB in magnitude, which, by CEQR criteria, would be imperceptible and insignificant. Therefore it can be concluded that the playground would have no significant impact on ambient noise levels in the area.

## F. NOISE ATTENUATION MEASURES

As shown in Table 8-6, the New York City *CEQR Technical Manual* has set noise attenuation quantities for buildings based on exterior L<sub>10(1)</sub> noise levels in order to maintain interior noise levels of 45 dBA or lower for school uses. Noise levels at the project site are likely to increase as a result of traffic associated with the Hunter's Point South project, which is located nearby. Therefore, the future noise levels at the project site were estimated taking the Hunter's Point South project into account, and the noise attenuation requirements were based on these estimates in order to ensure that sufficient attenuation would be provided.

Chapter 19 of the *Hunter's Point South Rezoning and Related Actions Final Environmental Impact Statement* describes an analysis of noise generated by that project. Of all the noise receptor sites included in that analysis, Site 3, located on 50th Avenue between Vernon Boulevard and 5th Street is closest to the proposed school, and its results were applied to the proposed project. The cumulative noise increases due to background growth and traffic associated with the Hunter's Point South project would be at most 4.7 dBA, so this amount would be added to the maximum L<sub>10(1)</sub> noise level measured at the project site to conservatively determine the maximum future L<sub>10(1)</sub> noise level at the project site. This level would be 74.4 dBA.

Based upon this L<sub>10(1)</sub> value, the proposed school would require at least 31 dBA of attenuation to achieve the CEQR interior noise level requirements of 45 dBA L<sub>10(1)</sub>.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade is comprised of the wall, glazing, and any vents or louvers for HVAC/air conditioning units in various ratios of area. The building design for the proposed school includes the use of well sealed double-glazed windows and central air conditioning (i.e., alternate means of ventilation). The proposed project's building facades, including these elements, would be designed to provide a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the attenuation requirements listed in Table F-4. The OITC classification is defined by the American

Society of Testing and Materials (ASTM E1332-90 [Reapproved 2003]) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise. By adhering to these design requirements, the existing building and proposed addition will thus provide sufficient attenuation to achieve the CEQR interior noise level guideline of 45 dBA L<sub>10</sub> for school uses.

In addition, the building mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. \*

**A. INTRODUCTION**

This section addresses soil and groundwater conditions at the project site resulting from previous and existing uses of the site. The following environmental investigation reports have been prepared for the site: a Phase I Environmental Site Assessment (ESA) by Dvirka and Bartilucci Consulting Engineers dated July 3, 2008; a Remedial Action Work Plan (RAWP) by TRC Engineers, Inc. (TRC) dated August 2006; a Preliminary Geotechnical Engineering Study by Yu & Associates Engineers, P.C. dated September 15, 2008; and a Remedial Investigation Report (RIR) by TRC dated January 2008. In addition, a draft Final Engineering Report (FER) and a draft Site Management Plan (SMP) were prepared by TRC in March 2010 and submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) for approval. Prior to the start of work, the FER and SMP will be approved by the NYSDEC and NYSDOH.

**B. EXISTING CONDITIONS**

The project site is located at 46-00 5th Street in Long Island City, Queens, New York. Much of the area east of the project site is part of the Long Island City Mixed Use Special District, which consists of a mixture of light industrial, commercial, residential, and cultural uses. Also to the east are some M1-4 districts that contain warehouses with light manufacturing occupants. The project site consists of an approximately 25,000 square foot (0.57 acres) L-shaped portion (Parcel 4) of the larger Queens West Development (QWD)-Stage 2 site, which encompasses approximately 21 acres and mainly consists of contiguous parcels corresponding to Tax Blocks 20 and 21. The entire QWD-Stage 2 site is in various levels of development. The project site is located within the Brownfield Cleanup Program (BCP) Site No. C241096, which encompasses approximately 4.7 upland-acres of the QWD-Stage 2 site. An application was submitted to the NYSDEC for BCP Site No. C241096 and it was accepted into the program, effective June 23, 2008. BCP Site No. C241096 was formerly in the Voluntary Cleanup Program (VCP) and was designated VCP Site No. V00505C-OU1.

Historically, the entire QWD-Stage 2 site was part of the Hunter family farm in the early 1800s. Through the 1800s and to a limited extent during the 1900s, the QWD-Stage 2 site was filled on land and in water to roughly form the current water's edge location. In the 1860s, the Devoe Manufacturing Company developed a petroleum processing facility on the QWD-Stage 2 site, which processed crude petroleum into kerosene for lamps. In 1873, Standard Oil Company of New York ("SOCONY") acquired the property and continued similar operations until the early 1900s when SOCONY modified its petroleum distilling operations to produce gasoline and other petroleum products. By 1936, the SOCONY operations had ceased on the Site and the property was sold to PepsiCo. By 1947, PepsiCo operations occupied buildings on the QWD-Stage 2 site. PepsiCo ceased operations in 2002, and aboveground structures were demolished by the Queens West Development Corporation in 2003 and 2004.

The project site was occupied by steam stills, condensers and track maintenance operations for oil distillation and condensers (refining) as part of SOCONY from 1898 through 1915, dry storage use as part of PepsiCo until 1950, and vehicle maintenance operations as part of PepsiCo from 1950 through 2002. Three 500-gallon underground storage tanks (USTs) were also present on the project site.

Remedial investigations were performed on the Site between September 2005 and April 2006 in accordance with the NYSDEC-approved Remedial Investigation Work Plan ("RIWP"). Additional limited investigations were also performed between April-October 2009. The findings of the RIWP for the project site and the additional limited investigations indicated the following were present:

- USTs and buried piping;
- Elevated levels of petroleum in soil in the form of Gross Contamination at and below the water table with associated petroleum odor;
- Metals (particularly lead and arsenic) and semi-volatile organic compounds ("SVOCs") in soil;
- No significant levels of pesticides and polychlorinated biphenyls ("PCBs");
- Volatile organic compounds (VOCs), SVOCs, and dissolved phase metals in groundwater; and
- VOCs and combustible gas in soil vapor.

The following remedial activities were performed to achieve the remedial action objectives at the project site:

- Site preparation including pre-excavation sampling;
- Erection of negative-pressure enclosure (tents) with air handling and treatment equipment to control odors and vapors during excavation;
- Installation of perimeter sheeting along 5th Street, facilitating excavation and minimizing the potential for off-site migration of groundwater and soil vapor, and preventing potential recontamination from off-site sources;
- Installation of dewatering and water-treatment equipment for deep excavations;
- Implementation of a site-specific Health and Safety Plan (HASP) to protect on-site workers and the surrounding community;
- Excavation and off-site transportation and disposal of Gross Contamination;
- Excavation and off-site transportation and disposal of soil with contaminant levels exceeding the numeric Site-Specific Soil Cleanup Objectives ("SSSCOs"). Please see below for SSSCOs.
- Removal of subsurface structures including piping and USTs;
- Post-excavation soil, soil gas and groundwater sampling;
- Backfilling and restoration with reusable material and/or Clean Fill or recycled concrete aggregate from other portions of the QWD site;
- Installation of a Demarcation Layer between Clean Fill and Residual Soil;
- Placement and compaction of a Barrier Layer consisting of a minimum 2-foot thick layer of imported Clean Fill; and

- Surveying and mapping of: the horizontal and vertical extent of the excavations; the Demarcation Layer; post-excavation soil sampling locations; long term groundwater monitoring wells; sheeting; and final grade.

The selected Restricted Use SSSCOs are as follows:

Contaminant	Site-Specific Soil Cleanup Objectives (SSSCOs)
VOCs	Track 2 Restricted Residential
SVOCs	5- parts per million ("ppm") for individual SVOCs and 500 ppm for total SVOCs
Arsenic	25 ppm
Cadmium	5 ppm
Lead	1,000 ppm
Mercury	2 ppm
Gross Contamination	Removal of Gross Contamination and Free Product (as defined by ECL Section 27-1405 and 6 NYCRR 375-1.2(u))

Post-excavation soil samples were collected within the project site to document post-remediation conditions. Post-excavation bottom soil samples were not collected in areas where excavations extended to the bedrock surface. In such instances, the bedrock surface was inspected for gross contamination. The final post-excavation soil samples did not indicate any exceedances of the SSSCOs.

Post-remediation groundwater samples including one sample within the project site and three samples in the sidewalks near the project site were collected and analyzed for Target Compound List ("TCL") VOCs, TCL SVOCs, and Target Analyte List ("TAL") metals (filtered and unfiltered). Post-remediation groundwater sampling results indicate the presence of VOCs, SVOCs and metals above Class GA Groundwater Quality Standards and Guidance Values. Although VOCs, SVOCs and metals above Class GA Standards and Guidance Values remain in the groundwater following remedial excavation, the remedial action objectives were achieved.

After soil excavation and backfilling were complete, post-remediation VOC and combustible gas levels in soil gas were also measured. VOCs were present in the soil gas.

### C. FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project, it is assumed that the project site would be developed by 2013 in accordance with the General Project Plan (GPP), which calls for 100,000 sf of community facility use to be constructed on Parcel 4 of the Queens West Development.

In the future without the proposed project, prior to the start of construction activities on the site, the FER and SMP would be approved by the NYSDEC and NYSDOH. The FER and SMP would contain all of the specific provisions and the Engineering and Institutional Controls (ECs/ICs") described below in Section D, "Probable Impacts of the Proposed Project."

### D. FUTURE WITH THE PROPOSED PROJECT

The proposed project would not result in significant adverse impacts from contaminated media and building materials. During construction, the Contractor would properly manage excavated soil, dewatering, air quality control measures, and community air monitoring in accordance with the Site Management Plan (and all applicable local, State and Federal regulations). To minimize



the potential for construction workers' exposure, the HASP provisions of the SMP would be implemented during construction activities. The HASP would establish procedures for the protection of on-site workers and the community, and require soil gas, dust and odor suppression measures, as well as community air monitoring. Since residual contaminated soil, groundwater and soil vapor would exist beneath the project site following completion of construction, Engineering and Institutional Controls ("ECs/ICs") would be implemented to prevent potential exposure to these impacted media. Long-term management of ECs/ICs and of residual contamination would be performed under the SMP.

The following ECs would be implemented at the project site: replacement of a Barrier Layer consisting of a minimum two-foot thick imported environmentally clean fill layer preventing contact with residual soil, and re-installation of a demarcation layer between residual soil and environmentally clean fill; the building would be constructed with a sub-slab vapor barrier and active sub-slab depressurization system ("SSDS") to prevent intrusion of soil vapor; and the site would be covered with the building, pavement, and landscaping ("Final Site Development Cover") in accordance with the SMP, minimizing the potential for contact with residual soil. The Final Development Cover would consist of impervious surfaces (e.g., buildings, and asphalt and concrete paving) and in all other areas (e.g., landscaped areas) at least two feet of environmentally clean soil meeting the soil cleanup objectives for unrestricted use as described in 6 NYCRR 375-6.8(a).

The IC would consist of an environmental easement placed on the project site as a precondition for approval of the SMP. The environmental easement would require implementation of all SMP activities; prohibit the use of site groundwater; prohibit the use of the property as a farm or vegetable garden; prevent the use of the property for a less restrictive use; and require groundwater monitoring to assess performance of the remedy.

With these measures in place, no significant adverse impacts due to the presence of hazardous materials would be expected to occur either during or following construction at the site. \*

## A. INTRODUCTION

Construction activities, although temporary in nature, can sometimes result in significant adverse environmental impacts. This chapter summarizes the construction plan for the proposed project and assesses the potential for construction-period impacts. The stages of construction and their associated activities and equipment are described first, followed by the types of impacts likely to occur. The assessment also describes methods that may be employed to minimize construction-period impacts.

As described below, the analysis concludes that the proposed project would not result in extensive construction-related effects for an extended period with respect to any of the analysis areas of concern. Therefore, no significant adverse impacts are expected to occur as a result of construction.

## B. DESCRIPTION OF CONSTRUCTION ACTIVITIES

It is anticipated that construction of the proposed project would require a total of approximately 30 months to complete, however, it could take up to 36 months. As shown in Table 10-1, below, the major external construction activities are expected to be completed within approximately 15 months. Based on current plans, construction would be completed in 2013.

**Table 10-1**  
**On-Site Construction Activities**

Construction Activity	Months of Construction
Mobilization, Excavation, and Foundation	6
Superstructure and Exterior Work	9
Interior Construction and Fit-out	12
Exterior Finishing and Landscaping	3
<b>Source:</b> New York City School Construction Authority, July 2010.	

