City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT SHORT FORM ● FOR UNLISTED ACTIONS ONLY

Please fill out, print and submit to the appropriate agency (see instructions)

PART I: GENERAL INFORMATION

1. *Does Action Exceed Any Type I Threshold In 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?*

☐ Yes ☑ No

If yes, **STOP**, and **complete the FULL EAS**

2. *Project Name* Zoning Map Amendment 209-231 McGuinness Blvd, Greenpoint

3. *Reference Numbers*

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
10DCP024K	
ULURP REFERENCE NUMBER (If Applicable))	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g. Legislative Intro, CAPA, etc)
100218ZMK	N100219ZRY

4a. *Lead Agency Information*

NAME OF LEAD AGENCY: NYC DCP- EARD

NAME OF LEAD AGENCY CONTACT PERSON: Robert Dobruskin, Director

ADDRESS: 22 Reade St

CITY: New York STATE: NY ZIP: 10007

TELEPHONE: 212-720-3423 FAX: 212-720-3495

EMAIL ADDRESS: r_dubrus@planning.nyc.gov

4b. *Applicant Information*

NAME OF APPLICANT: Paul Pullo \ McGuinness Realty

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON: Jim Heineman / Equity Environmental Engineering, LLC

ADDRESS: 277 Route 206 South - Building 1 Suite 6

CITY: Flanders STATE: NJ ZIP: 07836

TELEPHONE: 973-527-7451 x101 FAX: 973-858-0280

EMAIL ADDRESS: Jim.@equityenvironmental.com

5. *Project Description*:

The Applicant, McGuinness Realty is seeking a zoning map amendment for a portion of Block 2576, located in Brooklyn which fronts McGuinness Boulevard between Greenpoint Avenue and Calyer Street. The subject property is currently zoned M1-1. The amendment would rezone the entire block front to R7A with a C2-4 commercial overlay. The Applicant is also seeking a zoning Text Amendment which would allow the rezoned area to participate in the inclusionary housing program.

6a. *Project Location: Single Site* *(for a project at a single site, complete all the information below)*

ADDRESS: 209-231 McGuinness Blvd NEIGHBORHOOD NAME: Greenpoint

TAX BLOCK AND LOT: Block 2576/Lots 7, 20, 23-27, p/o 5, p/o 42 BOROUGH: Brooklyn COMMUNITY DISTRICT: 1

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

West side of McGuinness Blvd bounded by Greenpoint Ave .and Calyer Street

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION IF ANY: M1-1 ZONING SECTIONAL MAP NO: 13a

6b. *Project Location: Multiple Sites* *(Provide a description of the size of the project area in both City Blocks and Lots. If the project would apply to the entire city or to areas that are so extensive that a site-specific description is not appropriate or practicable, describe the area of the project, including bounding streets, etc.)*

NA

7. *REQUIRED ACTIONS OR APPROVALS* *(check all that apply)*

City Planning Commission: YES ☑ NO ☐

- ☐ CITY MAP AMENDMENT
- ☑ ZONING MAP AMENDMENT
- ☑ ZONING TEXT AMENDMENT
- ☑ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ HOUSING PLAN & PROJECT
- ☐ SITE SELECTION — PUBLIC FACILITY
- ☐ FRANCHISE
- ☐ DISPOSITION — REAL PROPERTY

ZONING SPECIAL PERMIT, SPECIFY TYPE:

- ☐ MODIFICATION OF
- ☐ RENEWAL OF
- ☐ OTHER

Board of Standards and Appeals: YES ☐ NO ☑

- ☐ SPECIAL PERMIT

EXPIRATION DATE MONTH DAY YEAR

- ☐ VARIANCE (USE)
- ☐ VARIANCE (BULK)

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION

Department of Environmental Protection: YES ☐ NO ☑ IF YES, IDENTIFY:

Other City Approvals: YES ☐ NO ☑

- ☐ LEGISLATION
- ☐ FUNDING OF CONSTRUCTION; SPECIFY:
- ☐ POLICY OR PLAN; SPECIFY:
- ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL *(not subject to CEQR)*
- ☐ 384(b)(4) APPROVAL
- ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) *(not subject to CEQR)*
- ☐ RULEMAKING
- ☐ CONSTRUCTION OF PUBLIC FACILITIES
- ☐ FUNDING OF PROGRAMS; SPECIFY:
- ☐ PERMITS; SPECIFY:
- ☐ OTHER; EXPLAIN

State or Federal Actions/Approvals/Funding: YES ☐ NO ☑ IF "YES," IDENTIFY:

8. *Site Description:* *Except where otherwise indicated, provide the following information with regard to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory controls.*

GRAPHICS *The following graphics must be attached and each box must be checked off before the EAS is complete.* ***Each map must clearly depict*** *the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11×17 inches in size and must be folded to 8.5 ×11 inches for submission*

- ☑ Site location map
- ☑ Zoning map
- ☑ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map
- ☑ Sanborn or other land use map
- ☑ Tax map
- ☐ For large areas or multiple sites, a GIS shape file that defines the project sites

PHYSICAL SETTING *(both developed and undeveloped areas)*

Total directly affected area (sq. ft.):	Type of Waterbody and surface area (sq. ft.):	Roads, building and other paved surfaces (sq. ft.)
33,750	na	33,750

Other, describe (sq. ft.):

9. *Physical Dimensions and Scale of Project* *(if the project affects multiple sites, provide the total development below facilitated by the action)*

Size of project to be developed: 33,750 (gross sq. ft.)

Does the proposed project involve changes in zoning on one or more sites? YES ☑ NO ☐

If 'Yes,' identify the total square feet owned or controlled by the applicant: Total square feet of non-applicant owned development: 56,000

Does the proposed project involve in-ground excavation or subsurface disturbance, including but not limited to foundation work, pilings, utility lines, or grading? YES ☐ NO ☑

If 'Yes,' indicate the estimated area and volume dimensions of subsurface disturbance (if known):

Area: sq. ft. (width × length) Volume: cubic feet (width × length × depth)

DESCRIPTION OF PROPOSED USES *(please complete the following information as appropriate)*

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	138,879	26,335		
Type (e.g. retail, office, school)	141 units	retail		

Does the proposed project increase the population of residents and/or on-site workers? YES ☑ NO ☐ Number of additional residents? Number of additional workers?

Provide a brief explanation of how these numbers were determined: 308 residents (2.19 persons/household 2010 US Census - track 575) 46 workers

Does the project create new open space? YES ☐ NO ☑ if Yes (sq. ft)

Using Table 14-1, estimate the project's projected operational solid waste generation, if applicable: 9,494 (pounds per week)

Using energy modeling or Table 15-1, estimate the project's projected energy use: 23.3 million BTUs (annual BTUs)

Has a No-Action scenario been defined for this project that differs from the existing condition? YES ☐ NO ☑ If 'Yes,' see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

10. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL): 2015	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18 months
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ☑ NO ☐	IF MULTIPLE PHASES, HOW MANY PHASES:
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:	

11. *What is the Predominant Land Use in Vicinity of Project?* *(Check all that apply)*

☑ RESIDENTIAL ☐ MANUFACTURING ☑ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER, Describe:

PART II: TECHNICAL ANALYSES

INSTRUCTIONS: The questions in the following table refer to the thresholds for each analysis area in the respective chapter of the CEQR Technical Manual.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the '**NO**' box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the '**YES**' box.
- Often, a 'Yes' answer will result in a preliminary analysis to determine whether further analysis is needed. For each 'Yes' response, consult the relevant chapter of the CEQR Technical Manual for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether detailed analysis is needed. Please note that a 'Yes' answer does not mean that an EIS must be prepared—it often only means that more information is required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant either to provide additional information to support this Short EAS Form or complete a Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response. In addition, if a large number of the questions are marked 'Yes,' the lead agency may determine that it is appropriate to require completion of the Full EAS Form.

	YES	NO
1. *LAND USE, ZONING AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use or zoning that is different from surrounding land uses and/or zoning? Is there the potential to affect an applicable public policy? If "Yes", complete a preliminary assessment and attach.	✓	
(b) Is the project a large, publicly sponsored project? If "Yes", complete a PlaNYC assessment and attach.		✓
(c) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? If "Yes", complete the Consistency Assessment Form.	✓	
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
• Generate a net increase of 200 or more residential units?		✓
• Generate a net increase of 200,000 or more square feet of commercial space?		✓
• Directly displace more than 500 residents?		✓
• Directly displace more than 100 employees?		✓
• Affect conditions in a specific industry?		✓
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Does the proposed project exceed any of the thresholds outlined in Table 6-1 of Chapter 6?	✓	
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?		✓
(b) Is the proposed project within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 50 or more additional residents?	✓ ✓	
If "Yes," would the proposed project generate 125 or more additional employees?		✓
(c) Is the proposed project in a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 300 or more additional residents?		✓
If "Yes," would the proposed project generate 750 or more additional employees?		
(d) If the proposed project is not located in an underserved or well-served area, would the proposed project generate: 200 or more additional residents?		
500 additional employees?		

	YES	NO
5. *SHADOWS:* *CEQR Technical Manual Chapter 8*		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	✓	
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?		✓
6. *HISTORIC AND CULTURAL RESOURCES*: *CEQR Technical Manual Chapter 9*		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for, or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; is listed or eligible for listing on the New York State or National Register of Historic Places; or is within a designated or eligible New York City, New York State, or National Register Historic District? If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources.		✓
7. *URBAN DESIGN*: *CEQR Technical Manual Chapter 10*		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	✓	
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources that is not currently allowed by existing zoning?		✓
8. *NATURAL RESOURCES:* *CEQR Technical Manual Chapter 11*		
(a) Is any part of the directly affected area within the Jamaica Bay Watershed? If "Yes," complete the Jamaica Bay Watershed Form.		✓
(b) Does the proposed project site or a site adjacent to the project contain natural resources as defined in section 100 of Chapter 11? If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources.		✓
9. *HAZARDOUS MATERIALS:* *CEQR Technical Manual Chapter 12*		
(a) Would the project allow commercial or residential use in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	✓	
(b) Does the project site have existing institutional controls (*e.g.* (E) designations or a Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?		✓
(c) Would the project require soil disturbance in a manufacturing zone or any development on or near a manufacturing zone or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	✓	
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?		✓
(e) Would the project result in development where underground and/or aboveground storage tanks (*e.g.* gas stations) are or were on or near the site?	✓	
(f) Would the project result in renovation of interior existing space on a site with potential compromised air quality, vapor intrusion from on-site or off-site sources, asbestos, PCBs or lead-based paint?		✓
(g) Would the project result in development on or near a government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, municipal incinerators, coal gasification or gas storage sites, or railroad tracks and rights-of-way?		✓
(h) Has a Phase I Environmental Site Assessment been performed for the site? If 'Yes," were RECs identified? Briefly identify: Fuel tank, potential offsite source of groundwater contamination	✓	
10. *INFRASTRUCTURE:* *CEQR Technical Manual Chapter 13*		
(a) Would the proposed project result in water demand of more than one million gallons per day?		✓
(b) Is the proposed project located in a combined sewer area and result in at least 1,000 residential units or 250,000 SF or more of commercial space in Manhattan or at least 400 residential units or 150,000 SF or more of commercial space in the Bronx, Brooklyn, Staten Island or Queens?		✓
(c) Is the proposed project located in a separately sewered area and result in the same or greater development than that listed in Table 13-1 of Chapter 13?		✓
(d) Would the project involve development on a site five acres or larger where the amount of impervious surface would increase?		✓
(e) Would the project involve development on a site one acre or larger where the amount of impervious surface would increase and is located within the Jamaica Bay Watershed or in certain specific drainage areas including: Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek?		✓
(f) Is the project located in an area that is partially sewered or currently unsewered?		✓
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a WWTP and/or generate contaminated stormwater in a separate storm sewer system?		✓
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?		✓
11. *SOLID WASTE AND SANITATION SERVICES:* *CEQR Technical Manual Chapter 14*		
(a) Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?		✓
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?		✓

	YES	NO
12. *ENERGY*: *CEQR Technical Manual Chapter 15*		
(a) Would the proposed project affect the transmission or generation of energy?		✓
13. *TRANSPORTATION*: *CEQR Technical Manual Chapter 16*		
(a) Would the proposed project exceed any threshold identified in Table 16-1 of Chapter 16?	✓	
(b) If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions:		
(1) Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?		
If "Yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection?		✓
***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16, "Transporation," for information.*		
(2) Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?		✓
If "Yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?		
(3) Would the proposed project result in more than 200 pedestrian trips per project peak hour?	✓	
If "Yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?		✓
14. *AIR QUALITY*: *CEQR Technical Manual Chapter 17*		
(a) *Mobile Sources:* Would the proposed project result in the conditions outlined in Section 210 of Chapter 17?		✓
(b) *Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 of Chapter 17?	✓	
If 'Yes,' would the proposed project exceed the thresholds in the Figure 17-3, Stationary Source Screen Graph? (attach graph as needed)		✓
(c) Does the proposed project involve multiple buildings on the project site?		✓
(d) Does the proposed project require Federal approvals, support, licensing, or permits subject to conformity requirements?		✓
(e) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?		✓
15. *GREENHOUSE GAS EMISSIONS*: *CEQR Technical Manual Chapter 18*		
(a) Is the proposed project a city capital project, a power plant, or would fundamentally change the City's solid waste management system?		✓
(b) If "Yes," would the proposed project require a GHG emissions assessment based on the guidance in Chapter 18?		✓
16. *NOISE*: *CEQR Technical Manual Chapter 19*		
(a) Would the proposed project generate or reroute vehicular traffic?		✓
(b) Would the proposed project introduce new or additional receptors (see Section 124 of Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	✓	
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?		✓
(d) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?		✓
17. *PUBLIC HEALTH*: *CEQR Technical Manual Chapter 20*		
(a) Would the proposed project warrant a public health assessment based upon the guidance in Chapter 20?		✓
18. *NEIGHBORHOOD CHARACTER*: *CEQR Technical Manual Chapter 21*		
(a) Based upon the analyses conducted for the following technical areas, check yes if any of the following technical areas required a detailed analysis: Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Open Space, Historic and Cultural Resources, Urban Design and Visual Resources, Shadows, Transportation, Noise		✓
If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance of in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		

		YES	NO
19.	***CONSTRUCTION IMPACTS***: *CEQR Technical Manual Chapter 22* Would the project's construction activities involve (check all that apply):		
	• Construction activities lasting longer than two years;		✓
	• Construction activities within a Central Business District or along an arterial or major thoroughfare;	✓	
	• Require closing, narrowing, or otherwise impeding traffic, transit or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc);	✓	
	• Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out;		✓
	• The operation of several pieces of diesel equipment in a single location at peak construction;		✓
	• Closure of community facilities or disruption in its service;		✓
	• Activities within 400 feet of a historic or cultural resource; or		✓
	• Disturbance of a site containing natural resources.		✓

If any boxes are checked, explain why or why not a preliminary construction assessment is warranted based on the guidance of in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

All construction activities would comply fully with applicable Department of Buildings and Department of Transportation regulations to minimize effects on surrounding land uses and roadways.

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the

Environmental Consultant (APPLICANT/SPONSOR) of Paul Pullo / McGuiness Realty (NAME THE ENTITY OR OWNER)

the entity which seeks the permits, approvals, funding or other governmental action described in this EAS.

Check if prepared by: ☑ APPLICANT/REPRESENTATIVE or ☐ LEAD AGENCY REPRESENTATIVE (FOR CITY-SPONSORED PROJECTS)

Merry Barrieres
APPLICANT/SPONSOR NAME:

LEAD AGENCY REPRESENTATIVE NAME:

SIGNATURE:

July 19, 2012
DATE:

PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.

PART III: DETERMINATION OF SIGNIFICANCE (To Be Completed By Lead Agency)

INSTRUCTIONS:
In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY §6-06 (Executive Order 91 of 1977, as amended) which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant effect on the environment. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.

	Potential Significant Adverse Impact	
IMPACT CATEGORY	**YES**	**NO**
Land Use, Zoning, and Public Policy		✓
Socioeconomic Conditions		✓
Community Facilities and Services		✓
Open Space		✓
Shadows		✓
Historic and Cultural Resources		✓
Urban Design/Visual Resources		✓
Natural Resources		✓
Hazardous Materials	✓	
Water and Sewer Infrastructure		✓
Solid Waste and Sanitation Services		✓
Energy		✓
Transportation		✓
Air Quality		✓
Greenhouse Gas Emissions		✓
Noise		✓
Public Health		✓
Neighborhood Character		✓
Construction Impacts		✓

2. Are there any aspects of the project relevant to the determination whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, explain them and state where, as a result of them, the project may have a significant impact on the environment.

3. ***LEAD AGENCY CERTIFICATION***

Deputy Director, Environmental Assessment & Review Division
TITLE

NYC Department of City Planning
LEAD AGENCY

Celeste Evans
NAME

Celeste Evans
SIGNATURE

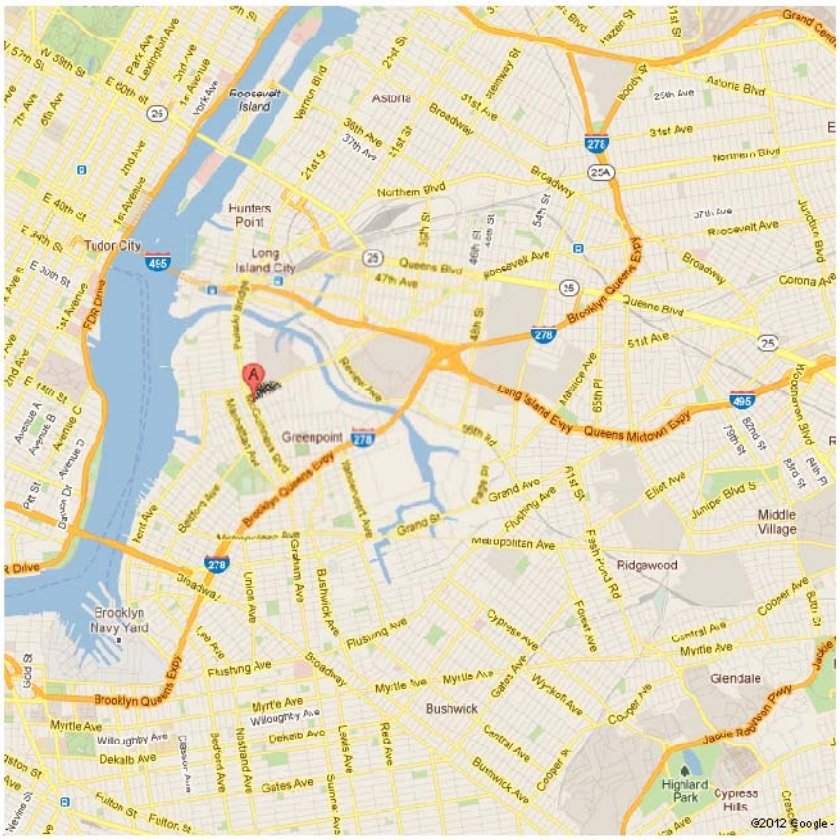
0. Introduction and Project Description

The applicant, McGuinness Realty, is seeking a zoning map amendment from M1-1 to R7A/C2-4 for a portion of a block located in the Greenpoint section of Brooklyn. The rezoning includes all of the lots on the eastern side of Block 2576, bounded by McGuinness Boulevard, Greenpoint Avenue, Eckford Street, and Calyer Street. The affected area comprises the western blockfront of McGuiness Boulevard between Greenpoint Avenue and Calyer Street. Specifically, the following lots would be affected:

Lot Number	Lot Size (sf)	Land Use	Description	#Floors	Gross Floor Area (sf)	Owner
7	8,967	Transportation /Parking	Gas Station	1		Amerada Hess Corp
20	***36,875***	***Commercial***	***retail***	***1***	***13,800***	***Eckford Realty, LLC***
23	***1,875***	***Residential***	***1 family***	***2***	***1,260***	***Point Equities Management***
24	1,875	Residential	Mixed Use	4	6,700	233 Calyer Corp
25	1,875	Residential	Walk up Apartment building	3	3,375	Patricia Mocko
26	1,875	Residential	Walk up Apartment building	4	5,500	Peter Jusczsak
27	2,500	Residential	Walk up Apartment building	4	5,000	Virginia Folek
TOTAL	**55,842**					

Existing Condition

The applicant controls lots 20 and 23, which are currently occupied by a one-family residence, an auto parts store, a billiards hall and café, a lumber sales company, and a vacant retail building. The applicant is also seeking a zoning text amendment, which would allow the rezoned area to participate in the inclusionary housing program and receive bonus floor area. The remaining lots within the proposed rezoning area are described in the table above.



Reasonable Worst Case Development Scenario (RWCDS)

A RWCDS for both "future No-Action" and "future With-Action" conditions would be considered for a 2015 Build year.

The future With-Action scenario identifies the amount, type, and location of development that is expected to occur by 2015 because of the proposed action. The future without the action (or No-Action) scenario identifies similar development projections for 2015 absent the proposed action. The incremental difference between the With-Action and No-Action scenarios serves as the basis for the impact analyses.

To determine the scenarios, standard methodologies have been used following *CEQR Technical Manual* guidelines and employing reasonable worst-case assumptions. These methodologies have been used to identify the amount and location of future residential, commercial, and community facility growth. In projecting the amount and location of new residential development, several factors have been considered, including known development proposals, current housing market demands, and NYC DCP's standard "soft site" criteria, described below, for identifying likely development sites.

The first step in establishing the development scenarios was to identify those sites where new development could reasonably be expected to occur. In identifying the RWCDS, a set of criteria were established and all sites that met the criteria were identified. Development sites were identified based on the following criteria:

1. Lots located in areas where an increase in permitted floor area ratio (FAR) is proposed; AND
2. With a total lot area of 4,000 square feet (sf) or larger on narrow streets, or 5,000 sf or larger on wide streets (may include potential assemblages totaling 4,000 or 5,000 sf, respectively, if assemblage seems probable); AND

3. Constructed to less than or equal to half of the permitted floor area under current zoning (for No-Action condition) and those constructed to less than half the permitted FAR under the proposed zoning (for With-Action condition). If a development site includes multiple tax lots with varying FARs, the overall floor area of the group of lots was used.

Sites or lots with the following land uses are unlikely to be soft sites:

4. Schools (public and private) and houses of worship
5. Multiple dwelling unit building(s) with three or more residential units(required relocation of tenants)
6. Highly irregular lots of otherwise encumbered parcels
7. Active businesses that have undergone extensive investment, which provide unique services, or which are prominent and successful neighborhood businesses or organizations

By the definitions above, the only site not under the project sponsor's control that would be considered a "soft site" is the gasoline station (Lot 7) or Potential Development Site. The remaining lots (24, 25, 26, and 27) are not soft sites because:

- Not in common ownership
- Have lot areas smaller than 4,000 sf
- Currently contain floor areas greater than 50 percent of what could be realized under the proposed rezoning

Lots 20 and 23 comprise the Projected Development site.

Future With Action

The proposed action would facilitate development of the project sponsor's property (Block 2576, Lots 20 and 23). This site will be identified throughout this document as the Projected Development Site. Development would consist of an 8-story mixed residential and commercial building containing 141 dwelling units (138,879 sf), of which 40 would be affordable housing, and 26,335 sf of ground floor commercial space, which would be occupied by local-serving retail uses.

The building would provide 91 accessory parking spaces in a 31,500 sf below-grade garage with a single entrance / exit located to the south of the proposed building. The parking would be available 24 / 7 and be a self-park facility. (Figure 0-1)

In addition to the project sponsor's site, it is possible that the proposed zoning map amendment would result in redevelopment of Block 2576, Lot 7, located at the northern end of the affected area. This site will be identified throughout this document as the Potential Development Site. This lot is currently contains a gas station owned and operated by Hess. The applicant has approached Hess regarding the sale of the property. They, Hess, have told the applicant that the site is not for sale, and would not be in the near future. Therefore, it is considered unlikely the site would be developed by build year of 2015. Accordingly, the development of this site is not assumed, and its development is not included in any assessment of density related impacts such as traffic, school utilization, or open space utilization. However, site specific issues such as hazardous materials and archaeological resources are assessed for this potential development site. (Figure 0-2)

If the potential site were to be developed, it is assumed that the building would have three FAR or about 53,885 sf of residential floor area and one FAR or 12,500 sf, of commercial / retail space. The building would be seven stories in height and have about 32 dwelling units (assuming 850 sf per DU) with ground floor retail uses, set back 10 feet from McGuinness Boulevard and 15 feet from Greenpoint Avenue, and 16 parking spaces in the cellar, with a curb cut on McGuinness Boulevard. It is unknown whether any development on the potential development site would provide inclusionary housing.

Future No-Action

The Future No-Action scenario assumes the Projected Development site would remain in commercial retail use. No other changes to area land uses are anticipated.

Increment

The incremental difference between the Future With Action and Future No Action scenarios would be as follows:

	Future No Action	Future With Action	Difference
Commercial	13,800 sq. ft.	26,335 sq. ft.	12,535
Residential	1 DU	141 DU	140 DU
Parking	50 spaces	91 spaces	41 spaces

The analysis of the projected project will be based on the incremental difference of 12,535 sf commercial use, 140 residential dwelling units and 41 parking spaces. The possibility of development of the Potential Development site will not be considered for density-related impact analysis.

Figure 0-1: Projected Development Site

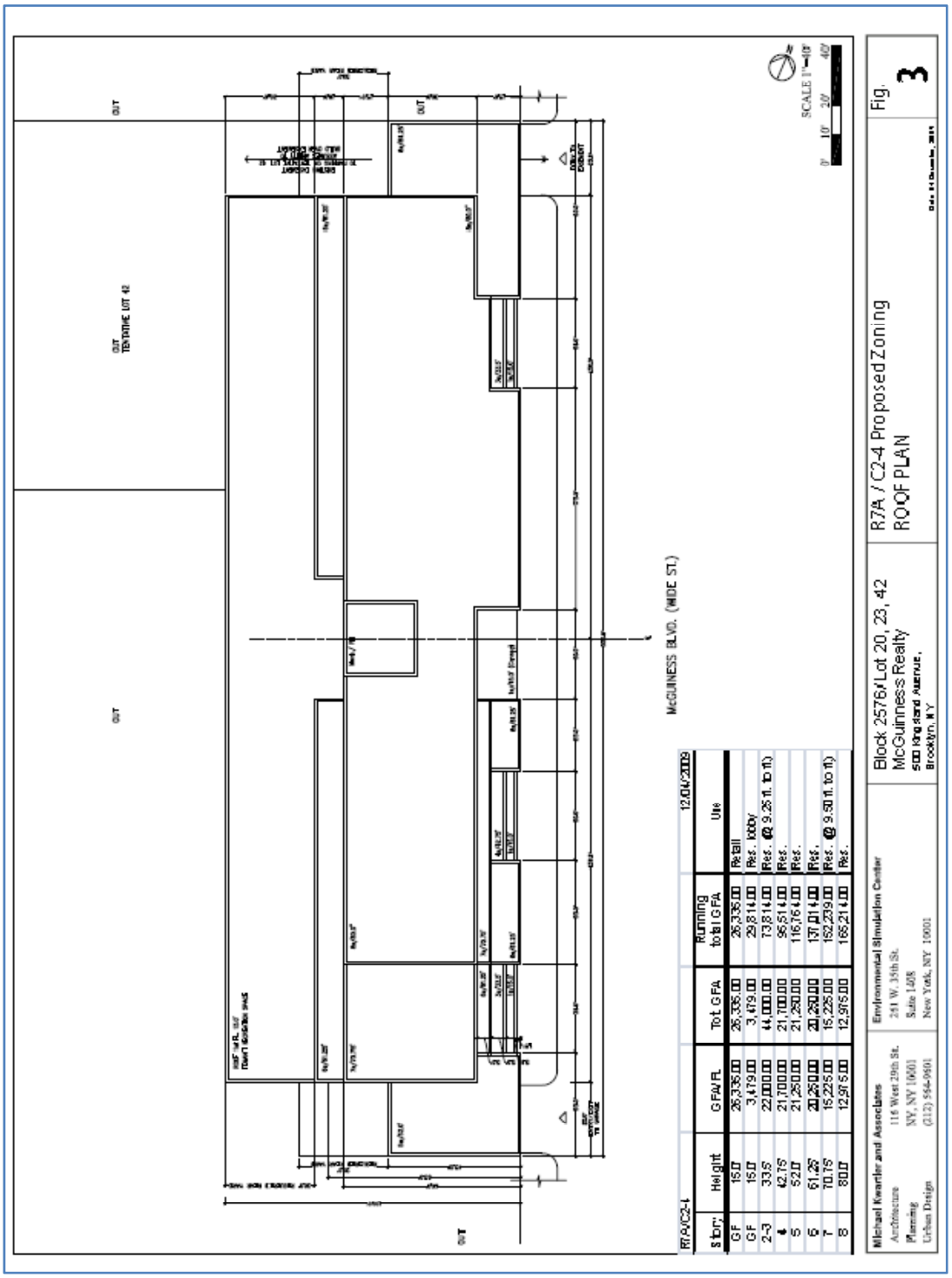
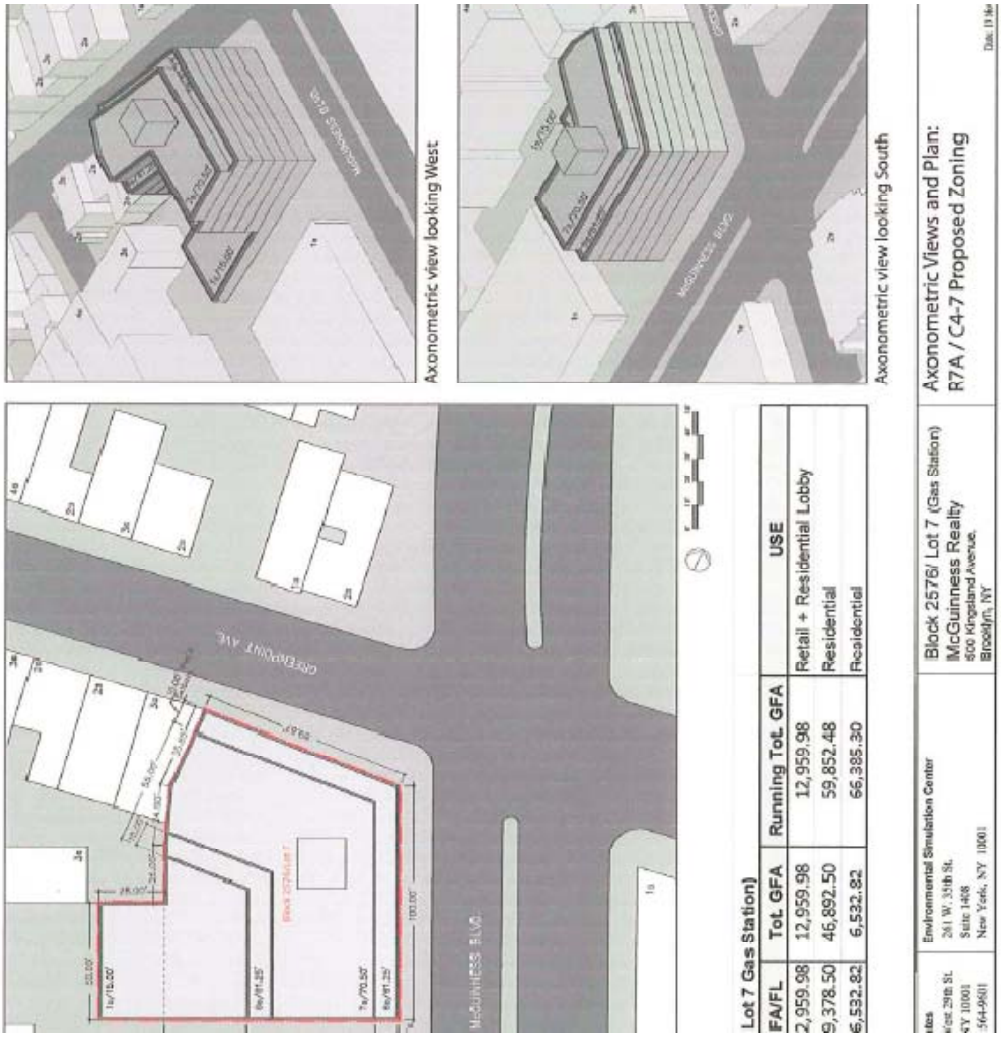


Figure 0-2: Potential Development Site



1. Land Use, Zoning, and Public Policy

Pursuant to the current *CEQR Technical Manual*, a preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. Accordingly, a preliminary assessment of land use, zoning, and public policy is provided. As recommended in the CEQR Technical Manual, a study area extending 400 feet from the boundaries of the affected area is considered. A tax map (Figure 1-1), a land use map (Figure 1-2) and a zoning map (Figure 1-3) for the study area are provided below.

Existing Conditions

Land Use

The affected area is in the Greenpoint section of Brooklyn Community District 1. The area surrounding the affected area is mixed use in character, containing residential buildings to the north, south, and west, and industrial/manufacturing, retail commercial uses, as well as parking and transportation uses to the east. North, south, and west of the affected area are row houses and mid-rise apartment buildings. A supermarket with surface parking lot is located directly across McGuiness Boulevard, to the east of the affected area. Other commercial and light industrial uses are located further east.

Figure 1-1: Tax Map

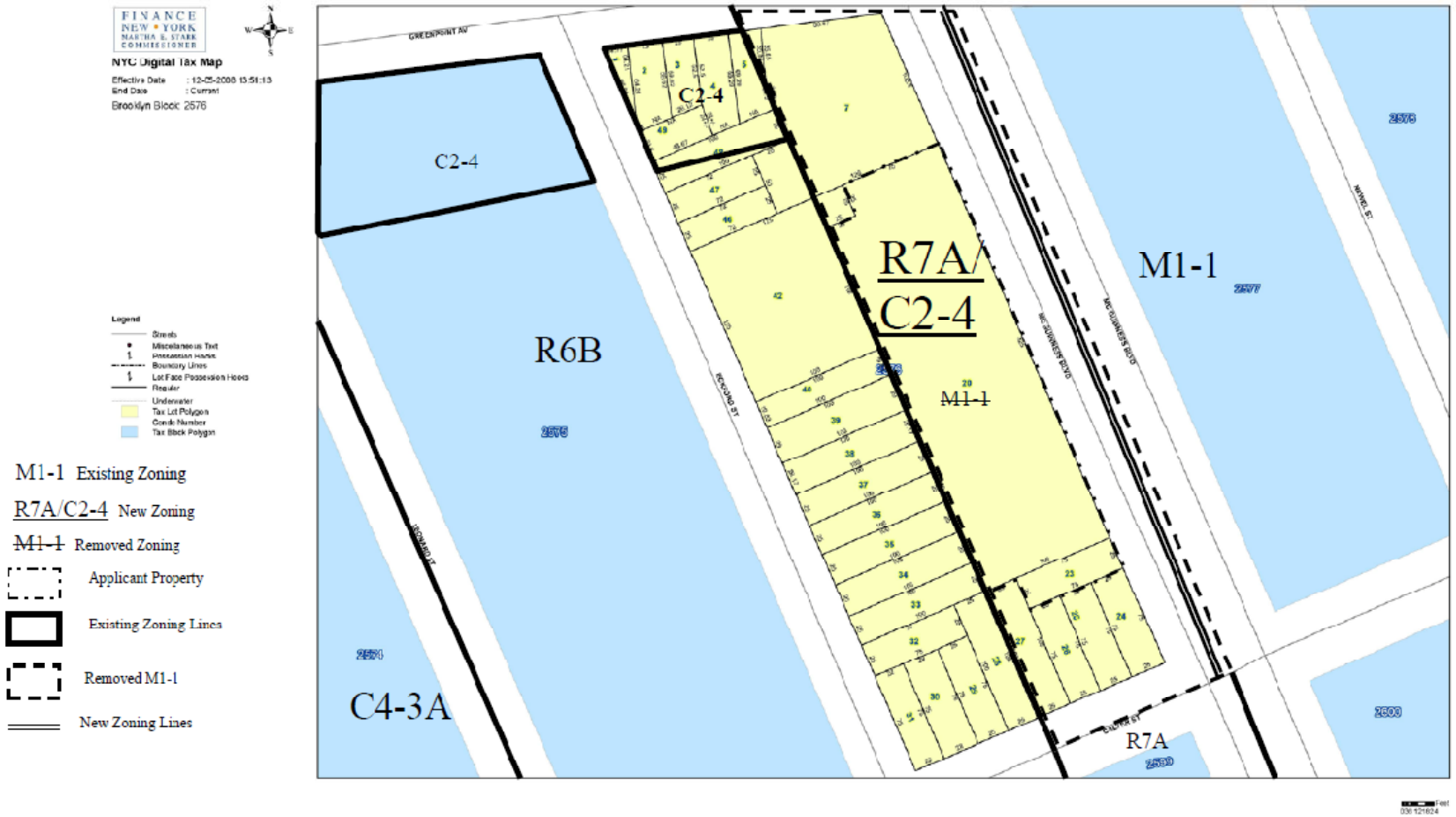
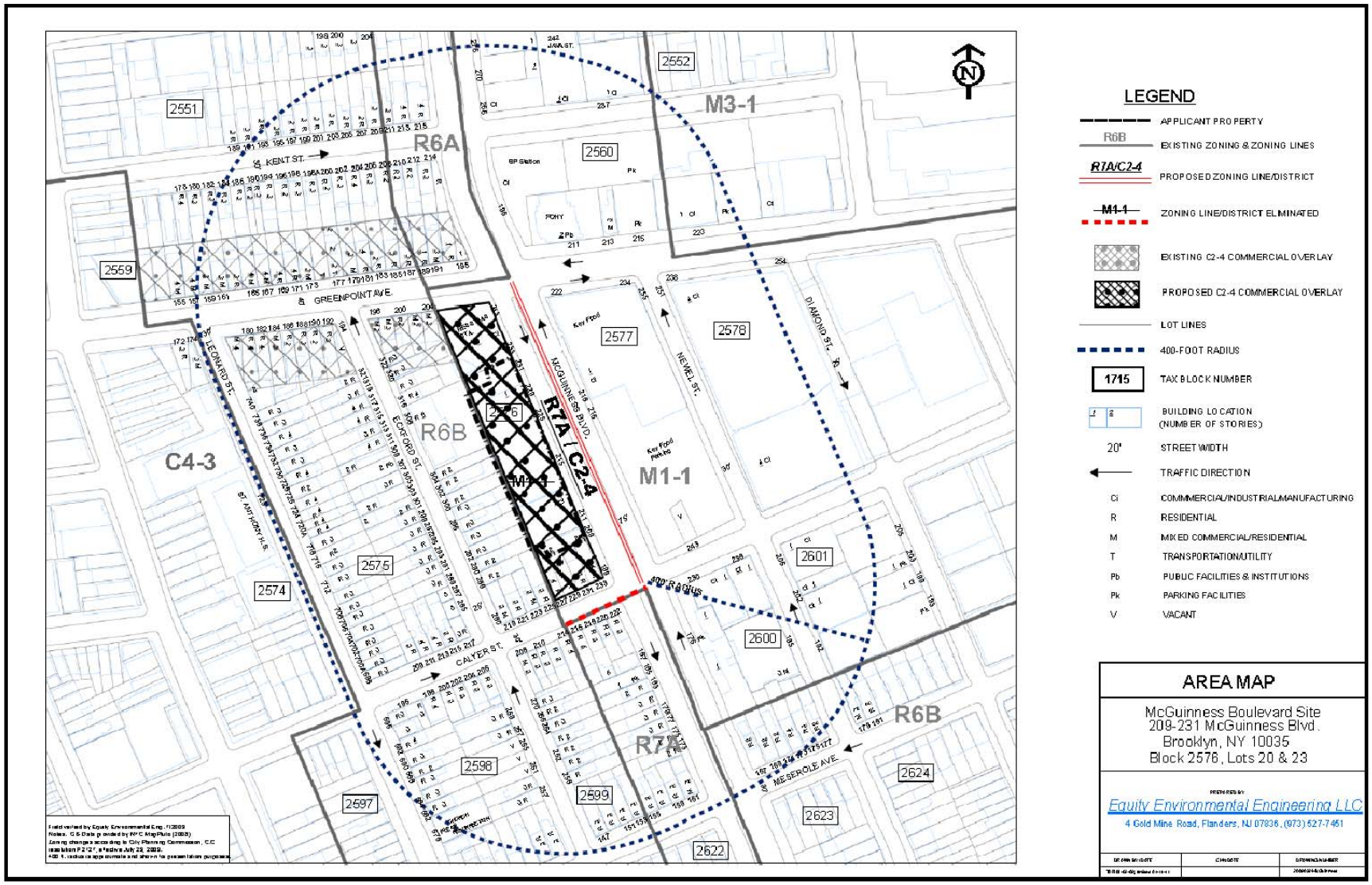


Figure 1-2: Land Use Map



A copy of the Land Use Map can be found in Appendix 1.

Figure 1-3: Zoning Map



1 Existing Zoning



2 Proposed Zoning

Project Site

There are seven complete and two partial tax lots included in the proposed rezoning area (Block 2576). The Table below provides a summary of uses.

Land Uses Within the Affected Area

Lot#	Total Lot Size (sf)	Rezoning Lot Area (sf)	Land Use	#Floors	Gross Floor Area (sf)	Owner	DU	FAR
5	1731	152	Walk up Apartment Building	3	3,375	Krzyztof Janowski	6	1.95
7	12,275	12,275	Gas Station	1	746	Amerada Hess Corp	0	.06
20	31,875	31,875	retail	1	13,800	Eckford Realty, LLC	0	.43
23	1,875	1,875	2 family	2	1,260	Point Equities Management	2	.67
24	1,875	1,875	Mixed Use	4	6,700	233 Calyer Corp	6	3.57
25	1,875	1,875	Walk up Apartment building	3	3,375	Patricia Mocko	5	1.80
26	1,875	1,875	Walk up Apartment building	4	5,500	Peter Jusczsak	8	2.93
27	2,500	2,500	Walk up Apartment building	4	5,000	Virginia Folek	8	2.0
42	13,125	625	Elevator Apartment building	6	36,787	Eckford Realty	42	2.80
	Total	54,927					77	

Zoning

The affected area is currently zoned M1-1. This M1-1 district covers a large area east of McGuinness Boulevard, and the affected area is the only portion of this M1-1 district that is west of McGuinness Boulevard. M1-1 is a light industrial district that permits most commercial uses, manufacturing uses that are fully enclosed and meet high performance standards, and community facilities without sleeping accommodations. Residential development is not permitted. Commercial and manufacturing development is permitted at a floor area ratio (FAR) of 1.0, and community facility development is permitted at an FAR of 2.4.

The area along McGuinness Boulevard north of the affected area is zoned R6A. R6A permits residential and community facility development at 3.0 FAR and typically results in mid-rise apartment building development of six or seven stories, occupying a high percentage of their building lot, and set on or near the street line. The Quality Housing bulk provisions are mandatory in R6A

The area on McGuinness Boulevard south of the affected area is zoned R7A, a medium-density quality housing district. R7A permits 4.0 FAR of residential or community facility development and typically results in high lot coverage, seven or eight-story apartment building.

The blocks west of the affected area are zoned R6B, a quality housing district permitting 2.0 FAR of residential or commercial development. R6B typically produces four- to five-story row houses or apartment buildings.

A C2-4 commercial overlay is mapped on Greenpoint Avenue northwest of the affected area. This is a local commercial district, which permits 2.0 FAR of commercial development when mapped in an R6 or higher residence district.

Public Policy

The affected area is not within an Urban Renewal Area. It is within the Coastal Management Zone, despite being one-half mile from the nearest shoreline, on the East River.

Waterfront Revitalization Program

The subject property lies within the Coastal Zone Boundary of New York, although it is over ½ mile from the nearest water body, the East River. Consequently, the proposed action must be assessed for consistency with the City's Local Waterfront Revitalization Program (LWRP), which identifies ten waterfront polices regarding: (1) residential and commercial redevelopment, (2) water-dependent and industrial uses, (3) commercial and recreational boating, (4) coastal ecological systems, (5) water quality, (6) flooding and erosion, (7) solid waste and hazardous materials, (8) public access, (9) scenic resources, and (10) historical and cultural resources. A Costal Boundary Map can be found below in Figure 1-4.

Future Without the Proposed Action

No changes to zoning or public policy are anticipated in the future without the proposed action. Existing land use patterns are expected to remain in place.

Future With the Proposed Action

Land Use

The applicant would redevelop Lots 20 and 23, the Projected Development Site, by the Build Year. The projected development would consist of a seven-story mixed use building developed using the Quality Housing provisions of the Zoning Resolution. It would contain 141 residential units. Forty units would be low-income units developed under the inclusionary housing program. The ground floor residential lobby would open onto McGuinness Boulevard. The projected development would have 26,335 sf of commercial/retail floor area. It is expected that this space would be occupied by local-serving retail uses. An accessory self-park parking garage with 91 accessory spaces for the residents and retail use would be constructed in the cellar. The garage would operate 24/7 and be non-attended. In addition, common areas consisting of recreation space, laundry facilities, and storage areas would be provided for the building's residents.

Block 2576, Lot 7 is identified as a Potential Development Site because the existing use (gasoline filling station), lot size, and property condition make it a candidate to take advantage of the additional development rights provided under the proposed zoning, although it is a viable business and the operators have expressed no interest in selling the site. Development is not anticipated in the reasonable foreseeable future, but could potentially include 57 dwelling units and 39 accessory parking spaces.

The medium-density residential and local commercial development that would occur under the proposed action would be consistent with established land use patterns in the areas to the north, south, and west, and would be compatible with the commercial and light industrial uses to the east, on the opposite side of McGuinness Boulevard. The proposed action would bring conforming status to residential uses within the affected area. No adverse impacts related to land use would occur.

Zoning

The proposed action would extend an existing R7A district that is mapped south of the affected area, and would create continuous residential zoning on the west side of McGuinness Boulevard. The affected area would abut an R6A district to the north and an R6B district to the west, and an M1-1 district to the east, across McGuinness Boulevard. Medium-density residence districts are commonly mapped adjacent to M1 light manufacturing districts. The proposed zoning would grant conforming status to the residential uses within the affected area. The mapping of a C2-4 commercial district would allow for existing commercial uses to remain conforming, and would allow for a local commercial component of new development. Extending the inclusionary housing program to include the affected area would increase opportunities for the provision of affordable housing within developments including market-rate housing. No adverse impacts related to zoning would occur.

Public Policy

Development of the Projected Development Site would include 40 units of low-income housing, and would be consistent with city policy encouraging the production of affordable and market rate housing in suitable locations. As discussed in the Waterfront Revitalization Program section of this document, the proposed action would be consistent with Coastal Zone Management policies. No adverse impacts related to public policy would occur.

Waterfront Revitalization Program

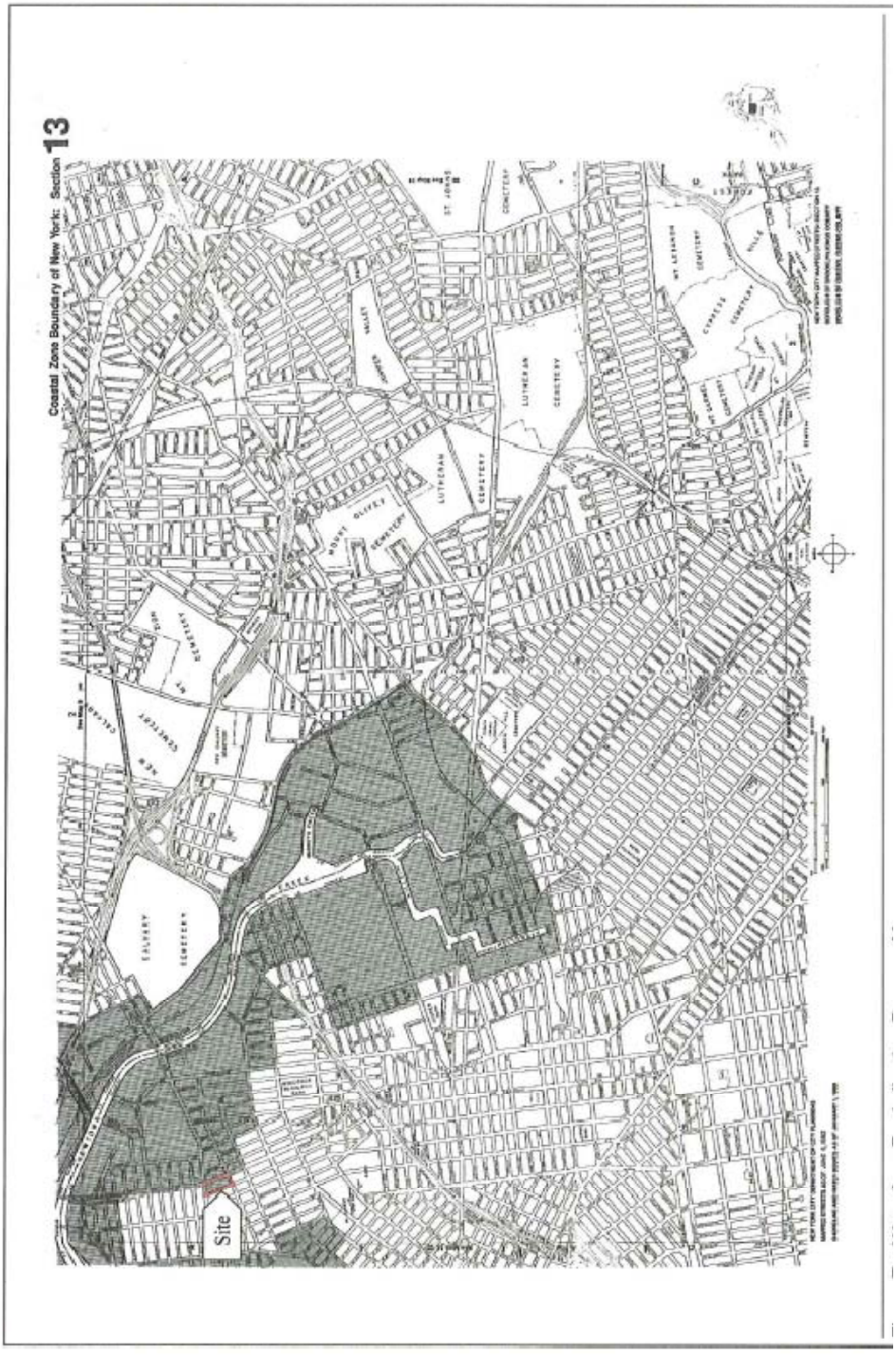
A New York City Waterfront Revitalization Program Consistency Assessment Form has been completed (Appendix 1) to provide a preliminary assessment of the Action's consistency with the LWRP polices. According to the *CEQR Technical Manual*, a "yes" answer to any question on the form would warrant further examination. Additional information is provided below for the one question with a "yes" answer. It is identified by both the question and policy number.

Question 5: Is the project site appropriate for residential or commercial redevelopment? (1.1)

> *The proposed action is supportive of the goal of Policy 1 to "support and facilitate commercial and residential development in areas well suited to such development." The affected area constitutes the only non-residential zoning district on the west side of McGuinness Boulevard. The remainder of the surrounding area west of McGuinness Boulevard is developed residentially, and the proposed action would permit new development in an area where such development is common, and where adequate supporting services exist.*

Therefore, there would be no adverse impacts from the projected or potential developments and no additional analysis is required.

Figure 1-4: Coastal Boundary Map



2. Socioeconomic Conditions

The *CEQR Technical Manual* states that the socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements.

The *CEQR Technical Manual* identifies the following circumstances that would typically require a socioeconomic assessment:

- Displacement of 500 or more residents or more than 100 employees
- Displacement of a business that is unusually important
- Substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Residential development of 200 units or less or commercial development of 200,000 sf or less would typically not result in significant socioeconomic impacts.
- Projects resulting in greater than 200,000 sf of regional-serving retail in the study area or greater than 200,000 sf of local-serving or regional-serving retail on a single development site.

The Projected Development would result in 141 new residential units and 26,335 sf of commercial space on a site now occupied by one dwelling unit and local retail uses including an auto parts store, billiard hall and café, and lumber sales. The amount of new development and residential displacement are far below relevant threshold sizes, and the businesses that could be displaced are not unusually important, nor would they have difficulty finding appropriately zoned sites, including within the surrounding area, under the proposed action. Therefore, the proposed action would not have a significant adverse impact on socioeconomic conditions. No additional analysis is warranted.

3. Community Facilities and Services

A community facilities assessment may be necessary if an action could potentially affect the provision of services provided by public or publicly funded community facilities such as schools, hospitals, libraries, day care/Head Start facilities, and fire and police protection. According to the screening levels established in the *CEQR Technical Manual*, there are direct and indirect effects. An assessment of the project's effects on community facilities is generally warranted if:

- a project would add more than 100 residential units to an area, introducing new population to an area that would increase the demand for services and cause potential indirect effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population there may be effects on public or publicly funded schools, libraries, health care facilities, or day care/Head Start facilities.

- a project would physically alter a community facility, whether by displacement of the facility or other physical change. This direct effect triggers the need to assess the service delivery of the facility and the potential effect that the change may have on that service delivery.

Under the Reasonable Worst-Case Development Scenario, the proposed action would result in incremental development of 140 dwelling units. Based on a preliminary assessment of CEQR thresholds for analysis, as shown in Table CF-1, this project does not trigger a detailed C*EQR* analysis for libraries, health care facilities, and publicly funded day care, or Police and Fire Protection services. However, the projected development exceeds the threshold size warranting an assessment of potential impact to public schools. A preliminary assessment was conducted to determine the necessity of additional analysis.

Table 3-1: Preliminary Assessment of *CEQR* Thresholds

Community Facility	Threshold Per *CEQR Technical Manual* Table 6-1	140 incremental DUs		Exceeds Criteria Threshold
Public Schools Elementary School and Middle School Students High School Students	>50 elementary and middle school children (combined) >150 high school students	0.29 0.12 0.14	41 17 20	Yes (Total of 58 elementary and middle school) No
Libraries >5% Increase in ratio of residential units	>734 DUs (in Brooklyn)			No
Health Care Facilities	Sizeable New Neighborhood			No
Publicly Funded Day Care/Head Start Facilities <6 years old	> 110 low-to-moderate income DUs in Brooklyn			No
Fire Protection	Sizeable New Neighborhood or Direct Effect			No
Police Protection	Sizeable New Neighborhood or Direct Effect			No

Public Schools

Based on this analysis, the proposed action is not expected to have a significant adverse impact on public schools in CSD 14's Sub-district 3. The proposed action is projected to result in the incremental development of 140 new units, compared to no-action conditions.

Pursuant to the *CEQR Technical Manual* Table 6-1a, the projected increment of 140 dwelling units would result in the addition of 41 elementary students and 17 intermediate students to the school district.

An assessment has been made of the utilization rate of local public elementary and middle schools to determine their ability to accommodate any project-related increase in enrollment. Information on school enrollment and capacity was obtained from the Department of Education's Utilization Profiles: Enrollment/Capacity/Utilization Report 2010-2011 ('Blue Book').

The following map (Figure C-1) shows elementary and intermediate schools located in Community School District 14 Sub-district 3.


