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# ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) AND SUPPLEMENTAL STUDIES TO THE EAS

**Lead Agency:**
Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

**Prepared for:**
446-448 Park Realty Corp.

**Prepared by:**
Equity Environmental Engineering
500 International Drive, Suite 150
Mount Olive, NJ 07828

**July 5, 2022**

448 Park Avenue Rezoning
Community District 3
Brooklyn, New York 11205

Block 1898, Lots 35, 37, 38, and 7501, and
Block 1899, Lots 26, 27, 28, 29, and 30

**CEQR Reference No: 21DCP094K**

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# EAS SHORT FORM

# City Environmental Quality Review
# ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) SHORT FORM

FOR UNLISTED ACTIONS ONLY • *Please fill out and submit to the appropriate agency* (see instructions)

## Part I: GENERAL INFORMATION

**1. *Does the 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 FORM**.

**2. *Project Name*** 448 Park Avenue Rezoning

**3. *Reference Numbers***

| | |
|---|---|
| CEQR REFERENCE NUMBER (to be assigned by lead agency)<br>21DCP094K | BSA REFERENCE NUMBER (if applicable) |
| ULURP REFERENCE NUMBER (if applicable)<br>Zoning Map - 210332ZMK. Zoning Text - N210333ZRK | OTHER REFERENCE NUMBER(S) (if applicable)<br>(*e.g.*, legislative intro, CAPA) |

| **4a. *Lead Agency Information*** | | | **4b. *Applicant Information*** | | |
|---|---|---|---|---|---|
| NAME OF LEAD AGENCY<br>Department of City Planning, Environmental Assessment and Review Division(EARD, DCP) | | | NAME OF APPLICANT<br>446-448 Park Realty Corp. | | |
| NAME OF LEAD AGENCY CONTACT PERSON<br>Stephanie Shellooe, Director EARD | | | NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON<br>Amber Kartalyan, Equity Environmental Engineering LLC | | |
| ADDRESS 120 Broadway, 31st Floor | | | ADDRESS 500 International Drive | | |
| CITY New York | STATE NY | ZIP 10271 | CITY Mount Olive | STATE NJ | ZIP 07828 |
| TELEPHONE 212-720-3328 | EMAIL<br>sshellooe@planning.nyc.gov | | TELEPHONE 201-757-3561 | EMAIL<br>amber.kartalyan@equityenvironmental.com | |

**5. *Project Description***

The Applicant is seeking the approval of a zoning map amendment and a zoning text amendment to facilitate the construction of a new 6-story, 65-foot-tall plus cellar multi-family building with 11 total dwelling units. The building would be 12,283 GSF (11,373 ZSF; 3.49 FAR) and would include storage space at cellar level. No parking spaces would be provided and none are required as the building would not exceed the threshold of five parking spaces. Six bicycle spaces and two street trees would be added as part of the project. The proposed project would extend an existing Mixed-Use District, bring conforming status to existing residential uses within the Affected Area, and induce the development of an underutilized lot as well as to provide permanently affordable housing units in align with the needs of city's affordable housing provision goals.

The zoning map amendment would rezone Block 1898, Lots 35, 37, 38, and 7501 and Block 1899, Lots 26, 27, 28, 29, and 30 from an M1-1 zoning district to an M1-4/R6A (MX) zoning district. The zoning text amendment would affect Zoning Resolution Appendix F by modifying Brooklyn CD 3 Map with MIHA.

***Project Location***

| | | |
|---|---|---|
| BOROUGH Brooklyn | COMMUNITY DISTRICT(S) 3 | STREET ADDRESS 444, 446, 448, and 462 Park Avenue; 83, 85, 86, 87, and 89 Franklin Avenue |
| TAX BLOCK(S) AND LOT(S) Block 1898, Lots 35, 37, 38, and 7501 and Block 1899, Lots 26, 27, 28, 29, and 30 | | ZIP CODE 11222 |
| DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Affected Area is located on the south side of Park Avenue, on either side of Franklin Avenue | | |
| EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1 | | ZONING SECTIONAL MAP NUMBER 12d |

**6. *Required Actions or Approvals*** (check all that apply)

***City Planning Commission*:** ☒ YES ☐ NO ☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)

☐ CITY MAP AMENDMENT ☐ ZONING CERTIFICATION ☐ CONCESSION

☒ ZONING MAP AMENDMENT ☐ ZONING AUTHORIZATION ☐ UDAAP
☒ ZONING TEXT AMENDMENT ☐ ACQUISITION—REAL PROPERTY ☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY ☐ DISPOSITION—REAL PROPERTY ☐ FRANCHISE
☐ HOUSING PLAN & PROJECT ☐ OTHER, explain:
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Board of Standards and Appeals*:** ☐ YES ☒ NO
☐ VARIANCE (use)
☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO If "yes," specify:

***Other City Approvals Subject to CEQR*** (check all that apply)
☐ LEGISLATION ☐ FUNDING OF CONSTRUCTION, specify:
☐ RULEMAKING ☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES ☐ FUNDING OF PROGRAMS, specify:
☐ 384(b)(4) APPROVAL ☐ PERMITS, specify:
☐ OTHER, explain:

***Other City Approvals Not Subject to CEQR*** (check all that apply)
☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

***State or Federal Actions/Approvals/Funding*:** ☐ YES ☒ NO If "yes," specify:

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

***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 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.*

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP ☒ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

***Physical Setting*** (both developed and undeveloped areas)
Total directly affected area (sq. ft.): 17,056
Waterbody area (sq. ft) and type:
Roads, buildings, and other paved surfaces (sq. ft.): approx 14,000
Other, describe (sq. ft.): approx 3,000 rear yards

**8. *Physical Dimensions and Scale of Project*** (if the project affects multiple sites, provide the total development facilitated by the action)
SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 22,319
NUMBER OF BUILDINGS: 2
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Projected Site 1 - 12,894
Projected Site 2 - 21,335
HEIGHT OF EACH BUILDING (ft.): 85'
NUMBER OF STORIES OF EACH BUILDING: 8

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO
If "yes," specify: The total square feet owned or controlled by the applicant: 3,256
The total square feet not owned or controlled by the applicant: 13,800

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 permanent and temporary disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: 3,256 sq. ft. (width x length) VOLUME OF DISTURBANCE: 48,840 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 3,256 sq. ft. (width x length)

***Description of Proposed Uses*** (please complete the following information as appropriate)

| | ***Residential*** | ***Commercial*** | ***Community Facility*** | ***Industrial/Manufacturing*** |
|---|---|---|---|---|
| ***Size*** (in gross sq. ft.) | 17,206 (incremental) | 5,113 (incremental) | | |

| | | | | |
|---|---|---|---|---|
| ***Type*** (*e.g.,* retail, office, school) | 20 incremental units | retail | | |

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 55 NUMBER OF ADDITIONAL WORKERS: 15

Provide a brief explanation of how these numbers were determined:

2.77 persons per dwelling unit average for Brooklyn CD 3; 3 workers per 1,000 GSF commercial

Does the proposed project create new open space? ☐ YES ☒ NO If "yes," specify size of project-created open space: sq. ft.

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:

**9. *Analysis Year*** CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2027

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24 months of construction - a break of 13 months between two twelve month construction periods.

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☐ YES ☒ NO IF MULTIPLE PHASES, HOW MANY? 2

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

The Applicant Development of Projected Development Site 1 is anticipated to commence construction in February 2023, one month after ULURP approvals. Construction is expected to commence with Excavation and SOE on or around February 2023 and conclude with interior core and shell work to be completed in February of 2024 for a period of approximately 12 months of construction activity. Interior finishes and Certification of Occupancy (CoO) are assumed to complete approximately 6 months later in August of 2024.

Demolition and clearance of Projected Development Site 2 assumed to start 13 months after the completion of CoO at Projected Development Site 1. Construction Activities are expected to commence with Excavation and SOE on or around October 2025 and conclude with interior core and shell work to be completed in October 2026 for a period of approximately 12 months of construction activity. Interior finishes are assumed to complete approximately 6 months later with CoO in May of 2027.

**10. *Predominant Land Use in the Vicinity of the Project*** (check all that apply)

☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:

## Part II: TECHNICAL ANALYSIS

**INSTRUCTIONS**: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the CEQR Technical Manual. Check each box that applies.

- 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.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Short EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

| | 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 different from surrounding land uses? | ☐ | ☒ |
| **(b)** Would the proposed project result in a change in zoning different from surrounding zoning? | ☒ | ☐ |
| **(c)** Is there the potential to affect an applicable public policy? | ☐ | ☒ |
| **(d)** If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. | | |
| **(e)** Is the project a large, publicly sponsored project? | ☐ | ☒ |
| ○ If "yes," complete a PlaNYC assessment and attach. | | |
| **(f)** 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) Direct Effects** | | |
| ○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations? | ☐ | ☒ |
| **(b) Indirect Effects** | | |
| ○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6) | ☐ | ☒ |
| ○ **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6) | ☐ | ☒ |
| ○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6) | ☐ | ☒ |
| ○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood? | ☐ | ☒ |
| **4. *OPEN SPACE***: CEQR Technical Manual Chapter 7 | | |
| **(a)** Would the proposed project change or eliminate existing open space? | ☐ | ☒ |
| **(b)** Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? | ☐ | ☒ |
| ○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees? | ☐ | ☐ |
| **(c)** Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? | ☐ | ☒ |
| ○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees? | ☐ | ☐ |
| **(d)** If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 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; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm) | ☐ | ☒ |
| **(b)** Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated? | ☒ | ☐ |
| **(c)** If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attached | | |
| **7. *URBAN DESIGN AND VISUAL RESOURCES***: 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 not currently allowed by existing zoning? | ☐ | ☒ |
| **8. *NATURAL RESOURCES***: CEQR Technical Manual Chapter 11 | | |
| **(a)** 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 proposed project would affect any of these resources. | | |
| **(b)** Is any part of the directly affected area within the Jamaica Bay Watershed? | ☐ | ☒ |
| ○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions. | | |
| **9. *HAZARDOUS MATERIALS***: CEQR Technical Manual Chapter 12 | | |
| **(a)** Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials? | ☒ | ☐ |
| **(b)** Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts? | ☐ | ☒ |
| **(c)** Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area 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 on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)? | ☒ | ☐ |
| **(f)** Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint? | ☐ | ☒ |
| **(g)** Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators? | ☐ | ☒ |
| **(h)** Has a Phase I Environmental Site Assessment been performed for the site? | ☒ | ☐ |
| ○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Small areas of stained soil identified at various locations throughout the subject property. A disturbed area in the soil was identified at the front of the subject property and indicates that an underground storage tank may have been previously excavated on-site. The rectangular patch is approximately 6-feet wide by 10-feet long and is located on the northeastern portion of the property where a building once stood. | ☒ | ☐ |
| **10. *WATER AND SEWER INFRASTRUCTURE***: CEQR Technical Manual Chapter 13 | | |
| **(a)** Would the project result in water demand of more than one million gallons per day? | ☐ | ☒ |
| **(b)** If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens? | ☐ | ☒ |
| **(c)** If the proposed project located in a separately sewered area, would it result in the same or greater development than the | ☐ | ☒ |

| | YES | NO |
|---|---|---|
| amounts listed in Table 13-1 in Chapter 13? | | |
| **(d)** Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase? | ☐ | ☒ |
| **(e)** If the project 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, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase? | ☐ | ☒ |
| **(f)** Would the proposed project be 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 Wastewater Treatment Plant 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)** Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 2005 = (41 x 20 households)+(15 employees x 79) | | |
| ○ 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? | ☐ | ☒ |
| **12. *ENERGY***: CEQR Technical Manual Chapter 15 | | |
| **(a)** Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 3285942.1= (126.7 x 17,206 gsf large residential) + (5,113 x 216.3) | | |
| **(b)** 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 in Chapter 16? | ☐ | ☒ |
| **(b)** If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions: | | |
| ○ 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 for more information.* | ☐ | ☐ |
| ○ 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? | ☐ | ☐ |
| ○ 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 in Chapter 17? | ☐ | ☒ |
| **(b)** *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17? | ☒ | ☐ |
| ○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (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) designation or 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 or a power generation plant? | ☐ | ☒ |
| **(b)** Would the proposed project fundamentally change the City's solid waste management system? | ☐ | ☒ |
| **(c)** If "yes" to any of the above, would the 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 in Chapter 19) near heavily trafficked | ☒ | ☐ |

| | YES | NO |
|---|---|---|
| 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) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts? | ☐ | ☒ |
| **17. *PUBLIC HEALTH***: CEQR Technical Manual Chapter 20 | | |
| **(a)** Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise? | ☐ | ☒ |
| **(b)** If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. No impacts would occur in any of the technical areas affecting public health | | |
| **18. *NEIGHBORHOOD CHARACTER***: CEQR Technical Manual Chapter 21 | | |
| **(a)** Based upon the analyses conducted, do any of the following technical areas require 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? | ☐ | ☒ |
| **(b)** If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. No impacts would occur to any of the constituent elements of neighborhood character. | | |
| **19. *CONSTRUCTION***: CEQR Technical Manual Chapter 22 | | |
| **(a)** Would the project's construction activities involve: | | |
| ○ Construction activities lasting longer than two years? | ☐ | ☒ |
| ○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare? | ☐ | ☒ |
| ○ 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 a community facility or disruption in its services? | ☐ | ☒ |
| ○ Activities within 400 feet of a historic or cultural resource? | ☐ | ☒ |
| ○ Disturbance of a site containing or adjacent to a site containing natural resources? | ☐ | ☒ |
| ○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall? | ☐ | ☒ |
| **(b)** If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance 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. | | |

## 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 the 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 applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.

| APPLICANT/REPRESENTATIVE NAME | DATE |
|---|---|
| Amber Kartalyan | 7/5/2022 |

SIGNATURE Amber Kartalyan

***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 or 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 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.

| IMPACT CATEGORY | Potentially Significant Adverse Impact 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 | ☐ | ☒ |

**2.** Are there any aspects of the project relevant to the determination of 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? ☐ YES ☒ NO

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

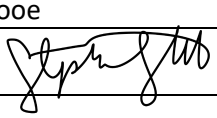
**3.** Check determination to be issued by the lead agency:

☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).

☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.

☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.

**4.** ***LEAD AGENCY'S CERTIFICATION***

| TITLE | LEAD AGENCY |
|---|---|
| Director, Environmental Assessment and Review Division | City Planning Commission |
| NAME: Stephanie Shellooe | DATE: July 8, 2022 |
| SIGNATURE:  | |

## NEGATIVE DECLARATION

**Statement of No Significant Effect**

Pursuant to Executive Order 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review, found at Title 62, Chapter 5 of the Rules of the City of New York and 6 NYCRR, Part 617, State Environmental Quality Review, the Department of City Planning acting on behalf of the City Planning Commission assumed the role of lead agency for the environmental review of the proposed actions. Based on a review of information about the project contained in this environmental assessment statement (EAS) and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed actions would not have a significant adverse impact on the environment.

**Reasons Supporting this Determination**

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would not have a significant adverse impact on the environment. Reasons supporting this determination are noted below.

**Land Use, Zoning, and Public Policy**

A detailed analysis of land use, zoning, and public policy is included in the EAS. The Applicant, 446-448 Park Realty Corp., seeks a Zoning Map Amendment affecting portions of the southern blockfronts of Park Avenue east and west of Franklin Avenue in the Bedford Stuyvesant neighborhood of Brooklyn Community District 3 from M1-1 to a Special Mixed-Use ("MX") District, which would consist of an R6A zoning district paired with an M1-4 zoning district. The Applicant also proposes a Zoning Text Amendment to Map 1 of Appendix F, to establish a Mandatory Inclusionary Housing (MIH) Area over the proposed rezoning area. The Affected Area consists of Block 1898, Lots 35, 37, 38, and 7501, and Block 1899, Lots 26, 27, 28, 29, and 30, located on the south side of Park Avenue on either side of Franklin Avenue. Park Avenue is a two-way, east-west street with one moving lane in each direction and curbside parking and loading. Franklin Avenue is a one-way southbound street with one moving lane and a painted bicycle lane, with curbside parking and loading. Existing land uses within the 400-foot buffer around the Affected Area primarily consist of attached and multi-family residential, industrial and manufacturing, mixed residential and commercial, and vacant land. The proposed actions would facilitate the development of two projected development sites, that would result in two 8-story, 85 foot-tall plus cellar mixed-use residential and commercial buildings with MIH. Projected Development Site 1 (Block 1898, Lots 37 and 38) is applicant owned and would consist of an approximately 12,894 gross square foot (gsf) building with 13 dwelling units, of which 3-4 would be affordable pursuant to MIH, and 2,013 gsf of retail use. Projected Development Site 2 (Block 1899, Lots 27, 28, 29) is non-applicant owned and is projected to include approximately 12,414 gsf of residential use (15 units, of which 4-5 would be affordable pursuant to MIH), and 4,421 gsf of retail use The proposed actions are anticipated to result in a change in land use to Projected Development Sites 1 and 2, however, given the existing character if Park Avenue and the affected area that includes low and mid-rise residential buildings and industrial and commercial land uses, the change in land use and zoning would not constitute a significant adverse impact.

**Hazardous Materials and Air Quality**

An (E) designation (E-681) related to hazardous materials and air quality would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials and air quality analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials or air quality.

*No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Louise Cafiero at lcafiero@planning.nyc.gov.*

| TITLE | LEAD AGENCY |
|---|---|
| Director, Environmental Assessment and Review Division | Department of City Planning on behalf of the City Planning Commission<br>120 Broadway, 31st Fl. New York, NY 10271 \| 212.720.3328 |
| NAME<br>Stephanie Shellooe, AICP | DATE<br>July 8, 2022 |
| SIGNATURE | |
| TITLE<br>Chair, City Planning Commission | |
| NAME<br>Daniel R. Garodnick | DATE<br>July 11, 2022 |
| SIGNATURE | |

**Project Name: 446-448 Park Avenue Rezoning**
**CEQR # 21DCP094K**
**SEQRA Classification: Unlisted**

Determination of Significance Appendix

The Proposed Action(s) were determined to have the potential to result in changes to development on the following site(s):

| Development Site | Borough | Block and Lot |
|---|---|---|
| Projected Development Site 1 | Brooklyn | Block 1898, Lots 37, 38 |
| Projected Development Site 2 | Brooklyn | Block 1899, Lots 27, 28, 29 |

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials or air quality, an (E) designation (**E-681**) would be established as part of approval of the proposed actions on **Projected Development Sites 1 and 2** as described below:

| Development Site | Hazardous Materials | Air Quality | Noise |
|---|---|---|---|
| Projected Development Site 1 | | X | |
| Projected Development Site 2 | X | X | |

*Hazardous Materials*

The (E) designation requirements applicable to **Projected Development Site 2** for hazardous materials would apply as follows:

*Task 1-Sampling Protocol*

*The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guide lines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.*

*Task 2-Remediation Determination and Protocol*

*A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.*

*If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.*

*A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse*

*impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.*

*Air Quality*

The (E) designation requirements for air quality would apply as follows:

***Projected Development Site 1 (Block 1898, Lots 37, 38):*** *Any new residential and/or commercial development on the above-referenced property must ensure the heating, ventilating and air conditioning (HVAC) systems and hot water equipment stack is located at the highest tier and at least 88 feet above grade to avoid any potential significant adverse air quality impacts.*

***Projected Development Site 2 (Block 1899, Lots 27, 28, 29):*** *Any new residential and/or commercial development on the above-referenced property must ensure the heating, ventilating and air conditioning (HVAC) systems and hot water equipment stack is located at the highest tier and at least 88 feet above grade to avoid any potential significant adverse air quality impacts.*

**Figure 1-1: Project Location Map**




a

**Figure 1-2: Existing Land Use and Zoning Map**



**Figure 1-3: Zoning Sectional Map**

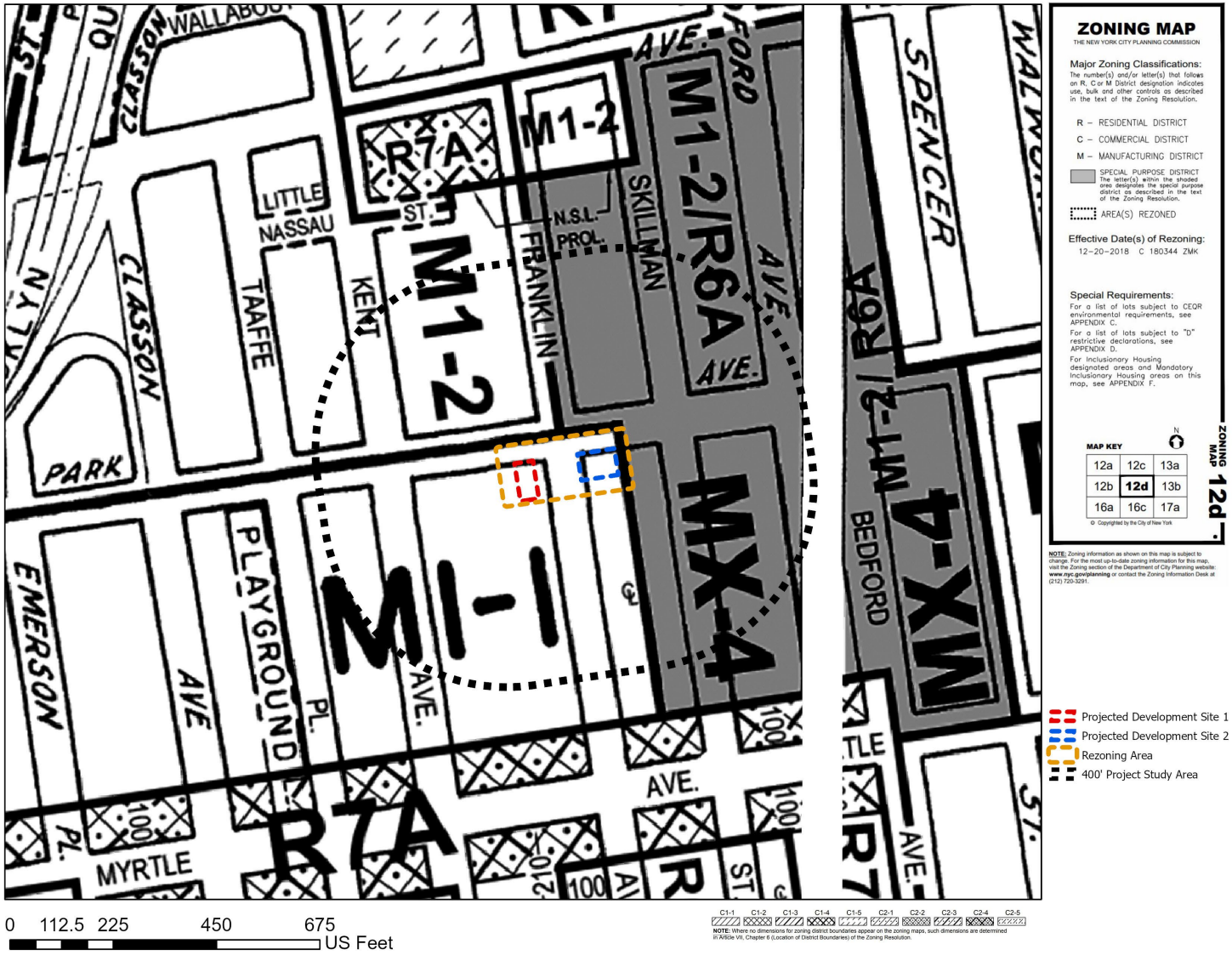
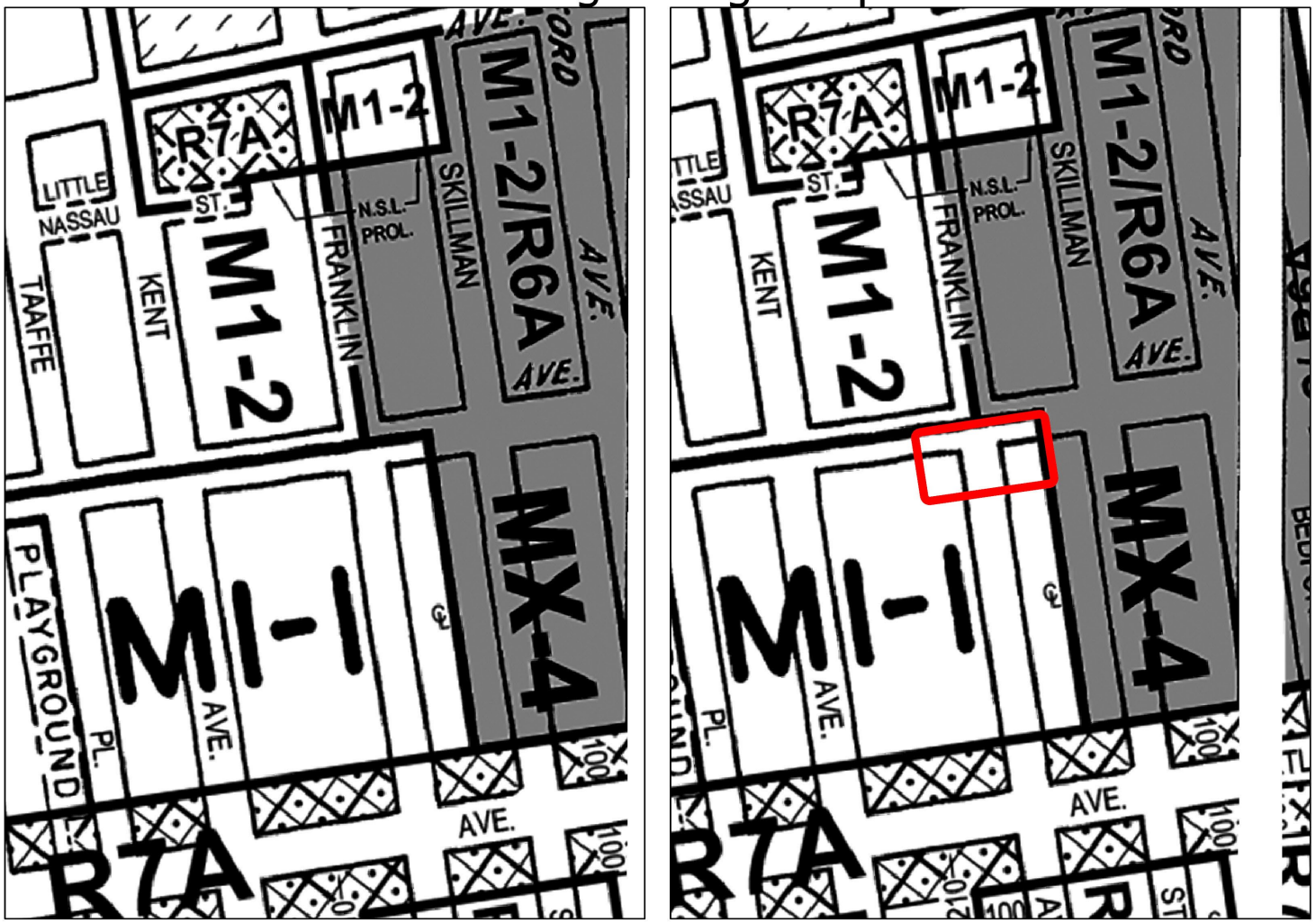