Construction would begin with the fencing and screening of the site, followed by excavation and grading. Soil would be excavated from the project site and removed by truck to a licensed landfill or recycling facility. If soil containing petroleum or other contaminated materials is discovered during excavation activities, it would be segregated and disposed of in accordance with all applicable Federal, State, and local regulations and guidelines. Additionally, all material that needs to be removed from the site would be disposed of in accordance with applicable requirements.

Piles would be driven, as necessary, to support the building, and pile caps would be formed and concrete poured to build the foundations for the building. Bedrock on the site is generally found 10 feet below grade or deeper. Since the building design does not include a basement, the depth of excavation required for this work, including the installation of pile caps, grade beams, and foundation slabs, would be approximately five feet below grade. Consequently, disturbance of bedrock is not anticipated.

Following the steps outlined above, the project's structural frame and exterior façade would be erected. Construction of the exterior enclosure, or "shell" of the building would include construction of the building's framework (installation of beams and columns), floor decks, facade (exterior walls and cladding), and roof construction. In the final year of construction, interior finishing would proceed, including electrical work, plumbing, wall and ceiling construction, painting, floorwork, and other finishing items along with the completion of the remaining exterior work, such as utility and façade work. During this time, most work would occur inside, and operation of heavy on-site equipment would be infrequent. As construction nears completion on the interior of the project, final site work would commence and would include construction of the outdoor play yards and landscaping.

The estimated average number of workers on site by phase would be: 40 workers for mobilization, excavation, and foundation; 60 workers for superstructure and exterior work; 120 workers for interior construction and fit-out; and 40 workers for exterior finishing and landscaping.

Typical equipment used for excavation and foundation work would include excavators, bulldozers, backhoes, compaction equipment, tractors, pile drivers, jackhammers, and concrete pumping trucks. Other equipment that would be used include hoist complexes, dump trucks and loaders, concrete trucks, and back hoes. Trucks would deliver concrete and other building materials, and remove excavated material as well as construction debris. The construction equipment likely to be used during erection of the superstructure would include compressors, cranes, derricks, hoists, bending jigs, and welding machines. During facade and roof construction, hoists may continue to be used. Trucks would remain in use for material supply and construction waste removal. Interior and finishing work would employ a large number of construction workers, and a wide variety of fixtures and supplies would have to be delivered to the site. It is anticipated that most trucks would travel to and from the area along Vernon Boulevard, accessing the site on Fifth Street via 46th Avenue and exiting via 46th Road.

The majority of construction activities would take place Monday through Friday, although if necessary, the delivery or installation of certain equipment could occur on weekend days. Hours of construction are regulated by the New York City Department of Buildings (DOB) and apply in all areas of the City. These requirements are reflected in the collective bargaining agreements with major construction trade unions. In accordance with those regulations, almost all work could occur between 7 AM and 6 PM on weekdays, although some workers would arrive and begin to prepare work areas before 7 AM. Occasionally, Saturday or overtime hours would be required to complete time-sensitive tasks. Weekend work requires a permit from the DOB and, in certain instances, approval of a noise mitigation plan from the New York City Department of Environmental Protection (NYCDEP) under the City's Noise Code. The New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007, limits construction (absent special circumstances as described below) to weekdays between the hours of 7 AM and 6 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6 PM and 7 AM and on weekends) may be

permitted only to accommodate: (1) emergency conditions, (2) public safety, (3) construction projects by or on behalf of City agencies, (4) construction activities with minimal noise impacts, and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts and/or financial considerations. In such cases, the numbers of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday would be on Saturday, beginning with worker arrival and site preparation at 7 AM, and ending with site cleanup at 5 PM. Movement of certain oversized materials, to comply with the requirements of the New York City Department of Transportation (NYCDOT), would occur at night.

Much of the proposed project's construction staging would occur within the project site, thereby limiting any effects on surrounding roadways and pedestrian elements. However, certain construction activities may require the temporary closing, narrowing, or otherwise impeding of Fifth Street, and or/the sidewalk on this street.

### C. PROBABLE IMPACTS DURING CONSTRUCTION

As with most development in New York City, construction of the proposed project may be disruptive to the surrounding area for limited periods of time throughout the construction period. The following analyses describe the proposed project's temporary effects on transportation systems, air quality, noise, historic resources, hazardous materials, natural resources, land use and neighborhood character, socioeconomic conditions, community facilities, open space, and infrastructure, as well as the economic benefits associated with the construction.

#### TRANSPORTATION

As described in the *CEQR Technical Manual*, construction activities may affect several elements of the transportation system, including traffic, transit, pedestrians, and parking. A transportation analysis of construction activities is predicated upon the duration, intensity, complexity and/or location of construction activity.

As described above, much of the proposed project's construction staging would occur within the project site, thereby limiting any effects on surrounding roadways and pedestrian elements. However, certain construction activities may require the temporary closing, narrowing, or otherwise impeding of Fifth Street, and or/the sidewalk on this street. These potentially affected locations are not along New York City Transit bus routes, nor are they areas of high vehicular or pedestrian activity. Construction-related closures are anticipated to be the type of routine closure typically addressed by a permit (and pedestrian access plan) required by New York City Department of Transportation (DOT) Office of Construction Mitigation and Coordination (OCMC) at the time of closure. Additionally, the potentially-affected roadways and pedestrian elements are not located near sensitive land uses such as a hospital or school.

Throughout the construction process, construction workers would travel to and from the site by personal vehicle, bus, and subway. Given that construction worker commuting trips generally occur during off-peak hours, and that there would not be a substantial number of construction workers at the project site on any given day, the construction worker trips are not expected to result in significant adverse impacts to the area's traffic operations, parking supply and utilization, bus loading, or subway station conditions. Therefore, the proposed project's construction activities are not expected to result in significant adverse transportation impacts.

## AIR QUALITY AND NOISE

Air quality and noise impacts can be generated by construction vehicles and delivery vehicles traveling to and from a site, as well as by stationary equipment used for on-site construction activities. According to the *CEQR Technical Manual*, an assessment of air quality or noise impacts from construction vehicles is warranted only when quantified transportation analysis is needed for construction activities. As described above, the proposed project's construction activities are not anticipated to result in extended impacts to any transportation systems requiring quantified analysis, and therefore, an assessment of air quality or noise impacts from construction vehicles is not warranted.

With regard to the air quality and noise impacts of other construction activities (such as demolition, rock drilling, and pile driving), the *CEQR Technical Manual* suggests that potential impacts should be analyzed only when construction activities would affect a sensitive receptor over a long period of time. Construction duration as defined by the *CEQR Technical Manual* is broken down into short-term (less than two years) and long-term (two or more years). As described above, the proposed project's major external construction activities, which generate the greatest potential for air quality and noise impacts, would be short-term in nature (lasting less than two years). Since the proposed project would not cause noisy and/or diesel-powered construction equipment to be operating within 1,500 feet of a receptor for a period of time exceeding two years, and since there are no highly sensitive receptors (such as a school or hospital) in the immediate vicinity of the project site, significant adverse air quality and noise impacts are not anticipated, and quantified analyses are not warranted. The following sections qualitatively discuss the likely effects of on-site construction activities on air quality and noise, and describe measures to minimize construction-period impacts.

### *STATIONARY SOURCE AIR QUALITY IMPACTS*

Most construction engines are diesel-powered, and produce relatively high levels of sulfur oxides (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>). Construction activities also emit fugitive dust.

Technologies have been developed to substantially reduce SO<sub>2</sub> and PM emissions. These include ultra low-sulfur diesel fuel (ULSD), diesel particulate filters (DPFs), and Tier 1, 2, and 3 engines. These technologies have become more readily available in New York City as they are required for large, ongoing public projects, and it is anticipated that some contractors working on the project site would use vehicles that include these technologies to reduce SO<sub>2</sub> and PM emissions. Furthermore, as early in the construction period as practicable, diesel-powered equipment would be replaced with electrical-powered equipment, such as electric scissor lifts and electric articulating forklifts (i.e., early electrification). It is expected that the SCA would employ best available technologies and utilize ultra low-sulfur diesel fuel for construction vehicles in accordance with City and State requirements.

All necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. Appropriate fugitive dust control measures, including watering of exposed areas and dust covers for trucks, would be employed, and to reduce the resulting concentration increments at sensitive receptors, large emissions sources and activities, such as concrete trucks and pumps, would be located away from sensitive receptors to the extent practicable. Additional measures would be taken in accordance with applicable laws, regulations, and building codes. These include the restriction

of on-site vehicle idle time to three minutes for all vehicles not using the engine to operate a loading, unloading, or processing device (e.g., concrete mixing trucks).

Under both New York State Environmental Quality Review Act (SEQRA) and New York City Environmental Quality Review (CEQR) requirements, the determination of the significance of impacts is based on an assessment of the predicted intensity, duration, geographic extent, and the number of people who would be affected by the predicted impacts. Guidelines for assessing potential impacts from NO<sub>x</sub>, CO, and PM<sub>2.5</sub> are discussed in Chapter 7, "Air Quality." While it is possible that the construction activities may exceed certain thresholds used for assessing the potential for significant adverse air quality impacts, any exceedance would be limited in extent, duration, and severity. Based on the limited duration of these potential exceedances above threshold values, potential increments greater than applicable thresholds are not expected to result in significant adverse impacts from construction activities.

#### *STATIONARY SOURCE NOISE IMPACTS*

Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating), the distance from the construction site, and any shielding effects (from structures such as buildings, walls, or barriers). Noise levels caused by construction activities would vary widely, depending on the phase of construction and the location of the construction relative to receptor locations.

A wide variety of measures can be used to minimize construction noise and reduce potential noise impacts. A noise mitigation plan is required as part of the New York City Noise Control Code, and would include:

- Source controls;
- Path controls; and
- Receptor controls.

In terms of source controls (i.e., reducing noise levels at the source or during most sensitive time periods), the following measures for construction would be implemented:

- The contractors would use equipment that meets the sound level standards for equipment (specified in Subchapter 5 of the New York City Noise Control Code) from the start of construction activities and use a wide range of equipment, including construction trucks, that produce lower noise levels than typical construction equipment.
- Where feasible, the project sponsors would use construction procedures and equipment (such as generators, concrete trucks, delivery trucks, and trailers) that are quieter than that required by the New York City Noise Control Code.
- As early in the construction period as practicable, diesel-powered equipment would be replaced with electrical-powered equipment, such as electric scissor lifts and electric articulating forklifts (i.e., early electrification).
- All contractors and subcontractors would be required to properly maintain their equipment and have quality mufflers installed.

In terms of path controls (e.g., placement of equipment and implementation of barriers between equipment and sensitive receptors), the following measures for construction would be implemented:

- Perimeter noise barriers would be constructed that satisfy New York City Noise Control Code requirements.
- To the extent feasible, noisy equipment, such as generators, cranes, trailers, concrete pumps, concrete trucks, and dump trucks, would be located away from and shielded from sensitive receptor locations.

For impact determination purposes, significant adverse noise impacts are based on whether maximum predicted incremental noise levels at sensitive receptor locations off-site would be greater than the impact criteria suggested in the *CEQR Technical Manual* for two consecutive years or more. The impact criteria are explained in detail in Chapter 8, "Noise." While increases exceeding the CEQR impact criteria for one year or less may be noisy and intrusive, they are not considered to be significant adverse noise impacts.

On-site construction activities may generate elevated noise levels at nearby residential and open space areas during some parts of the construction period, and are expected to exceed CEQR impact criteria only during the heaviest construction activities (excavation, foundation construction, etc.). Such exceedances are not expected to occur in two or more consecutive years, and therefore construction of the proposed school would not result in a significant impact.

The residential buildings in the immediate vicinity of the project site generally contain double-glazed windows and/or alternative ventilation (i.e., air conditioning), which would greatly reduce interior noise levels compared with exterior noise levels and may result in interior noise levels of 45 dBA or less. On-site construction activities could produce  $L_{10(1)}$  noise levels at nearby open space areas that would exceed the levels recommended by CEQR for passive open spaces (55 dBA  $L_{10}$ ). While this is not desirable, noise levels in many parks and open space areas throughout the city that are located near heavily trafficked roadways and/or near construction sites, experience comparable, and sometimes higher, noise levels. In addition, except under special circumstances night work is not expected, and any exceedences of the CEQR criteria at sensitive locations would occur during day. Therefore, no long-term, significant adverse noise impacts are expected from construction activities.

## HISTORIC AND CULTURAL RESOURCES

The assessment of construction impacts on historic and cultural resources considers the possibility of physical damage to any architectural or archaeological resources. Impacts on archaeological resources from construction are assessed as part of the overall evaluation of the proposed project's effect on archaeological resources (see Chapter 3, "Historic and Cultural Resources").