CSD 14 Schools
NYCityMap
East River
FDR Dr
STUYVESANT TOWN
GREENPOINT
Project Site
PS 31
PS 34
PS 110
Bkln Automotive HS
Region 3
Region 2
JHS 126
Van Arsdale HS
PS 84
PS 17
PS 132
CSD 14
JHS 50
El Puente Academy
Progress HS
PS 18
Williamsburg
Brooklyn Queens Expy
Public School

Table 3-2 provides the location, enrollment, capacity, and utilization rate of elementary schools and intermediate schools within CSD 14's Sub-district 3. Sub-district elementary schools operate at 72.8% of capacity, while sub-district 3 intermediate schools are at 63.5% of capacity. For the CSD as a whole, elementary school utilization is 68.9% and intermediate school utilization is 73.7%

The proposed action has an analysis year of 2015. Accordingly, projections of school utilization during this analysis year were made, based on projections conducted for the Department of Education.

Projected elementary school enrollment for 2015 is 8,661 students in CSD 14. Projected middle school enrollment is 3,410 students in CSD 14. It is assumed that the percentage of School District 14 enrollment within Sub-district 3 would remain constant between the existing and future no-action condition. Based on these assumptions, no-action conditions in the analysis year, elementary schools in CSD 14's Sub-district 3 would operate at 72.1% of capacity, and intermediate schools would operate at 51.1% of capacity. Within all of CSD 14, elementary schools would operate at 68.2% of capacity, and intermediate schools would operate at 59.2% of capacity.

The proposed action is projected to generate 41 elementary school students, which would bring utilization rate within CSD 14's Sub-district 3 to 73.2% and the entire CSD to 68.6%. At the intermediate school level, utilization within Sub-district 3 under the proposed action would be 51.7% and for the entire CSD would be 59.5%

According to the *CEQR Technical Manual*, if with-action conditions within the sub-district exceed 100% of capacity and the proposed action would cause an increase of five percent or more in deficiency of available seats in the affected schools there may be a significant adverse impact on schools. In the future with the proposed action, utilization at both the elementary and intermediate level would be below 100%. Therefore, the proposed action does not have the potential for significant adverse impacts at the elementary or intermediate level

Table 3-2: Existing Conditions

School Name	Address	Grades	Enrollment	Target Capacity	Seats Avail.	% Util
Elementary and PS/IS						
Schools in Sub-district 3						
PS 31: Samuel F. Dupont	75 Mesarole Av	PK-5	556	694	138	80.1%
PS 34: Oliver H. Perry	131 Norman Av	PK-5	521	438	-83	118.9%
PS 110: The Monitor	124 Monitor St	PK-5	349	739	390	47.2%
PS 17: Henry D. Woodworth	205 North 5 St	PK-5	838	756	-82	110.8%
PS 84: Jose De Diego	250 Berry St	PK-5	465	1123	658	41.4%
Total for Elementary Schools in Sub-district 3			2729	3750	1021	72.8%
Total CSD 14 Elementary			8,744	12,694	3950	68.9%
Intermediate Schools and PS/IS						
Schools in Sub-district 3						
JHS 126: John Ericsson	424 Leonard St	6-8	687	1333	646	51.5%
JHS 50: John D. Wells	183 South 3 St	6-8	943	1232	289	76.5%
Total for Intermediate Schools in Sub-district 3			1630	2565	935	63.5%
Total for CSD 14 Intermediate			4,245	5,758	1513	73.7%

Table 3-3: No-Action Condition

	2015 Projected Enrollment (w/ Pre-K)	Students Generated by Development (Without Action)	Total Projected Enrollment	Program Capacity	Seats Available	Program Utilization (%)
Elementary/K-8 Schools						
Sub-district 3 *	2,703		2,703	3,750	1,047	72.1%
CSD 14	8661		8,661	12,694	4,033	68.2%
Intermediate/Secondary Schools						
Sub-district 3	1,309		1,309	2,565	1,256	51.1%
CSD 14	3,410		3,410	5,758	2,348	59.2%

Source: Enrollment Projections: *Grier Projected 2009-2018.*

Subdistrict Projections		
	Percentages for Sub-district 3	Proj. Enroll
PS	31%	2703
IS	38%	1309

Table 3-4: With-Action Condition

	2015 No-Build Projected Enrollment (w/ Pre-K)	Students Generated by Development (With Action)	Total Projected Enrollment	Program Capacity	Seats Available	Program Utilization (%)	No Action Program Utilization (%)	Difference between No Action and With Action
Elementary/K-8 Schools								
Sub-district 3	2,703	41	2,744	3,750	1,006	73.2%	72.1%	1.1%
CSD 14	8,661	41	8,702	12,694	3,992	68.6%	68.2%	0.3%
Intermediate/Secondary Schools								
Sub-district 3	1,309	17	1,326	2,565	1,239	51.7%	51.1%	0.7%
CSD 14	3,410	17	3,427	5,758	2,331	59.5%	59.2%	0.3%

4. Open Space

According to the *CEQR Technical Manual*, an open space assessment may be necessary if an action could potentially have a direct or indirect effect on open space. Action-induced development would have no direct effects on open space as it would not physically change, diminish, or eliminate any public open space or reduce its utilization or aesthetic value. Therefore, an assessment of the direct effect of the proposed action on open space resources is not warranted.

Indirect effects may occur when the population generated by a proposed action would be sufficient to noticeably diminish the availability of an area's open space to serve the existing or future population. Because the affected area is within an underserved area of Brooklyn, an assessment should be conducted if the proposed action's population is greater than 50 residents or 125 employees.

Based on the 2012 Census data for Community Board 1, the average number of persons per household was 2.19. . It is assumed that the projected project in the Build Year would introduce an increment of 140 residential dwelling units. Based on the average number of persons per household, it is anticipated that there would be approximately 307 new residents introduced to the area. Accordingly, a preliminary open space analysis was conducted.

Existing Condition

The projected project site located in Brooklyn's Greenpoint community has been designated as being underserved regarding open space resources. Currently, the subject property has only one dwelling unit and minimal retail space. Its open space requirements are negligible.

Information regarding population size and available open space resources is provided in the Preliminary Screening analysis below.

The Future No-Action Condition

The subject property and the surrounding area are not expected to acquire additional open space resources in the near future by the 2015 build year. The census data for 2000 indicated that the study area's population was 29,241. The 2010 population was 29,314. In the intervening 10 years, the study area's population increased by 73 people.

The Future Build Condition

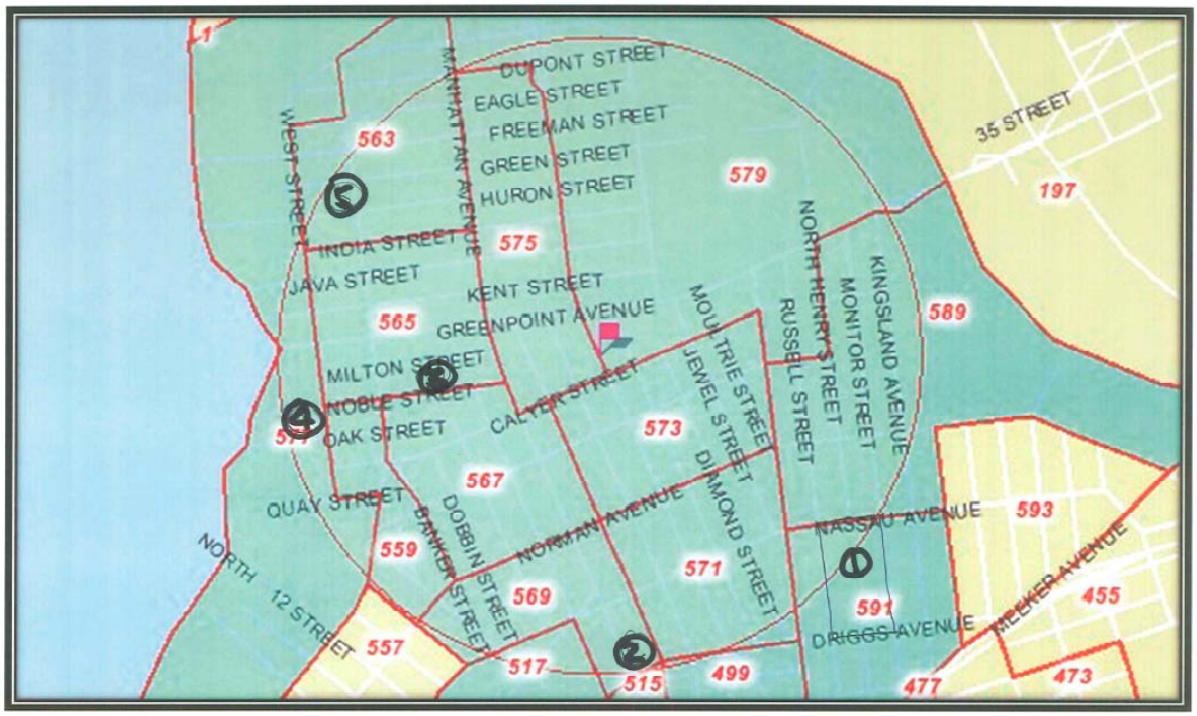
In the future with the project, 307 new residents would be added to the study area. There would be no additional open space resources added to the study area.

Preliminary Screening Analysis

The CEQR Technical Manual assumes that residents will typically travel up to one half mile to access local open space and recreational facilities. Large regional parks draw visitors from a wider area. In conducting a quantitative assessment of potential open space impacts, a study area should include all census tracts (2012 Census) with at least 50 percent of their area within a half mile of the projected project site. All of the recreational resources should be identified in this area as well (Figure D-1). As such, the following census tracts would fall within 0.5 miles of the affected area:

Census Tract	Population
563	4,360
575	4,249
579	1,117
565	3,255
573	2,608
559	1,217
567	4,574
569	1,630
571	4,400
589	1,904
Total	29,314

Figure 4-1: Census Tracts within ½ mile Radius



Source: NYC Census Fact Finder

Open space resources in this same area are annotated above and include:

	Property Name	Address	Type	Acreage
1	Monsignor McGolrick Park	Driggs to Nassau Avenues; Russell to Monitor Streets	Park	9.134
2	McCarren Park	Nassau Ave, Bayard, Leonard and North 12 Streets	Park	35.713
3	American Playground	Noble, Franklin & Milton Streets	PG	0.896
4	Greenpoint Park	Franklin & Commercial Streets	Park	.504
5	Newton Barge Playground	Commercial, DuPont & West Streets	PG	1.198
			Total	47.445

As a planning goal, the City attempts to achieve a ratio of 2.5 acres per 1,000 people. This does not constitute an impact threshold, but rather a benchmark that represents an area well served by open space. A detailed assessment of open space would be warranted if a proposed action would cause the open space ratio to decrease by five percent or would increase population in areas underserved by open space (those with open space rations of below 1.5 acres per 1,000 populations).

The open space ratio of the existing condition (acres per 1,000 populations) is 1.62. With the addition of 307 new residents to the area, the population would increase from 29,314 to 29,622 and the open space ration would decrease from 1.62 to 1.60. As there would be no significant decrease in the open space ratio (greater than 5 percent), and the with-action open space ratio would remain above the citywide average, it is therefore anticipated that there would not be a significant adverse impact to open space resources in the vicinity of the project site, and a more detailed assessment of open space resources is not necessary at this time.

5. Shadows

The shadow assessment considers actions that result in new shadows long enough to reach publicly accessible open space or significant architectural / historical resources. Approval of the proposed actions would lead to the development of a new building that would be about 80 feet in height.

Shadow impacts occur when a new shadow intersects an existing public open space or historic resource for a significant period of the day. The length of the longest shadow for the proposed new site is 4.3 times the height of the building, or 344 feet (80 ft times 4.3). Within this radius, there are no historic resources or public open spaces (Figure 5-1). As such, the projected project would not have a potentially significant shadow impact on public open space or historic resources in the area.

The Potential Development (Lot 7) would have a maximum height of 70.5 feet. The length of the longest shadow would be 303.15 feet (70.5 ft. times 4.3). Within this radius, there are no historic resources or public open spaces (Figure 5-2). As such, the projected project would not have a potentially significant shadow impact on public open space or historic resources in the area.

No additional analyses would be required at this time.

Figure 5-1: Shadow Analysis Map for the Projected Development Site

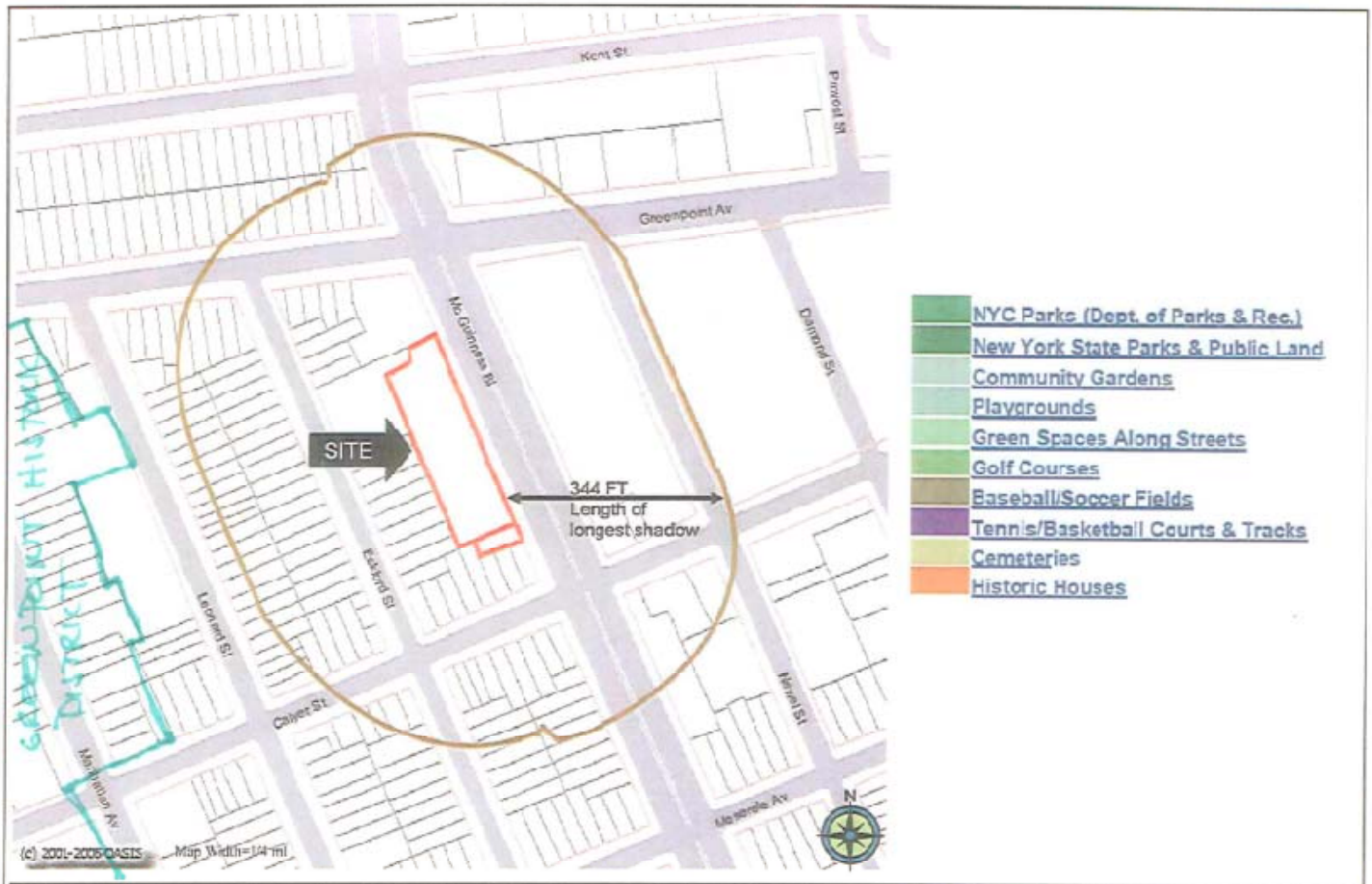


Figure 5 - Shadow Assessment
(A 7-story building would have a potential shadow impact of approximately 344 ft Radius)
Zoning Map Amendment
209-231 McGuinness Boulevard
Brooklyn, New York 10035

Figure 5-2: Figure 5-1: Shadow Analysis Map for the Potential Development Site

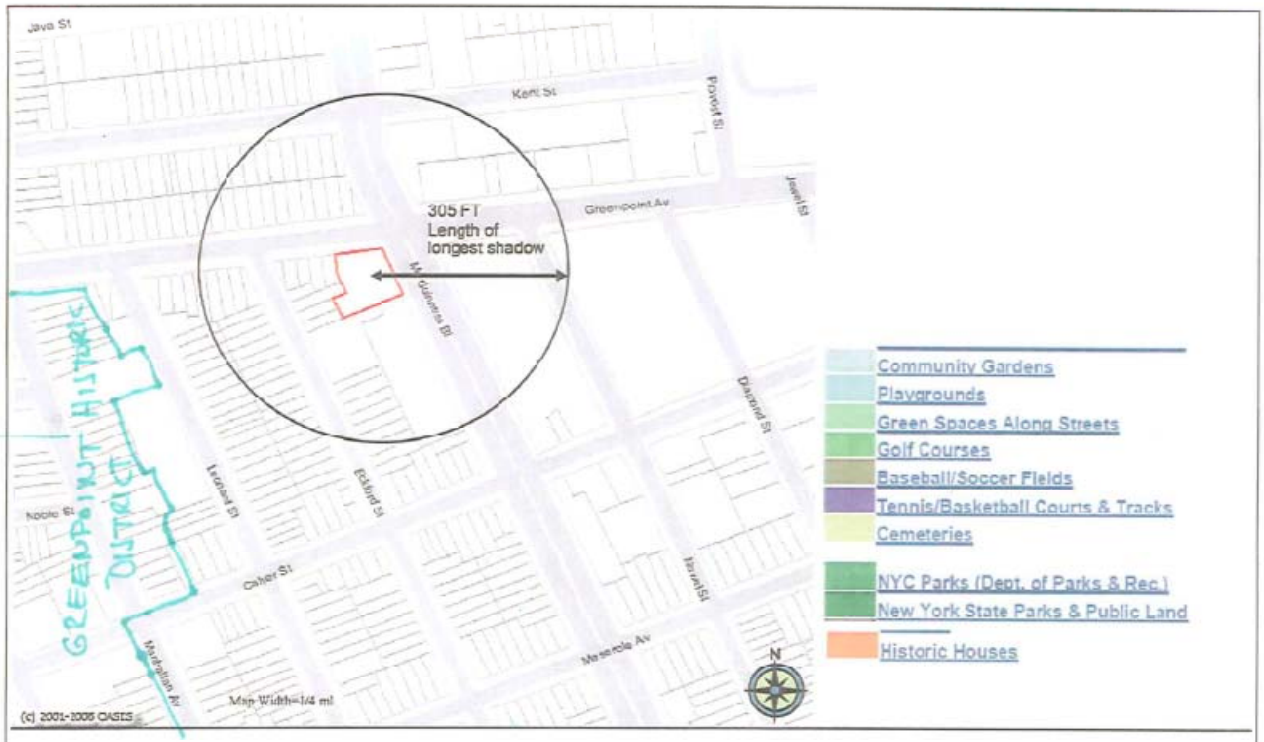


Figure 5 - Shadow Assessment (Projected Development)
(A 7-Story building would have a potential shadow impact of approximately 305 ft. radius)
Zoning Map Amendment
209-231 McGuinness Boulevard
Brooklyn, New York 10035

Equity Environmental Engineering, LLC

6. Historic Resources

The proposed actions if approved would not result in significant adverse impacts on historical resources. Historic resources include both archeological and architectural resources. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells, and privies. Architectural resources include historically important buildings, structures, objects, sites, and districts. They also may include bridges, canals, piers, wharves, and railroad transfer bridges that may be wholly or partially visible above ground.

In assessing these resources, a request for determination was sent to the LPC on 9/23/09. A determination of "no significance" for both architectural resources and archaeological resources was provided on 9/30/09 and 11/18/09 respectively (Appendix 6). In addition, various sources of information were consulted including:

- NYC Landmarks Preservation Commission designated landmarks, interior landmarks, scenic landmarks, and historic districts
- Locations being considered for landmark status by LPC
- Scenic landmarks and historic districts; locations listed on, or formally determined to be eligible for inclusion on the State and/or National Register of Historic Places
- Locations recommended by the NYS Board for listing on the State and/or National Register of Historic Places
- National Historic Landmarks

Archeological Assessment

The LPC' s initial 9/30/09 response indicated that there may potentially be remains from the 19th Century occupation for Lots 20, 23, 25, 26, 27, and 42. The LPC recommended that an archaeological documentary study be performed for these locations to clarify these initial findings. Additional information was provided to the LPC and their determination was that no further analysis was required for archaeological resources.

Architectural Assessment

As noted above, the property contains commercial retail use. The property and the adjacent properties do not contain listed architectural landmarks as listed in the third edition of "New York City Landmarks" prepared by the NYC Landmarks Preservation Commission, 2004. The LPC determined that there were no architectural concerns on any of the properties included in this projected project.

No significant architectural impacts are anticipated with the approval of the proposed action and the subsequent redevelopment of the Projected Development Site. No additional architectural analysis is required at this time.

7. Urban Design and Visual Resources

As defined in the *CEQR Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open space, natural features, sunlight, and, in the case of tall buildings, wind.

An urban design assessment is typically needed when a discretionally approval would allow redevelopment of a site with a building(s) that have different yard, height, or setback requirements, or would result in an increase of built floor area beyond that allowed as-of-right or in the future.

Typically, urban design and visual resources are dependent on changes in elements that contribute to the pedestrian experience. Approval of the proposed action would allow the construction of a new mixed-use development with accessory parking and new retail space.

According to the Technical Manual, a preliminary assessment requires the following information:

- A narrative of existing, the future With-Action, and the future No-Action conditions
- Aerial photograph of the study area (Figure 7-1)
- Ground-level photographs
- A three-dimensional representation of the future With-Action condition streetscape

Information regarding floor area, building height, lot coverage, and zoning calculations are provided above in the Land Use, Zoning, and Public Policy section. There are no significant visual resources in the project vicinity.

Existing Conditions

The affected area contains a gasoline service station at its northern end (the Potential Development Site), a one-story commercial building (most of the Projected Development Site) occupying the middle of the block front, and several two- to four-story residential buildings at the southern end of the affected area.

The project vicinity consists of a medium-density residential area west of McGuinness Boulevard, and a commercial and light industrial area to the east. Residential buildings are primarily row houses and midrise apartment buildings.

Under the proposed R7A/C2-4 zoning, development of the Projected Development Site would consist of a seven- to eight-story apartment building with a ground floor commercial component. The Projected Development would be similar in scale, bulk, and form to surrounding residential development to the north, west, and south. The area to the east consists primarily of one- to three-story industrial buildings. Directly across McGuinness Boulevard from the Projected Development Site is a supermarket with open parking.

A land use map is provided in Section 01 and an Aerial Photograph is provided below (Figure 7-1).



The buildings in the study area that front on McGuiness Boulevard and the adjacent streets are typically one to three stories in height. Recently (2009), the City Planning Commission approved a zoning map amendment from M1-1 to R7A, R6B, and R6A in the area surrounding the subject property. However, little compliant construction has occurred since the CPC approval. Directly to the west of the subject property is a new 6-story residential building. Because of the regional topography, the building as seen from McGuinness Boulevard appears to be an 8-story structure.

Future Without the Proposed Action

No significant changes to urban design and visual resources are expected in the future without the proposed action. The building form will remain as it was when the CPC rezoned the area in 2009. Any new development in the area would be subject to its contextual R6A, R6B, and R7A zoning districts and would be consistent in form and scale with the area's existing design.

Future With the Proposed Action

The projected and potential developments would not significantly impact the area's urban design characteristics. New development would consist of medium-rise high coverage apartment buildings, as permitted by the proposed extension of the R7A district that is mapped to the south of the affected area. The Projected Development would include a ground floor commercial component. The new development would be consistent with existing development on the west side of McGuinness Boulevard, and would be compatible with its location on a wide street. The replacement of auto-related commercial uses with medium-density residences with ground floor commercial space would enhance the pedestrian environment on McGuinness Boulevard. The following figures illustrate the projected and potential development in the context of the area's existing built form. Overall, there would be no impacts related to urban design or visual resources.

Figure 7-2: Street View Looking South at the Existing Projected Development Site



Figure 7-3 Street View Looking North Along McGuinness Boulevard - Existing Condition



Figure 7-4 Street View Looking North Across McGuinness Boulevard - Existing Condition



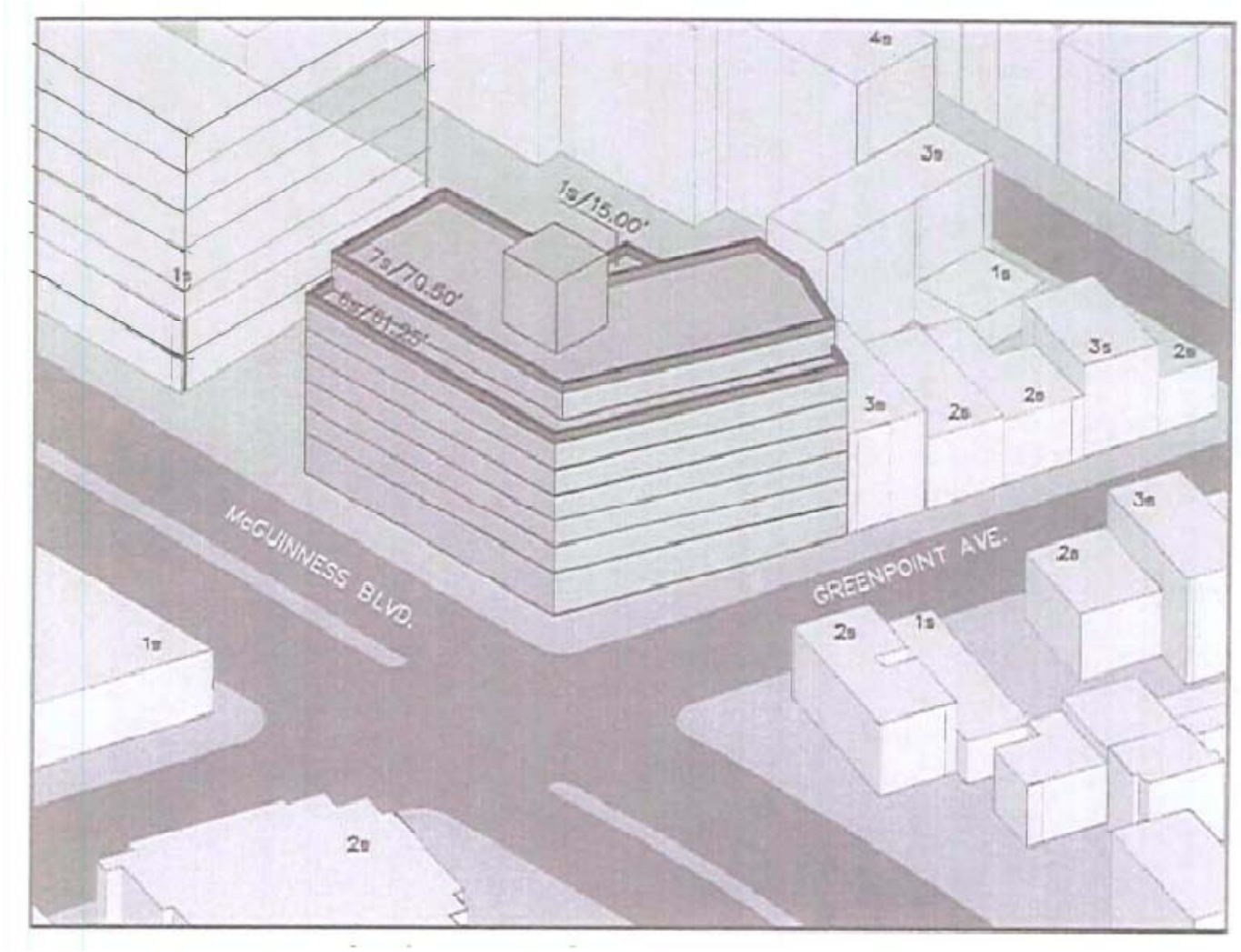
Figure 7-5: Street View Looking Southwest at the Existing Potential Site



Figure 7-6: Street View Looking South at the Future Build Projected Development Site



Figure 7-7: Birds Eye View Looking Southwest at the Future Build Potential Development Site



8. Hazardous Materials

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile or semi-volatile organic compounds, methane, polychlorinated biphenyls, and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic).

According to the CEQR Technical Manual, the potential for significant impacts from hazardous materials can occur when: (a) hazardous material exists on a site, and (b) an action would increase pathways to their exposure, or (c) an action would introduce new activities or processes using hazardous materials. Since the proposed actions would allow for the development of mixed residential and commercial development, no activities or processes using hazardous materials would be introduced to the affected area or increase pathways to a hazardous materials exposure.

Conditions at the applicant's site resulting from previous and existing uses and those in surrounding areas were determined from a review of a Phase I Environmental Site Assessment (Appendix 9) prepared for the subject property by M.D. London Associates LLC. This document includes a discussion of the visual inspections of the property and an examination of the applicant property's history.

The Phase I stated that the following Recognized Environmental Condition (REC) was found during MDLA's site inspection and records review:

- Fuel tank located in the cellar of the subject property, although the likelihood of a significant spill from the tank is very small, should it happen the fuel would enter the sump and be discharged into the sewer system.

- Potential offsite source of groundwater contamination from 100 Mesarole Avenue. The property has soil and groundwater contamination consisting primarily of BTEX and MTBE. Remediation has been completed but it has not been given a no further action designation and the NYSDEC has required additional monitoring. It should be noted that this potential source is approximately 900 feet away from the affected area, and is separated from the affected area by multiple streets. If there were any contaminants migrating from this site, they would likely be diverted into the trenches dug to accommodate utility lines in the street.

Based on the above information, it is assumed that the New York City Department of Environmental Protection (DEP) would review this EAS and supporting Phase I. If it were their opinion that potentially hazardous materials could be present on the subject property, the proposed zoning map amendment would include the use of an (e) designation to ensure that any potential impacts related to hazardous materials are addressed prior to construction and occupancy of development occurring on the potential development site. On March 28, 2012, the New York City Council approved revisions to Section 11-15 of the Zoning Resolution to allow the mapping of (e) designations to address potential hazardous materials concerns on sites under the control of the project sponsor.

With the revision of this ZR section, and in order to avoid any potential impacts related to hazardous materials an (E) designation for hazardous materials would be placed on the potential development site (Block 2576, Lot 7 .

The text of the (E) designation is as follows:

> *Due to the possible presence of hazardous materials on the aforementioned designated sites there is potential for contamination of the soil and groundwater. To determine if contamination exists and to perform the appropriate remediation,*

the following tasks must be undertaken by the fee owners(s) of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1
The fee owner(s) of the lot(s) restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to DEP for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from DEP. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by DEP upon request.

Task 2
A written report with findings and a summary of the data must be presented to DEP after completion of the testing phase and laboratory analysis for review and approval. After receiving such test results, a determination will be provided by DEP if the results indicate that remediation is necessary.

If DEP determines that no remediation is necessary, written notice shall be given by DEP.

If remediation is necessary according to test results, a proposed remediation plan must be submitted to DEP for review and approval. The fee owner(s) of the lot(s) restricted by this (E) designation must perform such remediation as determined necessary by DEP. After completing the remediation, the fee owner(s) of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

A DEP-approved construction-related health and safety plan would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This Plan would be submitted to DEP for review and approval prior to implementation.

Should the (E) designation text that would apply to this lot be revised under the rule-making authority of the Mayor's office of Environmental Remediation prior to the formal action to amend the Zoning Map to change the zoning district that applies to the lots affected by this application, then that revised (E) designation text shall apply at the effective date of the zoning map amendment.

Based on the results of the Phase 1, a Restrictive Declaration (Appendix 8) was approved by the Department of Environmental Protection and recorded on May 12, 2012 for the Projected Development Site (Block 2576 Lots 20 and 23). Any development on the Projected Development site would comply with the directives of the Restrictive Declaration. This course of action would ensure that neither construction workers nor occupants of the completed project would be subjected to contact with

hazardous materials as of result of prior contamination of the site. An adverse hazardous material impact would not occur.

10. Water and Sewer Infrastructure

According to the CEQR Technical Manual, generally only projects that increase density or change drainage conditions on a large site require an infrastructure analysis. Specifically, a preliminary infrastructure analysis is needed if the project would have exceptionally large demand for water (more than 1 million gallons per day) or is located in an area that experiences low water pressure, such as the Rockaway Peninsula and Coney Island

The proposed action would not result in a demand for water greater than 1 million gallons per day. Neither the Projected Development Site nor the Potential Development Site is located in either of the above-mentioned areas. The approval of the proposed action would not significantly impact the city's ability to provide potable water to its citizens, convey, and treat wastewater, or manage storm water.

Therefore, a significant adverse impact would not occur based upon the potential water usage or sewage generation of the projected development and no additional analyses are required at this time.

11. Solid Waste and Sanitation Services

The CEQR Manual states that actions involving construction of housing or other developments generally do not require evaluation of solid waste impacts unless they are unusually large. Using the waste generation rates provided in Table 14-1 of the CEQR Technical Manual, a projection of solid waste generation was made.

Component	Size	Waste Generation Rate (pounds per week)	Projected Waste Generation Per Week (lb)
Residential	141 DU	41 per household	5,781
Retail	47(*)	79 per employee	3,713
TOTAL			9,494

(*) Assumes two retail employees per 1,000 feet of retail space, and 26,335 sf

According to the *CEQR Technical Manual*, a project that generates less than 50 tons (100,000 pounds) of solid waste per week does not require further assessment, and does not have the potential for adverse impacts related to solid waste and sanitation services.

13. Transportation

13.1 Traffic

This section describes vehicular traffic and parking conditions associated with the proposed mixed-use development, located on the west side of McGuinness Boulevard between Greenpoint Avenue and Calyer Street (Block 2576, Lots 20 and 23). The potential development of Block 2576, Lot 7 is not considered for analysis of density-related environmental issues such as traffic.

The proposed rezoning from M1-1 to R7A/C2-4 is projected to result in a mixed residential and commercial development consisting of 141 dwelling units and 26,335 sf of commercial space. A 91-space accessory parking facility would serve the project. Because the projected development site currently contains one residential unit and 13,800 sf of retail space, which are anticipated to remain in the future without the proposed action, incremental development attributable to the proposed action would be 140 dwelling units and 12,535 sf of retail space.

Pursuant to Table 16-1 of the CEQR Manual, a residential development of 200 or fewer dwelling units within one mile of a subway station is below the threshold size requiring further traffic assessment. The Project site is less than one mile from the Greenpoint Avenue station of the IND G train. Table 16-1 also indicates that retail development of less than 20,000 sf in this part of the city does not require further analysis.

Because the projected development includes both residential and commercial components, further assessment of trip generation was conducted to determine if action-related traffic would exceed threshold levels warranting further assessment.

13.1.1 Trip Generation

The first step in the traffic analysis is the projection of new vehicular trips associated with the projected development. Trip generation projections were made using the trip generation rates and travel mode splits for the area as used in the Environmental Impact Statement for the Greenpoint Williamsburg rezoning (CEQR #04DCP003K). The Transportation Planning Assumptions are presented in the following Table (Table 13-1: Transportation 1).

Table 13-1: Transportation 1

SUMMARY - Transportation Planning Assumptions for Project Components

Land Use		Residential		Local Retail	
Daily Trip Generation		8.07 (per d.u.)		205 (per 1,000 gsf)	
Temporal Distribution	**AM (8-9)**	10.0%		3.0%	
	MD(12-1)	5.0%		19.0%	
	PM(5-6	11.0%		10.0%	
Modal Split	**Auto**	23.7%		2.0%	
	Taxi	0.2%		3.0%	
	Subway	55.2%		5.0%	
	Bus	4.8%		20.0%	
	Walk-only	16.1%		70.0%	
Vehicle Occupancy	**Auto**	1.20		2.0	
	Taxi	1.2		2.0	
Directional Distribution		Inbound	Outbound	Inbound	Outbound
	AM (8-9)	15%	85%	48%	52%
	MD(12-1)	50%	50%	50%	50%
	PM(5-6	70%	30%	43%	57%
Daily Truck Trip Gen.		0.06 **(trips/d.u.)**		0.35 **(trips/1,000 gsf)**	
Truck Trip Temporal Distribution	**AM (8-9)**	12%		8%	
	MD(12-1)	9%		11%	
	PM(5-6	1%		2%	

sources:
Trip Generation, Temporal Distribution, and Mode Split from Greenpoint Williamsburg FEIS (CEQR #04DCP003K) and 2012 CEQR Technical Manual
note: for local retail, a trip credit of 25% is applied for linked trips

Applying these factors to the incremental action-induced development – 140 dwelling units and 12,535 sf of commercial space – produces a vehicular traffic projection of up to 37 vehicles, during the P.M. peak period. Since this level of traffic is below the 50-vehicle threshold identified in the CEQR Technical Manual as warranting further assessment, no impacts are anticipated. Trip generation for the project's residential and components, and for the project as a whole, are presented in the following tables.

Table 13-2: Transportation 2

Residential Trip Generation

Residential Component Trip Generation

				Peak Hours	Inbound	Outbound
Incremental Residential Units =	140	AM	10.0%	of daily trips	15%	85%
Person Trips/Unit/Day =	8.07	Midday	5.0%	of daily trips	50%	50%
Daily Person Trips =	1129.8	PM	11.0%	of daily trips	70%	30%
Percent Auto Use =	23.7%					
Auto Occupancy =	1.20					
Percent Subway Use =	55.2%					
Percent Bus Use =	4.8%					
Percent Taxi Use =	0.2%					
Taxi Occupancy =	1.2					
Percent Walk Only =	16.1%					

Peak Hour Person Trips

	Inbound	Outbound	Total
AM	17	96	113
Midday	28	28	56
PM	87	37	124

Peak Hour Person Trips by Auto

	Arriving	Departing	Total
AM	4	23	27
Midday	7	7	13
PM	21	9	29

Peak Hour Person Trips by Taxi

	Arriving	Departing	Total
AM	0	0	0
Midday	0	0	0
PM	0	0	0

Daily Truck Trip Gen.	0.06 **(trips/d.u.)**	
Truck Trip Temporal Distribution	**AM (8-9)**	12%
	MD(12-1)	9%
	PM(5-6	1%

Daily Truck Trips

8

Balanced Truck Trips

	Inbound	Outbound	Total
AM	1	1	1
Midday	1	1	2
PM	0	0	0

Peak Hour Auto Trips

	Arriving	Departing	Total
AM	3	19	22
Midday	6	6	11
PM	17	7	25

Peak Hour Taxi Trips

	Arriving	Departing	Total
AM	0	0	0
Midday	0	0	0
PM	0	0	0

Peak Hour Taxi Trips Balanced*

	Arriving	Departing	Total
AM	0	0	0
Midday	0	0	0
PM	0	0	0

Peak Hour Vehicle Trips auto, taxi, truck

	Arriving	Departing	Total
AM	4	20	24
Midday	7	7	13
PM	17	7	25

Peak Hour Subway Trips

	Arriving	Departing	Total
a.m.	9	53	**62**
midday	16	16	**31**
p.m.	48	21	**69**

Peak Hour Bus Trips

	Arriving	Departing	Total
a.m.	1	5	**5**
midday	1	1	**3**
p.m.	4	2	**6**

Peak Hour Walk-only Trips

	Arriving	Departing	Total
a.m.	3	15	**18**
midday	5	5	**9**
p.m.	14	6	**20**

Total Walk Trips

	Arriving	Departing	Total
a.m.	13	73	86
midday	21	21	43
p.m.	66	28	95

*** assumes 1/2 of arriving taxis would be available for departing trips**

Table 13-3: Transportation 3

Retail Trip Generation

Incremental Floor area (1000 sq ft	12.335
Daily visitors (per 1000 ft)	205
Daily visitors	2529

Peak Hour Person Trips

	Inbound	Outbound	Total
AM	39	39	78
Midday	240	240	480
PM	121	121	243

Net Peak Hour Person Trips*

	Inbound	Outbound	Total
AM	29	29	59
Midday	180	180	360
PM	91	91	182

Peak Hour Person Trips by Auto

	Arriving	Departing	Total
AM	1	1	1
Midday	4	4	7
PM	2	2	4

Peak Hour Person Trips by Taxi

	Arriving	Departing	Total
AM	1	1	2
Midday	5	5	11
PM	3	3	5

Daily Truck Trip Gen.	0.35 **(trips/1,000 gsf)**	
Truck Trip Temporal Distribution	**AM (8-9)**	8%
	MD(12-1)	11%
	PM(5-6	2%

Daily Truck Trips
4

Balanced Truck Trips

	Inbound	Outbound	Total
AM	1	1	2
Midday	1	1	2
PM	0	0	0

	Peak Hour Trips		Percent Auto Use = 2%
a.m.	3.1%		Auto Occupancy = 2
midday	19.0%		Percent Taxi Use= 3%
p.m.	9.6%		Taxi Occupancy= 2
			Percent Bus Use= 5%
			Percent Subway Use= 20%
			Percent Walk= 70%

Directional Distribution	Inbound	Outbound
AM (8-9)	48%	52%
MD(12-1)	50%	50%
PM(5-6	43%	57%

Peak Hour Auto Trips

	Arriving	Departing	Total
AM	0	0	1
Midday	2	2	4
PM	1	1	2

Peak Hour Taxi Trips

	Arriving	Departing	Total
AM	0	0	1
Midday	3	3	5
PM	1	1	3

Peak Hour Subway Trips

	Arriving	Departing	Total
a.m.	6	6	**12**
midday	36	36	**72**
p.m.	18	18	**36**

Peak Hour Bus Trips

	Arriving	Departing	Total
a.m.	1	1	**3**
midday	9	9	**18**
p.m.	5	5	**9**

Peak Hour Walk-only Trips

	Arriving	Departing	Total
a.m.	26	29	**55**
midday	126	126	**252**
p.m.	55	73	**127**

Total Walk Trips

	Arriving	Departing	Total
a.m.	34	36	70
midday	171	171	342
p.m.	78	95	173

note: a 25% linked trip credit is applied to retail trips

Table 13-4: Transportation 4

PROJECT TOTAL - COMBINED COMPONENTS

Peak Hour Person Trips

	Arriving	Departing	Total
AM	46	125	172
Midday	208	208	417
PM	178	128	306

Peak Hour Person Trips by Auto

	Arriving	Departing	Total
AM	5	23	28
Midday	10	10	21
PM	22	11	33

Peak Hour Person Trips by Taxi

	Arriving	Departing	Total
AM	1	1	2
Midday	5	5	11
PM	3	3	6

Peak Hour Subway Trips

	Arriving	Departing	Total
a.m.	15	59	74
midday	52	52	103
p.m.	66	39	105

Peak Hour Bus Trips

	Arriving	Departing	Total
a.m.	2	6	**8**
midday	10	10	**21**
p.m.	9	6	**15**

Peak Hour Walk-only Trips

	Arriving	Departing	Total
a.m.	29	44	**73**
midday	131	131	**261**
p.m.	69	79	**147**

Peak Hour Auto Trips

	Arriving	Departing	Total
AM	4	19	23
Midday	7	7	15
PM	18	8	26

Peak Hour Taxi Trips

	Arriving	Departing	Total
AM	0	1	1
Midday	3	3	5
PM	2	1	3

Peak Hour Taxi Trips - Balanced

	Arriving	Departing	Total
AM	2	2	4
Midday	9	9	18
PM	5	5	10

Daily Truck Trips

13

Balanced Truck Trips

	Inbound	Outbound	Total
AM	2	2	3
Midday	2	2	4
PM	0	0	0

Total Vehicle Trips - Cars, Taxis, Trucks

	Inbound	Outbound	Total
AM	8	23	31
Midday	18	18	37
PM	23	13	36

Total Walk Trips

	Arriving	Departing	Total
a.m.	47	109	156
midday	193	193	385
p.m.	144	124	268

13.2 Parking

The projected development would include a 91-space accessory parking facility. Based on data from the 2000 census, local households own cars at the rate of 0.46 vehicles for every household. Therefore the projected development of 141 dwelling units would generate an overnight parking demand of 65 vehicles. There would be little or no parking demand overnight from the project's commercial space. During the daytime period, residents who drive to work would vacate the garage, so daytime parking demand would be fewer than 65 vehicles. The project's commercial component would generate minimal parking demand because of the very small number of local retail-generated

trips made by private automobile. The projected project's 91 accessory parking spaces would be adequate to meet project-generated parking demand.

13.3 Transit and Pedestrians

The objectives of the transit and pedestrian analyses are to determine whether the proposed action can be expected to have any significant impacts on public transportation facilities and services, as well as on pedestrian flows. According to the CEQR Technical Manual, a proposed action generating fewer than 200 transit trips or 200 pedestrian trips during the peak hour would not warrant further assessment. The next step in assessing the project's potential for adverse impacts related to pedestrian conditions is to assign the action-induced traffic to the network, to determine which elements of the pedestrian network – sidewalks, crosswalks, corners – would receive in excess of 200 hourly trips.

13.3.1 Transit

The incremental development ascribed to the proposed action is projected to result in up to 8, 21, and 15 bus trips and 47, 103, and 105 subway trips during the A.M., Midday, and P.M. peak periods, respectively. Because the proposed action would generate fewer than 200 hourly transit trips during any period, no further assessment of transit is warranted.

13.3.2 Pedestrians

The CEQR Technical Manual identifies the potential for impacts to pedestrian conditions for proposed actions located near already congested intersections, sidewalks with a sizable amount of street furniture, narrow sidewalks, long traffic lights, or active subway entrances. None of these conditions exist in the vicinity of the project under consideration. The project site is surrounded by wide sidewalks without any obstructions, and is not in an area that is characterized by congested pedestrian conditions.

Total pedestrian trips, inclusive of transit and walk-only trips, would be 156, 385, and 268 during the A.M., Midday, and P.M. periods, respectively. Because the total pedestrian trips during the Midday and P.M. periods would exceed 200 per hour, further assessment of pedestrian conditions is warranted for those analysis periods.

The proposed project would generate 21 bus trips in the Midday period and 15 during the P.M. period. The project site is served by three local buses, the B24, operating on Greenpoint Avenue, and the B43 and B62 buses on Manhattan Avenue. It is assumed that 1/3 of the proposed action's bus trips would be assigned to each of these routes. Passengers of the B24 bus would travel north from the site to the bus stop (both directions) on the west side of McGuinness Boulevard. Passengers of the 43 and 62 buses could reach Manhattan Avenue via either Greenpoint Avenue to the north or Calyer Street to the south, since there are bus stops on Manhattan Avenue at both of these streets. Therefore it is assumed that approximately 2/3 of bus patrons would travel to or from the north, while 1/3 would travel south to Calyer Street and then west to Manhattan Avenue.

It is assumed that the proposed action's 103 Midday and 105 P.M. subway riders would travel to the closest subway station, at Greenpoint Avenue and Manhattan Avenue, by the most direct route, walking north on McGuinness Boulevard from the Projected Development Site and then west on Greenpoint Avenue

The projected 261 Midday and 147 P.M. walk-only trips would be overwhelmingly associated with the Projected Development's retail component and would consist largely of local residents. There are residential areas to the north, south, west, and southeast of the affected area, while the area to the east and northeast is primarily commercial and industrial, with some non-conforming residential uses. Because the area to the southeast is residential, while the area to the northeast is not, it is expected

that a greater proportion of walk-only trips would originate from the south than from the north. Accordingly, 30% of walk-only trips are assigned to the north and 70% are assigned to the south.

During the Midday period, trips to and from the north would include all 103 subway trips, Two thirds of the bus trips (14 trips), and 30% of the walk-only trips (78 trips). Therefore total pedestrian trips to and from the north would be 196 trips. Trips to and from the south would include 30% of the bus trips (6 trips) and 70% of the walk-only trips (183 trips), for a total of 189 trips. Because of this dispersal of action-generated pedestrian trips, no single location would receive in excess of 200 hourly pedestrian trips during the Midday peak period. Assigning the 268 action-induced walking trips during the P.M. peak hour using the same assumptions results in 160 pedestrian trips to and from the north and 108 trips to and from the south. Because of this dispersal of action-generated pedestrian trips, no single location would receive in excess of 200 hourly pedestrian trips during the Midday peak period.

There is no potential for pedestrian impacts, and no further assessment is warranted.