**Figure 1-4: Zoning Change Map**

# Zoning Change Map




Existing M1-1 Zoning District

Proposed M1-4/R6-A Zoning District

**Figure 1-5: Tax Map (pt. 1, Block 1898)**



**Figure 1-5: Tax Map (pt. 2, Block 1899)**



**Figure 1-6.1: Site Photos and Photo Key**



**1** View of Park Ave from the intersection of Park Ave and Kent Ave facing east




**Study Area Map with Photo Key**



**2** View of Kent Ave facing north



**3** View of Park Avenue looking east towards Rezoning Area

**Figure 1-6.2: Site Photos and Photo Key**



**4** View of Projected Development Site 1 facing south from Park Avenue




**Study Area Map with Photo Key**



**5** View of Franklin Ave from the intersection of Franklin Ave and Park Ave facing south



**6** View of Projected Development Site 2 from the corner of Franklin Ave and Park Ave facing southeast

**Figure 1-6.3: Site Photos and Photo Key**




**7** View of Park Ave from the intersection of Franklin Ave and Park Ave facing east




**Study Area Map with Photo Key**



**8** View of Franklin Ave from the intersection of Franklin Ave and Park Ave facing north

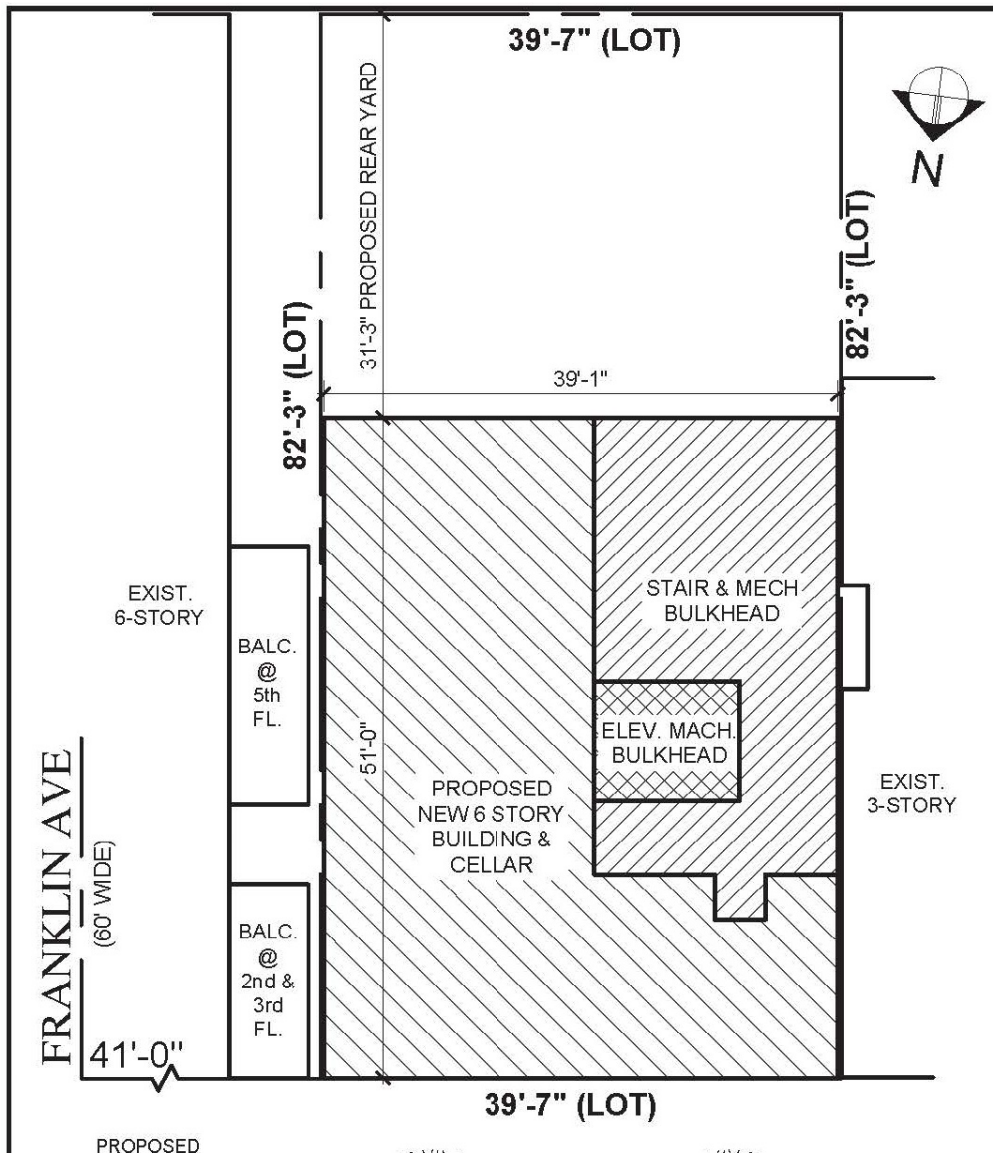


**9** View of Park Ave facing west

**Figure 1-7.1: Proposed Development - Massing Diagram**



**Figure 1-7.2: Proposed Development – Illustrative Plot Plan**



# 1.0 PROPOSED ACTIONS

## 1.1 Introduction

"The Applicant", 446-448 Park Realty Corp. seeks a Zoning Map Amendment affecting portions of the southern blockfronts of Park Avenue east and west of Franklin Avenue in the Bedford Stuyvesant neighborhood of Brooklyn Community District 3 from M1-1 to a Special Mixed-Use ("MX") District, which would consist of an R6A zoning district paired with an M1-4 zoning district. The Affected Area consists of Block 1898, Lots 35, 37, 38, and 7501, and Block 1899, Lots 26, 27, 28, 29, and 30. The Applicant also proposes a Zoning Text Amendment to Map 1 of Appendix F, adding Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing (MIH) Areas to Brooklyn Community District 3, to establish an MIH Area over the proposed rezoning area. The Zoning Text Amendment and Zoning Map Amendment constitute the Proposed Actions.

The Proposed Actions are sought in order to facilitate the development of 446-448 Park Avenue (Block 1898, Lots 37 and 38) (the "Development Site") with a new 6-story, 65-foot-tall plus cellar multi-family building with 11 total dwelling units, including approximately two permanently affordable units set aside at or below 80% AMI. The building would be 12,283 GSF (11,373 ZSF; 3.49 FAR) and would include storage space at cellar level. No parking spaces would be provided and none are required as the building would not exceed the threshold of five parking spaces. Six bicycle spaces and two street trees would be added as part of the project.

## 1.2 Background

The Affected Area is located in the northern part of the Bedford-Stuyvesant neighborhood, and was zoned M1-1 in the 1961 zoning ordinance. The area immediately east and northeast of the Affected Area was zoned MX-4 (M1-2/R6A) as part of the Flushing/Bedford Rezoning of 2001 (CEQR No. 00DCP015K).

## 1.3 Description of Surrounding Area

The Affected Area is located on the south side of Park Avenue on either side of Franklin Avenue. Park Avenue is a two-way, east-west street with one moving lane in each direction and curbside parking and loading. Franklin Avenue is a one-way southbound street with one moving lane and a painted bicycle lane, with curbside parking and loading. The B48 bus operates southbound on Franklin Avenue and northbound on Classon Avenue, three blocks to the west.

Existing land uses within the 400-foot buffer around the Affected Area (the "Surrounding Area") primarily consist of attached and multi-family residential, industrial and manufacturing, mixed residential and commercial, and vacant land.

To the north and west of the Affected Area, the Surrounding Area contains a mix of light industrial uses such as warehouse/distribution and contractor's storage, along with community facilities (schools), and

low-rise residential uses. Auto salvage uses occupy most of the southern blockfront of Park Avenue immediately to the west of the Affected Area.

The area to the east of the Affected Area is within the area rezoned to Mixed Use as part of the 2001 Flushing Bedford Rezoning. This area contains several recently developed midrise residences, along with older low-rise attached and semi-detached residences.

Built form in the area varies by use, and generally consists of low-rise industrial and commercial buildings and one- to seven-story multi-family residential buildings. The manufacturing buildings are mostly one story in height, with a few built to two or three stories. The residential buildings mainly consist of one- and two-family attached and semi-detached houses and multiple family midrise buildings.

Zoning districts in the surrounding area are M1-1 to the west and south of the Affected Area, MX-4 (M1-2/R6A) to the east and north, and M1-2 to the northwest. A further discussion of Surrounding Area zoning is provided in the following Land Use, Zoning, and Public Policy section of this document.

The Affected Area is located within a Transit Zone, where households are accessible to transit, retail, and services, and have low car ownership rates. Within these areas, parking would be optional for affordable housing units. The existing public transportation system around the Affected Area is considered sufficient to meet the residents' needs. The B57 bus operates on Flushing Avenue between Gowanus and Maspeth with a stop near the corner of Flushing and Franklin Avenue, which is one block to the north of the Affected Area. The B44 bus operates northbound along Bedford Avenue between Sheepshead Bay and Williamsburg with a stop at the corner of Bedford Avenue and Park Avenue, which is two blocks east of the Affected Area. The B54 bus operates eastbound and westbound along Myrtle Avenue with a stop near the corner of Franklin and Myrtle Avenue, which is one block south of the Affected Area. The B48 bus operates southbound along Franklin Avenue between Lefferts Gardens and Greenpoint with a stop near the corner of Park and Franklin Avenue, which is within the Affected Area. The closest subway station is the Flushing Avenue station with access to the G train, at Flushing Avenue and Marcy Avenue, approximately 1/10 of a mile from the Affected Area.

### 1.4 Description of Affected Area

The Affected Area is located on the southern side of Park Avenue extending approximately 80.6 feet to the west of Franklin Avenue and 100 feet to the east, and has a depth of 82.25 feet south of Park Avenue. The Affected Area contains approximately 6,662 square feet of lot area within Block 1898 and approximately 8,225 square feet of lot area on Block 1899.

<u>The Applicant-Owned Development Site</u>

The Applicant-Owned Development Site is located at 446 and 448 Park Avenue (Block 1898, Lots 37 and 38). The site is vacant, and measures approximately 39.6 feet wide by 82.25 feet deep, with a lot area of

3,256 square feet. The site was formerly improved with a residential building on Lot 38 and a mixed residential and commercial building on Lot 37.

Non-Applicant Controlled Sites

- Block 1898, Lot 35 (444 Park Avenue) is a 2,282-square foot lot occupied by a three-story multiple-family residence with six dwelling units, and a floor area of 4,380 square feet.
- Block 1898, Lot 7501 (86 Franklin Avenue) is a 3,331-square foot lot occupied by a six-story multiple family residence with seven dwelling units, and a floor area of 13,960 square feet.
- Block 1899, Lot 26 (89 Franklin Avenue) is a 2,517-square foot lot occupied by a three-story, two-family residence containing 2,466 square feet of floor area.
- Block 1899, Lot 27 (87 Franklin Avenue) is a 1,385-square foot lot occupied by a three-story, two-family residence containing 1,785 square feet of floor area.
- Block 1899, Lot 28 (85 Franklin Avenue) is a 1,385-square foot lot occupied by a three-story, two-family residence containing 1,785 square feet of floor area.
- Block 1899, Lot 29 (83 Franklin Avenue) is a 1,651-square foot lot occupied by a four-story building containing a ground floor restaurant (café latte) and fish store (Park Fish), and three dwelling units, and a two-story building occupied by a single dwelling unit. The lot's buildings have a floor area of 3,840 square feet.
- Block 1899, Lot 30 (462 Park Avenue) is a 1,249-square foot lot occupied by a three-story multiple family residence with three units, and a floor area of 2,250 square feet.

### 1.5 Description of the Proposed Development

Pursuant to the Proposed Actions, the Applicant proposes to build, on the Development Site, a new six-story, 65-foot-tall plus cellar multi-family building with 11 total dwelling units, including approximately two permanently affordable units set aside at or below 80% AMI. The building would be 12,283 GSF (11,373 ZSF; 3.49 FAR) and would include storage space at cellar level. No parking spaces would be provided and none are required as the building would not exceed the threshold of five parking spaces. Six bicycle spaces and two street trees would be added as part of the project.

### 1.6 Action(s) Necessary to Facilitate the Project

The actions necessary to facilitate construction of the Proposed Development are approvals of:

(1) a Zoning Map Amendment (ZM) to map an MX (M1-4/R6A) zoning district in the Affected Area currently zoned as M1-1;
(2) a Zoning Text Amendment (ZR) to amend Brooklyn Community District 3, Map 1 in Appendix F: Inclusionary Housing Designated Areas to establish the Affected Area as an MIH Area

## 1.7 Purpose and Need

The Affected Area is currently mapped within an M1-1 zoning district, which limits development to manufacturing and commercial uses, limiting most retail uses to under 10,000 square feet in size. As a result, the existing zoning does not allow for residential development, including development of affordable housing, that would be consistent with the established mixed-use character of the Surrounding Area. The proposed rezoning would grant conforming status to existing residential uses within the Affected Area, and allow new mixed-use development that would be consistent in use and bulk to existing land use patterns within the Affected Area and Surrounding Area.

The Affected Area presents an opportunity for new mixed-use growth at a density suitable for its location. It is in close proximity to existing residential and mixed-use districts and to mass transit. There are numerous public transportation options for bus and subway service near the Affected Area, including three bus lines and the IND G train.

The proposed MX (M1-4/R6A) envelope is consistent with the M1-2/R6A district mapped immediately to the east of the Affected Area. It would permit medium-density residential development at a maximum FAR of 5.6 for developments with a permanent affordable housing set aside pursuant to the MIH program. The maximum building height is 115 feet after a setback from the base height of up to 95 feet. Buildings must set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum of 11 floors. Off-street parking is required for 50 percent of the residential dwelling units but is not required for income-restricted housing units within the Transit Zone. Within the proposed MX district, the bulk regulations of Article XII, Chapter 3 would apply to manufacturing, commercial, and community facility uses. M1-4 districts permit a maximum of 2.0 FAR for commercial or manufacturing use, and 4.2 for community facility uses. Off-Street parking is not required in M1-4 districts. At this density, the Applicant would be able to construct a mixed-use residential and commercial building with 13 units.

The proposed rezoning would provide new opportunities for affordable and market-rate housing development in an area which has experienced rapid population growth and demand for new housing. The population of Census Tract 1237 increased by 12.7% between the 2006-2010 American Community Survey and the 2014-2018 ACS. The proposed development would add an estimated 13 dwelling units including 2 affordable units to meet this demand on a site that is currently vacant and would provide opportunities for additional housing supply, including affordable housing on other underbuilt sites.

In addition to opportunities for medium-density housing development under the MIH program, mapping an MX (M1-4/R6A) within the Affected Area provides opportunities for active, non-residential ground floor use. Establishing an MX district would foster both residential growth with affordable housing and revitalization of an underutilized manufacturing district. The MX district would encourage job creation and provide increased walk-to-work opportunities for a diverse mix of business uses, while also allowing existing industrial uses to remain in conformance.

The proposed zoning map amendment would thus allow the productive and more intensive reuse of underutilized property. The Special Mixed-Use District M1-4/R6A proposed will allow new local retail and service uses and encourage neighborhood investment and job creation. The proposed development would include opportunities for such employment growth.

The proposed text amendment of ZR Appendix F is necessary to establish an MIH Area, which would require new developments to set aside 25-30 percent of the residential floor area for affordable housing. MIH Option 1 requires an affordable housing set aside of 25 percent of the residential floor area at an average of 60 percent of AMI with 10 percent at 40 percent AMI. MIH Option 2 requires an affordable housing set aside of 30 percent of the residential floor area at an average of 80 percent AMI. The Applicant proposes mapping both MIH Option 1 and Option 2 within the Affected Area to provide maximum flexibility for both Applicant controlled and non-Applicant controlled sites. The MIH program for the Development Site would result in approximately 3-4 permanently affordable units. The proposed affordable housing set-asides would ensure that development within the Affected Area would address the critical need for new affordable housing in Brooklyn Community District 3. The proposed MIH Area would advance the City's Housing New York: A Five-Borough, Ten-Year Plan goals by increasing affordable housing to help ensure the community remains economically diverse in the face of increasing pressure for market-rate development.

The Proposed Actions are consistent with many of the City's stated policy goals such as the concession of more affordable housing, supportive transit-oriented housing, job creation, and the provision of first floor commercial uses that serve the needs of the local community. The Special Mixed-Use District (MX: M1-4/R6A) proposed will encourage neighborhood investment as well as protect light industrial/manufacturing uses, critical to the City's economic viability, from encroachment. The proposed rezoning will respond to the evolving needs of the industrial and manufacturing economy as well as enhance the vitality of the existing neighborhood by ensuring a balanced variety of uses. Due to the proximity between industrial, community facility, commercial and residential uses, the Affected Area is well suited for the Proposed Actions and would serve as both a paradigm and a platform for new mixed-use communities throughout the City's Boroughs.

## 1.8 Analysis Framework

The analysis framework compares the incremental difference between the proposed and potential development under the Proposed Actions (with-action condition) and the development which could occur under the existing zoning (no-action condition) by the build year specified below. This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Actions occurring in a study area of approximately 400 feet around the rezoning area. This environmental assessment considers the potential effects of the Proposed Actions compared to future conditions without the approvals sought by the project sponsor. This analysis framework is described below:

Reasonable Worst-Case Development Scenario

Discretionary actions sometimes permit a range of project characteristics, or development scenarios, to occur even though the action may be sought in order to facilitate a specific development. From the range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen for analysis. This is considered to be the Reasonable Worst-Case Development Scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The Environmental Assessment examines the incremental differences between the RWCDS of the future without the project in place (No-Action Condition) and the future with the project in operation (With-Action Condition).

Build Year

The RWCDS assumes a build year of 2027, as described below.

*Projected Development Site 1*
The Applicant Development of Projected Development Site 1 is anticipated to commence construction in February 2023, one month after ULURP approvals. Construction is expected to commence with Excavation and SOE on or around February 2023 and conclude with interior core and shell work to be completed in February of 2024 for a period of approximately 12 months of construction activity. Interior finishes and Certification of Occupancy (CoO) are assumed to complete approximately 6 months later in August of 2024.

*Projected Development Site 2*
Demolition and clearance of Projected Development Site 2 assumed to start 13 months after the completion of CoO at Projected Development Site 1. Construction Activities are expected to commence with Excavation and SOE on or around October 2025 and conclude with interior core and shell work to be completed in October 2026 for a period of approximately 12 months of construction activity. Interior finishes are assumed to complete approximately 6 months later with CoO in May of 2027.

Future Without the Proposed Actions

The No-Action Scenario for the Affected Area is the same as existing conditions.

The existing zoning has been in place for nearly 60 years. Any new residential development would require discretionary approval, and no applications for such approval are active at this time.

Future With the Proposed Actions

*Projected Development Site 1 (Applicant-Owned Block 1898, Lots 37 and 38)*

Lots 37 and 38 would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. For maximum flexibility the Applicant is proposing to map the area for both MIH Options 1 and 2. MIH Option 1 would require 25% floor area set aside at or below 60% AMI, while MIH Option 2 would require 30% floor area set aside at or below 80% AMI. The building would contain 12,894 GSF (11,722 ZSF; 3.60 FAR): 10,881 GSF (9,892 ZSF; 3.04 FAR) of residential floor area on floors 2 through 8 with 13 total dwelling units, 3 to 4 of which would be permanently set aside at or below 80%. The building would contain 2,013 GSF (1,830 ZSF; .56 FAR) of ground-floor commercial uses (local retail). No parking is required as the threshold of 5 residential parking spaces and 15 commercial parking spaces is not met. The cellar would include bicycle spaces and storage space.

*Projected Development Site 2 (Non-Applicant-Owned Block 1899, Lots 27, 28, 29)*

The lots would combine to form a 4,421-SF corner lot and would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 21,335 GSF (15,916 ZSF; 3.60 FAR) of floor area. The ground floor would contain 4,421 GSF (4,421 ZSF; 1.00 FAR) of commercial (local retail) uses, and floors 2 through 8 would include 12,414 GSF (11,495 ZSF; 2.60 FAR) of residential floor area with 15 total dwelling units, 4 to 5 of which would be permanently set aside at or below 80% AMI pursuant to MIH Options 1 or 2. 15 commercial accessory parking spaces would be provided at cellar level in an approximately 4,500 GSF enclosed garage.

By maximizing the bulk and height for the proposed zoning district and assuming the highest and best uses of floor area for the neighborhood given market trends. An average dwelling unit size of 850 GSF was assumed for both projected buildings. For Projected Development Site 2, the assemblage of these lots is assumed so that they can be developed with the maximum development permitted within the new zoning district.

The Projected Development Sites and Other Affected Site are shown in **Figure 1-1,** while the RWCDS Analysis Framework described above is shown in **Table 1.8-1**.

The Other Affected Sites will not be considered for potential impacts to site-specific aspects of environmental review such as design, noise levels, and air emissions, incremental development under the Proposed Actions, since only Projected Development Sites the analysis of density-related aspects of the environment such as traffic, school utilization, and socioeconomic conditions would be based on the increment between the no-action and with-action condition on both Projected Development Sites. This incremental development would consist of 20 dwelling units, 6-9 of which would be affordable pursuant to MIH. The net residential square footage would equal 17,206 GSF or 15,297 ZSF and the net commercial square footage would equal 5,113 GSF or 4,930 ZSF. Further, an increase of 15 parking spaces would result in the with-action condition compared to the no-action condition to accommodate future commercial space.

## Table 1.8-1: RWCDS Analysis Framework – Existing, No-Action and With-Action Calculations

| | EXISTING CONDITION | NO-ACTION CONDITION | WITH-ACTION CONDITION | INCREMENT |
|---|---|---|---|---|
| **Land Use** | | | | |
| **Residential** | ☑ Yes ☐ No | ☑ Yes ☐ No | ☑ Yes ☐ No | |
| If "yes," specify the following: | | | | |
| Describe type of residential structures | 5 midrise multi-family | 5 midrise multi-family | 7 mid-rise multi-family | |
| No. of dwelling units | 7 | 7 | 27 | 20 |
| No. of low- to moderate-income units | 0 | 0 | 6 | 6 |
| Gross floor area (sq. ft.) | 6,089 | 6,089 | 23,295 | 17,206 |
| **Commercial** | ☑ Yes ☐ No | ☑ Yes ☐ No | ☑ Yes ☐ No | |
| If "yes," specify the following: | | | | |
| Describe type (retail, office, other) | retail | retail | retail | |
| Gross floor area (sq. ft.) | 1,321 | 1,321 | 6,434 | 5,113 |
| Manufacturing/Industrial | No | No | No | |
| If "yes," specify the following: | | | | |
| Type of Use | N/A | N/A | N/A | |
| Gross floor area (sq. ft.) | N/A | N/A | N/A | |
| Open storage area (sq. ft.) | N/A | N/A | N/A | |
| If any enclosed activities, specify: | N/A | N/A | N/A | |
| **Community Facility** | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If "yes," specify the following: | | | | |
| Type of Use | N/A | N/A | N/A | |
| Gross floor area (sq. ft.) | N/A | N/A | N/A | |
| **Vacant Land** | ☑ Yes ☐ No | ☑ Yes ☐ No | ☐ Yes ☑ No | ☑ No |
| If "yes", describe: | 3,256 sq ft lot | 3,256 sq ft lot | | |
| **Publicly Accessible Open Space** | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If "yes," specify type (mapped City, State, or Federal Parkland, wetland-mapped or otherwise known, other): | N/A | N/A | N/A | |
| Other Land Uses | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If "yes," describe: | N/A | N/A | N/A | |
| **Parking** | | | | |
| **Garages** | ☐ Yes ☑ No | ☐ Yes ☑ No | ☑ Yes ☐ No | |
| If "yes," specify the following: | | | | |
| No. of public spaces | N/A | N/A | | |
| No. of accessory spaces | N/A | N/A | 15 | 15 |
| Operating hours | N/A | N/A | 24/7 | |
| Attended or non-attended | N/A | N/A | Non-Attended | |
| **Lots** | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If "yes," specify the following: | TRUE | TRUE | TRUE | |
| No. of public spaces | N/A | N/A | N/A | |
| No. of accessory spaces | N/A | N/A | N/A | |
| Operating hours | N/A | N/A | N/A | |
| **Other** (includes street parking) | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If "yes," describe: | N/A | N/A | N/A | |
| **Population** | | | | |
| **Residents** | ☑ Yes ☐ No | ☑ Yes ☐ No | ☑ Yes ☐ No | |
| If "yes," specify number: | 19 | 19 | 75 | 55 |
| Briefly explain how the number of residents was calculated: | 2.77 person dwelling unit average per Brooklyn CD 3 (2017 ACS) | | | |
| **Businesses** | ☑ Yes ☐ No | ☑ Yes ☐ No | ☑ Yes ☐ No | |
| If "yes," specify the following: | | | | |
| No. and type | local retail | local retail | local retail | |
| No. and type of workers by business | 4 | 4 | 19 | 15 |
| No. and type of non-residents who are not workers | 271 | 271 | 1319 | 1048 |
| Briefly explain how the number of businesses was calculated: | Employees: 3 employees per 1,000 SF for local retail;<br>Patrons: 205 per 1,000 SF local retail | | | |
| **Other** (students, visitors, concert-goers, *etc*.) | ☐ Yes ☑ No | ☐ Yes ☑ No | ☐ Yes ☑ No | |
| If any, specify type and number: | N/A | N/A | N/A | |
| Briefly explain how the number was calculated: | | | | |
| **Zoning** | | | | |
| Zoning classification | M1-1 | M1-1 | M1-4/R6A | |
| Maximum amount of floor area that can be developed | 1.0 FAR Mfg and Comm; 2.4 FAR CF | 1.0 FAR Mfg and Comm; 2.4 FAR CF | 3.6 FAR Resid; 3.0 CF, 2.0 Mfg, 2.0 Comm | |
| Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project | Industrial, Commercial, Residential, M1-1; M1-2; M1-2/R6A; R7A/C2-2 | Industrial, Commercial, Residential, M1-1; M1-2; M1-2/R6A; R7A/C2-2 | Industrial, Commercial, Residential, M1-1; M1-2; M1-2/R6A; R7A/C2-2 | |
| Attach any additional information that may be needed to describe the project.<br><br>If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site. | | | | |

# 2.0 ENVIRONMENTAL REVIEW

## 2.1 Land Use, Zoning, and Public Policy

The *2021 CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the Surrounding Area. Land use, zoning, and public policy are described in detail below. This section considers existing conditions, development trends, and zoning and other public policies in relation to the Projected Development Site and the Surrounding Area as well as the larger area in which the Proposed Actions may have an effect. Because the Proposed Actions would permit the development of multiple family residential uses with a larger bulk and would also reduce the parking requirements for commercial uses compared to existing zoning regulations, a preliminary assessment of Land Use, Zoning, and Public Policy is provided.

**Methodology**

Existing land uses were determined by reference to the New York City Zoning and Land Use (Zola) database and PLUTOTM 20v3 shapefiles. These uses were then confirmed through site visits. The evaluation of lots within the 400-foot Study Area was performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of New York City Department of City Planning (NYCDCP) and other city agencies programs and documentation.

### 2.1.1 Land Use

The *2021 CEQR Technical Manual* suggests that a land use, zoning, and public policy study area should generally extend 400 feet from the site of the Proposed Actions. Existing land use patterns of city blocks within approximately 400 feet of the Affected Area are presented in **Figure 2.1-1**. The proposed zoning map amendment would affect the following lots: Block 1898, Lots 37 and 38 (the Applicant's Development Site), 35, and 7501; as wells as Block 1899, Lots 27, 28, 29 (Projected Development Site 2), 26, and 30. Collectively these lots are identified as the Affected Area.

**Existing Conditions**

<u>Land Use Study Area</u>

The Affected Area is located in the Bedford-Stuyvesant neighborhood, within Community District 3 in the Borough of Brooklyn. As noted above, the existing land uses within the 400-foot Surrounding Area primarily consist of multi-family residential, industrial and manufacturing, mixed-residential and commercial, and vacant land. Built form in the area varies by use, and generally consists of low-rise industrial and commercial buildings and one- to seven-story multifamily residential buildings. The manufacturing buildings are mostly 1 story in height, with a few that are 2 to 3 stories. The residential

buildings mainly consist of one- and two-family attached and semi-detached houses and multiple family midrise buildings that are 3 to 6 stories.

Affected Area

The Affected Area is located on Blocks 1898 and 1899 on the southern side of Park Avenue with a frontage length of 180.6 feet and a depth of 100 feet along Franklin Avenue. The Affected Area has a depth 82.25 feet south of Park Avenue. West of Franklin Avenue, the Affected Area extends 80.6 feet on Park Avenue and is composed of lots 35, 7501, and the Projected Development Site that is identified as 446-448 Park Avenue (Block 1898, Lots 37 and 38). East of Franklin Avenue, the Affected Area extends approximately 100 feet on Park Avenue and encompasses Block 1899; Lots 27, 28, 29 (Projected Development Site 2), 26, and 30. The Affected Area is shown in **Figure 1-1** of this document.