As detailed in Chapter 3, "Historic and Cultural Resources," the potential archaeological sensitivity of the project site was assessed in the *Hunters Point Waterfront Development FEIS* approved by New York City and New York State in 1990. As part of the environmental review for the Hunters Point Development Project, a Phase 1A Archaeological Documentary Study was completed by Historical Perspectives, Inc. in 1988 entitled *Phase 1A Archaeological Assessment Report for the Hunters Point Site, Queens, New York, CEQR 85-134Q*. The Phase 1A concluded that due to extensive previous disturbance on the site, the project site was not sensitive for archaeological resources.

Although the project site was previously analyzed in a Phase 1A Archaeological Documentary Study, the standards regarding the evaluation of potential archaeological resources have changed since the report was written. The School Construction Authority (SCA) contacted the New York

State Office of Parks, Recreation and Historic Preservation (OPRHP) to confirm the project site's lack of archaeological sensitivity. In a comment letter dated December 30, 2008, OPRHP determined that the project site was not sensitive for archaeological resources (see Appendix C). Therefore, construction of the proposed project would have no adverse impacts on archaeological resources.

In addition, as noted in Chapter 3, "Historic and Cultural Resources," upon review of the 1990 *Hunters Point Waterfront Development FEIS*, there are no designated architectural resources or properties that meet the criteria of eligibility for S/NR listing or NYCL designation located on the project site or within the 400-foot study area. Therefore, construction of the proposed project would not result in significant adverse impacts on architectural resources and no further analysis is necessary.

### **HAZARDOUS MATERIALS**

Chapter 9, "Soil and Groundwater," describes the Phase I Environmental Site Assessment (ESA); Remedial Action Work Plan (RAWP); Preliminary Geotechnical Engineering Study; and Remedial Investigation Report (RIR) prepared for the site. In addition, a draft Final Engineering Report (FER) and a draft Site Management Plan (SMP) were prepared and submitted to the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) for approval. Prior to the start of work, the FER and SMP will be approved by the NYSDEC and NYSDOH.

Excavation activities could disturb hazardous materials and increase pathways for human exposure. The SCA and/or its contractors would develop management plans (e.g., soil management plan, groundwater management plan, construction health and safety plan, etc.) to address any hazardous materials that may be encountered during construction of the school, consistent with the NYSDEC-approved SMP. The management plans prepared or reviewed by SCA would include measures to protect the health and safety of construction workers, school staff and students, and the public in general during construction and at the time of occupancy.

Specific measures that would be implemented to avoid impacts are as follows: during construction, the Contractor would properly manage excavated soil, dewatering, air quality control measures, and community air monitoring in accordance with the SMP (and all applicable local, State and Federal regulations). To minimize the potential for construction workers' exposure, the Health and Safety Plan (HASP) provisions of the SMP would be implemented during construction activities. The HASP would establish procedures for the protection of on-site workers and the community, and require soil gas, dust and odor suppression measures, as well as community air monitoring. Since residual contaminated soil, groundwater and soil vapor would exist beneath the project site following completion of construction, Engineering and Institutional Controls ("ECs/ICs") would be implemented to prevent potential exposure to these impacted media. The specified engineering controls include installation of a vapor barrier and sub-slab depressurization below the foundation to address potential vapors. Long-term management of ECs/ICs and of residual contamination would be performed under the SMP. Transportation of all material leaving the site would be in accordance with applicable requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.

In addition, to minimize the potential for construction workers' exposure, standard industry practices, including appropriate health and safety measures, will be utilized.



## **NATURAL RESOURCES**

According to the 2010 *CEQR Technical Manual*, a construction assessment is needed for natural resources only if the construction activities would disturb a site or be located adjacent to a site containing natural resources. The project site and adjacent sites do not contain any natural resources, and therefore, no further assessment is warranted.

## **LAND USE AND NEIGHBORHOOD CHARACTER**

As is typical with construction projects, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. There would be construction trucks and construction workers coming to the site. There would also be noise, sometimes intrusive, from building construction as well as trucks and other vehicles backing, loading, and unloading.

The project site is within an M3-1 manufacturing zoning district, and there are several manufacturing and industrial uses located nearby. To the extent that construction activities are industrial in nature, the proposed project's construction activities would not present a new land use to the study area. There would be periods during which construction activities would be more intrusive than what is typical of a light manufacturing district; however, those periods of time would be limited, and would not result in significant or long-term adverse impacts on the local land use patterns or character of the nearby area.

## **SOCIOECONOMIC CONDITIONS**

The *CEQR Technical Manual* suggests that if a project entails construction of a long duration that could affect the access to and therefore viability of a number of businesses, and the failure of those businesses has the potential to affect neighborhood character, then a preliminary assessment for construction impacts on socioeconomic conditions should be conducted. The proposed project would not have such effects. There are no commercial businesses at locations where construction activities could result in the temporary closing, narrowing, or otherwise impeding of roadways and sidewalks. The proposed project's construction activities would not impede access to any businesses, and therefore would not have any significant adverse impacts on socioeconomic conditions.

The proposed project's construction would create major direct benefits resulting from expenditures on labor, materials, and services, as well as substantial indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction would also contribute to increased tax revenues for the City and State, including those from personal income taxes. Local businesses may also expect increased sales from construction worker spending (i.e., coffee, food, convenience products).

## **COMMUNITY FACILITIES AND SERVICES**

According to the *CEQR Technical Manual*, a construction impact assessment should be conducted for any community facility that would be directly affected by construction (e.g., if construction would disrupt services provided at the facility or close the facility temporarily). Construction activities for the proposed project would not cause disruptions in service or closures of any community facilities; therefore, no further analysis is warranted.

### OPEN SPACE

According to the *CEQR Technical Manual*, a construction impacts analysis for open space should be conducted if an open space resource would be used for an extended period of time for construction-related activities, such as construction staging, or if access to the open space would be impeded for an extended period during construction activities. The proposed project would not have such effects. The proposed project's construction activities would not require the use of public open space, nor would construction affect access to or from a public open space. Therefore, there would be no significant adverse impacts to open space resources from construction, and no further assessment is warranted.

### INFRASTRUCTURE

Prior to the start of construction, all on-site utilities that may be affected by construction activities would be relocated in accordance with all applicable New York City regulations.

The proposed project would receive some combination of electric and gas service via extensions of the existing Con Edison distribution system. During the superstructure stage of construction, some sidewalk and on-street construction activities would be required to connect the proposed buildings to existing utility networks. This may require short-term sidewalk excavations ranging from approximately 50 to 150 feet in length. The construction activities that would be required to connect the proposed project to existing energy systems are part of Consolidated Edison's normal operations for providing services to new customers, and occur on a regular basis throughout the city. \*

**APPENDIX A**  
**GENERAL PROJECT PLAN**

EMPIRE STATE DEVELOPMENT CORPORATION  
HUNTERS POINT (QUEENS WEST) WATERFRONT DEVELOPMENT  
LAND USE IMPROVEMENT PROJECT  
MODIFIED AND RESTATED GENERAL PROJECT PLAN  
MARCH 17, 2009

In November 1983, an agreement was entered into by the City of New York (City), the Port Authority of New York and New Jersey (PA) and the State of New York to have the PA undertake a waterfront development project in New York City. This agreement was contingent on the passage of waterfront development legislation then pending in the New York State Legislature that would authorize the PA in New York and New Jersey to finance and implement waterfront projects. The legislation, an amendment to the marine terminal legislation, McKinney's Unconsolidated Laws §6671 *et seq.*, was passed by the State of New York and signed into law in 1984. Companion legislation was passed by the State of New Jersey. The New York City Public Development Corporation (PDC) was designated as the City's representative for the project. The New York City Economic Development Corporation (EDC) is the successor to PDC, and hereinafter all references to PDC are designated as EDC.

Shortly after the 1983 agreement, the PA undertook feasibility studies and an environmental assessment of proposed development for the Hunters Point waterfront. This work and related technical analyses led to the proposed project.

Commenced by the PA and EDC and joined by UDC, now doing business as Empire State Development Corporation (ESDC), a complex master planning process resulted in this proposed development of the Hunters Point site. To accomplish the objectives described in the proposed plan of development, UDC would undertake a land use improvement project (Project) and has accordingly prepared this General Project Plan (GPP). These actions have been undertaken in accordance with a Memorandum of Understanding (MOU) among the PA, the City, EDC and UDC dated August, 1989. Upon final approval of this Plan in the manner provided by the New York State Urban Development Corporation Act (UDC Act) after compliance with other applicable laws, including the State Environmental Quality Review Act (SEQRA), UDC proposed to undertake, or cause to be undertaken in conjunction with the City, EDC and the PA (acting through its enabling legislation) the Project described herein. UDC, EDC and the PA are herein collectively referred as the Public Sponsors.

I. Project Location and Site

The Project as modified and restated is located in Long Island City, Queens County, and is generally bounded by Anable Basin (also known as the 11th Street Basin) to the north, by the United States pierhead line of the East River on the west, by the northern border of 50th Avenue on the south, and on the east by 5th Street between the Anable Basin and 49th Avenue, and by a line running approximately north from a point 100 feet east of the corner of 2nd Street and 50th Avenue to 49th Avenue, then east to 5th Street and then north to Anable Basin. The project area also includes a strip of land about 100 feet wide, running between 5th Street and a point approximately 100 feet east of Vernon Boulevard. The Project is depicted in the attached plan (Attachment 1).

## II. General Project Description

The modified and restated Project contemplates the creation of eleven (11) development parcels, generally organized around a main north-south thoroughfare, Center Boulevard. East-west access to and through the site has been created through extension of certain existing street rights-of-way through the site, connecting with Center Boulevard and any outboard roads. A new roadway has been constructed connecting Center Boulevard with 5th Street, along the northern border of the Project area.

The Project contemplates the creation of a new waterfront residential community comprised of eleven residential apartment buildings; some with retail amenities, public parks, two public schools, and a public library. Of these buildings, six have already been constructed, including a senior housing building and the remaining five are either in construction or being designed. One public school (pre-kindergarten through grade 5) is already open (PS 78) in the residential building on parcel 10. A second public school will be provided on a 25,000 square-foot subparcel of Parcel 4, subject to a determination of need by the City. A branch of the Queens Public Library of approximately 18,000 square feet is also contemplated for parcel 8.

A waterfront esplanade will be created along the entire water's edge, and public and private open space will also be developed throughout the Project. This publicly dedicated park space, much of which is already constructed, is intended to be used as active and passive recreational space, and will be furnished with walkways, benches and planting. In addition, appropriately located play areas for small children and pre-teens will be provided within the esplanade. A multi-purpose playing field has been constructed between parcel 4 and parcel 7, and will shortly be open. Small private open spaces located on top of residential garages will be created by developers on certain residential parcels for the use of building residents. In addition, the existing, neon lit, 65-year-old Pepsi-Cola sign, now located on the northern residential area, will be permanently incorporated into the Project in front of the building to be constructed on parcel 3. Maintenance of the sign and the land on which it will be sited will be provided by Pepsi Cola Inc. in perpetuity.

The Project contemplates approximately 4.3 million square feet of residential space, 174,325 square feet of retail space and 140,000 square feet of public facilities. The proposed total area of building program development is approximately 4.6 million square feet. Off-street parking spaces in structures at ratios of approximately 0.6 spaces per dwelling unit for residential space are proposed. Valet parking will be encouraged in order to increase the ratio of parking spaces to dwelling units. On-street parking spaces will be available as well. Attachment 2 describes the site plan graphically.

A below-market housing component to equal ten percent of the residential units in the Project's first development phase have been provided.

There will be a limited shuttle or bus service in the residential areas to provide linkage between the Project and main transit nodes. The provision of such service will be linked to the phased development of the project.

The specific development program and the controls and requirements for development of each parcel are discussed in sections following.

### III. Objectives Under the UDC Act

The principal goal of the Project is to establish within the Project area a viable development consisting of residential, retail, cultural and recreational facilities and to provide public access to the waterfront.

Another objective of the Project is to eliminate the substandard and unsanitary conditions that existed in the Project area.

### IV. Project Objectives

In addition to removal of substandard and unsanitary conditions, which act presently as impediments to the effective and economic use of the site, the proposed Project is designed to establish and carry out a range of public policy objectives in the context of a comprehensive plan. These objectives include:

1. The expansion and reinforcement of the outer boroughs of New York City as feasible alternate locations to Manhattan.
2. The recognition of the historical prominence of the site as the symbolic "gateway" to Queens and creation of a new image for and access to the water's edge for use by residents, employees and visitors.
3. The creation of a new mixed-use neighborhood, including a significant expansion of the City's housing stock.
4. The expansion of the City's tax base by opening hitherto underdeveloped areas, generating new employment and new business opportunities, and increasing potential generation of revenue.
5. The creation of a significant public open space that opens the Queens waterfront to passive recreational uses for the use of all people, through the provision of a continuous publicly accessible waterfront esplanade.