Figure 13.3-1: Bus Trip Assignments

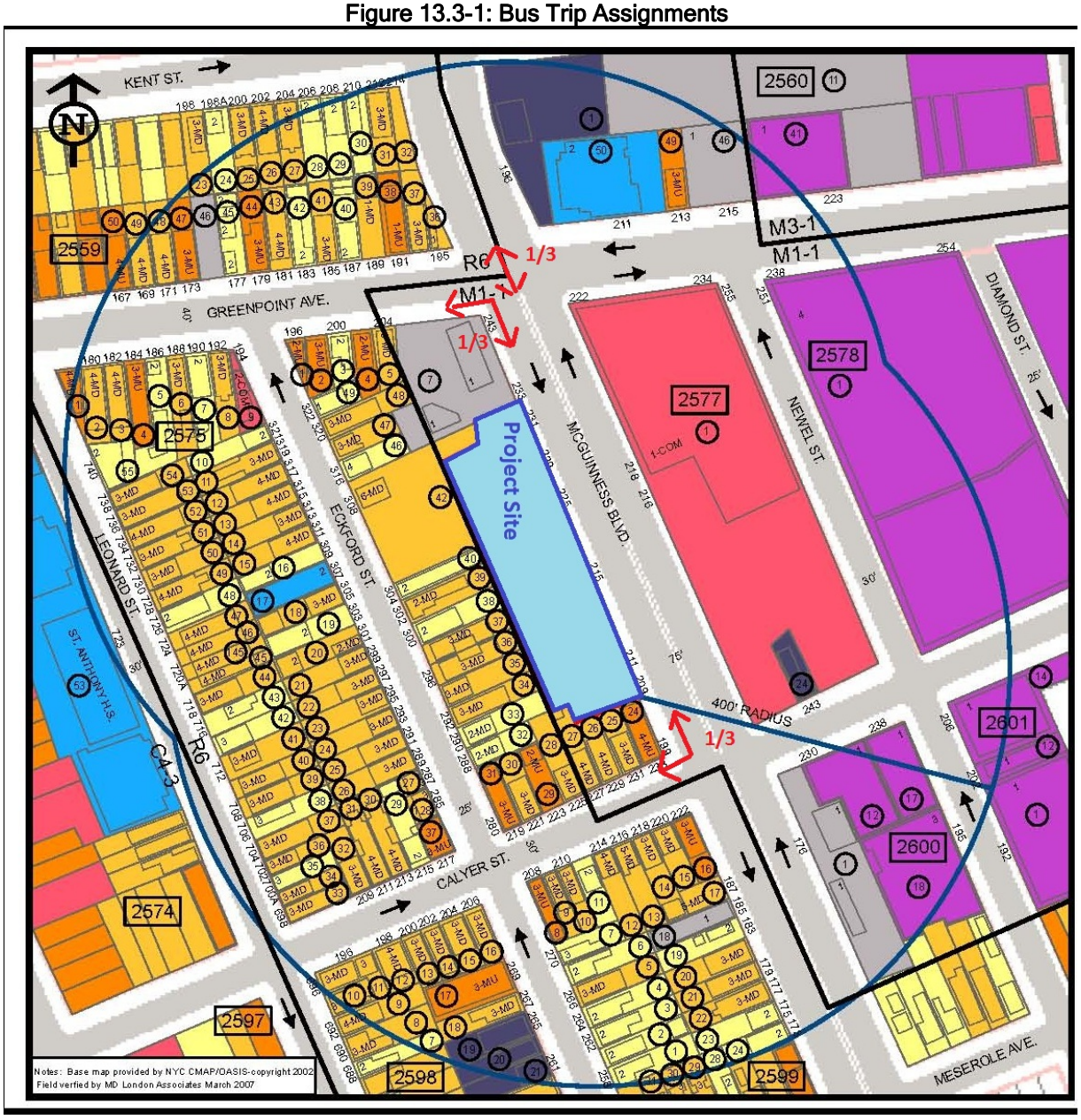


Figure 13.3-2: Subway Trip Assignment

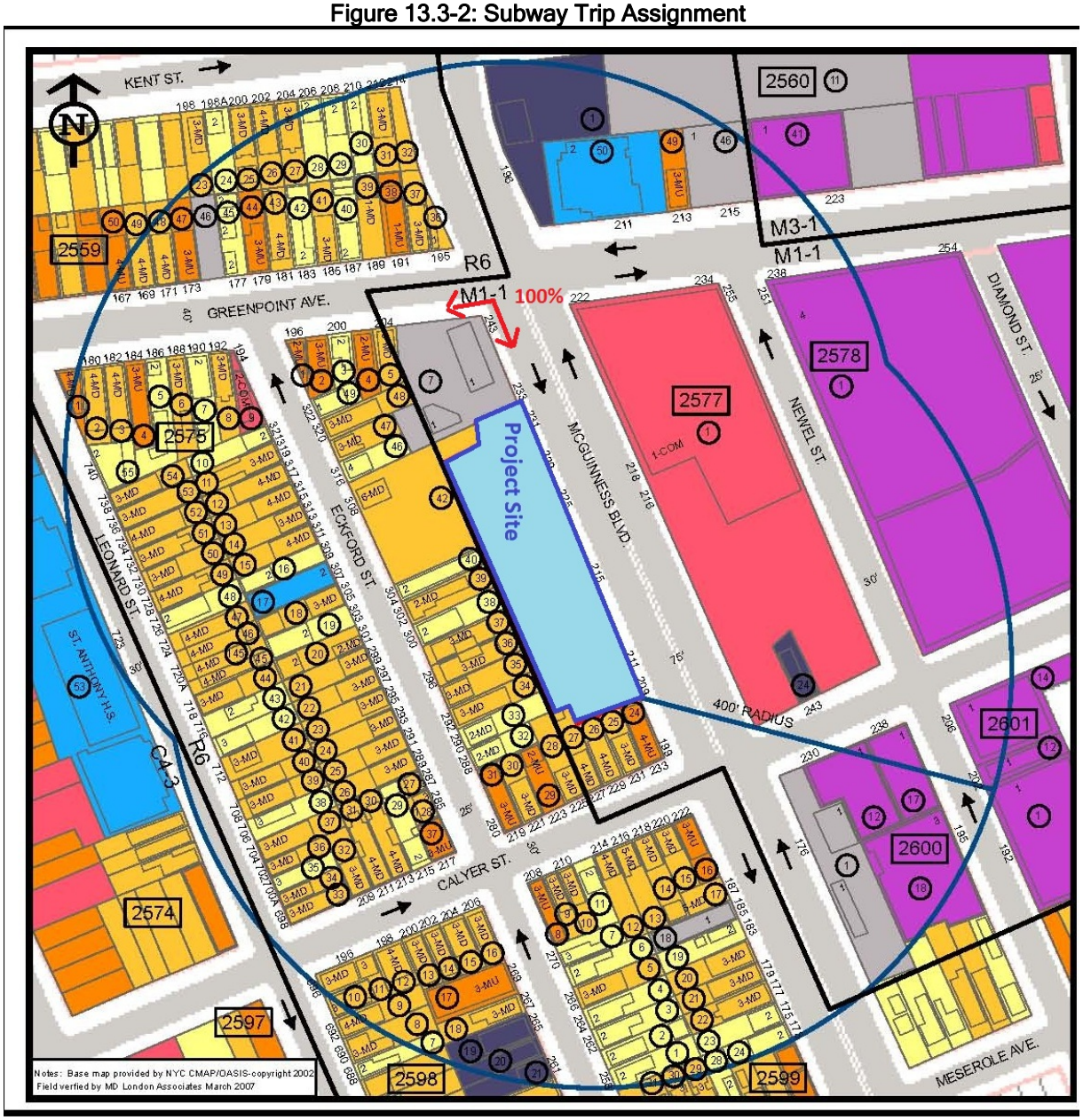


Figure 13.3-3 Walk-only Trip Assignment

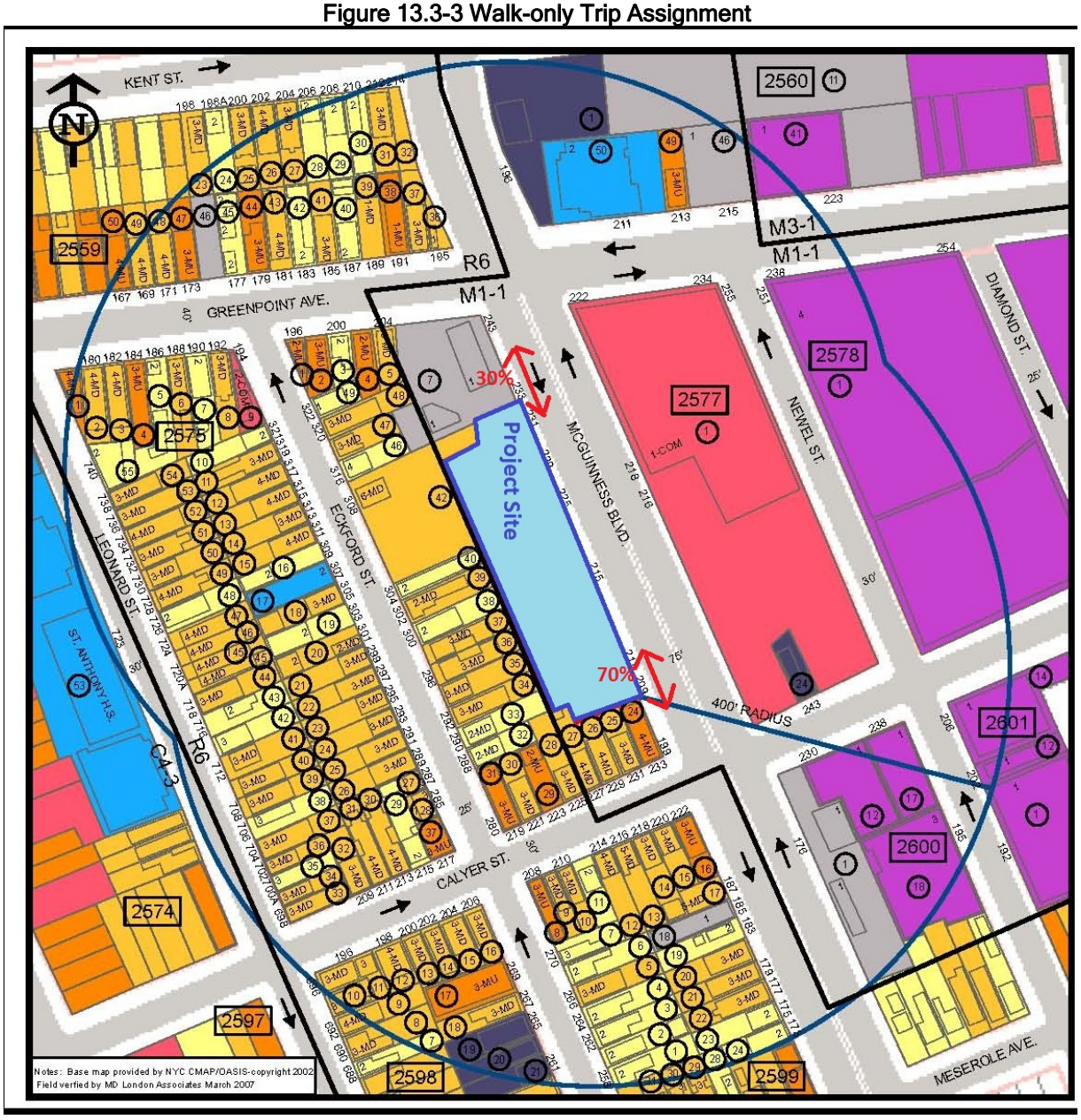


Figure 13.3-4 Midday Bus Trips

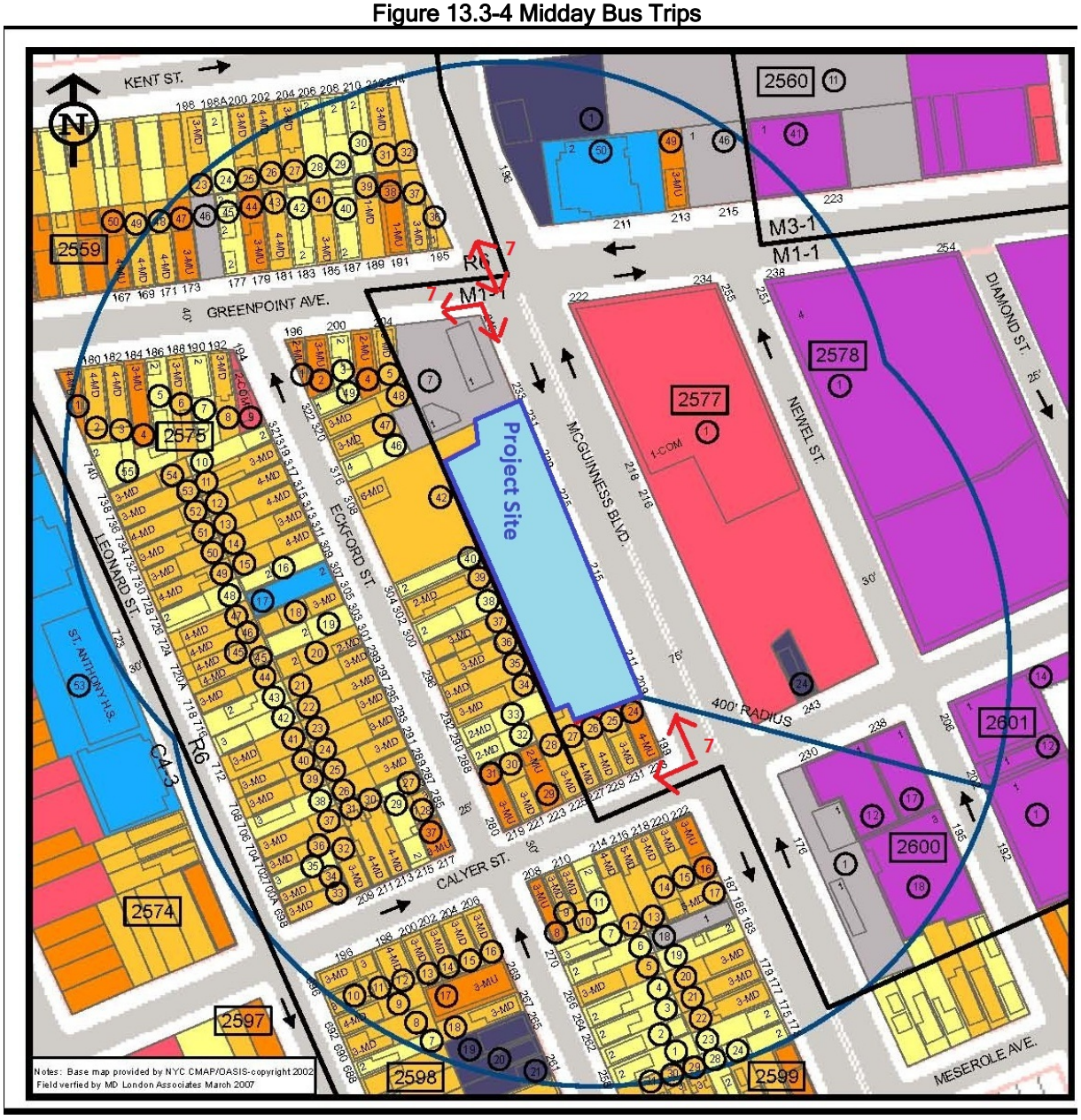


Figure 13.3-5 Midday Subway Trips

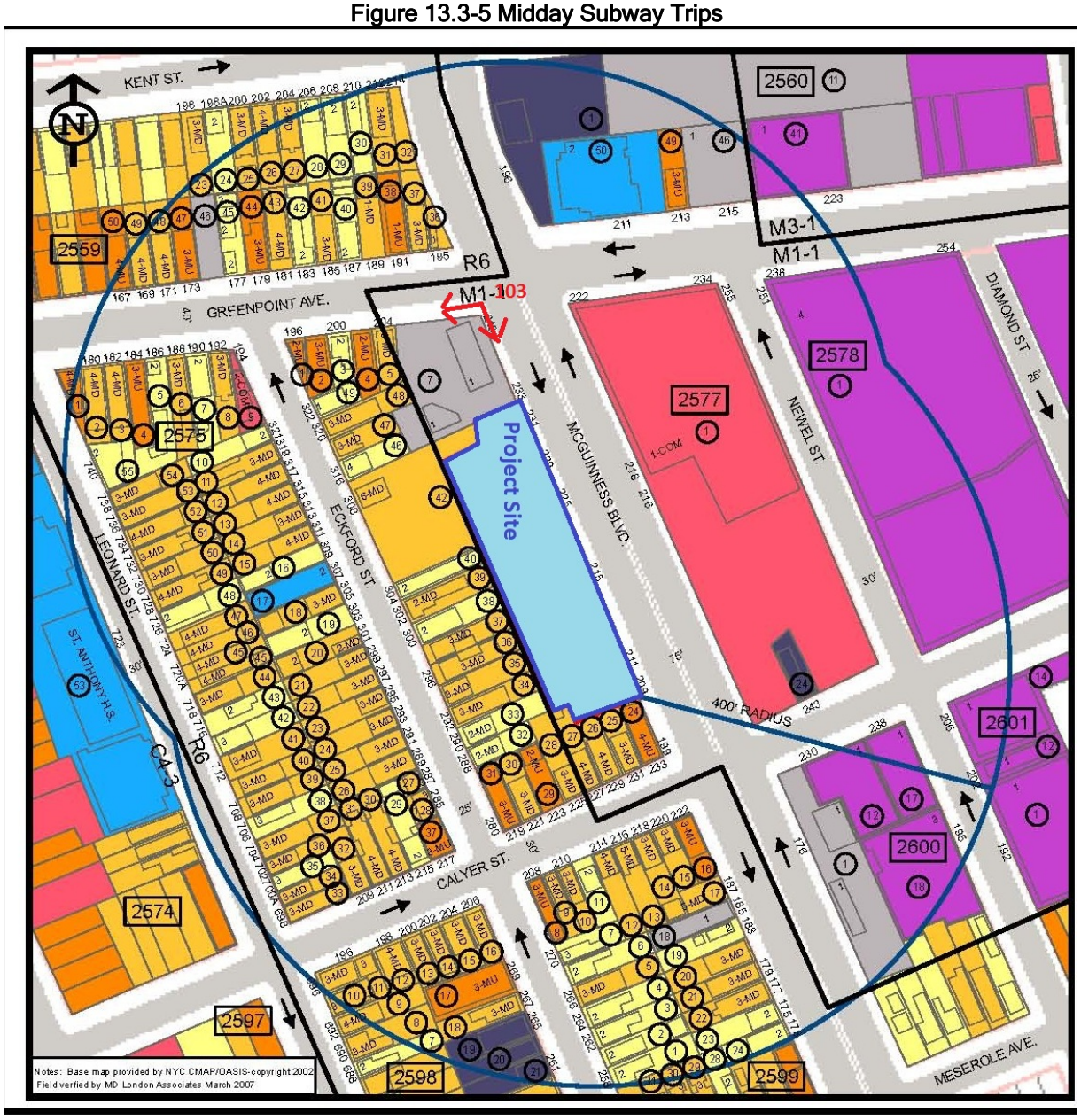


Figure 13.3-6 Midday Walk-only Trips

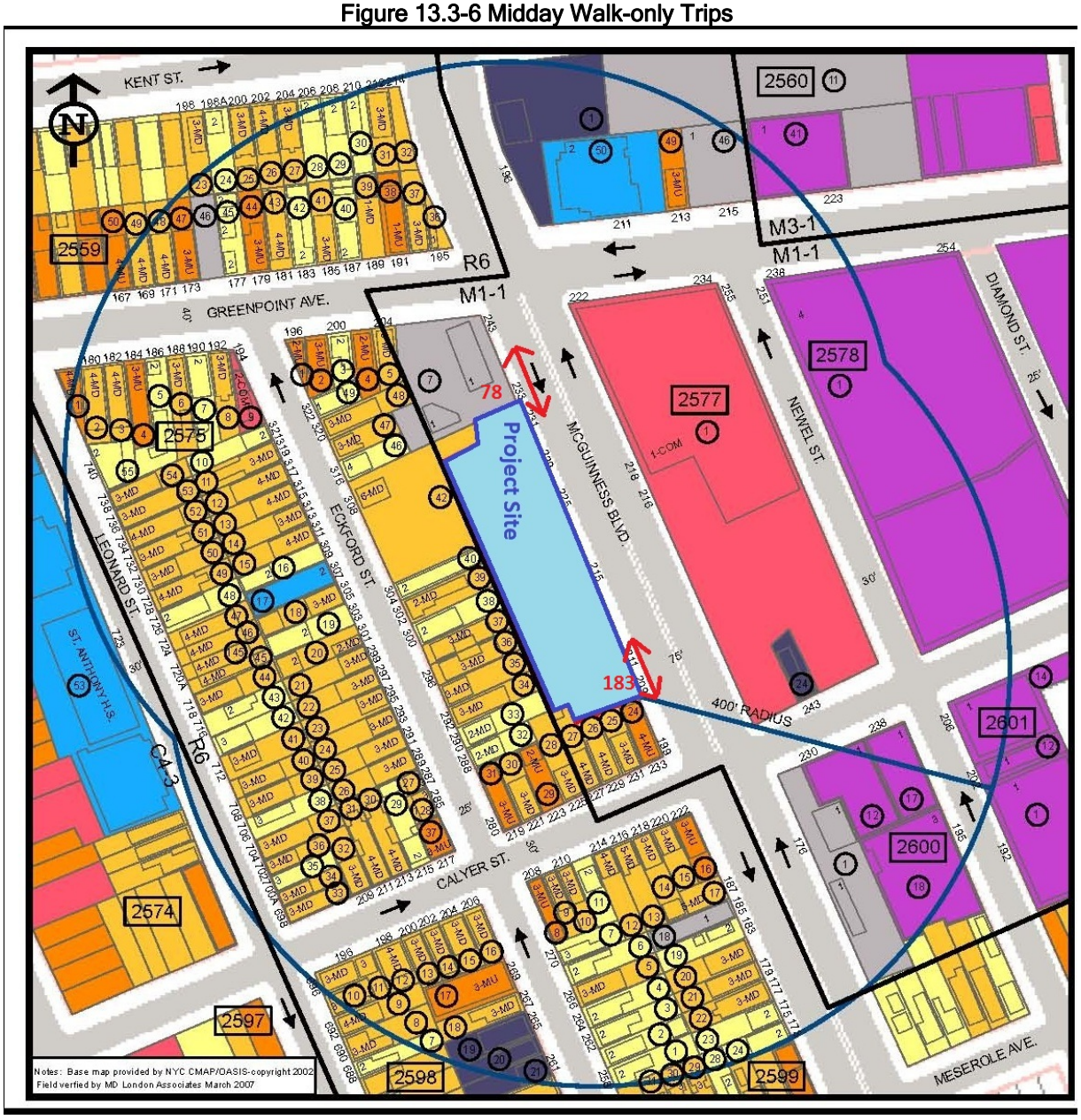


Figure 13.3-7 PM Bus Trips

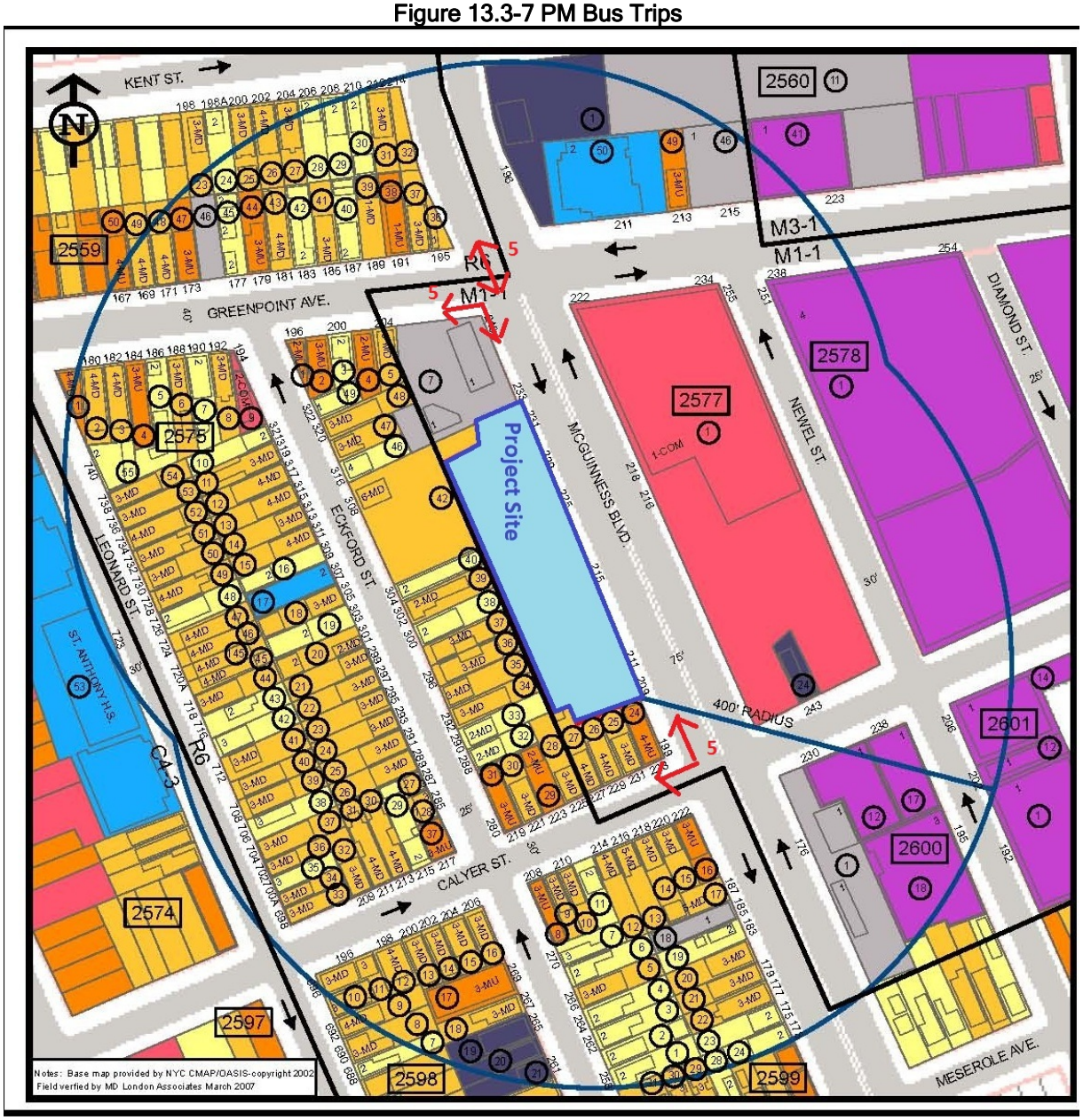


Figure 13.3-8 PM Subway Trips

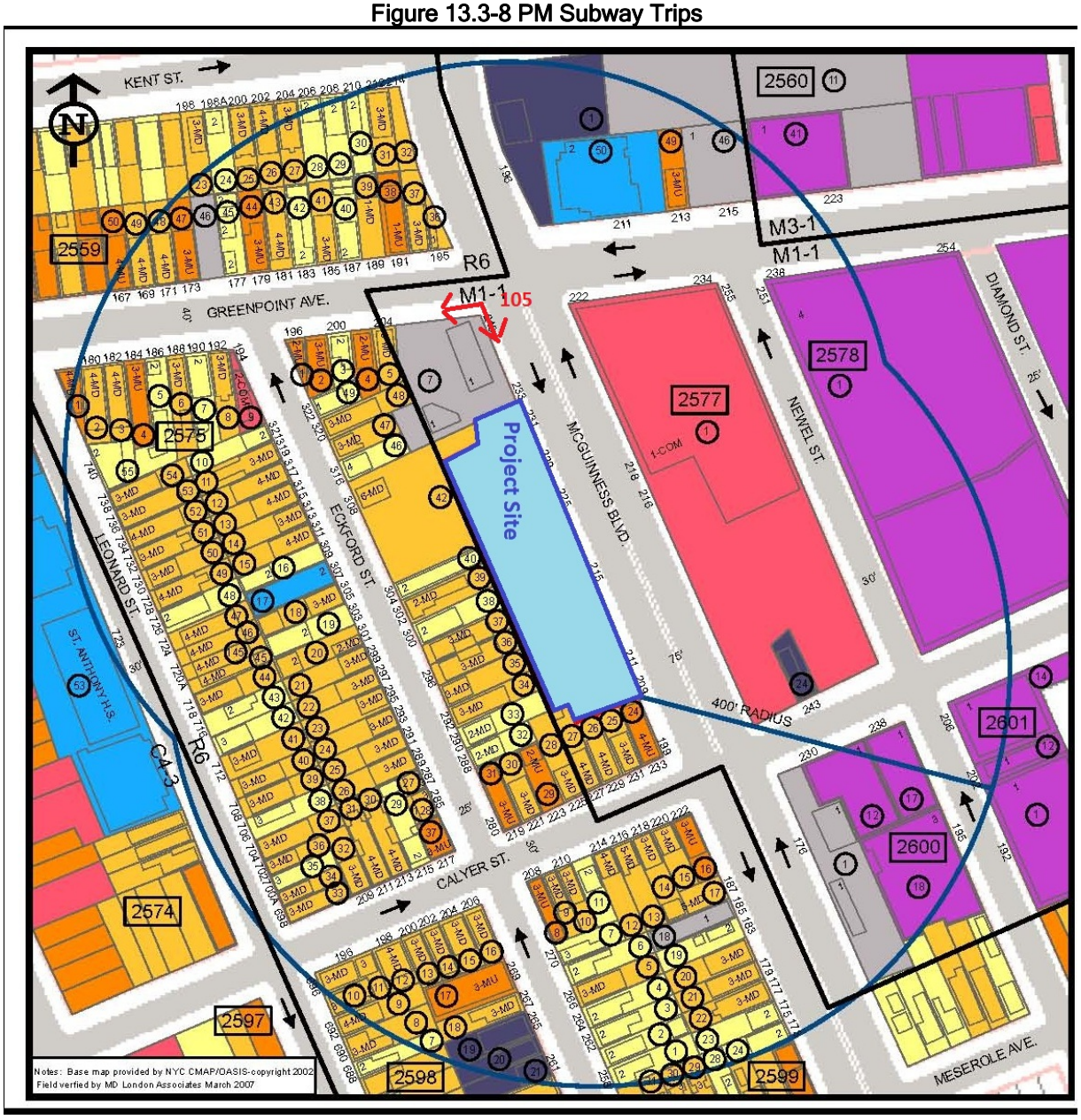
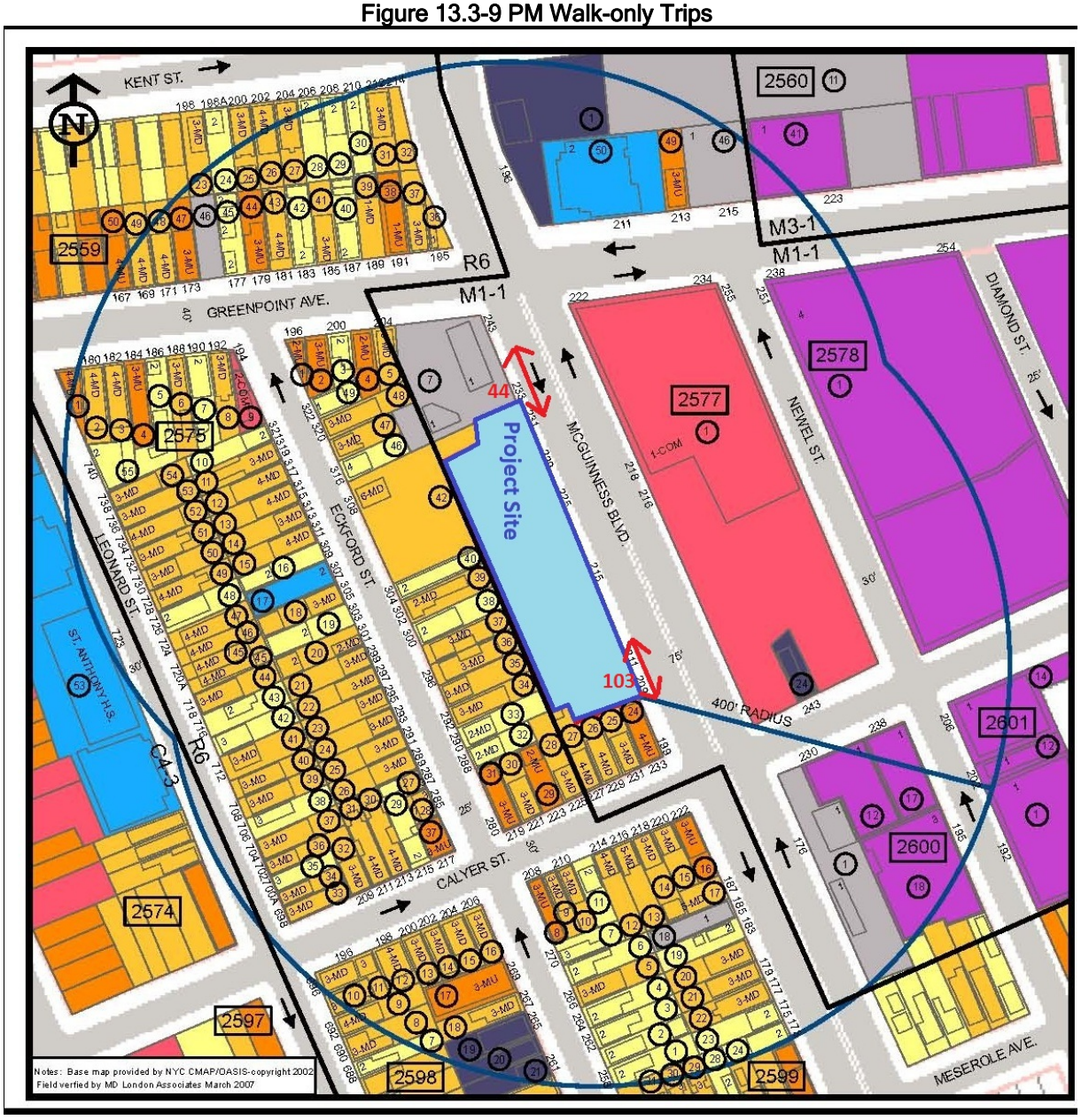


Figure 13.3-9 PM Walk-only Trips



14. Air Quality

An air quality analysis is conducted in order to assess the effects of a proposed action on ambient air quality (i.e. the quality of the surrounding air), as well as the potential of a project to introduce a sensitive receptor into an area characterized by elevated levels of air pollutants. Ambient air quality can be affected by air pollutants produced by fixed facilities, usually referred to as "stationary sources," and by motor vehicles, referred to as "mobile sources".

Mobile Sources

Based on the *2012 CEQR Technical Manual*, actions can result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any new mobile sources of pollutants, or add new uses near mobile sources. The following actions may result in significant adverse air quality impacts and therefore require further analyses:

- Placement of operable windows, balconies, air intakes, or intake vents generally within 200 feet of an atypical vehicular source of air pollutants
- Creation of a fully or partially covered roadway
- Generate peak hour auto traffic or divert existing traffic, resulting in:
    - 160 or more auto trips in sections of downtown Brooklyn or Long Island City
    - 140 or more auto trips in Manhattan between 30th and 60th Streets
    - 170 or more auto trips in all other areas of the City
- Addition of a substantial number of local or regional diesel vehicle trips
- Creation of new sensitive uses (particularly schools, hospitals, parks and residences) adjacent to large existing parking facilities or parking garage exhaust vents
- Addition of a sizeable number of other mobile sources of pollution, such as heliports, rail terminals, or trucking

A preliminary evaluation was carried out according to the threshold criteria listed above, to determine whether detailed analysis of potential mobile source impacts is warranted for the proposed action. Specifically:

- The location of the proposed new mixed use building does not place operable windows, balconies, air intakes, etc. within 200 feet of an atypical air pollution source
- The projected project does not create a fully or partially covered roadway
- The project site is not located in Downtown Brooklyn, Long Island City, or Manhattan. As provided in Table 14-4: Transportation 4, the projected project will not generate 170 or more auto trips
- The nature of the projected development, commercial and residential uses, would not generate a substantial number of diesel vehicle trips
- The project does not create a new sensitive use
- The project would not add a new mobile source of pollution

The approval of the proposed action does not meet any of the CEQR criteria listed above; no significant adverse mobile air quality impacts are anticipated. A detailed mobile source air quality analysis is not warranted due to the size of the project.

Stationary Sources

According to the 2012 CEQR Technical Manual, the potential of stationary source air quality impacts should be assessed for the following actions:

- Projects that would use fossil fuels (fuel oil or natural gas) for heating/hot water, ventilation, and air conditioning systems (note that single-building projects may be able to perform a screening analysis rather than detailed stationary source analyses; see Subsection 322.1, below)
- Projects that would create large emission sources, including but not limited to the following: solid waste or medical waste incinerators, cogeneration facilities, asphalt and concrete plants, or power generating plants
- Projects that would result in new uses (particularly schools, hospitals, parks, and residences) located near a large emission source
- Projects that would include medical, chemical, or research labs
- Projects that would result in new uses being located near medical, chemical, or research labs
- Projects that would include operation of manufacturing or processing facilities
- Projects that would result in new uses (such as residences, schools, hospitals, parks, *etc.*) within 400 feet of manufacturing or processing facilities
- Projects that would result in new uses within 400 feet of a stack associated with commercial, institutional, or residential developments, and the height of the new structures would be similar to or greater than the height of the emission stack
- Projects that would result in potentially significant odors. This includes, but is not limited to, solid waste management facilities, water pollution control plants (*i.e.*, sewage treatment plants), and incinerators.
- Projects that would result in new uses near an odor-producing facility
- Projects that would create "non-point" sources, such as unpaved surfaces and storage piles that could result in what is known as fugitive dust
- Projects that would result in new uses near non-point sources

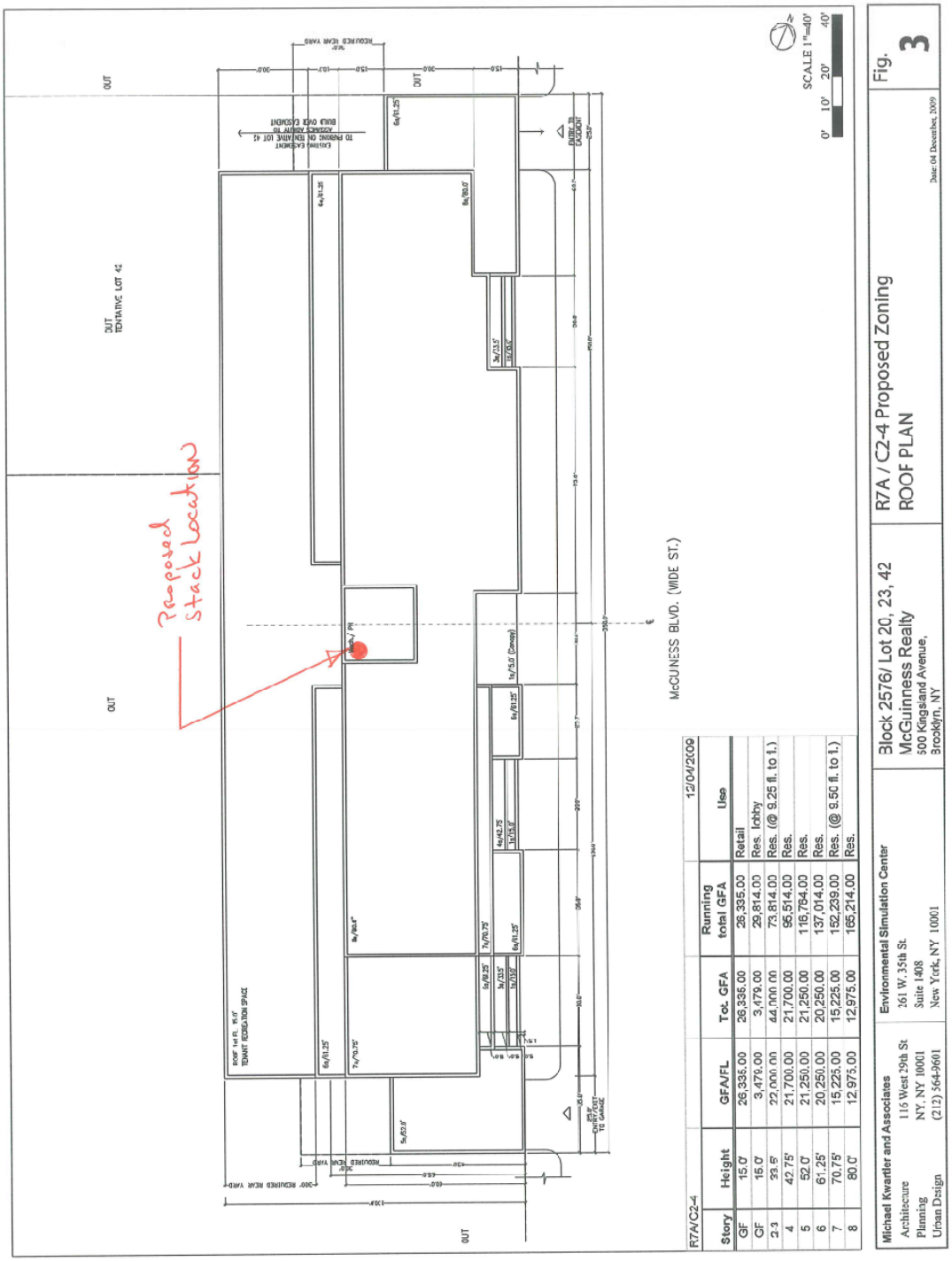
The proposed mixed-use commercial and residential project would not meet any of the criteria listed above except:

- The introduction of a new HVAC system fueled by natural gas
- Be located within 1,000 feet of an odor producing facility (i.e., Newtown Creek WTCF)
- Introduction of a new 91 space accessory garage

HVAC Assessment

The projected project would be 8-stories (80 feet in height). The stack, 12-in diameter would be 85-feet high (5-feet about the roof). . The proposed stack location can be found in the following figure (Figure 14-1).

Figure 14-1: Proposed HVAC Stack Location



To determine the potential for project-generated HVAC emissions to affect nearby receptors, an analysis was conducted using Figure 17-7 of the CEQR Technical Manual. A rendition of the figure adapted to include the information pertaining to this project can be found below (Figure 14-2).

The projected project would contain approximately 155,000 sf of floor area and be 80 feet in height. Based on a review of land use maps, there are no receptors of comparable or greater height within 400 feet. Assuming the worst case scenario, emissions from the project's HVAC equipment would not have the potential for adverse impacts on a building 400 feet away. As there would not be a significant increase of stationary source air pollutants, the proposed action does not warrant a detailed stationary source assessment.

The potential development site will contain about 66,385.3 sf of floor area and would raise seven stories high (70 feet). Based on the figure above, there would be no significant adverse air quality impacts if the building were fueled by natural gas and the HVAC vent were located at least 75 feet from the projected building's façade.

The building located at 308 Eckford Street is six stories in height (60-feet) and contains about 36,000 sf of floor area. Assuming that the HVAC stack is located on the roof's highest parapet, the stack would be about 100 feet from the projected building's façade. As such, there would be no significant adverse air quality impacts on the projected building's façade from this site.

To determine impact from the potential development on the projected development, or the reciprocal, an analysis was completed using Figure 17-5 Fuel Oil #2 from the 2012 CEQR Technical Manual (Figure 14-3) and Figure 17-7 Natural Gas (Figure 14-4)..

The potential development site will contain about 66,385.3 sf of floor area and would raise seven stories high. The vent for the potential development site would be located within the rooftop bulkhead. This is located over fifty feet from the southern edge of this building, which is closest to the projected development site (Figure 14-5).

The projected development site would have an area of 155,000 sf. The vent would be located in the rooftop bulkhead over 165 feet from the northern edge of this building, which is closest to the potential development site.

Assuming a worst case scenario of HVAC system using fuel oil #2, CEQR Technical Manual Figure 17-5 shows the Potential Development site failed the screening.

Therefore, the analysis determined that under both the projected and potential site under the RWCDS would require (E) designations that would specify the type of fuel to be used, and the stack location and height. The proposed (E) designations for the applicable projected and potential development sites with respect to HVAC systems are presented below.

> Block 2576, Lots 20 and 23 (Projected Development Site): Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 100 feet from the lot line facing Greenpoint Avenue, at a height of 3 feet, and will use exclusively natural gas as the type of fuel for space heating and hot water (HVAC) systems to avoid any potential significant adverse air quality impacts.
>
> Block 2576, Lot 7 (Potential Development Site): Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 65 feet from the lot line facing Calyer Street, at a height of 3 feet, and will use exclusively natural gas as the type of fuel for space heating and hot water (HVAC) systems to avoid any potential significant adverse air quality impacts.

Figure 14-2

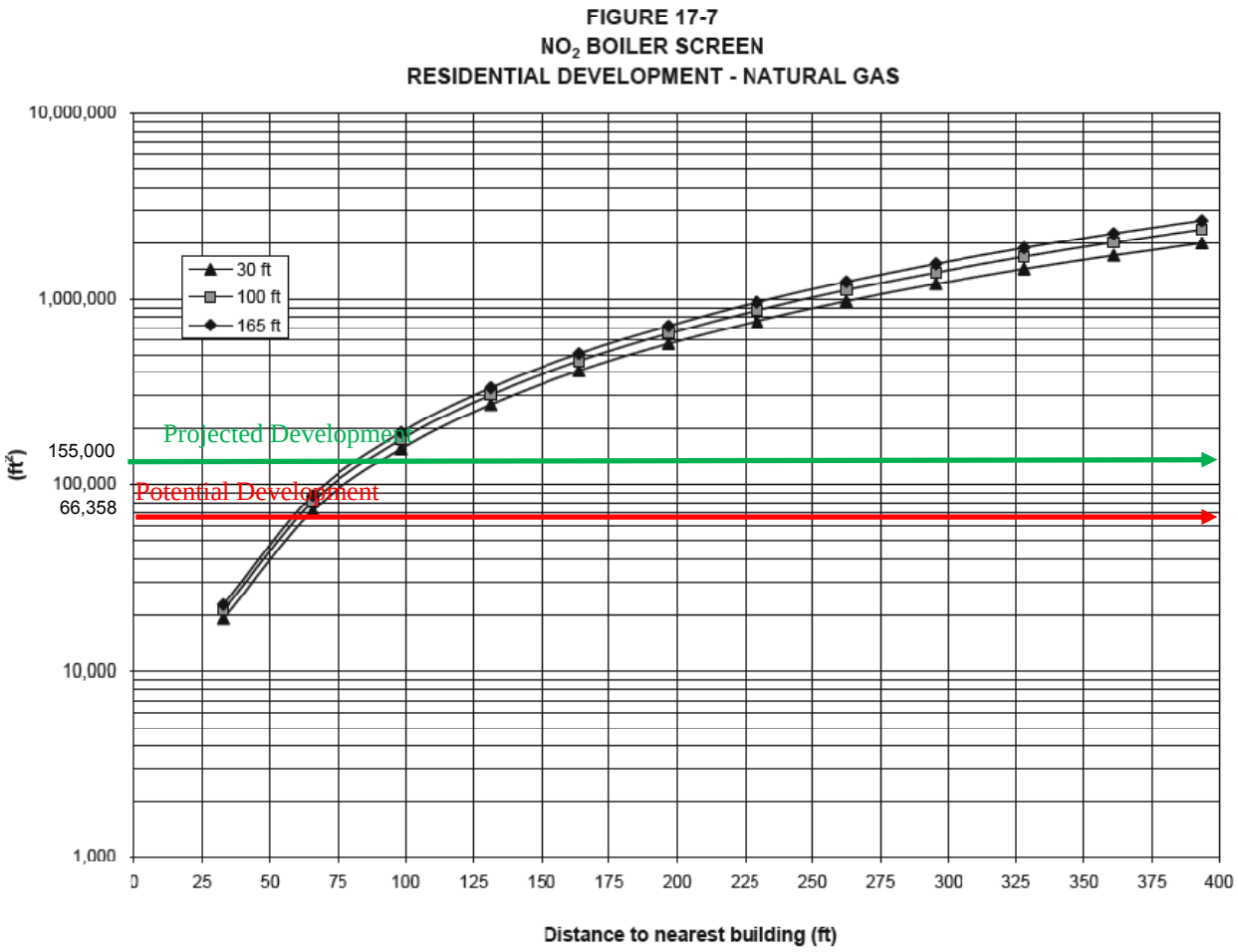


FIGURE 17-7
NO2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - NATURAL GAS
10,000,000
1,000,000
155,000
100,000
66,358
10,000
1,000
(ft²)
30 ft
100 ft
165 ft
Projected Development
Potential Development
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
Distance to nearest building (ft)

Figure 14-3

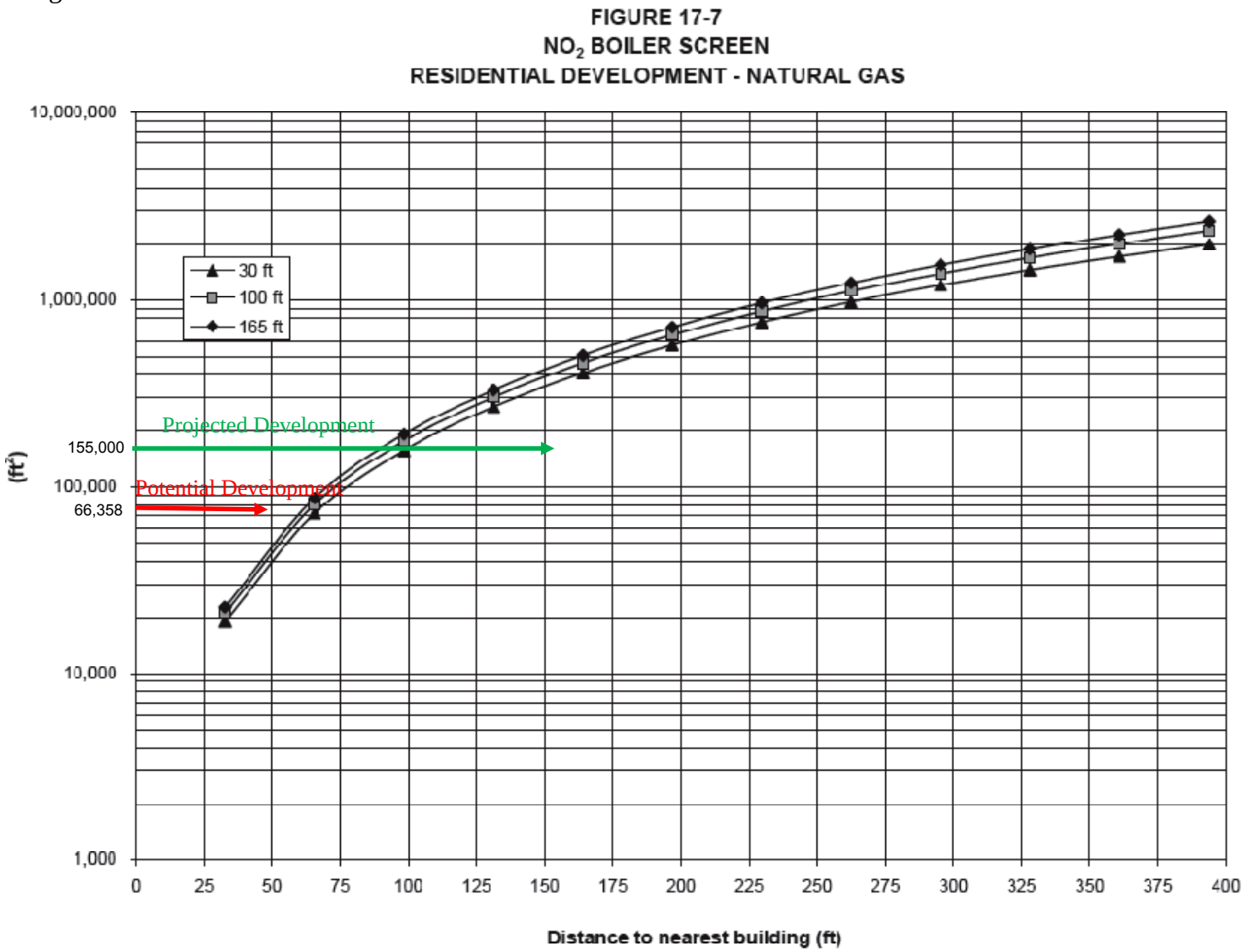


FIGURE 17-7
NO2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - NATURAL GAS
10,000,000
1,000,000
155,000
100,000
66,358
10,000
1,000
(ft²)
30 ft
100 ft
165 ft
Projected Development
Potential Development
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
Distance to nearest building (ft)

Figure 14-4

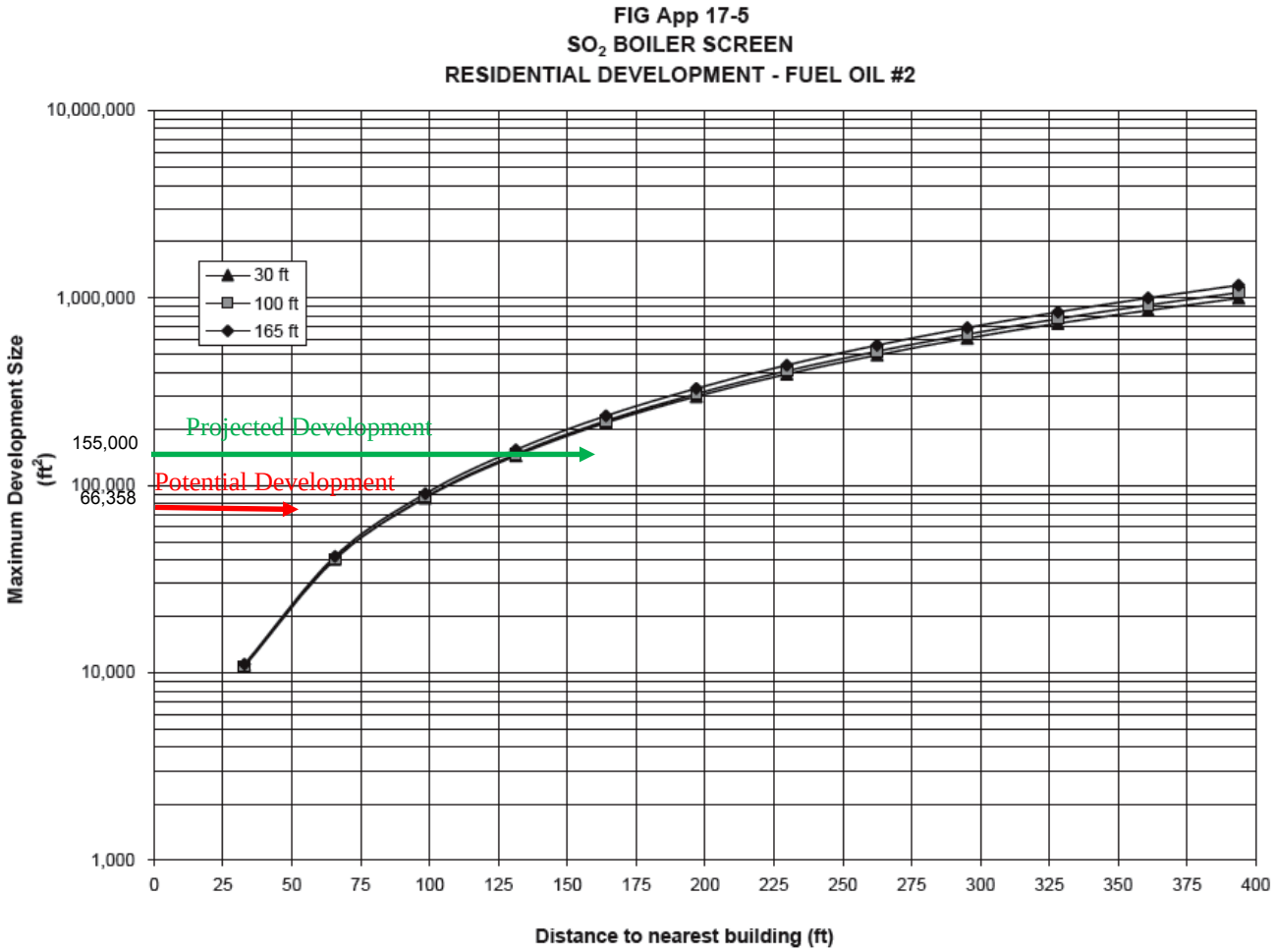
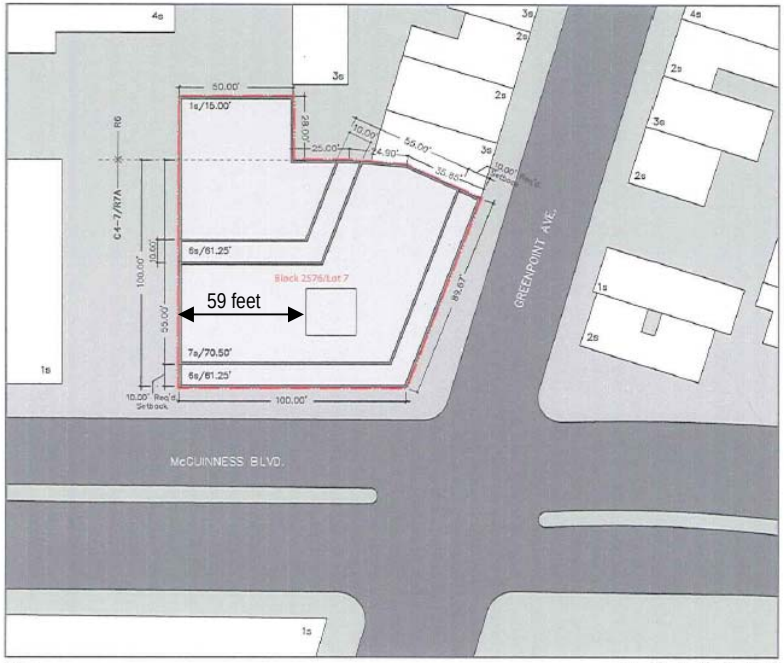
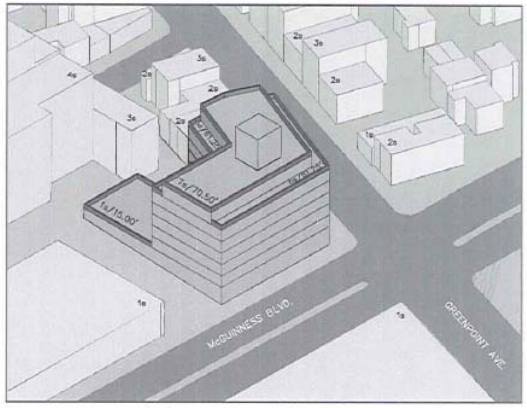


FIG App 17-5
SO2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - FUEL OIL #2
10,000,000
1,000,000
155,000
100,000
66,358
10,000
1,000
30 ft
100 ft
165 ft
Projected Development
Potential Development
Maximum Development Size (ft2)
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
Distance to nearest building (ft)

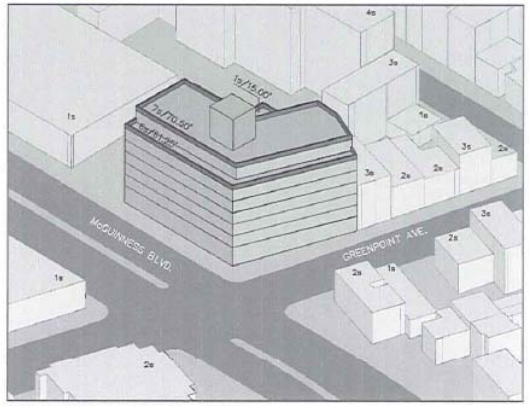
Figure 14-5 Potential Development Site



Plan



Axonometric view looking West



Axonometric view looking South

Mc Guinness Blvd.: Lot 7 Gas Station)

Story	Height	GFA/FL	Tot. GFA	Running Tot. GFA	USE
GF	15.0'	12,959.98	12,959.98	12,959.98	Retail + Residential Lobby
2-6	61.25'	9,378.50	46,892.50	59,852.48	Residential
7	70.50'	6,532.82	6,532.82	66,385.30	Residential

Michael Kwartler and Associates Architecture 116 West 29th St. Planning NY, NY 10001 Urban Design (212) 564-9601	Environmental Simulation Center 261 W. 35th St. Suite 1408 New York, NY 10001	Block 2576/ Lot 7 (Gas Station) McGuinness Realty 500 Kingsland Avenue, Brooklyn, NY	Axonometric Views and Plan: R7A / C4-7 Proposed Zoning Date: 19 November, 2009	Fig. 1

Odor Issue

The CEQR Technical Manual states: "Estimates of malodorous pollutant emission rates are evaluated on a case-by-case basis. Odor thresholds of specific pollutants (i.e., pollutant levels in ambient air that result in a malodorous smell that is recognized by the general populace) may vary by several orders of magnitude, depending on the pollutants. For odor concerns from facilities that are related to wastewater treatment, DEP should be consulted."

With the assistance of DEP, a copy of the Newtown Creek Water Pollution Control Plan Track 3 Upgrade - Final Supplemental Environmental Impact Statement (CEQR No.: 00DEP032K) was reviewed. A Technical Memo was prepared discussing the FSEIS' findings (Appendix 14A). Supporting documentation can also be found in this appendix.

Based on the FSEIS, the upgrades to Newtown Creek will be completed by 2013. Therefore, the upgrades should be in place before the projected site is constructed and completed by 2014.

The Executive Summary of the FSEIS (see Appendix 14A) summaries the "Probable Impacts of the Proposed Action" and finds on page S-21 regarding the odor issue:

> *At the Newtown Creek WPCP under Track 3, extensive odor- control is proposed, including the covering of odorous wastewater treatment processes, the capture and control of the odorous emissions from these processes by dual bed carbon adsorption systems, and the use of tall stacks to disperse odor-causing emissions. Carbon adsorption odor-control systems would also be installed at the Manhattan Pump Station.*
>
> *The results of the H2S modeling for the upgraded plant and pump station show that the maximum 1-hour off-site impact is well below the 10-ppb H2S New York State standard and below the CEQR significant odor indicator threshold of 1 ppb H2S at the nearest sensitive receptors. Therefore no significant odor impacts are anticipated. Post-construction monitoring will be performed to confirm that the emissions from the plant have been controlled.*

FSEIS Chapter 11 – Odors (Appendix 14A) discusses the facility's odor issue and the modeling methodology used to assess potential odor impacts. Figure 11-1 provides the location of "discrete and sensitive receptor locations" that were examined. Note that a sensitive receptor is located just south of the intersection of McGuinness Boulevard and Greenpoint Avenue, directly in front of the subject property.