The Proposed Actions would affect the following lots in the Affected Area:

- Block 1898, Lot 35 (444 Park Avenue) is a 2,282-square foot lot occupied by a three-story multiple-family residence with six dwelling units, and a floor area of 4,380 square feet.
- Block 1898, Lot 7501 (86 Franklin Avenue) is a 3,331-square foot lot occupied by a six-story multiple family residence with seven dwelling units, and a floor area of 13,960 square feet.
- Block 1899, Lot 26 (89 Franklin Avenue) is a 2,517-square foot lot occupied by a three-story, two-family residence containing 2,466 square feet of floor area.
- Block 1899, Lot 27 (87 Franklin Avenue) is a 1,385-square foot lot occupied by a three-story, two-family residence containing 1,785 square feet of floor area.
- Block 1899, Lot 28 (85 Franklin Avenue) is a 1,385-square foot lot occupied by a three-story, two-family residence containing 1,785 square feet of floor area.
- Block 1899, Lot 29 (83 Franklin Avenue) is a 1,651-square foot lot occupied by a four-story building containing a ground floor restaurant (café latte) and fish store (Park Fish), and three dwelling units, and a two-story building occupied by a single dwelling unit. The lot's buildings have a floor area of 3,840 square feet.
- Block 1899, Lot 30 (462 Park Avenue) is a 1,249-square foot lot occupied by a three-story multiple family residence with three units, and a floor area of 2,250 square feet.

Projected Development Site

The Applicant-Owned Development Site (Block 1898, Lots 37 and 38) is vacant, and measures approximately 39.6 feet wide by 82.25 feet deep, with a lot area of 3,256 square feet. The site formerly was improved with a residential building on Lot 38 and a mixed residential and commercial building on Lot 37.

**Analysis**

Future No-Action Condition

*Land Use Study Area*

Existing land use patterns are generally expected to continue in the Surrounding Area in the future without the Proposed Actions. There are no known major land use changes anticipated in the foreseeable future within the land use Study Area. Any new development within the Surrounding Area would be governed by the underlying zoning regulations.

There are two active major construction projects within the 400-foot Study Area that would add 16,195 SF of residential space with 219 proposed dwelling units and 6,261 SF of commercial space. The larger of the developments is located at 91 Franklin Avenue (Block 1899, Lot 24), is directly south of the Affected Area adjacent to Lot 26, and would develop a four-story multifamily building with eight dwelling units; the development was facilitated through a variance granted by the BSA pursuant to ZR § 72-21 contrary to use regulations under ZR § 42-00. The other construction site is located at 831 Kent Avenue (Block 1898, Lot 19) where a New Building permit has been issued for the construction of a two-story building that would contain 6,261 SF of commercial space.

*Affected Area*

No changes to land use within the Affected Area are anticipated in the absence of the Proposed Actions. The existing M1-1 zoning district has been in place for nearly 60 years, and any new commercial or manufacturing development would be required to provide 1 parking space per 300 SF of uses; residential use is not permitted within manufacturing districts except by discretionary approval.

**Figure 2.1-1: Land Use Study Area**



Future With-Action Condition

*Land Use Study Area*

Land use and development patterns in the Land Use Study Area are generally anticipated to remain unchanged in the future with the Proposed Actions.

*Projected Development Site 1*

The rezoning would result in a new 8-story (85-foot-tall) plus cellar mixed-use residential and commercial building. The building would total 12,894 gsf (11,720 zsf; 3.60 FAR), including 10,881 gsf (9,892 zsf); 3.04 FAR) of residential floor area (13 dwelling units including 3 affordable), and 2,013 GSF of ground floor commercial space. No parking is required as the threshold of five residential parking spaces and 15 commercial parking spaces is not met under the MX District M1-4/R6A.

*Projected Development Site 2*

The lots would combine to form a 4,421-SF corner lot and would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 21,335 GSF (15,916 ZSF; 3.60 FAR) of floor area. The ground floor would contain 4,421 GSF (4,421 ZSF; 1.00 FAR) of commercial (local retail) uses, and floors 2 through 8 would include 12,414 GSF (11,495 ZSF; 2.60 FAR) of residential floor area with 15 total dwelling units, 3-5 of which would be permanently set aside at or below 80% AMI. 15 commercial accessory parking spaces would be provided at cellar level in an approximately 4,500 GSF enclosed garage.

*Other Affected Sites*

The sites in the Affected Area include Block 1898, Lots 35 and 7501; Block 1899, Lots 26 and 30. Lot 35 on Block 1898 is occupied by a three-story multifamily residential building built at 1.98 FAR, which is over the current FAR limit for M1-1 of 1.0. The residential building was constructed in 1905 and has six residential dwelling units. Due to the age of the building and the number of dwelling it must be assumed that the building is under rent-control regulations, which makes it unlikely that the Proposed Actions would induce redevelopment at this site. Lot 7501 on Block 1898 is improved with a six-unit multifamily building constructed approximately fifteen years ago pursuant to a 2003 Use Variance. The building's 4.19 FAR exceeds the allowable devilment under the proposed zoning, and therefore the proposed rezoning would not be expected to induce development of the site. Lot 26 on Block 1899 is occupied by a three-story residential building built at 1.8 FAR. An assemblage of more than three lots is generally considered unlikely and this lot's location relative to the three lots which are projected to be assembled into Projected Development Site 2 would result in an irregularly shaped assemblage. Therefore, Lot 26 is not considered to be redeveloped under the Proposed Actions. Lot 30 on Block 1899 contains a three-story residential

building at 1.8 FAR. Due to the unlikely assemblage of more than three lots and the building's relatively high FAR it is unlikely that the Proposed Actions would induce development on Lot 30.

**Conclusion**

The Proposed Rezoning would introduce a new land use (residential) to the area, and would allow mixed-use developments composed of residential, commercial, and light-industrial with increased density and fewer parking spaces required. The Surrounding Area already contains a stable and enduring residential population in low-rise and mid-rise type buildings as well as industrial and commercial land uses. The Proposed Rezoning would allow for the productive redevelopment of the Affected Area with land uses that are similar to the Surrounding Area and therefore the Proposed Actions would not generate land uses that would be incompatible with surrounding uses.

### 2.1.2 Zoning

The proposed zoning map amendment would affect the following lots: Block 1898, Lots 37 and 38 (the Projected Development Site), 35, 7501; Block 1899, Lots 27, 28, and 29 (Projected Development Site 2), 26 and 30. Collectively these lots are identified as the Affected Area.

**Existing Conditions**

Zoning Study Area

The zoning districts within 400 feet of the Affected Area are MX-4 (M1-2/R6A), M1-1, M1-2, and R6A.

**Table 2.1-1: Summary of Existing Zoning Regulations**

**Source**: Zoning Handbook, New York City Department of City Planning, 2019

| Zoning District | Type and Use Group (UG) | Floor Area Ratio (FAR) | Parking (Required Spaces) |
|---|---|---|---|
| **MX-4** | UGs 1-14, 16, 17 | 3.0 FAR for Residential<br>2.0 FAR for Commercial<br>3.0 FAR for Community Facility<br>2.0 FAR for Manufacturing | 50 percent of dwelling units (waived if 5 or fewer spaces required) |
| **M1-1** | Light Manufacturing<br>UGs 4-14, 16, 17 | 1.0 FAR – Manufacturing<br>1.0 FAR – Commercial<br>2.4 FAR – Community Facility | Varies by Use |
| **M1-2** | Light Manufacturing<br>UGs 4-14, 16, 17 | 2.0 FAR – Manufacturing<br>2.0 FAR – Commercial<br>4.8 FAR – Community Facility | Varies by Use |
| **R6A** | Residential<br>UGs 1-4 | 3.0 – 3.6 FAR for Residential<br>3.0 FAR for Community Facility | 50 percent of dwelling units (waived if 5 or fewer spaces required) |

Existing zoning districts in the Surrounding Area include:

MX-4

The Affected Area is adjacent to the MX-4 zoning district that was established on May 9, 2001 as part of the Flushing/Bedford Rezoning (00DCP015K), which rezoned blocks along Skillman Street, Bedford Avenue, and Spencer Street immediately east of the Affected Area to an M1-2/R7-1 special mixed-use district to permit a wider variety of uses. Prior to 2001 the study area of Flushing/Bedford Rezoning was originally zoned for manufacturing uses, however, due to a significant decline in industrial uses over the previous 40 years the area became increasingly occupied by a mix of residential uses, vacant land, open uses, auto-related uses, and commercial and industrial buildings. Furthermore, DCP identified that over the previous two decades there was a substantial growth in the residential population in the area surrounding the current MX-4 district that indicated (1) a housing shortfall and (2) an increasing demand for new dwelling units. The goal of the then-newly created Mx-4 district was to "allow for the continued presence and expansion of commercial and manufacturing uses, permit the introduction of new commercial and manufacturing uses, and allow the residential use of underutilized and vacant land."[2] On June 18, 2001, the DCP issued a Technical Memorandum to modify the Flushing/Bedford Rezoning application to (1) eliminate Block 1885, bounded by Skillman, Park, Franklin, and Flushing avenues; and (2) change the zoning map designation from the mixed use district (MX-4) south of Flushing Avenue from M1-2/R7-1 to the current M1-2/R6A.

Currently, the land use composition of the adjacent MX-4 special mixed-use district is predominantly occupied by residential buildings, specifically multifamily walk-up buildings (46 lots) followed by multifamily elevator buildings (33 lots) and mixed residential/commercial buildings (25 lots). As noted in the Flushing/Bedford Rezoning FEIS, industrial/manufacturing uses represent a minority of the uses in the zoning district with four lots occupied by such uses unlike the adjacent M1-2 district to the west that runs along the Brooklyn-Queens Expressway and includes 26 industrial/manufacturing sites to the east of the highway.

M1-1

The M1-1 district is a light manufacturing district that limits development to 1.00 FAR. In addition to the aforementioned FAR limit, M1-1 districts are also governed by a sky exposure plan that limits building height and setbacks. While the uses in this district are generally limited to the above-mentioned use groups, nearly all permitted industrial uses must meet stringent M1 performance standards and certain community facilities such as hospitals are permitted only by special permit. In regard to parking, the requirements in M1 district vary and are based on the type of use and size of the building. For a warehouse use in this district on off-street parking space

[2] NYC Department of City Planning, Flushing/Bedford Rezoning Final Environmental Impact Statement, 2001, p.S-2

is required for every 2,000-sf of floor area or for every three employees. Despite all restrictions in place for M1 districts it is important to note that these districts often play an important role in acting as a buffer between M2 or M3 districts and adjacent residential or commercial districts.

M1-2

There are M1-2 districts to the north, northeast, and east of the Affected Area, across Park Avenue and adjacent to Lots 30 and 26 of Block 1899. As seen in M1-1 districts, the M1-2 district is a light manufacturing district with high performance standards. The bulk restrictions in the M1-2 district is slightly more relaxed than the M1-1 district in that FAR is limited to 2.0. Parking and loading requirements in M1-2 vary with the actual use of the land, however parking generally requires 1 space for every 300 square feet of floor area. Requirements for loading berths of specified dimensions also differ according to building size and type of use.

R6A

R6A is a medium-density contextual residential district where the Quality Housing bulk regulations are mandatory. These regulations produce high lot coverage, six- to eight-story apartment buildings set at or near the street line. The floor area ratio (FAR) in R6A districts is 3.0 (3.6 with Inclusionary Housing designated area bonus). Above a maximum base height of 60 feet (65 feet with a qualifying ground floor or inclusionary housing bonus) the building must set back by at least 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 70 feet (75 feet with qualifying ground floor, 80 feet with inclusionary housing bonus, or 85 feet with both). To preserve the traditional streetscape, the street wall of a new building can be no closer to the street line than any building within 150 feet on the same block, but need not be farther than 15 feet. The area between a building's street wall and the street line must be planted. R6A buildings must have interior amenities for the residents pursuant to the Quality Housing Program. Off-street parking, which is not allowed in front of a building, is required for 50% of a building's dwelling units (25% of Inclusionary Residential Housing Units), but requirements are lower for income-restricted housing units (IRHU) and are further modified in certain areas, such as within the Transit Zone and the Manhattan Core, or for lots less than 10,000 square feet. Parking can be waived if five or fewer spaces are required. A lot coverage of 100% is permitted for corner lots and 65% for interior or through lots.

Affected Area

The Affected Area is zoned M1-1, which permits light industrial and commercial uses at 1.0 FAR.

**Analysis**

Future No-Action Condition

*Zoning Study Area*
No changes to zoning are anticipated in the future without the Proposed Actions in the Surrounding Area. Existing zoning patterns would remain.

*Affected Area*
No changes to zoning are anticipated in the future without the Proposed Actions within the Affected Area. The Affected Area would continue to be subject to M1-1 zoning.

Future With-Action Condition

*Zoning Study Area*

*Projected Development Site 1 (Applicant-Owned Block 1898, Lots 37 and 38)*

Lots 37 and 38 would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 12,894 GSF (11,722 ZSF; 3.60 FAR): 10,881 GSF (9,892 ZSF; 3.04 FAR) of residential floor area on floors 2 through 8 with 13 total dwelling units, 3-4 of which would be permanently set aside at or below 80% AMI; and 2,013 GSF (1,830 ZSF; .56 FAR) of ground-floor commercial uses (local retail). No parking is required as the threshold of 5 residential parking spaces and 15 commercial parking spaces is not met. The cellar would include bicycle spaces and storage space.

*Projected Development Site 2 (Non-Applicant Block 1899, Lots 27, 28, 29)*

The lots would combine to form a 4,421-SF corner lot and would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 21,335 GSF (15,916 ZSF; 3.60 FAR) of floor area. The ground floor would contain 4,421 GSF (4,421 ZSF; 1.00 FAR) of commercial (local retail) uses, and floors 2 through 8 would include 12,414 GSF (11,495 ZSF; 2.60 FAR) of residential floor area with 15 total dwelling units, 3-5 of which would be permanently set aside at or below 80% AMI. 15 commercial accessory parking spaces would be provided at cellar level in an approximately 4,500 GSF enclosed garage.

*Affected Area – MX District (M1-2/R6A)*

The Proposed Actions would establish an MX District composed of an M1-2 and R6A zoning district within the Affected Area, including the Projected Development Sites and the Other Affected Sites, and would establish the Affected Area as a Mandatory Inclusionary Housing Area. The proposed MX (M1-2/R6A)

envelope is consistent with the adjacent MX-4 (M1-2/R6A) districts mapped in the area. It would permit medium-density residential development at a maximum FAR of 3.6 for developments with permanent affordable housing set aside for a portion of the projected housing pursuant to the MIH program. The maximum building height is 85 feet after a setback from the base height of up to 65 feet. Buildings with a base height of 40 feet or more must be set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum height of 70 feet. Off-street parking is required for 50 percent of the residential dwelling units but is not required for income-restricted housing units within the Transit Zone. Within the proposed MX district, the bulk regulations of Article IV, Chapter 3 would apply to manufacturing, commercial, and community facility uses. M1-2 districts permit a maximum of 2.0 FAR for commercial or manufacturing use, and 4.8 for community facility uses. Parking is not required for industrial or commercial uses in the MX M1-2/R6A districts.

As noted earlier, for this analysis two projected development sites have been identified. On the applicant-owned Project Site, Projected Development Site 1, a mixed residential and commercial development with maximum FAR of 3.60 would be permitted. Under the worst-case development scenario, the rezoning would result in a new 8-story (85-ft) tall plus cellar mixed -use residential and commercial building. The building would contain 12,894 gsf (11,720 zsf; 3.60 FAR) that includes 10,881-gsf (9,892 zsf); 3.04 FAR) of residential floor area to provide 13 dwelling units, with 3-4 affordable units. No parking is required as the threshold of five residential parking spaces and 15 commercial parking spaces is not met under the MX District M1-4/R6A.

On Projected Development Site 2, three non-applicant owned lots on Block 1899 would be assembled and develop. The lots would combine to form a 4,421-sf corner lot and would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 21,335 GSF (15,916 ZSF; 3.60 FAR) of floor area. The ground floor would contain 4,421 GSF (4,421 ZSF; 1.00 FAR) of commercial (local retail) uses, and floors 2 through 8 would include 12,414 GSF (11,495 ZSF; 2.60 FAR) of residential floor area with 15 total dwelling units, 3-5 of which would be permanently set aside at or below 80% AMI. 15 commercial accessory parking spaces would be provided at cellar level in an approximately 4,500 GSF enclosed garage.

**Conclusion**

The Proposed Actions would establish a medium-density mixed-use residential district that would mandate the provision of a substantial amount of affordable housing and would bring existing legal non-conforming buildings into compliance. The new development would be consistent with manufacturing land uses in the Surrounding Area. The Proposed Actions would continue the zoning trend that has been established with the mapping of the nearby special mixed-use district (MX-4) to allow redevelopment of underutilized land for new market rate and affordable housing with ground floor commercial space. This trend is further demonstrated with the construction of a multifamily residential building at 91 Franklin Avenue (Block 1899, Lot 24), which was facilitated through a BSA variance (CEQR No. 12BSA108K). The development resulting from the Proposed Actions would not result in significant adverse impacts to zoning, therefore no further analysis is required.

### 2.1.3 Public Policy

The Affected Area is not part of, or subject to, an Urban Renewal Plan (URP), an adopted community 197-a Plan, or a Solid Waste Management Plan. The Proposed Actions are also not a large publicly sponsored project, and as such, consistency with the City's PlaNYC 2050 for sustainability is not warranted. The Affected Area is located in a transit zone, where parking is optional for new affordable units.

***Transit Zone***

The Project Site is in a Transit Zone, which has a lower accessory parking requirement for various types of affordable housing including income restricted housing units (or IRHUs) and generally apply to areas within one-half mile of a subway station where auto ownership rates area among the lowest in the city. Although the Proposed Actions would result in the development of residential units and includes affordable housing units, under the Proposed Actions the number of residential units would not require accessory parking to be provided. Thus, parking requirements under Transit Zone regulations would not apply.

***Food Retail Expansion to Support Health (FRESH) Program***

The Affected Area is within a FRESH Program zone that offers zoning incentives and financial benefits to develop and retain convenient and accessible stores in underserved communities that provided fresh meat, fruit and vegetables, and other perishable goods. Such zoning incentives include additional floor area in mixed use buildings reduced parking requirements, and the construction of larger grocery stores as-of-right in light manufacturing districts. Since the Proposed Actions do not include a space for grocery store and the Applicant is not seeking a Certification for a FRESH food store, the zoning incentives regulations under the FRESH program would not apply.

**Conclusion**

The Proposed Actions would not affect or impact public policy, accordingly, further analysis of public policy is not required.

## 2.2 Historic and Cultural Resources

An assessment of historic and cultural resources is usually necessary for projects that are located in close proximity to historic or landmark structures or districts, or for projects that require in-ground disturbance, unless such disturbance occurs in an area that has been formerly excavated, according to the *2021 CEQR Technical Manual*.

The term "historic resources" defines districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, architectural and archaeological importance. In assessing both historic and cultural resources, the findings of the appropriate city, state, and federal agencies are consulted. Historic resources include: the New York City Landmarks Preservation Commission (LPC) designated landmarks, interior landmarks, scenic landmarks, and historic districts; locations being considered for landmark status by the LPC; properties/districts listed on, or formally determined eligible for, inclusion on the State and/or National Register (S/NR) of Historic Places; locations recommended by the New York State Board for Listings on the State and/or National Register of Historic Places and National Historic Landmarks.

### 2.2.1 Architectural Resources

Per *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the Proposed Actions and in the area surrounding identified development sites. The historic resources study area is therefore defined as the project site plus an approximately 400-foot radius around the Proposed Actions area. To determine whether the Proposed Development has the potential to affect nearby off-site historic or architectural resources, the study area is screened for historic and architectural resources. No architectural resources were found in the project area that were considered historic or significant.

The LPC was contacted on June 4, 2020 for their initial review of the project's potential to impact nearby historic and cultural resources. In a letter dated August 28, 2020, indicating that the Study Area does not contain any sites of buildings of known architectural significance (*see* **Appendix A**).

### 2.2.2 Cultural and Archaeological Resources

Unlike the architectural evaluation of a Study Area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts to archaeological resources is controlled by the actual footprint of the limits of soil disturbance. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells and privies. The CEQR Technical Manual requires a detailed evaluation of a project's potential effect on the archeological resources if it would potentially result in an in-ground disturbance to an area not previously excavated.

The project would result in an in-ground disturbance to develop the Projected Development Sites. As

noted, LPC was contacted for their initial review of the proposed project's potential to impact historic and cultural resources on or near the Affected Area. The LPC determined the site has no archeological significance via letter dated August 28, 2020 (*see* **Appendix A**), which confirmed that Projected Development Sites were not found to be archaeologically sensitive for historic resources. Thus, the Proposed Action is not anticipated to result in significant adverse impacts to archaeology.

## 2.3 Shadows

The *CEQR Technical Manual* defines a shadow as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space, or feature. An incremental shadow is an additional or new shadow that a building or other built structure resulting from a proposed project would cast on a sunlight-sensitive resource during the year. The sunlight-sensitive resources of concern are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity, including public open space, architectural resources, and natural resources. Shadows can have impacts on publicly accessible open spaces or natural features by adversely affecting their use and important landscaping and vegetation. In general, increases in shadow coverage make parks feel darker and colder, affecting the experience of park patrons. Shadows can also have impacts on historic resources whose features are sunlight-sensitive, such as stained-glass windows, by obscuring the features or details, which make the resources significant.

The duration and dimensions of shadows are determined by the geographic location of the area from which the shadow is cast and the time of day and season. Shadows cast during the morning and evening, when the sun is low in the sky, are longer, while midday shadows are shorter in length. Shadows in winter, when the sun arcs low across the southern sky, are also longer throughout the day than at corresponding times in spring and fall seasons. In summer, the high arc of the sun casts shorter shadows than at any other time of year, and early and late shadows during the summer are cast towards the south than shadows cast in early and late winter months.

The *CEQR Technical Manual* states that a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is warranted only if the project would either result in: (a) new structures (or additions to existing structures including the addition of rooftop mechanical equipment) of 50 feet or more; or, (b) be located adjacent to, or across the street from, a sunlight-sensitive resource. However, a project located adjacent to or across the street from a sunlight-sensitive open space resource (which is not a designated New York City Landmark or listed on the State/National Registers of Historic Places, or eligible for these programs) may not require a detailed shadow assessment if the project's height increase is ten feet or less.

In general, shadows on city streets and sidewalks or on other buildings are not considered significant. Some open spaces also contain facilities that are not sensitive to sunlight. These are usually paved such as handball or basketball courts, contain no seating areas and no vegetation, no unusual or historic plantings, or contain only unusual or historic plantings that are shade tolerant. These types of facilities do not need to be analyzed for shadow impacts. Additionally, it is generally not necessary to assess resources located to the south of projected development sites, as shadows cast by the action-generated development would not be cast in the direction of these resources. Furthermore, shadows occurring within one and one-half hour of sunrise or sunset generally are not considered significant in accordance with the *CEQR Technical Manual*.

**Methodology**

A preliminary analysis of shadows follows the guidelines set forth in the *2021 CEQR Technical Manual* for a preliminary assessment (Section 310). According to the *2021 CEQR Technical Manual*, a preliminary shadow assessment includes the development of a base map showing the site location in relation to any sunlight-sensitive resources as per guidelines provided in the *2021 CEQR Technical Manual*. Following these guidelines, the longest shadow study area is determined, and a Tier 1 screening assessment is conducted to determine if any sunlight-sensitive resources fall within the study area. If no resources are found, no further analysis would be needed. If sunlight-sensitive resources lay within the longest shadow study area, the next tier of screening assessment should be conducted. This preliminary assessment includes a basic description of the Proposed Development that would be facilitated by the Proposed Actions in order to determine whether a more detailed assessment would be appropriate.

**Analysis**

Tier 1 Screening Assessment

Under the Future With-Action condition, Projected Development Sites 1 (Block 1898, Lots 37 and 38) and Projected Development Site 2 could be developed with new buildings having a maximum height of 100 feet (85-foot maximum building height plus a 15-foot mechanical bulkhead) and the longest action-induced shadow would be approximately 430 feet (4.3 x 100 feet) in length. The first step in a shadow analysis is to determine if there are any sunlight sensitive resources located within a radius of this length. As **Figure 2.3-1** shows, there are no sunlight sensitive resources within 430 feet of the Projected Development Sites. Therefore, a Tier 2 Screening Assessment is not warranted and no further analysis is required.

**Figure 2.3-1: Tier 1 Shadow Study Screening**



## 2.4 Urban Design and Visual Resources

According to the *2021 CEQR Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements that play an important role in the pedestrian's experience include streets, buildings, visual resources, open space, and natural features, as well as wind as it relates to channelization and downwash pressure from tall buildings. Pursuant to the *2021 CEQR Technical Manual*, an assessment of Urban Design may be warranted when a Proposed Actions may affect one or more of the elements that contribute to the pedestrian experience of an area, specifically the arrangement, appearance, and functionality of the built environment.

The proposed rezoning of the Affected Area from M1-1 to an MX District combining M1-4/R6A would alter the permitted use, bulk, and height within the Affected Area. Therefore, further analysis is warranted. The difference between existing and proposed zoning, with regards to those aspects of zoning affecting urban design, are presented in the following **Table 2.4-1**.

**Table 2.4-1: No-Action and With-Action Zoning Controls**

| | **No-Action** | **With-Action** |
|---|---|---|
| **Zoning** | M1-1 | MX: M1-4/R6A |
| **Permitted Uses** | Commercial, community facility, and manufacturing | Residential, commercial, community facility, manufacturing |
| **Maximum FAR** | 2.4 community facility<br>1.0 commercial<br>1.0 manufacturing | 3.6 residential (with mandatory inclusionary housing)<br>3.0 community facility<br>2.0 commercial<br>2.0 manufacturing |
| **Base Height** | 30 feet or 2 stories, whichever is less | 65 feet |
| **Building Height** | Governed by sky exposure plane | 85 feet maximum height with qualifying ground floor. |

Existing Condition

The 400-foot Study Area is located in the Bedford-Stuyvesant neighborhood of Brooklyn. Ground-level photographs of the Affected Area and the Surrounding Area are provided along with photo keys **(Figure 1.6-1 to Figure 1.6-3)**.

The street grid is regular where the streets are perpendicular to each other at the intersections and the blocks are rectangles near the site. As noted earlier, Park Avenue is a 70-foot east-west two-way street with one moving lane in each direction and curbside parking. Franklin Avenue is a 60-foot southbound roadway with a single moving lane of traffic and curbside parking on both sides of the road. In regard to

the street hierarchy of the study area, both Park and Franklin Avenues are classified as Minor Arterial Roadways by the New York State Department of Transportation.[4]

There are few streetscape elements within the Study Area. Along Park Avenue, the concrete sidewalks are of moderate quality with an average width of approximately 16 feet, which are generally clear of obstructions to pedestrians and devoid of any street trees. Exceptions of the existing street trees are located in front of the 6-story multi-family elevator residential building on Block 1898 Lot 7501 (86 Franklin Avenue) and in front of the 5-story elevator residential condo building on Block 1885 Lot 7501 (55-57 Franklin Avenue) to the north of the Affected Area. West of the Affected Area and Projected Development Site 1, on the same side of the Park Avenue, is an outdoor parking facility located on Block 1898 Lots 29-34 (430-440 Park Avenue) and Block 1898 Lot 25 (813 Kent Avenue), spanning seven lots with plywood fencing along the sidewalk and vehicle entrance with a gate on Lot 34. At the intersection of Park and Franklin Avenue is a 4-story mixed residential and commercial building with a café on the ground floor fronting Franklin Avenue on Block 1899 Lot 29 (83 Franklin Avenue).

Existing land uses in the Surrounding Area primarily consist of multi-family residential, industrial and manufacturing, mixed residential and commercial, and parking facilities. The built form in the area varies by different land uses, and generally consists of low-rise industrial and commercial buildings and two- to six-story residential buildings. The manufacturing buildings are mostly 3 stories in height with a few that are 1 or 2 story in height. The residential buildings mainly consist of multifamily walkup buildings and a few multifamily elevator buildings, which range from 2 to 6 stories in height. Most buildings within the Study Area are arranged regular (parallel) with respect to their lot placement.