### V. Project Implementation

#### A. Administration

The Project will be implemented by the Public Sponsors. Among the responsibilities of the Public Sponsors is:

- acquisition of privately held property to be developed as part of the Project by negotiated purchase, where possible, or by condemnation, where necessary.

- promulgation of detailed design guidelines, which will provide specific direction for the development of each project parcel
- creation and utilization of land disposition agreements that outline the terms under which parcels would be conveyed to private parties for development or creation of a public amenity
- if compliance with local laws is not feasible or practicable, the override of local codes and ordinances by ESDC
- receipt and or disbursement of funds, from public or private entities, for the purpose of maintenance of publicly owned open spaces
- exercise of other duties that may be necessary to undertake the Project.

#### **B. Methods of Acquisition and Disposition of Property for Purposes of Project Development**

Acquisition and disposition of Project properties for development may occur in any of the following ways or combinations thereof:

1. The Public Sponsors may enter into agreements with property owners who wish to develop their Project site holdings in accordance with the Plan. If such agreements with owners are reached, no public funds for acquisition would be required, but title would likely pass from the private owner to the Public Sponsors for some period of time during the development process.
2. The Public Sponsors may undertake acquisition of lands (other than those owned by the PA) in a phased manner. Such phased acquisition may be funded in whole or in part by the Public Sponsors. If PA funds are used for acquisition, title may pass to the PA.
3. The Public Sponsors may provide for the development and disposition of any site not being developed by its existing owner, through a request for proposals, sole source negotiations, or some combination thereof.
4. The approval requirements and procedures applicable to UDC and its projects will apply, in lieu of the Uniform Land Use Review Procedure of the New York City Charter, to any disposition of City-owned property necessary to implement the Project.

#### **C. Requirements of Developers**

As part of any response to a request for proposals or any inquiry for development of the Project in accordance with this GPP, developers will be required to demonstrate a willingness and capacity to fund costs of any acquisition and any other costs of development that may be necessary.

#### D. Infrastructure Development

All required infrastructure intended to advance Project purposes will be undertaken as part of the Project, under the aegis of the Public Sponsors, and may be financed through some combination of public and private funds.

Elements of infrastructure will include provision for utilities such as sanitary sewerage, storm water disposal, provision of water, electrical service, gas service and telephone service, as well as roads, sidewalks, streetscape and other similar improvements.

#### E. Operation of Public Open Space

The Project provides for the operation and maintenance of parks and open space. It is anticipated that title to and responsibility for maintenance of the parks and open space shall be transferred to the New York State Office of Parks, Recreation and Historic Preservation (State Parks).

### VI. General Development Controls

The General Development Controls will promote the proper implementation of the Project, consistent with the design objectives formulated during the master planning process. These general controls establish a framework for the development of parcel-specific design guidelines and requirements which will be prepared for the Project by the Public Sponsors, and will be incorporated as part of land disposition agreements governing development under this Plan.

The General Development Controls consist of three elements: building bulk and massing controls; pedestrian and vehicular circulation controls; and open space controls. The General Development Controls are set out in Attachment 3 (parcel descriptions), and are presented graphically in Attachments 4a & b (bulk controls), 5a & b (circulation controls) and 6a & b (open space controls).

#### A. Proposed Parcel Descriptions

Attachment 3 hereto describes each parcel, with parcel area, approximate intended program and floor area. Coupled with the bulk, height and setback requirements, these descriptions define the permitted building program.

Lot areas shown are approximate and will be refined following the survey of all the constituent parcels of the Project site.

#### B. Permitted Uses

The following would be allowed as part of the Project:

Residential uses: Residential uses, for sale or for rent (or a combination thereof), public educational uses, community space, recreation and open space.

Retail uses: Retail sales, including restaurants and service establishments. Retail establishments are intended primarily to provide convenience services for the use of residents and commercial



occupants of the Project Area. Retail uses may be permitted on any residential parcel, so long as the total retail program is not exceeded. Retail locations on commercial parcels are required.

Open Space uses: Open space uses include active and passive recreational uses accessible to the general public, except as otherwise specified herein.

### C. Bulk Controls

#### 1. Intent

Bulk Controls establish the building envelopes for the Project. The objectives of these controls are to: (1) delineate the distribution of building development across the site, assuring that the overall physical massing and form of the Project reflects the design principles identified in the overall physical planning process; (2) establish building heights, street wall requirements, setbacks, and tower locations, so as to ensure adequate light and air for streets, parks, public spaces and adjacent context and to preserve views and vistas; and (3) encourage development that will complement adjacent properties through building elements placed to create design emphases, reinforce open space planning concepts and preserve waterfront views.

Shifts in bulk among residential parcels and among commercial parcels and modifications to individual parcel height and setback requirements may be permitted by the Public Sponsors, as long as such changes reinforce Project design goals and objectives and do not result in a change to total Project building program floor area, Project height or grade level setback requirements. The total Project building program will be limited to approximately 4.6 million square feet, inclusive of program additions requested as part of the Board of Estimate approval of the General Project Plan. The overall Project height will not exceed 400 feet for residential parcels.

#### 2. Definitions

The following definitions are illustrated on the accompanying Bulk Controls diagrams (Attachments 4a & b):

Height Control Line - A line defining the boundaries of each height restriction zone. A building wall is permitted, but not required, to occur along the height control line and may be built to a height not exceeding the height restriction specified.

Lot Line - A line defining the boundary of a tract of land intended for development. Lot lines may coincide with a required street wall.

Maximum Building Height - The maximum building height permitted, measured from the adjacent finished curb level. The following are permitted obstructions or exceptions which may penetrate the maximum building height limit: chimneys or flues; elevator or stair bulkheads, roof water tanks or cooling towers (including enclosures); flagpoles or aerials; ornamental church towers having no habitable floor area; certain parapet walls; spires or belfries; wire, chain link, or other transparent fences.

Street Line - A lot line separating a street from other land.

Street Wall -A wall or portion of a wall of a building facing a street or publicly accessible private pedestrian space.

Required Street Wall -A wall or portion of a wall of a building facing a street or publicly accessible private pedestrian space which must be built to a height of between 40'0" and 100'0" above curb level. Modulation of the street wall within these ranges will be permitted in order to create a sense of different uses, visual interest and orientation.

D. Circulation Controls

1. Intent

Circulation Controls have been established to create parameters for the location of pedestrian and vehicular circulation elements and the placement of pedestrian and service easements. The objectives of the Circulation Controls are to: (1) provide separation of vehicular and pedestrian movements to the extent feasible; (2) minimize pedestrian/vehicular conflicts particularly with regard to curb cuts on major pedestrian circulation routes; (3) provide public street activity at the Project perimeter, along Center Boulevard and on side streets through locating building entry zones on each parcel; (4) assure public access to the waterfront through provision of a combination of various pedestrian/circulation easements.

2. Definitions

The following terms are illustrated on the accompanying Circulation Controls Diagram (Attachments 5a & b):

Building Entrance Zone -Required primary building entrance location, with other points of entry permitted.

Curb Cut Zone -Portions of parcel areas where curb cuts are permitted. These curb cut requirements shall be in addition to any other applicable City rules or regulations concerning driveway curb cuts, as may be required.

E. Open Space Controls

1. Intent

Open Space Controls establish the location and nature of public and private open space treatments to be developed as part of the Project, and describe the design intent of active and passive recreational areas. The objectives of these controls are: (1) to promote a high level of design quality and diversity of public and private open spaces; (2) to promote a continuity of the design through common and compatible treatments of public streets and open spaces; and (3) to respond to the adjacent context.

The nature and character of public open spaces have been defined in the Uniform Land Use Review Procedure (ULURP) application submitted by EDC as part of the Project. The Open Space

Controls are a departure point for the treatment of open space which will be incorporated into the Design Guidelines, to be developed and implemented through the land disposition agreements and infrastructure development program.

## 2. Definitions

The following definitions are illustrated on the accompanying Open Space Controls diagram (Attachments 6a & b):

Grade Level Setback -A grade level setback is an area defined by the lot line or height control line. Grade level setbacks occur on residential parcels. Permitted encroachments into this area include stoops, bay windows, canopies, balconies, and retail storefronts.

Private Open Space -An area within the lot lines of a parcel, which is located at or above grade level, which has an unobstructed exposure to the sky and which is for the exclusive use of residents of that parcel.

Publicly Accessible Private Pedestrian Space -A continuous area, located on privately owned land, designated for public pedestrian circulation.

Public Open Space -A publicly accessible and maintained landscaped pedestrian esplanade provided along the entire length of the waterfront including Anable Basin and the community park located south of Parcel 4. The esplanade links all the neighborhoods and contains a mix of passive and active uses.

## VII. Relocation

No residential relocation will be required.

## VIII. Environmental Review

The GPP originally affirmed by the ESDC Directors in January 1991 was the subject of an Environmental Impact Statement (EIS) for which ESDC was the lead agency. The City is preparing an EIS for its proposed acquisition of and development in Stages 3 and 4 of the Project, which is the reason for the GPP modifications herein. ESDC is an involved agency in that EIS, and will make findings in accordance therewith, prior to and in conjunction with the affirmance of the modified GPP.

## IX. Real Estate Taxes

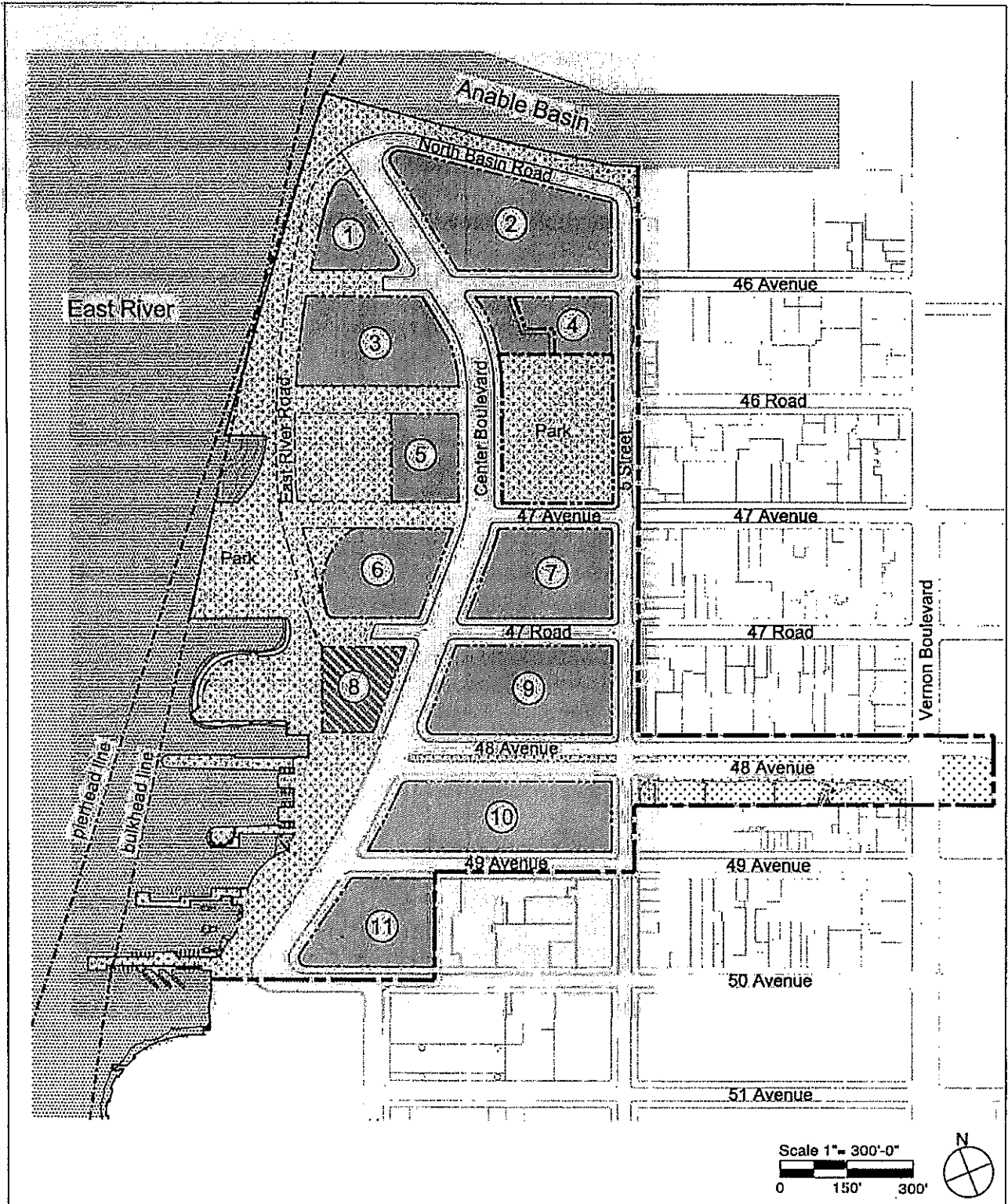
The equivalent of real estate taxes, payable as Payments in Lieu of Taxes (PILOT), shall be based on existing as-of-right programs that have been agreed to between the Public Sponsors and have been incorporated into the respective development leases in the Project area. Such PILOT payments shall be made to the City either directly by lessees or to QWDC, which will forward such payments to the City. It is anticipated that QWDC and the City will enter into an agreement memorializing all PILOT amounts due from lessees and providing a mechanism for payment.