Based on the modeling effort, the conclusion presented was:

> *Analyses were conducted at the Newtown Creek WPCP and the Manhattan Pump Station to assess the potential impact of odors from process sources at these facilities under the proposed Track 3 Upgrade. Using hydrogen sulfide as a surrogate for odorous compounds it was determined that emissions from both the Newtown Creek WPCP and the Manhattan Pump Station would meet both the 10 ppb NYSAAQS in ambient air and the 1 ppb NYCDEP significant odor threshold at sensitive receptors.*
>
> Odor Conclusion:

Newtown Creek Water Pollution Control Plan Track 3 Upgrade - Final Supplemental Environmental Impact Statement (CEQR No.: 00DEP032K) and the document's Notice of Completion were prepared by the DEP. Through consultation with DEP and the above mentioned document no significant adverse odor impacts are anticipated at the subject property, located at 209-231 McGuinness Boulevard, Brooklyn, NY. No further odor assessment would be required at this site.

Garage Analysis

The proposed action would allow development of a mixed-use building consisting of 141 residential units and 26,335 sf of commercial space. A91-space below-grade accessory garage with and area of 31,500 sf would serve the building. Pursuant to CEQR Manual methodology, an assessment of the potential for emissions from cars operating within the garage is conducted.

The garage would have a single two-way access drive on McGuinness Boulevard located at the southern end of the site. It is expected that the garage would be mechanically vented by a single exhaust vent located on the roof of the one-story commercial portion of the building, at the rear of the building. The exact location of the vent is not known, but pursuant to Building Code regulations, it would be located at least ten feet from any building opening. As an elevated emission source, pursuant to CEQR Manual methodology, the worst-case receptor location would be an elevated receptor location such as an operable window on a nearby window. Accordingly, the distance from the emission source to the receptor is conservatively set at ten feet, and at zero feet elevation difference. Although the garage vent would be at the rear of the building on the one-story commercial portion, an analysis of garage emissions on the near and far sides of McGuinness Boulevard was performed to address the potential effects of pedestrian-level emissions from the garage door.

Emissions through the ventilation stack are a function of vehicle movements within the garage. These include emissions from arriving cars, which are assumed to operate in a hot-stabilized condition, as well as emissions from cars being started, and exiting, which are assumed to operate in a cold start condition. It is assumed that the mean distance traveled by vehicles within the garage is equal to ½ of the shorter dimension of the garage, plus 2/3 of the longer dimension. While the garage layout has not been designed, it is conservatively assumed that the garage would occupy the entire cellar level of a full coverage building, giving it the maximum possible dimensions (100' x 300') and hence the maximum total distance travelled by vehicles within the garage.

Traffic movements within the garage were determined using the Transportation Planning Assumptions described in the Transportation section above. Based on these factors, hour-by-hour arrivals and departing vehicles for the project's residential and commercial components were determined. It should be noted that only auto trips are considered, since taxi and truck trips would not affect the parking garage. The garage accumulation analysis accounts for the full action-related development, all of which would be accommodated within the proposed accessory parking garage, without taking any credit for no-action development. It is also assumed that the garage would be fully utilized (91 vehicles) during the overnight period, which is the time of peak demand for the project's residential component. Based on these assumptions, parking accumulation for the project's residential and retail components would be as presented in the following tables (Table 14-1: Garage 1 and Table 14-2: Garage 2).

Table 14-1: Garage 1

Residential Component Trip Generation

Residential Units =	141
Person Trips/Unit/Day =	8.07
Daily Person Trips =	1137.87
Percent Auto Use =	23.7%
Auto Occupancy =	1.22

Hour Ending	Percent Two-Way Trips	Two-Way Trips	% In	% Out	I-Person Trips-I Inbound	Outbound	I--Auto Trips--I Inbound	Outbound	TOTAL	Auto Accl't	
											91
7:00 AM	4%	47	50%	50%	23	23	5	5	9		91
8:00 AM	4%	44	16%	84%	7	37	1	7	9		85
9:00 AM	9%	104	17%	83%	18	86	3	17	20		72
10:00 AM	7%	75	25%	75%	19	56	4	11	15		65
11:00 AM	5%	57	30%	70%	17	40	3	8	11		60
12:00 PM	4%	50	35%	65%	18	33	3	6	10		57
1:00 PM	5%	53	40%	60%	21	32	4	6	10		55
2:00 PM	5%	52	45%	55%	24	29	5	6	10		54
3:00 PM	4%	48	50%	50%	24	24	5	5	9		54
4:00 PM	5%	61	55%	45%	34	28	7	5	12		55
5:00 PM	7%	82	60%	40%	49	33	10	6	16		59
6:00 PM	11%	122	67%	33%	82	40	16	8	24		67
7:00 PM	9%	107	70%	30%	75	32	15	6	21		75
8:00 PM	8%	94	75%	25%	71	24	14	5	18		84
9:00 PM	4%	43	70%	30%	30	13	6	3	8		87
12:00 AM	9%	98	60%	41%	58	40	11	8	19		91
Total	100%	1138			569	569	111	111	221		

Table 14-2: Garage 2

Commercial Component Trip Generation

Retail Area (1,000 sf) =	26.335
Person Trips/1,000 sf/Day =	205
Daily Person Trips =	5399
Percent Auto Use =	2%
Auto Occupancy =	2

Hour Ending	Percent Two-Way Trips	Two-Way Person Trips	% In	% Out	Person Trips Inbound	Person Trips Outbound	Auto Trips Inbound	Auto Trips Outbound	Parking Accum
8:00 AM	0%	0	70%	30%	0	0	0	0	0
9:00 AM	0%	0	70%	30%	0	0	0	0	0
10:00 AM	1%	54	60%	40%	32	22	0	0	0
11:00 AM	4%	216	55%	45%	119	97	1	1	0
12:00 PM	7%	378	55%	45%	208	170	2	2	1
1:00 PM	22%	1188	55%	45%	653	534	7	5	2
2:00 PM	20%	1080	50%	50%	540	540	5	5	2
3:00 PM	11%	594	50%	50%	297	297	3	3	2
4:00 PM	7%	378	50%	50%	189	189	2	2	2
5:00 PM	7%	378	50%	50%	189	189	2	2	2
6:00 PM	10%	540	45%	55%	243	297	2	3	1
7:00 PM	7%	378	40%	60%	151	227	2	2	1
8:00 PM	3%	162	40%	60%	65	97	1	1	0
9:00 PM	1%	54	40%	60%	22	32	0	0	0
Total	100%	5399			2707	2691	27	27	

Based on the combined inbound and outbound auto traffic of the projected development's residential and commercial components, total parking accumulation would be as shown in the following table (Table 14-3 Garage 3).

Table 14-3: Garage 3

Hour Ending	TOTAL PROJECT Person Trips Inbound	Outbound	Auto Trips Inbound	Outbound	Parking Accum
overnight					91
7:00 AM	23	23	5	5	91
8:00 AM	7	37	1	7	85
9:00 AM	18	86	3	17	72
10:00 AM	51	78	4	11	65
11:00 AM	136	137	5	9	60
12:00 PM	225	203	5	8	58
1:00 PM	675	567	11	12	57
2:00 PM	563	569	10	11	56
3:00 PM	321	321	8	8	56
4:00 PM	223	217	8	7	57
5:00 PM	238	222	11	8	60
6:00 PM	325	337	**18**	**11**	68
7:00 PM	226	259	16	9	75
8:00 PM	136	121	14	6	84
9:00 PM	52	45	6	3	88
12:00 AM	58	40	11	8	91

The peak 1-hour vehicular movements occur during the 5 to 6 p.m. hour, with a total of 29, consisting of 18 inbound and 11 outbound. However, the worst case for air quality is the period with the highest number of cold-start, outbound vehicles, which occurs during the 8 to 9 a.m. hour, with 3 inbound and 17 outbound To provide a conservative assessment, the peak inbound and outbound volumes were used. A garage dimension of 100' x 328' was used, along with the most recent available background CO concentrations from the closest DEC monitoring location, and emission factors for 2015, Projections were made of future with-action CO concentrations at the near and far sidewalk receptor location. The resulting 8-hour concentration of 3.35 parts per million (ppm) at the near sidewalk and 3.48 ppm at the far sidewalk are well below the 9 ppm National Ambient Air Quality Standard (NAAQS), and the increment between no-action and with-action conditions, 0.019 PPM, is below the de minimis criterion of one half of the increment between the no-action condition (1.7 PPM) and the NAAQS. Therefore the proposed action does not have the potential for significant adverse impacts related to garage emissions.

Screen for Garage CO Emission Analysis

PLEASE FILL IN THE HIGHLIGHTED AREAS ONLY

Project ID: **10DCP024K** Date: _____

Analyst(s): **Equity Environmental Engineering**

Project Year: **2015** Borough: **Brooklyn**

Garage Data & Emissions:

Cars Out: 17.00 (cold cars) Cars In: 18.00 (hot cars) No. of Vehicles: 35 (cold+hot)

Garage Length:	**100**	feet	=	30.48	meters
Garage Width:	**228**	feet	=	69.49	meters
Ramp Length:	**100**	feet	=	30.48	meters
Garage Area:	22800.00	ft²	=	2118.19	m²
Travel Distance:	280.7	feet	=	85.55	meters
Adjacent Sidewalk Dist.:	**7.5**	feet	=	2.29	meters
Opposite Sidewalk Dist.:	**100**	feet	=	30.48	meters
Receptor Height	**6**	feet	=	1.83	meters
Effective Emis. Ht. (H):	**6**	feet	=	1.83	meters
MOVES emissions	**21616**	g/mi-hr	=	6588.56	

Travelling Emission (cold)	at 5 mph	@45 °F:		g/veh-mi
Travelling Emission (hot)	at 5 mph	@45 °F:		g/veh-mi
Travelling Emission (cold)	at 5 mph	@45 °F:	**24.08**	g/veh-mi
Travelling Emission (hot)	at 5 mph	@45 °F:	**9.21**	g/veh-mi
Idle Emissions for Cold Cars		@45 °F:	**1.928**	g/veh-min

Volumetric Flow Rate of Garage Air:	**1**	ft³/min-ft²
Average Idle Time for Vehicles in Garage:	**1**	min/veh
Average Wind Velocity:	**1**	m/sec

Emissions	g/sec
Incoming Vehicles	0.0024
Outgoing Vehicles	0.0151
Total (In + Out)	0.0176

Distrib. (m)	Adjacent	Opposite
r o	1.8507	1.8507
r y'	0.3656	4.8547
r y	1.8865	5.1955
r z'	0.3199	4.2478
r z	1.8782	4.6335
v (g/m³)	1.58E-03	2.33E-04

1-hr Concentrations	g/m³	ppm
Background	**3.45E-03**	**2.8**
Qtot / A V	1.64E-03	1.4227
Adjacent Sidewalk	9.09E-04	0.7909
Line Source Contr.	9.20E-04	0.8000
Across Street	2.02E-04	0.1753

8-hr Concentrations	g/m³	ppm	
De Minimus Criterion	1.95E-03	1.7000	
Adjacent Sidewalk	6.36E-04	0.5536	3.3536 w/bkgrd
Project Status		**Pass**	
Across Street	7.85E-04	0.6827	3.4827 w/bkgrd
Project Status		**Pass**	

Xa	7.90E-04
Xb	1.00E+00
Xc	1.50E-01
Xa2	1.16E-04
Xb2	1.00E+00
Xc2	7.32E-01

Industrial Sources

Because the proposed action would allow new residential development in an area which is adjacent to manufacturing districts, an assessment of potential industrial sources of air emissions was conducted.

A new field reconnaissance was performed by Equity Environmental Engineering on January 26, 2012. This survey and a review of land use maps (industrial, transportation, and utility uses) within 400 feet of the project site identified (Figure 14-3) the following uses:

Block	Lot	Address	Use Per Certificate of Occupancy	Current Use	Site & Photo Number
2552	1	266 McG	1960 - Auto repair and gas station	Enterprise Rent-A-Car Lot	A
2560	1	256 McG	NA	BP Gas Station	B
2560	41	2560 GPA	1924 - Public Garage	Beer distributer	C
2576	7	210 GPA	1972 – Auto service station	Hess Gas Station	D
2578	1	256–276 GPA	1996- Factory, Moving & Storage	Greenpoint Industrial Center, warehouses, wholesale shops, property management companies	E
2599	18	185 McG	1947 – Manufacturing	New residential	F
2600	1	176 McG	1962 – gas station, repair, washing	Auto repair	G
2600	12	230 Calyer	1929 – one family dwelling	New unoccupied retail stores	H
2600	17	236 Calyer	1929 – one family dwelling	New unoccupied retail stores	I
2600	18	195 Newel	1989 – CO2 filling and storage facility	Vacant warehouse	J
2601	1	192 Newel	2008 - Warehouse	Vacant	K
2601	12	202 Newel	NA	Warehouse	L
2601	14	206 Newel	1964 – factory	Warehouse	M

(McG = McGuinness Blvd, GPA = Greenpoint Avenue, NA = not available)

After reviewing the land use map of the area using ArcMap (attached), the following properties classified as Industrial/Manufacturing were not found in the list provided to DEP when a formal request for information regarding process permits was done. Please check to see if the stack locations are within or outside the 400' buffer.

Block	Lot	Address
2552	10	224 Java Street - the stack is located 446 ft from the project site
2552	47	237 Kent Avenue – the stack is located 411 Ft from the project site
2601	1	192 Newel Street – the stack is located 663 ft from the project site

Figure 14-6: Industrial, Transportation, and Utility Uses within 400 feet of the Project Site

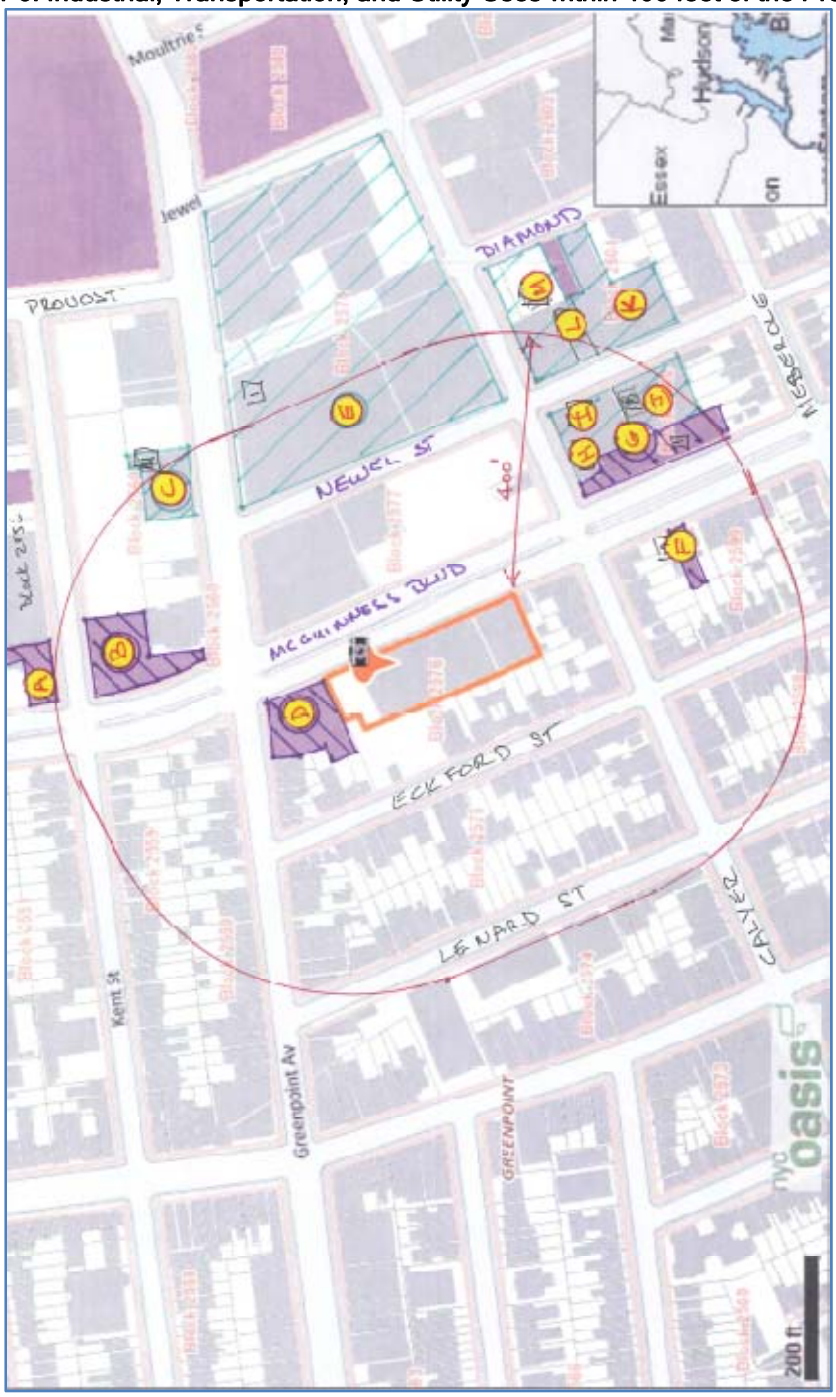


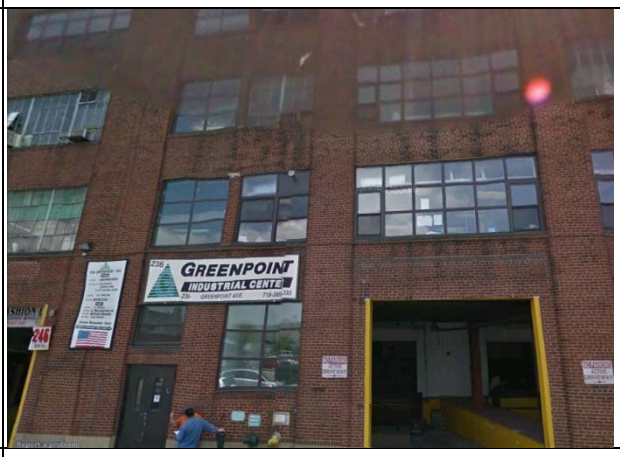
Figure 14-6 can also be found in Appendix 14.

Site	Photo
A	
B	
C	

D



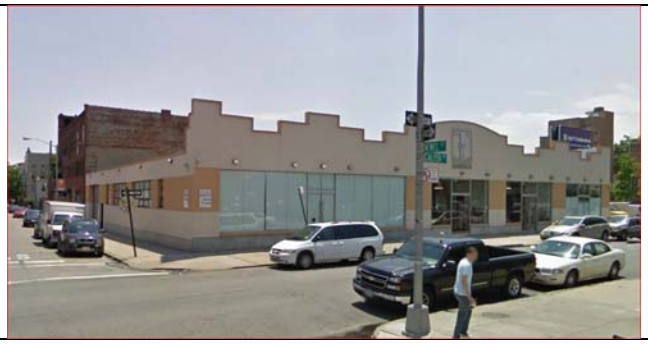
E



F



g

G	
H	
I	

J	
K	

L	
M	

As such, a request for a search of air emissions permits was sent to the NYC DEP on February 18, 2008. An additional request for response on air quality issues was made on December 16, 2009. Equity received a response from the DEP indicating that there was one active air permit for a facility over 600 feet away from the affected area. There were 15 expired permits in the area. Copies of these permits are provided in Appendix 14.

Based on the 2012 site survey and land use maps, there is no significant adverse industrial air quality impacts anticipated regarding either the potential or projected development sites. No further assessments are required at this time.

16. Noise

Framework of Noise Analysis

The proposed action would introduce a residential population into an area that is currently zoned for manufacturing and where heavily trafficked roads (McGuinness Boulevard and Greenpoint Avenue) may be a significant source of ambient noise. The projected residential use is not a significant noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, this noise assessment is limited to the potential that ambient noise in the area could adversely affect occupants of the development occurring as a result of the proposed action.

Noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound.

Because the human ear can detect such a wide range of sound pressures, sound pressure is converted to sound pressure level (SPL), which is measured in units called decibels (dB). The decibel is a relative measure of the sound pressure with respect to a standardized reference quantity. Because the dB scale is logarithmic, a relative increase of 10 dB represents a sound pressure that is 10 times higher. However, humans do not perceive a 10-dB increase as 10 times louder. Instead, they perceive it as twice as loud. Table 16-1 lists some noise levels for typical daily activities.

Table 16-1: Noise Levels of Common Sources

Sound Source	SPL (dBA)
Fire alarm siren at 50 feet	120
Maximum levels at rock concerts (rear seats)	110
On platform by passing subway train	100
On sidewalk by passing heavy truck or bus	90
On sidewalk by typical highway	80
On sidewalk by passing automobiles with mufflers	70
Typical urban area	60 – 70
Typical suburban area	50 – 60
Quiet suburban area at night	40 – 50
Typical rural area at night	30 – 40
Isolated broadcast studio	20
Audiometric (hearing testing) booth	10
Threshold of hearing	0

Source: City of New York, CEQR Technical Manual.

Sound is often measured and described in terms of its overall energy, considering all frequencies. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to 5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a function of frequency to account for human perception and sensitivities. The most common weighting networks used are the A- and C-weighting networks. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristic of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighted network is the most commonly used, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual

(unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

The following is typical of human response to relative changes in noise level:

- 3-dBA change is the threshold of change detectable by the human ear;
- 5-dBA change is readily noticeable; and
- 10-dBA change is perceived as a doubling or halving of the noise level.

The SPL that humans experience typically varies from moment to moment. Therefore, various descriptors are used to evaluate noise levels over time. Some typical descriptors are defined below.

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.

The sound level exceeded during a given percentage of a measurement period is the percentile-exceeded sound level (L_X). Examples include L_{10}, L_{50}, and L_{90}. L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period.

The decrease in sound level caused by the distance from any single noise source normally follows the inverse square law (i.e., the SPL changes in inverse proportion to the square of the distance from the sound source). In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

Measurement Location and Equipment

Because the predominant noise source in the area of the projected project is vehicular traffic, noise monitoring was conducted during peak vehicular travel periods on February 11, 2011 at 8-9 a.m., and on February 14, 2011 at 12 noon-1 p.m. and 5-6 p.m. Pursuant to CEQR Technical Manual methodology, readings were conducted for a 20-minute period during each peak hour. The monitoring was conducted on the sidewalk in front of the parking lot at the northern end of the Projected Development Site, on McGuinness Boulevard adjacent to the Potential Development Site. Noise at this location would be representative of both the Potential Development Site and the Projected Development Site. The monitor was calibrated prior to and following each monitoring session.

Measurement Conditions

Monitoring was conducted during typical midweek days, with dry weather and moderate wind speeds. Traffic volumes and vehicle classification on McGuinness Boulevard were documented during the noise monitoring.

Existing Conditions

Based on the noise measurements taken at the project site, the predominant source of noise at the site is traffic along McGuiness Boulevard. McGuinness Boulevard carries two moving lanes in each

direction, and is a truck route. Vehicle classification counts identified a large component of van and heavy truck traffic. Table 16-2 contains the results for the measurements taken at the subject site.

Table 16-2: Noise Levels at 209-231 McGuinness Boulevard

	Friday, February 11, 2011 8:10-8:30 a.m.	Monday February 14, 2011 12:15 –12:45 p.m.	Monday February 14, 2011 5:15-5:45 p.m.
L_{max}	87.9	88.0	87.4
L_5	78.0	77.6	76.4
L_{10}	**75.8**	**76.0**	**73.9**
L_{eq}	73.0	72.6	71.1
L_{50}	70.3	69.9	68.2
L_{90}	65.0	64.3	64.2
L_{min}	59.2	58.5	57.8

Traffic volumes and vehicle classifications during the noise monitoring sessions are presented in Table 16-3.

Table 16-3: Traffic Volumes and Vehicle Classifications (20-minute counts)

	AM	Midday	PM
Car	562	455	648
Light truck/van	183	111	93
Heavy truck	259	368	140
Mini Bus	6	4	2
Full Size Bus	12	0	0

Field Data Sheet for the noise monitoring event can be found in Appendix 16.

The CEQR Technical Manual Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the proposed action, an L_{10} between 70 and 80 dB(A) is identified as marginally unacceptable. CEQR Technical Manual Table 19-3 identifies required attenuation levels to achieve acceptable interior noise levels. This table indicates that, for an L_{10} between 73 and 76, attenuation of 31 dB(A). The highest recorded L_{10} at the project site's McGuinness Boulevard frontage was 76.0 dB(A) during the midday, which is the period of greatest heavy trucking activity The location of the Potential Development site would subject it to additional ambient noise from Greenpoint Avenue and therefore would require an attenuation of 33 dB(A).

To ensure that the required attenuation is provided for new development occurring under the proposed action, an (E) Designation would be placed on the Projected Development Site as follows:

Block 2576, Lots 20, 23

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 31 dB(A) window/wall attenuation on all building's east, north, and south facades in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners.

To ensure that the required attenuation is provided for new development occurring under the proposed action, an (E) Designation would be placed on the Potential Development Site as follows:

Block 2576, Lots 7

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 33 dB(A) window/wall attenuation on all building's east, north, and south facades in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners.

17. Public Health

The approval of the proposed action would not create a public health impact, as the new residential development would not emit hazardous materials, release hazardous material to the environment, or exceed the guidance levels provided in the *CEQR Technical Manual*. No significant public health impact is anticipated when the proposed actions are approved. No additional analyses are warranted at this time.

18. Neighborhood Character

According to the *CEQR Technical Manual,* a neighborhood character assessment considers how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling. Neighborhood character is the combination of the various elements that give neighborhoods their 'distinct personality.' These defining features include land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. For neighborhood character, CEQR considers how those elements combine to create the context and feel of a neighborhood and how an action would affect that context. As demonstrated elsewhere in this document, the proposed action would not result in adverse impacts related to any of the constituent elements of neighborhood character. The new residential/commercial development that would occur would be consistent with the established mixed-use character of the area, which contains residential and local commercial uses west of McGuinness Boulevard, and commercial, light industrial, and non-conforming residential uses east of McGuinness Boulevard.

As noted elsewhere in this document, the proposed action required preliminary assessment of land use, transportation, and noise. Therefore the potential for changes in these areas to result in impacts on neighborhood character is considered.

The proposed action would bring conforming status to existing residential land uses, and would permit new residential and commercial development that is consistent with surrounding land uses on the west side of McGuinness Boulevard. Vehicular, transit, and pedestrian traffic associated with action-induced development was screened out after level 1 or level 2 analyses, and would not increase travel at any location such that detailed assessment would be required. There would be no changes in traffic patterns as a result of the proposed action. The proposed action would not introduce development that would result in noticeable changes in ambient noise levels. It would not double vehicular traffic, and would not introduce any stationary noise source.

Overall, the proposed action would permit development that is consistent with the surrounding residential and commercial uses and midrise context on the west side of McGuinness Boulevard. It would not result in adverse impacts to any of the constituent elements of neighborhood character. The proposed action would not result in adverse impacts to neighborhood character, and no further assessment is warranted.

19. Construction Impacts

According to the CEQR Technical Manual, the potential for significant impacts from construction can occur when: (a) an action would create construction-induced traffic (b) an action would increase mobile source emissions or fugitive dust emissions, or (c) an action would introduce increased noise associated with construction activities.

Approval of the proposed action would allow for the construction of new mixed use on McGuinness Boulevard. The period of construction is anticipated to be less than 24 months and is considered a short-term period. The proposed construction would result in increased levels of noise and dust, however, the increases would be temporary and appropriate measures would be taken to limit the escape of fugitive dust.

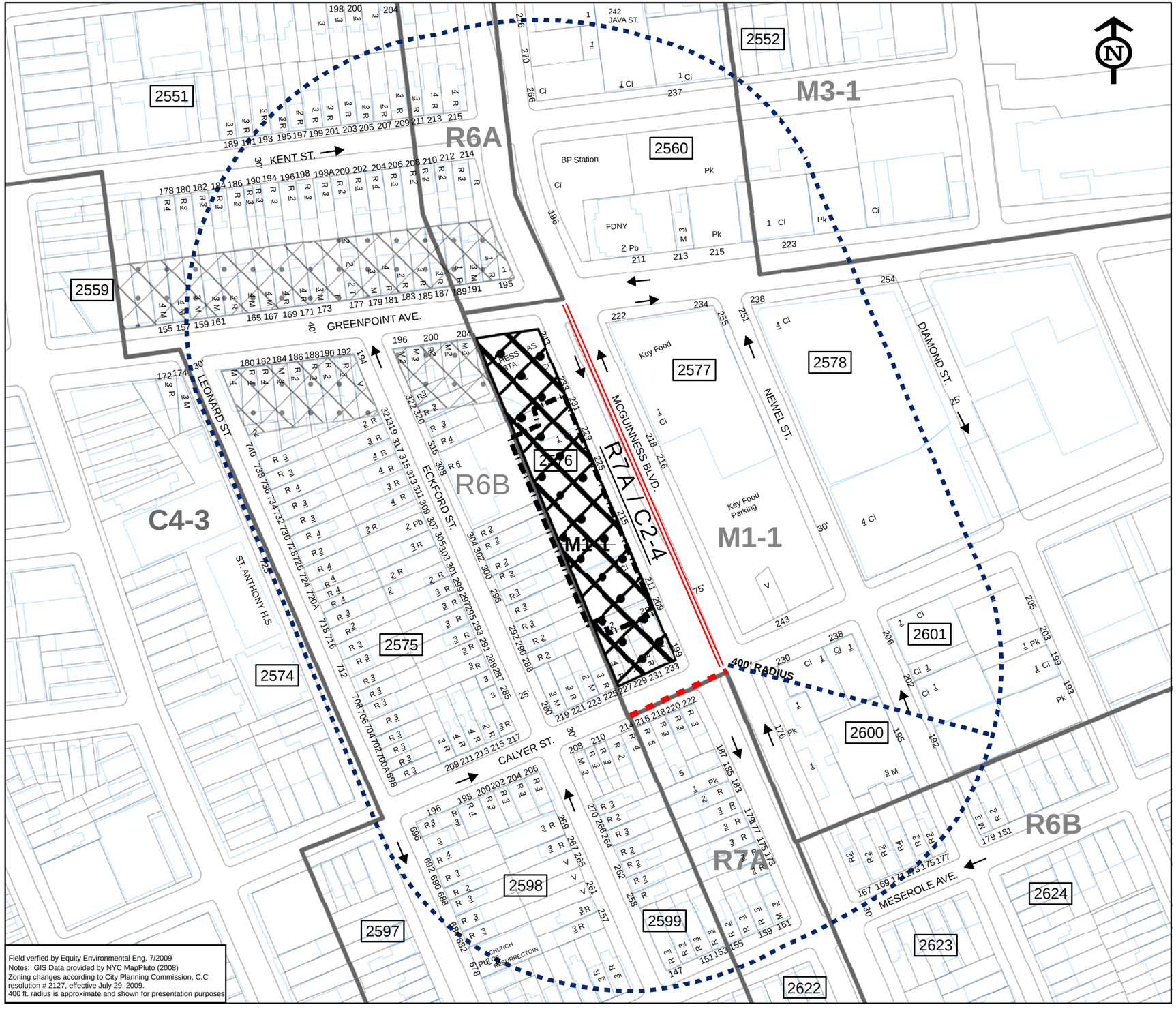
Working with the NYC Department of Buildings, an acceptable construction management plan would be formulated and approved prior to the start of construction. With this approved plan and proactive management of the project design and construction, no significant adverse construction impacts are anticipated for the projected development. No additional analyses are warranted at this time.

Appendices

Note: Appendices are numbered for their correlation section of the EAS Form and Analysis.

Appendix 1
Land Use, Zoning and Public Policy

-Land Use Map
-NYC Waterfront Revitalization Program Consistency Form



Field verfied by Equity Environmental Eng. 7/2009
Notes: GIS Data provided by NYC MapPluto (2008)
Zoning changes according to City Planning Commission, C.C resolution # 2127, effective July 29, 2009.
400 ft. radius is approximate and shown for presentation purposes

LEGEND

	APPLICANT PROPERTY
R6B	EXISTING ZONING & ZONING LINES
R7A/C2-4	PROPOSED ZONING LINE/DISTRICT
~~M1-1~~	ZONING LINE/DISTRICT ELIMINATED
	EXISTING C2-4 COMMERCIAL OVERLAY
	PROPOSED C2-4 COMMERCIAL OVERLAY
	LOT LINES
	400-FOOT RADIUS
1715	TAX BLOCK NUMBER
1 2	BUILDING LOCATION (NUMBER OF STORIES)
20'	STREET WIDTH
←	TRAFFIC DIRECTION
Ci	COMMMERCIAL/INDUSTRIAL/MANUFACTURING
R	RESIDENTIAL
M	MIXED COMMERCIAL/RESIDENTIAL
T	TRANSPORTATION/UTILITY
Pb	PUBLIC FACILITIES & INSTITUTIONS
Pk	PARKING FACILITIES
V	VACANT

AREA MAP

McGuinness Boulevard Site
209-231 McGuinness Blvd.
Brooklyn, NY 10035
Block 2576, Lots 20 & 23

PREPARED BY

Equity Environmental Engineering LLC

4 Gold Mine Road, Flanders, NJ 07836, (973) 527-7451

DRAWN BY/ DATE	CHK/DATE	DRAWING NUMBER
TAF/08-03-09; revised 01-11-11		2009092-McGuinness

For Internal Use Only:
Date Received: _____

WRP no._____
DOS no._____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's designated coastal zone, 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 subsequently approved by the New York State Department of State with the concurrence of the United States Department of Commerce pursuant to applicable state and federal law, including the Waterfront Revitalization of Coastal Areas and Inland Waterways Act. 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 agencies or the New York City Department of City Planning in their review of the applicant's certification of consistency.

A. APPLICANT

1. Name: Equity Environmental Engineering LLC
2. Address: 4 Gold Mine Road, Flanders NJ 07836
3. Telephone: 973-527-7451 Fax: 973-858-0280 E-mail: jim.heineman@equityenvironmental.com
4. Project site owner: McGuinness Realty

B. PROPOSED ACTIVITY

1. Brief description of activity:

   The applicant proposes to map an R7A/C2-4 zoning district on the western blockfront of McGuinness Boulevard between Greenpoint Avenue and Calyer Street. The proposed zoning map amendment would permit the project sponsor to develop an underutilized, primarily commercial, site for a mixed-use building containing 141 dwelling units and 23,375 square feet of local retail space.

2. Purpose of activity:

   The proposed zoning map would bring many existing residential uses into conformity and would allow for new residential and local commercial development of underutilized property in an area where such development would be consistent with surrounding land uses and activities.

3. Location of activity: (street address/borough or site description):

   West side of McGuinness Boulevard between Greenpoint Avenue and Calyer Street, to a depth of 100 feet (Block 2576, Lots 7, 20, 23, 24, 25, 26, 27, 5 (part), and 42 (part)) in the Greenpoint section of Brooklyn Community District 1.

Proposed Activity Cont'd

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:

   N/A

5. Is federal or state funding being used to finance the project? If so, please identify the funding source(s).

   No

6. Will the proposed project require the preparation of an environmental impact statement?
   Yes _____ No ____✓____ If yes, identify Lead Agency:

7. Identify **city** discretionary actions, such as a zoning amendment or adoption of an urban renewal plan, required for the proposed project.

   Amendment to Zoning Map

C. COASTAL ASSESSMENT

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	**Yes**	**No**

The following questions represent, in a broad sense, the policies of the WRP. Numbers in parentheses after each question 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.

4. Will the proposed project result in revitalization or redevelopment of a deteriorated or under-used waterfront site? (1)		✓
5. Is the project site appropriate for residential or commercial redevelopment? (1.1)	✓	
6. Will the action result in a change in scale or character of a neighborhood? (1.2)		✓

Policy Questions cont'd	Yes	No
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 Habitat? (4.1)		✓
20. Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1and 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)		✓

Policy Questions cont'd	Yes	No
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)		✓
33. Would the action result in any construction activities that would lead to erosion? (6)		✓
34. Would the action involve construction or reconstruction of a 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 that has a history of underground fuel tanks, oil spills, or other form or petroleum product use or storage? (7.2)		✓
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)		✓
44. Would the action result in the provision of open space without provision for its maintenance? (8.1)		✓
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 publicly 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)		✓
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)		✓

Policy Questions cont'd	Yes	No
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 or agent 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: James Heineman - Equity Environmental Engineering, LLC

Address: 4 Gold Mine Road, Flanders NJ 07836

Telephone 973-527-7451

Applicant/Agent Signature: James Heineman Date: 30 September 2010

Appendix 6
Historic and Cultural Resources

-LPC Determination

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

ENVIRONMENTAL REVIEW

NO LEAD AGENCY/NL-CEQR-K 11/18/2009

Project number **Date received**

Project: 209-231 MCGUINESS BLVD

Properties with no Architectural or archaeological significance:

210 GREENPOINT AVENUE, BBL 3025760007
211 MC GUINNESS BLVD, BBL 3025760020
209 MC GUINNESS BLVD, BBL 3025760023
233 CALYER STREET, BBL 3025760024
231 CALYER STREET, BBL 3025760025
229 CALYER STREET, BBL 3025760026
227 CALYER STREET, BBL 3025760027
308 ECKFORD STREET, BBL 3025760042

Comments: The LPC is in receipt of the additional information sent by the applicant and now concurs that there is no further archaeological concern for B 2576 Lots 20, 23, 25, 26, 27, and 42 and that, therefore, an archaeological documentary study is not needed.

Gina Santucci

11/19/2009

SIGNATURE DATE

26133_FSO_ALS_11192009.doc

Appendix 9
Hazardous Materials

-Phase I Environmental Site Assessment (electronic file only)
-Restricted Declaration

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument. The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

2012051000643001001EB7E1

RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 18**

Document ID: 2012051000643001 Document Date: 05-09-2012 Preparation Date: 05-10-2012
Document Type: SUNDRY AGREEMENT
Document Page Count: 16

PRESENTER:	**RETURN TO:**
NEIL WEISBARD	NEIL WEISBARD
61 BROADWAY, STE 1801	61 BROADWAY, STE 1801
FOR PICK-UP ONLY	FOR PICK-UP ONLY
NEW YORK, NY 10006	NEW YORK, NY 10006
212-391-8045	212-391-8045
nweisbard@slaterbeckerman.com	nweisbard@slaterbeckerman.com

PROPERTY DATA

Borough	Block	Lot		Unit	Address
BROOKLYN	2576	20	Entire Lot		211 MC GUINNESS BLVD
Property Type:	OTHER				
Borough	**Block**	**Lot**		**Unit**	**Address**
BROOKLYN	2576	23	Entire Lot		209 MC GUINNESS BLVD
Property Type:	OTHER				

CROSS REFERENCE DATA

CRFN_____ ***or*** Document ID_____ ***or*** _____ Year____ Reel ___ Page ____ ***or*** File Number_____

PARTIES

PARTY 1:
MCGUINESS REALTY, INC.
500 KINGSLAND AVENUE
BROOKLYN, NY 11222

x Additional Parties Listed on Continuation Page

FEES AND TAXES

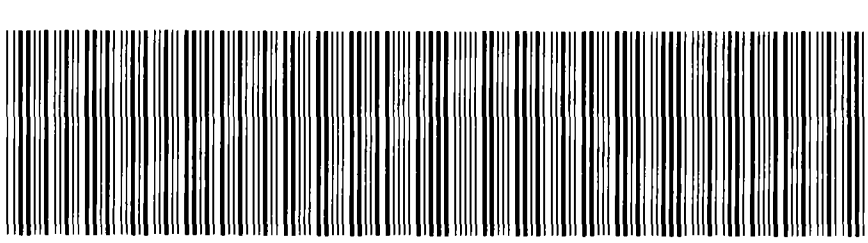
Mortgage		
Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00
Recording Fee:	$	120.00
Affidavit Fee:	$	0.00

Filing Fee:	$	0.00
NYC Real Property Transfer Tax:	$	0.00
NYS Real Estate Transfer Tax:	$	0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded/Filed 05-21-2012 12:39
City Register File No.(CRFN):
2012000200000

City Register Official Signature

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER



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RECORDING AND ENDORSEMENT COVER PAGE (CONTINUATION) **PAGE 2 OF 18**

Document ID: 2012051000643001 Document Date: 05-09-2012 Preparation Date: 05-10-2012
Document Type: SUNDRY AGREEMENT

PARTIES
PARTY 1:
POINT EQUITIES MANAGEMENT, INC.
500 KINGSLAND AVENUE
BROOKLYN, NY 11222

DECLARATION

This DECLARATION made as of the 9th day of May 2012, by McGuiness Realty, Inc. ("McGuiness Realty") and Point Equities Management, Inc. ("Point Equities"), both having an office located at 500 Kingsland Avenue, Brooklyn, NY 11222 (McGuiness Realty and Point Equities hereinafter, collectively referred to as the "Declarants");

WITNESSETH

WHEREAS, McGuiness Realty is the fee owner of certain real property located in the County of Kings , City and State of New York, designated for real property tax purposes as Lot 20 of Tax Block 2576 ("Lot 20"), and Point Equities is the fee owner of certain real property located in the County of Kings, City and State of New York, designated for real property tax purposes as Lot 23 of Tax Block 2576 ("Lot 23"), in which Lot 20 and Lot 23 are commonly known by the street address as 211-235 McGuiness Boulevard (Lot 20 and Lot 23, are collectively known as the "Subject Property") and is more particularly described in Exhibit A, annexed hereto and made part hereof; and

WHEREAS, Commonwealth Land Title Insurance Company has issued a Certification of Parties in Interest, annexed hereto as Exhibit B and made a part hereof, that as of the 8th, day of May, 2012, Declarants, herein after also referred to as "Parties-in-Interest", are the only Parties-in-Interest (as defined in subdivision (c) of the definition of "zoning lot" set forth in Section 12-10 of the Zoning Resolution of the City of New York) in the Subject Property; and

WHEREAS, all Parties-in-Interest to the Subject Property have executed this Declaration; and

WHEREAS, Declarants have proposed to rezone the Subject Property from an M1-1 district to an R7A district with a C2-4 district overlay to permit ground floor retail use, residential use and accessory parking on the Subject Property (the "Current Project") and has submitted applications numbered 100218 ZMK and N 100219 ZMY (collectively known as, the "Application") for review by the New York City Department of City Planning (the "DCP") under the Uniform Land Use Review Procedure (the "ULURP") as set forth in the New York City Charter, sections 197-c, 197-d, 200 and 201 and the procedures set forth in the paragraph immediately following; and

WHEREAS, an environmental assessment of the Subject Property pursuant to the State Environmental Quality Review Act (the "SEQRA") and the City Environmental Quality Review (the "CEQR") is under review in connection with the Application (CEQR # 10DCP024K) and, pursuant to the SEQRA and CEQR, the Department of Environmental Protection (the "DEP") has reviewed the environmental assessment, including the historic land use of the Subject Property; and

WHEREAS, the results of such review as documented in DEP's February 17, 2011 letter attached hereto as Exhibit C and made a part hereof, indicate the potential presence of hazardous materials; and

WHEREAS, Declarants desire to identify the existence of any potential hazardous materials and remediate any such hazardous materials found in connection with the development of the Subject Property for the Current Project and Declarants shall provide for the remediation of such hazardous materials in accordance with any future DEP approved Remedial Action Plan; and

WHEREAS, Declarants further desire to identify the existence of any potential hazardous materials and remediate any such hazardous materials found in connection with the development or redevelopment of the Subject Property involving a change in use or soil disturbance subsequent to the Current Project ("Future Project") and has agreed to submit to DEP for approval a hazardous materials sampling protocol prepared by a qualified consultant and including a health and safety plan, (the "Sampling Protocol"), specific to the Future Project and to test and identify any potential hazardous materials pursuant to the approved Sampling Protocol and, if any such hazardous materials are found, to submit to DEP for approval a hazardous materials remediation plan, including a health and safety plan, (the "Remediation Plan"), based on the results of the DEP approved Sampling Protocol and upon the approval of the Remediation Plan by DEP, the Declarants shall provide for the remediation of such hazardous materials; and

WHEREAS, Declarants agree to implement the Sampling Protocol and all hazardous material remediation required by the Remediation Plan, if any, for the Current Project and any Future Project and desires to restrict the manner in which the Subject Property may be developed or redeveloped by having the implementation of the Sampling Protocol and Remediation Plan, if any, for the Current Project or any Future Project performed to the satisfaction of DEP, as evidenced by a writing as set forth herein, be a condition precedent to any change of use or soil disturbance for the Current Project or any Future Project; and

WHEREAS, Declarants intend this Declaration to be binding upon all successors and assigns; and

WHEREAS, Declarants intend this Declaration to benefit all land owners and tenants including the City of New York ("the City") without consenting to the enforcement of this Declaration by any party or entity other than the City.

NOW, THEREFORE, Declarants do hereby declare and agree that the Subject Property shall be held, sold, transferred, and conveyed, subject to the restrictions and obligations which are for the purpose of protecting the value and desirability of the Subject Property and which shall run with the land, binding the successors and assigns of Declarants so long as they have any right, title or interest in the Subject Property or any part thereof:

1. (a) Declarants covenant and agree that no application for grading, excavation, foundation, alteration, building or other permit respecting the Subject Property which permits soil disturbance for the Current Project or any Future Project shall be submitted to or accepted from the Department of Buildings (the "DOB") by the Declarants until DEP has issued to DOB, as applicable, either a Notice of No Objection as set forth in Paragraph 2(a), a Notice to Proceed as set forth in Paragraph 2(b), a Notice of Satisfaction as set forth in Paragraph 2(c) or a Final Notice of Satisfaction as set forth in Paragraph 2(d). Declarants shall submit a copy of the Notice

of No Objection, Notice to Proceed, Notice of Satisfaction or Final Notice of Satisfaction to the DOB at the time of filing of any application set forth in this Paragraph 1(a).

(b) Declarants further covenant and agree that no application for a temporary or permanent Certificate of Occupancy that reflects a change in use group respecting the Subject Property for the Current Project or any Future Project shall be submitted to or accepted from DOB by the Declarants until DEP has issued to DOB, as applicable, either a Notice of No Objection as set forth in Paragraph 2(a), a Notice of Satisfaction as set forth in Paragraph 2(c) or a Final Notice of Satisfaction as set forth in Paragraph 2(d). Declarants shall submit a copy of the Notice of No Objection, Notice of Satisfaction or Final Notice of Satisfaction to the DOB at the time of filing of any application set forth in this Paragraph 1(b).

2. (a) Notice of No Objection - DEP shall issue a Notice of No Objection for the Current Project or any Future Project after the Declarants have completed the work set forth in the project specific DEP approved Sampling Protocol and DEP has determined in writing that the results of such sampling demonstrate that no hazardous materials remediation is required for the proposed project.

(b) Notice to Proceed - DEP shall issue a Notice to Proceed for the Current Project or any Future Project after it determines that: (i) the project specific Remedial Action Plan or Remediation Plan has been approved by DEP and (ii) the permit(s) respecting the Subject Property that permit grading, excavation, foundation, alteration, building or other permit respecting the Subject Property which permits soil disturbance or construction of the superstructure for the Current Project or any Future Project are necessary to further the implementation of the DEP approved Remedial Action Plan or Remediation Plan.

(c) Notice of Satisfaction - DEP shall issue a Notice of Satisfaction for the Current Project or any Future Project after the project specific Remedial Action Plan or Remediation Plan, if any, has been prepared and accepted by DEP and DEP has determined in writing that such Remedial Action Plan or Remediation Plan has been completed to the satisfaction of DEP.

(d) Final Notice of Satisfaction - DEP shall issue a Final Notice of Satisfaction for the Current Project or any Future Project after the project specific Remedial Action Plan or Remediation Plan, if any, has been prepared and accepted by DEP and DEP has set forth in writing, that such Remedial Action Plan or Remediation Plan has been completed to the satisfaction of DEP and all potential hazardous materials have been removed or remediated and no further hazardous remediation is required on the Subject Property as determined by DEP.

3. Declarants represent and warrant with respect to the Subject Property, that no restrictions of record, nor any present or presently existing estate or interest in the Subject Property nor any lien, encumbrance, obligation, covenant of any kind preclude, presently or potentially, the imposition of the obligations and agreements of this Declaration.

4. Declarants acknowledge that the City is an interested party to this Declaration and consents to the enforcement of this Declaration solely by the City, administratively or at law or at equity, of the obligations, restrictions and agreements pursuant to this Declaration.

5. The provisions of this Declaration shall inure to the benefit of and be binding upon the respective successors and assigns of the Declarants, and references to the Declarants shall be deemed to include such successors and assigns as well as successors to their interest in the Subject Property. References in this Declaration to agencies or instrumentalities of the City shall be deemed to include agencies or instrumentalities succeeding to the jurisdiction thereof.

6. Declarants shall be liable in the performance of any term, provision, or covenant in this Declaration, subject to the following provisions:

The City and any other party relying on this Declaration will look solely to the fee estate interest of the Declarants in the Subject Property for the collection of any money judgment recovered against Declarants, and no other property of the Declarants shall be subject to levy, execution, or other enforcement procedure for the satisfaction of the remedies of the City or any other person or entity with respect to this Declaration. The Declarants, including its officers, shareholders, directors, managers and members, shall have no personal liability under this Declaration.

7. The obligations, restrictions and agreements herein shall be binding on the Declarants or other parties in interest only for the period during which the Declarants and any such Party-in-Interest holds an interest in the Subject Property; provided, however, that the obligations, restrictions and agreements contained in this Declaration may not be enforced against the holder of any mortgage unless and until such holder succeeds to the fee interest of the Declarants by way of foreclosure or deed in lieu of foreclosure.

8. Declarants shall indemnify the City, its respective officers, employees and agents from all claims, actions, or judgments for loss, damage or injury, including death or property damage of whatsoever kind or nature, arising from Declarants' obligations under this Declaration, including without limitation, the negligence or carelessness of the Declarants, its agents, servants or employees in undertaking such obligations; provided, however, that should such a claim be made or action brought, Declarants shall have the right to defend such claim or action with attorneys reasonably acceptable to the City and no such claim or action shall be settled without the written consent of the City.

9. If Declarants are found by a court of competent jurisdiction to have been in default in the performance of its obligations under this Declaration, and such finding is upheld on a final appeal by a court of competent jurisdiction or by other proceeding or the time for further review of such finding or appeal has lapsed, Declarants shall indemnify and hold harmless the City from and against all reasonable legal and administrative expenses arising out of or in connection with the enforcement of Declarants' obligations under this Declaration as well as any reasonable legal and administrative expenses arising out of or in connection with the enforcement of any

judgment obtained against the Declarants, including but not limited to the cost of undertaking the Remediation Plan, if any.

10. Declarants shall cause every individual or entity that between the date hereof and the date of recordation of this Declaration, becomes a Party-in-Interest (as defined in subdivision (c) of the definition of "zoning lot" set forth in Section 12-10 of the Zoning Resolution of the City of New York) to all or a portion of the Subject Property to waive its right to execute this Declaration and subordinate its interest in the Subject Property to this Declaration. Any mortgage or other lien encumbering the Subject Property in effect after the recording date of this Declaration shall be subject and subordinate hereto as provided herein. Such waivers and subordination shall be attached to this Declaration as Exhibits and recorded in the Office of the County or City Register.

11. This Declaration and the provisions hereof shall become effective as of the date of this Declaration. Within five (5) business days of the date hereof, Declarants shall submit this Declaration for recording or shall cause this Declaration to be submitted for recording in the Office of the County or City Register, where it will be indexed against the Subject Property. Declarants shall promptly deliver to the DEP and the Department of City Planning proof of recording in the form of an affidavit of recording attaching the filing receipt and a copy of the Declaration as submitted for recording. Declarants shall also provide a certified copy of this Declaration as recorded to DEP and DCP as soon as a certified copy is available.

12. This Declaration may be amended or modified by Declarants only with the approval of DEP or the agency succeeding to its jurisdiction and no other approval or consent shall be required from any other public body, private person or legal entity of any kind. A statement signed by the Deputy Commissioner of the Bureau of Environmental Planning and Assessment of DEP, or such person as authorized by the Deputy Commissioner, certifying approval of an amendment or modification of this Declaration shall be annexed to any instrument embodying such amendment or modification.

13. Any submittals necessary under this Declaration from Declarants to DEP shall be addressed to the Deputy Commissioner of the Bureau of Environmental Planning and Assessment of DEP, or such person as authorized by the Deputy Commissioner. As of the date of this Declaration DEP's address is:

New York City Department of Environmental Protection
59-17 Junction Blvd
Flushing, New York 11373

14. Declarants expressly acknowledge that this Declaration is an essential element of the SEQRA review conducted in connection with the Application and as such the filing and recordation of this Declaration may be a precondition to the determination of significance pursuant to the SEQRA Regulations, Title 6 New York Code of Rules and Regulations ("NYCRR") Part 617.7.

15. Declarants acknowledge that the satisfaction of the obligations set forth in this Declaration does not relieve Declarants of any additional requirements imposed by Federal, State or Local laws.

16. This Declaration shall be governed by and construed in accordance with the laws of the State of New York.

17. Wherever in this Declaration, the certification, consent, approval, notice or other action of Declarants, DEP or the City is required or permitted, such certification, consent, approval, notice or other action shall not be unreasonably withheld or delayed.

18. In the event that any provision of this Declaration is deemed, decreed, adjudged or determined to be invalid or unlawful by a court of competent jurisdiction, such provision shall be severable and the remainder of this Declaration shall continue to be in full force and effect.

19. This Declaration and its obligations and agreements are in contemplation of Declarants receiving approvals or modified approvals of the Application. In the event that the Declarant withdraws the Application before a final determination or the Application is not approved, the obligations and agreements pursuant to this Declaration shall have no force and effect and this Declaration shall be cancelled.

20. Notice of Cancellation - Declarants may request that DEP issue a Notice of Cancellation upon the occurrence of the following steps: (i) Declarants have withdrawn the Application in writing before a final determination on the Application; (ii) the Application was not approved by the DCP; or (iii) DEP has issued a Final Notice of Satisfaction in accordance with paragraph 2 herein. Upon such request, DEP shall issue a Notice of Cancellation after it has determined to DEP's own satisfaction that the above referenced steps, as applicable, have occurred. Upon receipt of a Notice of Cancellation from DEP, Declarants shall cause such Notice to be recorded in the same manner as the Declaration herein, thus rendering this Restrictive Declaration null and void. Declarants shall promptly deliver to DEP and the DCP a certified copy of such Notice of Cancellation as recorded.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, Declarants have executed this Declaration as of the day and year first above written.

McGuiness Realty, Inc.

By: Paul J. Pullo

Title: President

Point Equities Management, Inc.

By: Paul J. Pullo

Title: President

CERTIFICATE OF ACKNOWLEDGMENT

STATE OF NEW YORK)
) .ss.:
COUNTY OF KINGS)

On the 9th day of May in the year 2012 before me, the undersigned, personally appeared Paul J. Pullo, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity (ies), and that by his/her/their signature on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

SEAL Notary Public

ANTHONY F. VALENTE
Notary Public, State of New York
No. 02VA6156912
Qualified in Kings County
Commission Expires 12/04/2014

L5332480K2

Exhibit A

AS TO LOT 20

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the Westerly side of McGuiness Blvd. (98 feet wide) distant 100 feet Northerly from the corner formed by the intersection of the Westerly side of McGuiness Boulevard with the Northerly side of Calyer Street; running

THENCE Westerly parallel with the Northerly side of Calyer Street, 100 feet to the center line of the block between McGuiness Boulevard and Eckford Street;

THENCE Northerly along said centerline of the block and parallel with the Westerly side of McGuiness Boulevard, 300 feet;

THENCE Easterly parallel with the Northerly side of Calyer Street, 25 feet

THENCE Northerly parallel with the Westerly side of v McGuiness Boulevard, 25 feet

THENCE Easterly parallel with the Northerly side of Calyer Street, 75 feet to the Westerly side of McGuiness Boulevard;

THENCE Southerly along the Westerly side of McGuiness Boulevard, 325 feet to the point or place of BEGINNING.