There is one development located at 91 Franklin Avenue (Block 1899, Lot 24), directly south of the Affected Area adjacent to Lot 26, which would develop a four-story multifamily building with eight dwelling units. The development was facilitated through a variance granted by the BSA pursuant to ZR § 72-21 contrary to use regulations under ZR § 42-00. Though the building has residential uses that is not allowed by the existing M1-1 zoning regulations, the building form remains compliance with the regulations.

No significant visual resources or open space is located within the Study Area.

Future No-Action Condition

The No-Action Scenario for the Affected Area is the same as Existing Conditions. The existing M1-1 zoning district has been in place for nearly 60 years, and any new commercial or manufacturing development would be required to comply with the designated zoning regulations. Residential use is not permitted within manufacturing districts except by discretionary approval. Without the Proposed Actions, there

[4] NYSDOT, Functional Classification Map – NYSDOT Region 11: Kings County (May 2017), https://www.dot.ny.gov/divisions/engineering/technical-services/hds respository//Functional_Class_Map_Region_11_Kings_-_May_2017.pdf

would not be any changes given the limited bulk allowed and the strict parking requirements under the existing zoning. Therefore, no significant changes to the area's urban character are anticipated.

Future With-Action Condition

With the Proposed Actions, an MX District composed of an M1-2 and R6A zoning district would be established within the Affected Area, including the Projected Development Sites and the Other Affected Sites. Meanwhile, the Proposed Actions would establish the Affected Area as a Mandatory Inclusionary Housing Area.

The proposed MX (M1-2/R6A) envelope is consistent with the adjacent MX-4 (M1-2/R6A) districts mapped in the area. It would permit medium-density residential development at a maximum FAR of 3.6 for developments with permanent affordable housing set aside for a portion of the projected housing pursuant to the MIH program. The maximum building height is 85 feet after a setback from the base height of up to 65 feet. Buildings with a base height of 65 feet or more must be set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum height of 85 feet. Off-street parking is required for 50 percent of the residential dwelling units but is not required for income-restricted housing units within the Transit Zone. Within the proposed MX district, the bulk regulations of Article IV, Chapter 3 would apply to manufacturing, commercial, and community facility uses. M1-2 districts permit a maximum of 2.0 FAR for commercial or manufacturing use, and 4.8 for community facility uses. Parking is not required for industrial or commercial uses in the MX M1-2/R6A districts.

*Projected Development Site 1 (Applicant-Owned Block 1898, Lots 37 and 38)*

Under the With-Action condition, Lots 37 and 38 would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 12,894 GSF (11,722 ZSF; 3.60 FAR): 10,881 GSF (9,892 ZSF; 3.04 FAR) of residential floor area on floors 2 through 8 with 13 total dwelling units, 3 units of which would be permanently set aside at or below 80% AMI; and 2,013 GSF (1,830 ZSF; .56 FAR) of ground-floor commercial uses (local retail). No parking is required as the threshold of 5 residential parking spaces and 15 commercial parking spaces is not met. The cellar would include bicycle spaces and storage space.

The proposed building would not be significantly higher or larger than the adjacent buildings. Sidewalks around the site would remain the same as the existing condition. Two street trees would be added along Park Avenue as part of the project to provide a pedestrian friendly environment and to improve pedestrian experience.

The proposed building envelope on Projected Development Site 1 would not exceed the maximum FAR (3.60) or the maximum building height (85 feet) allowed by the proposed zoning regulations. It also features a qualified ground floor of 15 feet used as local retail space and the residential lobby, which is higher than the required minimum ground floor height of 13 feet. Furthermore, the building would set back a depth of 15 feet after rising up to the maximum allowed 65 feet base height to comply with the

proposed MX (M1-2/R6A) zoning regulations, given that Park Avenue is a narrow street with a width of less than 75 feet. The building would comply with the MIH regulations by permanently setting aside 20% of the total dwelling units for households at or below 80% AMI.

The proposed building under the With-Action condition is different from the Applicant's actual proposed building with a larger GSF, a higher FAR, and a higher building height. It is chosen for a more conservative analysis as the use of the reasonable worst-case development scenario ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review.

*Projected Development Site 2 (Non-Applicant Block 1899, Lots 27, 28, 29)*

The lots would combine to form a 4,421-SF corner lot and would be improved with a new 8-story, 85-foot-tall plus cellar mixed-use residential and commercial building. The building would contain 21,335 GSF (15,916 ZSF; 3.60 FAR) of floor area. The ground floor would contain 4,421 GSF (4,421 ZSF; 1.00 FAR) of commercial (local retail) uses, and floors 2 through 8 would include 12,414 GSF (11,495 ZSF; 2.60 FAR) of residential floor area. Parking is anticipated to be included with 15 commercial accessory spaces at cellar level in an approximately 4,500 GSF enclosed garage.

The new building would be featured with multiple entrances, including three commercial entrances on both Franklin Avenue and Park Avenue and a residential lobby entrance on Franklin Avenue. A curb cut would be placed on Franklin Avenue more than 50 feet to the south of the intersection between Franklin Avenue and Park Avenue. Franklin Avenue is a one-way street with narrower street width and lighter traffic flows than that along Park Avenue, which would cause less interference with the existing traffic flow and avoid accidents.

**Figure 2.4-1: Urban Design Study Area – Photomontage Locations**

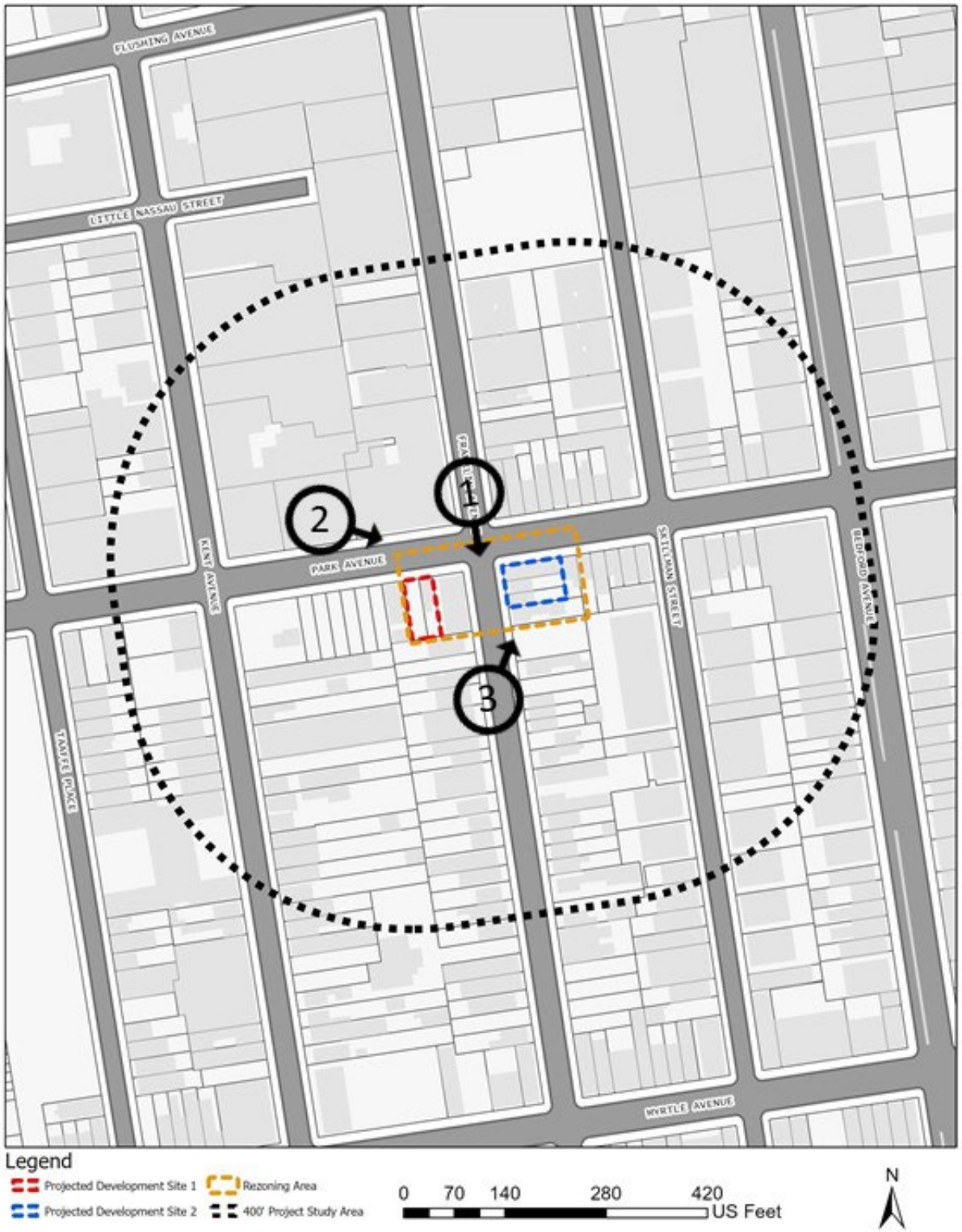


**Figure 2.4-2: Existing Condition and No-Action Condition 1 – Looking South North of the Park and Franklin Avenue Intersection along Franklin Avenue**




**Figure 2.4-3: With-Action Condition 1 – Looking South North of the Park and Franklin Avenue Intersection along Franklin Avenue**



**Figure 2.4-4: Existing Condition and No-Action Condition 2 – Looking at the Applicant-Owned Projected Development Site (Projected Development Site 1)**

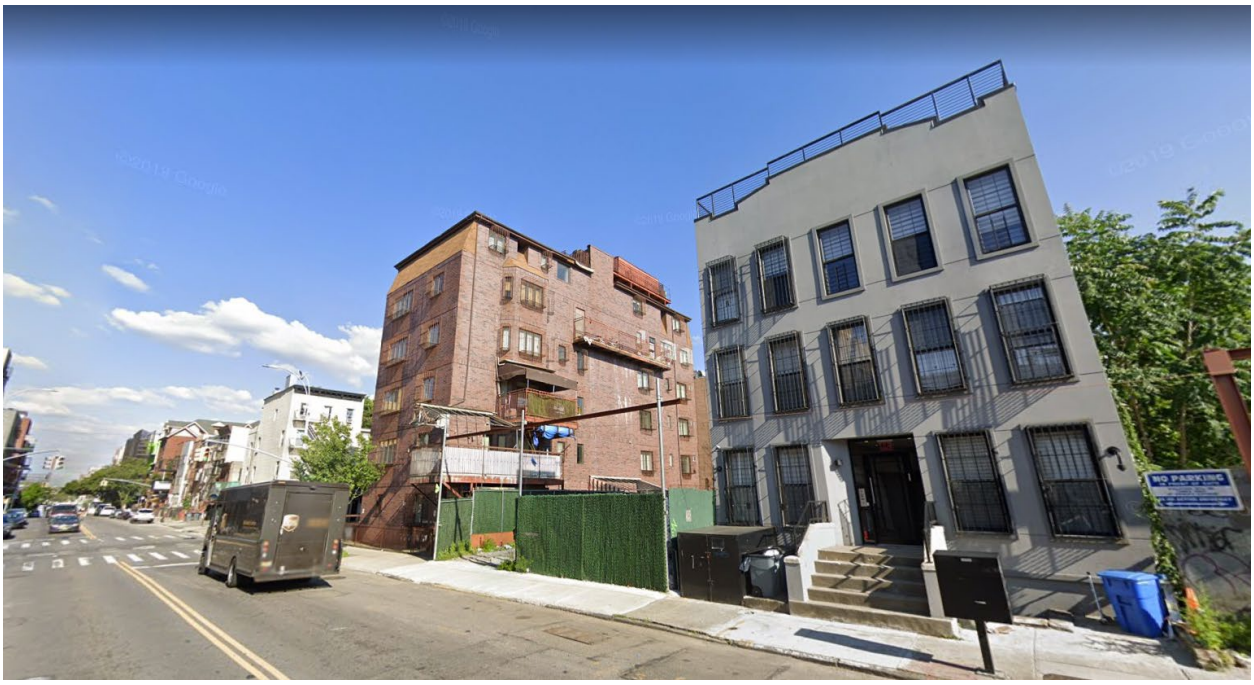


**Figure 2.4-5: With-Action Condition 2: Looking at the Applicant-Owned Projected Development Site (Projected Development Site 1)**



**Figure 2.4-6: Existing Condition and No-Action Condition 3 – Looking at the Non-Applicant-Owned Projected Development Site (Projected Development Site 2)**



**Figure 2.4-7: With-Action Condition 3 - Looking at the Non-Applicant-Owned Projected Development Site (Projected Development Site 2)**



**Conclusion**

The development which would occur under the Proposed Actions would not have an adverse impact on the area's urban design elements. It would allow development of two new multi-story, mixed-use buildings on both Projected Development Sites with a base height of 65 feet and a building height of up to 8 stories at 85 feet.

The new developments would be consistent with the built form in the Surrounding Area although at a slightly greater height and scale. It would not result in buildings which are substantially different in height, bulk, scale and/or use than the component of the existing built form consisting of multi-story residential buildings. The BSA trends within the Study Area introduce residential uses of moderate density to the area, which is similar to what the proposed development would be constructed.

It would not affect street hierarch or pedestrian activity, although it designs for one curb cut for cellar parking for the commercial space anticipated for Projected Development Site 2. The street wall would change for Projected Development Site 1 since an existing vacant parking lot currently occupies the site and under the With-Action condition there would be an 8-story building. The change of the street wall, along with the development of the new ground floor local retail space, would provide a consistent and unanimous pedestrian experience within the Study Area. As illustrated in the renderings above, the figures show the projected building and surrounding environment under the Proposed Actions, which would provide context and a sense of place with active ground floor local retail space that attracts pedestrians in an area of transition.

**Visual Resources**

There are no significant visual resources within the vicinity of the Affected Area. The Proposed Actions would not block any public view of a resource of significant aesthetic value. Therefore, it would not result in significant adverse impacts related to urban design and visual resources.

## 2.5 Hazardous Materials

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.

### Methodology

The hazardous materials assessment begins with a Phase 1 ESA, which is a qualitative evaluation of the environmental conditions present at a site, based on a review of available information, site observations, and interviews. The Phase 1 ESA includes research and field observations to determine whether the site may contain contamination from either past or present activities on the site or as a result of activities on adjacent or nearby properties. If a potential REC is identified during this assessment, then building any subsurface investigations are usually conducted as part of a Phase II ESA to confirm the presence and extent of the contamination.

### Analysis

Block 1898/Lots 37 and 38 is owned by the Applicant and is currently vacant. The proposed rezoning would allow for residential, commercial, community facility, and light industrial uses to be built with a higher FAR in a new Special Purpose District (MX). Accordingly, a Phase I Environmental Site Assessment (ESA) for the Development Site was prepared by Equity Environmental Engineering (Equity) on January 23, 2015. A copy of this report is included as an Attachment.

The purpose of a Phase I ESA is to determine whether any type of environmental hazard exists within or adjacent to the project site. Environmental hazards may include, but are not be limited to, hazardous/toxic wastes or raw chemicals stored, dumped, or spilled on the site, underground and above ground storage of petroleum or hazardous materials; asbestos within the building materials/structures; and identification of potential off-site sources of hazardous waste contamination, such as industrial facilities adjacent to the subject property.

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. De minimis RECs are those that do not present a threat to health or the environment and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis RECs, were considered in the Phase I.

Equity Environmental Engineering, LLC (Equity) has performed a Phase I ESA (contained in **Appendix E-1**) in conformance with the scope and limitations of ASTM Practice E 1527-13. The following conditions were observed:

- The Subject Property - It is comprised of 3,300 square feet of land and is currently vacant, however at the time that the Phase I ESA was prepared an empty recreational trailer was found on the southeastern part of the property in addition to demolition debris on the eastern side of the property and new construction material on the northern side of the property. Six months prior to the preparation of the Phase I ESA the property was occupied by a vacant three-story residential building that was eventually demolished following the issuance of an emergency order by the fire department due to the building's unsafe conditions.
- RECs - There is one REC associated with the Subject Property. Small areas of stained soil were identified on the subject property in various locations.
- HRECs - Equity found no HRECs associated with the property.
- CRECs - Equity found no CRECs associated with this property.
- VECs - The Project Site is listed twice in the 'NY Spills' database for a release of an unknown petroleum by Con Edison during maintenance of manholes located adjacent to the subject property. It was reported that two quarts were released on 300 gallons of water and remediated. Although it has been determined that there is no impact to the site based on the quantity of petroleum spilled and subsequent remediation of the site, a VECs (Vapor Encroachment Conditions) can be ruled out for the Applicant-Owned Projected Development Site.

The following conditions were identified for the Surrounding Area:

- Environmental Database Reports (EDR) identified multiple environmental spills were identified within 1/8 of a mile; 24 underground storage tank sites, 16 aboveground storage tank sites within 1/4 of a mile; and 42 leaking storage tank sites and 4 brownfield sites within 1/2 a mile of the Applicant-Owned Development Site.

**Phase I ESA Recommendations**

A subsurface (Phase II) investigation was recommended prior to any future development of the Property that involves subsurface disturbance, to investigate the areas of stained soil on the Applicant-Owned Development Site.

**Phase II Remedial Investigation Workplan**

Because of a REC from the observed stained soil on the Applicant-Owned Projected Development Site, a Phase II Remedial Investigation Workplan (RIWP) and a Health and Safety Plan (HASP) (contained in **Appendix E-2**) was prepared by Equity in June and August of 2018, respectively. The New York City Department of Environmental Protection (DEP) provided initial comments on September 14, 2018, which was followed by a revised RIWP prepared in September of 2018 and an approval on October 18, 2018. An investigation of soil, soil vapor, and groundwater were proposed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The sampling procedures of the investigation were proposed in accordance with NYSDEC Technical Guidance for Site Investigations and Remediation DER-10. The RIWP proposed four (4) test borings, three (3) temporary

monitoring wells and four (4) soil-gas points.

**Phase II Remedial Investigation Report**

A Phase II Site Investigation was performed on December 22, 2021 by Equity. Subsequently, a Remedial Investigation Report (RIR) was prepared (contained in **Appendix E-3**). The findings of the RIR are as follows:

- Four (4) soil vapor points were installed and sampled. Soil vapor sample were collected from these locations over a 2-hour period to evaluate soil vapor quality. All samples were analyzed for TO-15.
    - The soil vapor samples indicated that PCE was detected at concentrations ranging from 24 ug/$m^3$ to 102 ug/$m^3$ and TCE was detected at concentrations ranging from 0.86 ug/$m^3$ to 3.8 ug/$m^3$. PCE and TCE concentrations are above the most recent air guideline values. In addition, the maximum concentration of methylene chloride was 4.9 ug/$m^3$, which is below the air guideline value of 60 ug/$m^3$.
    - Concentrations of total benzene (maximum of 10 ug/m3), toluene (maximum of 52 ug/m3), ethylbenzene (maximum of 5.2 ug/m3), total xylenes (maximum of 23 ug/m3), collectively known as BTEX and Tertiary Butyl alcohol (TBA) (maximum of 17 ug/m3) are indicative of the presence of petroleum-related materials.
- Four (4) soil borings were installed and nine (9) soil samples (8 samples and 1 duplicate) were collected for chemical analysis to evaluate soil quality.
    - The soil samples indicted that there were no exceedances above the soil criteria for VOCS. SVOCs were detected with two (2) exceedances above the Unrestricted Use, Residential, and Restricted Residential Use criteria. Pesticides were detected with two (2) exceedances above the Unrestricted Use criteria. Multiple samples and metals were found in exceedance of all criteria.

**Summary of Remedial Action Workplan**

A Remedial Action Workplan (RAWP) was prepared based on the findings of the RIR (provided in **Appendix E-4**). The following tasks comprise the Remedial Action Plan:

1. The preparation of a Construction Health and Safety Plan (CHASP) for the protection of onsite workers during construction.
2. Waste Classification soil sampling will be required for offsite soil disposal approvals. Review of the onsite soil excavation plans, to determine depths of excavation and applicable T&D (Transportation and Disposal) facilities for offsite disposal for soil spoils created during construction activities on the Subject Property.
3. A vapor barrier will be designed and installed under the proposed building slab and on the sidewalls of the foundation. The vapor barrier, W.R. Grace Florprufe 120 or an approved equivalent, will be designed in conjunction with the proposed building architect and be at least 20 mils thick. A geosynthetic liner or 2-inch-thick foam core will be placed between the sub-grade and the vapor barrier. The barrier will be installed under the entire slab and be anchored into the

foundation walls. A cross section of the vapor barrier is shown on Figure 4. The seams will overlap as required by the vendor and taped. Pipe penetrations will be sealed with liquid Bithuthene or equivalent. Specifications of the proposed barrier shall be forwarded to the DEP for review and approval prior to construction.

4. Contaminated soil from within the proposed building footprint will be excavated to the extent necessary for construction with proper disposal at an offsite disposal facility. Approximately 1,350 tons of soil will be excavated from the site.
5. During the soil excavation and or movement onsite, a Community Air Monitoring Program (CAMP) will be implemented to monitor the site for potential offsite migration of dust and volatile organic emissions for the soil. The program is in accordance with the NYSDEC Division of Environmental Remediation DER-10. The CAMP will consist of upwind and downwind monitoring stations onsite with preset limits above which alarms will be triggered for mitigative measures to be taken.
6. The CAMP data will be provided to the DEP in periodic construction reports.
7. Should visual observations and or the CAMP monitors indicate that there is a dust problem, water will be available to spray the appropriate areas. In addition, the activity that caused the dust will be modified as appropriate to prevent further occurrences. Soil stockpiles, if any, will be covered when not in use and at the end of each day they are onsite. A tracking pad will be established at the site entrance to minimize the offsite transport of soil on truck tires.
8. Trucks transporting excavated soil offsite will be logged using the truck number if any, license plate, manifest of bill of lading, company name, and destination, at a minimum.

**Soils Excavation & Soils Management**

Given the location and size of the subject property it is likely that the excavated soil will be live-loaded into trucks for offsite disposal. If the soil is stockpiled onsite, it will be done on and covered with plastic sheeting. This includes any petroleum contaminated soil if observed onsite. Based on the proposed development plans, it is estimated that approximately 1,350 tons of soil will need to be excavated to reach the desired subgrade depths for construction.

The excavated material shall be properly handled, transported, and disposed of in accordance with applicable local, state, and federal laws and regulations. Dust suppression will be maintained by the contractor during soil excavation and grading operations.

Should any USTs (Underground Storage Tanks) or ASTs (Above ground Storage Tanks) (including dispensers, piping, and fill-ports) be found during the site excavation they will be properly managed and closed/removed in accordance with applicable local, state, and federal laws and regulations.

Although not anticipated, should site dewatering and discharge into New York City storm/sewer drains be required, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained prior to the start of any dewatering activities.

**Backfill**

Any areas of the site to be landscaped or covered with grass (not capped with an impervious surface) must have a minimum of 2-feet of DEP approved clean fill/top soil imported from an approved facility/source and graded across the landscaped/grass areas. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, and TAL metals by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory, and compared to the NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs. Upon completion of the investigation activities, the Applicant should submit a detailed clean soil report for DEP review and approval. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

**Conclusion**

With the above remedial measures in-place, the potential for significant environmental impact associated with hazardous materials would be mitigated for Projected Development Site 1 (Applicant owned). To preclude the potential for significant adverse impact on the non-applicant owned Projected Development Site 2 (Block 1899, Lots 27, 28, and 29), an E-Designation will be placed to assure that testing and mitigation will be performed, as necessary, before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation (OER). With these provisions in place, the Proposed Actions would not result in the potential for significant adverse impact related to Hazardous Materials.

The E-Designation language related to Hazardous Materials is as follows:

**E-Designation (E-681)**

**Projected Development Site 2 (Non-Applicant-Owned Block 1899, Lots 27, 28, 29)**

**Task 1-Sampling Protocol**

The Applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if

any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

**Task 2-Remediation Determination and Protocol**

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The Applicant must complete such remediation as determined necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

## 2.6 Air Quality

Ambient air quality describes pollutant levels in the surrounding environment to which the public has access. The impact of air pollutants emitted by motor vehicles (mobile source) and by fixed facilities (stationary source) are analyzed to assess potential health hazards due to ambient air quality, where the effects of both the proposed project on ambient air quality and the ambient air quality effect on the proposed project are considered. The analysis framework, as mandated by the State Environmental Review Act, follows the *2021 CEQR Technical Manual.* The potential air quality impacts of the resulting emissions are estimated following the procedures and methodologies prescribed in the *CEQR TM*:

- *The potential for changes in vehicular travel associated with proposed development activities to result in significant mobile source (vehicular related) air quality impacts.*
- *The potential for an atypical (e.g., not at-grade) source of vehicular pollutants to significantly impact the proposed development.*
- *The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the proposed development to significantly impact nearby planned and/or existing land uses.*
- *The potential for air toxic emissions released from existing industrial facilities to significantly impact the proposed development.*
- *The potential for significant air quality impacts from the emissions of facilities that require Prevention of Significant Deterioration permits (Title V), and facilities which require a state facility permit to significantly impact the proposed development.*
- *The potential for facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.*

**Project Description**

The Affected Area, located in the Bedford Stuyvesant neighborhood of Brooklyn, Community District 3, is comprised of 5 lots on Block 1898 and 1899. Projected Development will occur at two separate sites on either block.

The Proposed Development on Projected Development Site 1 would be a 12,894 GSF, mixed-use commercial and residential building with a height of 85 feet. The building would contain 10,881 GSF of residential floor area and 2,013 GSF of retail commercial space. The building's HVAC equipment would operate on natural gas under the RWCDS.

The Development on Projected Development Site 2 would contain 12,414 GSF of residential floor area, 4,421 GSF of retail commercial space, and 15 commercial accessory parking spaces would be provided at cellar level in an approximately 4,500 GSF enclosed garage. The building would rise to a height of 85 feet. The building's HVAC equipment would operate on natural gas under the RWCDS.

The Other Affected Sites under the RWCDS would remain the same as the existing conditions. **Table 2.6-1** summarizes the Affected Area.

**Table 2.6-1: The RWCDS of the Affected Area.**

| Site ID | Block | Lot | Building Height (feet) | Gross Floor Area | No. of Parking Spaces |
|---|---|---|---|---|---|
| **Projected Development Site 1** | 1898 | 37 & 38 | 85 | 12,894 | 0 |
| **Projected Development Site 2** | 1899 | 27, 28, 29 | 85 | 21,335 | 15 |
| **Other Affected Site 1** | 1898 | 7501 | 72.5 | 17,000 | 0 |
| **Other Affected Site 2** | 1898 | 35 | 3.5 | 5,500 | 0 |
| **Other Affected Site 3** | 1899 | 26 | 35 | 2,466 | 0 |
| **Other Affected Site 4** | 1899 | 30 | 35 | 2,250 | 0 |

## Methodology & Standards

### *Air Pollutants and Applicable Standards/Guidelines*

*National Air Quality Standards*

The U.S. Environmental Protection Agency (EPA) has identified six pollutants, known as criteria pollutants which are being of concern nationwide, and established threshold concentration based upon adverse effect on human health. The six pollutants and their characteristics are:

*Carbon Monoxide (CO) is mainly produced by motor vehicles from the incomplete combustion of gasoline. The impact of CO on the ambient air is analyzed next to roadways, intersections, parking lots, and parking garages vents as these locations are the most affected.*

*Nitrogen Dioxide ($NO_2$) is a main concern related to the burning of natural gas. Emitted NOx from the burning of fossil fuel gradually convert to $NO_2$ in a chemical reaction that is affected by ozone concentration and the presence of sunlight. In a micro scale analysis, buildings HVAC systems are analyzed for $NO_2$ impact.*

*Ozone ($O_3$) is formed by chemical reaction between hydrocarbons and nitrogen oxides and its impact is analyzed on a regional scale by monitoring stations.*

*Lead (Pb) in the ambient air is monitored on a regional level. In a project scale analysis, impact due to Lead concentration levels are analyzed if a new source, such as lead smelters, is introduced into the environment or if a project is located next to a lead emitter.*

*Particulate Matter emissions are associated with both stationary sources and mobile sources. Two sizes of particulate matters are analyzed: Inhalable Particles ($PM_{10}$) and Fine Particulate Matter ($PM_{2.5}$), where the subscript number refers to the diameter of the particulate matter in micrometers.*

*Sulfur Dioxide ($SO_2$) emission is principally associated with stationary sources that use oil or coal as the fossil fuel for the equipment. These fuels contain sulfur that bond to oxygen atoms in the burning process.*

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards. The $NO_2$, $SO_2$, and $PM_{2.5}$ standards together with their health-related averaging periods are presented in **Table 2.6-2**.