X. Zoning and Building Code

The Project will be developed in substantial conformance with the General Development Controls outlined herein and Project design guidelines developed by QWDC. These General Development Controls and design guidelines will apply in lieu of the New York City Zoning Resolution.

The construction of all buildings and public improvements will conform to the New York City Building Code.








# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



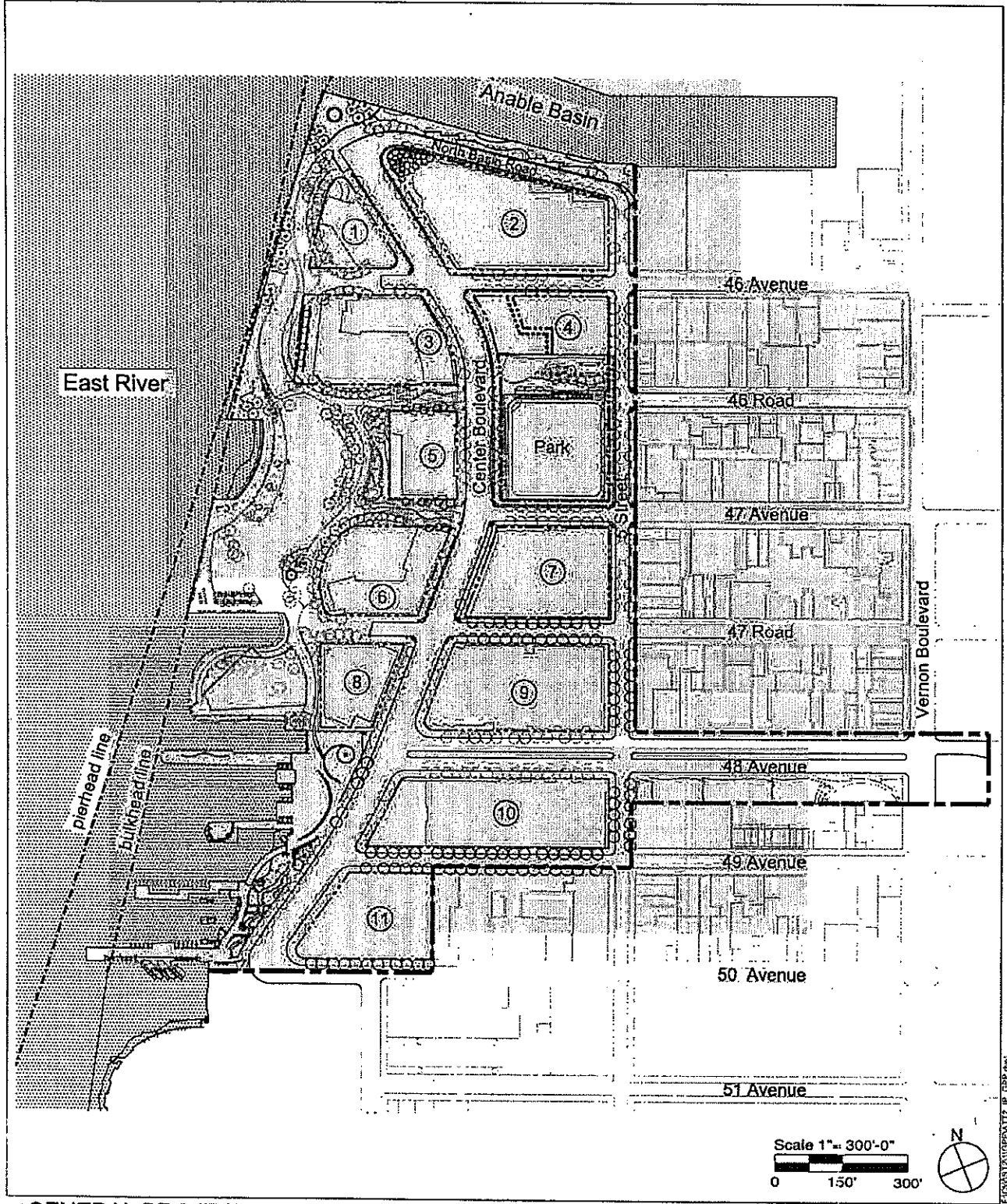
## GENERAL PROJECT PLAN

Attachment #1

### Land Use Plan

- |  |  |
|--|--|
|  Residential    |  Project Boundary |
|  Open Space     |  Lot Line         |
|  Public Library |  Unbuilt Street   |
|  |  Parcel Number    |

# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



**GENERAL PROJECT PLAN**  
**Proposed Illustrative Site Plan**

Attachment #2

- Project Boundary
- Lot Line
- ⑧ Parcel Number

**GENERAL PROJECT PLAN**  
**Attachment 3**  
**Parcel Descriptions [16]**  
**Proposed Program, Bulk and Use Controls**

parcel	approx lot area	residential floor area	commercial / office / hotel area	retail floor area (1)	public facilities floor area	total floor area (2)	maximum bldg height	parking spaces	loading spaces	private open space	other requirements
1	24,786	296,972 (15)(18)		4,000 (13)		300,972	330 (15)(18)	0	0	13,500	0 SF PAPPs
2	89,985	726,000		11,925 (12)(17)		737,925	390	1,000 (7)	0	11,000	6,600 SF PAPPs
3	57,105	311,786 (18)(19)		8,000 (13)		319,786	260 (18)	0	0		8,386 SF PAPPs
4	35,740	343,000 (15)		1,610 (17)	100,000 (5)(14)	444,610	400 (15)	0	0		
5	30,767	250,000		800 (11)		250,800	200	0	0	8,000	666 SF PAPPs
6	48,090	457,242 (19)		5,000		462,242	300	0	0	12,000	535 SF PAPPs
7	57,931	432,000		35,000 (10)		467,000	290	825 (7)	0		
8	32,040	0 (9)		28,090 (17)	25,000 (9)	53,090	130	0	0	10,000	15,900 wide PAPPs
9	77,809	539,000 (9)		30,000		569,000	370	594 (6)	1		
10	79,553	495,000		40,000 (4)	15,000 (18)(9)	550,000	390	527	1	9,000	12,000 SF PAPPs
11	50,874	435,000 (6)		10,000		445,000	300	135 (6)	0		
	583,380	4,287,000		174,325	140,000	4,601,325		3,081	2	63,500	

(1) Suggested retail program. Retail is permitted on all parcels but shall not exceed the total 235,000 SF program.

(2) Total Floor Area is all floor area above grade, excluding parking and mechanical space (3% residential and 5% commercial).

(3) Parcel 16, redesignated as public open space, has been omitted. Parcel no longer part of Project.

(4) 27,000 SF of retail on parcel 10 is being used as an early childhood learning center.

(5) Elementary school (Grades K-5) pursuant to NYC Board of Estimate's Resolution of Approval and current NYC Board of Education space planning requirements.

(6) April 19, 2000 GPP amendment resulted in increased residential area on parcel 11 by 20,000 SF and transfer of 234 parking spaces from parcel 11 to parcel 9.

(7) Based on square footage of parking provided. Assume 275 SF per parking space.

(8) Community Center with swimming pool, pursuant to the NYC Board of Estimate's Resolution of Approval.

(9) February 24, 2004 GPP amendment transferred 104,000 residential SF from parcel 8 to parcel 9 and transfer of 25,000 Public Facilities SF from parcel 10 to parcel 8 to accommodate a library.

(10) April 20, 2006 GPP amendment transferred 20,000 SF of retail from parcel 14 to parcel 7, which increased retail area on parcel 7 to a total of 35,000 SF.

(11) July 20, 2006 GPP amendment transferred 800 SF of retail from parcel 13 to parcel 5, which increased retail area on parcel 5 to a total of 800 SF.

(12) October 11, 2007 GPP amendment transferred 6,525 SF of retail from parcel 13 to parcel 2, which increased retail area on parcel 2 to a total of 6,525 SF.

(13) January 28, 2008, GPP amendment creating 12,000 SF of retail space on parcels 1 and 3, which increased retail area on parcel 1 to a total of 4,000 SF, and parcel 3 to a total of 8,000 SF.

(14) January 28, 2008, GPP amendment to create discrete sub-parcels for the school and the residential area on parcel 4.

(15) January 28, 2008, GPP amendment to transfer 90,000 square feet of residential area from parcel 4 to parcel 1; increase the height of parcel 1 from 240 to 365 feet; increase the height of parcel 4 from 270 to 400 feet; eliminate the grade level setbacks at the residential area of parcel 4.

[16] April 17, 2008 GPP modification terminating Project as to Stages 3 and 4.

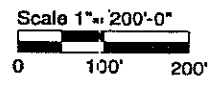
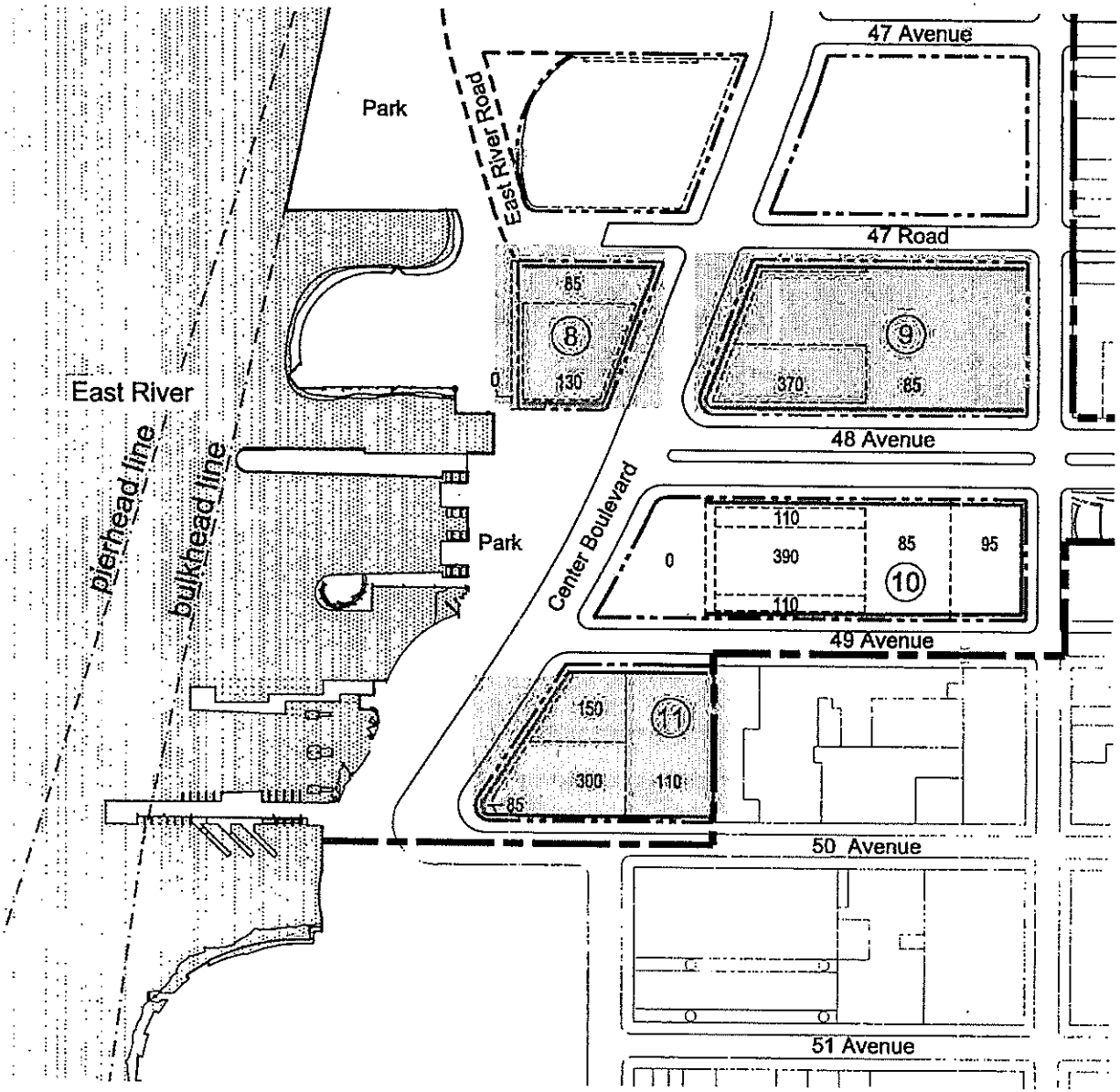
[17] March 19, 2009 GPP amendment transferring 6,910 SF of retail from parcel 8 to parcel 2 (5,400 SF) and parcel 4 (1,510 SF)

[18] March 19, 2009 GPP amendment transferring 51,028 SF of residential SF from parcel 1 to parcel 3; reducing maximum building height on parcel 1 to 330 feet and increasing maximum building height on parcel 3 to 260 feet.