AS TO LOT 23

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the Westerly side of Oakland Street (now McGuinness Boulevard) distant 75 feet Northerly form the corner formed by the intersection of the Westerly line of Oakland Street with the Northerly line of Calyer Street;

RUNNING THENCE Westerly and parallel with Calyer Street, 75 feet;

THENCE Northerly and parallel with Oakland Street, 25 feet;

THENCE Easterly again parallel with Calyer Street, 75 feet to the Westerly line of Oakland Street; and

THENCE Southerly along the Westerly side of Oakland Street, 25 feet to the point or place of BEGINNING.

Exhibit B

CERTIFICATION PURSUANT TO ZONING LOT SUBDIVISION C OF SECTION 12-10 OF THE ZONING RESOLUTION OF DECEMBER 15, 1961 OF THE CITY OF NEW YORK-AS AMENDED EFFECTIVE AUGUST 18, 1977

RIDGE ABSTRACT CORP. representing COMMONWEALTH LAND TITLE INSURANCE COMPANY, a title insurance company licensed to do business in the State of New York and having its principal office at 1967 McDonald Avenue, Brooklyn, NY 11223, hereby certifies that as to the land here after described being a tract of land, either unsubdivided or consisting of two or more lots of record, contiguous for a minimum of ten linear feet, located within a single block in the single ownership of McGuinness Realty, Inc. (**as to Lot 20)** and Point Equities Management, Inc.**(as to Lot 23).** That all the parties in interest consisting of a "party in interest" as defined in Section 12-10, subdivision (c) of the Zoning Resolution of the City of New York, effective December 15, 1961, as amended, are the following:

NAME	*ADDRESS*	*NATURE OF INTEREST*
McGuinness Realty, Inc.	500 Kingsland Ave. Brooklyn, NY 11222	Fee Owner **(as to Lot 20)**
Point Equities Management Inc.	500 Kingsland Ave. Brooklyn, NY 11222	Fee Owner **(as to Lot 23)**
McGuiness Realty, Inc.	500 Kingsland Avenue Brooklyn, NY 11222	Party to Driveway and Pedestrian Easement Agreement- LOT 42

The subject tract of land with respect to which the foregoing parties are the parties in interest as aforesaid, is known as Tax Lot Number(s) 20 and 23 in Block 2576 on the Tax Map of the City of New York, Kings County and more particularly described as follows:

AS TO LOT 20

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the Westerly side of McGuiness Blvd. (98 feet wide) distant 100 feet Northerly from the corner formed by the intersection of the Westerly side of McGuiness Boulevard with the Northerly side of Calyer Street; running

THENCE Westerly parallel with the Northerly side of Calyer Street, 100 feet to the center line of the block between McGuiness Boulevard and Eckford Street;

THENCE Northerly along said centerline of the block and parallel with the Westerly side of McGuiness Boulevard, 300 feet;

THENCE Easterly parallel with the Northerly side of Calyer Street, 25 feet

THENCE Northerly parallel with the Westerly side of v McGuiness Boulevard, 25 feet

THENCE Easterly parallel with the Northerly side of Calyer Street, 75 feet to the Westerly side of McGuiness Boulevard;

THENCE Southerly along the Westerly side of McGuiness Boulevard, 325 feet to the point or place of BEGINNING.

AS TO LOT 23

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Borough of Brooklyn, County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the Westerly side of Oakland Street (now McGuinness Boulevard) distant 75 feet Northerly form the corner formed by the intersection of the Westerly line of Oakland Street with the Northerly line of Calyer Street;

RUNNING THENCE Westerly and parallel with Calyer Street, 75 feet;

THENCE Northerly and parallel with Oakland Street, 25 feet;

THENCE Easterly again parallel with Calyer Street, 75 feet to the Westerly line of Oakland Street; and

THENCE Southerly along the Westerly side of Oakland Street, 25 feet to the point or place of BEGINNING.

That the said premises are known as and by street address (es) 211-235 McGuinness Blvd., Brooklyn, NY (as to Lot 20) and 209 McGuinness Blvd., Brooklyn, NY (as to Lot 23) as shown on the following DIAGRAM:

SEE ATTACHED SCHEDULE "A" DIAGRAM

That the Zoning Lot Description and Ownership Statement containing the above description is simultaneously recorded herewith.

NOTE: A Zoning Lot may or may not coincide with a lot as shown on the Official Tax Map of the City of New York, or on any recorded subdivision plot or deed. A Zoning Lot may be subdivided into two or more zoning lots provided all the resulting zoning lots and all the buildings thereon shall comply with the applicable provisions of the zoning lot resolution.

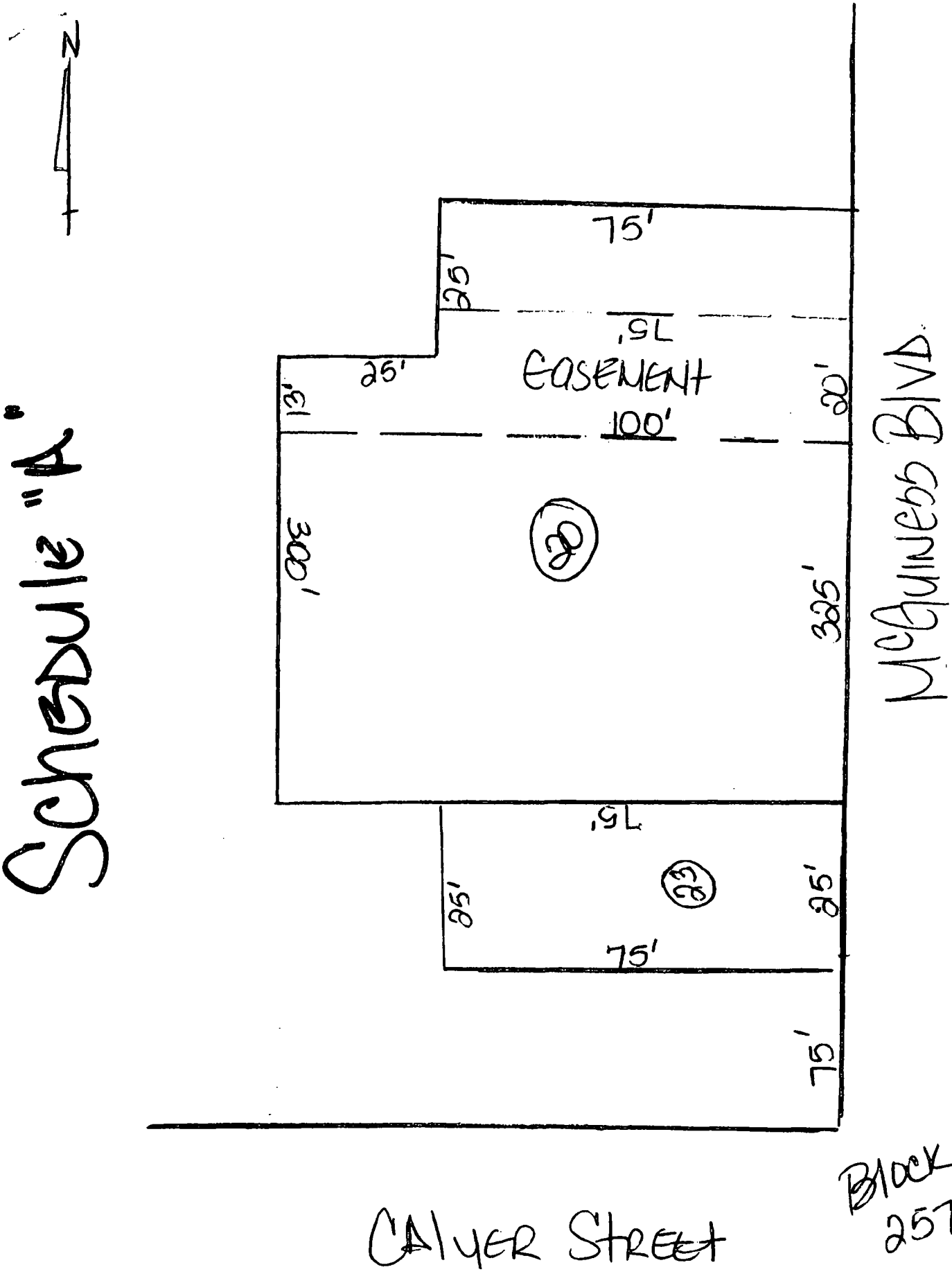
THIS CERTIFICATE IS MADE FOR AND ACCEPTED BY THE APPLICANT UPON THE EXPRESS UNDERSTANING THAT LIABILITY HEREUNDER IS LIMITED TO ONE THOUSAND ($1,000.00) DOLLARS.

RIDGE ABSTRACT CORP. REPRESENTING
COMMONWEALTH LAND TITLE INSURANCE CO.

DOCUMENT DATED: 5/8/12

BY: CHRISTOPHER M. BECK
VICE PRESIDENT

Schedule "A"

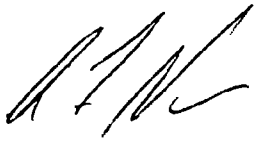

N
75'
25'
75'
25'
EASEMENT
13'
100'
20'
300'
20
325'
McGuiness Blvd
75'
25'
23
25'
75'
75'
Calyer Street
Block
2571

State of New York, County of Kings *ss:*

On the 8th day of May , 2012, before me personally appeared

CHRISTOPHER M. BECK

Personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity (ies), and that by his/her/their signature(s) on the instrument, the individual(s) or the person upon behalf of which the individual(s) acted, executed the instrument.



SEAL

ANDREW F. NUNZIATO
Notary Public, State of New York
No. 01NU4910721
Qualified in Nassau County
Commission Expires Nov. 09, 2013

(signature and office of individual taking acknowledgement)

NOTE: Section C26-110.2 Subdivision (a) Paragraph (1) of the Administration Code requires submission of an accurate Lot diagram in accordance with an attached boundary Survey made by a licensed surveyor, which need not be recorded but which must be submitted with the application for the permit.

SECTION:

BLOCK: 2576

LOT: 20 and 23

COUNTY: Kings

RECORD & RETURN TO:
Anthony Valente, Esq.
Metro Terminals Corp.
500 Kingsland Avenue -2nd Floor
Brooklyn, NY 11222

PREMISES: 211-235 McGuinness Blvd., Brooklyn, NY (as to Lot 20)
209 McGuinness Blvd., Brooklyn, NY (as to Lot 23)

Exhibit C

Environmental Protection

Caswell F. Holloway
Commissioner

February 17, 2011

Mr. Robert Dobruskin
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007-1216

Re: Zoning Map Amendment & Text Change
209-231 McGuinness Boulevard
Block 2576 Lots 20 and 23 (proposed development site)
Block 2576, Lots 7, 24, 25, 26, 27, and P/O Lots 5 and 42
(Sites are not under the control or ownership of the applicant)
CEQR # 10DCP024K / ULURP # 10218ZMK/N100219ZRY
DEP # 11DEPTECH 032K
Brooklyn, New York

Angela Licata
Deputy Commissioner
Bureau of Environmental Planning and Analysis
alicata@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-4398
F: (718) 595-4479

Dear Mr. Dobruskin:

New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis has reviewed the March 2010 Environmental Assessment Statement prepared by Equity Environmental Engineering, LLC and the May 2007 Phase I Environmental Site Assessment Report (Phase 1) prepared by M.D. London Associates LLC., on behalf of McGuinness Realty (applicant) for the above reference project. The applicant is proposing a zoning map and text amendment from the New York City Department of City Planning (DCP) for a M1-1 to a R7A zoning district change with a C2-4 commercial overlay for **Block 2576 Lots 7, 20, 23, 24, 25, 26, 27, and P/O Lots 5 and 42** bounded by Greenpoint Avenue, McGuinness Boulevard, Cayler Street and Eckford Street in the Williamsburg neighborhood of Brooklyn Community District 1. The proposed action would permit development of a seven-story residential buildings on **Block 2576, Lots 20 and 23** (proposed development site). The proposed development sites would accommodate approximately 141 residential dwelling units and approximately 23,375 square feet of retail space. It is anticipated that **Block 2576, Lots 7, 24, 25, 26, 27, and P/O Lots 5 and 42** could be developed under the proposed rezoning action. However, these sites are not under the control or ownership of the applicant.

The May 2007 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential and commercial uses including an R&S Strauss auto parts store and repair facility, active gasoline service stations, lumber sales company, vacant building (former Blockbuster Video store), truck parts store, vehicle inspection stations, strip mall, factory outlet stores, prior-on-site underground and or aboveground tanks uses. In addition potential source of groundwater contamination from surrounding off-site property may have impacted

the development site. The New York State Department of Environmental Conservation database identified 39 Leaking Storage Tanks and 13 spills within 1/2-mile radius of subject property respectively.

Based upon our review of the submitted documentation, we have the following comments/recommendations to DCP:

Proposed Development Site under the control or ownership of the applicant
(Block 2576 Lots 20 and 23)

DCP should inform the applicant that based on prior on-site and surrounding area land uses, a Phase II Environmental Site Assessment (Phase II) is necessary to adequately identify/characterize the surface and subsurface soils of the subject parcels prior to on-site soil disturbance. A Phase II Investigative Protocol/Workplan summarizing the proposed drilling and soil/groundwater sampling activities should be submitted to DEP for review and approval. The Workplan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil boring locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory (NYSDOH) for the presence of Volatile Organic Compounds by United States Environmental Protection Agency (EPA) Method 8260, Semi-Volatile Organic Compounds by EPA Method 8270, Pesticides/Polychlorinated Biphenyl by EPA Method 8081/8082 and Target Analyte List (TAL) metals (filtered and unfiltered for groundwater samples). An investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

Site not under the control or ownership of the applicant

Block 2576, Lots 7, 24, 25, 26, 27, and P/O Lots 5 and 42

Since these sites are not under the control or ownership of the applicant, DEP recommends that an "E" designation for hazardous materials should be place on the zoning map pursuant to 11-15 of the New York City Zoning Resolution for any projected and or potential development sites. The "E" designation will ensure that testing and mitigation will be provided as necessary before any future development. Soil and groundwater samples should be collected and analyzed by an NYSDOH ELAP-CERTIFIED laboratory for the presence of VOCs by EPA Method 8260, SVOCs by EPA Method 8270, Pesticides/PCBs by EPA Method 8081/8082 and TAL Metals. An investigative HASP will also be required to be submitted for review and approval.

DCP should instruct the applicant that the Phase II Work plan and HASP should be submitted to DEP for review and approval prior to start of any fieldwork. Future correspondence related to this project should include the following tracking number **11DEPTECH032K**. If you have any question, you may contact Maurice Winter at 718-595-4514.

Sincerely,

Gary C. Heath
Director, Bureau Operations and Environmental Analysis

cc: G. Heath
M. Winter
M. Myrie
C. Evans- DCP
File

Appendix 14
Air Quality

-Kelpin Response with Air Quality Permits
-Industrial Emissions Map

Parking Garage Emissions - McGuinness Boulevard
10 Foot Receptor Distance, 0 Foot Relative Height Receptor

Garage

2015 CO Emission Factors - Brooklyn Mobile 6.2 Emissions						No.of Vents	1		Background			
Cold Start Idle @ 43 F:						65.375	grams/hr-veh		1-HR	2.8	ppm	
2.5mph Cold Start Auto @ 43 F:						26.15	grams/mi-veh		8-HR	1.7	ppm	
2.5mph Hot Stable Auto @ 43 F						17.55	grams/mi-veh		**(2nd highest 1-hr & 8-hr avg at Queens College 2009)**			
						PF=	0.7					

	MAXIMUM 1-HOUR (8-9 am)		AVG HR MAX 8-HR (8am-4pm)		PARKING GARAGE AR	MEAN TRAV.DIST.	PK HR ER	8 HR ER	1 HR CONC	8 HR CONC	1 HR CONC	8 HR CONC
INS	OUTS		INS	OUTS	(GSF)#	(feet)	G/SEC	G/SEC	W/O BG AT VENT	W/O BG AT VENT	W BG AT VENT	W BG AT VENT
18	17		7	10	31500	271	**0.016**	**0.009**	**0.94**	**0.50**	**3.74**	**2.20**

1-hour and 8-hour maxima based on maximum number of outbound (cold) vehicles

						PK HR OUTS		**PK HR INS**				
						max out =	17	max ins =	18			
						CI/60=	1.0896	HA=	17.55			
						CA=	26.1500	Max Ins *HA*Mean d =	85640.49			
						mean d =	0.0513	5280*3600 =	19008000			
						CA * Mean d =	1.3427	In Emissions =	0.004505497			
						CA * Mean d +CI/60=	2.4322					
						Out Emissions =	0.0115		**0.0160**	<=In + Out Emissions		
						8 HR OUTS		**8 HR INS**				
						max out =	10.0000	max ins =	7.00			
						CI/60=	1.0896	HA=	17.55			
						CA=	26.1500	Max Ins *HA*Mean d =	33304.635			
						mean d =	0.0513	5280*3600 =	19008000			
						CA * Mean d =	1.3427	In Emissions =	0.001752138			
						CA * Mean d +CI/60=	2.4322					
						Out Emissions =	0.0068		**0.0085**	<=In + Out Emissions		
								7				
								0.001				
	enter feet							0.002				
	sheet converts to meters											
meters	feet											
3.048	10.000		Receptor - Source Distance									
0.000	0.000		Height above or Below Vent			(oy(0))^2 =	3.640					
						(oy(0)) =	1.908	(oy(0)) = sqrt((8HR ER/(8HR g/m^3 x 3.14))				
	oy(3.048)=			2.395								
	oz(3.048)=			2.335								
	Q=	0.009										
	To calculate 8 HR x,:											
	PF * Q=	0.006										
	-0.5*(H/oz)^2=	0.000										
	exp(-0.5*(H/oz)^2)=	1.000										
	PF*Q*exp(-0.5*(H/oz)^2)=	0.006										
	PI * oy * oz=	17.560		At Receptor:		Background:	Total:					
PF*Q*exp(-0.5*(H/oz)^2)/(PI*oy*oz)=		0.0003	g/m^3	**0.31**	PPM	**1.70**	**2.01**					
				PPM		PPM	PPM					
	g/m^3 => PPM (conversion factor)	903										
	mean travel distance based on 1/2 of short dimension + 2/3 of long dimension of garage											

M.D. London Associates, LLC
Environmental Planning and Assessments

February 18, 2008
VIA EMAIL
Gkelpin@DEP.NYC.gov

Ms. Gerry Kelpin, Director
New York City Department of Environmental Protection
Bureau of Air Resources
5947 Junction Boulevard
Flushing, New York I 1373-5108

RE: Air Permit Search
209-231 McGuinness Boulevard, Brooklyn, NY 10035
Block 2576, Lots 20 & 23

Dear Gerry:

We are requesting your help in obtaining the copies of air permits for properties surrounding the site referenced above. The properties in question are:

Address	Block/Lot	Use Per Certificate of Occupancy
223 Greenpoint Avenue	2560/41	1924- Public Garage
238-254 Greenpoint Avenue	2578/1	1996- electrical factory
230 Calyer St	2600/12	1960- 2 family residential
238 Calyer St	2600/17	NA
195 Newel St.	2600/18	1989- Filling & storage facility for C02 gas and offices
206 Newel St.	2601/14	1964-Factory- metal gifts/ offices
202 Newel ST.	2601/12	NA

We have included a map showing land uses within 400 feet of the subject property.

If you have any questions or need additional information, please let me know. I can be reached using the contact information below or at Merry@mdlondon.com.

Thank you. We appreciate your assistance.

Very truly yours,
M.D. London Associates, LLC

Merry Barrieres

Merry Barrieres, Project Manager

4 Goldmine Road
Flanders, New Jersey 07836

(973)527-7500(v)
(973)255-3999(f)
info@MDLondonAssociates.com

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:16 PM

Facility No.: 3 XE1E
Expires On: 07/16/2010

CA131498N

Registration
Active

Owner:

HERTLING JULIUS
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
HERTLING TROUSERS CO. INC.
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 110.00	07/27/98
Last Pay Amount:	$ 110.00	08/20/07
Balance Due:	$ .00	

Floor:

Boiler Make & Model : FULTON, FB-015A
# of Identical Units: 1
Input Rating: 649000
Gross BTU Rating: 519200

Burner 1 Make & Model : FULTON, INTEGRAL
# of Burners: 1
Fuel Type: ~~0~~ Natural Gas

Usage : Hrs/Day: 5 Days/Week: 5 Weeks/Year: 50
Max Firing Rate: 649

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:13 PM

Facility No.: 3 XD0C
Expires On: 03/13/1999

CA049996N

Registration
Unknown

Owner:

GREENPOINT IND. DEV.
250 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
GREENPOINT IND. DEV.
244 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 110.00	03/28/96
Last Pay Amount:	$ 110.00	03/07/96
Balance Due:	$ .00	

Floor:

Boiler Make & Model : FULTON, FB-015-A
# of Identical Units: 1
Input Rating: 0
Gross BTU Rating: 521000

Burner 1 Make & Model : INTEGRAL
Fuel Type: 0 Natural Gas
# of Burners: 0

Usage : Hrs/Day: 3 Days/Week: 7 Weeks/Year: 50

Max Firing Rate: 649

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/28/09
Time 4:50 PM

Facility No.: 3 XCJL
Expires On: 06/12/1998

CA159795Y

Registration
Cancelled

Owner:

ALDA FASHIONS/BELASQUEZ
218 NEWEL STREET
BROOKLYN NY 11222

Facility
ALDA FASHIONS CO.
244 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 110.00	06/14/95
Last Pay Amount:	$ 110.00	06/02/95
Balance Due:	$ .00	

Floor:

Boiler Make & Model : FULTON FB-10 # of Identical Units: 1
Input Rating: 0 Gross BTU Rating: 435000

Burner 1 Make & Model : FULTON INTEGRAL Fuel Type: 0
# of Burners: 0

Usage : Hrs/Day: 3 Days/Week: 7 Weeks/Year: 50

Max Firing Rate: 435

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:14 PM

Facility No.: 3 X0FN
Expires On: 10/24/1996

CA168468L

Certificate to Operate
Cancelled

Owner:

GREENPOINT INDUSTRIAL CTR
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
GREENPOINT INDUSTRIAL CENTER,
256 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 1190.00	09/22/93
Last Pay Amount:	$ 1190.00	06/14/93
Balance Due:	$ .00	

Floor: B

Boiler Make & Model : BABCOCK AND WILCOX (2) # of Identical Units: 2
Boiler Type: 2 Source Code: A7320 Air Intake: 1 Heat Input: 7.9 x 10^6 Gross BTU Rating: 7.84

Burner 1 Make & Model : RAY AEOR 144 (2) Fuel Type: 36
Burner Type: 053 # of Burners: 2

Usage : Avg. Fuel/Hr: 56 Max Fuel/Hr: 56 Avg. Fuel/Year: 110000 Fuel Supplier: 0
% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 4 Days/Year: 200

Burner 2 Make & Model : Fuel Type: 0
Burner Type: # of Burners: 0

Usage : Avg. Fuel/Hr.: 0 Max Fuel/Hr: 0 Avg. Fuel/Year: 0 Fuel Supplier:
% By Season : Winter: 0 Spring: 0 Summer: 0 Fall: 0 Hours/Day: 0 Days/Year: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:15 PM

Facility No.: 3 X1R6
Expires On: 10/17/1997

CA074372J

Certificate to Operate
Cancelled

Owner:

GREENPOINT INDUSTRIAL CTR
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
GREENPOINT INDUSTRIAL CENTER,
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 345.00	12/06/94
Last Pay Amount:	$ 345.00	10/26/94
Balance Due:	$ .00	

Floor: 1

Boiler Make & Model : BABCOK & WILCOX H1 #8 # of Identical Units: 1
Boiler Type: 2 Source Code: A7320 Air Intake: 1 Heat Input: 3.9 x 10^6 Gross BTU Rating: 3.9

Burner 1 Make & Model : RAY AEOR - 144 SIZE 100 Fuel Type: 36
Burner Type: 053 # of Burners: 1

Usage : Avg. Fuel/Hr: 25 Max Fuel/Hr: 27.9 Avg. Fuel/Year: 90000 Fuel Supplier: UNKNOWN
% By Season : Winter: 60 Spring: 10 Summer: 10 Fall: 20 Hours/Day: 9 Days/Year: 365

Burner 2 Make & Model : Fuel Type: 0
Burner Type: # of Burners: 0

Usage : Avg. Fuel/Hr.: 0 Max Fuel/Hr: 0 Avg. Fuel/Year: 0 Fuel Supplier:
% By Season : Winter: 0 Spring: 0 Summer: 0 Fall: 0 Hours/Day: 0 Days/Year: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/28/09
Time 4:52 PM

Facility No.: 3 X1R6
Expires On: 10/17/1997

CA074372J

Certificate to Operate
Cancelled

Owner:

GREENPOINT INDUSTRIAL CTR
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
GREENPOINT INDUSTRIAL CENTER,
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 345.00	12/06/94
Last Pay Amount:	$ 345.00	10/26/94
Balance Due:	$ .00	

Floor: 1

Boiler Make & Model : BABCOK & WILCOX H1 #8 # of Identical Units: 1
Boiler Type: 2 Source Code: A7320 Air Intake: 1 Heat Input: 3.9 x 10^6 Gross BTU Rating: 3.9

Burner 1 Make & Model : RAY AEOR - 144 SIZE 100 Fuel Type: 36
Burner Type: 053 # of Burners: 1

Usage : Avg. Fuel/Hr: 25 Max Fuel/Hr: 27.9 Avg. Fuel/Year: 90000 Fuel Supplier: UNKNOWN
% By Season : Winter: 60 Spring: 10 Summer: 10 Fall: 20 Hours/Day: 9 Days/Year: 365

Burner 2 Make & Model : Fuel Type: 0
Burner Type: # of Burners: 0

Usage : Avg. Fuel/Hr.: 0 Max Fuel/Hr: 0 Avg. Fuel/Year: 0 Fuel Supplier:
% By Season : Winter: 0 Spring: 0 Summer: 0 Fall: 0 Hours/Day: 0 Days/Year: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:15 PM

Facility No.: 3 XDN0
Expires On: 07/01/2000

CA113497M

Registration
Unknown

Owner:

ANDREW TAILOR SERVICES IN
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
ANDREW TAILOR SERVICES INC.
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 110.00	07/15/97
Last Pay Amount:	$ 110.00	06/20/97
Balance Due:	$ .00	

Floor:

Boiler Make & Model : FULTON, FB-010-A
Input Rating: 0
# of Identical Units: 1
Gross BTU Rating: 420000

Burner 1 Make & Model : FULTON, INTEGRAL
# of Burners: 0
Fuel Type: 0 Natural Gas

Usage : Hrs/Day: 3 Days/Week: 6 Weeks/Year: 52
Max Firing Rate: 420

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:18 PM

Facility No.: 3 Y5141
Expires On: 06/06/2004

CB100601X

Registration
Active

Owner:

CHEN XIN QUAN
16-20 68 STREET
BROOKLYN NY 11204

Facility
CHEN XIN QUAN
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ .00	
Last Pay Amount:	$ 110.00	05/03/01
Balance Due:	$ .00	

Floor:

Boiler Make & Model : FULTON F13-15A # of Identical Units: 1
Input Rating: 649000 Gross BTU Rating: 521000

Burner 1 Make & Model : INTEGRAL Fuel Type: 0 Natural Gas
# of Burners: 1

Usage : Hrs/Day: 7 Days/Week: 6 Weeks/Year: 5

Max Firing Rate: 649

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:18 PM

Facility No.: 3 X1R6
Expires On: 03/13/1991

PA013678Z

Certificate to Operate
Cancelled

Owner:

LEVITON MFG CO INC
59-25 LITTLE NECK PARKWAY
LITTLE NECK NY 11362

Facility
LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 200.00	04/18/88
Last Pay Amount:	$ 200.00	03/30/88
Balance Due:	$ .00	

Floor: 3

Process Description

14 GRINDERS - STEEL GRINDING OPERATION

% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 4 Days/Year: 220

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:18 PM

Facility No.: 3 X1R6
Expires On: 12/01/1988

PA013884J

Certificate to Operate
Reactive

Owner:

LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 250.00	08/25/89
Last Pay Amount:	$ .00	01/27/88
Balance Due:	$ 250.00	

Floor: 3

Process Description

AUTOMATIC CAUSTIC CLEANER AND ANNEALING OF PARTS

% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 8 Days/Year: 250

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:18 PM

Facility No.: 3 X1R6
Expires On: 01/04/1994

PA013984R

Certificate to Operate
Cancelled

Owner:

LEVITON MFG CO INC.
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ .00	10/06/92
Last Pay Amount:	$ 50.00	10/05/92
Balance Due:	$ .00	

Floor: 2

Process Description

AUTOMATIC CAUSTIC CLEANING AND DRYING OF PARTS-RANSHOFF WASHER.

% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 24 Days/Year: 250

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:19 PM

Facility No.: 3 X1R6
Expires On: 04/14/1992

PA021784M

Certificate to Operate
Cancelled

Owner:

LEVITON MFG CO INC
236 GREENPOINT AVENUE
BKLYN NY 11222

Facility
LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 375.00	03/23/89
Last Pay Amount:	$ 375.00	01/30/89
Balance Due:	$ .00	

Floor: 1

Process Description

SURFACE TREATING OF METAL PARTS

% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 8 Days/Year: 250

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:20 PM

Facility No.: 3 X1R6
Expires On: 01/22/1993

PA029192P

Work Permit
Cancelled

Owner:

LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Facility
LEVITON MFG CO INC
236 GREENPOINT AVENUE
BROOKLYN NY 11222

Last Fee Assessed:	$ 250.00	07/22/92
Last Pay Amount:	$ 250.00	06/24/92
Balance Due:	$ .00	

Floor: 4

Process Description

ANNEALING OVEN FOR ANNEALING LAMP PARTS

% By Season : Winter: 25 Spring: 25 Summer: 25 Fall: 25 Hours/Day: 8 Days/Year: 72

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:21 PM

Facility No.: 3 X7KY
Expires On: 02/15/2004

CA039092L

Registration
Cancelled

Owner:

230 CALYER ST.CORP.
230 CALYER STREET
BROOKLYN NY 11222

Facility
230 CALYER ST.CORP
230 CALYER STREET
BROOKLYN NY 11222

Last Fee Assessed:	$ 110.00	11/20/98
Last Pay Amount:	$ 110.00	10/05/00
Balance Due:	$ .00	

Floor:

Boiler Make & Model : WEIL MCLAIN BL-576 # of Identical Units: 1
Input Rating: 413000 Gross BTU Rating: 336000

Burner 1 Make & Model : CARLIN 201 CRD Fuel Type: 0
# of Burners: 0

Usage : Hrs/Day: 3 Days/Week: 7 Weeks/Year: 52

Max Firing Rate: 2.5

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:21 PM

Facility No.: 3 X7KY
Expires On: 01/07/2006

CB250002J

Registration
Cancelled

Owner:

230 CALYER ST CORP - ATT: MARK KLICH
215 NORMAN AVE
BROOKLYN NY 11222-3502

Facility
230 CALYER ST. CORP.
230 CALYER STREET
BROOKLYN NY 11222

Last Fee Assessed:	$ .00	
Last Pay Amount:	$ 110.00	11/21/02
Balance Due:	$ .00	

Floor:

Boiler Make & Model : WEIL MCLAIN EGH 105 # of Identical Units: 1
Input Rating: 450000 Gross BTU Rating: 360000

Burner 1 Make & Model : INTEGRAL Fuel Type: 0
# of Burners: 1

Usage : Hrs/Day: 3 Days/Week: 7 Weeks/Year: 35

Max Firing Rate: 450

Fuel Type: 0

Bureau of Environmental Compliance

59-17 Junction Blvd., Corona, N.Y. 11368
Records Control

Date: 12/18/09
Time 7:21 PM

Facility No.: 3 X7KY
Expires On: 12/30/1899

PA048871K

Work Permit
Cancelled

Owner:

HAVMOR FOOD PROD. INC.
230 CALYER STREET
BROOKLYN NY 11222

Facility
HAVMOR FOOD PROD. INC.
230 CALYER STREET
BKLYN. NY 11222

Last Fee Assessed:	$ 160.00	05/12/88
Last Pay Amount:	$ .00	05/12/88
Balance Due:	$ 160.00	

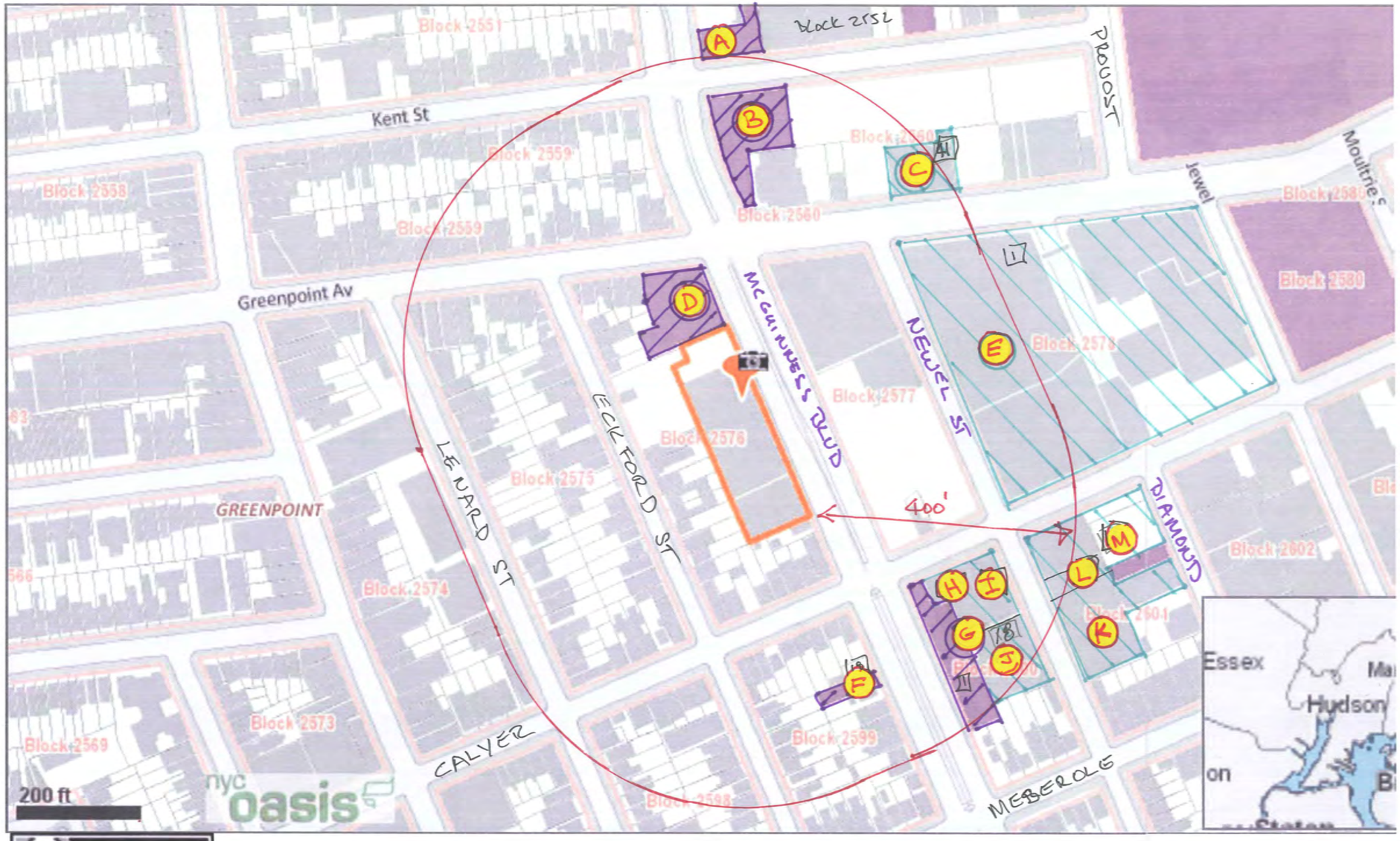
Floor:

Process Description

% By Season : Winter: 0 Spring: 0 Summer: 0 Fall: 0 Hours/Day: 0 Days/Year: 0

McGuinness Blvd - Transportation / Utility

nyc oasis



FROM OASIS

TRANSIT UTILITY

INDUSTRIAL

SITE SURVEY

A GREENPOINT INDUSTRIAL CTR

B BEER DISTRIBUTOR

C HESS GAS STATION

D BP GAS STATION

E SMALL AUTO REPAIR

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Appendix 14A
Air Quality (Odor)

- Technical Memo
-FSEIS Executive Summary
-FSEIS Notice of Completion
-FSEIS Chapter 11- Odor

The City of New York

Department of Environmental Protection

59-17 Junction Boulevard
Flushing, New York
11373-5108

Christopher O. Ward
Commissioner

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Assistant Commissioner

Office of Environmental Planning & Assessment

Tel: (718) 595-4398
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CEQR No. 00DEP032K

NOTICE OF COMPLETION FOR THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

TRACK 3 UPGRADE FOR THE NEWTOWN CREEK WATER POLLUTION CONTROL PLANT

Date: June 6, 2003

A Final Supplemental Environmental Impact Statement (SEIS) has been prepared by the New York City Department of Environmental Protection (NYCDEP) for the proposed Newtown Creek Water Pollution Control Plant (WPCP) Track 3 Upgrade. Acting as lead agency and in accordance with New York City's Executive Order 91 and its amendments, City Environmental Quality Review (CEQR), the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617), and the State Environmental Review Process (SERP), NYCDEP is hereby certifying this Final SEIS as complete.

As part of the public review process, public hearings to obtain oral testimony on the Draft SEIS were held accordingly on:

	Brooklyn	**Manhattan**
Date:	April 9, 2003	April 10, 2003
Time:	7 PM	7 PM
Location:	Newtown Creek Water Pollution Control Plant Large Conference Room Construction Management Building 329 Greenpoint Avenue	P.S. 34 730 E. 12th St

Notification of the time and location of the public hearings appeared in the Daily News, Nowy Dziennik, Courier Plus, El Diario, and Greenpoint Gazette. The period for submitting written comments on the Draft SEIS remained open until May 1, 2003.

DESCRIPTION AND LOCATION OF THE PROPOSED ACTION

NYCDEP, on behalf of the City of New York, is proposing to make modifications to the planned long-term upgrade of the Newtown Creek WPCP located in the Greenpoint section of Brooklyn. The upgrade is necessary to bring the WPCP in compliance with the secondary treatment requirements of the Clean Water Act (85 percent removal of biochemical oxygen demand and total suspended solids). The proposed Track 3 Upgrade is a modified step-feed process designed to provide treatment for an annual average flow of 310 million gallons per day (mgd) and a peak wet weather flow of 700 mgd. The Track 3 Upgrade offers a potential savings in the cost of upgrading the plant, would reduce potential construction-related impacts on the surrounding community, and would bring the Newtown Creek plant into full compliance with the secondary treatment requirements of the Clean Water Act in a shorter timeframe than other previous proposed tracks.

In addition, as part of the Track 3 Upgrade, NYCDEP is proposing to upgrade and enlarge the Manhattan Pump Station, which conveys flow from Manhattan to the plant. The pump station is located on Avenue D between 12th and 13th Streets.

REQUIRED APPROVALS

There are several potential State and City discretionary actions that require environmental review under State and City regulations including the following:

- Financing under the State Revolving Fund Program, which requires review under the State Environmental Review Process;
- Approval by the New York State Department of Environmental Conservation (NYSDEC) of air permits for the Newtown Creek WPCP and Manhattan Pump Station;
- Approval by NYSDEC of a modification to the plant's State Pollution Discharge Elimination System permit;
- Waterfront Revitalization (Coastal Zone) Consistency Determination from the New York State Department of State; and
- Potential City Board of Standards and Appeals action to extend the Variance and Special Permit for the Manhattan Pump Station.

SIGNIFICANT IMPACTS AND MITIGATION

Potential significant adverse impacts identified for the Track 3 Upgrade are as follows:

- *Newtown Creek WPCP*: Potential significant adverse impacts were identified for traffic and parking (construction), noise (construction), and hazardous materials (construction).
- *Manhattan Pump Station*: Potential significant adverse impacts were identified for hazardous materials (construction).

The potential significant adverse impacts identified in the SEIS would be mitigated, with certain exceptions during construction at Newtown Creek WPCP. Potential significant traffic impacts would not be mitigable at the intersection of McGuinness Boulevard and Greenpoint Avenue in the AM peak period. With regard to other potential significant traffic impacts, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted in the traffic assessment be realized and the mitigation measures not be implemented, the

impacts would be unmitigated. Potential significant parking impacts would occur only if construction workers do not utilize off-street parking sites that will be secured by the construction contractors. Potential significant noise impacts would remain partially unmitigated during periods when construction could occur on Saturdays.

TRAFFIC AND TRANSPORTATION

The analysis years for the project are 2007 (the year secondary treatment would be achieved), 2013 (the year construction would be completed) and 2004 (the peak construction year). No potential significant adverse traffic impacts were identified for the year 2013. While potential significant impacts were identified for the other two analysis years, it should be noted that potential significant impacts may occur during construction in other years to a lesser extent.

2007 Analysis Year

In the 2007 analysis year, potential significant adverse traffic impacts were identified for the following locations:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

At all three intersections, signal timing changes are identified that could mitigate potential significant adverse impacts. With this proposed mitigation in place, all impacted approaches and movements would return to No Action levels, except for the intersection of Greenpoint Avenue and McGuinness Boulevard. At this location under the Base scenario, physical reconfiguration of the roadway would be necessary to mitigate potential impacts; however, McGuinness Boulevard has recently heen reconfigured and new physical modifications are not considered economically feasible. Therefore, the northbound through-right lane group during the AM peak hour would be significantly adversely impacted by the creation of a southbound lead phase. This impact would be unavoidable. In addition, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted above be realized and the mitigation measures not be implemented, the impacts would be unmitigated.

2004 Analysis Year

In the 2004 analysis year, three intersections would be significantly impacted under the Base scenario and five intersections would be significantly impacted under the Kingsland Parking scenario, as follows:

The Base scenario:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

The Kingsland Parking scenario:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Kingsland Avenue (Midday peak hour)

- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)
- Kingsland Avenue at Norman Avenue (AM peak hour)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

Some of the measures identified to mitigate the 2007 impacts, such as signal timing changes, in addition to several other readily implementable potential modifications, such as daylighting, could mitigate the potential 2004 peak construction period impacts.

Similar to the 2007 mitigated Build conditions, potential significant adverse impacts occurring at the intersection of Greenpoint Avenue and McGuinness Boulevard during the AM peak hour under the Base scenario could not be fully mitigated. This impact would be unavoidable. In addition, as stated above, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted above be realized and the mitigation measures not be implemented, the impacts would be unmitigated.

Potential Mitigation Measures—Second Shift Construction Periods

A second shift would be added during certain construction periods through the year 2007. The year 2004 would also be the peak year for a potential second construction shift. As with the 2004 and 2007 analysis years, there would be the potential for potential significant impacts during the midday time period when the second shift arrival would be followed by the first shift departure. The mitigation measures identified above, if implemented, would mitigate potential significant impacts.

Parking

Contractors would be required to provide off-street parking during construction at the plant and enforcement mechanisms will be put in place to ensure this parking is provided. However, if construction workers do not utilize the off-street parking sites secured by the contractors, potential significant adverse impacts from on-street parking could occur. These significant impacts, if they were to occur, would be unavoidable.

NOISE

On-site construction activity at the Newtown Creek WPCP would result in potential significant impacts during certain periods of construction both during weekdays and on Saturdays at sensitive receptors on Java and India Streets 100 feet or more east of McGuinness Boulevard. Typically, construction related impacts are considered to be temporary and not practical to mitigate. Because the construction related noise would persist for an unusually long time and would require extensive noise intrusive activity (i.e. pile driving), NYCDEP is committing to using polymer block during pile driving activities.

On weekdays, with the use of polymer block, the maximum noise level increase at the closest sensitive receptors on Java and India Streets would be 2.3 dBA, well below the 3.0 dBA CEQR noise impact threshold. Increases of this magnitude would be imperceptible and potential significant noise impacts would be mitigated. During periods when construction activities would occur on Saturdays, noise levels would remain above 3 dBA at residences 100 feet or more east of McGuinness Boulevard. At the closest sensitive receptors on Java and India Streets, the maximum noise level increases would be 4.3 dBA and 3.7 dBA.

NYCDEP investigated the possibility of offering window-wall attenuation and an alternate means of ventilation to affected residents along Java and India Streets east of McGuinness Boulevard. Upon further evaluation, it was determined that the mitigation is not practicable for mitigating construction on weekends, a condition that would occur on a sporadic basis. Therefore, potential significant noise impacts would remain partially unmitigated.

HAZARDOUS MATERIALS

Construction at the WPCP and Manhattan Pump Station would result in potential significant hazardous materials impacts and would require the following remediation measures at each project site:

- Subsurface investigations in areas not yet constructed to determine disposal requirements in accordance with a NYCDEP-approved sampling plan;
- Soil removal and disposal off-site in accordance with all applicable federal, state, and local regulations;
- Implementation of a NYCDEP-approved HASP;
- Testing and potential treatment of groundwater from dewatering activities to levels specified in applicable local and state permits; and
- Removal of asbestos, lead, PCBs, and other hazardous materials from building demolition activities in accordance with all applicable federal, state, and local regulations.
- Other site-specific measures will also be required.

In addition, the Manhattan Pump Station site was formerly a manufactured gas plant (MGP). If the additional subsurface investigations find manufactured gas waste in the areas to be excavated, special remedial measures will be implemented including measures to reduce odors due to the proximity of residences to the site. These measures will include, for example, the use of counteractants, plastic sheeting over the soils, and possibly performing work inside temporary structures. MGP wastes would be disposed of in accordance with all applicable regulations.

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Honorable C. Virginia Fields
Jasmine Javaheri
Crystal Johnson
Lisa Kaplan
Irene Klementowicz
Robert Kulikowski
Rory Levy
Honorable Marty Markowitz
Barbara Mihelic
J. Kumar Nepal
NCMC Members
Pasquale Pacifico
Naim Rashid
Victor Robles
George Stafford
Mathy Stanislaus
Bill Woods

A. PROJECT DESCRIPTION

INTRODUCTION AND PROJECT IDENTIFICATION

The New York City Department of Environmental Protection (NYCDEP), on behalf of the City of New York, is proposing to make modifications to the planned long-term upgrade of the Newtown Creek WPCP located in the Greenpoint section of Brooklyn (see Figure S-1). The upgrade is necessary to bring the WPCP in compliance with the secondary treatment requirement of the Clean Water Act (85 percent removal of biochemical oxygen demand and total suspended solids.) The proposed Track 3 Upgrade is a modified step-feed process designed to provide treatment for an annual average flow of 310 million gallons per day (mgd) and a peak wet weather flow of 700 mgd. The Track 3 Upgrade offers a potential savings in the cost of upgrading the plant, would reduce potential construction-related impacts on the surrounding community, and would bring the Newtown Creek plant into full compliance with the secondary treatment requirements of the Clean Water Act in a shorter timeframe. Construction for the long-term WPCP Upgrade has been ongoing since 1998.

In addition, as part of the Track 3 Upgrade, NYCDEP is proposing to upgrade and enlarge the Manhattan Pump Station, which conveys flow from Manhattan to the plant. The pump station is located on Avenue D between 12th and 13th Streets (see Figure S-2).

PROJECT BACKGROUND AND CURRENT PLANNING STATUS

Located in the Greenpoint section of Brooklyn, the Newtown Creek Water Pollution Control plant (WPCP) treats wastewater from a service area covering parts of Brooklyn, Manhattan, and a small portion of Queens (see Figure S-3). The existing facility treats an average annual dry weather flow of 310 mgd using a modified aeration treatment process without primary settling. This process is designed to achieve removal rates of 60 percent for biochemical oxygen demand (BOD) and 70 percent removal for total suspended solids (TSS). Because these removal rates do not meet the secondary treatment levels (85 percent removal of BOD and TSS) of the 1972 Clean Water Act, a 1995 New York State Supreme Court Modified Judgment on Consent (1995 Modified Judgment) required the City to meet the requirements by December 31, 2007. The 1995 Modified Judgment established a schedule for attainment of secondary treatment, the preparation of an updated Facility Plan, new requirements for nitrogen removal, and treatment of wet weather flows.

Under the terms of the 1995 Modified Judgment, NYCDEP submitted a Draft Facility Plan to the New York State Department of Environmental Conservation (NYSDEC) in August 1995. The 1995 Facility Plan, accepted by NYSDEC, presented a two-track approach based on two different treatment process alternatives: Track 1, Step-Feed Denitrification, and Track 2, Biofiltration. These processes were previously analyzed in a Final Environmental Impact Statement (FEIS) released in October 1996.

Concurrent with the two-track planning process, NYCDEP undertook further testing of treatment methods. Based on extensive testing conducted over more than two years, NYCDEP identified a third alternative for the WPCP upgrade, Track 3. The Track 3 design is a modified step-feed process. The Track 3 design complied with or exceeded all 1995 Modified Judgment requirements, except for those related to nitrogen removal. NYCDEP is now proposing to upgrade the plant in accordance with the Track 3 design.

Construction for the long-term WPCP upgrade has been on-going since 1998. Elements common to Tracks 1, 2, and 3 ("common elements") are presently either completed or under construction at the WPCP site. By implementing the common elements early in the construction sequence, the plant can begin to be upgraded in compliance with the Modified Judgment while a decision is made as to which track is the most feasible. These common elements consist of support facilities, disinfection facilities, portions of the sludge facilities, and portions of the Main Building. The common elements were assessed in the 1996 FEIS.

Because Track 2 biofiltration is a less proven technology, a Biofilter Demonstration Plant was operated at the Newtown Creek WPCP beginning in December 1996 through June of 1998. These tests showed that biofiltration would not reliably meet secondary treatment requirements of the Clean Water Act. In addition, the performance of a step-feed modification of Aeration Tank No. 15 over several years, implemented as part of the Treatment Enhancement Program conducted at the Newtown Creek WPCP, demonstrated the potential for achieving 85 percent removal of BOD and TSS with a less expensive upgrade than originally anticipated. This finding indicates that, if augmented with some additional facilities, secondary treatment can be reliably achieved without primary sedimentation.

The resulting new alternative—Track 3, Enhanced Modified Step-Feed—is based upon the performance of the step-feed modification operated in Aeration Tank No. 15. Track 3 would upgrade the existing facilities to secondary treatment effluent levels of 85 percent removal of BOD and total suspended solids. The plant would provide secondary treatment for an annual average dry weather flow of 310 mgd and a peak wet weather flow of 700 mgd. Unlike Tracks 1 and 2, Track 3 does not provide for additional nitrogen removal. Based on the analyses conducted for the East River Water Quality Facilities Planning process and Long Island Sound Study, it was determined that the benefits from nutrient removal would be minimal.

In August 2000, NYCDEP submitted the Track 3 Upgrade design to the State because the plan was superior to Track 1 and brought the WPCP into compliance with secondary treatment mandates at a lesser cost and at an earlier date than Track 1. After several modifications and a thorough review by the State, the State determined that it was willing to accept the Track 3 Upgrade design and a new agreement was required.