*$NO_2$ NAAQS*

Nitrogen oxide ($NO_x$) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The $NO_x$ in these emissions are then gradually converted to $NO_2$, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 1-hour $NO_2$ NAAQS standard of 0.100 ppm (188 $\mu g/m^3$) is the 3-year average of the 98$^{th}$ percentile of daily maximum 1-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating 1-hour $NO_2$ concentrations that is comprised of three tiers: Tier 1, the most conservative approach, assumes a full (100%) conversion of $NO_x$ to $NO_2$; Tier 2 applies a conservative ambient NOx/$NO_2$ ratio of 80% to the $NO_x$ estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's PVMRM module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to $NO_2$ within the source plume using hourly ozone background concentrations. When Tier 3 is utilized, AERMOD generates 8$^{th}$ highest daily maximum 1-hour $NO_2$ concentrations or total 1-hour $NO_2$ concentrations if hourly $NO_2$ background concentrations are added within the model.

Per the *CEQR TM*, a Tier 1 approach is initially applied, followed by a Tier 2 application of $NO_x/NO_2$ ratio of 80% to the $NO_x$ modeled concentration to determine whether a violation of the NAAQS is likely to occur. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour $NO_2$ NAAQS were estimated. The annual $NO_2$ standard is 0.053 ppm (100 $\mu g/m^3$).

*New York State Standards*

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the New York State Department of Environmental Conservation (NYSDEC) has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. The maximum allowable guidelines set a maximum 1-hour and annual averaging time concentrations and are published in the DAR-1 AGC/SGC Table, where AGC/SGC refers to Annual and Short-term Guideline Concentrations. The most recent DAR-1 guidelines were created on February 12, 2021.

NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic or duration.

*NYC Interim Guidelines*

In addition to the NAAQS, the *CEQR TM* requires that projects subject to CEQR apply a $PM_{2.5}$ and CO 8-hour averaging time significant impact criteria (based on concentration increments). These criteria are named *de minimis* and they are more stringent than the NAAQS, and the state standards as the *de minimis* concentrations set a maximum increase of pollutant concentration that is below the national standard. If the estimated impacts of a proposed project are less than the *de minimis* criteria, the impacts are not considered to be significant. As outlined in the *CEQR TM,* $PM_{2.5}$ significant impacts are evaluated as follow:

- *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or*
- *Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m$^3$ at any receptor location for stationary sources.*

*Background Concentrations*

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the existing and planned land uses.

Background concentrations of $NO_2$, $SO_2$, and $PM_{2.5}$ —the criteria pollutants of main concern for HVAC systems fueled by Fuel Oil #2—were obtained from the NYSDEC's annual report for 2018 at the nearest monitoring stations (JHS 126 and Queens College 2). **Table 2.6-2** shows the background concentrations and the NAAQS.

**Table 2.6-2: Background Concentrations at the Nearest Monitoring Stations**

| Pollutant | Averaging Period | National and State Standards | Background Concentration | Monitoring Station |
|---|---|---|---|---|
| $NO_2$ | 98$^{th}$ Percentile of Daily Maximum 1-hour averaged over last 3 years | 188 µg/m$^3$ | 56.2 ppb (105.68 µg/m$^3$) | Queens College 2 |
| | Annual Arithmetic Mean | 100 µg/m$^3$ | 14.44 ppb (27.15 µg/m$^3$) | |
| $SO_2$ | 99$^{th}$ Percentile of Daily Maximum 1-hour averaged over last 3 years | 196 µg/m$^3$ | 5.67 ppb (14.83µg/m$^3$) | Queens College 2 |
| | Annual Arithmetic Mean | 80 µg/m$^3$ | 0.41 ppb (1.07 µg/m$^3$) | |
| $PM_{2.5}$ | 24-Hour average of 98$^{th}$ percentile for last 3 years | 35 µg/m$^3$ | 17.2 µg/m$^3$ | JHS 126 |
| | Average of last 3 years annual means | 12 µg/m$^3$ | 7.7 µg/m$^3$ | |

The *de minimis* criteria for $PM_{2.5}$ was evaluated as described in the NYC Interim Guidelines. The concentrations increments are presented below:

- 24-hour $PM_{2.5}$ 8.90 µg/$m^3$
- Annual $PM_{2.5}$ 0.3 µg/$m^3$

**Analysis**

*Mobile Sources*

Projects may result in significant mobile source impacts when they create mobile sources of pollutants, change traffic patterns, or add new uses near mobile sources of pollutants. Per CEQR guidelines, a detailed analysis is conducted to predict whether the Proposed Actions could potentially have a significant adverse air quality impact if certain threshold criteria are met or exceeded, while proposed projects that do not meet or exceed the threshold criteria (screen out) are not expected to have a mobile source impact. Projects that require a detailed analysis model the ambient air CO and $PM_{10}$/$PM_{2.5}$ concentrations—the mobile source pollutants of concern—and compare the modeled concentrations with the applicable air quality standard.

*Mobile Source Screen*

*Project-Generated Traffic*

Per the *CEQR TM*, localized increases in CO and $PM_{2.5}$ levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the Proposed Development. As such, screening analyses for CO and $PM_{2.5}$ were carried out to determine whether the project-generated traffic has the potential to cause significant impact. The Projected Development effectuated by the Proposed Actions was analyzed to determine the peak number of vehicular trips generated. The vehicular trips were then calculated into equivalent HDDV trips to conduct the Mobile Source Impact screening for PM2.5, shown below in **Table 2.6-3**.

**Table 2.6-3: PM2.5 Screening**

| **Table 2: Equivalent Truck Calculation** | | | |
|---|---|---|---|
| **Road Types** | **Equ. truck** | **Screen value** | **PM2.5 Screen** |
| Paved road < 5000 veh/day | 3 | 12 | Pass Screen |
| Collector roads | 1 | 19 | Pass Screen |
| Principal and minor arterials | 0 | 23 | Pass Screen |
| Expressways and limited access roads | 0 | 23 | Pass Screen |

Park Avenue is considered a Minor Arterial Roadway according to the New York State DOT Functional Classification, and HDDV trips below 23 would pass the screen. The 20 incremental dwelling units and 5,113 GSF of local retail development would generate 6 peak hour vehicular trips in the PM peak period, which convert into 0 equivalent HDDV trips for principal and minor arterial roadways. Because the project-

generated trips pass the screen threshold, no impacts were identified. Therefore, the Proposed Actions have no potential for adverse impacts related to mobile source air emissions.

*Parking Garage*

Based on CEQR recommendations, the maximum capacities of parking garages are evaluated with a threshold criterion to predict whether the potential impacts associated with mobile source emissions are significant. The threshold criteria level, per CEQR guidelines, is 85 off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted. As seen in **Table 2.6-1**, the Proposed Actions would facilitate 15 parking spaces at Projected Development Site 2. The number of parking spaces do not exceed the parking spaces threshold criterion. Therefore, no detailed air quality analysis is required, and no significant mobile source air quality impacts are expected as a result of the parking facilities.

*Existing Mobile Sources of Pollutant*

According to *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadways or near an existing parking facility may result in significant mobile source air quality impacts. These impacts are estimated at sensitive receptors located at air intakes, operable windows, and terraces of the receptor building. There is no atypical roadway within 200 feet of the proposed project, and there are no large parking facilities located near the proposed project. Therefore, no analysis was required, and no mobile source significant adverse air quality impacts are expected to the proposed project from vehicular emission generated at an existing nearby mobile source of pollutant.

**Stationary Sources**

According to CEQR, an action can result in stationary source air quality impacts when it creates new stationary sources of pollutants such as emission stacks for industrial plants, hospitals, or other large institutional uses, or even building boilers- that can affect surrounding uses, or when they introduce sensitive uses near existing (or planned future) emissions stacks, and the new uses might be affected by the emissions from the stack.

Project HVAC Systems Analysis

As outlined in the *CEQR TM*, the analysis of buildings' HVAC systems follows stationary sources methodology and based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system boiler emissions can be significant. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

As previously mentioned, the screening analysis is only applicable to a single smokestack, and this CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. As the proposed development is a single building, the CEQR screening analysis

is only applicable for the project-on-existing scenario. The project-on-existing screening analysis considered two scenarios separately to provide a comprehensive analysis:

- Projected Development Site 1's actual height of 85 feet and 12,894 GSF of total area. The stack height of the proposed building is assumed to be 3 feet above the building's roof height, which is 88 feet accordingly.

- Projected Development Site 2's height of 85 feet and 21,335 GSF of total area. The stack height of the proposed building will be 88 feet.

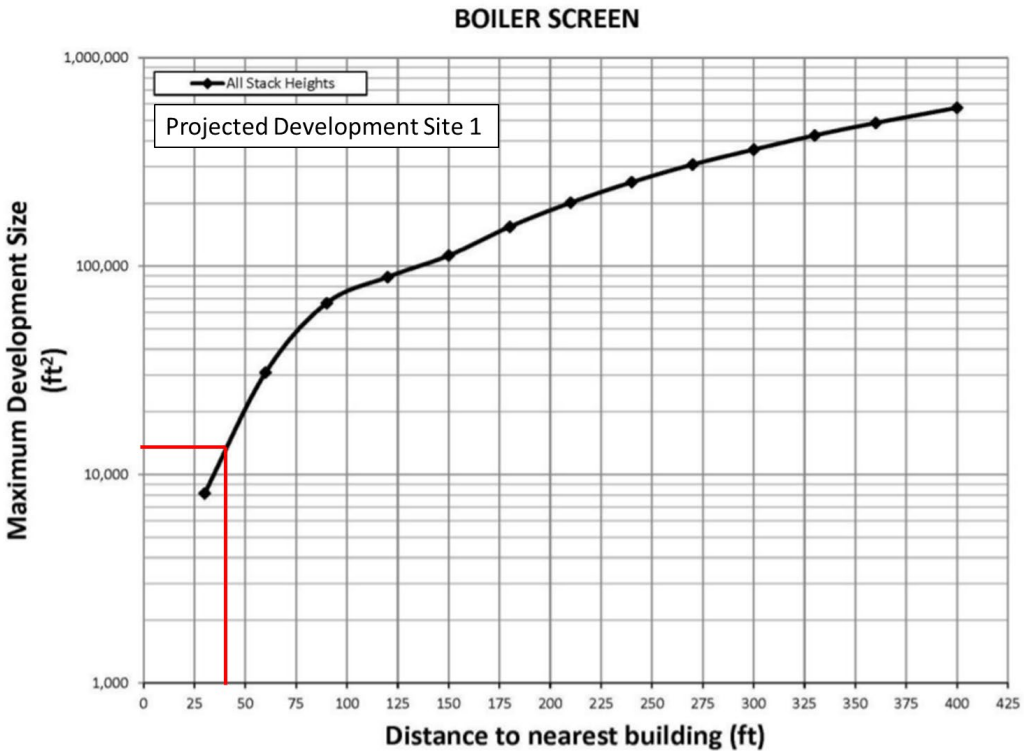
***Projected Development Site 1***

The Stationary Source Screen was conducted using Figure 17-3 referenced in the *2021 CEQR Technical Manual*. **Figure 2.6-1** (*CEQR Figure 17-3*) shows the Projected Development Site 1 HVAC screening analysis. The screening analysis **Figure 2.6-1** nomograph shows that a detailed analysis would be required for any existing land uses that are 85 feet or taller and at a distance of less than 45 feet from Projected Development Site 1.

A review of existing land uses around the Projected Development Site shows that the nearest building of similar or greater height would be the building developed for Projected Development Site 2 at 85 Franklin Ave (Block 1899 / Lot 27, 28, and 29) which is approximately 100-feet to the east of Projected Development Site 1. The building footprint data geo metadata, used to assess buildings' roof heights, was obtained from the NYC Open Data Building Footprints Shapefile[5]. Therefore, there is no potential from Projected Development Site 1's HVAC system to significantly impact the affected area.

[5] https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh/data.

**Figure 2.6-1: Projected Development Site 1 Nomograph**




***Projected Development Site 2***

The Stationary Source Screen was conducted using Figure 17-3 referenced in the *2021 CEQR Technical Manual*. **Figure 2.6-2** (*CEQR Figure 17-3*) shows the Projected Development Site 2 HVAC screening analysis. **Figure 2.6-2** nomograph shows that a detailed analysis would be required for any existing land uses that are 85 feet or taller and at a distance of less than 51 feet from Projected Development Site 2.

The nearest building of similar or greater height is the proposed building on Projected Development Site 1 448 Park Avenue (Block 1898, Lot 37 and 38), which is approximately 100 feet west of Projected Development Site 2.

**Table 2.6-4** shows the screening analysis framework and result for the two scenarios. Given the long distance between the Projected Development Sites and the nearest existing and planned building of similar or greater height, a potential significant impact due to boiler stack emissions is unlikely and no further analysis is needed.

**Figure 2.6-2: Projected Development Site 2 Nomograph**

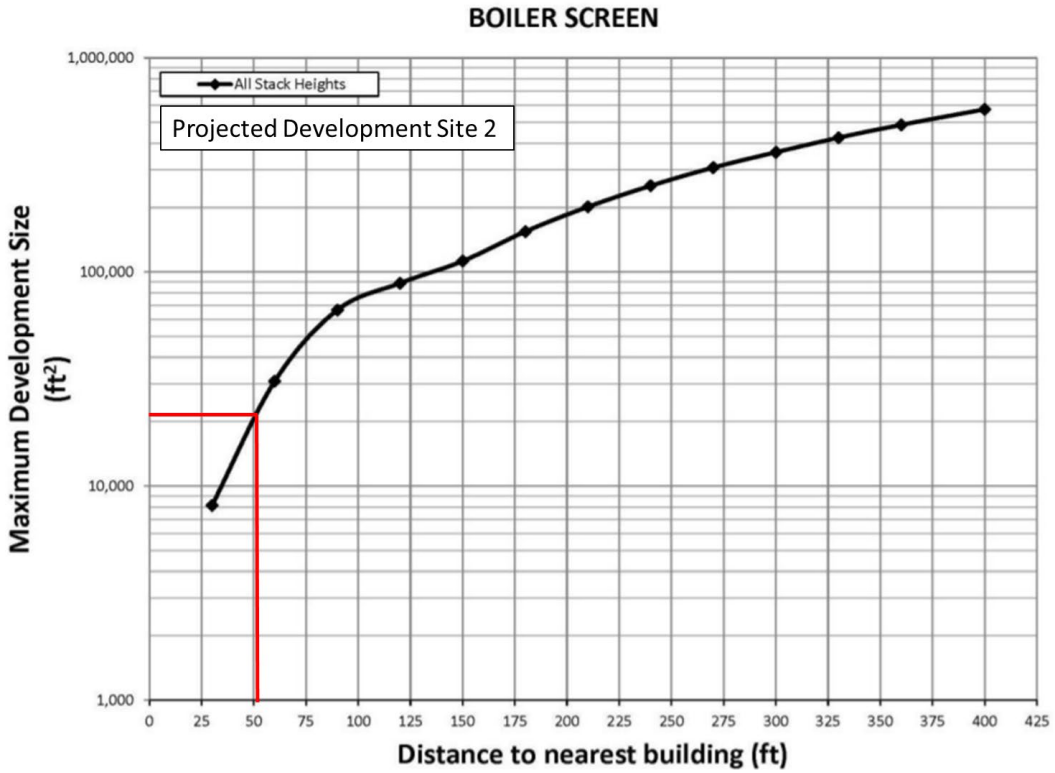



**Table 2.6-4: Screening Analysis Results**

| Source Building Site ID | Heated Area (sq. ft.) | Screen Distance (ft.) | Receiving Building (Site ID or Block/Lot) | Receiving Building Distance (ft.) | Pass/ Fail |
|---|---|---|---|---|---|
| **Project-on-Existing and/or Planned Land Uses** | | | | | |
| **Projected Development Site 1** | 12,894 | 45 | Proposed Development Site 2 85 Franklin Avenue | 100 | Pass |
| **Projected Development Site 2** | 21,335 | 51 | Proposed Development Site 1 448 Park Avenue | 100 | Pass |

To ensure that no impacts would occur to project occupants and nearby receptors, an E-Designation on minimum stack heights is required for both Projected Development Sites:

**E-Designation**

**E-681**

**Block 1898 Lots 37, 38 (Projected Development Site 1): Any new residential and/or commercial development on the above-referenced property must ensure the heating, ventilating and air conditioning (HVAC) systems and hot water equipment stack is located at the highest tier and at least 88 feet above grade to avoid any potential significant adverse air quality impacts.**

**Block 1899 Lots 27, 28, 29 (Projected Development Site 2): Any new residential and/or commercial development on the above-referenced property must ensure the heating, ventilating and air conditioning (HVAC) systems and hot water equipment stack is located at the highest tier and at least 88 feet above grade to avoid any potential significant adverse air quality impacts.**

Industrial Emissions Sources

A search of potential industrial sites was performed to identify any NYC DEP, and USEPA1 Air Quality Permits issued within 400 feet of the Affected Area. This Study Area and uses, preliminarily identified as manufacturing or industrial based on NYCDCP MAPPLUTO database, are identified in **Figure 2.6-3**. This search was performed to determine if hazardous air toxics would have the potential to impact the proposed development.

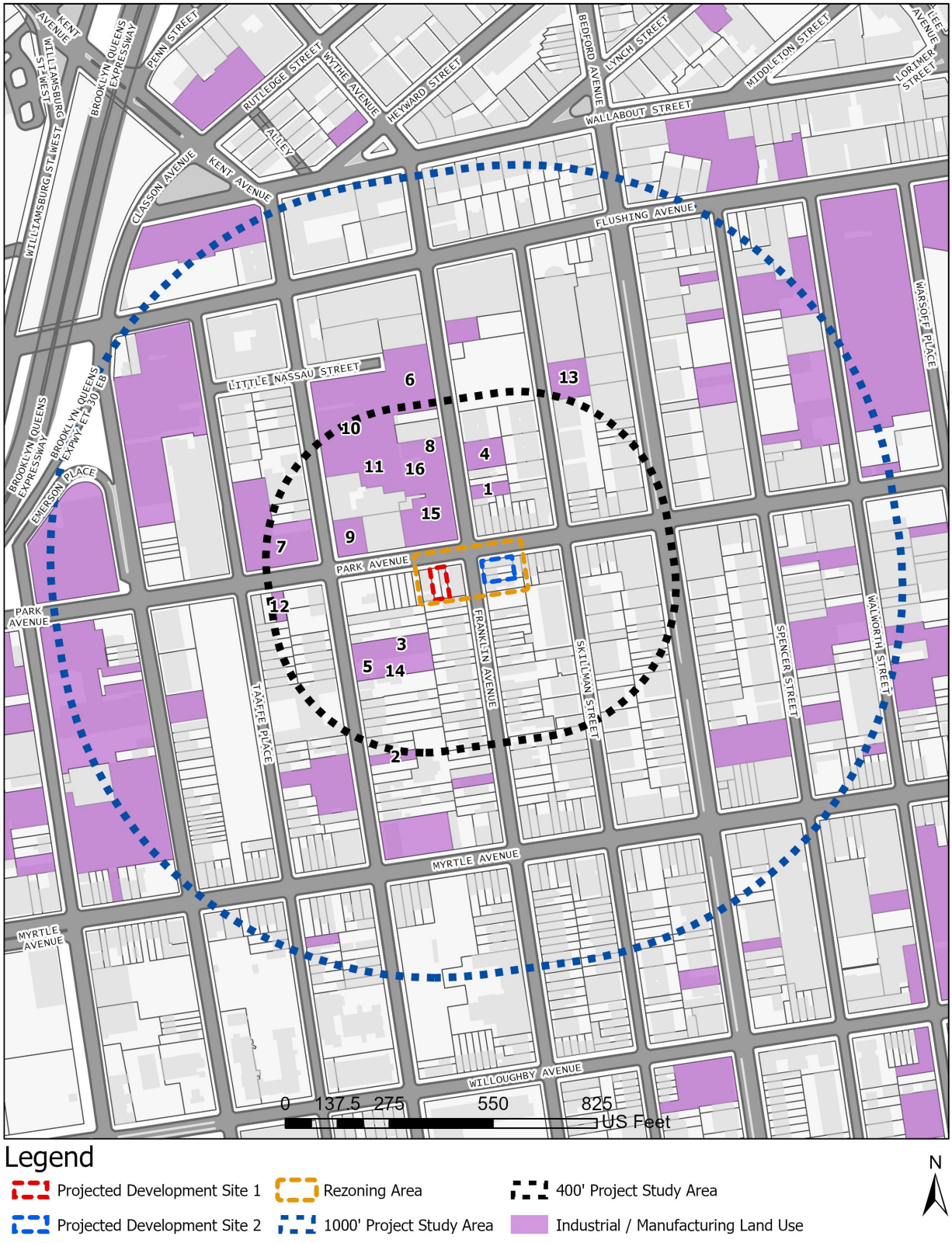
Sixteen sites were originally identified as potentially manufacturing or industrial in nature as identified as ID Number 1-16 in **Figure 2.6-3**. These uses were screened further using Google and in field assessments. **Table 2.6-5** shows the eighteen (16) properties within approximately 400 feet of the Affected Area that were screened as potentially industrial or manufacturing sites. These sites were further reviewed for permit activity.

As shown in **Table 2.6-5**, only three sites (those highlighted under ID Number 1-18) were determined to have industrial or manufacturing type uses and one of these has two active DEP industrial permits. The site is highlighted in gold, which has active permits requiring further investigation. These sites were analyzed based on the permit information and in-field findings.

**Table 2.6-5: Industrial Sites within 400 feet of Affected Area**

| Site ID | Block | Lot | Address | Current Use | Industrial Permit Search Results |
|---|---|---|---|---|---|
| 1 | 1885 | 2 | 71 FRANKLIN AVENUE | Warehouse | No Records |
| 2 | 1898 | 8 | 851 KENT AVENUE | Warehouse | No Records |
| 3 | 1898 | 19 | 831 KENT AVENUE | Warehouse | No Records |
| 4 | 1885 | 6 | 61 FRANKLIN AVENUE | Heavy Manufacturing | No Records |
| 5 | 1898 | 19 | 831 KENT AVENUE | Warehouse | No Records |
| 6 | 1884 | 57 | 40 FRANKLIN AVENUE | Warehouse | No Records |
| 7 | 1883 | 1 | 413 PARK AVENUE | Heavy Manufacturing | No Records |
| 8 | 1884 | 68 | 60 FRANKLIN AVENUE | Light Manufacturing | PA018075, PA098974 |
| 9 | 1884 | 1 | 433 PARK AVENUE | Warehouse | No Records |
| 10 | 1884 | 13 | 781 KENT AVENUE | Warehouse | No Records |
| 11 | 1884 | 12 | 791 KENT AVENUE | Warehouse | PA043194 |
| 12 | 1897 | 28 | 406 PARK AVENUE | Light Manufacturing | No Records |
| 13 | 1886 | 14 | 37 SKILLMAN STREET | Light Manufacturing | No Records |
| 14 | 1898 | 18 | 833 KENT AVENUE | Industrial | No Records |
| 15 | 1884 | 70 | 72 FRANKLIN AVENUE | Warehouse | No Records |
| 16 | 1884 | 69 | 64 FRANKLIN AVENUE | Light Manufacturing | No Records |

**Figure 2.6-3: Potential Industrial and Manufacturing Uses within 400-Foot Study Area**



Per DEP, only one site (#8) above was identified as having relevant industrial permitting activity within the Study Area. The only other industrial permit identified was an permit to install 12 steam heated tubmler dryers at site #11. With further investigation, the permitted activity at this site is no longer active because the site is no longer operated by Multi Color Industries, Inc. who was issuesd the permit.

**Site 8: 60 Franklin Avenue**

62 Franklin Street is located 300 feet to the north of the Affected Area. DEP and CATS database indicate that this site is currently under an Industrial Permit for Metal Processing use, which will expire in November, 2021. The building is currently occupied by Silverman-Shaw Inc. and does metal platting according to their two current permits (PA018075 and PA098974). Screening analysis was conducted with the provided information for all chemicals of concern covered under the permits.

For analysis purposes, the contaminants of concern were listed as Liquid Mist NEC, Acid Mist NEC, Alkaline Mist, Muriatic Mist, and Sulphuric Mist. These contaminants do not have direct SGU or AGU standards set by the EPA or NYSDEC, therefore the most SGUs and AGUs of the common contaminant assocaiated with each process was used for comparison (See **Table 2.6-6**). Each permit has a stack that includes all of the contaminants from each permit. Permit PA018075 includes the Alkaline mist, the Muriatic Mist, and the Sulphuric mist and a stack exit velocity of 3000 CFM. Permit PA098974 includes the Liquid Mist and the Acid Mist and the stack exit velocity is 7,500 CFM. Both stacks release at 30 feet and were assumed to be located at the buildings closest point to the Proposed Development (i.e. 300 feet).

**Table 2.6-6: Standards Used for Screening of Air Toxics**

| Contaminant of Concern | Standard Compared To | 1-hour Concentration (ug/m3) | SGU (ug/m3) | Annual Concentration (ug/m3) | AGU (ug/m3) | Pass/ Fail |
|---|---|---|---|---|---|---|
| Liquid Mist NEC | Hydrogen Chloride | 7.15 | 2100 | 0.0568 | 20 | Pass |
| Acid Mist NEC | Hydrogen Chloride | 2.859 | 2100 | 0.0229 | 20 | Pass |
| Alkaline Mist | Ammonia | 7.15 | 2400 | 0.0580 | 500 | Pass |
| Muriatic Mist | Hydrogen Chloride | 3.57 | 2100 | 0.0290 | 20 | Pass |
| Sulphur Mist | Sulphuric Acid | 3.57 | 120 | 0.0290 | 1 | Pass |

Using the emission rate and stack condition information provided in the two active permits and the industrial source screening method for the *2020 CEQR Technical Manual*, the emission rates at Site #8 Pass the screening analysis at 300-feet distance from the Proposed Development.

**Conclusion**

The air quality analyses addressed mobile sources, stationary HVAC systems, and air toxics. The results of the analyses are summarized below.

- Emissions from project-related vehicle trips would not cause significant air quality impacts to receptors at the local or neighborhood scale;
- Emissions from project-related heating, ventilation, and air conditioning systems (HVACs) would not cause significant air quality impacts to receptors at the local scale;
- No significant air quality impacts to the proposed project are anticipated from air toxics; and
- As no existing large or major sources are located within 1,000 feet of the Development Sites, emissions from existing stationary sources would not cause a significant air quality impact to the proposed project.

## 2.7 Noise

According to the *2021 CEQR Technical Manual,* a Noise Analysis may be required if the project would (1) generate any mobile or stationary sources of noise; and/or (2) be located in an area with existing high ambient noise levels. If the proposed project is located in areas with high ambient noise levels, which typically include those near highly-trafficked thoroughfares, airports, rail, or other loud activities, further noise analysis may be warranted to determine the attenuation measures that are appropriate for the proposed project.

The Proposed Action would not create a significant noise generator. With the relatively moderate to high number of vehicles in the immediate area, project generated traffic would not double existing vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Consequently, there would not be significant adverse noise impact due to project generated traffic and existing noise levels are considered representative of future noise levels. This noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development.

The Proposed Action would effectuate a zoning map amendment from M1-1 to a Special Mixed-Use ("MX") District, which would consist of an R6A zoning district paired with an M1-4 zoning district.

As part of the zoning requirement for Special MX districts, "all new dwelling units shall be provided with a minimum 35 dB(A) of window wall attenuation to maintain an interior noise level of 45 dB(A) or less, with windows closed, and shall provide an alternate means of ventilation", as noted in Section 123-32 of Zoning Resolution (ZR) Article XII. Equity Environmental Engineering conducted noise monitoring to determine site-specific attenuation requirements for the proposed development.