[19] March 19, 2009 GPP amendment transferring 10,758 SF of residential SF from parcel 6 to parcel 3.

Revisions: September 2001; April 2003; February 2004; April 2006; July 2006; October 2007; December 2007; January 2008; Sept. 2008; March 2009

# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



## GENERAL PROJECT PLAN Bulk Controls - Stage 1

Attachment #4a

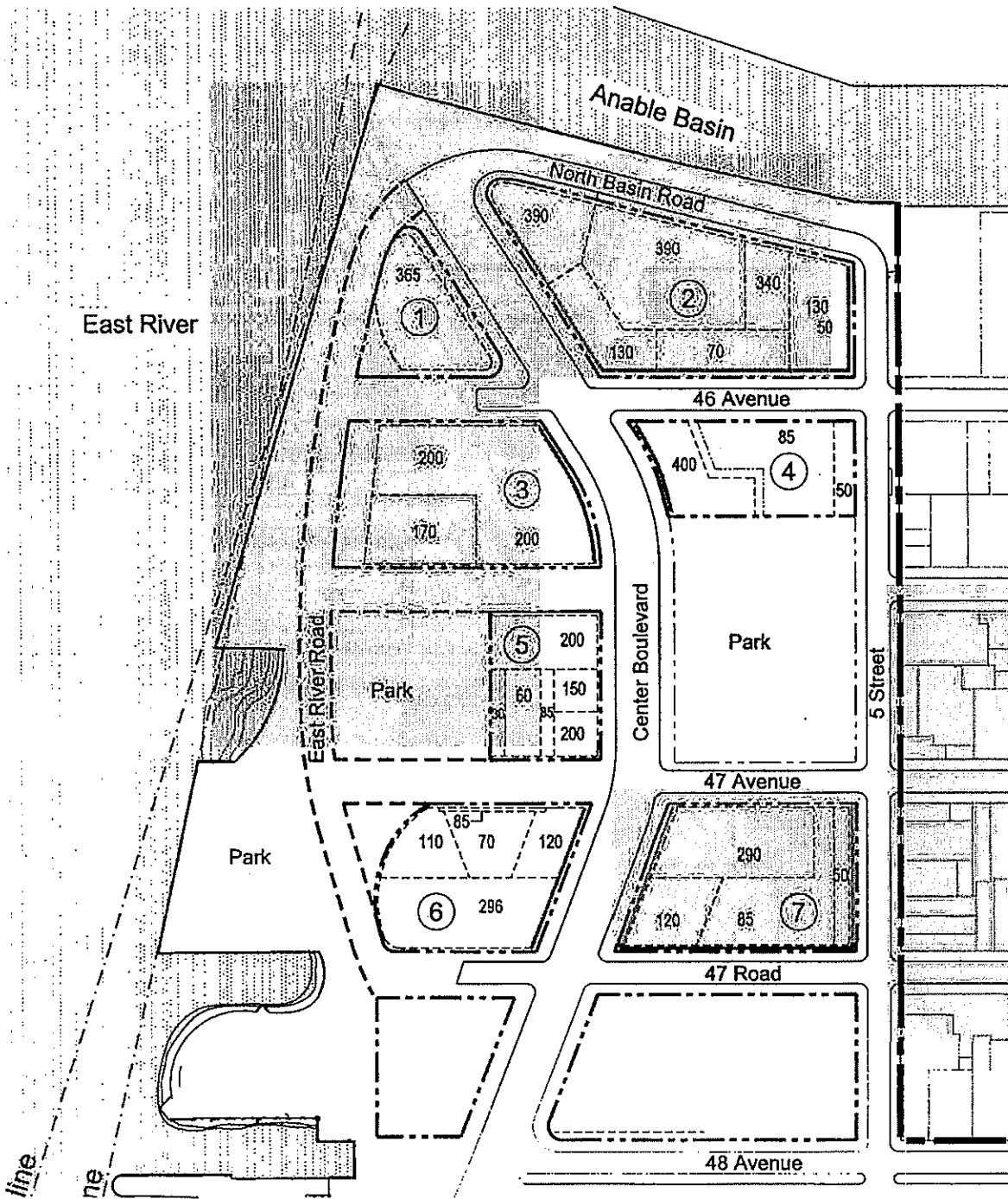
- 296 Height Restriction (in feet)
- Required Street Wall
- Height Control Line
- Project Boundary
- Lot Line
- Unbuilt Street
- Parcel Number

rev. 02/24/04  
rev. 04/17/08

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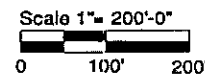


# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



## GENERAL PROJECT PLAN Bulk Controls - Stage 2

- |           |                              |           |                |
|-----------|------------------------------|-----------|----------------|
| 296       | Height Restriction (in feet) | -----     | Lot Line       |
| -----     | Required Street Wall         | - - - - - | Unbuilt Street |
| - - - - - | Height Control Line          | Ⓢ         | Parcel Number  |
| -----     | Project Boundary             |           |                |

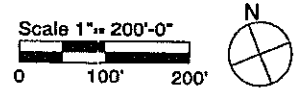
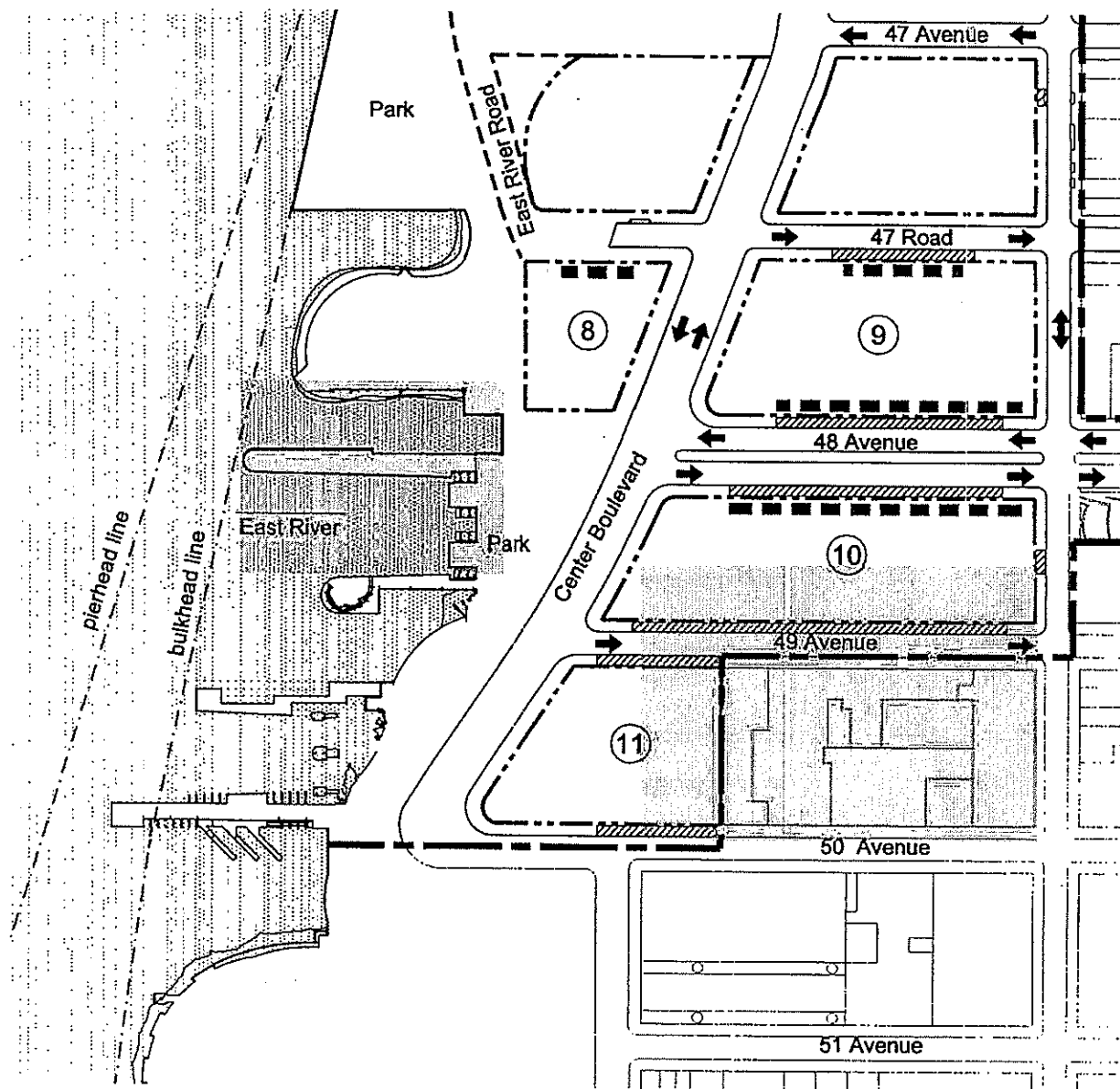


Attachment #4b

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 rev. 04/23/03  
 rev. 07/20/06  
 rev. 10/18/07  
 rev. 01/28/08  
 rev. 04/17/08

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# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



## GENERAL PROJECT PLAN Circulation Controls - Stage 1

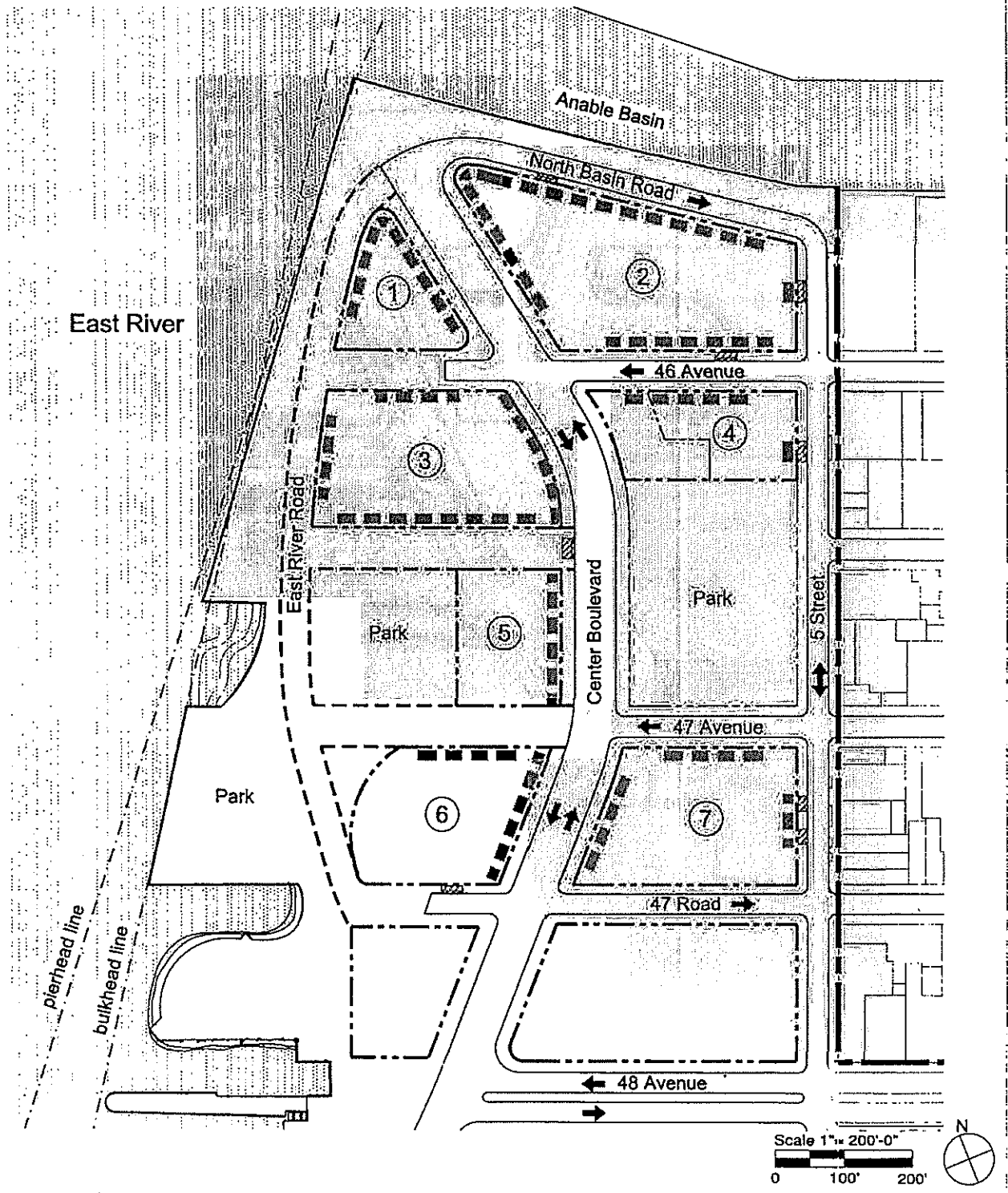
- ■ ■ Building Entrance Zone
- ▨ Curb Cut Zone
- ← Traffic Direction
- Project Boundary
- Lot Line
- Ⓢ Parcel Number