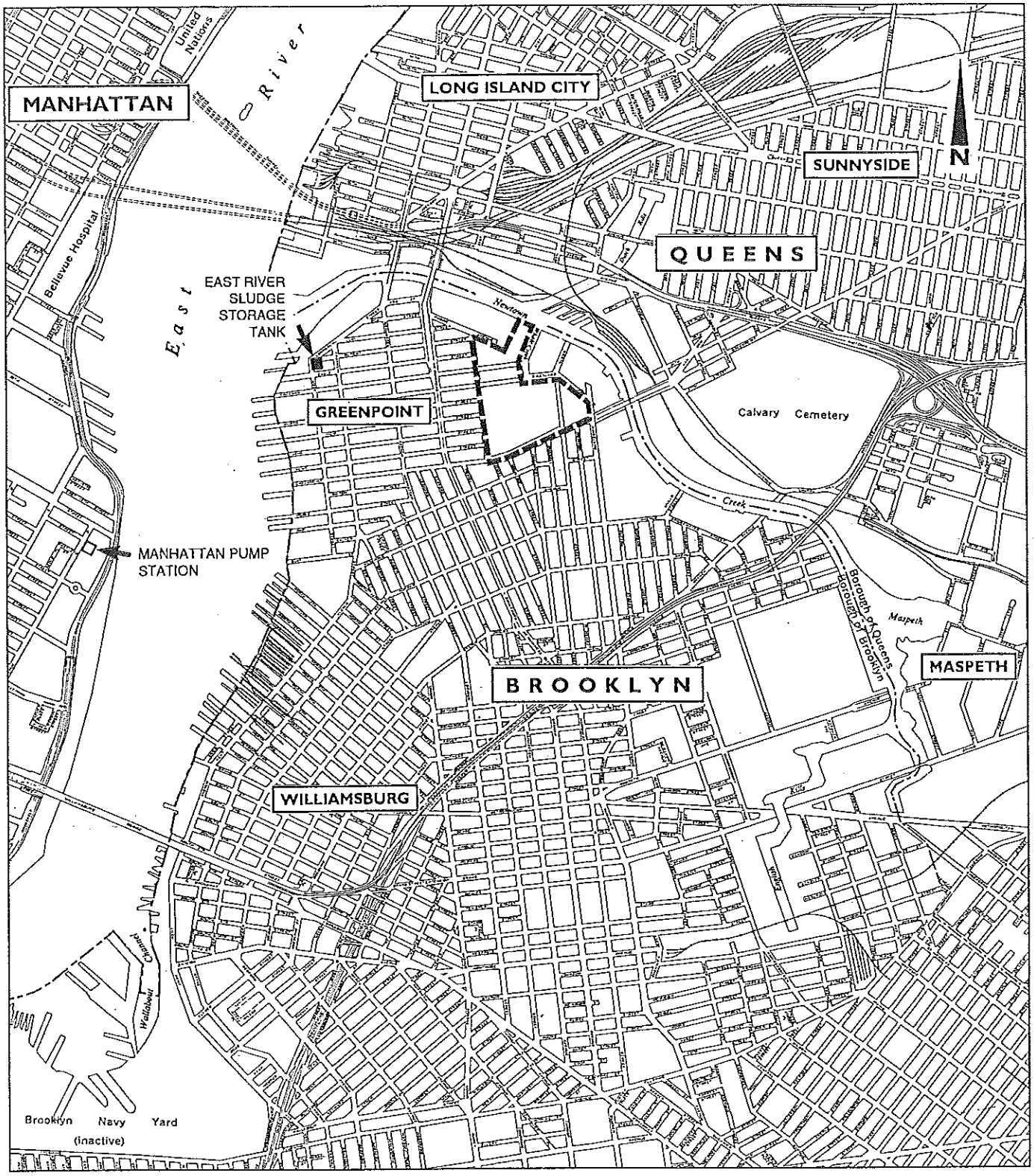
Effective as of June 12, 2002, the 2002 Modified Judgment includes the Track 3 Upgrade. As with previous orders, the 2002 Modified Judgment stipulates provisions the City must comply with. These include:

- Schedule milestones—the major construction and operation related milestones the City must comply with when implementing the Track 3 Upgrade. Major milestones are:

- Approvable Secondary Treatment Contingency Plan	June 30, 2006
- Approvable Operation and Maintenance Manual	June 30, 2006
- Compliance with secondary treatment limits	December 31, 2007
- Completion of all construction for Track 3	July 4, 2013

Project Location

Figure S-1



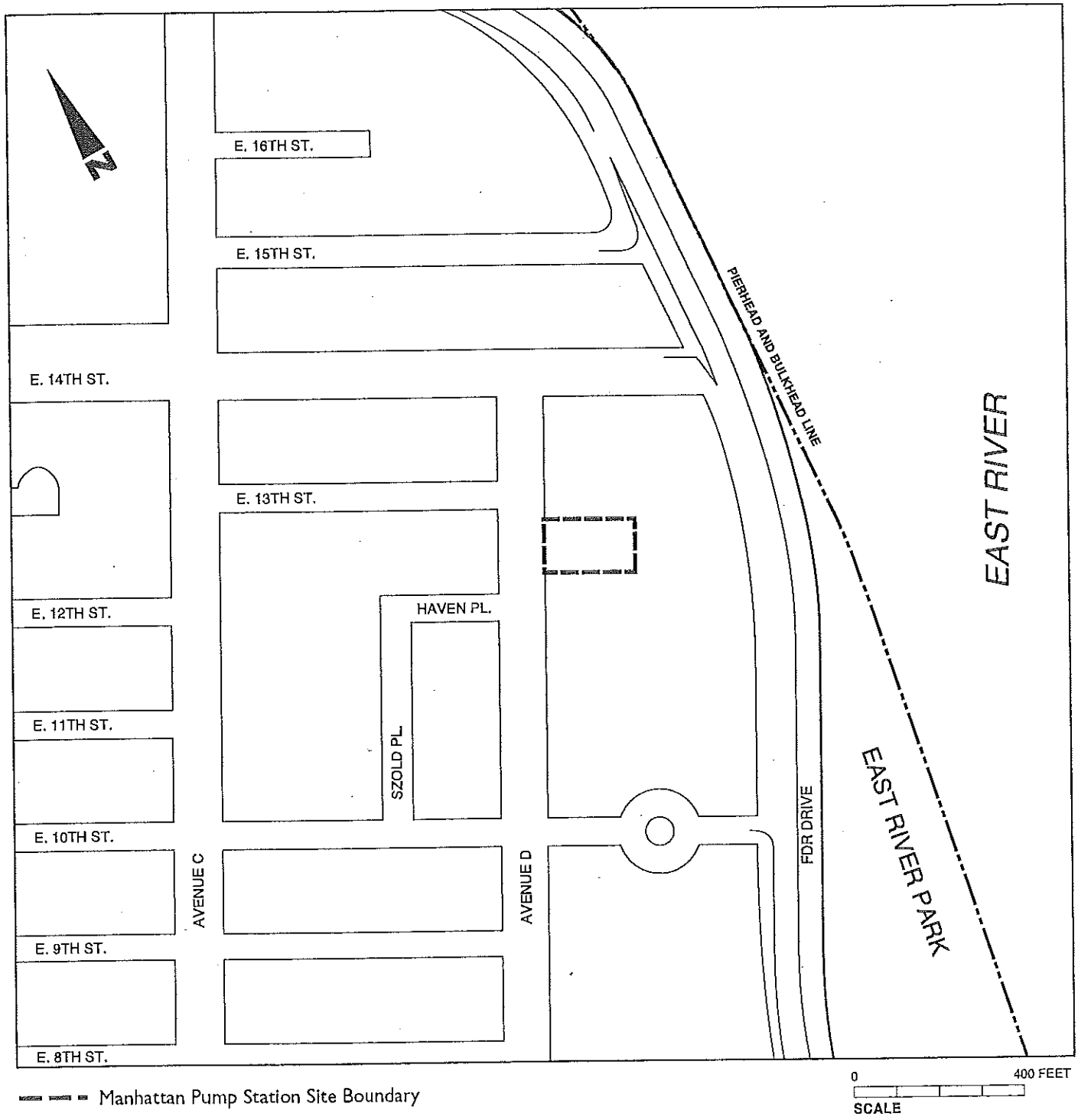
Newtown Creek WPCP Project Site Boundary

East River Sludge Storage Tank

Manhattan Pump Station

Location of Manhattan Pump Station

Figure S-2



Newtown Creek WPCP Service Area

Figure S-3



Newtown Creek WPCP Service Area Boundary

Neighborhood District Boundary

Borough Boundary

- Interim effluent limits and monitoring requirements.
- Final effluent limits and monitoring requirements with which the facility must comply no later than December 31, 2007.
- Aggregate interim effluent limits and monitoring requirements for certain parameters that the City must comply with at its 14 WPCPs, on an aggregate basis, during implementation of the upgrade.

UNIFORM LAND USE REVIEW PROCEDURE

The three upgrade designs—Tracks 1, 2, and 3—require more land area than what had been available at the Newtown Creek WPCP site. Previously, as part of the planning activities for secondary treatment upgrade under Tracks 1 and 2, and as assessed in the 1996 FEIS, Uniform Land Use Review Procedure (ULURP) actions were undertaken to acquire additional land immediately adjacent to the plant boundaries, bringing the current size of the plant site to 53 acres from 36 acres for use as a wastewater treatment facility. Under ULURP actions Nos. C 960404 PCK, C 960403 MLK, and C 960402 MMK, three properties were acquired, portions of two streets were demapped, and a portion of the Whale Creek Canal bank was stabilized. No further ULURP actions are required to implement the Track 3 Upgrade.

REQUIRED APPROVALS

There are several potential State and City discretionary actions that require environmental review under State and City regulations including the following:

- Financing under the State Revolving Fund Program, which requires review under the State Environmental Review Process (SERP);
- Approval by the New York State Department of Environmental Conservation (NYSDEC) of air permits for the Newtown Creek WPCP and Manhattan Pump Station;
- Approval by NYSDEC of a modification to the plant's State Pollution Discharge Elimination System (SPDES) permit;
- Waterfront Revitalization (Coastal Zone) Consistency Determination from the New York State Department of State (NYSDOS); and
- Potential City Board of Standards and Appeals action to extend the Variance and Special Permit for the Manhattan Pump Station.

NEWTOWN CREEK MONITORING COMMITTEE

In compliance with resolutions passed as part of the ULURP process, the Newtown Creek Advisory Panel was disbanded and the Newtown Creek Project Monitoring Committee (NCMC) was established. ULURP resolutions dictated that the committee be chaired by the local Council member and have membership made up of two representatives appointed by the Chair, two members appointed by the local Community Board, two members appointed by the Borough President and a representative of NYCDEP. The ULURP resolution charges NCMC with monitoring the City's progress in complying with modifications included in the ULURP resolutions, construction-related issues and plant operations.

The same ULURP resolutions also requires the NYCDEP to fund a community liaison person and an independent consulting engineer to assist the Monitoring Committee.

EXISTING CONDITIONS

NEWTOWN CREEK WPCP

With a design flow of 310 mgd, the Newtown Creek WPCP is the largest of the City's wastewater treatment plants. The WPCP, located on an approximately 53-acre site adjacent to Newtown Creek in the Greenpoint section of Brooklyn, treats wastewater from a service area covering parts of Brooklyn, Queens, and Manhattan (see Figure S-4). The existing facility was designed to treat an average annual dry weather flow of 310 mgd and to provide 60 percent removal of biochemical oxygen demand (BOD) and 70 percent removal of total suspended solids (TSS). To attain this level of treatment, the plant utilizes a modified aeration process without primary settling.

Service Area

The Newtown Creek WPCP service area is predominantly a combined service area covering 25.4 square miles in Manhattan, Brooklyn, and Queens. In Manhattan, the service area includes all or part of the Upper East Side, Midtown, Lower East Side, Lower Manhattan, and Greenwich Village. Flows from these areas travel by gravity to the Manhattan Pump Station. From the pump station, flow is pumped through a force main under the East River directly to the Newtown Creek WPCP.

In Brooklyn, the service area includes Greenpoint, Williamsburg, Fort Greene, Bedford Stuyvesant, Crown Heights, and Bushwick. In Queens, the service area includes the neighborhoods of Ridgewood, Glendale, and Maspeth. Flows from these areas travel by gravity to the Newtown Creek WPCP via either the Morgan Avenue interceptor or the Kent Avenue interceptor.

Existing Plant

The existing plant consists of the following major components:

- The main building on Greenpoint Avenue, which contains offices, maintenance facilities, the monitoring and control center, the main pumps and screening chambers, boiler and process air blowers.
- The north and south wastewater units on the western portion of the site, which include grit chambers, aeration tanks, sedimentation tanks, and control buildings.
- Sludge processing tanks on the northeast portion of the site, which comprise eight gravity thickening tanks, six digestion tanks, two sludge storage tanks, and a gas holder.
- The main outfall from the plant, which extends west beneath India Street to the East River. A second outfall to Whale Creek Canal is only used during certain wet weather and high tide conditions.

Interim Upgrade Projects

To address the immediate repair and replacement needs of the Newtown Creek WPCP the City initiated the Newtown Creek Interim Upgrade Projects (IUP) in 1993. The IUP was independent of the long-term upgrade. The projects included some temporary and some permanent measures

to correct some of the operating problems identified in the plant evaluation and maintain proper plant operation until the long-term upgrade is implemented. The IUP also reduced odor releases (at both the WPCP and East River Sludge Storage Tank) and air pollutant emissions, and tested ways of improving solids capture and BOD removal. The IUP has recently been completed.

Existing Plant Flows

Table S-1 shows annual average, the maximum month (typically a summer month), and minimum month (typically a fall or winter month) daily dry-weather flows to the plant for the years 1989 through 2002. The dramatic reduction in flows to the plant over this period is due primarily to water conservation and flow reduction measures implemented by NYCDEP since the early 1990s.

Table S-1
Reported Average Daily
Dry Weather Flows(mgd) 1989-2002

	Annual*	Maximum Month**	Minimum Month**
1989	339	363	309
1990	319	362	299
1991	308	338	285
1992	283	305	261
1993	273	285	263
1994	280	306	254
1995	269	300	243
1996	252	264	238
1997	246	283	225
1998	232	253	215
1999	215	240	191
2000	216	233	205
2001	222	239	222
2002	217	239	206

Notes:
* Daily average calculated for the year.
** Daily average for the highest/lowest month of flows.
Source: DEP Newtown Creek WPCP operating records, 1989-2002.

MANHATTAN PUMP STATION

At the Manhattan Pump Station, there are five main sewage pumps, each rated at 100 mgd. Currently, the operations at the station have limitations, and normal effective operational capacity of the pump station is 300 mgd. Wastewater flows through a set of screens prior to being pumped through the 102-inch Manhattan Force Main to the Brooklyn Uptake Shaft at the Newtown Creek WPCP site.

SLUDGE FORCE MAIN AND THE EAST RIVER SLUDGE STORAGE TANK AND LOADING DOCK

Sludge is held in storage tanks on-site or pumped to the East River Sludge Storage Tank prior to being loaded onto a sludge boat at the East River Sludge Loading Dock for transport to a remote dewatering location. Sludge is pumped to the East River Sludge Storage Tank and/or Loading Dock through 3,600 linear feet of an 18-inch diameter sludge force main. The East River Sludge Storage Tank is located approximately ½ mile west of the Newtown Creek WPCP at Dupont and West Streets on a 90-by-100-foot, fenced-in site.

THE FUTURE WITHOUT THE PROPOSED TRACK 3 UPGRADE

For purposes of the SEIS, the "No Action" scenario or the "Future without Track 3" conservatively assumes that the proposed Track 3 Upgrade does not move forward and the WPCP will operate as upgraded under the recently completed Interim Upgrade Projects (IUP), which addressed immediate needs at the facility. The No Action scenario would improve neither the water quality of the effluent nor the quality of life for residents in the surrounding community beyond those measures implemented under the IUP.

In fact, there is no viable "No Action" scenario for the plant. If the City does not move forward with the WPCP upgrade, it would be in violation of the Clean Water Act and Modified Judgment which mandates that the WPCP reach secondary treatment by December 31, 2007. Thus, the "Future without Track 3" would likely be the Track 1 or Track 2 Upgrade. However, to be conservative for purposes of the analysis, the No Action scenario does not take credit for another track being built.

Under the No Action condition, no changes are anticipated at the Manhattan Pump Station.

ELEMENTS COMMON TO TRACKS 1, 2, AND 3

Tracks 1, 2, and 3 share a number of processes or facilities in common. By implementing the common features early in the construction sequence, the plant can begin to be upgraded in compliance with the Modified Judgment while a decision is made as to which track is the most feasible. The following elements common to Tracks 1, 2, and 3 have either been constructed or are under construction.

Elements Constructed

- *NC-27—Construction Management Building and Site Work (Common Element)*—Construction of a new Construction Management Office (CM) Building located on Plant property near the intersection of Greenpoint Avenue and Provost Street. The work also included construction of the south interim water service building, installation of underground utilities and site work. The contract commenced in 1999 and was completed in 2001.
- *NC-28—Demolition and Site Preparation (Common Element)*—Demolition of existing structures, remediation work, miscellaneous site work, utility relocation, and debris removal at the properties acquired via the ULURP process. The sites include the former Mobil, Exxon, and Williamsburg Steel properties. The project commenced in 1998 and was completed in 1999, although additional site remediation work continues under other contracts.

- *NC-29—Reconstruction of Kingsland Avenue Stage 1 (Common Element)*—Widening of Kingsland Avenue by taking a portion of the property acquired from Mobil and adding it to the width of Kingsland Avenue and reconfiguring Kingsland Avenue to provide new travel lanes for queuing of sanitation department trucks. The project commenced in 1999 and was completed in 2001.

Elements Currently Under Construction

The following elements common to Tracks 1, 2, and 3 are under construction. In addition, NC35F, specific to Track 3, was initiated in 2002 to ensure that secondary treatment would be achieved by 2007. Portions of these elements not yet constructed are assessed in the SEIS.

- *NC-30 – Main Building South Addition (Common Element)*— A new South Addition is being constructed on the south side of the existing Main Building. This area would house the new central boiler plant and hot water distribution system, switchgear and motor control centers, main control room, HVAC equipment and process air blowers, and air filter rooms for future process air blowers (need for future blowers is track dependent). The new building addition would also include a visitors' center at the southeast corner of the building. A new building extension would be added to the eastern side of the existing Electrical Substation for the new Main Electrical Substation and Transformer Vault. This work commenced in 2000. In the existing area of the Main Building, emergency generators (diesel-fueled combustion turbines) would be provided.
- *NC-31 – Sludge Handling Facilities (Common Element)*—Construction of the structures and equipment associated with sludge treatment and handling including a new Centrifuge Thickening Building, new Digestion Building, new Grit Building and a new Service Building. Construction activities for this contract commenced in 2000.
- *NC-32 – Support Building and Disinfection Facilities (Common Element)*—Construction of a new Support Building, new Disinfection Facilities, new Chlorine Contact Tanks, new contact effluent channel, East River and Whale Creek Canal effluent conduits, Whale Creek Canal outfall, and a Whale Creek Canal bulkhead. Construction activities for this contract commenced in 2000, and the bulkhead and associated work has been substantially completed.
- *NC-35F – North Battery Foundations (Track 3 Specific)*—This contract includes the work required to excavate the site for the new North Battery of aeration and sedimentation tanks and install piles in advance of the NC-35 contract (see below). For construction sequencing, this portion of the contract was separated from the remainder of the work for the new North Battery. NYCDEP issued a Negative Declaration for this component of the project on October 10, 2002.

PROPOSED NEWTOWN CREEK WPCP TRACK 3 UPGRADE PROJECT

PURPOSE AND NEED

Implementation of Track 3 offers several distinct advantages. While Tracks 1 and 2 provided for 700 mgd treatment of wet weather events, only 465 mgd would be treated to secondary treatment levels (the remainder would bypass secondary treatment and then be disinfected) as compared to Track 3, which provides secondary treatment for 700 mgd wet weather flows. The Track 3 Upgrade is scheduled to achieve secondary treatment by December 31, 2007, while the

Track 1 Upgrade was projected to achieve these levels of treatment in June 2010. The Track 3 Upgrade also offers the opportunity for considerable cost savings: $2.27 billion (2002 dollars) as compared to $2.907 billion (2002 dollars) for Track 1, the only other track that would provide reliable secondary treatment. Finally, the proposed Track 3 Upgrade would directly benefit the local community by reducing construction-related impacts.

PROPOSED TREATMENT PROCESS

The Track 3 Upgrade design is intended to achieve secondary treatment without completely demolishing and rebuilding existing facilities (see Figure S-4). The Track 3 Upgrade would add a third battery of grit, aeration and sedimentation tanks to the north of the two existing batteries (the North Battery), as well as new disinfection facilities. The plan is distinguished by the absence of primary tanks, relatively small aeration tanks as compared to typical NYCDEP treatment plants, and relatively large sedimentation tanks. The Track 3 Upgrade would also include numerous improvements to grit and screening removal facilities. A key feature of the enhanced design would be the provision of separate distribution channels between the grit tanks and aeration tanks and sedimentation tanks. This would permit taking individual components out-of-service without removing an entire treatment train from service when maintenance or repairs are required, which would significantly improve system reliability and flexibility. Upgrades to the existing aeration/sedimentation batteries would include additional grit tank improvements, step-feed modifications of the aeration tanks, increased air supply, increased return sludge capacity, and replacement of mechanical and process control systems. New sludge handling facilities would include eight egg-shaped digesters constructed east of the existing Main Building. The existing sludge facilities would be demolished and a new Central Residuals Building would be constructed at that location.

TREATMENT OBJECTIVES

Biochemical Oxygen Demand (BOD)/Total Suspended Solids (TSS) Removal

To meet the mandate of the CWA, the Track 3 Upgrade would provide 85 percent BOD and TSS removal.

Wet Weather Treatment

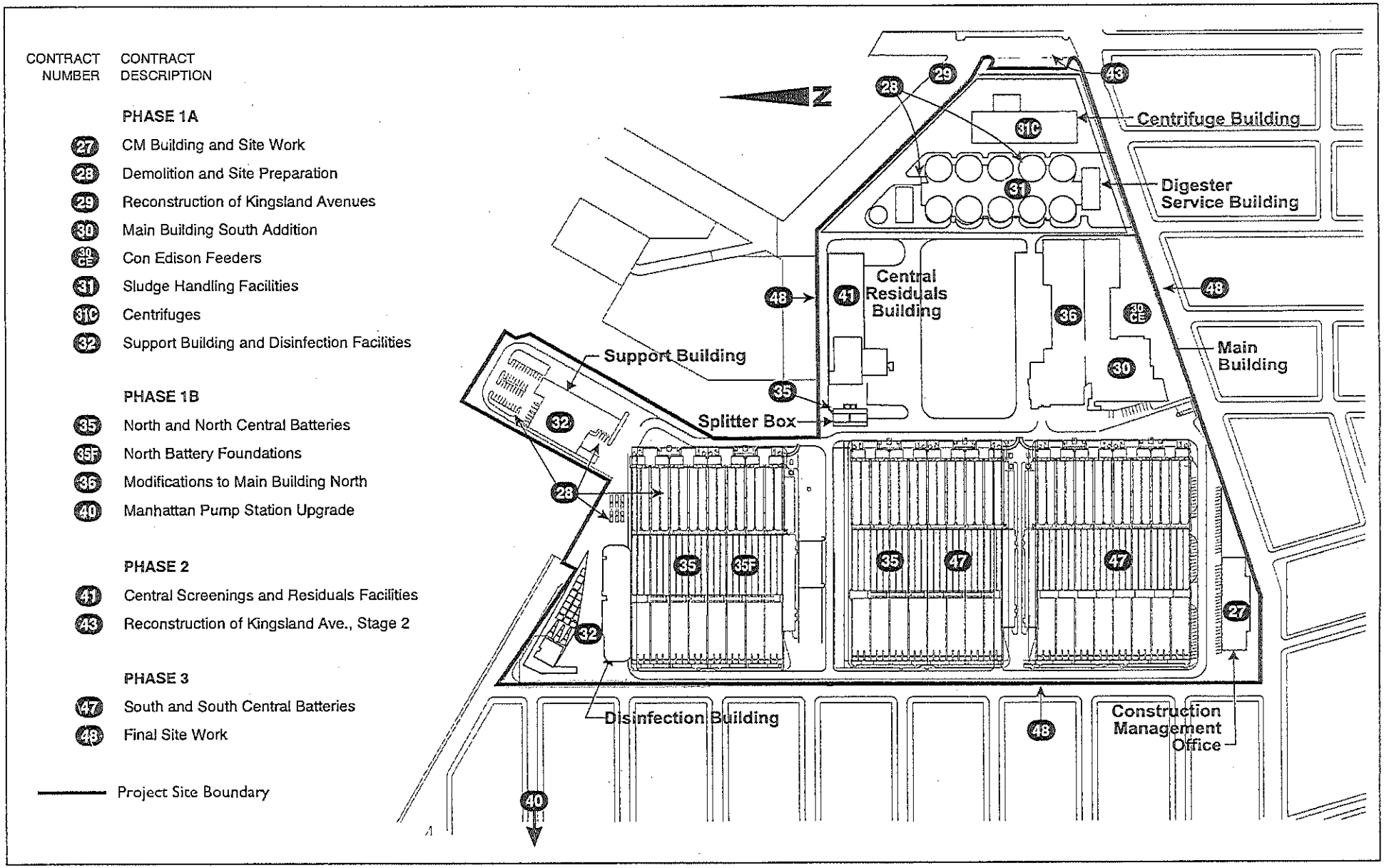
Combined Sewer Overflows (CSO) during wet weather are a known cause of floatables, TSS, turbidity, and pathogen impacts on waterbodies. Under the Track 3 process, 700 mgd would be treated to secondary treatment levels for wet weather events, an improvement over Tracks 1 and 2.

Disinfection

Disinfection within a chlorine contact tank at the plant site would provide, at a minimum, 15 minutes of contact time during wet weather events. Chlorination using sodium hypochlorite would occur after the sedimentation tanks. Currently, the plant does not use chlorine contact tanks, but rather uses the India Street outfall to provide the contact time.

SITE PLAN AND STRUCTURES FOR THE PROPOSED TRACK 3 UPGRADE AT NEWTOWN CREEK WPCP

A technology will be selected prior to completion of construction of the common elements so that design of track-specific processes can be implemented and constructed in the second period



Track 3 Design

Figure S-4

of design. Work needed to complete the attainment of secondary treatment would then be undertaken. Lastly, projects needed to provide a 25-year facility life would be designed and constructed. Table S-2 depicts those elements that are common to the three tracks and those that are specific to Track 3.

Elements Common to the Three Upgrade Tracks

As shown in Table S-2 there are 8 elements common to the three tracks. These elements would be constructed regardless of the secondary treatment track implemented at the Newtown Creek WPCP. Those that have been constructed or are under construction are described above under "The Future without the Proposed Track 3 Upgrade." The other common elements include:

Table S-2
Elements Commonality with Tracks

Contract Number	Description	Common or Track-Specific Element
NC-27[1]	CM Building and Site Work	Common Elements
NC-28[1]	Demolition and Site Preparation	
NC-29[1]	Reconstruction of Kingsland Avenue Phase 1	
NC-30[1]	Main Building South	
NC-30CE	Consolidated Edison Feeders	
NC-31[1]	Sludge Handling Facilities	
NC-32[1]	Support Building and Disinfection Facilities	
NC-43	Reconstruction of Kingsland Avenue Stage 2	
NC-35	North and N. Central Batteries of Aeration/Final Tanks	Specific to Track 3
NC-35F	North Battery Foundations	
NC-36	Modifications to Main Building North[2]	
NC-40	Manhattan Pump Station Modifications[2]	
NC-41	Central Screening and Residuals Facilities	
NC-47	South and S. Central Batteries of Aeration/Final Tanks	
NC-48	Final Site Work[2]	

Notes:
1 Work Completed or Currently Underway
2 Although these elements would be required for all three tracks, their design would differ somewhat among tracks.

- *NC-30CE* – New electrical feeders from the Consolidated Edison substation to the Newtown Creek Plant would be furnished and installed.
- *NC-43 Reconstruction of Kingsland Avenue Stage 2*—Kingsland Avenue would be reconstructed to reflect a final queuing and travel lane configuration. A portion of the site east of the new Sludge Handling Facilities that would be utilized throughout the upgrade program for construction staging would be incorporated into the Kingsland Avenue design and landscaped. Parking spaces would not be provided in this area. The work for Stage 2 would not commence until after secondary treatment is achieved in 2007.

Elements Specific to the Proposed Track 3 Upgrade

The following elements are specific to the proposed Track 3 Upgrade and would only be constructed if Track 3 is selected as the plan for upgrading the Newtown Creek WPCP. These elements would include:

- *NC-35 North and North Central Batteries—Aeration and Sedimentation Tanks (Track 3 Specific)*—Construction of the new North Battery Aeration/Sedimentation Tanks as well as associated facilities required for a complete installation. The associated facilities include a new North Control Building and installation of new process air blowers in a section of the existing Main Building. The north half of the existing Central Battery would also be modified and rehabilitated under this contract to ensure that the completed WPCP has a service life of 25 years. In addition, the aeration tanks will be provided with low profile covers and air withdrawn from the aeration tanks will be odor controlled. The weir section of the Sedimentation Tanks would also be covered and the air withdrawn will be odor controlled.
- *NC-36 Main Building North (Track 3 Specific)*—Under this contract, the existing main Building would be remodeled and some major equipment items replaced. In addition, the raw sewage pump discharge configuration would be modified and the west side of the existing building would be modified and renovated.
- *NC-41 Central Residuals Building (Track 3 Specific)*—Under this contract, a new building would be constructed to centralize residuals handling at the upgraded plant. Screenings containers, truck loading stations and an odor control facility would be provided in the new facility.
- *NC-47 South Central and South Batteries—Aeration and Sedimentation Tanks (Track 3 Specific)*—The south half of the existing Central Battery and the existing South Battery Aeration and Sedimentation Tanks would be rehabilitated and modified to ensure that the completed WPCP has a service life of 25 years. In addition, the aeration tanks would be provided with low profile covers and air withdrawn from the aeration tanks will be odor controlled. The weir section of the Sedimentation Tanks will also be covered and the air withdrawn will be odor controlled.
- *NC-48 Final Site Work (Track 3 Specific)*—A final site work contract, specific to Track 3, would be developed after construction activities are largely complete. The contract would include landscaping work, construction of new on-site roads, parking areas, sidewalks and curbs, lighting and any other treatments considered necessary.

MANHATTAN PUMP STATION

As part of the Track 3 Upgrade, the Manhattan Pump Station would be rehabilitated and modified. The station would be modified to provide enough pressure to send flows to the new Secondary Screening Facility at the Newtown Creek WPCP. To accommodate these changes, the surge tower at the pump station would be raised approximately 25 feet. Currently, due to operational limitations, the normal effective operational capacity of the pump station is 300 mgd, although the rated sewage pump capacity is 500 mgd. Under the upgrade, the pumps would be replaced and the pumping capacity would be 400 mgd. Due to an increase in operating horsepower from 4,500 hp to 9,000 hp, a new electrical facility would be constructed consisting of a new primary substation, secondary substation, and two (2) 5-megawatt emergency

generators (diesel-fueled combustion turbines) to provide emergency power. New diesel fuel storage equipment would be provided for the emergency generators.

The upgrade would require a 4,000-square foot expansion of the existing building to the northeast corner of the site and the addition of a new floor that would extend over the existing building. Current designs based on the addition of one story indicate that there would be a 30-foot increase in the height of the building from 30 feet to 60 feet; and a 25-foot increase in the height of the surge tower parapet from 68 feet to 93 feet. However, the design for the pump station has not been finalized and it is possible that the height of the building would be increased by another story. The additional story would be needed if it is determined that additional redundancy is required for the electrical feeders from the electric utility. In addition, two new stacks for the emergency generators would rise to a height of 139 feet.

Other work includes such items as evaluation of the structural integrity of certain sections in the pump station and remedial action to fix any apparent problem; miscellaneous architectural renovations; new HVAC systems for proper ventilation of all areas and odor control systems for the screening wing, wet well and surge tower; new traveling bridge crane and monorail system for moving heavy equipment; and new employee facilities. Figure S-5 presents the site plan.

PURCHASED POWER

The Newtown Creek WPCP secondary treatment upgrade would rely upon purchased power regardless of the upgrade track implemented. As such, for all tracks, emergency generators (diesel-fueled combustion turbines) are being provided to provide back-up power if utility service becomes unavailable, (e.g., during blackout periods). The engine generators that had been used in the past to provide power on-site have been removed from the facility, since the WPCP is currently and will be purchasing power in the future. The emergency generators would operate periodically for routine maintenance functions to ensure their operability should off-site power service ever be interrupted. Similarly, two emergency generators would provide emergency power to the Manhattan Pump Station.

NYCDEP is considering participating in programs sponsored by New York Power Authority (NYPA) and the Independent Systems Operator (ISO), which aim to reduce peak load demand and prevent the possibility of blackouts or brownouts due to insufficient electric supply within New York City. Under these programs, the emergency generators at the Newtown Creek WPCP may be requested to reduce electrical demand during limited periods of the peak demand season, resulting in a potential additional 90 hours per year of operation per emergency generator. Participation in the NYPA/ISO program is independent of the Track 3 Upgrade. (For more information, see "Air Quality," below).

SLUDGE HANDLING—NEW SLUDGE FORCE MAIN AND EAST RIVER SLUDGE STORAGE TANK

As part of the resolution for the approval of the ULURP process undertaken for land acquisition and usage in 1996, NYCDEP has committed to demolish the East River Sludge Storage Tank. With the demolition of the tank and the expected increase in sludge production due to implementation of the upgraded treatment processes, sludge from the digestion and thickening processes would be stored on-site in storage tanks in the digester complex. Because the existing 18-inch sludge force main from the Newtown Creek Plant to the East River Sludge Loading Dock would not be capable of handling the sludge load, a new force main would need to be constructed.

To date, NYCDEP has studied a sludge force main route from the plant to the East River Sludge Loading Dock. Currently, the City is considering pumping the sludge to alternative locations for eventual transport and disposal, such as directly to NYCDEP's Wards Island WPCP. However, such plans are only in the preliminary phases of study so sufficient design detail to allow a meaningful environmental review is not possible. Future alternatives for the sludge force main route will be subject to environmental review and permitting before they are implemented.

If a new force main to Wards Island WPCP is constructed, the existing force main and barge infrastructure would need to be left in place in case of emergency. Upon completion of a new sludge force main, the existing structures, foundations, piping, electrical and mechanical equipment, and pavement at the East River Sludge Storage Tank property will be demolished and removed. Following demolition, the one-quarter acre site will be capped or graded and seeded.

DIGESTER GAS USAGE

Digester gas would be utilized to meet plant heating demand during the cold months of the year. However, during the coldest months there would not be sufficient digester gas produced to meet demand. At such times, natural gas would be purchased to supplement the WPCP's digester gas production. During warm weather periods of the year (June through September), WPCP heating demands would not require use of all of the digester gas produced. During these warm weather months, the excess digester gas would be burned off.

Four emergency gas burners would be constructed on site. The gas burners would be enclosed and located within the WPCP site in the vicinity of Kingsland Avenue and the northern end of the demapped portion of North Henry Street. On average, one emergency gas burner unit would be required to burn the excess digester gas in the warm weather months. The four burners would be utilized in the event of an emergency situation that causes the boiler system to be inoperable for a period of time (e.g., a ruptured gas pipe). In these instances, the four burners would burn the volume of gas produced at the WPCP until repairs were made.

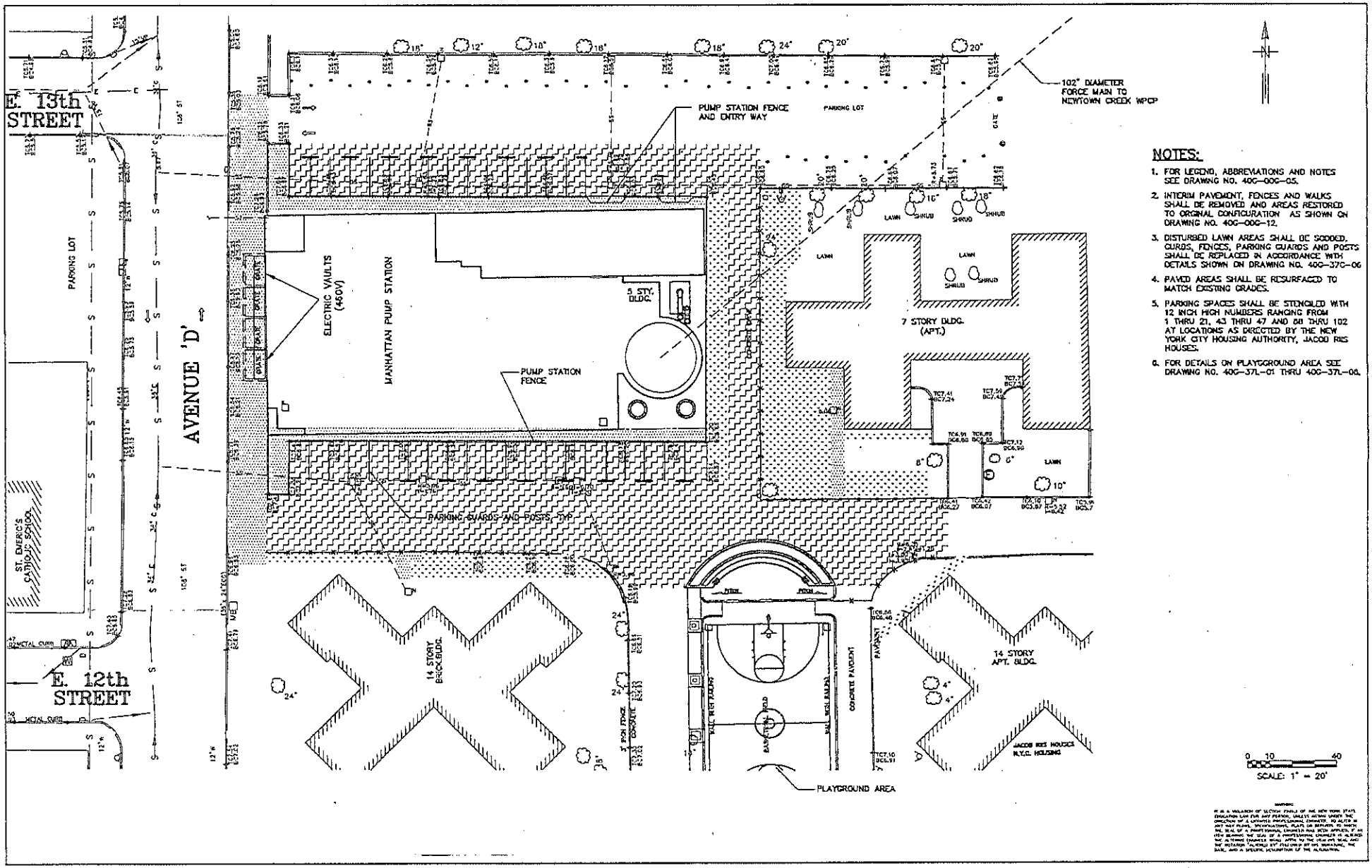
ODOR CONTROL

For the Track 3 Upgrade, odor control equipment would be provided for critical odor-generating sources within the upgraded plant including the sludge handling facilities, central residuals building, wastewater tanks, and the main building screening chamber and wet well. The odor control system in each complex would consist of an activated carbon adsorption system. The system would adsorb hydrogen sulfide (H_2S) in order to meet a 1 ppb H_2S concentration at the nearest sensitive receptor and thereby controlling other inorganic odor causing constituents found in the air stream. Additional odor control has been added to the Track 3 Upgrade which includes covering the final settling tank weirs.

Carbon adsorption would also be used to control odors at the Manhattan Pump Station. Two control systems are proposed; one for the wet well and screening areas and one for the surge tank.

WATERFRONT NATURE WALKWAY

The Waterfront Nature Walkway would be a public walkway adjacent to the Newtown Creek WPCP along the waterfront. With access from Paidge Avenue, the walkway would continue east and north to the Newtown Creek waterfront. At the waterfront, the walkway would extend



Manhattan Pump Station Site Plan

Figure S-5

approximately 200-feet along Newtown Creek and would then run parallel to Whale Creek Canal and the east side of the Support Building for 515 feet before ending. Along the walkway, there would be park bench seating and native plantings in the form of trees, shrubs and tall grasses.

MAINTENANCE AND OPERATIONS

Efficient operation of the upgraded Newtown Creek WPCP depends upon a well-coordinated maintenance program. Regular equipment inspection and servicing reduces problems caused by equipment downtime and conscientious housekeeping helps keep the working environment clean and safe. For the Track 3 Upgrade, maintenance requirements would be consistent with practices currently employed at the WPCP. These maintenance functions fall within three categories:

- Preventive maintenance—routine inspection of equipment, lubrication, and minor adjustments designed to prevent breakdowns, reduce wear, and extend equipment life;
- Corrective maintenance—changing belts and replacing bearings, brushes, and other equipment parts in order to keep equipment in proper working condition; and
- Emergency maintenance—performed when equipment is out-of-service.

By the terms of the 2002 Modified Judgment, an approvable Operation and Maintenance Manual is to be available by June 30, 2006. In addition, the O&M Manual is to be submitted to the State for review and approval. Requirements for the Facility Upgrade Preventive Maintenance and Corrective Maintenance (PM/CM) Plan are also discussed in the 2002 Modified Judgment. This plan, also to be submitted to the State for review and approval, is to identify all preventive maintenance needed at the plant in accordance with the O&M system approved by the State.

CONSTRUCTION

The long-term upgrade of the Newtown Creek WPCP involves substantial construction activities for a period of nearly 14 years; 4 of which have been completed and 10 which remain. During the construction period, the WPCP must remain in operation and meet interim discharge limits as stipulated by the Modified Judgment. These interim limits require that the existing tankage not be taken out of service until new facilities are built and that chemical addition be implemented to enhance pollutant removal levels.

The 2002 Modified Judgment establishes deadlines for compliance with SPDES permit limits and further stipulates the following milestones for construction of the upgraded facilities:

- March 1, 1996: Start Preliminary Design
- March 1, 1997: Start Phase 1 Final Design
- December 1, 1997: Submit Initial Phase 1 Design for NYSDEC Approval
- September 1, 1998: Commence Construction of Initial Phase 1 Projects
- March 1, 1999: Submit Balance of Phase 1 Design for NYSDEC Approval
- January 2, 2002: Begin Final Design of Remaining Phases
- December 31, 2007: Attachment of Secondary Treatment
- July 4, 2013: Completion of all construction for the Track 3 Facility Plan

The Track 3 Upgrade would require implementation of 15 specific construction contracts at the Newtown Creek WPCP, potential sludge force main and East River Sludge Loading Dock sites, and the Manhattan Pump Station. The construction schedule for contracts to be undertaken at the

Newtown Creek WPCP is presented in Figure S-6. Construction at the Manhattan Pump Station would occur between January 2005 and October 2009. The contract durations are approximate durations developed for planning purposes. As described above, elements common to Tracks 1, 2, and 3 are being constructed while additional planning is occurring, thus ensuring compliance with implementation milestones in the Modified Judgment.

ENVIRONMENTAL REVIEW

This SEIS has been prepared to assist decision-makers by providing a full disclosure of the environmental consequences of the proposed action. The SEIS conforms with the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617) and the City Environmental Quality Review (CEQR) Executive Order 91 of 1977 (as amended). In addition, because the project would be funded through the State Revolving Fund (SRF) program, it is subject to the State Environmental Review Procedure (SERP), which is satisfied through the completion of this SEIS.

As the first step in the environmental review process, a draft scoping document was distributed on November 14, 2002. Public Scoping meetings were scheduled at the WPCP on December 17, 2002 and near the Manhattan Pump Station on December 18, 2002. The comment period remained open until December 31, 2002. A Final Scope of Work was distributed on January 31, 2003. The Draft SEIS was then prepared according to the Final Scope of Work. Public hearings on the DSEIS were scheduled at the WPCP on April 9, 2003 and near the Manhattan Pump Station on April 10, 2003. The comment period remained open until May 1, 2003. After the close of the comment period, this Final SEIS, which includes written responses to public comments made on the DSEIS, was prepared.

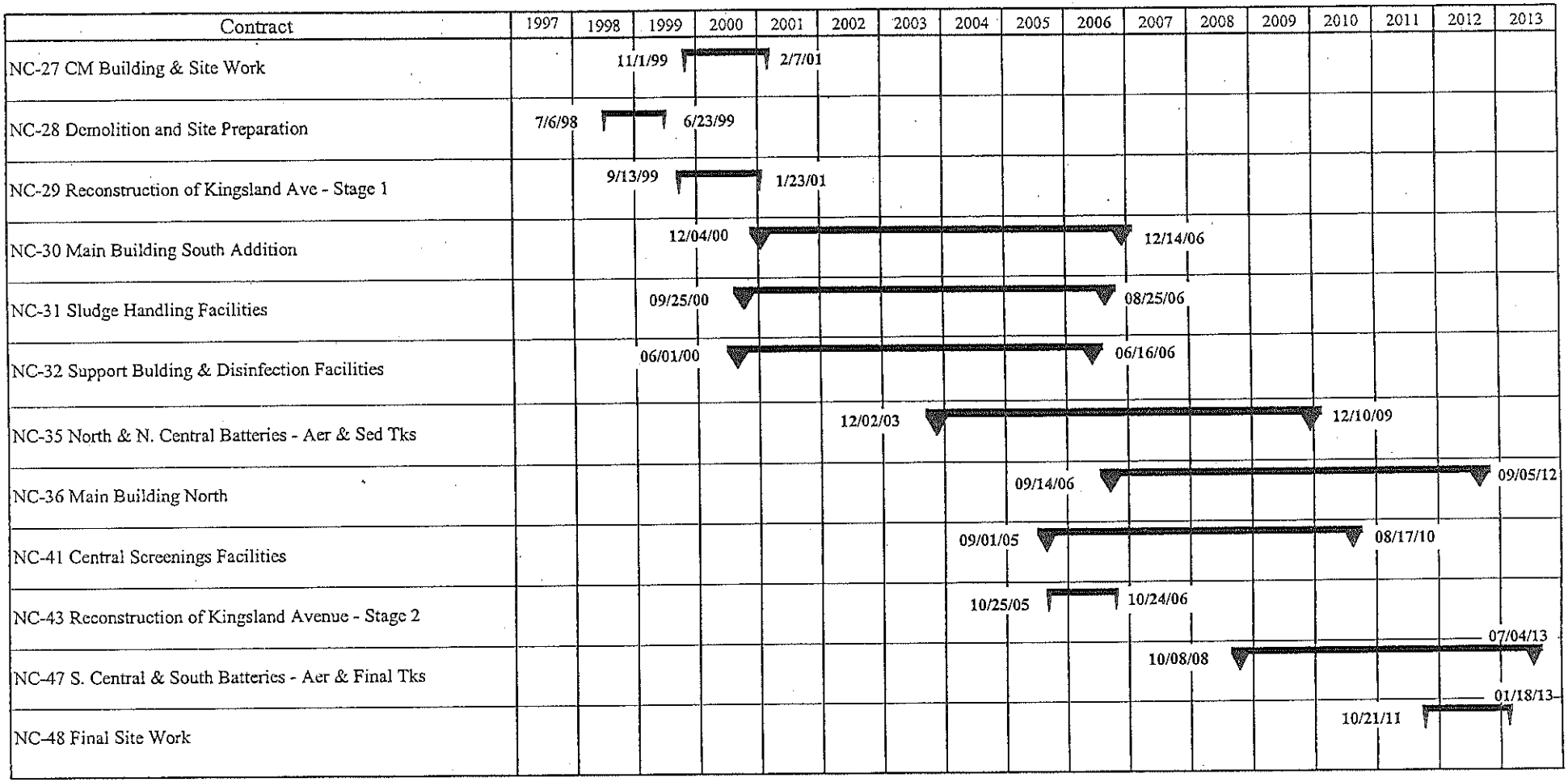
B. PROBABLE IMPACTS OF THE PROPOSED ACTION

LAND USE, COMMUNITY CHARACTER, AND ZONING

GREENPOINT STUDY AREA

Upgrading the WPCP on the project site would increase the presence of the wastewater treatment facility within the surrounding area. However, the WPCP, an existing heavy industrial use, is consistent with the surrounding land use patterns. The limited number of new employees to the site would not cause any significant adverse impacts on open space. The addition of the Nature Walkway would have a beneficial effect on open space conditions in the study area by providing publicly accessible open space in an area that currently has very limited open space resources. Traffic increases would be minimal and insignificant. Moreover, new odor control systems proposed as part of the upgrade would reduce off-site impacts of the WPCP. Therefore, no potential significant adverse impacts on land use, community character, or open space are expected due to the proposed project.

The proposed project would be consistent with zoning regulations and with the M3-1 zoning for the site and area. The provision of open space along Newtown Creek would be consistent with the City's waterfront plan and recommendations outlined in the *Greenpoint 197-a Plan.* Therefore, the proposed project is consistent with the current zoning and public policy and would not significantly affect zoning conditions within the Greenpoint study area.



Construction Schedule

Figure S-6

MANHATTAN PUMP STATION STUDY AREA

The proposed improvements at the Manhattan Pump Station, including enlargement of the building, would not change land use on the pump station site, nor would it require a zoning change. However, it is possible that a Board of Standards and Appeals action to extend the facility's Variance and Special Permit would be required. If a Fair Share analysis is required for the Manhattan Pump Station, it will be prepared after the completion of the FSEIS and/or as part of the potential City Board of Standards and Appeals action. The enlargement of the pump station would occur adjacent to the much larger Consolidated Edison industrial buildings. Therefore, no potential impacts on land use, community character, or open spaces would occur.

SOCIOECONOMIC CONDITIONS

The Track 3 Upgrade would have an estimated total cost of approximately $2.27 billion (2002 dollars). There are two types of financing that would be available to fund the construction: bonds issued by the City's Municipal Water Finance Authority (Authority); and bonds issued through the State Revolving Fund (SRF).

Financing the proposed project through Authority bonds would result in a repayment (or amortization) period of 30 years at an interest rate of approximately 6 percent. The average monthly payment per occupied household unit required to amortize the bonds (or portions of bonds would begin at a low of $0.47 in 2003, and increase to a high of $3.45 in 2013, and remain at that level for 20 years when the first bond issues are fully repaid, and decline until 2043 when the final bond issue would be fully repaid.

Bonds issued under SRF also have a 30-year repayment period. Because interest rates for SRF financing are likely to be one-third to one-half less than Municipal Water Authority bonds, annual debt service will be lower. The effect on New York City residential users would range from about $0.40 per month in 2003, to about $2.94 monthly in 2013. The additional monthly amortization cost would remain at that level until 2032, when the first bond issues are fully repaid, and decline until 2043 when the final bond issue would be fully repaid.

Because of the minimal net increase in the median monthly cost of renting or owning a residential unit in New York City directly resulting from the proposed project, it is unlikely that renters or owners of residential units would relocate from the City as a result of the proposed project. Therefore, the proposed project is not expected to result in potential significant adverse socioeconomic impacts.

HISTORIC RESOURCES

ARCHAEOLOGICAL RESOURCES

At the WPCP site, the potential for prehistoric archaeological resources is very limited based on the available data. If such resources exist, they are deeply buried and below the water table, making retrieval of such resources, should they exist, not feasible. The Manhattan Pump Station is also not sensitive for archaeological resources.

The New York City Landmarks Preservation Commission concurs that the Newtown Creek WPCP site and the Manhattan Pump Station site have no archaeological sensitivity and historic resources would not be significantly affected (letters dated September 16, 1996 and November 7, 2002).

ARCHITECTURAL RESOURCES

The Track 3 Upgrade of the WPCP would not result in potential significant adverse impacts on historic resources in the Greenpoint study area because there are no designated or potential historic resources on the WPCP site or in the vicinity of the plant. Further, the WPCP would not be visible from the nearest historic resource, the Greenpoint Historic District.

There are no designated historic resources within the vicinity of the Manhattan Pump Station. However, the Jacob Riis Houses is a potential historic resource that transformed the built environment of the Lower East Side of Manhattan and played a significant role in the evolution of urban planning and the development of modern urban renewal practices in the city. The Jacob Riis complex has not been reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) for S/NR-eligibility. It is not expected that the modification of the Manhattan Pump Station would result in any long-term adverse effects on the historic context of the Jacob Riis Houses, since the Jacob Riis Houses complex and Manhattan Pump Station have coexisted for approximately 37 years and modification of the Manhattan Pump Station would occur within the existing site boundaries.

To avoid any possible accidental damage from ground-borne construction period vibration or accidental damage by heavy machinery at the Manhattan Pump Station site, construction protection measures to include the implementation of machinery operating protocols would be developed and implemented prior to construction. Therefore, no potential significant adverse impacts on historic resources are expected.

VISUAL RESOURCES

GREENPOINT STUDY AREA

Upgrading the Newtown Creek WPCP would not change the plant's basic visual character, that of a large, relatively low industrial complex set within an industrial area. However, the plant would be larger than in the past, and certain existing visual features would be altered.

The structures on the site in the future with the proposed project (see Table S-3) would be considerably taller than those of the original WPCP and of the former Exxon, Williamsburg Steel, and Mobil sites. The largest structures proposed on the site for Track 3 are the egg digesters (125 feet). These would be sited at the location of the previous Mobil oil tanks. The digesters would be clearly seen from Paidge Avenue and from the J.J. Byrne Memorial Bridge. While the digesters would be taller than the Mobil oil tanks, views toward the site would continue to show large tank-like structures in an industrial setting.

Three of the six odor control stacks would also be 125 feet tall (at the North Control Building, the South Control Building, and the Residual Building), one stack would be 52 feet in height, and two stacks would be 20 feet. In addition, four stacks, 74 feet tall, would be provided for the emergency generators in the North Addition of the Main Building, and five 75-foot stacks would be provided in the South Addition for the boilers. While these stacks would be tall additions to the project site, the site is surrounded by an industrial neighborhood, and the stacks would be consistent with the neighborhood's visual character.

The publicly accessible open space to be provided along the Newtown Creek and Whale Creek Canal waterfronts as part of the proposed project would provide new waterfront views that to-date have not been available to residents of the area. Landscaping would be provided throughout the site and along the site perimeter.

Table S-3
Structure Heights

Structure	Height Above Grade (feet)
Main Building	
South Wing	74
North Wing	54.5
Electrical Substation	36.5
Visitors' Center	54
Wastewater Unit Structures	
Aeration Tanks	5
Sedimentation Tanks	2.5
Control Buildings	57.5
Sludge Facilities	
Grit Handling Building	51
Centrifuge Building	76
Digester Building	125
Service Building	56
Other Facilities	
Disinfection Building	53
Contact Tanks	4.5
Residuals Building	56.5
Support Building	106.6
Stacks	
Six Odor Control Stacks	125 (3 stacks), 52 (1 stack), 20 (2 stacks)
Four Emergency Generator Stacks	74
Five Boiler Stacks	75

Therefore, there would be no significant adverse visual resource impacts at or near the Newtown Creek WPCP due to the proposed project.

MANHATTAN PUMP STATION STUDY AREA

In the future with the proposed project, the Manhattan Pump Station would be rehabilitated and modified. As currently designed, the upgrade would require a 4,000-square-foot expansion of the existing building to the northeast corner of the site and an increase in the height of the pump station (see "Project Description" above).

The upgraded Manhattan Pump Station would be visible from the west and south and from the apartment buildings adjacent to the site. However, the visual impact of these changes would not be significant. Currently, the building's glazed white and blue brick facade does not correspond to the other cladding materials in the surrounding area. Recladding the building with red brick would make it compatible with neighboring buildings, resulting in a beneficial visual effect. The pump station is seen from all views in relation to the Consolidated Edison power plant complex, which contains buildings that are far larger and stacks that are far taller than the ultimate height

of the building, surge tank structure, and stacks. Therefore, the modifications proposed for the Manhattan Pump Station would not be expected to result in a potential significant adverse impact on visual character.

WATERFRONT REVITALIZATION PROGRAM

The Newtown Creek WPCP and the Manhattan Pump Station are located in the coastal zone and therefore are subject to the New York City Waterfront Revitalization Program (WRP). The Track 3 Upgrade would be consistent with all 10 policies of the WRP. It would help toward improving the quality of coastal waters, would not displace or impact water-dependent uses, and would not result in negative impacts to the coastline or natural features of the coasts. In addition, new publicly accessible open space would be created along the waterfront at the Newtown Creek WPCP site.

TRAFFIC AND TRANSPORTATION

A substantial portion of the plant would still be under construction in 2007, the year the plant would achieve secondary treatment. The analysis for 2007 incorporates both project-generated and construction-related traffic. This analysis discusses two potential scenarios—a base scenario, in which it is assumed that traffic arrives and departs from near the plant site, and the Kingsland Parking scenario, in which designated parking facilities for construction workers are provided on Kingsland Avenue. In addition, a qualitative assessment of traffic conditions in the year 2013 (post construction) is provided.

2007 ANALYSIS YEAR

In 2007, all 15 additional permanent employees would arrive at the plant between 7:30 and 8:30 AM and depart between 4 and 5 PM. Construction workers vehicles would typically arrive at the site between 6:30 and 7:30 AM and depart between 3:00 and 4:00 PM. There would be a total of 90 construction-related vehicles (84 worker vehicles and 6 trucks) generated for AM and midday peak hours in 2007. To determine the potential for significant adverse traffic impacts, the AM and midday peak periods were selected for detailed analysis.

Significant adverse traffic impacts attributed to the combined effects of project and construction generated vehicle trips were identified for the following locations under both the Base and Kingsland Parking scenarios:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

Potential Second Shift Construction Periods

As more fully discussed below under "Construction," a potential second shift of construction could occur during the weekday hours of 3 PM and 11:30 PM and during Saturday between the hours of 7 AM and 6 PM. In 2007, an average of approximately 80 construction workers (40 vehicles) was estimated for the weekday second shift. On Saturday, the number of workers and vehicles could be as high as those projected for the weekday first shift.

Potential significant adverse impacts on traffic during the midday peak hour beyond those already identified are unlikely because construction worker shifts are likely to be staggered and

because the net increment generated by the second shift is smaller than under the first shift. No significant adverse impacts on traffic are expected during the late night departure hour because background traffic levels are significantly lower than during the daytime peak analysis hours and because the net increment generated by the second shift is smaller than under the first shift. Similarly, on Saturdays, background traffic levels during the anticipated arrival and departure hours are significantly lower than during weekday peak hours. Therefore, no potential significant traffic impacts are anticipated from potential Saturday construction work.