**Framework of Noise Analysis**

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 acoustic energy 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.

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. 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 frequency weightings used are the A- and C-weightings. 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-weighting is the most commonly used for environmental measurements, 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.

**Table 2.7-1: Noise Levels of Common Sources**

| Sound Source | SPL (dB(A)) |
|---|---|
| Air Raid 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 |
| *Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.* | |
| *Source: 2021 CEQR Technical Manual* | |

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.

- Lmax is the highest SPL measured during a given period of time. It is useful in evaluating Leqs for time periods that have an especially wide range of 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.

**Noise Standards and Guidelines**

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the CEQR Technical Manual noise exposure guidelines for exterior noise levels. As shown in **Table 2.7-2** below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable, Table 19-3 of the *2021 CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA $L_{10}$ or 40 dBA $L_{dn}$ depending on the source or below.

## Table 2.7-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

| Receptor Type | Time Period | Acceptable General External Exposure | Airport[3] Exposure | Marginally Acceptable General External Exposure | Airport[3] Exposure | Marginally Unacceptable General External Exposure | Airport[3] Exposure | Clearly Unacceptable General External Exposure | Airport[3] Exposure |
|---|---|---|---|---|---|---|---|---|---|
| 1. Outdoor area requiring serenity and quiet[2] | | $L_{10} \leq 55$ dBA | ----------DNL ≤ 60 dBA---------- | | ----------60 < DNL ≤ 65 dBA---------- | | (I) 65 < DNL ≤ 75 dBA | | ---------- 75 dBA < DNL ---------- |
| 2. Hospital, nursing home | | $L_{10} \leq 55$ dBA | | 55 < $L_{10} \leq 65$ dBA | | 65 < $L_{10} \leq 80$ dBA | | $L_{10} > 80$ dBA | |
| 3. Residence, residential hotel, or motel | (7 AM to 10 PM) | $L_{10} \leq 65$ dBA | | 65 < $L_{10} \leq 70$ dBA | | 70 < $L_{10} \leq 80$ dBA | | $L_{10} > 80$ dBA | |
| | (10 PM to 7 AM) | $L_{10} \leq 55$ dBA | | 55 < $L_{10} \leq 70$ dBA | | 70 < $L_{10} \leq 80$ dBA | | $L_{10} > 80$ dBA | |
| 4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | |
| 5. Commercial or office | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | | Same as Residential Day (7 AM-10 PM) | |
| 6. Industrial, public areas only[4] | Note 4 | Note 4 | | Note 4 | | Note 4 | | Note 4 | |

**Notes:**

(i) In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

[2] Tracts of land where serenity and quiet are extraordinarily important and serve as important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

[3] One may use the FAA-approved DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are listed by octave bands).

**Sources:** New York City Department of Environmental Protection (adopted policy 1983).

**Table 2.7-3: Attenuation Values to Achieve Acceptable Interior Noise Levels**

| | Marginally Unacceptable | | | | Clearly Unacceptable |
|---|---|---|---|---|---|
| Vehicular Traffic | 70 < L10 ≤ 73 | 73 < L10 ≤ 76 | 76 < L10 ≤ 78 | 78 < L10 ≤ 80 | 80 < L10 |
| Aircraft[A] | 65 < DNL ≤ 68 | 68 < DNL ≤ 71 | 71 < DNL ≤ 73 | 73 < DNL ≤ 75 | 75 < DNL |
| Train | 65 < Ldn ≤ 68 | 68 < Ldn ≤ 71 | 71 < Ldn ≤ 73 | 73 < Ldn ≤ 75 | 75 < Ldn |
| Attenuation[B] | (i) 28 dB(A) | (ii) 31 dB(A) | (iii) 33 dB(A) | (iv) 35 dB(A) | See Note c |

Note:

A. DNL descriptor based on average values of Ldn over a year period.
B. The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
C. The required attenuation value is the difference between Lbuild and Linterior, using the appropriate noise descriptor Where:
Lbuild is the projected noise level under the build condition rounded up to the whole number
Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

**Measurement Location and Equipment**

Because the predominant noise sources in the area of the proposed project consist of vehicular traffic, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Pursuant to CEQR Technical Manual Methodology, three (3) measurement were collected for 20-minute periods: Location One (1) was at the frontage of the Projected Development Site 1 along Park Avenue; Location Two was at the intersection of Park Avenue and Franklin Avenue; and Location Three (3) was along Franklin Avenue across the street from the frontage of Projected Development Site 2. The noise monitoring location is shown in **Figure 2.7-1** and **Photo 2.7-1, 2.7-2**, and **2.7-3** below.

Noise monitoring was conducted using a using Type 1 Casella CEL-633 sound level meter with wind screen. The monitor was placed on a tripod at a height of approximately four feet above the ground, away from any other noise-reflective surfaces. The monitor was calibrated prior to and following each monitoring session. Periods of peak vehicular traffic around the Project Area constitute a worst-case condition for noise. Noise meter calibration certification and back up data are provided in **Appendix C.**

**Figure 2.7-1: Noise Monitoring Locations**



**Photo 2.7-1: Noise Monitoring Location 1 (Park Avenue)**




**Photo 2.7-2: Noise Monitoring Location 2 (Intersection of Park Avenue and Franklin Avenue)**



**Photo 2.7-3: Noise Monitoring Location 3 (Franklin Avenue)**




Existing Conditions

Based on the noise measurements taken at the Projected Development Sites, the predominant sources of noise in the area is vehicular traffic. The volume of vehicular traffic, and its corresponding level of noise, is moderate to heavy. **Tables 2.7-4** through **2.7-9** contain the results of the noise measurements and traffic volume counts taken at the monitoring locations.

**Table 2.7-4: Noise Levels (dB) at Location 1**

| *Tuesday, January 21st, 2020* | | | |
|---|---|---|---|
| Time | **7:30 am – 7:50 am** | **12:00 pm – 12:20 pm** | **4:30 pm – 4:50 pm** |
| $L_{max}$ | 90.5 | 103.0 | 90.4 |
| $L_{10}$ | **77.5** | **79.0** | **77.5** |
| $L_{eq}$ | **73.6** | **77.4** | **73.2** |
| $L_{50}$ | 67.0 | 69.0 | 66.5 |
| $L_{90}$ | 62.0 | 62.5 | 56.5 |
| $L_{min}$ | 46.2 | 48.0 | 48.5 |

**Table 2.7-5: Noise Levels (dB) at Location 2**

| *Tuesday, January 21st, 2020* | | | |
|---|---|---|---|
| Time | **7:50 am – 8:11 am** | **12:21 pm – 12:41 pm** | **4:50 pm – 5:10 pm** |
| $L_{max}$ | 95.4 | 93.4 | 96.5 |
| $L_{10}$ | **79.0** | **79.0** | **79.0** |
| $L_{eq}$ | **75.9** | **75.1** | **75.0** |
| $L_{50}$ | 70.5 | 67.5 | 70.0 |
| $L_{90}$ | 63.0 | 62.5 | 64.5 |
| $L_{min}$ | 60.5 | 49.8 | 54.4 |

**Table 2.7-6: Noise Levels (dB) at Location 3**

| *Tuesday, January 21st, 2020 & Tuesday, November 23rd, 2021* | | | |
|---|---|---|---|
| Time | **8:11 am – 8:31 am** | **12:24 pm – 12:44 pm** | **5:11 pm – 5:31 pm** |
| $L_{max}$ | 92.5 | 89.3 | 88.0 |
| $L_{10}$ | **77.0** | 69.5 | **77.5** |
| $L_{eq}$ | **75.0** | 69.9 | **73.1** |
| $L_{50}$ | 68.5 | 63.5 | 67.5 |
| $L_{90}$ | 60.5 | 59.0 | 56.5 |
| $L_{min}$ | 50.4 | 55.1 | 48.2 |

**Table 2.7-7: Location 1 Traffic volumes and vehicle classifications**

| | **7:30 am – 7:50 am** | **12:00 pm – 12:20 pm** | **4:30 pm – 4:50 pm** |
|---|---|---|---|
| **Car/ Taxi** | 103 | 91 | 125 |
| **Van/Light Truck/SUV** | 91 | 96 | 108 |
| **Medium Truck** | 7 | 8 | 6 |
| **Heavy Truck** | 0 | 2 | 1 |
| **Bus** | 8 | 1 | 13 |
| **Train** | 0 | 0 | 0 |

**Table 2.7-8: Location 2 Traffic volumes and vehicle classifications**

| | **7:50 am – 8:11 am** | **12:21 pm – 12:41 pm** | **4:50 pm – 5:10 pm** |
|---|---|---|---|
| **Car/ Taxi** | 111 | 102 | 142 |
| **Van/Light Truck/SUV** | 121 | 93 | 139 |
| **Medium Truck** | 12 | 6 | 8 |
| **Heavy Truck** | 3 | 1 | 2 |
| **Bus** | 27 | 2 | 16 |
| **Train** | 0 | 0 | 0 |

**Table 2.7-9: Location 3 Traffic volumes and vehicle classifications**

| | 8:11 am – 8:31 am | 12:24 pm – 12:44 pm | 5:11 pm – 5:31 pm |
|---|---|---|---|
| **Car/ Taxi** | 18 | 40 | 33 |
| **Van/Light Truck/SUV** | 10 | 39 | 38 |
| **Medium Truck** | 8 | 5 | 2 |
| **Heavy Truck** | 0 | 2 | 0 |
| **Bus** | 20 | 1 | 6 |
| **Train** | 0 | 0 | 0 |

**Mechanical Equipment**

The design of and specification for building mechanical systems, such as heating, ventilation, and air conditioning (HVAC), would be designed to meet all applicable noise regulations (Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Mechanical Code) to ensure that the equipment does not result in any significant increase in ambient noise levels

**Conclusions**

The *2021 CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a proposed residential use such that would occur under the proposed development, an $L_{10}$ of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. The highest recorded $L_{10}$ at Location 1 was 79.0 during the midday monitoring period; The highest recorded $L_{10}$ at Location 2 was 79.0 during the midday monitoring period; and the highest recorded $L_{10}$ at Location 3 was 77.5 during the PM monitoring period.

Based on the noise monitoring results and the requirements of ZR 123-32, 35 dB(A) of attenuation would be required for all new dwelling units on all facades of Projected Development Site 1 and Projected Development Site 2. With this level of attenuation, there would be no adverse interior impacts related to noise.

With the application of ZR 123-32, no E-Designation is required. However, the requirements of 35 dB(A) of attenuation based on ZR 123-32 are to be followed.

# APPENDIX A

## Agency Correspondence

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

# ENVIRONMENTAL REVIEW

**Project number:** DEPARTMENT OF CITY PLANNING / LA-CEQR-K
**Project:** 448_PARK_AVE_REZONING
**Date Received:** 8/26/2020

**Properties with no Architectural or Archaeological significance:**

1) 444 PARK AVENUE, BBL: 3018980035
2) 446 PARK AVENUE, BBL: 3018980037
3) 448 PARK AVENUE, BBL: 3018980038
4) 86 FRANKLIN AVENUE, BBL: 3018987501
5) 89 FRANKLIN AVENUE, BBL: 3018990026
6) 87 FRANKLIN AVENUE, BBL: 3018990027
7) 85 FRANKLIN AVENUE, BBL: 3018990028
8) 462 PARK AVENUE, BBL: 3018990030
9) 83 FRANKLIN AVENUE, BBL: 3018990029

Gina Santucci 8/28/2020

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

**File Name:** 35001_FSO_DNP_08282020.docx

Environmental Protection

**Vincent Sapienza, P.E.**
*Commissioner*

**Angela Licata**
*Deputy Commissioner of Sustainability*

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
Fax (718) 595-4422
alicata@dep.nyc.gov

September 14, 2018

Darrell Ruffin
Project Manager
New York City Board of Standards and Appeals
250 Broadway, 29th Floor
New York, NY 10007

**Re: 448 Park Avenue**
**Block 1898, Lots 37 and 38**
**CEQR # 18BSA010K**

Dear Mr. Ruffin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the August 2018 Environmental Assessment Statement, the January 2015 Phase I Environmental Site Assessment (Phase I), and the June 2018 Phase II Environmental Site Assessment Work Plan (Work Plan) and August 2018 Health and Safety Plan (HASP) prepared by Equity Environmental Engineering on behalf of Mr. Yoel Horowitz (applicant) for the above referenced project. It is our understanding that the applicant is seeking a variance from the New York City Board of Standards and Appeals (BSA) pursuant to Section 72-21 of the New York City Zoning Resolution to facilitate the construction of a new six-story residential building with a cellar and rear yard within an M1-1 zoning district. The subject property is located on the south side of Park Avenue between Kent Avenue and Franklin Avenue in the Bedford Stuyvesant neighborhood of Brooklyn Community District 3.

The January 2015 Phase I report revealed that historical on-site and surrounding land uses consisted of a variety of residential, commercial, and industrial uses including residential buildings, industrial warehouses, a laundry, stables, a uniform corporation, a church, auto repair shops, used auto sales, junk yards, a school, ice cream manufacturing, a motor freight station, tire storage, an undertaker, a steam laundry, metal stamping, a filling station, gutta percha and rubber manufacturing, electric carpet cleaning works, leather goods manufacturing, a machine shop, etc. Regulatory databases identified 21 spills within 1/8 mile; 24 underground storage tank sites, 16 aboveground storage tank sites within 1/4 mile; and 42 leaking storage tank sites and 4 brownfield sites within 1/2 mile of the subject property.

The June 2018 Work Plan proposes to advance 4 borings (SB-1 to SB-4) to the water table or approximately 30 feet below surface grade (bgs), whichever comes first. Two soil samples collected from each boring. The first sample will be collected from 0-2 feet bgs. The second sample will be collected from the appropriate interval based on observations made during the boring installation. The samples will be collected based on the following: the bottom of the boring

if there is no evidence of contamination and groundwater is not encountered; the 2-foot interval immediately above the water table if encountered; the 2-foot interval where there is evidence of contamination based on observations, and photoionization detector readings. Three (3) groundwater samples will be collected from the soil borings if groundwater is encountered. Soil and groundwater samples will be analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, polychlorinated biphenyls by EPA Method 8082, pesticides by EPA Method 8081, and Target Analyte List metals by EPA Method 6000/7000 (filtered and unfiltered for groundwater samples). Four (4) soil gas vapor sampling points (SV-1 and SV-1) will be installed to a depth of approximately 7-feet or directly below the proposed slab of the new building or immediately above the water table if groundwater is encountered and four soil vapor samples will be collected and analyzed for VOCs by EPA Method TO-15.

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

***Work Plan***

- BSA should instruct the applicant to specify the proposed maximum depth of excavation that is being used to determine the sampling depths.

- BSA should instruct the applicant that if no evidence or elevated readings are noted during borehole advancement, the subsurface soil sample should be collected from the two foot interval below the proposed maximum excavation depth and/or the groundwater interface (whichever is encountered first).

- BSA should instruct the applicant that where the water table is less than 30 feet beneath the deepest level of the proposed on-site cellar (not measuring from at grade), groundwater samples should be collected to adequately characterize the site. Therefore, temporary groundwater monitoring wells should extend a minimum of 30 feet beyond the proposed excavation depth (if groundwater is not encountered shallower) in order to collect groundwater samples.

- BSA should instruct the applicant that the soil vapor samples should be collected at a depth comparable to the depth of foundation footings or at least 1 foot above the water table in areas where the groundwater table is less than 5 feet below grade.

BSA should instruct the applicant that a revised Phase II Work Plan should be submitted to DEP for review and approval prior to the start of any fieldwork. Future correspondence and submittals related to this project should include the following CEQR # **18BSA010K**. If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
T. Behnke - BSA
R. Levy - BSA

Environmental Protection

**Vincent Sapienza, P.E.**
*Commissioner*

**Angela Licata**
*Deputy Commissioner of Sustainability*

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
Fax (718) 595-4422
alicata@dep.nyc.gov

October 18, 2018

Darrell Ruffin
Project Manager
New York City Board of Standards and Appeals
250 Broadway, 29th Floor
New York, NY 10007

**Re: 448 Park Avenue**
**Block 1898, Lots 37 and 38**
**CEQR # 18BSA010K**

Dear Mr. Ruffin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the Revised September 2018 Phase II Environmental Site Assessment Work Plan (Work Plan) and August 2018 Health and Safety Plan (HASP) prepared by Equity Environmental Engineering on behalf of Mr. Yoel Horowitz (applicant) for the above referenced project. It is our understanding that the applicant is seeking a variance from the New York City Board of Standards and Appeals (BSA) pursuant to Section 72-21 of the New York City Zoning Resolution to facilitate the construction of a new six-story residential building with a cellar and rear yard within an M1-1 zoning district. The subject property is located on the south side of Park Avenue between Kent Avenue and Franklin Avenue in the Bedford Stuyvesant neighborhood of Brooklyn Community District 3.

The Revised September 2018 Work Plan proposes to advance 4 soil borings (SB-1 to SB-4) to the water table or approximately 30 feet below the bottom of the proposed building excavation, whichever comes first. Two soil samples collected from each boring. The first sample will be collected from 0-2 feet below grade surface. The second sample will be collected from the appropriate interval based on observations made during the boring installation. The samples will be collected based on the following: the 2-foot interval where there is evidence of contamination based on observations, and photoionization detector readings; the 2-foot interval below the proposed excavation depth if no evidence of contamination is observed; or the 2-foot interval immediately above the water table if above the excavation depth. Three (3) of the soil borings will be converted into temporary monitoring well points (TW-1 to TW-3) and three (3) groundwater samples will be collected if groundwater is encountered. Soil and groundwater samples will be analyzed for volatile organic compounds (VOCs) with methyl tert-butyl ether by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls by EPA Method 8082, and Target Analyte List metals by EPA Method 6010/6020/7471 (filtered and unfiltered for groundwater samples). Four (4) soil gas vapor sampling

points (SG-1 to SG-4) will be installed to the depth of the proposed building foundation or directly above the water table if groundwater is encountered above that. Four (4) soil vapor samples will be collected and analyzed for VOCs by EPA Method TO-15.

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

DEP finds the Revised September 2018 Work Plan and August 2018 HASP for the proposed project acceptable. BSA should inform the applicant that upon completion of the investigation activities, the applicant should submit a detailed Phase II report to DEP for review and approval. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data and conclusions, comparison of soil, groundwater, and soil vapor analytical results (i.e., New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375, NYSDEC Water Quality Regulations, and the New York State Department of Health's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York), updated site plans depicting sample locations, boring logs, and remedial recommendations, if warranted.

Future correspondence and submittals related to this project should include the following CEQR # **18BSA010K**. If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

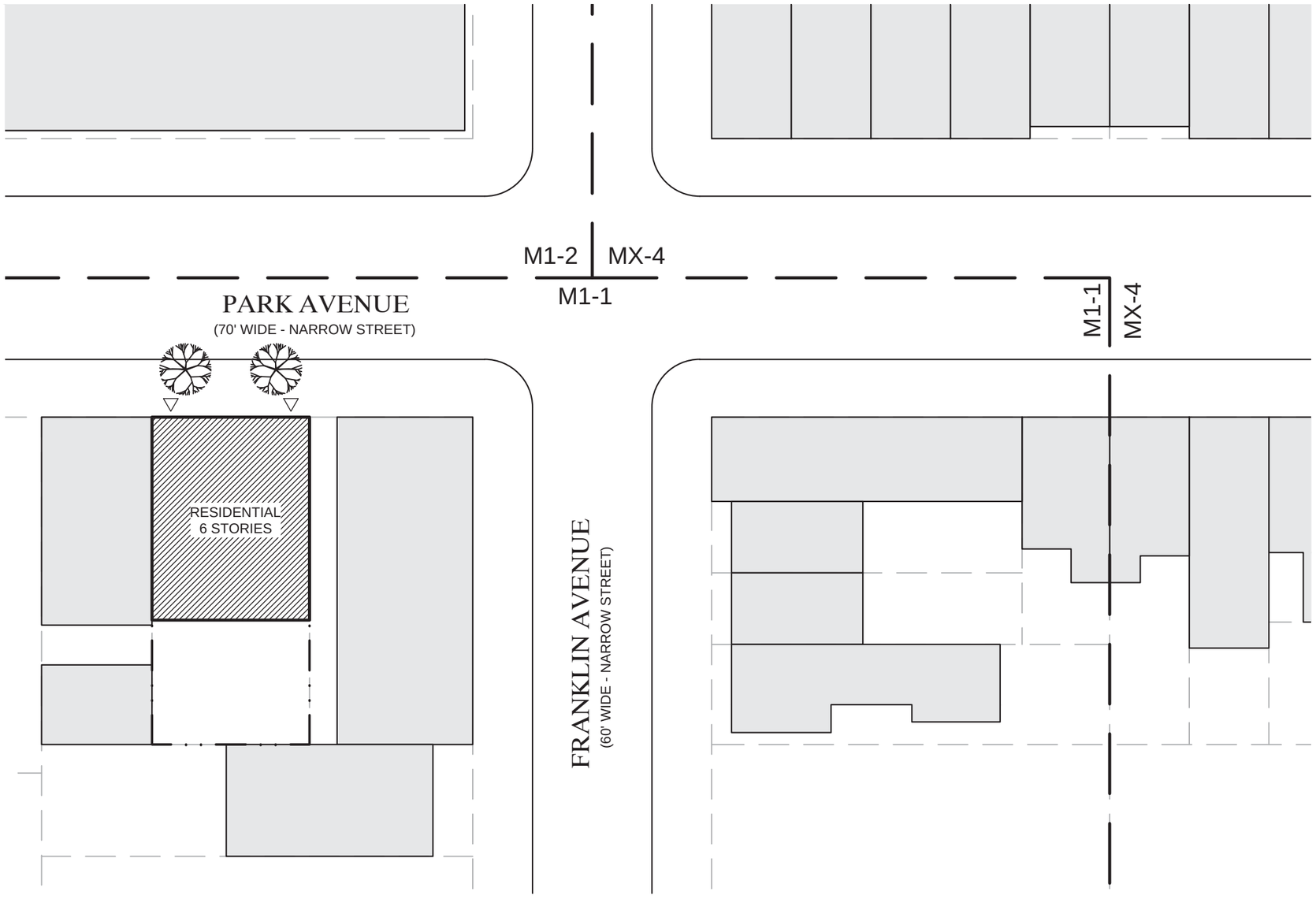
Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
T. Behnke - BSA

# APPENDIX B

## ARCHITECTURAL PLANS




## SITE DATA

| | |
|---|---|
| ADDRESS: | 446 PARK AVENUE |
| BLOCK: | 1898 |
| LOTS: | 37, 38 |
| COMMUNITY DISTRICT: | BROOKLYN 303 |
| ZONING MAP: | 12D |
| LOT AREA: | 3,255.73 SF |
| EXISTING ZONING: | M1-1 |
| REQUESTED ZONING: | R6A / M1-4 with MIH |

## LEGEND

- ZONING DISTRICT BOUNDARY
- ZONING LOT
- TAX LOT
- BUILDING FOOTPRINT
- ADJACENT BUILDING FOOTPRINTS
- BUILDING ENTRANCE
- TREE

N

SITE PLAN
SCALE: 1" = 30'-0"

0' 15' 30' 60'

REGISTERED ARCHITECT
LEWIS ELIEZER GARFINKEL
No. 025123
STATE OF NEW YORK

**LEWIS ELIEZER GARFINKEL, R.A.**
ARCHITECT
N.Y. REG. NO. 025123
2919 AVENUE J
BROOKLYN, NEW YORK 11210
TEL. 718-951-6551

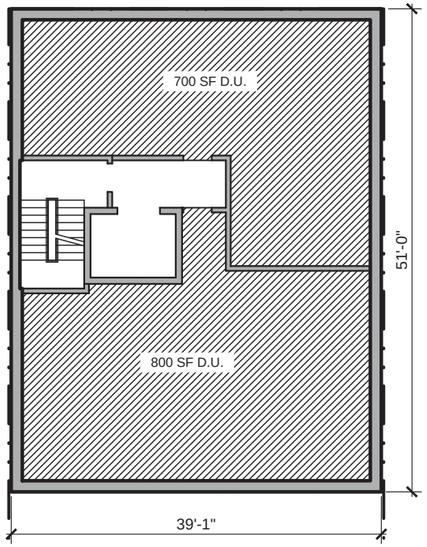
PROJECT:
NEW BUILDING
446 PARK AVENUE
BROOKLYN, NY

SITE PLAN

SEAL & SIGNATURE

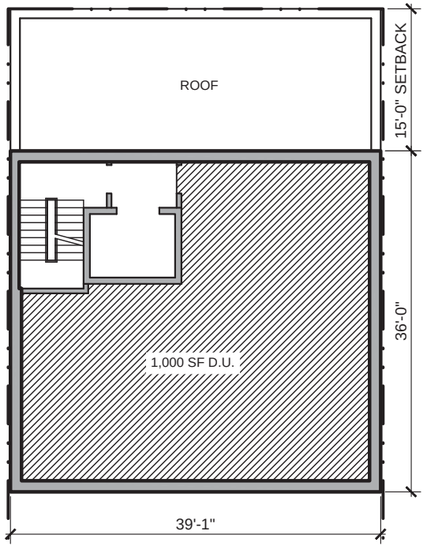
DATE: 8/26/19
PROJECT No. 15-075
DRAWING BY: qmp
CHK BY: LG
DWG No.
A-1
DWG SCALE: AS NOTED
1 OF 4

FILE NAME: S:\Drawings\15\15-075 Horowitz\Re-zoning\15-075_Re-Zoning_Proposed_
PLOT DATE: 9/19/2019 2:47:47 PM



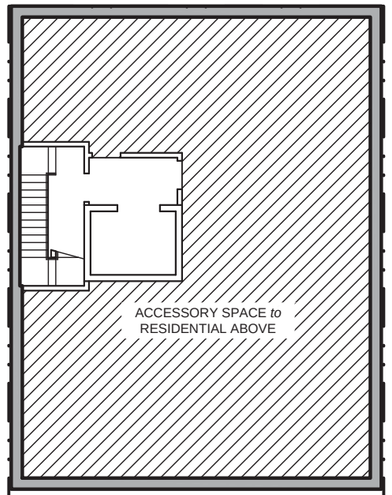

## 2nd-5th FLOORS

SCALE: 1/16" = 1'-0"