Attachment #5a

rev. 04/17/08

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# QUEENS WEST DEVELOPMENT AT HUNTERS POINT

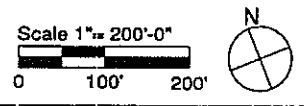
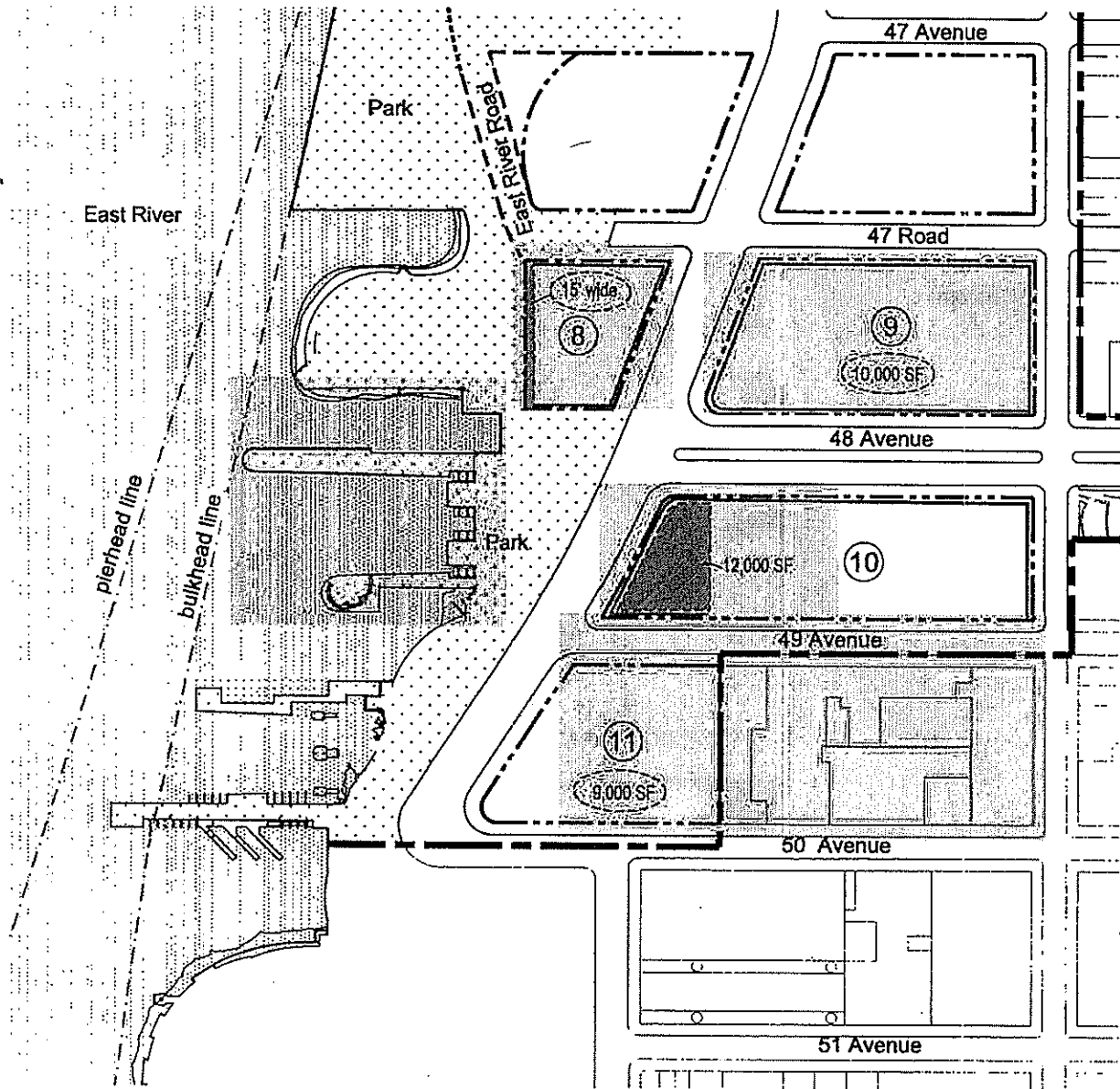


## GENERAL PROJECT PLAN Circulation Controls - Stage 2

- ■ ■ Building Entrance Zone
- ▨ Curb Cut Zone
- ← Traffic Direction
- Project Boundary
- ..... Lot Line
- ⑧ Parcel Number

Attachment #5b

# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



## GENERAL PROJECT PLAN Open Space Controls - Stage 1

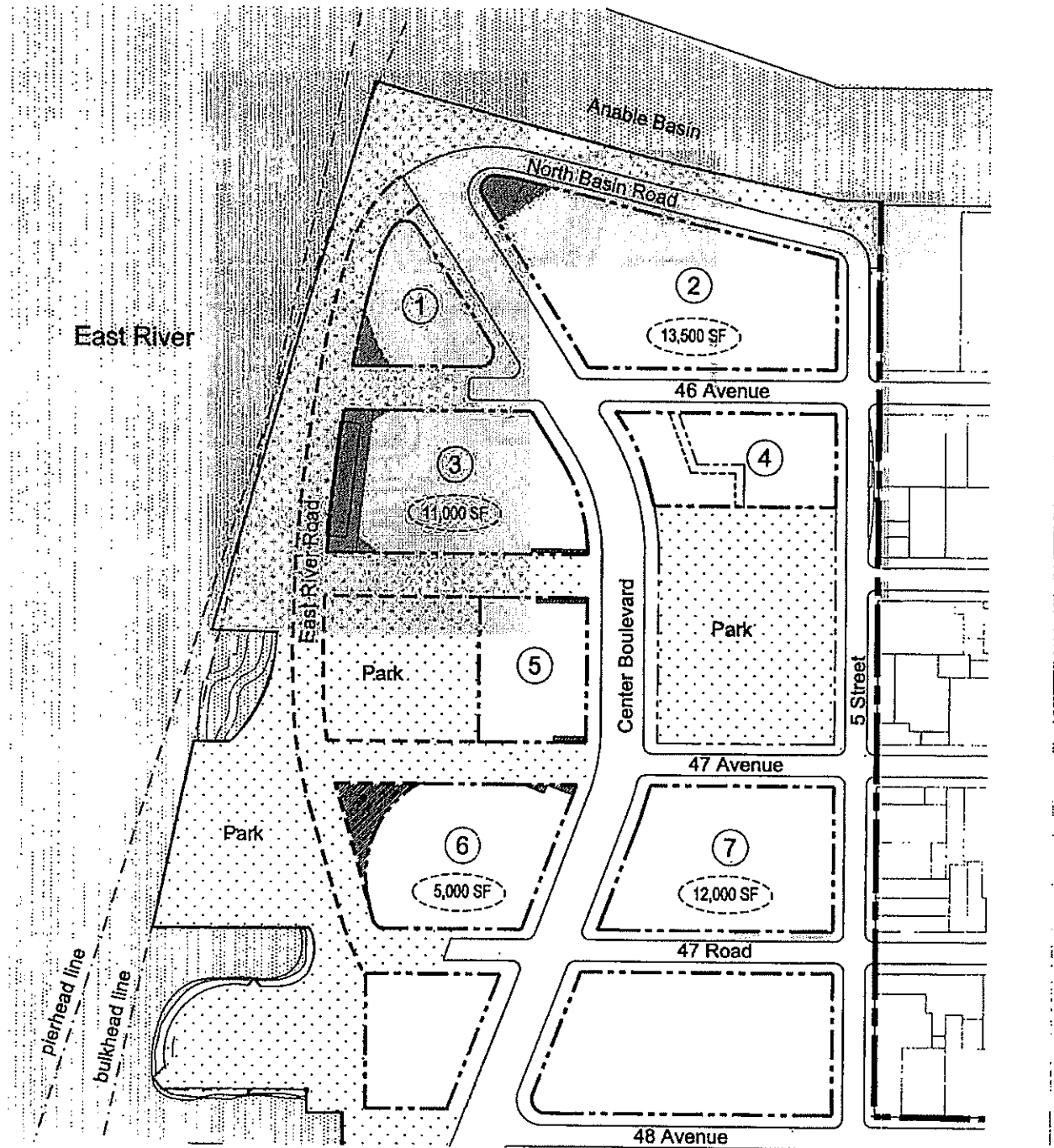
- |  |                  |
|--|------------------|
| Public Open Space                            | Project Boundary |
| Private Open Space (square feet)             | Lot Line         |
| Publicly Accessible Private Pedestrian Space | Unbuilt Street   |
| Grade Level Setback                          | Parcel Number    |

Attachment #6a





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



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# QUEENS WEST DEVELOPMENT AT HUNTERS POINT



## General Project Plan Open Space Controls - Stage 2

-  Public Open Space
-  Private Open Space (square feet)
-  Publicly Accessible Private Pedestrian Space
-  Grade Level Setback

-  Project Boundary
-  Lot Line
-  Unbuilt Street
-  Parcel Number

Attachment #6b

rev. 09/01  
rev. 04/17/08

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**APPENDIX B**  
**NYC WRP CONSISTENCY ASSESSMENT FORM**

For Internal Use Only:	WRP no. _____
Date Received: _____	DOS no. _____

**NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM  
Consistency Assessment Form**

Proposed action subject to CEQR, ULURP, or other Local, State or Federal Agency Discretionary Actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the New York City Waterfront Revitalization Program (WRP). The WRP was adopted as a 197-a Plan by the Council of the City of New York on October 13, 1999, and approved in coordination with local, state and Federal laws and regulations, including the State's Coastal Management Program (Executive Law, Article 42) and the Federal Coastal Zone Management Act of 1972 (P.L. 92-583). As a result of these approvals, state and federal discretionary actions within the city's coastal zone must be consistent to the maximum extent practicable with the WRP policies and the city must be given the opportunity to comment on all state and federal projects within its coastal zone.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, other State Agency or the New York City Department of City Planning in its review of the applicant's certification of consistency.

**A. APPLICANT**

1. **Name:** Lisa M. Lau, AKRF, Inc. on behalf of the New York City School Construction Authority  


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**Address:** 440 Park Avenue South, New York, NY 10016
  
3. **Telephone:** (646) 388-9781 **Fax:** (212) 779-9271  


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**E-mail Address:** llau@akrf.com
  
4. **Project site owner:** Queens West Development Corporation  


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**B. PROPOSED ACTIVITY**

1. **Brief description of activity:** The applicant seeks to construct an approximately 665-seat elementary and intermediate school on a portion of Block 21, Lot 30 in Queens.  


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2. **Purpose of activity:** The proposed project would allow construction of a new elementary and intermediate school on the project site.  


---
3. **Location of activity:** Long Island City  
**Borough:** Queens  


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**Street Address or Site Description:** The project site is Parcel 4 of the Queens West Development and located on the west side of 5th Street between 46th Road and 46th Avenue.  