Parking, Public Transportation, and Pedestrians

A parking shortfall would likely occur in the industrial Greenpoint area near the plant if the construction worker vehicles were added to existing background demand. Although the projected parking shortfall would not be permanent, considerable disruptions to the nearby community could occur, since the site's construction activities would take place over several years. To address this issue, NYCDEP has amended its Contract Specifications to require that the personal vehicles of the Contractor's employees and its subcontractor's employees are to be parked in designated parking areas the Contractor is required to secure. These parking areas are to be located off-site and at off-street locations. For future contracts, beginning with Contract NC-35, the contract documents will also include an allowance for off-site parking lots. The lot(s), for employee parking only (no staging or equipment storage permitted), are to be paved, fenced, lighted, and have a security guard present. In the event that a remote site is used, the contractor(s) are to provide transportation to and from the Newtown Creek WPCP site. To facilitate the contractor(s) securing of the parking facilities, the allowance would be used to reimburse the contractor(s) for expenses related to the Contractor Parking Facilities. If construction workers do not utilize these areas, there would be a potential significant parking shortfall impact.

With no significant increases in pedestrian levels anticipated by 2007, the ability of area crosswalks to process pedestrian flow in 2007 is expected to remain at favorable levels. The anticipated increase in vehicular traffic from the plant's construction activities would not have a notable impact on these crosswalks, since pedestrian crossing is largely a function of crosswalk width and allowable walk time (red traffic signal), unless both pedestrian and vehicular traffic levels approach saturated levels, at which point potential conflicts could result from natural reactions to congested conditions. Although none of the study area intersections has a high pedestrian accident history per the *CEQR Technical Manual*, a review of NYSDOT accident data shows that there was an average of approximately 83 accidents per year over the last three years or fewer than 4 accidents per location per year. Of the 248 total accidents, only seven cases (2.8 percent) involved pedestrians). The others were either "non-reportable" (131 cases), which generally have minimal property damage and no personal injuries, and accidents involving only vehicles and inanimate objects (110 cases), which may have higher property damage and/or some level of personal injuries. Overall, none of the study locations along Greenpoint Avenue was identified as a high accident location in accordance with CEQR criteria.

2013 ANALYSIS YEAR

In 2013, plant construction would be completed and 15 additional plant employees and 7 daily truck delivery trips would be generated. Since the project increment would be below the 50-vehicle peak hour CEQR threshold, no detailed analyses of traffic conditions are warranted, and no potential significant adverse impacts would occur.

The design of the Kingsland Avenue configuration has not been completed. However, a portion of the site east of the Solids Handling Facilities, used throughout the upgrade program for construction staging, will be incorporated into Kingsland Avenue. Parking spaces will not be provided in this area. NYCDEP will continue to work with NCMC to finalize the design. With these changes, no significant adverse impacts are expected on traffic or pedestrian conditions at the Greenpoint and Kingsland Avenue intersection.

AIR QUALITY

CO and PM_{10} concentrations due to the proposed Track 3 Upgrade project-generated traffic would not result in any violations of NAAQS or any adverse air quality impacts. In addition, CO impacts would not exceed CEQR *de minimis* criteria.

Emissions and dispersion of NO_2, CO, PM_{10}, and SO_2 from stationary sources at both the Newtown Creek WPCP and the Manhattan Pump Station would not result in violations of NAAQS. In addition, the combined impact of the Track 3 Upgrade, in combination with other stationary sources in the area, would not result in an exceedance of NAAQS.

No substantial cumulative impacts from mobile and stationary sources of $PM_{2.5}$ are expected from operation of Track 3 (either near the WPCP or Manhattan Pump Station). Based on comparisons to the $PM_{2.5}$ interim guidance criteria, no potential significant adverse impacts from incremental $PM_{2.5}$ concentrations were predicted from Track 3 stationary source emissions. Maximum predicted localized 24-hour and annual average incremental concentrations near the WPCP and Manhattan Pump Station were less than the applicable interim guidance criteria. The maximum 24-hour impacts, when added to available NYSDEC monitoring data, would also be less than the applicable $PM_{2.5}$ ambient air quality standard.

At the Newtown Creek WPCP, during the period when the NYPA program would be in effect (June 1 to September 30), up to three generators would operate simultaneously for a maximum of six hours per day during the hours of 11 AM to 7 PM, as well as one blackstart engine. Since the NYPA program occurs during the summer months when plant heating demand is lowest, only one boiler and three gas burners would operate. During the June through September period when NYPA is not in effect, or if NYCDEP decides not to participate in the NYPA program, the operation would be limited to one boiler, three gas burners, and for testing purposes, one emergency generator (up to four hours per day) and one blackstart engine. For the months when the NYPA program would not be in effect (January 1 to May 30, and October 1 to December 31), operation would be limited to seven boilers and three gas burners and, for testing purposes, one emergency generator and one blasckstart engine. NYCDEP will apply to modify its Title V operating permit consistent with these operational limits.

Overall, the Track 3 Upgrade would not result in any predicted potential significant adverse air quality impacts.

VOLATILE ORGANIC COMPOUNDS

Conservative estimates of the impacts of individual VOCs and other non-criteria pollutants from the process and combustion sources under the proposed Track 3 Upgrade at both the Newtown Creek WPCP and the Manhattan Pump Station indicated that all Annual Guideline Concentrations (AGCs) were met with the exception of the annual average impact for chloroform at the plant. In the case of chloroform at the plant, the maximum predicted annual average impact was approximately 17 percent above the AGC on Paidge Avenue at the

northwest edge of the plant. No residences or occupied places are within the small area where the exceedance was predicted. The main contributors to this maximum impact are the emissions from the chlorine contact tank and from the 125-foot North-Central Odor Control stack. This impact was conservatively modeled in that no reductions in chloroform emissions were taken due to the carbon adsorbers in the odor control system. However, it is expected that some chloroform and other VOCs will be adsorbed on the carbon; thereby reducing the levels emitted through the odor control stacks. In addition, all chloroform emissions from the chlorine contact tank were conservatively assumed to be emitted from the open portions of the tank.

It should be noted that AGCs and Short-Term Guideline Concentrations (SGCs) are guideline concentrations rather than standards because they have not undergone the rigorous regulatory scrutiny that would be afforded a proposed Federal or State ambient air quality standard. Annual guideline concentrations, in particular, are developed to protect the public health from effects associated with long-term, continuous exposure to a contaminant. Since the chloroform impacts were conservatively determined (by assuming no control due to the carbon adsorbers of the odor control systems and assuming that all emissions from the chlorine contact tanks were coming from the open portion of the tank), there will be no residences or occupied locations which might have such long term, continuous exposure within the small area on Paidge Avenue where the chloroform impacts potentially exceed the AGC under Track 3, and since the maximum predicted annual chloroform impact is well below 10 (about 1.17) times the AGC, no significant adverse public health impact is predicted due to this exceedance.

For acrolein, a review of the database of existing boiler emission factors indicated that all values were obtained using invalid sampling methods and techniques, therefore, acrolein emission factors for the boilers at Newtown Creek could not be reliably determined. At the present time, USEPA and CARB are both working to develop appropriate sampling methods to measure acrolein from stationary sources at the low levels anticipated for the boilers under Track 3. Once a sampling method that can accurately measure for acrolein (especially a method that can measure acrolein down to the low ppb levels potentially found in boiler exhaust) is developed and approved by the regulatory agencies, then boiler testing can be performed, and if required based on these tests results, an appropriate subsequent course of action be identified. It is expected that a methodology for measuring acrolein at such low concentrations may be available from USEPA or CARB within the next couple of years. The Track 3 boilers will not be operational until 2006, and therefore, even if a valid test method for such low concentrations of acrolein were available then, no boiler stack testing of acrolein could even occur. If, by the time the new boilers are operational, a recommended methodology is not available from either USEPA or CARB, NYCDEP will undertake its own site specific study to estimate acrolein emissions from the boilers. NYCDEP will continue to keep the community apprised of the latest advances in stack testing of acrolein.

ODORS

At the Newtown Creek WPCP under Track 3, extensive odor- control is proposed, including the covering of odorous wastewater treatment processes, the capture and control of the odorous emissions from these processes by dual bed carbon adsorption systems, and the use of tall stacks to disperse odor-causing emissions. Carbon adsorption odor-control systems would also be installed at the Manhattan Pump Station. The results of the H_2S modeling for the upgraded plant and pump station show that the maximum 1-hour off-site impact is well below the 10-ppb H_2S New York State standard and below the CEQR significant odor indicator threshold of 1 ppb H_2S at the nearest sensitive receptors. Therefore no significant odor impacts are anticipated. Post-

construction monitoring will be performed to confirm that the odor emissions from the plant have been controlled.

NOISE

NEWTOWN CREEK WPCP

Stationary Noise Sources

The upgraded Newtown Creek WPCP under Track 3 would utilize noise control measures, such as gasketed doors and double-glazed windows. In addition, inlets and outlets to space ventilation units and blowers would utilize 90° bends, dampeners, sound adsorption lining, acoustical louvers, and/or silencers, where applicable. The facility is being designed so that it would not result in any significant noise impacts per CEQR significance criteria and so that the maximum octave band noise levels at the property line would be below the levels specified in the performance standards contained in the New York City Zoning Resolution for an M3 manufacturing district. Silencers will be included on the four emergency generators and the three blackstart engines. Furthermore, all openings on buildings within the plant, except for the sides of the buildings facing the interior of the plant, will be equipped with acoustical louvers.

At the Java Street receptor, the closest sensitive receptor to the project's noise sources, the WPCP, when upgraded in 2013, would increase noise levels 0.5 dBA compared to existing ambient noise levels. Changes of this magnitude would be imperceptible and insignificant.

In both the summer (NYPA/ISO) and winter scenarios, the sound pressure levels at five "worst-case" receptor sites located on the property lines of the project site would not exceed the maximum permitted decibel limits under the performance standards contained in the New York City Zoning Resolution.

Therefore, the proposed Track 3 Upgrade at the Newtown Creek WPCP would not result in any potential significant noise impacts from stationary sources.

Mobile Noise Sources

Under the Track 3 Upgrade, there would be no change in noise levels at mobile source receptors due to the minimal number of vehicles and trucks generated by the WPCP compared with No Action condition noise levels in 2013.

MANHATTAN PUMP STATION

Stationary Noise Sources

The upgraded Manhattan Pump Station under Track 3 would utilize noise control measures, such as gasketed doors and double-glazed windows. In addition, inlets and outlets to space ventilation units and blowers would utilize 90° bends, dampeners, sound adsorption lining, acoustical louvers, and/or silencers, where applicable. The facility is being designed so that the proposed facility would not result in any significant noise impacts per CEQR significant criteria and so that the maximum octave band noise levels at the property line would be below the levels specified in the performance standards contained in the New York City Zoning Resolution for an M1 manufacturing district adjoining a residential district. Silencers will be included on the emergency generators and blackstart engines. Acoustical silencers will also be utilized on rooftop equipment such as exhaust fans, drycoolers, odor control fans, surge tower fans, and the

screening room heating and ventilation units. Furthermore, all openings on the pump station building, except for the side of the building facing the Consolidated Edison facility, will be equipped with acoustical louvers.

With this equipment in place, the maximum noise level increase for Manhattan Pump Station under the Track 3 Upgrade would be 0.1 dBA compared with existing ambient noise levels. Increases of this magnitude would be imperceptible and would produce no potential significant impacts.

The sound pressure levels at all three receptor sites would not exceed the maximum permitted decibel limits under the Performance Standards contained in the New York City Zoning Resolution for M1 zoning districts adjoining residential districts.

Therefore, the proposed Track 3 Upgrade at the Manhattan Pump Station would not result in any potential significant noise impacts from stationary sources.

Mobile Noise Sources

A mobile source analysis was not conducted for the Manhattan Pump Station because there would be no significant changes in the levels of traffic generated by the upgraded facility.

INFRASTRUCTURE AND SOLID WASTE

At the WPCP, an additional 15 employees would use 3,675 gpd of water and would generate a similar amount of wastewater. The plant operations would continue to use and generate approximately 350,000 gpd. Wastewater would be treated on-site. No potential significant adverse impacts on water supply or on wastewater treatment are expected.

Under the proposed action, the amount of solid waste generated by the upgraded WPCP is expected to increase; however the increases and total volumes in employee solid waste and process residual waste generation would be insignificant and would not adversely affect the City's solid waste management program.

While the amount of sludge produced by the upgraded plant would increase, the proposed project is not expected to have a potentially significant adverse impact on the City's Sludge Management Program, including the handling, transport, and disposal of sludge materials.

ENERGY

The Track 3 Upgrade would result in increased energy usage at the WPCP and Manhattan Pump Station sites. The electrical demand would rely upon purchased power from Consolidated Edison or another utility and would require a new electrical substation at the Newtown Creek WPCP and a new primary substation and secondary substation at the Manhattan Pump Station. Emergency generators (diesel-fueled combustion turbines) would be installed at both sites to provide back-up power if utility service becomes unavailable (blackout periods).

WPCP heat requirements would be met by low-pressure steam from nine new dual-fuel boilers. The boilers would use digester gas, supplemented by natural gas, as fuel. Typically, digester gas would be utilized to meet plant heating demand. However, during the coldest months there would not be sufficient digester gas produced to meet demand. At such times, natural gas would be purchased to supplement the WPCP's digester gas production. The Manhattan Pump Station's heat requirements would be met by the Consolidated Edison steam heating supply system.

The Track 3 Upgrade would not require any significant change in Consolidated Edison's regional distribution system or on the region's power supplies. The required amount of supplemental natural gas to fuel the boilers is minute compared with total use in the City, and the existing distribution system would be able to supply the WPCP without difficulty. In conclusion, no potential significant adverse impacts from the energy demands for the proposed upgrade are expected.

HAZARDOUS MATERIALS

SOIL AND GROUNDWATER

Land use histories and available environmental data and testing conducted for the project indicate that the project sites are contaminated due to organics and heavy metals in soil and groundwater, subsurface petroleum, and site structures containing asbestos and lead paint. Therefore, construction and/or excavation at the WPCP and Manhattan Pump Station would result in potential significant hazardous materials impacts

Subsurface investigations have occurred at both of these sites and remediation has been implemented for areas of the WPCP site that are currently under construction or have completed construction for elements common to Tracks 1, 2, and 3. Subsurface investigations and remediation measures for areas remaining to be constructed at the WPCP site and at the Manhattan Pump Station are presented in "Mitigation" below.

CHEMICAL STORAGE

A number of chemicals would be used for operation of the plant under Track 3, including lime, ferric chloride, polymer, sodium hypochlorite, and sodium hydroxide. In addition, petroleum fuels would be stored onsite. These chemicals would be stored and transported in accordance with all applicable local, state and federal regulations, and appropriate secondary containment measures would be provided.

WATER QUALITY

With the proposed upgrade, the plant would achieve full secondary wastewater treatment levels of 85 percent removal of BOD and TSS. With the proposed project, the plant would continue to be designed for an annual average flow of 310 mgd. Full secondary treatment would be provided for up to 700 mgd of wet weather flow, thus reducing impacts on the receiving waters during wet weather events. Dry weather flows would be discharged to the East River via the India Street outfall under most tidal conditions. Wet weather flows would continue to be split between the India Street outfall and the Whale Creek Canal outfall. Residual chlorine levels would be reduced below current conditions due to added detention time in the chlorine contact tanks.

All stormwater runoff from the plant site would be collected and discharged to the head of the plant for treatment. Similarly, runoff from the Manhattan Pump Station site would be collected and discharged to the head of the pump station, with ultimate treatment at the Newtown Creek WPCP.

As a result of the proposed upgrade, some water quality benefits to the East River would be realized, including:

- Limited improvement in DO concentrations;
- Reductions in concentrations of suspended and settleable solids; and

- Reductions in total coliform concentrations during wet weather events.

NATURAL RESOURCES

AQUATIC RESOURCES

The limited improvements in DO concentrations in the East River from the Track 3 Upgrade could result in some marginal benefit for fish propagation and survival. The reduction in suspended and settleable could have some resulting beneficial impact for habitat use in the water column and benthic region. The reduction in coliform discharges to the East River and Whale Creek Canal during wet weather events could also result in marginal improvements to aquatic resources.

WETLANDS, FLOODPLAINS, AND TERRESTRIAL RESOURCES

As part of the elements common to Tracks 1, 2, and 3, areas along Newtown Creek and Whale Creek Canal have been substantially bulkheaded. Prior to construction, most of Newtown Creek and Whale Creek Canal adjacent to the facility had been bulkheaded or had a rock riprap edge and no vegetated wetlands existed along its banks. Since no vegetated wetlands exist and the habitat is degraded, no potential significant impacts were expected on wetlands.

All facility structures on project sites would be built to withstand a 100-year flood. Therefore, there is not expected to be a potential for significant adverse impacts from flooding.

The Newtown Creek WPCP site consists of minimal terrestrial resources. Many of the trees and landscaping at the original WPCP site either have already been or would be removed during construction. Landscaping would be provided for the WPCP site under the Track 3 Upgrade. However, the replacement trees would not be the mature, full canopy trees once at the site. A landscaping plan would be developed based on NYCDEP-approved protocols and specifications. Plant life to be used would be representative of native flora, reflecting both native and local diversity.

At the Manhattan Pump Station, five trees, including two trees in planters, in the landscaped and playground area adjacent to the pump station site and some lawn area associated with the Jacob Riis apartments would be removed during construction. These trees and lawn areas would be replaced and a new playground area would be built post-construction as part of the project. The trees would be replaced with pin oaks in accordance with specifications of the New York City Housing Authority that owns the site.

No potential significant adverse impacts on terrestrial resources would occur with the Track 3 Upgrade.

CONSTRUCTION

Construction activities and schedules are described above under "Project Description." A discussion of construction-period impacts follows. At the Newtown Creek WPCP site, 2004 is the peak construction year for purposes of the analysis. During 2004, the projected period of greatest worker activity, an average of up to 485 workers could be on-site. This number would steadily decrease as the project nears completion in 2013, although several smaller peaks of activities could occur in later phases of the construction process. While 2004 would be the peak year for construction activities, potential significant impacts identified in the following sections for that year could occur during other construction periods to a lesser extent.

Construction at the plant site would typically occur between the hours of 7 AM and 3 PM. However, potential second work shifts during the week and a Saturday work shift would occur during certain construction periods at the WPCP through the year 2007, to meet the modified judgment milestone date for secondary treatment. Second work shifts during weekdays could extend to 11:30 PM. A Saturday shift could occur between the hours of 7 AM and 6 PM. In 2004, an average of approximately 200 construction workers (99 vehicles) was estimated for the weekday second shift. On Saturday, the number of workers and vehicles could be as high as those projected for the weekday first shift.

Activities occurring at the Manhattan Pump Station would take place between September 2004 and March 2009, a period of 54 months, with the peak period occurring in July 2006. During this peak period, a peak of 29 workers per day would be on-site. Fewer than 10 worker vehicles would be required, and truck traffic would be approximately 5 round trip truck trips per day. No second shift construction or weekend construction is expected at the Manhattan Pump Station site.

LAND USE, COMMUNITY AND VISUAL CHARACTER, ZONING, AND OPEN SPACE

The Track 3 Upgrade would involve substantial construction on the Newtown Creek WPCP project site for a period of 10 years. However, because the site is located in an industrial area, no adverse impacts on land use, community and visual character, zoning, or open space are expected.

As part of the agreement with the New York City Housing Authority (NYCHA), the play area at the Joseph Riis Houses would be rehabilitated. Construction at the Manhattan Pump Station would not result in any significant adverse impacts on land use, community and visual character, or open space, as renovation of the NYCHA play area would be temporary.

TRAFFIC AND TRANSPORTATION

Newtown Creek WPCP

The construction-period analysis evaluates conditions under two potential scenarios—a Base Scenario, in which it is assumed that traffic arrives and departs from the plant site, and the Kingsland Parking scenario, in which designated parking facilities for construction workers are provided on Kingsland Avenue.

Under the Base scenario, construction-related activities would result in significant adverse traffic impacts at the following locations:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

Under the Kingsland Parking scenario, construction-related activities would result in significant adverse traffic impacts at the following locations:

- Greenpoint Avenue at McGuinness Boulevard (AM and midday peak hours)
- Greenpoint Avenue at Kingsland Avenue (Midday peak hour)
- Greenpoint Avenue at Humboldt Street (AM and midday peak hours)

- Kingsland Avenue at Norman Avenue (AM peak hour)
- Kingsland Avenue at Nassau Avenue (AM peak hour)

Impacts related to parking and pedestrian levels and safety are discussed under "Traffic and Transportation" above.

Manhattan Pump Station

The Manhattan Pump Station would likely generate less than 10 peak hour vehicle trips during its peak construction period. In accordance with CEQR guidelines, this level of trip generation does not warrant a quantified traffic analysis. NYCDEP would use an area immediately adjacent to the pump station as a construction staging area, a portion or which is in the New York Housing Authority parking area, which currently contains 41 spaces. An interim parking plan would be implemented which would reconfigure the area to the south and east of the pump station with 41 parking spaces. During the period when these parking spaces are being configured, there would be a temporary displacement (approximately two weeks) of half of these spaces at any given time. Based on the existing parking supply and the limited duration of the displacement, no potential significant impacts are expected on the overall parking conditions in the area.

The construction work at the Manhattan Pump Station would require partial roadway closure along Avenue D and detour of existing traffic. The temporary changes would not significantly impact the low to moderate traffic along the area roadways.

AIR QUALITY

Possible effects on local air quality during construction at the project sites include:

- Mobile source emissions from construction workers' private vehicles, construction trucks,
- Air emissions from on-site construction equipment, and
- Fugitive dust and other emissions from land-clearing operations and demolition at the project sites.

Mobile Source Analysis

The 2004 results indicate that under both the Base and Kingsland Parking scenarios under any shift, maximum predicted CO concentrations in the project study area would be less than the corresponding ambient CO air quality standards and *de minimis* criteria. Therefore, there would be no potential significant adverse CO mobile source air quality impacts from the construction activities associated with the Track 3 Upgrade and the Newtown Creek WPCP. No mobile source analysis was performed for the Manhattan Pump Station due to the low levels of traffic generated during construction.

A construction-related $PM_{2.5}$ mobile source analysis was conducted. The analysis determined that the maximum predicted daily and annual average $PM_{2.5}$ concentration increments are very low, less than 0.1 percent of the NAAQS—an increment that is below the detection limit of the monitoring systems, and is considered insignificant. The total maximum predicted daily (24-hour) concentration of $PM_{2.5}$ at the monitored community sites were well below the NAAQS.

An analysis of the impact of the construction related changes in traffic volumes and patterns on PM_{10} concentrations was performed. The maximum increase in PM_{10} concentrations due to

construction related traffic is expected to be on the order of 0.1 $\mu g/m^3$ on a 24-hour average and 0.03 $\mu g/m^3$ on an annual average. These impacts would be considered insignificant and would be undetectable. The total concentrations would remain virtually unchanged and would remain significantly lower than the respective NAAQS levels.

Therefore, no potential significant mobile source impacts on air quality are expected.

Air Quality Analysis Of On-Site Construction Equipment

An analysis of the potential for air quality impacts from on-site construction equipment at the Newtown Creek WPCP was performed for the year 2004 and a post 2007 scenario. The analyses address combustion emissions from on-site equipment, such as cranes, and fugitive dust emissions from mobile equipment, such as backhoes.

Maximum predicted concentrations from on-site construction sources occurred at receptors along the perimeter of the facility, as expected. This is true for all averaging periods, both short-term and annual and for all pollutants modeled in the analysis.

The maximum predicted off-site concentrations combined with the ambient background levels are below the applicable NAAQS for each modeled pollutant. Because the ambient concentrations are in compliance with NAAQS, the proposed project is also considered to be consistent with the New York State Air Quality Implementation Plan.

For $PM_{2.5}$, air quality modeling analysis determined that the highest predicted increase in the 24 hour and annual average $PM_{2.5}$ concentrations to be 4.27 $\mu g/m^3$ and 0.18 $\mu g/m^3$, respectively. The annual concentration is predicted for a discrete perimeter location. However, on a neighborhood scale basis the predicted incremental impact of $PM_{2.5}$ is 0.038 $\mu g/m^3$, which is less than the NYCDEP interim guidance of 0.1 $\mu g/m^3$. The predicted concentration of 4.27 $\mu g/m^3$ for the 24 hour averaging period at a discrete location is also less than the interim guidance criteria of 5 $\mu g/m^3$. With respect to the proposed annual criteria of 0.3 $\mu g/m^3$, the predicted annual impact of 0.18 $\mu g/m^3$ is below the criteria.

During construction activities at the project site, all appropriate fugitive dust control—including watering of exposed areas and using dust covers for trucks—will be employed. These measures include satisfying Section 1402.2-9.11 of the New York City Air Pollution Code.

NOISE

Newtown Creek WPCP Weekday Daytime Shift

On-Site Construction Equipment Sources. The worst-case construction month would occur in September 2004 when work in the Main Building South Addition (NC-30), Sludge Handling Facilities (NC-31), Support Building and Disinfection Facilities (NC-32) and the new North Battery (NC-35) would be proceeding. The maximum noise levels would result from pile driving, work associated with pile driving and placement of concrete. The associated work for pile driving includes excavation around the area where the piles will be driven and equipment used to remove cut-off piles.

The closest sensitive receptors to the Newtown Creek WPCP include a location on Java Street and a location on India Street both west of the western boundary of the plant site. The lowest existing ambient daytime noise levels for the two sites are the same, 63.6 dBA. Total noise levels associated with peak daytime construction activity would be approximately 70.9 dBA at these sites. Therefore, peak daytime construction activities would increase noise levels 7.3 dBA

compared to the ambient noise levels. This change would be greater than the 3 dBA CEQR impact criteria and would be perceptible. Therefore, there could be the potential for significant impacts at these and other nearby sensitive receptor sites on these streets more than 100 feet east of McGuinness Boulevard during certain periods of construction. While these significant impacts have been identified for the peak construction period, they could occur during other construction periods to a lesser extent. Elevated noise levels may occur at sensitive receptor sites along Eagle Street that are more than 100 feet east of McGuinness Boulevard. However, due to the shorter duration of construction activities at the WPCP in the vicinity of this location, impacts would be considered temporary and not significant.

Mobile Sources. The noise assessment of construction-related mobile sources considers three sites: Greenpoint Avenue between McGuinness Boulevard and Newel Street, McGuinness Boulevard between Calyer Street and Meserole Avenue, and Kingsland Avenue between Norman and Nassau Avenues. These sites were analyzed for both the Base and the Kingsland Parking scenarios. The analysis at these sites includes the impacts of both off-site mobile sources and construction equipment from the plant site. The maximum noise level increase would be 0.2 dBA, well below the 3.0 dBA CEQR noise impact threshold. Increases of this magnitude would be imperceptible and would produce no significant impacts.

Newtown Creek Potential Second Shift Construction Periods

As discussed above, a potential second construction shift could occur on weekdays between 3 PM and 11:30 PM and a Saturday shift between the hours of 7 AM and 6 PM. Should circumstances require the contractor to work extended hours, beyond 7 AM to 6 PM Monday through Friday, a variance would be required.

On-site Construction Equipment. On-site construction activities would be less extensive during the weekday second shift. The number of workers at the site would be smaller and the type of activities performed would tend to be less noisy (i.e. construction of formwork, placement of reinforcing steel, and lifting these materials into place) than other activities (i.e. demolition work, jack hammering, pile driving) that would likely occur primarily during the first shift.

Based on monitoring data, the lowest existing nighttime noise level is 55.4 dBA at the Java Street receptor. At this receptor site, total noise levels associated with peak second shift construction activity would be 58.2 dBA. Therefore, peak second shift construction activities would increase noise levels 2.8 dBA compared to the ambient noise levels. This change would be less than the 3 dBA CEQR impact criteria and would be barely perceptible. Therefore, there would be no significant impacts at residences along Java Street and India Street east of McGuinness Boulevard during second shift construction periods.

During Saturday construction, total noise levels associated with 2004 peak construction at the Java Street and India Street receptors would be 66.1 and 66.4 dBA, respectively. The lowest daytime noise level, between the hours of 7AM and 6 PM when construction could be occurring is 59.7 dBA at the Java Street receptor and 60.7 dBA at the India Street receptor. Peak second shift construction activities would increase the noise levels 6.4 dBA compared to the ambient noise levels. A change of this magnitude would be noticeable and significant. Therefore, there could be the potential for significant impacts at residences along Java Street and India Street that are located more than 100 feet east of McGuinness Boulevard during Saturday construction periods. While these significant impacts have been identified for the peak construction period, they could occur during other construction periods to a lesser extent. Elevated noise levels may occur at sensitive receptor sites along Eagle Street that are more than 100 feet east of

McGuinness Boulevard. However, due to the shorter duration of construction activities at the WPCP in the vicinity of these locations, impacts would be considered temporary and not significant.

Mobile Sources. On weekdays, during the midday shift change, construction workers from the second shift are expected to arrive at the site prior to the dismissal of the first shift and shifts are likely to be staggered. The additional vehicles would not double the passenger car equivalents (PCEs) over No Build conditions at the mobile receptor sites and therefore, no potential significant impacts would occur.

At the end of the weekday second shift, approximately 99 worker vehicles would depart the area between the hours of 11 PM and 12 midnight. The maximum noise level increase would be 0.7 dBA, well below the 3.0 dBA CEQR noise impact threshold. Increases of this magnitude would be imperceptible and would produce no significant impacts.

For the Saturday shift, during the AM arrival and PM departure, the maximum noise level increase would be 2.2 dBA, well below the 3.0 dBA CEQR noise impact threshold. Therefore, there would be no potential significant adverse impacts at the mobile receptor sites.

Manhattan Pump Station

Two sensitive receptor sites were analyzed for the Manhattan Pump Station; Site 4 is located east of the pump station, and Site 5 is located south of the pump station.

The periods where the greatest noise would be generated are those with pile driving and when the roof of the existing pump station would be removed. The activities analyzed include: roof removal (for a period of approximately 4 weeks); pile driving on the north side of the building (for a period of approximately 4 months); and pile driving on the west side of the building (for a period of approximately 2 weeks). All of these activities would occur within an approximately one year period from April 2005 to February 2006. During all pile driving activities, a polymer block would be used to reduce noise levels.

The roof of the pump station will be removed from the drywell area so an additional story can be added to the building for the electrical room. This is an exterior activity occurring during an approximately four week period. Activities to remove the roofing system would require use of a saw to cut sections, a crane for removing materials from the work site, and a truck into which the debris would be loaded. Work to repair the surge tank would occur concurrently and entail use of a concrete truck. Total noise levels associated with all the equipment operating simultaneously, which would reflect the worst case analysis, would be 79.6 dBA at Site 4 and 75.3 dBA at Site 5. The maximum noise level increase would be 18.0 dBA at Site 4 and 13.7 dBA at Site 5, compared with existing ambient noise levels. Changes of this magnitude would be highly noticeable and disruptive. Noise levels for these activities at Sites 4 and 5 are summarized in Table 18-29.

There would be an approximately 4-month period during construction when pile driving would occur along the north side of the building. It was assumed that other pieces of equipment would be operating at the same time on other parts of the site include a backhoe, compactor, and cement truck. At Site 4, the total noise level would be approximately 89.3 dBA and at Site 5 the total noise level would be 67.2 dBA. The maximum noise level increase would be 27.7 dBA at Site 4 and 5.6 dBA at Site 5, compared with existing ambient noise levels. The lower noise levels for Site 5 are due to the longer distance and the attenuation from the building which is

located between the construction activity and the receptor. Changes of this magnitude would be highly noticeable and disruptive.

There would be an approximately 2 week period during construction when pile driving would occur to install new inline storage gates at two manholes along the west side of the building. It was assumed that other pieces of equipment would be operating at the same time on other parts of the site include a backhoe, compactor, and cement truck. At Site 4, the total noise level would be approximately 69.5 dBA and at Site 5 the total noise level would be 86.6 dBA. The maximum noise level increase would be 7.9 dBA at Site 4 and 25.0 dBA at Site 5, compared with existing ambient noise levels. The lower noise levels for Site 4 are due to the longer distance and the attenuation from the building which is located between the pile driving activity and the receptor. A change of this magnitude would be highly noticeable and disruptive.

It is estimated that noise levels following the roof removal and pile activities would be lower. During the period when the roof would still be removed from approximately March 2006 though September 2006, construction activities would include the installation of new floors and facades. Typical equipment would include a crane and cement or delivery truck and total noise levels would be approximately 71.0 dBA and 68.0 dBA at Sites 4 and 5, respectively. The maximum noise level increase would be 9.4 dBA at Site 4 and 6.4 dBA at Site 5, compared with existing ambient noise levels.

Once the building structure is completed, construction work would be primarily internal to the building (September 2006-2008) and noise levels would be lower. In 2009, architectural work on the outside of the building would produce considerably lower noise levels than those peak periods analyzed above.

Elevated noise levels, similar to those projected above, would also occur at other sensitive receptors in the area including the church and school across Avenue D.

Due to the temporary nature of the elevated noise levels when the roof of the building is open (approximately 1-1/2 years) and because much of work will be occurring inside the pump station building, noise impacts during construction at the Manhattan Pump Station are not considered to be significant. However, NYCDEP will work with the community and contractors to seek ways to further minimize potential effects on the community.

A mobile source noise analysis for construction was not performed for the Manhattan Pump Station due to the low numbers of trips generated (see "Traffic" above). These trips would not be expected to double PCEs in the area and therefore no potential significant noise impacts are expected.

VIBRATION

For the Newtown Creek WPCP, since no blasting is expected and the closest residence is more than 200 feet from the western boundary of the WPCP site, no vibrations are expected to be perceptible at any residence. There is a sensitive use–a production studio with a sound stage located on Dupont and Provost Streets. Future pile driving activities nearest the studio are for Contract NC-35F, the foundation work for the North Battery. This work would occur more than 200 feet away from the use and therefore is not expected to be perceptible. NYCDEP would continue to coordinate with the studio so that construction activities with the potential to cause vibration and noise would be stopped during the times the business was using its sound stage.

For the Manhattan Pump Station, the closest sensitive receptor is 39 feet from the pump station. While no blasting is expected, there would be pile driving along the north side of the building for approximately 4 months and along the west side of the building for approximately two weeks.

At both sites, if conditions or vibration monitoring indicate that pile driving could result in damages, alternative construction measures would be employed. Therefore, no potential significant impacts due to vibration are expected.

ODORS

Newtown Creek WPCP

Although a large part of the work to be accomplished during the various project phases is intended to control current odors, some construction activities would result in the release of odors. This is true for activities that require tanks to be removed from service for reconstruction, particularly the aeration tanks. It could also result during excavation, particularly of petroleum contaminated soils. To address community complaints, an odor response plan is in place.

To control potential odors during excavation activities at the Newtown Creek WPCP, a protocol has been developed in coordination with NCMC.

Manhattan Pump Station

During construction the roof would be removed from the pump station. To minimize odors from the wet well area, temporary enclosures and other measures will be put in place. The Manhattan Pump Station site was formerly a manufactured gas plant (MGP). If the additional subsurface investigations find manufactured gas waste in the areas to be excavated, special remedial measures will be implemented including measures to reduce odors due to the proximity of residences to the site. These measures will include, for example, the use of counteractants, plastic sheeting over the soils, water, and possibly performing work inside temporary structures. The impacts would be short term and temporary and therefore would not be considered significant.

WATER QUALITY AND NATURAL RESOURCES

During construction to upgrade the plant, beginning on April 1, 1997 until the time that the upgrade to secondary treatment is completed, but no later than December 31, 2007, the plant is required to meet interim treatment levels specified in the 2002 Modified Judgments. The Modified Judgment also includes Citywide effluent limits that are required to be maintained until the plant meets secondary treatment levels by December 31, 2007. These limits are based on a flow-weighted average of the City's 14 plants (a.k.a. the "bubble"). To attain the water quality objectives, treatment enhancement chemical addition facilities were built under the Effluent Enhancement Program at Newtown Creek and five of the City's other WPCPs (Wards Island, Bowery Bay, Jamaica, 26th Ward, and North River).

During construction, methods would be put in place for soil and erosion control measures, including straw bale dikes, silt fences, and storm drain inlet protection. At both the Newtown Creek WPCP and Manhattan Pump Station, all stormwater will be collected and directed to the head of the plant or pump station, respectively, and ultimately treated.

PUBLIC HEALTH

Potential public health related impacts associated with the proposed Track 3 Upgrade at the Newtown Creek WPCP and Manhattan Pump Station were reviewed.

The causes of asthma and its increase over the last two decades are not known, and the triggers for its exacerbation are only partially understood. The potential relationship between vehicular exhaust resulting from increased truck traffic and asthma, especially in communities with high rates of asthma, requires further study. Air quality modeling results show insignificant increases or even decreases in the annual average concentrations of $PM_{2.5}$ and predicted maximum 24 hour concentrations well below the NAAQS. Also, the specific types and amount of $PM_{2.5}$ associated with combustion of natural gas and oil are not known to adversely impact health, and are expected to be benign at the concentrations that would be in ambient air with the operation of the combustion sources. Therefore, potential $PM_{2.5}$ emissions from mobile and stationary sources related to the Track 3 Upgrade are not expected to result in adverse public health impacts.

Wastewater treatment plants are not expected to expose the neighboring population to any additional health hazards from infectious disease transmission, nor are they expected to expose treatment plant personnel to unacceptable health risks from toxic air contaminants. Furthermore, no potential significant adverse health effects are expected from emissions of VOCs at the upgraded facilities.

Therefore, the proposed project is not anticipated to have a measurable impact on public health.

C. MITIGATION AND UNAVOIDABLE IMPACTS

This section presents mitigation measures for potential significant adverse impacts under the Track 3 Upgrade. Potential significant adverse impacts identified at each of the project sites are as follows:

- *Newtown Creek WPCP*: Potential significant adverse impacts were identified for traffic and parking (construction), noise (construction), and hazardous materials (construction).
- *Manhattan Pump Station*: Potential significant adverse impacts were identified for hazardous materials.

The potential significant adverse impacts identified in the SEIS would be mitigated, with certain exceptions during construction at Newtown Creek WPCP. Potential significant traffic impacts would not be mitigable at the intersection of McGuinness Boulevard and Greenpoint Avenue in the AM peak period. With regard to other potential significant traffic impacts, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted in the traffic assessment be realized and the mitigation measures not be implemented, the impacts would be unmitigated. Potential significant parking impacts would occur only if construction workers do not utilize off-street parking sites that will be secured by the construction contractors. Potential significant noise impacts would remain partially unmitigated during periods when construction could occur on Saturday.

TRAFFIC AND TRANSPORTATION

POTENTIAL MITIGATION MEASURES – 2007

In the 2007 analysis year, three intersections would be potentially significantly impacted (see "Traffic and Transportation"). At all three intersections, signal timing changes are identified that could mitigate potential significant adverse impacts. With this mitigation in place, all impacted approaches and movements would return to No Action levels, except for the intersection of Greenpoint Avenue and McGuinness Boulevard. At this location under the Base scenario, physical reconfiguration of the roadway would be necessary to mitigate potential impacts; however, McGuinness Boulevard has recently been reconfigured and new physical modifications are not considered economically feasible. Therefore, the northbound through-right lane group during the AM peak hour would be significantly adversely impacted by the creation of a southbound lead phase. This impact would be unavoidable. In addition, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted above be realized and the mitigation measures not be implemented, the impacts would be unmitigated.

Implementation of mitigation measures at the affected intersections would not have adverse impacts on pedestrian activities.

POTENTIAL MITIGATION MEASURES – 2004

In the 2004 analysis year, three intersections would be significantly impacted under the Base scenario and five intersections would be significantly impacted under the Kingsland Parking scenario. Some of the measures identified to mitigate the 2007 impacts, such as signal timing changes, in addition to several other readily implementable potential modifications, such as daylighting, could mitigate the potential 2004 peak construction period impacts.

Similar to the 2007 mitigated Build conditions, potential significant adverse impacts occurring at the intersection of Greenpoint Avenue and McGuinness Boulevard during the AM peak hour under the Base scenario could not be fully mitigated. This impact would be unavoidable. In addition, as stated above, NYCDEP will continue to monitor the traffic conditions in the area and coordinate with NYCDOT on the need for short-term mitigation measures. However, should the potential significant impacts predicted above be realized and the mitigation measures not be implemented, the impacts would be unmitigated.

POTENTIAL MITIGATION MEASURES—SECOND SHIFT CONSTRUCTION PERIODS

As discussed above, a second shift would be added during certain construction periods through the year 2007. The year 2004 would also be the peak year for a potential second construction shift. In both the 2004 and 2007 analysis years as well as other construction periods to a lesser extent, in the Base and Kingsland Parking scenarios, there would be the potential for potential significant impacts during the midday time period when the second shift arrival would be followed by the first shift departure. The mitigation measures identified above, if implemented would mitigate potential significant impacts.

PARKING

Contractors would be required to provide off-street parking during construction at the plant and enforcement mechanisms will be put in place to ensure this parking is provided. However, if construction workers do not utilize the off-street parking sites secured by the contractors, potential significant adverse impacts from on-street parking could occur. These significant impacts, if they were to occur, would be unavoidable.

AIR QUALITY

Potential traffic mitigation measures were assessed for predicted significant adverse air quality impacts during the construction of the Track 3 Upgrade. No potential significant adverse air quality impacts are expected due to mobile sources with the traffic mitigation in place.

NOISE

On-site construction activity at the Newtown Creek WPCP would result in potential significant impacts during certain periods of construction both during weekdays and on Saturdays at sensitive receptors on Java and India Streets 100 feet or more east of McGuinness Boulevard. Typically, construction related impacts are considered to be temporary and not practical to mitigate. Because the construction related noise would persist for an unusually long time and would require extensive noise intrusive activity (i.e. pile driving), NYCDEP is committing to using polymer block during pile driving activities.

On weekdays, with the use of polymer block, the maximum noise level increase at the closest sensitive receptors on Java and India Streets would be 2.3 dBA, well below the 3.0 dBA CEQR noise impact threshold. Increases of this magnitude would be imperceptible and potential significant noise impacts would be mitigated.

During periods when construction activities would occur on Saturdays, noise levels would remain above 3 dBA at residences 100 feet or more east of McGuinness Boulevard. At the closest sensitive receptors on Java and India Streets, the maximum noise level increases would be 4.3 dBA and 3.7 dBA.

NYCDEP investigated the possibility of offering window-wall attenuation and an alternate means of ventilation to affected residents along Java and India Streets east of McGuinness Boulevard. Upon further evaluation, it was determined that the mitigation is not practicable for mitigating construction on weekends, a condition that would occur on a sporadic basis. Therefore, potential significant noise impacts would remain partially unmitigated.

HAZARDOUS MATERIALS

As discussed above, construction at the WPCP and Manhattan Pump Station would result in potential significant hazardous materials impacts. Construction of the Track 3 Upgrade would require the following remediation measures at each project site:

- Additional subsurface investigation to determine disposal requirements in accordance with a NYCDEP-approved sampling plan;
- Soil removal and disposal off-site in accordance with all applicable federal, state, and local regulations;
- Implementation of a NYCDEP-approved HASP;

- Testing and potential treatment of groundwater from dewatering activities to levels specified in applicable local and state permits; and
- Removal of asbestos, lead, PCBs, and other hazardous materials from building demolition activities in accordance with all applicable federal, state, and local regulations.
- Other site-specific measures will also be required.

In addition, the Manhattan Pump Station site was formerly a manufactured gas plant (MGP). If the additional subsurface investigations find manufactured gas waste in the areas to be excavated, special remedial measures will be implemented including measures to reduce odors due to the proximity of residences to the site. These measures will include, for example, the use of counteractants, plastic sheeting over the soils, and possibly performing work inside temporary structures. MGP wastes are a special category of wastes, which NYSDEC generally allows to be treated/disposed of by being burnt as part of a fuel blend at specially licensed energy facilities. These wastes would be disposed of in accordance with all applicable regulations.

D. ALTERNATIVES

INTRODUCTION

Several alternatives to the proposed Track 3 Upgrade have been considered in the SEIS:

- An upgrade under the Track 1 design (step-feed denitrification). The step-denitrification process is a modified conventional activated sludge process.
- An upgrade under the Track 2 design (biofiltration). The biofiltration process would take effluent from the plant's existing modified aeration treatment and add biofiltration to the process (known as "polishing" the effluent).
- The No Action Alternative. The No Action Alternative presents environmental conditions that would exist if the proposed action were not implemented. The assessment of the No Action Alternative is required for all EISs.

NO ACTION ALTERNATIVE

INTRODUCTION

The No Action Alternative assumes that the proposed upgrade does not move forward. Under the No Action Alternative, the Newtown Creek WPCP would operate as upgraded under the recently completed Interim Upgrade Projects (IUP). The No Action Alternative would improve neither the water quality of the effluent nor the quality of life for residents in the surrounding community beyond those measures implemented under the IUP.

In fact, there is no viable "No Action" Alternative for the plant. If the City does not move forward with the WPCP upgrade, it would be in violation of the Clean Water Act and Modified Judgment which mandates that the WPCP reach secondary treatment by December 31, 2007. However, to be conservative and to disclose the full impacts of the Track 3 Upgrade, the No Action Alternative does not take credit for another track being built.

Elements common to Tracks 1, 2, and 3 are presently either completed or under construction at the WPCP site, particularly on the sites of the former Mobil, Exxon, and Williamsburg Steel properties. As such, these processes or facilities are now part of the existing Newtown Creek

WPCP and future No Action Alternative regardless of the treatment track selected for the upgrade. Under the No Action Alternative, no changes are anticipated at the Manhattan Pump Station.

Under the No Action Alternative, there would not be project costs of $2.27 billion for the upgrade, but there would be fines imposed on the City for failure to meet the Modified Judgment milestones (alternatively, the City would have to renegotiate a consent judgment).

Under the No Action Alternative, there would not be the proposed plant-wide odor-control systems, and it is likely that the concentration of H_2S would remain above the 1 ppb odor indicator threshold.

At the WPCP and Manhattan Pump Station, there would be no additional disturbance on the remaining areas of the sites, with its potential risks of exposure for on-site construction workers and off-site residents during construction that requires mitigation. While this potential for hazardous materials impacts is considered a potential significant adverse impact of the project, the proposed action would also result in hazardous materials remediation at each site, which may not occur under the No Action Alternative.

Under the No Action Alternative, there would not be the remaining 10-year construction period at the Newtown Creek WPCP site and the 5-year construction period at the Manhattan Pump Station. Nor would there be the extensive construction activity on the sites, including demolition and excavation, operation of heavy equipment, or construction of structures.

TRACKS 1 AND 2

INTRODUCTION

The environmental evaluation of Track 1 and Track 2 was the subject of the 1996 FEIS for the upgrade of the Newtown Creek WPCP. The FEIS presented a full evaluation of both tracks.

Since that time, a number of changes have occurred that affect all three tracks:

- Three sites—the former Mobil, Exxon, and Williamsburg Steel properties—were acquired and portions of North Henry and Freeman Streets were demapped through the ULURP process and are now part of the WPCP site. The enlarged site is needed for all three tracks.
- Electricity is now purchased from Consolidated Edison to meet the plant's electric needs, and the plant's engine generators have been decomissioned. All three tracks would rely on purchased electricity and emergency generators to be used as a back-up power source and under other conditions.

Unlike Track 3, Tracks 1 and 2 provide for additional nitrogen removal. Based on the analyses conducted for the East River Water Quality Facilities Planning Process and Long Island Sound Study (LISS), it was determined that the benefits from nutrient removal would be minimal. Since developing the Tracks 1 and 2 designs, the Modified Judgment has been amended to no longer require nitrogen removal at the WPCP. However, since nitrogen removal is an integral part of the design for Tracks 1 and 2, it remains part of the design for purpose of this analysis.

Track 1 would use a step-feed denitrification process, which is a modified conventional activated sludge process. Baffles are installed in the tank systems to divert a third of the flow for denitrification.

Track 2 would use a biofiltration process that takes effluent from the plant's existing modified aeration treatment and adds biofiltration to the process to provide secondary treatment levels of BOD and TSS removal as well as nitrogen removal. With this technology, effluent passes through nitrifying biofilters, where bacteria remove nitrogen in the presence of oxygen. A portion of the effluent then passes through denitrifying sand filters, where nitrates are removed.

SITE PLAN AND STRUCTURES FOR TRACKS 1 AND 2

This section discusses elements common to Tracks 1 and 2 and elements specific to each of the tracks.

Common Elements—Newtown Creek WPCP

As described above in "Project Description," elements common to Tracks 1, 2, and 3 include the following: demolition and site preparation; site work; construction of the CM Building, Main Building South, solids handling facilities, Support Building and disinfection facilities, and new electrical feeders; and reconstruction of Kingsland Avenue Stages 1 and 2.

Elements Specific to Step-Feed Denitrification Process

The following structural elements are specific to the step-feed denitrification process.

- Preliminary treatment tanks would replace the existing sludge treatment facilities.
- Step-feed denitrification aeration tanks would replace the existing north and south sedimentation tanks. The existing north and south battery sedimentation tanks would be rehabilitated.
- A new battery of step-feed denitrification aeration tanks and sedimentation tanks would be north of the existing tanks. Two new control buildings would be provided between these tanks.

Elements Specific to Biofiltration Process

The following structural elements are specific to the biofiltration treatment process:

- The existing grit, aeration, and sedimentation tanks would be rehabilitated to provide a 25-year expected life. Process air piping and diffusers would be replaced, and a distribution channel would be added between the aeration and sedimentation tanks. Temporary improvements made to the tanks under previous programs would be made permanent.
- After flow passes through the existing plant, it would be treated in the biofiltration polishing plant. The flow would be split into two paths at the new biofiltration influent pump station.
- Backwash settling tanks would be provided to settle out sludge removed from the polishing filters during backwash cycles. A filter blower building would house blowers used to provide air to the bacteria in the BOD and nitrifying biofilters, and to scour air during backwash cycles.
- In addition to the new north half of new sludge facilities on the former Mobil site, the existing sludge facilities would be renovated.

Manhattan Pump Station

Under Tracks 1 and 2, the design of the Manhattan Pump Station would be essentially the same as that under the Track 3 Upgrade, with few exceptions. The major difference is that under Track 1, the surge tower would be need to be somewhat higher to provide enough pressure to the WPCP to send flows through the primary tanks. Pump replacement, odor control, and emergency generators would be provided, similar to Track 3.

COMPARISON WITH CURRENT TRACKS 1 AND 2

If Tracks 1 or 2 were to be built today, the following areas would have the same or very similar impacts as the Track 3 Upgrade: land use, zoning and public policy; historic resources; visual resources; traffic and transportation; air quality; VOCs; odors; noise; energy; infrastructure; hazardous materials; natural resources; and public health. The areas that would differ are presented below.

Socioeconomic Conditions

Costs for the Track 1 option are estimated at $2.9 billion (in 2002 dollars), as compared to $2.27 billion (in 2002 dollars) for Track 3. Costs have not been recently estimated for Track 2, but they would be lower than for Track 1. Potential impacts on residential users would be somewhat, but not substantially, higher for Track 1, than for Tracks 2 and 3. However, similar to Track 3, it is unlikely that renters or owners of residential units would relocate from the City and no potential significant impacts on socioeconomic conditions would occur under Tracks 1 or 2.

Water Quality

As mandated under the Modified Judgment, the upgrade must ensure that the WPCP achieves full secondary treatment of 85 percent removal of BOD and TSS, thereby attaining the effluent discharge limitations defined by the current SPDES permit. Step feed denitrification (Track 1) has been shown to reliably meet secondary treatment levels; however, biofiltration was not shown to reliably meet secondary treatment requirements. As discussed above, Tracks 1 and 2 would provide additional nutrient removal capabilities: These nutrient removal capabilities were not incorporated in the Track 3 design because they would provide minimal benefits for water quality.

When compared to Tracks 1 and 2, Track 3 offers several distinct advantages with regard to water quality: the improved treatment of wet weather flows and attainment of secondary treatment levels at an earlier date than would be accomplished otherwise. As with Track 3, only marginal improvements on regional water quality (DO, suspended solids and coliform) are expected with Tracks 1 and 2.

Construction

At the Newtown Creek WPCP, although Track 1 shares many common facilities with Track 3, Track 1 would involve a more extensive and lengthier construction period because the Track 3 Upgrade would reuse the two existing aeration-sedimentation tank batteries by modifying and rehabilitating the tanks, whereas under Track 1, the tanks would be demolished and rebuilt. In addition, Track 1 would require a new preliminary treatment facility to be constructed in the area of the existing sludge facilities. The Track 3 Upgrade does not require preliminary treatment facilities and, instead, would employ a Central Residuals Building, which is a considerably smaller structure. In comparison to Track 1, the Track 3 Upgrade would directly benefit the local

community by reducing construction-related impacts. At the Manhattan Pump Station, the duration and intensity of construction would be similar for all three tracks.

The Track 3 Upgrade is scheduled to achieve secondary treatment by December 31, 2007, while the Track 1 Upgrade was projected to achieve these levels of treatment in June 2010. Although the Track 1 schedule has not been recently revised, it is reasonable to assume that due to the more extensive facilities required, the overall construction schedule would be longer, extending beyond 2013, and/or more intensive.

COMPARISON WITH PREVIOUS TRACK 1 AND 2 DESIGNS

Plant-wide emissions from the previous designs for Tracks 1 and 2 that relied on engine generators were compared to the current Track 3 design that relies on purchased electricity and emergency generators. The results show that emissions for NO_x, SO_2, PM_{10}, CO, VOCs, and HAPs have been substantially reduced. *

Equity Environmental Engineering LLC

Technical Memorandum

To: Mauricio Garcia / Fara Surry
NYC Department of City Planning / Environmental Assessment & Review Division

From: Mark London
Equity Environmental Engineering LLC

RE: EAS Odor Assessment
209-231 McGuiness Boulevard
CEQR No. 10DCP024K
ULURP No. 100218ZMK, N100219ZRY

Date: October 13, 2011

Since last July we have been working through possible approaches to resolve the potential odor concern related to the proposed new residential use in proximity to the Newtown Creek Waste Water Treatment Plant. With a FOIL request we were given access to the following document and supporting information:

Newtown Creek Water Pollution Control Plan Track 3 Upgrade
Final Supplemental Environmental Impact Statement
CEQR No.: 00DEP032K

Prepared by the New York City Department of Environmental Protection
Angela Licata, Assistant Commissioner, CEQR Lead Agency Contact
June 6, 2003

The FSEIS Notice of Completion signed by Angela Licata (Attachment 1) specifies that the Build Year for the Track 3 Upgrade is 2013. 2013 is also the build year for the proposed McGuinness Boulevard development, so that the Track 3 Upgrade would be completed by the time of project completion and occupancy. The FEIS also notes that significant impacts requiring mitigation are only related to:

- Traffic and Transportation
- Noise
- Hazardous Materials

The Executive Summary of the FSEIS (Attachment 2) summaries the "Probable Impacts of the Proposed Action" and finds on page S-21 regarding the odor issue:

> *At the Newtown Creek WPCP under Track 3, extensive odor- control is proposed, including the covering of odorous wastewater treatment processes, the capture and control of the odorous emissions from these processes by dual bed carbon adsorption systems, and the use of tall stacks to disperse odor-causing emissions. Carbon adsorption odor-control systems would also be installed at the Manhattan Pump Station.*

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> *The results of the H,S modeling for the upgraded plant and pump station show that the maximum 1-hour off-site impact is well below the 10-ppb H_2S New York State standard and below the CEOR significant odor indicator threshold of 1 ppb H_2S at the nearest sensitive receptors. Therefore no significant odor impacts are anticipated. Post-construction monitoring will be performed to confirm that the emissions from the plant have been controlled.*

FSEIS Chapter 11 – Odors (Attachment 3) discusses the facility's odor issue and the modeling methodology used to assess potential odor impacts. Figure 11-1 provides the location of "discrete and sensitive receptor locations" that were examined. Note that a sensitive receptor is located just south of the intersection of McGuinness Boulevard and Greenpoint Avenue, directly in front of the subject property.