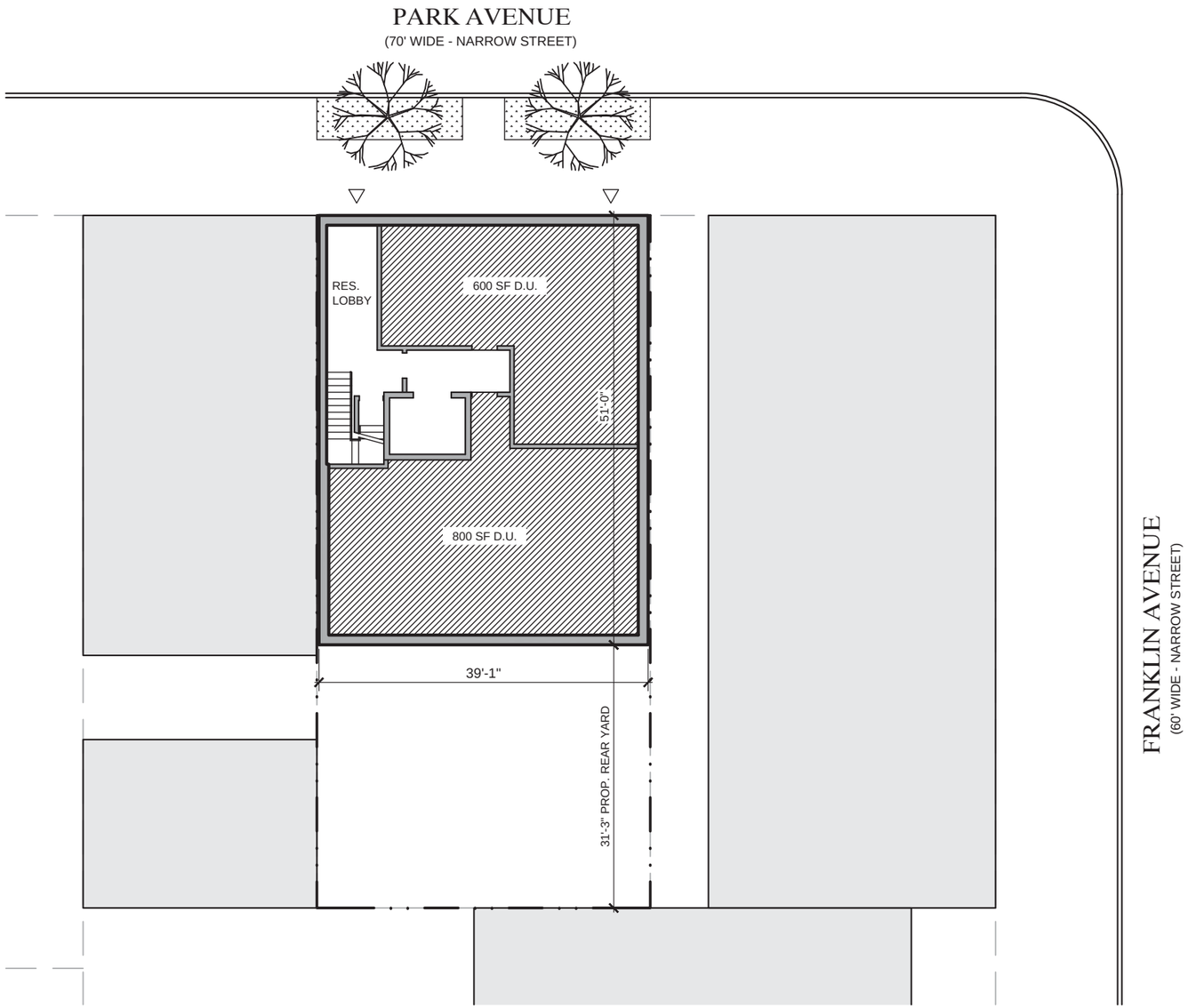

## 6th FLOOR

SCALE: 1/16" = 1'-0"




## CELLAR FLOOR

SCALE: 1/16" = 1'-0"




N

## GROUND FLOOR

SCALE: 1/16" = 1'-0"

0' 8' 16' 32'

REGISTERED ARCHITECT
LEWIS ELIEZER GARFINKEL
No. 025123
STATE OF NEW YORK


**LEWIS ELIEZER GARFINKEL, R.A.**
ARCHITECT
N.Y. REG. NO. 025123
2919 AVENUE J
BROOKLYN, NEW YORK 11210
TEL. 718-951-6551


PROJECT:

NEW BUILDING

446 PARK AVENUE
BROOKLYN, NY

GROUND FLOOR PLAN

SEAL & SIGNATURE

| | |
|---|---|
| DATE: | 8/26/19 |
| PROJECT No. | 15-075 |
| DRAWING BY: | qmp |
| CHK BY: | LG |
| DWG No. | A-2 |
| DWG SCALE: | AS NOTED |
| | 2 OF 4 |


FILE NAME: S:\Drawings\15\15-075 Horowitz\Re-zoning\15-075_Re-Zoning_Proposed_
PLOT DATE: 9/19/2019 2:47:47 PM




N

ELEVATION

SCALE: 1/16" = 1'-0"

0' 8' 16' 32'

REGISTERED ARCHITECT LEWIS ELIEZER GARFINKEL No. 025123 STATE OF NEW YORK


**LEWIS ELIEZER GARFINKEL, R.A.**
ARCHITECT
N.Y. REG. NO. 025123
2919 AVENUE J
BROOKLYN, NEW YORK 11210
TEL. 718-951-6551


PROJECT:
NEW BUILDING
446 PARK AVENUE
BROOKLYN, NY

ELEVATION

SEAL & SIGNATURE

| | |
|---|---|
| DATE: | 8/26/19 |
| PROJECT No. | 15-075 |
| DRAWING BY: | qmp |
| CHK BY: | LG |
| DWG No. | A-3 |
| DWG SCALE: | AS NOTED |
| | 3 OF 4 |


FILE NAME: S:\Drawings\15\15-075 Horowitz\Re-zoning\15-075_Re-Zoning_Proposed_
PLOT DATE: 9/19/2019 2:47:47 PM

## ZONING

ZONING: R6A / M1-4 with MIH (QUALITY HOUSING REQ'D as per ZR 23-011)
USE GROUP: 2 (1-4 PERMITTED)
OCCUPANCY GROUP: R2 (QUALITY HOUSING)

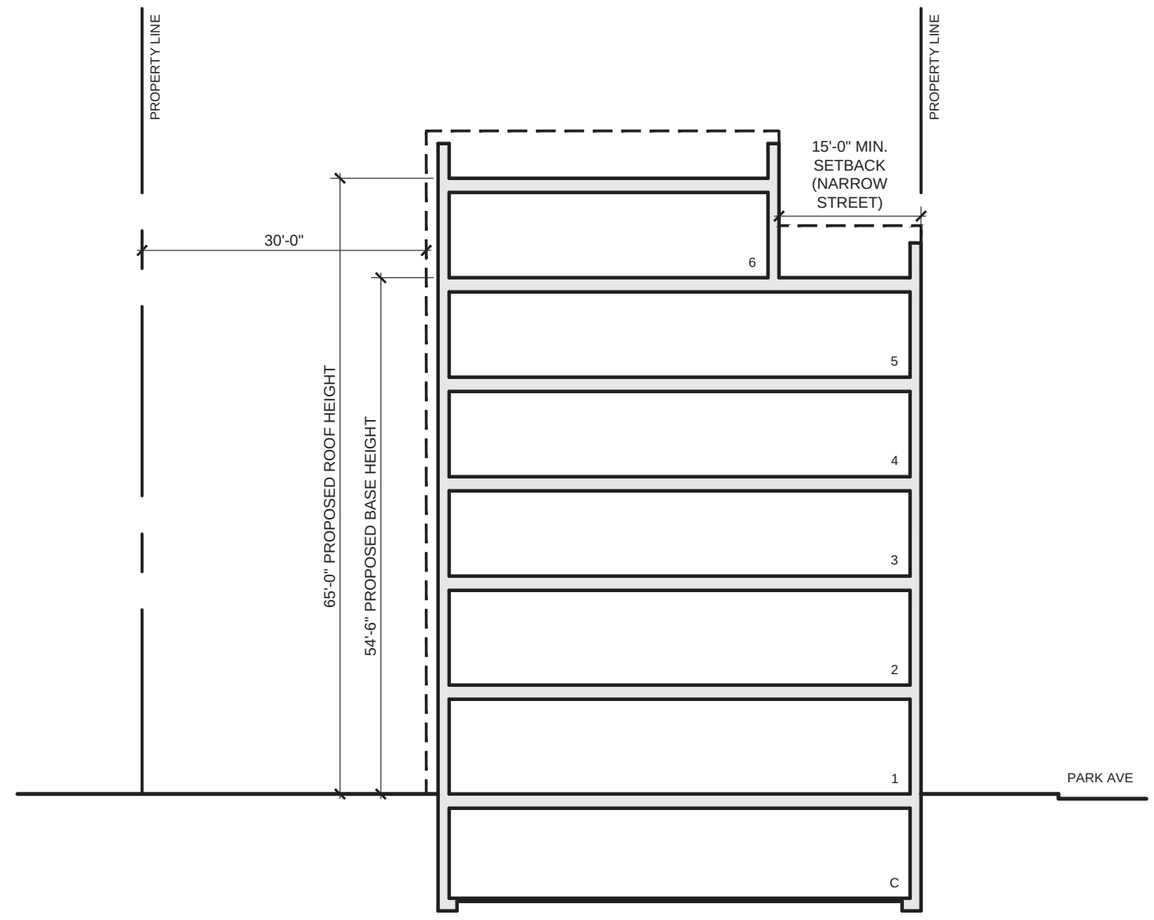
LOT AREA: 39'-7" x 82'-3" = 3,255.73 SF

BASE FAR + 25% = MAX FAR — ZR 23-154(b)
BASE FAR: 3,255.73 SF x 2.70 = 8,790.47 SF
MAX FAR: 3,255.73 SF x 3.60 = 11,720.63

PROPOSED FLOOR AREA

| FLOOR | PROPOSED | TOTAL | FAR |
|---|---|---|---|
| CELLAR *Accessory to Residential (2B)* | 39'-1" x 51'-0" = 1,993.25 SF *(not included in Zoning SF)* | 1,993.25 SF | |
| 1st FLOOR *Residential (2A)* | 39'-1" x 51'-0" = 1,993.25 SF | 1,993.25 SF | 0.61 |
| 2nd FLOOR *Residential (2A)* | 39'-1" x 51'-0" = 1,993.25 SF | 1,993.25 SF | 0.61 |
| 3rd FLOOR *Residential (2A)* | 39'-1" x 51'-0" = 1,993.25 SF | 1,993.25 SF | 0.61 |
| 4th FLOOR *Residential (2A)* | 39'-1" x 51'-0" = 1,993.25 SF | 1,993.25 SF | 0.61 |
| 5th FLOOR *Residential (2A)* | 39'-1" x 51'-0" = 1,993.25 SF | 1,993.25 SF | 0.61 |
| 6th FLOOR *Residential (2A)* | 39'-1" x 36'-0" = 1,407.00 SF | 1,407.00 SF | 0.44 |
| TOTAL | | 11,373.25 SF | 3.49 |

| | REQUIRED | PROPOSED | |
|---|---|---|---|
| MAX. LOT COVERAGE | 65% X 3,255.73 SF = 2,116.22 SF | 39'-1" x 51'-0" = 1,993.25 SF 61.22% | ZR 23-153 |
| MAX. LOT COVERAGE | 100% WITHIN 100 FT OF CORNER | 39'-1" x 51'-0" = 1,993.25 SF 61.22% | ZR 23-156(b) |
| DENSITY | 11,720.63 SF / 680 = 17 UNITS | 8 MARKET-RATE UNITS + 3 INCLUSIONARY UNITS = 11 UNITS TOTAL | ZR 23-22 |
| MIN. FRONT YARD | NONE | NONE PROVIDED | |
| MIN. SIDE YARD | NONE | NONE PROVIDED | ZR 23-462(C) |
| MIN. REAR YARD | 30 FT | 31'-3" | ZR 23-47 |
| STREET WALL LOCATION | NO CLOSER TO STREET LINE THAN BUILDING WITHIN 25 FT EITHER SIDE | LINE-UP WITH ADJACENT | ZR 23-661(a)(1) |
| MIN. BASE HEIGHT | 40 FT | 54'-6" | ZR 23-664(b) |
| MAX. BASE HEIGHT | 65 FT | 54'-6" | ZR 23-664(b) |
| MAX. TOTAL HEIGHT | 80 FT & 8 STORIES | 65'-0" | ZR 23-664(b) |
| SETBACK | 15 FT on NARROW STREET | 15'-0" | ZR 23-662(c) |
| STREET TREE | 39'-7" / 25 = 1.58 :. 2 TREES REQ'D | 2 TREES PROPOSED | ZR 23-03 |
| PARKING | 50% of D.U.'s | 8 DU x 0.5 = 4.0 4 SPACES REQ'D | ZR 25-23 |
| PARKING | NONE REQ'D FOR INCLUSIONARY HOUSING IN TRANSIT ZONE | NONE | ZR 25-251 |
| PARKING WAIVER | WAIVED IF 5 OR FEWER | 4 REQ'D, THEREFORE WAIVED NONE PROVIDED | ZR 25-261 |
| BICYCLE PARKING | 50% of D.U.'s | 11 DU x 0.5 = 5.5 6 SPACES REQ'D | ZR 25-811 |
| BICYCLE PARKING WAIVER | WAIVED 10 D.U.'s OR FEWER | NONE PROVIDED | ZR 25-811(a) |




SECTION
SCALE: 1/16" = 1'-0"

0' 8' 16' 32'

REGISTERED ARCHITECT LEWIS ELIEZER GARFINKEL No. 025123 STATE OF NEW YORK

**LEWIS ELIEZER GARFINKEL, R.A.**
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BROOKLYN, NEW YORK 11210
TEL. 718-951-6551

PROJECT:
NEW BUILDING
446 PARK AVENUE
BROOKLYN, NY

SECTION

SEAL & SIGNATURE

DATE: 8/26/19
PROJECT No. 15-075
DRAWING BY: qmp
CHK BY: LG
DWG No.
A-4
DWG SCALE: AS NOTED
4 OF 4

FILE NAME: S:\Drawings\15\15-075 Horowitz\Re-zoning\15-075_Re-Zoning_Proposed_
PLOT DATE: 9/19/2019 2:47:47 PM

# APPENDIX C

## Noise Backup Data

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 77.5 dB | Result |
| LASmax | 90.5 dB | LAS 50% | 67 dB | |
| LASmin | 46.2 dB | LAS 90% | 62 dB | |
| Start Date & Time | 1/21/2020 7:30:00 AM | Calibration (Before) Date | 1/21/2020 7:28:04 AM | |
| Duration | 00:20:03 HH:MM:SS | Calibration (After) Date | 1/21/2020 7:50:20 AM | |
| LAeq | 73.6 dB | Calibration Drift | 0.9 dB | |
| End Date & Time | 1/21/2020 7:50:03 AM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 79 dB | Result |
| LASmax | 103 dB | LAS 50% | 69 dB | |
| LASmin | 48 dB | LAS 90% | 62.5 dB | |
| Start Date & Time | 1/21/2020 12:00:32 PM | Calibration (Before) Date | 1/21/2020 12:00:09 PM | |
| Duration | 00:20:02 HH:MM:SS | Calibration (After) Date | 1/21/2020 12:20:47 PM | |
| LAeq | 77.4 dB | Calibration Drift | 0.2 dB | |
| End Date & Time | 1/21/2020 12:20:34 PM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 77.5 dB | Result |
| LASmax | 90.4 dB | LAS 50% | 66.5 dB | |
| LASmin | 48.5 dB | LAS 90% | 56.5 dB | |
| Start Date & Time | 1/21/2020 4:30:02 PM | Calibration (Before) Date | 1/21/2020 4:29:42 PM | |
| Duration | 00:20:02 HH:MM:SS | Calibration (After) Date | 1/21/2020 4:50:33 PM | |
| LAeq | 73.2 dB | Calibration Drift | 0.3 dB | |
| End Date & Time | 1/21/2020 4:50:04 PM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 79 dB | Result |
| LASmax | 95.4 dB | LAS 50% | 70.5 dB | |
| LASmin | 60.5 dB | LAS 90% | 63 dB | |
| Start Date & Time | 1/21/2020 7:50:38 AM | Calibration (Before) Date | 1/21/2020 7:50:31 AM | |
| Duration | 00:20:24 HH:MM:SS | Calibration (After) Date | 1/21/2020 8:11:21 AM | |
| LAeq | 75.9 dB | Calibration Drift | 0.3 dB | |
| End Date & Time | 1/21/2020 8:11:02 AM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 79 dB | Result |
| LASmax | 93.4 dB | LAS 50% | 67.5 dB | |
| LASmin | 49.8 dB | LAS 90% | 62.5 dB | |
| Start Date & Time | 1/21/2020 12:21:02 PM | Calibration (Before) Date | 1/21/2020 12:20:57 PM | |
| Duration | 00:20:01 HH:MM:SS | Calibration (After) Date | 1/21/2020 12:42:18 PM | |
| LAeq | 75.1 dB | Calibration Drift | -0.4 dB | |
| End Date & Time | 1/21/2020 12:41:03 PM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 79 dB | Result |
| LASmax | 96.5 dB | LAS 50% | 70 dB | |
| LASmin | 54.4 dB | LAS 90% | 64.5 dB | |
| Start Date & Time | 1/21/2020 4:50:49 PM | Calibration (Before) Date | 1/21/2020 4:50:43 PM | |
| Duration | 00:20:02 HH:MM:SS | Calibration (After) Date | 1/21/2020 5:11:36 PM | |
| LAeq | 75 dB | Calibration Drift | 0.2 dB | |
| End Date & Time | 1/21/2020 5:10:51 PM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 77 dB | Result |
| LASmax | 92.5 dB | LAS 50% | 68.5 dB | |
| LASmin | 50.4 dB | LAS 90% | 60.5 dB | |
| Start Date & Time | 1/21/2020 8:11:40 AM | Calibration (Before) Date | 1/21/2020 8:11:32 AM | |
| Duration | 00:20:04 HH:MM:SS | Calibration (After) Date | 1/21/2020 8:32:11 AM | |
| LAeq | 75 dB | Calibration Drift | 0.0 dB | |
| End Date & Time | 1/21/2020 8:31:44 AM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 5086866 | LAS 10% | 69.5 dB | Result |
| LASmax | 89.3 dB | LAS 50% | 63.5 dB | |
| LASmin | 55.1 dB | LAS 90% | 59 dB | |
| Start Date & Time | 11/23/2021 12:24:18 PM | Calibration (Before) Date | 11/23/2021 12:21:21 PM | |
| Duration | 00:20:05 HH:MM:SS | Calibration (After) Date | 11/23/2021 12:45:23 PM | |
| LAeq | 69.9 dB | Calibration Drift | 0.1 dB | |
| End Date & Time | 11/23/2021 12:44:23 PM | Battery Low | No | |
| Notes | | | | |

**Casella CEL Ltd.**

**Report On CEL-63X**

| | | | | |
|---|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | | |
| Serial Number | 4278006 | LAS 10% | 77.5 dB | Result |
| LASmax | 88 dB | LAS 50% | 67.5 dB | |
| LASmin | 48.2 dB | LAS 90% | 56.5 dB | |
| Start Date & Time | 1/21/2020 5:11:48 PM | Calibration (Before) Date | 1/21/2020 5:11:45 PM | |
| Duration | 00:20:01 HH:MM:SS | Calibration (After) Date | 1/21/2020 5:32:05 PM | |
| LAeq | 73.1 dB | Calibration Drift | -0.1 dB | |
| End Date & Time | 1/21/2020 5:31:49 PM | Battery Low | No | |
| Notes | | | | |

CASELLA

# Certificate of Conformity and Calibration

| | | | |
|---|---|---|---|
| **Instrument Model:-** | **CEL-633C** | **Preamplifier Type:-** | **CEL-495** |
| Serial Number | 4278006 | Serial Number | 4208 |
| Firmware revision | V006-03 | | |
| **Microphone Type:-** | **CEL-251** | As Received:- | 114.1 |
| Serial Number | 3796 | As Adjusted:- | 114.0 |
| **Instrument Class/Type:-** | **1** | | |



## Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

**Note:- The test sequences performed in this report are in accordance with the current Sound level meter** *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

| | | | |
|---|---|---|---|
| **Test Conditions:-** | 23.5 °C | Test Engineer:- | Ken Umbeer |
| | 87.7 %RH | Date of Issue:- | August 22, 2019 |
| | 1013.5 mBar | Date Due:- | August 22, 2020 |

## Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to NIST. This product is certified as being compliant to the requirements of the CE Directive.

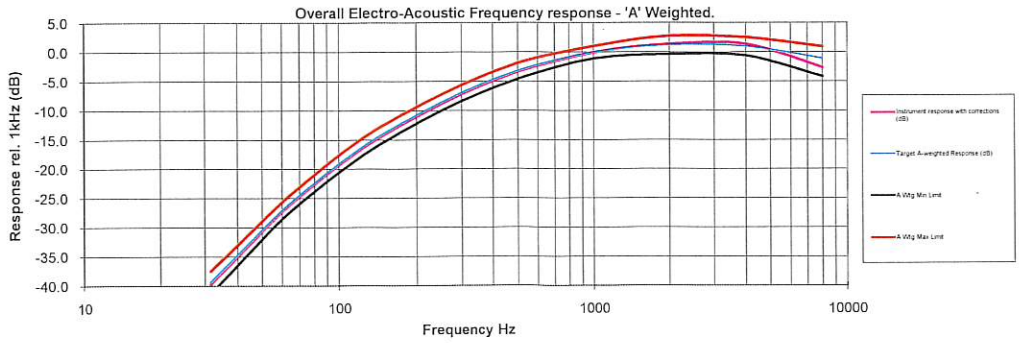
## Test Summary:-

| | |
|---|---|
| Self Generated Noise Test | All Tests Pass |
| Electrical Signal Test Of Frequency Weightings | All Tests Pass |
| Frequency & Time Weightings At 1 kHz | All Tests Pass |
| Level Linearity On The Reference Level Range | All Tests Pass |
| Toneburst Response Test | All Tests Pass |
| C-peak Sound Levels | All Tests Pass |
| Overload Indication | All Tests Pass |
| Acoustic Tests | All Tests Pass |

## Combined Electro-Acoustic Frequency Response - A Weighted

**Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)**

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.




**Casella CEL**
Regent House, Wolseley Road,
Kempston, Bedford
MK42 7JY
United Kingdom

Phone: +44 (0) 1234 844100
Fax:- +44(0) 1234 841490
E-mail:
info@casellameasurement.com
Web: www.casellameasurement.com

**Casella CEL, Inc.** a subsidiary of IDEAL Industries, Inc.
415 Lawrence Bell Drive
Unit 4
Buffalo
NY 14221
USA

Toll Free: (800) 366-2966
Tel (716) 276-3040 Fax: (716) 276-3043
E-mail: info@casellausa.com
Web: www.casellausa.com

Tested to CEL-63X test sheet TP444 revision 00-12

CASELLA

# Certificate of Conformity and Calibration



**Instrument Model:-** CEL-633C

Serial Number 5086866
Firmware revision V006-05

**Microphone Type:-** CEL-251
Serial Number 3700

**Preamplifier Type:-** CEL-495
Serial Number 003409

**Instrument Class/Type:-** 1

## Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

**Note:- The test sequences performed in this report are in accordance with the current Sound level meter** *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

**Test Conditions:-** 21 °C, 41 %RH, 1002 mBar

**Test Engineer:-** Paul Blackwell
**Date of Issue:-** July 28, 2021

## Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2015 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

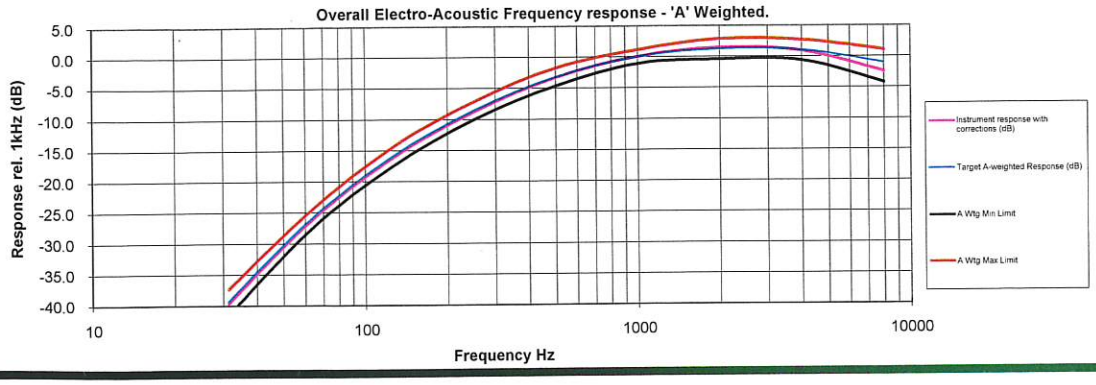
## Test Summary:-

| | |
|---|---|
| Self Generated Noise Test | **All Tests Pass** |
| Electrical Signal Test Of Frequency Weightings | **All Tests Pass** |
| Frequency & Time Weightings At 1 kHz | **All Tests Pass** |
| Level Linearity On The Reference Level Range | **All Tests Pass** |
| Toneburst Response Test | **All Tests Pass** |
| C-peak Sound Levels | **All Tests Pass** |
| Overload Indication | **All Tests Pass** |
| Acoustic Tests | **All Tests Pass** |

## Combined Electro-Acoustic Frequency Response - A Weighted

**Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)**

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.




**Casella UK**
Regent House, Wolseley Road,
Kempston, Bedford
MK42 7JY
United Kingdom
Tel: +44 (0) 1234 844100
Fax: +44(0) 1234 841490
E-mail: info@casellasolutions.com

**Casella US**
13 Pratts Junction Road,
Sterling, MA 01564-2305
USA
Toll Free: (800) 366-2966
E-mail: info-us@casellasolutions.com

**Casella India**
Ideal Industries India Pvt.Ltd
229-230, Spazedge, Tower -B Sohna Road,
Sector-47, Gurgaon-122001, Haryana (India)
Tel: +91 124 4495100
E-mail: casella.sales@ideal-industries.in

**Casella China**
Room 305, Building 1, No. 1295, Chuanqiao Road, Pudong District, Shanghai, China
Telephone: +86-21-31263188
Email: info@casellasolutions.cn

# Noise Job Field Sheet

Name of Project: 448 Park Avenue 2019101

Project Address: 448 Park Avenue Brooklyn

Date(s) of Field Work: 1/21/2020

Personnel: Zach Landis

Project Specific Scope of Work:

3 x 20-minute locations AM, Midday, PM

Site Contact -

Maximum Billable Hours for the Day: 15

## I. Start of Noise Monitoring Day

Departure Time: 6:00 Arrival Time: 7:00

Weather Conditions (temp, wind speed, precipitation): Sunny, 20's, Light Wind

Meter Type: Casella Meter Serial #: 4278006 Meter Location: 1, 2, 3
Meter Type: _____ Meter Serial #: _____ Meter Location: _____
Meter Type: _____ Meter Serial #: _____ Meter Location: _____
*If more locations are needed for a project use a second Field Sheet

Calibrator Serial #: ~~205~~ Meters used on: _____
Calibrator Serial #: 2045304 Meters used on: 1, 2, 3
Calibrator Serial #: _____ Meters used on: _____
Were Photos Taken of Each Location? (Y)/ N *Discuss specific photo instructions w/ Project Manager

**On a separate sheet of paper (field book) make a sketch of the noise meter locations and the distances to nearest wall, fence, building, or other solid surfaces.*

## II. Morning Session 7:30 AM – 9:00 AM

Before Measurement:

1 Meter Serial #: 4278006 Time: 7:28 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: 7:50 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 8:11 Calibration Passed at 114 dB? (Y) / N

After Measurement:

1 Meter Serial #: 4278006 Time: 7:50 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: 8:11 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 8:32 Calibration Passed at 114 dB? (Y) / N

*If more locations are needed for a project use a second Field Sheet

| Location # | Start Time | End Time |
|---|---|---|
| 1 | 7:30 | 7:50 |
| 2 | 7:50 | 8:11 |
| 3 | 8:11 | 8:31 |

*If more locations are needed for a project use a second Field Sheet

| Location # | Car | SUV | Medium Truck | Heavy Truck | Bus | Train |
|---|---|---|---|---|---|---|
| 1 | 103 | 91 | 7 | 0 | 8 | 0 |
| 2 | 111 | 121 | 12 | 3 | 27 | 0 |
| 3 | 18 | 10 | 8 | 0 | 20 | 0 |

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

None

*Please place noise meters in their respective cases between sessions to avoid damage.*

## III. Midday Session 12:00 PM – 1:30 PM

Before Measurement:

1 Meter Serial #: 4278006 Time: 12:00 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: 12:26 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 12:42 Calibration Passed at 114 dB? (Y) / N

After Measurement:

1 Meter Serial #: 4278006 Time: 12:20 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: 12:41 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 13:02 Calibration Passed at 114 dB? (Y) / N

*If more locations are needed for a project use a second Field Sheet

| Location # | Start Time | End Time |
|---|---|---|
| 1 | 12:00 | 12:20 |
| 2 | 12:26 | 12:41 |
| 3 | 12:42 | 13:02 |

*If more locations are needed for a project use a second Field Sheet

| Location # | Car | SUV | Medium Truck | Heavy Truck | Bus | Train |
|---|---|---|---|---|---|---|
| 1 | 91 | 96 | 8 | 2 | 1 | 0 |
| 2 | 102 | 93 | 6 | 1 | 2 | 0 |
| 3 | 7 | 11 | 5 | 0 | 0 | |

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

Bus held horn for a while right next to Location 3 run.