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4. **If a federal or state permit or license was issued or is required for the proposed activity, identify the permit type(s), the authorizing agency and provide the application or permit number(s), if known:** No federal or state permits are necessary for the proposed project.  


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5. **Is federal or state funding being used to finance the project? If so, please identify the funding source(s).**  
**Construction costs will be funded by the New York City Department of Education's Five-Year Capital Plan for Fiscal Years 2010-2014.**  


---
6. **Will the proposed project result in any large physical change to a site within the coastal area that will require the preparation of an environmental impact statement?** **Yes**      **No**  
**If yes, identify Lead Agency:** \_\_\_\_\_      ✓  


---
7. **Identify City discretionary actions, such as zoning amendment or adoption of an urban renewal plan, required for the proposed project.**  
**None**  


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### C. COASTAL ASSESSMENT

The following questions represent, in a broad sense, the policy of the WRP. The number in the parentheses after each question indicated the policy or policies that are the focus of the question. A detailed explanation of the Waterfront Revitalization Program and its policies are contained in the publication the *New York City Waterfront Revitalization Program*.

Check either "Yes" or "No" for each of the following questions. Once the checklist is completed, assess how the proposed project affects the policy or standards indicated in "( )" after each question with a Yes response. Explain how the action is consistent with the goals of the policy or standard.

#### Location Questions:

	Yes	No
1. Is the project site on the waterfront or at the water's edge?	_____	✓
2. Does the proposed project require a waterfront site?	_____	✓
3. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land underwater, or coastal waters?	_____	✓

#### Policy Questions:

The following questions represent, in a broad sense, the policies of the WRP. Numbers in parentheses after each questions indicate the policy or policies addressed by the question. The new Waterfront Revitalization Program offers detailed explanations of the policies, including criteria for consistency determinations.

Check either "Yes" or "No" for each of the following questions. For all "yes" responses, provide an attachment assessing the effects of the proposed activity on the relevant policies or standards. Explain how the action would be consistent with the goals of those policies and standards.

	Yes	No
4. Will the proposed project result in revitalization or redevelopment of a deteriorated or under-used waterfront site? (1) <b>As described in Chapter 2, "Land Use, Zoning, and Public Policy," the project site is currently vacant and part of the Queens West development. Development on the project site is governed by the Queens West General Project Plan, which calls for the development of a school on the project site.</b>	✓	_____
5. Is the project site appropriate for residential or commercial redevelopment? (1.1) <b>While the project site is not located on the water's edge, the proposed project would create a new community facility use (elementary and intermediate school) in a waterfront community, and would be consistent with existing public policy.</b>	✓	_____
6. Will the action result in a change in scale or character of a neighborhood? (1.2)	_____	✓
7. Will the proposed activity require provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (1.3)	_____	✓
8. Is the action located in one of the designated Significant Maritime and Industrial Areas (SMIA): South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook, Sunset Park, or Staten Island? (2)	_____	✓
9. Are there any waterfront structures, such as piers, docks, bulkheads or wharves, located on the project sites? (2)	_____	✓
10. Would the action involve the siting or construction of a facility essential to the generation or transmission of energy, or a natural gas facility, or would it develop new energy resources? (2.1)	_____	✓
11. Does the action involve the siting of a working waterfront use outside of a SMIA? (2.2)	_____	✓
12. Does the proposed project involve infrastructure improvement, such as construction or repair of piers, docks, or bulkheads? (2.3, 3.2)	_____	✓
13. Would the action involve mining, dredging, or dredge disposal, or placement of dredged or fill materials in coastal waters? (2.3, 3.1, 4, 5.3, 6.3)	_____	✓
14. Would the action be located in a commercial or recreational boating center, such as City Island, Sheepshead Bay or Great Kills or an area devoted to water-dependent transportation? (3)	_____	✓
15. Would the proposed project have an adverse effect upon the land or water uses within a commercial or recreation boating center or water-dependent transportation center? (3.1)	_____	✓
16. Would the proposed project create any conflicts between commercial and recreational boating? (3.2)	_____	✓
17. Does the proposed project involve any boating activity that would have an impact on the aquatic environment or surrounding land and water uses? (3.3)	_____	✓
18. Is the action located in one of the designated Special Natural Waterfront Areas (SNWA): Long Island Sound-East River, Jamaica Bay, or Northwest Staten Island? (4 and 9.2)	_____	✓
19. Is the project site in or adjacent to a Significant Coastal Fish and Wildlife Habitats? (4.1)	_____	✓



**Policy Questions cont'd:**

	Yes	No
20. Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1 and 9.2)	_____	✓
21. Would the action involve any activity in or near a tidal or freshwater wetland? (4.2)	_____	✓
22. Does the project site contain a rare ecological community or would the proposed project affect a vulnerable plant, fish, or wildlife species? (4.3)	_____	✓
23. Would the action have any effects on commercial or recreational use of fish resources? (4.4)	_____	✓
24. Would the proposed project in any way affect the water quality classification of nearby waters or be unable to be consistent with that classification? (5)	_____	✓
25. Would the action result in any direct or indirect discharges, including toxins, hazardous substances, or other pollutants, effluent, or waste, into any waterbody? (5.1)	_____	✓
26. Would the action result in the draining of stormwater runoff or sewer overflows into coastal waters? (5.1)	_____	✓
27. Will any activity associated with the project generate nonpoint source pollution? (5.2)	_____	✓
28. Would the action cause violations of the National or State air quality standards? (5.2)	_____	✓
29. Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (5.2C)	_____	✓
30. Will the project involve the excavation or placing of fill in or near navigable waters, marshes, estuaries, tidal marshes or other wetlands? (5.3)	_____	✓
31. Would the proposed action have any effects on surface or ground water supplies? (5.4)	_____	✓
32. Would the action result in any activities within a Federally designated flood hazard area or State designated erosion hazards area? (6)	_____	_____
<b>While the project site is located within the 100-year flood plain, it is set back from the water's edge. Furthermore, the proposed project would comply with all applicable statutes governing the construction of buildings in flood hazard areas. Therefore, the proposed project would be consistent with this policy.</b>		
	✓	_____
33. Would the action result in any construction activities that would lead to erosion? (6)	_____	✓
34. Would the action involve construction or reconstruction of flood or erosion control structure? (6.1)	_____	✓
35. Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (6.1)	_____	✓
36. Does the proposed project involve use of public funds for flood prevention or erosion control? (6.2)	_____	✓
37. Would the proposed project affect a non-renewable source of sand? (6.3)	_____	✓
38. Would the action result in shipping, handling, or storing of solid wastes; hazardous materials, or other pollutants? (7)	_____	✓
39. Would the action affect any sites that have been used as landfills? (7.1)	_____	✓
40. Would the action result in development of a site that may contain contamination or has a history of underground fuel tanks, oil spills, or other form or petroleum product use or storage? (7.2)	_____	_____
<b>The proposed project would include measures to ensure that no significant adverse impacts due to the presence of any hazardous or petroleum-contaminated materials would occur either during or following construction at the project site.</b>		
	✓	_____
41. Will the proposed activity result in any transport, storage, treatment, or disposal of solid wastes or hazardous materials; or the siting of a solid or hazardous waste facility? (7.3)	_____	✓
42. Would the action result in a reduction of existing or required access to or along coastal waters, public access areas, or public parks or open spaces? (8)	_____	✓
43. Will the proposed project affect or be located in, on, or adjacent to any federal, state, or city park or other land in public ownership protected for open space preservation? (8)	_____	_____
<b>There is a public park located directly south of the project site. The proposed project would not affect access to this park.</b>		
	✓	_____
44. Would the action result in the provision of open space without the provision for its maintenance? (8.1)	_____	✓

**Policy Questions cont'd:**

	Yes	No
45. Would the action result in any development along the shoreline but NOT include new water enhanced or water dependent recreational space? (8.2)	_____	✓ _____
46. Will the proposed project impede visual access to coastal lands, waters and open space? (8.3)	_____	✓ _____
47. Does the proposed project involve publically owned or acquired land that could accommodate waterfront open space or recreation? (8.4)	_____	✓ _____
48. Does the project site involve lands or waters held in public trust by the state or city? (8.5) <b>The proposed project is located within the Queens West Development, which is a New York State entity. The proposed project does not entail development on lands under water. The proposed project would develop a 665-seat elementary and intermediate school, in accordance with the General Project Plan for the Queens West Development. The proposed project would not interfere with the use or ownership of lands and waters held in the public trust. Therefore, the proposed project is consistent with this policy.</b>	✓ _____	_____
49. Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (9)	_____	✓ _____
50. Does the site currently include elements that degrade the area's scenic quality or block views to the water? (9.1)	_____	✓ _____
51. Would the proposed action have a significant adverse impact on historic, archeological, or cultural resources? (10)	_____	✓ _____
52. Will the proposed activity affect or be located in, on, or adjacent to an historic resource listed on the National or State Register of Historic Places, or designated as a landmark by the City of New York? (10)	_____	✓ _____


**D. CERTIFICATION**

The applicant must certify that the proposed activity is consistent with New York City's Waterfront Revitalization Program, pursuant to the New York State Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If the certification can be made, complete this section.  
 "The proposed activity complies with New York State's Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent Name: Lisa M. Lau, AKRF, Inc. for the New York City School Construction Authority

Address: 440 Park Avenue South, New York, NY 10016

Telephone (646) 388-9781

Applicant/Agent Signature:  Date: August 18, 2010

**APPENDIX C**  
**OPRHP CORRESPONDENCE**



**New York State Office of Parks,  
Recreation and Historic Preservation**

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

December 30, 2008

REAL ESTATE

2009 JAN -8 PM 1:39

David A. Paterson  
Governor

Carol Ash  
Commissioner

Chris Persheff  
NYCSCA  
30-30 Thomson Ave  
Queens, New York 11101-3045

Re: NYCSCA  
Proposed PS/IS 312 at Queens West, Block 26, Lot 1  
Hunters Point/QUEENS, Queens County  
08PR06517

Dear Mr. Persheff:

Thank you for requesting the comments of the Field Services Bureau of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the Field Services Bureau and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the OPRHP's opinion that your project will have No Impact upon cultural resources in or eligible for inclusion in the State and National Register of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont  
Director

2009 JAN -9 PM 1:40

REAL ESTATE

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 8/23/2010

(PLEASE PRINT)

Name: GREGORY P. SHAW

Address: 30-30 THOMSON AVE LIC, C.

I represent: NYC School Construction Authority

Address: 30-30 THOMSON AVE LIC.

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: KEN RICK OLI

Address: 30-30 THOMSON AVE LIC NY

I represent: NYC School Construction Authority

Address: 30-30 THOMSON AVE LIC, NY

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

in favor  in opposition

Date: 8/23/10

(PLEASE PRINT)

Name: ANN D CIECIERSKA

Address: 30-30 THOMSON AVE, LIC, NY

I represent: NYC SCA

Address: 30-30 THOMSON AVE, LIC, NY

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 164 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 8.23.10

(PLEASE PRINT)

Name: Jenny Fernandez

Address: 1 Centre Street

I represent: Landmarks Preservation Commission

Address: S/A/A

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 165 Res. No. Sotto-

in favor  in opposition

Cent Iron HD  
Extension

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: Joyce Mendelsohn

Address: 155 East 34th St. NYC 10016

I represent: NY Metropolitan Chapter Victorian Society of

Address: 232 E 11th St NYC 10003 America

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 165 Res. No. \_\_\_\_\_

in favor  in opposition

Sotto

Date: 8.23.10

(PLEASE PRINT)

Name: Jenny Fernandez

Address: 1 Centre Street 9th Floor N NY NY

I represent: Landmarks Preservation Commission

Address: S/A/A

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 165 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 8/23/10

(PLEASE PRINT)

Name: Hilda Regier

Address: 325 W. 22nd St.

I represent: Myself

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 165 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

(PLEASE PRINT)

Name: STEPHEN GOTTLIEB

Address: 160 BLEEKER

I represent: VICTORIAN SOCIETY

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 165 Res. No. \_\_\_\_\_

in favor  in opposition

Date: 08/23/10

(PLEASE PRINT)

Name: Ralph Lewis

Address: 545 Broadway, 2

I represent: Bowery Alliance of Neighbors

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL  
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 0165 Res. No. \_\_\_\_\_

in favor  in opposition

Date: \_\_\_\_\_

Name: Michael Slattery (PLEASE PRINT)

Address: 570 Lexington Ave

I represent: Real Estate Board of New York

Address: \_\_\_\_\_

Please complete this card and return to the Sergeant-at-Arms