Based on the modeling effort, the conclusion presented was:

> *Analyses were conducted at the Newtown Creek WPCP and the Manhattan Pump Station to assess the potential impact of odors from process sources at these facilities under the proposed Track 3 Upgrade. Using hydrogen sulfide as a surrogate for odorous compounds it was determined that emissions from both the Newtown Creek WPCP and the Manhattan Pump Station would meet both the 10 ppb NYSAAQS in ambient air and the 1 ppb NYCDEP significant odor threshold* at sensitive receptors.

Conclusion:

Newtown Creek Water Pollution Control Plan Track 3 Upgrade - Final Supplemental Environmental Impact Statement (CEQR No.: 00DEP032K) and the document's Notice of Completion were prepared by the DEP. These documents can be relied upon to find that no significant adverse odor impacts would occur at the subject property, located at 209-231 McGuinness Boulevard, Brooklyn, NY. Also, no further odor assessment would be required at this site.

A. INTRODUCTION

This section discusses the potential odor impacts from the proposed Track 3 Upgrade at the Newtown Creek Water Pollution Control Plant (WPCP) and the Manhattan Pump Station. Odors associated with wastewater treatment plants can be attributed to a number of conditions, including the nature of the raw influent wastewater, the diurnal variability in the influent flow and/or odor load, the type of unit operations employed within the plant, the manner in which the plant is operated, and the occurrence of upset conditions. In addition, physical conditions within the plant can vary the rate at which odors are released to the atmosphere. Wastewater turbulence caused by aerating wastewater, weir drops, changes in direction of flow, hydraulic jumps, drop structures, pumping, and other factors increase the potential of the odorous compounds being volatilized or stripped from solution and emitted to the ambient air. Controlling odor emissions at wastewater treatment plants can involve the management of the quality of the incoming wastewater, management of the plant's operations, and limiting potential wastewater turbulence. Since wastewater turbulence is largely dependent on the velocity of the wastewater flow and/or the height of the drops, it is best controlled through proper design as long as actual wastewater flow rates agree with the projected design flow rates.

Many of the odor-causing compounds associated with wastewater facilities are sulfur-based compounds, such as hydrogen sulfide (H_2S), and mercaptans. Although there are many common odors associated with treatment plants, H_2S is the most prevalent malodorous gas associated with domestic wastewater collection and treatment. The conditions leading to H_2S formation usually favor the production of other odorous gases, such as ammonia and mercaptans, which may have considerably higher detectable odor thresholds, and H_2S may be an indicator of their presence. H_2S is commonly used as a trace odor indicator for the following reasons:

- It is always present in wastewater collection and treatment plant operations;
- It has a very unique, unpleasant, and discernable odor character (rotten eggs);
- It has a very low odor recognition threshold (approximately 4 to 5 parts per billion [ppb] by volume in air detected by the average person according to published reports);
- It is heavier than air, and will therefore accumulate in low-lying areas; and
- It can be monitored by hand-held and/or stationary instruments.

Therefore, for purposes of the odor impact assessment, H_2S was used as an indicator of potential odor problems resulting from Track 3.

B. ODOR CRITERIA

The criteria used to assess odor impacts are the City's *CEQR Technical Manual* odor threshold of 1 ppb for H_2S from the project at sensitive receptors and the New York State Ambient Air Quality Standard (NYSAAQS) of 10 ppb H_2S in ambient air. The 1 ppb threshold at sensitive receptors is consistent with the Council of the City of New York Resolutions Nos. 2113-2114, which each note that "the one-hour average concentration of hydrogen sulfide shall not exceed one parts per billion, as measured at the nearest sensitive receptor." Implicit in the use of the 1 ppb of H_2S as the significant odor threshold is that any control measures that may be needed to achieve H_2S concentrations of 1 ppb will at the same time address other residual odors that are common to wastewater treatment plant operations, such as ammonia, amines, organic sulfides, mercaptans, indole, skatole, and aldehydes. Since the 1-ppb level is extremely low, and is at the lowest end of the detection range of currently available monitoring technology, compliance with this criterion is demonstrated with air dispersion models. The 1-hour average NYSAAQS of 10 ppb H_2S, applicable for all locations beyond the fence line of Newtown Creek WPCP, is used to protect the quality of life for the surrounding community.

Predictions of maximum off-site 1-hour average H_2S levels using dispersion modeling were determined at sensitive receptor locations (to compare with the 1-hour 1-ppb significant odor threshold) and at receptors locations beyond the fence line (to compare with the 10-ppb NYSAAQS) to assess the potential for a significant odor impact and compliance with the NYSAAQS due to the proposed upgrade at Newtown Creek WPCP.

C. METHODOLOGY

OVERVIEW

To determine the impacts of emissions of H_2S from the proposed Track 3 Upgrade, including the Newtown Creek WPCP and Manhattan Pump Station, on-site sources were modeled with the latest version of the ISCST3 model. The same general procedures outlined for the VOC modeling in Chapter 10, "Volatile Organic Compounds," were followed. As discussed in Chapter 10, the ISCST3 model requires four types of input:

- Source parameters (type, dimensions, location, flow, and emission rates);
- Meteorological data;
- Receptor locations; and
- Model control options (urban/rural, building wake effects, etc.).

After developing estimates of H_2S emission rates, these data are input into the model to determine the air concentration at each receptor for the specified averaging time (i.e., 1 hour for H_2S) for individual and combined sources. These modeled results are then compared to the odor threshold and standard for H_2S to determine the potential for odor impacts with the proposed Track 3 Upgrade.

MODEL INPUT

SOURCE PARAMETERS

Physical information on the odor control stacks at the Newtown Creek WPCP and the Manhattan Pump Station are presented in Chapter 10, "Volatile Organic Compounds." Additional

discussions of other modeled open sources of malodorous pollutants are described later on in this chapter, under "Estimates of H_2S emissions for Track 3."

METEOROLOGICAL DATA

The meteorological data were the same used for both the VOC and air quality modeling analyses, namely five years (1997 through 2001) of hourly surface data from LaGuardia Airport with upper air data from Brookhaven, NY. These data are the most recent five years available. The meteorological data include wind speed, wind direction, stability, temperature, and twice-daily mixing height. The purpose of using such an extensive meteorological data set (almost 44,000 hours of meteorological data) is to ensure that a wide array of atmospheric conditions that include diurnal and seasonal variations, as well as inversion and convective conditions are evaluated when assessing the compliance of the facility emissions with air quality and odor standards criteria.

RECEPTOR LOCATIONS

The receptors used in the odor analysis included a grid of receptors and a number of sensitive and discrete receptors. The receptor grid that was employed in the stationary source air quality and VOC modeling was also utilized in this analysis (see Chapter 9, "Air Quality," and Chapter 10, "Volatile Organic Compounds"). This receptor grid consisted of a polar grid (i.e., radial rings of receptors placed at multiple distances from the site boundaries to a 2½-mile radius from the WPCP) and a set of discrete receptor locations. Specific receptor locations representing the site boundaries, and residences, schools, churches, and other sensitive locations within approximately ½ mile for the WPCP were included in the modeling analysis. Locations of residential blocks were located by receptor locations nearest the sites, since these locations will, in general, have the highest impact. Receptors were also located along the walls of multistory buildings, representing windows and balconies. For the Manhattan Pump Station, a similar combination of polar, discrete, and sensitive receptors were developed resulting in a dense receptor network surrounding the site. The sensitive receptor locations were verified through a site visit to the area surrounding the WPCP and the Manhattan Pump Station. The extent and density of the grids at both the plant and the pump station were designed to ensure that the maximum impact locations would be identified.

Figure 11-1 shows the location of sensitive and discrete receptor locations used in the model for the WPCP. Specific sensitive receptors are listed in Table 11-1.

Figure 11-2 shows the location of sensitive and discrete receptor locations used in the model for the Manhattan Pump Station. Specific sensitive receptors are listed in Table 11-2.

MODEL OPTIONS

Model options followed the latest modeling guidance provided by the U.S. Environmental Protection Agency (EPA), the New York State Department of Environmental Conservation (NYSDEC), and the New York City Department of Environmental Protection (NYCDEP). The model control options used in the odor analysis were the same as those options used in the stationary source air quality and VOC analyses: urban coefficients, consideration of building downwash effects (for point sources, only), and model options (gradual plume rise, stack tip downwash, buoyancy-induced dispersion). The output of the ISCST3 model was in the form of maximum predicted 1-hour H_2S impacts at each receptor location. The background levels of H_2S

Table 11-1
Newtown Creek WPCP Sensitive Receptors

St. Anthony and Alphonsus' Church	St. Cyril and Methodist Church
St. Alphonsus School	St. Cyril and Methodist Convent
Polish and Slavic Culture Center	Russian Peoples Home of Greenpoint
St. Anthony of Padua School	Polish National Catholic Church of Resurrection
Brooklyn Public Library – Greenpoint Branch	Cinema World
Public School No. 34 (Oliver H. Perry School)	Inglesia de Dios (Church of God)
Polish American United Methodist Church of Greenpoint	Restaurants
WPCP Visitors Center	Residences
Nature Walk	Roadway Intersections

Table 11-2
Manhattan Pump Station Sensitive Receptors

Jacob Riis Apartment Bldgs.	2 Synagogues on 8th St.
St. Emeric School	2 Churches on 9th St.
St. Emeric Church	Cultural Center
Franklin Delano School	Public School N. 61
9th St. Adult Health Care	Playground at PS No. 61
Church on 10th St.	Basketball Court on 12th St.
Community Garden	Community Room on 13th St.
Child Day Care on 9th St.	Baseball Field on 15th St.
Nursery/Mission on 8th St.	

were assumed to be zero because there are no available H_2S background data. This is consistent with NYSDEC's guidelines, which are outlined in *Air-Guide 1*.

ESTIMATION OF H_2S EMISSIONS FOR TRACK 3

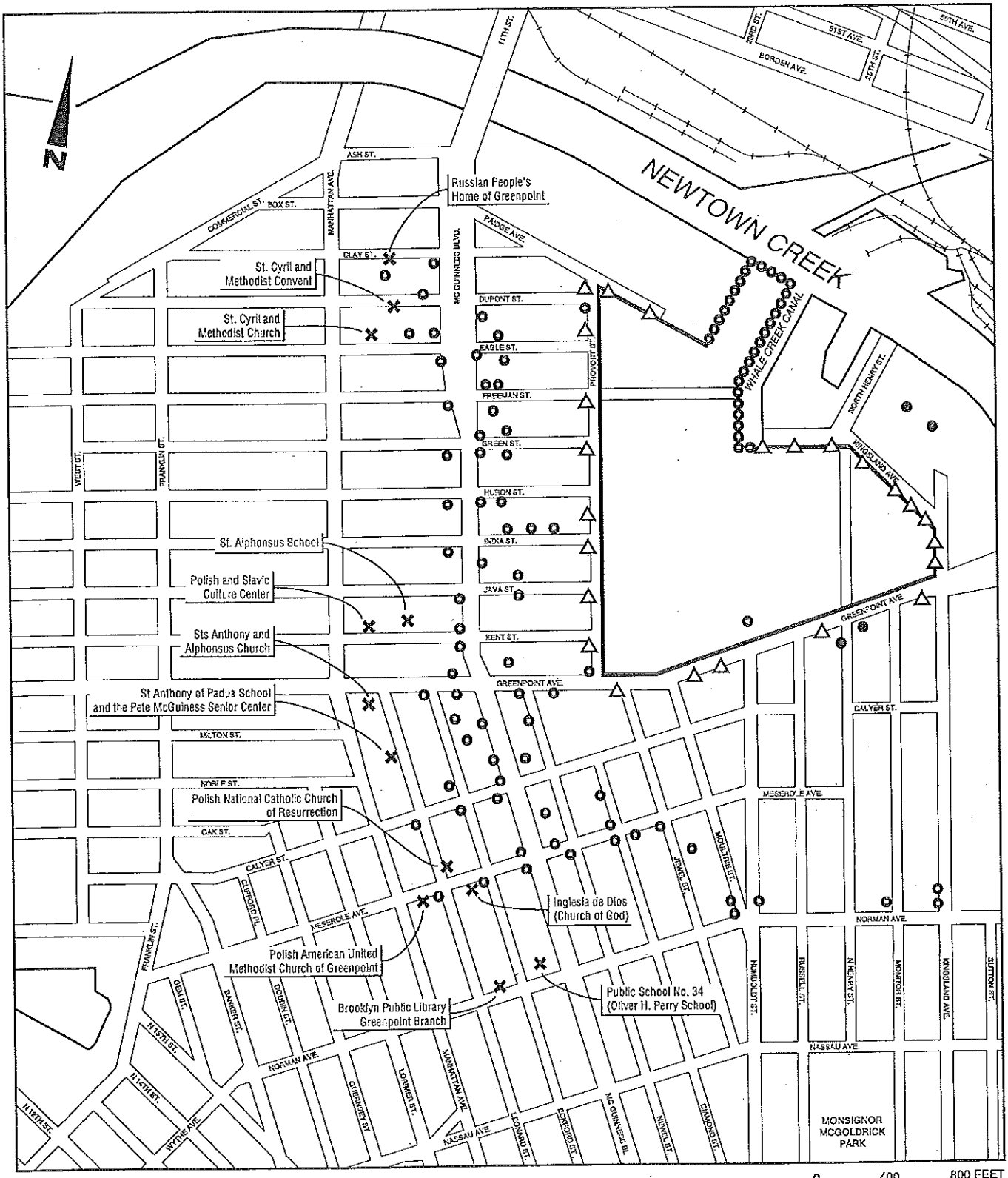
NEWTOWN CREEK WPCP

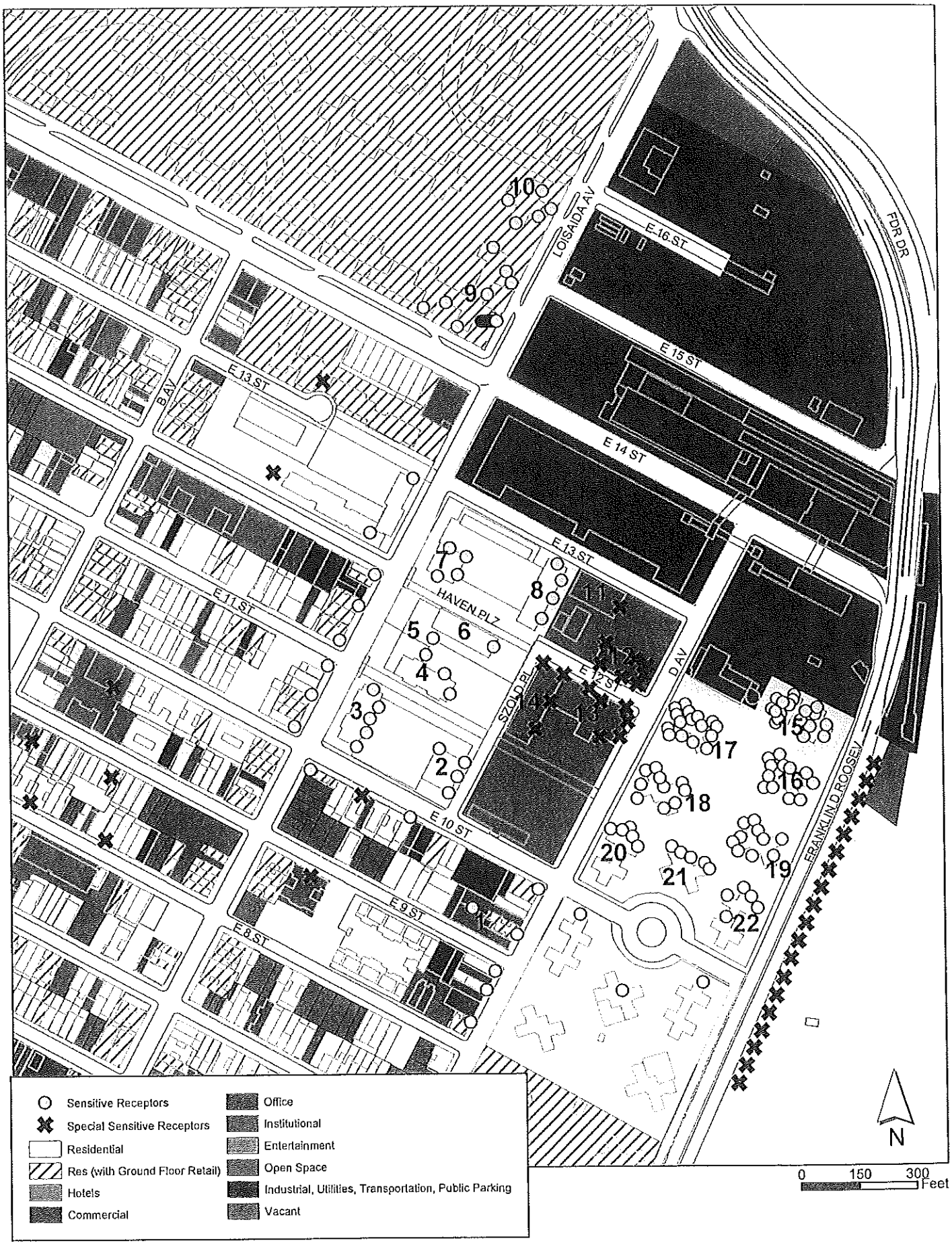
Overview

Prior to the implementation of the plant upgrade, comprehensive odor evaluations were conducted by NYCDEP at the Newtown Creek WPCP to establish baseline conditions. A series of five separate comprehensive odor surveys were performed at the WPCP during the months of June, July, August, September, and November of 1997. Hydrogen sulfide production is known to be at a maximum when the wastewater temperatures are high (as they are in the summer months of June, July, and August), since high temperatures cause the oxygen content of the liquid to decrease and biological activity to increase. These surveys were conducted during the day, and each survey was performed over a three- to four-day period. The samples were taken at various times throughout the day, corresponding to varying flow rates due to the typical diurnal variations in the wastewater flow. Each of the three- to four-day surveys included the following:

Discrete and Sensitive Receptor Locations: Newtown Creek

Figure 11-1





Manhattan Pump Station Sensitive Receptor Locations
Figure 11-2

- Wastewater and atmospheric sampling at each unit process (including pH, ORP, and dissolved oxygen measurements in the wastewater, and temperature measurements in the atmosphere);
- Existing odor control systems evaluation;
- Fenceline odor surveys; and
- Community odor surveys.

The study identified odorous sources at the WPCP and was used to assess the odor control requirements for these sources. The surveys confirmed the need for odor control at a number of unit processes, including the headworks, grit tanks, aeration tanks, thickeners, and digesters. The controlled emissions from these sources will be used as input for the dispersion modeling (see "Odor Control Emissions and Performance" below).

Results of the surveys also indicated the presence of H_2S concentrations associated with the final settling tanks (FSTs), especially from the FST weirs. A preliminary dispersion modeling analysis was performed during design to determine the impact of the FST emissions assuming that the entire FST areas were uncovered, and the potential need for odor control under Track 3. This preliminary design phase modeling indicated that while the 10 ppb H_2S ambient air quality standard was easily met with the uncovered FSTs, the 1 ppb H_2S NYCDEP significant odor threshold would be exceeded at a sensitive receptor location. Further analysis determined that it was the FST weir areas that were the largest contributor to the exceedance of the 1 ppb threshold and that emissions from the influent and midtank FSTs had an extremely minimal contribution to the maximum impact at the sensitive receptor. It was also determined that if the FST weir areas were covered and odors were contained and controlled, the 1 ppb H_2S threshold would be easily met.

NYSDEC does not currently routinely monitor for H_2S in the ambient air. If available, background levels of H_2S would be considered for comparison to the 10 ppb H_2S ambient air quality standard. However, data with the quality and characteristics necessary to be considered representative of background ambient air currently do not exist. Therefore, in the absence of credible background levels of H_2S in the vicinity of the plant, the modeling analysis assumed that the background H_2S value was zero. It should be noted that the final analysis indicated that the maximum H_2S impact from the Plant was well below both the 10 ppb ambient air quality standard and the 1 ppb H_2S significant odor threshold.

FST Emissions

Three parameters measured during the series of surveys at these tanks were used to estimate the H_2S emissions:

- Atmospheric H_2S;
- Wastewater sulfides; and
- Wastewater pH.

Standard sampling procedures were used to measure the three parameters. Based upon the data, the FST tanks were divided into two separate emission areas, the main tank and the weirs. Different emission estimation methodologies were used for each of the areas.

Main Tank Emissions. The main tank area consists of the influent, mid tank, and effluent before weir sections of the final settling tank. Total process emissions were calculated by applying the emissions determined using a floating emissions sampler (FES) to the entire surface of the

process being evaluated. The FES isolated a fixed portion of the wastewater surface of the final settling tanks and created a controlled environment from which emissions were measured. This was accomplished by floating the FES on the liquid surface and withdrawing air at a fixed rate (2 L/min). The withdrawn air was collected in a Tedlar bag and the H_2S concentration was measured. Knowing the area covered, the air withdrawal rate, and the concentration of a species, the emission flux was determined using the following equation:

$$EF = QC/A$$

EF = Emission flux (g/m^2-s)

Q = Air withdrawal from rate (m^3/s)

C = Species concentration (g/m^3)

A = Surface area covered by chamber (m^2)

Overall, emissions from the process were determined by multiplying the emission flux by the surface area of the unit process.

Weir Emissions. The values recorded at the weir drops indicate that the weirs have the potential to release elevated concentrations of H_2S due mainly to the turbulence caused by the wastewater drop. The configuration of the weirs prevented the use of an FES for emissions determination. Gaseous H_2S samples were taken by placing a sampling tube into the weir trough and drawing an air sample into a Tedlar bag. The results indicate that there is the potential for a wide range of H_2S release, from low to very high (15 to 1,400 ppb), but an accurate emission rate cannot be determined from this sampling method. Since the weirs have the potential for significant emissions leading to elevated H_2S concentrations and since they are in close proximity to the fenceline, an alternative method for determining emissions was employed.

A general fate model, TOXCHEM+, was used to develop H_2S emissions from the final settling tank weirs. The TOXCHEM+ model was configured to estimate emissions of volatile compounds from the Newtown Creek WPCP unit processes. Although the program is not normally used to quantify H_2S emissions on a plant-wide basis, it is well suited to calculate emissions from discrete emission points within a plant. In this instance, it was used to determine the volatilization/stripping of H_2S over the weir drop of the final settling tanks. The TOXCHEM+ model assumed 310 mgd flow.

A summary of the emissions from all open sources is provided in Table 11-3. Note that while the area of FST weirs is relatively small compared to the FST main tanks, the emission rates from the weirs are significantly higher, primarily due to the additional stripping of odors as a result of the turbulence at the weir drop. Preliminary dispersion modeling of the H_2S emissions from the FSTs was performed during design and it was determined that the FST weirs would need to be covered. Covers would be placed over the entire weir area, and the air beneath will be collected and ducted to an odor control system. The emissions from the FST main tanks were not found to have a significant odor impact during preliminary dispersion modeling and therefore would not be covered. The north, central, and south FST main tanks were modeled as open area sources for the final modeling analysis.

Table 11-3
FST H_2S Emission Rates

Area	Emission Flux (g/m2-s)	Surface Area (m2)	Emission Rate (g/s)
Main Tank	2.64E-8	40,276	0.00106
Weirs	4.12E-6	1,580	0.00651
Total			0.00757

Odor Control Systems

Foul air would be collected through ductwork and transported by a fan to a dual bed carbon adsorption vessel. The carbon unit consists of two beds of activated carbon through which the foul air is passed. The foul air would directly contact the activated carbon. The treated air stream would then be discharged through a stack to the atmosphere.

Five separate odor-control complexes are planned for the Track 3 Upgrade to control the odorous airflow from contiguous unit operations.

- The North and Central Odor Control System would treat foul air from four aeration tanks from the North Battery, four aeration tanks from the Central Battery, eight grit tanks from the North Battery, eight grit tanks from the Central Battery and the weirs and effluent areas from the North and Central Final Sedimentation Tanks.
- The South Odor Control System would treat foul air from four aeration tanks from the South Battery, eight grit tanks from the South Battery, and the weirs and effluent area from the South Final Sedimentation Tank.
- The Central Screenings and Residuals Building Odor Control System would control the odors from the grit rooms, the grit disposal room, the residuals building screen rooms, the screen equipment room, and the splitter box.
- The Thickeners and Digester Odor Control System would control the digester building odors, the centrifuge building odors, and the grit building odors.
- The Main Building Screenings Odor Control System would control the main building screen room, the wet well, and the surge tower.

A summary of the areas to be odor controlled, with the number of carbon adsorbers and the total volume of odorous air to be treated, is presented in Table 11-4. The five separate odor-control complexes would process a significant odorous airflow. The total odorous airflow rate would be644,930 cfm, and would require 35 operating carbon units. An additional eight carbon units would be designed and installed to provide redundancy for the operating units in the event that they need to be taken out of service for maintenance or emergency shut down.

All the unit processes associated with these odor-control complexes would be enclosed with either covers and/or buildings. The odorous air in the enclosures would be contained by providing a negative pressure within the enclosed space. The contained odorous air would be collected and conveyed to the carbon units by a fan to ventilate the enclosed space. The odor control systems would be sized to accommodate maximum potential odors generated within the plant which would include peak wet weather events of 700 million gallons per day (MGD).

Table 11-4
Newtown Creek WPCP Odor-Controlled Facilities for Track 3

WPCP Odor-Controlled Areas	Carbon Adsorbers		Flowrate
	Operating	Standby	Total (cfm)
Complex 1 Service Building (Thickeners and Digesters)	1	1	13,100
Complex 2 Residuals Building (Central Screenings and Residuals)	14	2	253,030
Complex 3 North Control Building (North and Central Grit and Aeration Tanks and FST Weirs)	12	2	219,200
Complex 4 South Control Building (South Grit and Aeration Tanks and FST Weirs)	6	1	109,600
Complex 5 Main Building Screenings	2	2	50,000

Table 11-5
Newtown Creek WPCP Odor Control Stack Parameters

	North and Central Odor Control System	South Odor Control System	Central Screenings and Residuals Building Odor Control System	Thickeners and Digester Odor Control System	Main Building Screenings Odor Control System
Number of Stacks Modeled	1	1	1	1	2
Stack Height (ft)	125	125	125	52	20
Stack Diameter (ft)	8	6	9	3	4
Exit Temperature (F)	75	75	75	75	75
Exit Flow Rate (acfm)	219,200	109,600	253,030	13,100	25,000/stack
Velocity (ft/min)	4,363	3,878	3,979	1,853	1,989/stack

The carbon adsorbers in Complex 1 would be 12-foot diameter units, while the remaining carbon adsorbers in the other areas would be 14-foot diameter units. Table 11-5 presents the parameters for the odor control stacks.

Odor Control Emissions

Vendor guarantees for the odor control systems proposed for installation at the Newtown Creek WPCP state that dual bed carbon adsorbers will achieve removal down to 25 ppb H_2S. The carbon adsorbers will remove inlet H_2S down to 25 ppb as long as there is remaining adsorption capacity in the carbon. After passing through the carbon adsorber odor control systems, the airflows for each odor control complex would then be ducted to a single stack (except for the Main Building Complex 5 which has two stacks) for a total of six stacks under the Track 3 Upgrade. The emission rate for each stack from each of the odor control systems assumes an H_2S concentration of 25 ppb at the stack exit.

The chlorine contact tanks were not included in the odor modeling analysis because they are not a significant source of H_2S.

Odor Control Performance

Activated carbon is also capable of removing volatile organic compounds. However, H_2S would continue to be removed by the carbon, even in the presence of VOCs, up to the point at which the adsorptive capacity of the carbon is reached. This is analogous to a sponge and water; once the saturation point is reached, water will drip through. The odorous air stream, with hydrogen sulfide and other VOCs, is like the water in this analogy, and the carbon is like the sponge. The carbon would remove the hydrogen sulfide and VOCs until it reaches saturation. While it is true that the more VOCs in the air stream, the quicker the saturation point will be reached, this will not affect the hydrogen sulfide removal efficiency until that point is reached. Since the WPCP personnel would be monitoring for saturation of the carbon systems as part of maintenance procedures, any potential for a reduction in odor control due to VOCs in the air stream would also be known. In addition, NYCDEP has established a protocol for performing H_2S breakthrough capacity monitoring of the carbon adsorber odor control systems, and has contracted with the City College of New York (CCNY) to perform these tests. The units would be sampled semi-annually, and the breakthrough capacity of the carbon would be tested to determine if the systems are effectively removing H_2S, or if the carbon needs replacement.

MANHATTAN PUMP STATION

Potential odorous emissions from the Manhattan Pump Station would also be controlled by carbon adsorber systems. Two control systems are proposed: one for the wet well and screening areas and one for the surge tower. After passing through the carbon adsorber odor control systems, the airflows for each area would he ducted to a stack, for a total of two stacks; the Main Building Odor Control Stack and the Surge Tower Odor Control Stack. The emission rate for each stack from each of the odor control systems assumes an H_2S concentration of 25 ppb at the stack exit. Table 11-6 presents the parameters of the odor control stacks.

Table 11-6
Manhattan Pump Station Odor Control Stack Parameters

	Main Building Odor Control System	Surge Tower Odor Control System
Number of Stacks Modeled	1	1
Stack Height (ft)	65.92	65.92
Stack Diameter (ft)	4	2
Exit Temperature (F)	65	65
Exit Flow Rate (acfm)	47,000	2,500
Velocity (ft/min)	3,740	796

A refined modeling analysis, using ISCST3 and the same five years of meteorological data that were employed for the Newtown Creek WPCPs odor impact analysis, was performed on the emissions from these two systems to determine the potential for significant odor impacts on the

surrounding community. Since the station is directly adjacent to buildings, a cavity analysis was also performed.

D. EXISTING CONDITIONS

NEWTOWN CREEK WPCP

The area directly surrounding the plant is primarily industrial. The nearest residences are located at the mid-blocks of Java and India Streets west of the western boundary of the project site. Additional residences and other sensitive receptor locations—such as schools, churches, and residences—are farther from the plant in the north- and southwest quadrants.

As part of the recently completed Interim Upgrade Projects, numerous odor-control actions have been implemented at both the WPCP and East River Sludge Storage Tank sites to address odor-producing operations. These included collecting the malodorous air from the sludge gravity thickener tank effluent and conveying it to activated carbon units; odor-controlling the north and south grease and scum-control buildings with activated carbon; odor-controlling the grease and scum pits at the end of the north and south sludge transfer boxes with activated carbon; controlling the grease and scum pits at the end of the north and south grease collection pits with activated carbon; using activated carbon units for odor-controlling the east and west digester sludge transfer boxes; and odor-controlling the reconfigured grit tank processing buildings (eight buildings are being installed, one building per every two aeration tanks) with activated carbon units. Odor-control measures were also employed near the East River Sludge Storage Tank, including the installation of an activated carbon unit at the East River Sludge Storage Tank, and under a separate initiative, equipping the sludge barges with activated carbon units to treat odors released during sludge transfer at the East River Sludge Loading Dock. Odors from the barge loading are now being controlled with a high-efficiency carbon adsorber odor-control system. The outlet H_2S concentration from this system is 25 ppb (based on the manufacturer's guarantee).

MANHATTAN PUMP STATION

The Manhattan Pump Station currently has no odor control technology.

COMMUNITY MONITORING AND ODOR COMPLAINTS

Beginning with construction under the Interim Upgrade Projects for the Newtown Creek WPCP, routine odor monitoring was conducted at the plant from 1995 until August 2002 to review historical odor complaints; assess plant odor sources; evaluate the effectiveness of odor-control actions implemented as part of the Interim Upgrade Project; mitigate construction odor during the upgrade; and determine if Newtown Creek WPCP-related odors could be perceived off-site, particularly in the residential neighborhoods surrounding the plant. Odor-emission inventories of the plant's odor sources and off-site odor monitoring were two key odor-monitoring program activities. The off-site odor surveys conducted as part of the odor-monitoring program documented the hydrogen sulfide concentration, odor intensity, odor concentration, odor character, and the likely sources of odors in the area surrounding the plant to a distance of 1 mile. Odor intensity was quantified by means of the n-butanol odor intensity scale according to ASTM Recommended Practice E-544-88. Odor concentration was measured by a scentometer, which is a hand-held device operated by the odor observer. Odor character was a principal tool for correlating various odors with their likely sources.

To establish an accepted common ground for rating the intensity of perceived odors, the odors are commonly referenced to a standard odorant, n-butanol. An eight-level scale of n-butanol, as defined in ASTM E 544-88, is commonly used. Accordingly, when an odor is perceived, it is assigned an intensity value between 1 and 8. The n-butanol odor intensity reference scale is defined in Table 11-7.

Table 11-7
N-butanol Odor Intensity Reference Scale

Scale Value	Identification	Odor Intensity Description
n = 1	Very Faint	Odorant present in the air that is barely perceptible and may not be detected if not specifically inhaling to detect an odor.
n = 2	Very Light	Odorant present in the air that activates the sense of smell, but the characteristics may not be distinguishable.
n = 3	Light	Odorant present in the air that activates the sense of smell and is distinguishable and definite, but not necessarily objectionable in short durations (Recognition Threshold).
n = 4	Light-to-Moderate	Odorant present in the air that activates the sense of smell, is distinguishable and definite, and at times objectionable.
n = 5	Moderate	Odorant present in the air that easily activates the sense of smell, is very distinct and clearly distinguishable, and may tend to be objectionable and/or irritating.
n = 6	Moderate-to-Strong	Odorant present in the air that easily activates the sense of smell, is very distinct and tends to be objectionable, and at times is perceived pungent enough to cause a person to avoid it completely.
n = 7	Strong	Odorant present in the air that would be objectionable and cause a person to attempt to avoid it completely.
n = 8	Very Strong	Odorant present that is so strong, it is overpowering and intolerable for any length of time.

In addition to the n-butanol method of assigning an intensity to a perceived odor, qualitative descriptors are used to characterize and define the detected odor. In this way, it is possible to trace a detected odor to its source and help determine whether it is plant or non-plant based.

ODOR COMPLAINT PROTOCOL

The current procedure is for odor complaints to be called into the NYCDEP help line center at 311. The operator answering the telephone asks the complainant a series of questions designed to assist in following through on the complaint. These questions include such things as when the odor was smelled, the location where it occurred, and an opinion of what the odor smelled like. The call and information is then logged in and the operator completes a complaint form. The complaint form is faxed to the Watch Engineer on duty at the plant who conducts an in-plant odor survey to identify potential sources of odors. This is followed by an off-site survey to identify the odor. The survey is then documented in an odor complaint log.

For the offsite odor surveys, the neighborhood surrounding the plant has been segmented into a grid system with 20 locations marked in each grid location. Based on the prevailing winds, a grid is selected where any odors from the plant would most likely be experienced. On the reverse side of the survey form, there is a list of the 20 locations. The surveyor then goes to each of the 20 locations, measures H_2S concentration, notes if an odor was present, its intensity, and what the odor smelled like.

After conducting both surveys, the Watch Engineer visits the complainant's home or business to discuss the results with them and request them to accompany the Watch Engineer to the location where the complainant smelled the odor. If the complainant elects to accompany the Watch Engineer a resurvey is then done.

The current practice is then to return to the plant where a telephone call is placed to the complainant to reconfirm the information provided during the site visit. The report is finalized, and the original log updated. The complaint and resolution is then sent to a central location at NYCDEP where a monthly report presenting all complaints received at the City's wastewater treatment plants and pumping stations is compiled. This report is first sent to the NYCDEP Commissioner and then to the Mayor's Office for review.

NEWTOWN CREEK MONITORING RESULTS AND ODOR COMPLAINTS 1997-2002

- The majority of the off-site odor complaints from 1997 to early 2002 originated within a 0.5-mile radius from the Newtown Creek WPCP.
- The maximum complaints for all years occurred in the months of May through September.
- Digester upsets were a noted cause of odor complaints.
- There was a substantial decrease in the number of odor complaints in the years following 1997 as compared to a review of the odor complaints recorded from 1993 to 1996. In 1993, 71 complaints were recorded, while in 1994 the number decreased to 33 and in 1995 to 24. In 1996, the number of complaints was 16, but the number decreased by almost 55 percent in 1997, when only 8 complaints were recorded. From 1998 to 2001, the number of complaints increased. In 1998 and 1999, 19 complaints were registered. In 2000 and 2001, 24 and 19 complaints were recorded, respectively. In 2002, there were 27 complaints registered through November. Complaints originating from west of McGuinness Boulevard decreased considerably from 1997 and almost stopped altogether in the year 2000.
- Odor surveys were conducted in the vicinity of the WPCP in 2001 and early 2002. It was noted that some odors that were perceived during the surveys were not caused by the WPCP. Other findings from the surveys are noted below.
- On March 28 and 29, 2001, evening and morning surveys were conducted. During the evening survey, winds were from the southeast, and odors were described at the western fenceline with an intensity of 1 to 1.5. During the morning survey, the winds originated from the east/northeast. Odors of low intensity (0.5 to 1) were detected at the western fenceline.
- Evening and morning surveys were conducted on May 21 and 22, 2001, under easterly winds. During both surveys, odors from the WPCP were detected at the western fenceline with intensities between 0.5 and 2.
- On September 20 and 21, 2001, evening and morning surveys were conducted. Winds were from the northwest during the evening survey and odors were perceived east of the WPCP, with intensity ranging from 1.5 to 2.5. During the morning survey, winds were from the west and southwest. Odors with an intensity of 2 on the n-butanol scale were described northeast of the WPCP, up to a distance of 0.3 miles.

- Evening and morning surveys were conducted on November 19 and 20, 2001. The wind was from the southwest on November 19th. Odors were perceived at the northeast fenceline of the WPCP, with intensity ranging from 0.5 to 1.5. Trace odors described as sewage were detected almost 0.5 miles away, across Newtown Creek. Petroleum-like odors were also detected from the plant construction site on North Henry Street. Low intensity odors were described during the morning survey, southeast of the WPCP. The petroleum-like odors were still perceived.
- An evening survey was conducted on February 21, 2002. The winds were from the west. Odors from the WPCP were perceived at the east of the plant, with an intensity level between 0.5 and 2. A morning survey conducted the next day under similar wind conditions also resulted in odors being perceived at the east of the plant. Odors were described as sewage-like or sludge-like. Many odors were described as petroleum-like. These odors were a result of the WPCP's construction site on North Henry Street. Some of the excavated soil had been previously contaminated with petroleum.

MANHATTAN PUMP STATION

NYCDEP records indicate two odor complaints for the Manhattan Pump Station in the past five years, one in February of 2000 and the other in January of 2002. In October of 2002 a field event was conducted to perform air, odor, and wind monitoring at the Manhattan Pump Station. Hydrogen sulfide was selected as the surrogate used to measure total odor levels. A total of four boundary locations and four community locations (one was upwind of the pump station) were selected for odor analysis and each was sampled three times. The average H_2S concentration upwind of the pump station was 4 ppb. This concentration was measured at street level and may have been affected by passing vehicles in the area.

E. THE FUTURE WITHOUT THE PROPOSED ACTION

In the "future without the proposed action" or the No Action condition, it is assumed that the existing plant would operate as upgraded under the recently completed Interim Upgrade Projects (IUP), which addressed immediate needs at the facility. Under the IUP, a number of odor control measures were installed as discussed above.

As described in Chapter 1, "Project Description," elements common to Tracks 1, 2, and 3 are presently either completed or under construction at the WPCP site. However, to be conservative for purposes of the analysis, and to disclose the full impacts of the Track 3 Upgrade, the assessment does not consider these to be part of the No Action scenario and the entire project is assessed under the section "Probable Impacts of the Proposed Action."

Under the No Action condition, no changes are anticipated at the Manhattan Pump Station.

F. PROBABLE IMPACTS OF THE PROPOSED ACTION

NEWTOWN CREEK WPCP

Modeling was performed for the six odor control stacks and the uncovered FST main tank following the procedures described above. The stacks were modeled as point sources while the FST main tanks were modeled as three areas sources (one for each FST battery). The results of the modeling analysis are presented in Table 11-8.

Table 11-8
Newtown Creek WPCP Maximum 1-Hour Off-Site and Sensitive Receptor Odor Impacts (ppb)

Year*	Receptor Impact (ppb)	
	Sensitive	Off-site
1999	0.25	0.40
Note:* Year of meteorological data with highest impact from ISCST3 modeling.		

This table presents the maximum 1-hour H_2S impact at a sensitive receptor and in ambient air. It was found that under Track 3, the maximum 1-hour impact at a sensitive receptor was 0.25 ppb, while the maximum 1-hour offsite impact was 0.40 ppb. These odor impacts fell well below the 1 ppb significant odor threshold for sensitive receptors, and well below the 10 ppb NYSAAQS off-site. Therefore, no potential significant malodorous impacts are expected from Track 3. Beneficial impacts with the proposed action are anticipated when compared with the No Action condition as a result of extensive odor-control measures that would be implemented. For example, the upgrade of the grit collection system proposed under the Track 3 Upgrade would help to reduce H_2S levels in the future aeration tanks. Additionally, the increased aeration rates in the new aeration tanks would also strip much more H_2S from the wastewater in that process (which would then be collected and sent to the North Central and South Odor Control Systems) and increase oxygen content, which would significantly reduce any H_2S going to the FSTs. Transitory odor impacts may occasionally occur as a result of malfunctions or unusual conditions.

MANHATTAN PUMP STATION

Odor control improvements would be made to the Manhattan Pump Station. Most of these improvements would be internal to the building and would not affect the pumping capacity. In addition, potential odorous emissions from the pump station would be controlled with the addition of carbon adsorber systems. Two control systems are proposed: one for the wet well and screening areas, and one for the surge tower.

A refined modeling analysis, using ISCST3 and the same five years of meteorological data that were employed for the Newtown Creek WPCP air quality and VOC impact analyses, was performed on the emissions from these two systems to determine the potential for significant odor impacts on the surrounding community. Receptors were placed at ground level, at elevated locations at the adjacent and nearby residential apartment houses (representing windows or balconies), and at other sensitive receptor locations, such as schools, parks, and churches. The results of the modeling analysis are presented in Table 11-9.

Table 11-9
Manhattan Pump Station
Maximum 1-Hour Off-Site and Sensitive Receptor Odor Impacts (ppb)

Year*	Receptor Impact (ppb)	
	Sensitive	Off-site
2001	0.81	0.23
Note:* Year of meteorological data with highest impact from ISCST3 modeling.		

It was determined that the maximum 1-hour impact at a sensitive receptor was 0.81 ppb, while the maximum 1-hour offsite impact was 0.23 ppb. These odor impacts fell well below the 1 ppb significant odor threshold for sensitive receptors, and well below the 10 ppb NYSAAQS off-site. Therefore, emissions from the upgraded Manhattan Pump Station would not result in any significant adverse odor impacts.

MEASURES TO BE IMPLEMENTED DURING PLANT MAINTENANCE

The current aeration tanks at Newtown Creek are typically cleaned approximately every three to four years to remove grit and screenings that have collected in the grit and aeration tanks. It is anticipated that with the proposed improvements to the grit tanks (under contract NC-35) and the addition of secondary 3/8-inch fine screen (under contract NC-41), the grit and screenings removal rate would increase, reducing the buildup in the tanks. Therefore, the cleaning frequency in the aeration tanks would be reduced to approximately four to five years under Track 3. A summary of the current and anticipated cleaning frequency and grit deposition rates was included in the August 2000 Enbanced Track 3 Design Report.

Under the current maintenance procedure, the tanks are first decanted (to the plant drain) to remove as much water as possible. Dewatering time is approximately one 8-hour shift. Next, workers move the grit into piles within the tanks. Once the grit is piled up, a vactor truck is then used to "suck" out the grit from tbe tanks. Tanks are washed down to remove all remaining material and returned to service. The diffuser system does not have to be removed in the existing tanks to facilitate the cleaning process.

The future maintenance procedure would be similar except that the diffusers and associated piping would be removed before the cleaning process. The grit removal would then be conducted using the vactor truck. Once the diffusers and piping are replaced, the tank would be returned to service.

When regular maintenance occurs, the work would be conducted so as to minimize odor generation. If standing water is allowed to go anoxic, it can cause odors during maintenance. The removal of standing water during maintenance would prevent this condition from occurring. Grit build-up beyond what currently occurs is not expected due to improved process design; therefore there should not be an increase in maintenance requirements.

The tanks would also be cleaned one at a time. The covers and odor control systems would remain in place until the tank is dewatered and cleaned. Access to the tank during this process would be considered confined space. Once the tank is cleaned, the covers would be removed as needed and any additional maintenance would be conducted as needed. Due to the improvements in process design under Track 3, the frequency of the aeration tank maintenance would be reduced to a five-year cycle. In addition, impacts from routine maintenance are temporary. Since the tanks are drained and washed before the covers are removed during maintenance, minimal odors are expected.

POST-CONSTRUCTION MONITORING

Odor monitoring will be performed at the completion of the plant construction to verify that the odor emissions from the plant are controlled under the Track 3 design. If the monitoring program indicates that the plant emissions result in acceptable ambient odor levels, then this monitoring will be completed and the results documented. If the results of the monitoring program lead to unacceptable ambient odor levels due to odor emissions from the plant, then a mitigation

program will be developed and implemented at the plant. A protocol that describes the sampling methodology, instrumentation, duration, and other details of the post-construction monitoring will be prepared prior to completion of plant construction.

G. CONCLUSIONS

Analyses were conducted at the Newtown Creek WPCP and the Manhattan Pump Station to assess the potential impact of odors from process sources at these facilities under the proposed Track 3 Upgrade. Using hydrogen sulfide as a surrogate for odorous compounds it was determined that emissions from both the Newtown Creek WPCP and the Manhattan Pump Station would meet both the 10 ppb NYSAAQS in ambient air and the 1 ppb NYCDEP significant odor threshold at sensitive receptors. ✳

Appendix 16
Noise

-Noise Monitoring Field Data Sheets

General Information

Serial Number	02230
Model	LxT2
Firmware Version	1.512
Filename	LxT_Data.043
User	
Job Description	
Location	
Measurement Description	
Start Time	Monday, 2011 February 14 12:16:25
Stop Time	Monday, 2011 February 14 12:36:33
Duration	00:20:07.6
Run Time	00:20:07.6
Pause	00:00:00.0
Pre Calibration	Monday, 2011 February 14 12:15:47
Post Calibration	None
Calibration Deviation	---

Note

Overall Data

LAeq		72.6	dB
LASmax	2011 Feb 14 12:28:26	88.0	dB
LApeak (max)	2011 Feb 14 12:18:29	102.1	dB
LASmin	2011 Feb 14 12:32:01	58.5	dB
LCeq		84.5	dB
LAeq		72.6	dB
LCeq - LAeq		11.9	dB
LAIeq		74.3	dB
LAeq		72.6	dB
LAIeq - LAeq		1.6	dB
LAE		103.4	dB
EA		2.458	mPa^2h
EA8		58.62	mPa^2h
EA40		293.1	mPa^2h
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	77.6	dBA
LAS10.00	76.0	dBA
LAS33.30	71.9	dBA
LAS50.00	69.9	dBA
LAS66.60	68.0	dBA
LAS90.00	64.3	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	1 / 3.4 s	
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	

Dose

Name	OSHA-1	
Dose	---	%
Projected Dose	---	%
TWA (Projected)	---	dBA
TWA (t)	---	dBA
Lep (t)	58.9	dBA

Settings

Exchange Rate	5	
Threshold	90.0	dBA
Criterion Level	90.0	dBA
Criterion Duration	8.0	h
RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT2	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 Octave	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At Bin Max	
Under Range Limit	35.6	dB
Under Range Peak	86.6	dB
Noise Floor	23.3	dB
Overload	141.0	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	76.4	72.8	77.5	82.5	78.2	74.0	68.9	66.4	64.4	60.5	56.9	53.4
LZSmax	89.3	84.4	90.9	98.7	90.0	88.6	86.9	78.9	81.2	81.2	80.2	76.6
LZSmin	57.0	62.5	66.4	67.3	66.0	59.8	52.9	51.5	48.2	42.9	37.9	41.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT2	14 Feb 2011 12:15:46	-47.2
PRMLxT2	11 Feb 2011 08:33:05	-47.8
PRMLxT2	11 Feb 2011 08:11:07	-48.1
PRMLxT2	04 Feb 2011 08:54:47	-47.8
PRMLxT2	04 Feb 2011 08:32:29	-48.0
PRMLxT2	03 Feb 2011 18:17:56	-47.9
PRMLxT2	03 Feb 2011 17:55:47	-48.1
PRMLxT2	03 Feb 2011 13:14:57	-47.9
PRMLxT2	03 Feb 2011 12:53:26	-48.0
PRMLxT2	03 Feb 2011 08:10:07	-48.1
PRMLxT2	31 Jan 2011 17:50:55	-47.6

General Information

Serial Number	02230	
Model	LxT2	
Firmware Version	1.512	
Filename	LxT_Data.042	
User		
Job Description		
Location		
Measurement Description		
Start Time	Friday, 2011 February 11 08:12:19	
Stop Time	Friday, 2011 February 11 08:32:30	
Duration	00:20:11.2	
Run Time	00:20:11.0	
Pause	00:00:00.2	
Pre Calibration	Friday, 2011 February 11 08:11:09	
Post Calibration	None	
Calibration Deviation	---	

Note

Overall Data

LAeq		73.0	dB
LASmax	2011 Feb 11 08:29:59	87.9	dB
LApeak (max)	2011 Feb 11 08:14:01	102.4	dB
LASmin	2011 Feb 11 08:30:30	59.2	dB
LCeq		86.4	dB
LAeq		73.0	dB
LCeq - LAeq		13.4	dB
LAIeq		75.0	dB
LAeq		73.0	dB
LAIeq - LAeq		1.9	dB
LAE		103.9	dB
EA		2.703	mPa^2h
EA8		64.29	mPa^2h
EA40		321.5	mPa^2h
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	78.0	dBA
LAS10.00	75.8	dBA
LAS33.30	72.4	dBA
LAS50.00	70.3	dBA
LAS66.60	68.5	dBA
LAS90.00	65.0	dBA

LAS > 85.0 dB (Exceedence Counts / Duration)	2 / 7.4 s	
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	

Dose

Name	OSHA-1	
Dose	---	%
Projected Dose	---	%
TWA (Projected)	---	dBA
TWA (t)	---	dBA
Lep (t)	59.3	dBA

Settings

Exchange Rate	5	
Threshold	90.0	dBA
Criterion Level	90.0	dBA
Criterion Duration	8.0	h
RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT2	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 Octave	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At Bin Max	
Under Range Limit	36.0	dB
Under Range Peak	87.0	dB
Noise Floor	23.6	dB
Overload	141.8	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	72.4	73.4	81.7	83.3	81.5	73.0	68.6	67.6	64.9	59.9	55.1	58.5
LZSmax	87.0	87.2	101.4	99.2	105.8	91.9	86.2	79.9	79.4	77.6	72.2	81.7
LZSmin	57.4	62.8	67.9	69.3	65.1	58.5	53.8	52.9	48.5	41.0	38.9	41.9

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT2	11 Feb 2011 08:11:07	-48.1
PRMLxT2	04 Feb 2011 08:54:47	-47.8
PRMLxT2	04 Feb 2011 08:32:29	-48.0
PRMLxT2	03 Feb 2011 18:17:56	-47.9
PRMLxT2	03 Feb 2011 17:55:47	-48.1
PRMLxT2	03 Feb 2011 13:14:57	-47.9
PRMLxT2	03 Feb 2011 12:53:26	-48.0
PRMLxT2	03 Feb 2011 08:10:07	-48.1
PRMLxT2	31 Jan 2011 17:50:55	-47.6
PRMLxT2	31 Jan 2011 17:28:11	-47.7
PRMLxT2	31 Jan 2011 17:04:17	-48.1

General Information

Serial Number	02230	
Model	LxT2	
Firmware Version	1.512	
Filename	LxT_Data.044	
User		
Job Description		
Location		
Measurement Description		
Start Time	Monday, 2011 February 14 17:18:02	
Stop Time	Monday, 2011 February 14 17:38:50	
Duration	00:20:48.1	
Run Time	00:20:48.1	
Pause	00:00:00.0	
Pre Calibration	Monday, 2011 February 14 17:17:33	
Post Calibration	None	
Calibration Deviation	---	

Note

Overall Data

LAeq		71.1	dB
LASmax	2011 Feb 14 17:18:20	87.4	dB
LApeak (max)	2011 Feb 14 17:20:59	110.4	dB
LASmin	2011 Feb 14 17:26:08	57.8	dB
LCeq		85.6	dB
LAeq		71.1	dB
LCeq - LAeq		14.5	dB
LAIeq		74.2	dB
LAeq		71.1	dB
LAIeq - LAeq		3.1	dB
LAE		102.1	dB
EA		1.793	mPa^2h
EA8		41.38	mPa^2h
EA40		206.9	mPa^2h
# Overloads		0	
Overload Duration		0.0	s
# OBA Overloads		0	
OBA Overload Duration		0.0	s

Statistics

LAS5.00	76.4	dBA
LAS10.00	73.9	dBA
LAS33.30	69.7	dBA
LAS50.00	68.2	dBA
LAS66.60	66.8	dBA
LAS90.00	64.2	dBA
LAS > 85.0 dB (Exceedence Counts / Duration)	2 / 3.6 s	
LAS > 115.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 135.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 137.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	
LApeak > 140.0 dB (Exceedence Counts / Duration)	0 / 0.0 s	

Dose

Name	OSHA-1	
Dose	---	%
Projected Dose	---	%
TWA (Projected)	---	dBA
TWA (t)	---	dBA
Lep (t)	57.5	dBA

Settings

Exchange Rate	5	
Threshold	90.0	dBA
Criterion Level	90.0	dBA
Criterion Duration	8.0	h
RMS Weight	A Weighting	
Peak Weight	A Weighting	
Detector	Slow	
Preamp	PRMLxT2	
Integration Method	Linear	
OBA Range	Normal	
OBA Bandwidth	1/1 Octave	
OBA Freq. Weighting	Z Weighting	
OBA Max Spectrum	At Bin Max	
Under Range Limit	35.6	dB
Under Range Peak	86.6	dB
Noise Floor	23.3	dB
Overload	141.0	dB

1/1 Spectra

Freq. (Hz):	8.0	16.0	31.5	63.0	125	250	500	1k	2k	4k	8k	16k
LZeq	92.0	86.7	83.1	81.9	77.4	71.9	68.1	64.5	61.9	60.0	54.4	58.4
LZSmax	107.9	102.7	96.9	99.4	96.9	86.7	88.1	81.1	78.7	83.0	74.9	85.1
LZSmin	58.9	61.3	69.0	67.4	61.0	57.3	54.1	52.1	46.2	39.4	38.1	41.0

Calibration History

Preamp	Date	dB re. 1V/Pa
PRMLxT2	14 Feb 2011 17:17:31	-47.3
PRMLxT2	14 Feb 2011 12:37:28	-47.2
PRMLxT2	14 Feb 2011 12:15:46	-47.2
PRMLxT2	11 Feb 2011 08:33:05	-47.8
PRMLxT2	11 Feb 2011 08:11:07	-48.1
PRMLxT2	04 Feb 2011 08:54:47	-47.8
PRMLxT2	04 Feb 2011 08:32:29	-48.0
PRMLxT2	03 Feb 2011 18:17:56	-47.9
PRMLxT2	03 Feb 2011 17:55:47	-48.1
PRMLxT2	03 Feb 2011 13:14:57	-47.9
PRMLxT2	03 Feb 2011 12:53:26	-48.0