*Please place noise meters in their respective cases between sessions to avoid damage.*

Note Midday Noise Monitoring at Location 3 was performed again on November 23rd, 2021 due to anomalous results

## IV. Evening Session 4:30 PM – 6:00 PM

Before Measurement:

1 Meter Serial #: 4278006 Time: 16:29 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: 16:50 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 17:11 Calibration Passed at 114 dB? (Y) / N

After Measurement:

1 Meter Serial #: 4278006 Time: 16:50 Calibration Passed at 114 dB? (Y) / N
2 Meter Serial #: 4278006 Time: ~~16~~ 17:11 Calibration Passed at 114 dB? (Y) / N
3 Meter Serial #: 4278006 Time: 17:32 Calibration Passed at 114 dB? (Y) / N

*If more locations are needed for a project use a second Field Sheet

| Location # | Start Time | End Time |
|---|---|---|
| 1 | 16:30 | 16:50 |
| 2 | 16:50 | 17:10 |
| 3 | 17:11 | 17:31 |

*If more locations are needed for a project use a second Field Sheet

| Location # | Car | SUV | Medium Truck | Heavy Truck | Bus | Train |
|---|---|---|---|---|---|---|
| 1 | 125 | 108 | 6 | 1 | 13 | 0 |
| 2 | 142 | 139 | 8 | 2 | 16 | 0 |
| 3 | 33 | 38 | 2 | 0 | 6 | 0 |

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

None

*Please place noise meters in their respective cases between sessions to avoid damage.*

## V. End of Noise Monitoring Day

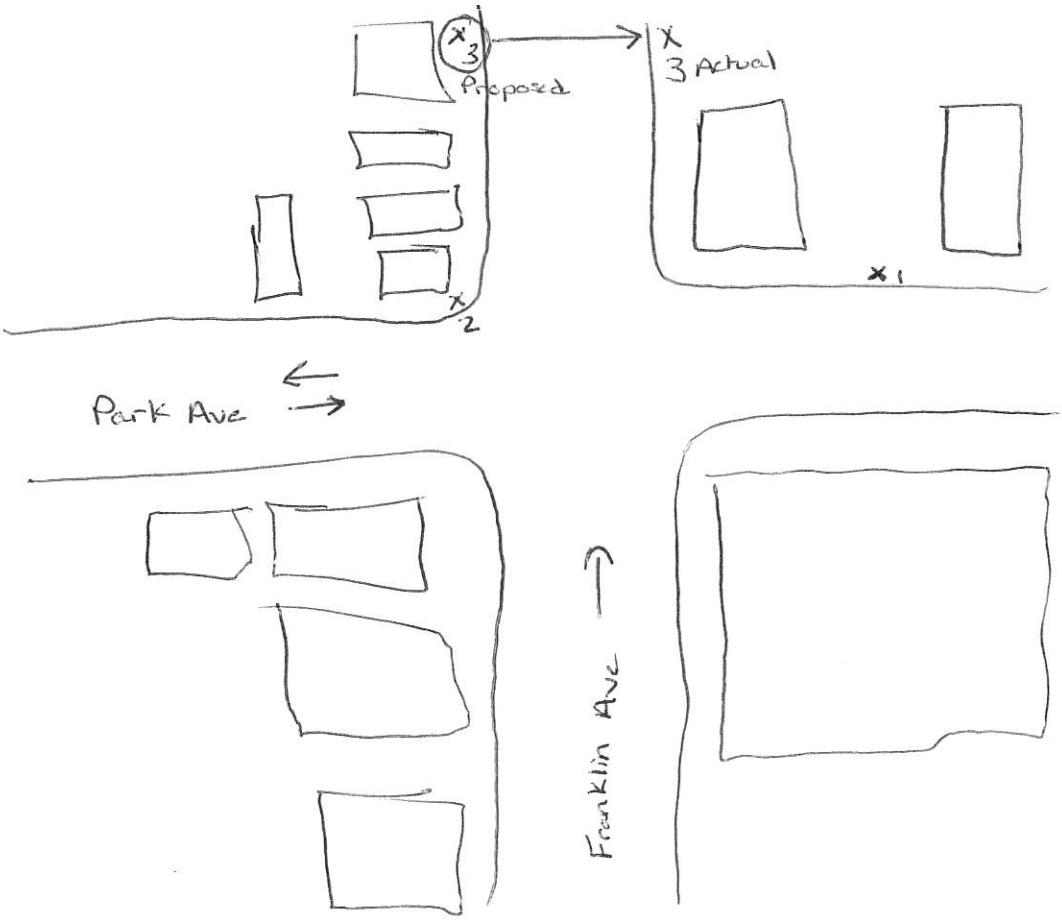
- Please return all noise meters to their cases.
- Do not return dead batteries to the cases, throw them out.
- Did you take photos? Y / N
- Did you complete the site sketch? Y / N
- If a meter(s) was rented, please scan in calibration documents.

Anything of note/concern for the day: _____

Location 3 was moved Across the street due to construction Scaffolding over the planned Location

Departure Time: 17:35 Arrival Time: 19:00

Total Time to Be Billed: _____






Legend

Projected Development Site 1

Noise Monitoring Locations

0 15 30 60 90 US Feet

N

**Noise Job Field Sheet**

Name of Project: 448 Park Avenue 2019101

Project Address: 448 Park Avenue Brooklyn

Date(s) of Field Work: 11/23/2021

Personnel: Josh Koh

Project Specific Scope of Work:

| |
|---|
| 1 x 20-minute location Midday only LOCATION 3 ONLY |

## I. Start of Noise Monitoring Day

Departure Time: 11:00 Arrival Time: 12:00 PM

Weather Conditions (temp, wind speed, precipitation): Mild wind speeds, no precipitation, temperature 41 degrees Fahrenheit

Meter Type: Casella CEL-633 C Meter Serial #: 5086866 Meter Location: 3

## III. Midday Session 12:00 PM – 1:30 PM

Before Measurement:

Meter Serial #: 5086866 Time: 12:21 Calibration Passed at 114 dB? Y

After Measurement:

Meter Serial #:5086866 Time: 12:45 Calibration Passed at 114 dB? Y

*If more locations are needed for a project use a second Field Sheet

| Location # | Start Time | End Time |
|---|---|---|
| 3 | 12:24 | 12:44 |

*If more locations are needed for a project use a second Field Sheet

| Location # | Car | SUV | Medium Truck | Heavy Truck | Bus | Train |
|---|---|---|---|---|---|---|
| 3 | 40 | 39 | 5 | 2 | 1 | 0 |

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

# APPENDIX D

## Industrial Processing Emissions Permits

DEP

# DOCUMENT COVER SHEET

Registration # CA 2146 - 70

APC 5-0 (Rev 6/69)

# APPLICATION FOR CERTIFICATE OF OPERATION
## FUEL BURNING EQUIPMENT

The City of New York

**DEPARTMENT OF AIR RESOURCES**
51 Astor Place, New York, N.Y. 10003

AUSTIN N. HELLER, *Commissioner*

2146

| DEPARTMENT OF BUILDINGS |
|---|
| Appl.No. and Date |
| Fee _____ Receipt No. _____ |
| Cashier |

| Present Certificate of Operation Number (if any) 141/63 | Block No. 1884 Lot No. 1 |
|---|---|

| BUILDING | BOILER(S) | BURNER(S) | FUEL GRADE |
|---|---|---|---|
| New _____ | New _____ | New _____ | Present No. 6 |
| Existing x | Existing x | Existing x | Proposed _____ |

| DEPARTMENT OF AIR RESOURCES |
|---|
| Appl.No. and Date CA2146 APR 770 |

Premise Address 70 Franklin Avenue Borough Brooklyn

Type of Building Factory Equipment Located on Floor No. cellar

No. of Floors 2 No. of Apartments (Including prof.& comm.) ---- Total Rooms ----

Owner ~~xxxxxxxx~~ Edwin B. Stimpson Co., Inc. Address 70 Franklin Avenue

Town or Borough Brooklyn City N. Y. State N. Y. Zip #11205

Authorized Agent* Abraham Beltzer, P. E. Address 1124 East 28 Street

Town or Borough Brooklyn City N. Y. State N. Y. Zip # 11210

Abraham Beltzer PE
Signature of Authorized Agent

Installer Mortimer Traktman Metropolitan Heat & Power Co., Inc. Address 820 Coney Island Avenue Town or Borough Brooklyn

NYC Oil Burner Lic.No. 1396 Class A City N. Y. State N. Y. Zip # 11218

"I certify that I will make the installation of the equipment as applied for and specified in this application and in accordance with the plans filed and approved by the Commissioner of Air Resources."

$3,000. Estimated Cost

Mortimer Traktman, Installer
Type Name & Title Shown at Right

Mortimer Traktman
Signature and Title

" I certify to the accuracy of the plans, specifications and supplementary data submitted. I state further that the equipment, if installed in accordance with the submitted plans, will comply with the requirements of the law."

PROFESSIONAL ENGINEER ABRAHAM BELTZER NO. 16529 STATE OF NEW YORK

Abraham Beltzer PE
Signature of P.E./R.A.
NYS License No. and Seal

*Applications and plans must be submitted in triplicate accompanied by a Letter of Authorization from the owner or lessee.

MAR 20 1970

RELATED AGENCY DIVISION

450 HP

BOILER(S):No. 1 ;Mfr. Cyclotherm ;Cat.No. C- 5200 ;Steel x Cast Iron ;Steam x Hot $H_2O$ ;

Boiler Net Rating(ea) 16,243 sq ft Steam EDR;Heating Surface 472 sq ft-Outside x Fireside ;

Gross Boiler Output(ea) 5,025 cat M Btu/hr; Firing Rate for Gross Output(ea) 42 cat gph;

Combustion Chamber: Floor Area sq in; Furnace Vol 39.6 cu ft; Dim:'A' 11 in;'B' 11 in

BURNER(S):No. 1 ;Mfr. Cyclotherm ;Cat.No. C- 5200 ;Type Gun ;Grade of Oil No.6 ;

Max Firing Rate(ea) 42 cap gph;Actual Firing Rate(ea) 38 gph;Int Gas Firing Rate(ea) cfh

Firing rate control - Honeywell L 91 A

OTHER EQUIPMENT ON STACK OR IN BOILER ROOM: Yes No x ; If yes, provide all details on plan.

FIXED VENTILATION: Centerline Ht Above Fl 10 ft; Louver Area(sq in):† Gross 1200 Net 840 ;

20 x 42 = 840

Fresh Air Duct(ID) in; Cross Sect Area sq in; Length ft; No.Bends: ;

Fresh Air Fan: Yes No ; Mfr. ; Cat.No. ; CFM ; S.P. " $H_2O$;

Fresh Air Fan/Motorized Louver Interlocked with Burner: Yes No

†Based on inside dim.

COMBUSTION CONTROLLER:Yes x No ;Type:High-Low Modulating x ;Mfr. Honeywell ;Cat.No. M904E

SEQUENTIAL DRAFT CONTROL: Yes No x ; Mfr. ; Cat.No.

WINDBOX:Yes No x Secondary Air Damper Shrouded:Yes No Barometric Damper:Yes No x

positive pressure - 5/14/70

OIL TEMPERATURE in suction line automatically maintained @ 120°F minimum: Yes x No ; Method:

Separate Pump Set x ; Other(describe) Continuous circulation with pump and hot well in fuel oil tank

OIL HEATERS:Yes x No ; Primary:No. 1 ;Mfr. Alstrom ;Cat.No.6DT- 120 ;Steam* Hot $H_2O$§x ;

2 x 42 = 84

Capacity(ea) 120 gph per 60 deg F oil temperature rise @:▽ lbs steam/ 180 deg F water;

§Circulation: Gravity x Forced ; Secondary: No. 1 ; Watts(ea) 5,000

*▽AUTOMATIC PRESSURE DEVICE to maintain boiler steam pressure @ lbs min: Yes No ; OR

§▽AUTOMATIC TEMPERATURE DEVICE to maintain boiler water temp @ 180 deg F min: Yes x No ;

Mfr. Honeywell ; Cat.No. L- 4046 §Minimum acceptable temperature-180 deg F.

SMOKE ALARM: Yes x No ; Mfr. Heat Timer ; Cat.No. M ; Automatic Shutoff: Yes x No

BREECHING: Inside Dim 24 in;Length 10 ft;No.Bends. 1 ;Cleanouts every 15 ft:Yes No

m.D 18.28 22-3 ϕ 18.5 ϕ

CHIMNEY: Construction brick ;Inside Dim 12 x 24 in; Height 45 ft; Cleanout: Yes x No ;

m.D 18.2 ϕ

Raincap: Yes No x Mechanical Draft: Yes x No ; Forced Induced ;

Fan Mfr. ; Cat.No. ; Capacity CFM °F; S.P. " $H_2O$;

Chimney at Least as High as any Building or Structure Within 100 ft Radius:** Yes x No

LOAD: (A)Space Heating 14,000 sq ft Steam EDR Max; (B)Domestic Hot Water: 500 gph Max;

Domestic Hot Water: 1,250 sq ft Steam EDR Max; Capacity of Water Storage Tank gal;

(C)Process Load: sq ft Steam EDR Max; Total (A)+(B)+(C): 15,250 sq ft Steam EDR

**PLOT PLAN MUST INDICATE DISTANCE IN FEET FROM STACK TO ALL TALLER BUILDINGS WITHIN 100' RADIUS.

APC 137-B
Rev.:
1/69

The City of New York

DEPARTMENT OF AIR RESOURCES
51 ASTOR PLACE, NEW YORK, N. Y. 10003

AUSTIN N. HELLER, Commissioner

Application No. CA- 2146-To
Date Issued: 6/8/70

AGENT

Abraham Beltzer

OWNER

Edwin B. Stimson

NOTICE OF APPROVAL
(WORK PERMIT)

KEEP COPY OF THIS NOTICE ON PREMISES

We are pleased to advise you that your application for an installation or alteration permit has been approved. One (1) set of the approved plans is returned herewith.

PREMISES: To Franklin Ave Brooklyn

BOILER(S) MAKE Cyklotherm (existing)

MODEL C-5200

BURNER(S) MAKE Cyclotherm (existing)

MODEL integral

FIRING OIL # 6

MAX. GAL/HOUR 38

Field test required

This permit shall not be transferable from one permittee to another, from one location to another or from one piece of equipment to another; and may be revoked at any time pursuant to the New York City Air Pollution Control Code. The Department shall be notified in writing within thirty (30) days after completion of the installation or alteration that it is completed and placed or will be placed in operation. The proposed installation or alteration shall be completed in conformity with the approved application and plans.

BY: Hugh Tipping
HUGH TIPPING, P.E.
Head, Fossil Fuels Combustion Division

Alfred Pieratti
ALFRED PIERATTI, P.E.
Director of Engineering

For the Commissioner

EB - Eggert

INSTALLER

Metropolitan Heat & Power Co., Inc.

APC 4A- REV. 10/1/67

THE CITY OF NEW YORK
DEPARTMENT OF
AIR POLLUTION CONTROL
51 ASTOR PLACE, NEW YORK, N.Y. 10003

TELEPHONE: 2742
566-2743
2744

# AMENDMENT

**To be TYPED and filed in TRIPLICATE**

NOTE—The applicant must not use the back of this sheet. If more space is needed, additional sheets must be used. No item must be continued over to another sheet; but each item must be complete on the sheet on which it appears. Only those items that appear above the endorsements at the bottom of the page can be considered.

APPLICATION No. CA 2146, 19 70

LOCATION 70 Franklin Avenue, Brooklyn

Date May 14, 19 70

**Please reconsider your disapproval dated 4/17/70 of the above application. The objections you have made are answered below. These amendments are to be made part of the original application and are subject to all the conditions, agreements and statements therein contained.**

Owner/Agent Abraham Beltzer, P.E. Signature Abraham Beltzer, P.E.

Address 1124 East 28 Street, Brooklyn, N.Y. 11210

1. A positive pressure will be maintained at the boiler outlet while the burner is firing. A field test will be made by installer to confirm this.

PROFESSIONAL ENGINEER * ABRAHAM BELTZER * No. 16528 * UNIVERSITY OF THE STATE OF NEW YORK

R.A. or P.E. Seal

RECEIVED
MAY 28 1970
DEPARTMENT OF AIR RESOURCES PLAN DESK

Estimated Cost: This Amendment $..... Fee Required $..... Verified by.....

Fee Paid....., 19..... Receipt No..... Cashier.....

APPROVED ON 6/8/70, 19

Examiner

Commissioner

# DEP

Cover Sheet

**Registration #:** CA 280494

94-33 EJS Boiler #3

DEP

Records Control Unit
(718) 595-3855

New York City
Department of
Environmental
Protection

ORIGINAL-KEEP IN FILE

DATE: 10/3/94

CA288494P
Installation Number

Bureau of
Air Resources

RE: 791 Kent Avenue Brooklyn, New York 11205
(PREMISE ADDRESS) (BORO)

## PROFESSIONAL CERTIFICATION

59-17 Junction Blvd.
Corona, New York
11368 - 5107

Being duly mindful of my responsibilities as a licensed Professional Engineer in the State of New York and acting as designated agent for the applicant, I hereby certify that the application, plans and all supplementary documents submitted in connection with this filing are complete and fully comply with all applicable laws, codes, rules,regulations and directives of the Department of Environmental Protection, Bureau of Air Resources of the City of New York in effect at the time filed.

ALBERT F. APPLETON
Commissioner

OCT 1994

LICENSED PROFESSIONAL ENGINEER
ELLIOT J. SHAPIRO
NO. 38
UNIVERSITY OF THE STATE OF NEW YORK

ELLIOT J. SHAPIRO, P.E. 10/3/94
P.E. Seal & Signature

Instructions: Pursuant to Engineering Directive #1-78, this certification must be submitted in triplicate with all APC 5-0, APC 5-R and APC5-PA applications and does not preclude the necessity to sign and seal the certification now contained on the appliction forms. This certification shall also be submitted in triplicate with all APC 5-0A applications submitted and certified by a professional engineer.

94-55 EJS Boiler #4 ✓ ✓

APC 9-0 (REV. 1/77)

# The City of New York
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## AIR RESOURCES - BUREAU OF ENGINEERING
59-17 JUNCTION BLVD., CORONA, QNS., N.Y. 11368

## FOSSIL FUEL COMBUSTION EQUIPMENT APPLICATION FOR CERTIFICATE OF OPERATION

C BOROUGH: 2 C 6 | APPLICATION YEAR: 0 0 | APPLICATION NUMBER: 0 0 0 0 A

1884 BLOCK | 70 LOT | M1-2 ZONING (BY APPLICANT)

FOR AGENCY USE ONLY

FEE: $ _____ DATE OF RECEIPT _____ 19 ____ RECEIPT # _____ CASHIER _____

25. DATE APPLICATION RECEIVED: / /

1. OWNER'S NAME: Multi Color Ind., Inc.

2. NUMBER AND STREET ADDRESS: 791 Kent Avenue

3. TOWN OR BORO: Brooklyn | 4. STATE: N.Y. | 5. ZIP: 11205

6. FACILITY CLASSIFICATION — H. ___ HOSPITAL L. ___ BD. OF ED. A. ___ COMMERCIAL C. ___ UTILITY I. ___ RESIDENTIAL M. ___ NYC HOSPITAL B. X INDUSTRIAL S. ___ SCHOOL K. ___ N.Y.C.H.A. N. ___ OTHER

7. OWNER OR OFFICERS NAME: Ben Hirsch | TITLE: President

I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the N.Y.C. Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Sec. 1403.2-15.23 of the NYC Air Pollution Cont. Code & Sec. 210.45 of Penal Law

8. OWNER OR OFFICER'S SIGNATURE | 9. TELEPHONE: 718 855 2700

10. NAME OF P.E.: Elliot J. Shapiro, P. E. Shapiro Engineering, P. C. | 11. TELEPHONE: 718 531-8400

12. NUMBER AND STREET ADDRESS: ~~6315 Mill Lane~~ 181 South Franklin Ave Suite 205

13. TOWN OR BORO: ~~Brooklyn~~ Valley Stream | 14. STATE: N.Y. | 15. ZIP: ~~11234~~ 11581

16. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF TO THE ACCURACY OF THE TECHNICAL INFORMATION CONTAINED IN THIS APPLICATION, PLANS AND ANY SUPPLEMENTARY DATA SUBMITTED

LICENSED PROFESSIONAL ENGINEER — ELLIOT J. SHAPIRO — NO. 038645 — STATE OF NEW YORK

PLACE SEAL ABOVE

10/3/94

17. NYS P.E. LIC. NO.: 38645 | 18. SIGNATURE OF PROFESSIONAL ENGINEER: Elliot J. Shapiro, P. E.

19. FACILITY NAME (IF ANY): Multi Color Ind., Inc.

20. FACILITY LOCATION (NUMBER AND STREET ADDRESS): 70 Franklin Avenue

21. BORO: Brooklyn | 22. ZIP: N.Y. 11205 | 23. BLDG. SECTION OR NUMBER | 24. EQUIPMENT LOCATION: Boiler Room

24A. NO. OF FLOORS: NA | NO. OF APTS.: 0 | NO. OF ROOMS: 0 | TYPICAL FLOOR AREA: NA

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(A) INSTALLER IS NAMED AND
(B) WORKMENS COMP. & DISABILITY ARE ON FILE WITH DAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

COMPANY NAME OF INSTALLER: PACIFIC BOILER CORP. LEGALIZATION

COMPANY ADDRESS: 95-06 101 AVE | TOWN OR BORO: QNS | STATE: NY | ZIP: 11416

INSTALLER'S NAME: LINO BELCASTRO | NYC OIL BURNER LIC. NO. _____

INSTALLER'S SIGNATURE _____ | CLASS _____

26. IDENTIFICATION # | 27. DATE APPLICATION REVIEWED: / / | 28. FACILITY: NEW ___ EX. X

29. EMISSION POINT I. D. NO.: 0 0 0 0

ALL PERTINENT DETAILS CONCERNING THE FOLLOWING ITEMS AS WELL AS ANY OTHER INFORMATION NOT CONTAINED HEREIN BUT REQUIRED IN THE ENGINEERING CRITERIA FOR FUEL BURNING EQUIPMENT EFFECTIVE JULY 1, 1973 MUST BE INDICATED ON THE PLANS OR SUBMITTED AS SUPPLEMENTARY DATA.

29A. CHIMNEY: NEW X EX. ___ | 29B. TYPE OF CHIMNEY: RESIDENTIAL Δ COMMERCIAL Σ | 29C. CLEAN CHAMBER: YES X NO ___

30. ELEVATION AT GROUND LEVEL (FT.): 37 | 32. CHIMNEY HT. (FT.): 44 | 33. CHIMNEY INSIDE DIMEN. AT OUTLET (IN.): 24" x 24" | 34.

34A. RAINCAP OR COVER: NO X | 35. EXIT VEL. (FT/SEC): ~~47.42 AFS~~ 17.15 | 36. EXIT FLOW RATE (SCFM): ~~5,300~~ 4116 | 37. I. D. FAN: YES ___ NO X

38. INDUCED DRAFT FAN: NEW ___ EX. ___ | 41. PARTICULATE EMISSION RATE: NA | 42. $SO_2$ EMISSION RATE: NA

43. $NO_X$ EMISSION RATE: NA | 44. TOTAL HEAT INPUT (BTU x $10^6$/HR): 26.6

45. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS SMOKE MONITOR: NA | RECORDER YES ___ NO ___

ORIGINAL LETTER IN FILE

46. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $SO_2$ MONITOR | RECORDER YES ___ NO ___

47. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $NO_X$ MONITOR: NA | RECORDER YES ___ NO ___

## BOILER

47A. NO. OF BOILERS APPLIED FOR: 1 | 48. UNIT I. D. LETTER: A | 49. BOILER: NEW X EX. ___ | 50. BOILER TYPE: 10

51. BOILER MANUFACTURER AND MODEL NUMBER: Cyclotherm C21000B-6N-23

51A. TYPE OF BOILER: STEEL X | CAST IRON ___ | STEAM X | HOT $H_2O$ ___ | 51B. CHECKERWORK COMB. CHAMBER FLOOR: NO. X

51C. HEATING SURFACE (FIRESIDE) SQ. FT.: 1,834 | 51D. GROSS OUTPUT, BTU/HR: 20,100,000

51E. GROSS OUTPUT FIRING RATE (GPH): 190 | 51F. ADDITIONAL COMBUSTION EQUIPMENT ON STACK OR IN BOILER ROOM: IF YES, COMPLETE DETAILS MUST BE SHOWN ON PLANS. YES ___ NO X

51G. LEAD LAG SYSTEM (MULTIPLE BOILERS): YES ___ NO X | MFR. STATIconary Refiner | CAT. NO. present

51H. TYPE OF LOAD ON BOILER

| SPACE HEATING | DOM. HOT $H_2O$ | AIR CONDITIONING | PROCESS |
|---|---|---|---|
| Δ | Δ | Σ | Σ X |

"I hereby certify that upon approval of this application, plans and any supplementary data I will make the installation of and adjustment to the equipment and/or apparatus described herein."

## BURNER

BURNER PERMANENTLY LIMITED AT BURNER OIL DELIVERY RATE AS PER PLAN NOTE

52. UNIT HEAT INPUT (BTU x $10^6$/HR): 20.02

| 58. TYPE | 59. BURNER NEW | EX. | 60. NUMBER OF BURNERS | 61. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 62. BURNER OIL DELIVERY RATE GPH |
|---|---|---|---|---|---|
| ~~5~~ 1,62 ~~9~~ | X | | 1 | Cyclotherm C21000B-6N-23 | 143 |

| 63. HRS/DAY | 64. DAYS/YR | 66. FUEL TYPE | 70. AVG. QUANTITY PER HR | 72. QUANTITY/YR | 363. HRS/DAY | 364. DAYS/YR | 366. FUEL TYPE | 370. AVG. QUANTITY PER HOUR | 372. QUANTITY/YR |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 10 | 12 | 114 | 11,400 | 10 | 110 | 21 | ~~15,647~~ 20,020 | 17,211,700 |

## COMBUSTION CONTROLLER

| 74. ON-OFF | 75. LOW-HIGH-OFF WITH LOW FIRE START | 76. LOW-HIGH-LOW-OFF WITH PROVEN LOW FIRE START | 77. FULL MODULATION WITH PROVEN LOW FIRE START | 78. DIRECT RESPONSE LINKAGE: YES |
|---|---|---|---|---|
| | § | Ψ | Ψ X | X |

79. HIGH/LOW MODULATING MOTOR: MFR. Honeywell; CAT. NO. M931 (§Ψ)

80. FIRING RATE CONTROL: MFR. Honeywell Accepted for this job only; CAT. NO. P455A (Ψ)

81. RAPID-DISCONNECT LINKAGE: YES X; N/A

| 82. WINDBOX YES | NO | 83. SHROUDED SECONDARY AIR DAMPER YES | N/A | 84. PREPURGE AND POSTPURGE YES | NO | 85. BURNER ELECTRICALLY INTERLOCKED WITH ANY MOTORIZED LOUVER(S), MOTORIZED DAMPER(S), MECHANICAL VENTILATION FAN(S), INDUCED DRAFT FAN(S) & FORCED DRAFT FAN(S): YES |
|---|---|---|---|---|---|---|
| | X | | X | X | | X |

## OIL HANDLING:

(FOR LOW SULPUR #6 OIL ONLY EXCEPT FOR ITEMS WITH (■) WHICH APPLY TO ALL INSTALLATIONS)

86. NO. OF PRIMARY OIL HEATERS — MFR. — CAT. NO.

86A. STEAM — HOT $H_2O$ — ELECTRIC: Ψ

86B. CAPACITY: ____ GPH PER ____ °F OIL TEMP. RISE @ ____ LBS STEAM ____ °F $H_2O$ ____ WATTS

| 87. CIRCULATION: GRAVITY | FORCED | 88. §Ψ NON-CONTAMINATING YES | 89. BLOWDOWN AND THROTTLING VALVES §Ψ YES | 90. NO. OF AUXILIARY (ELECTRIC) HEATER | 90A. CAPACITY (EA) WATTS |
|---|---|---|---|---|---|
| Ψ | | X | X | | |

| 91. ELECTRIC HEATER(S) UNDER CONSTANT TEMPERATURE CONTROL YES | 92. OILSTATS AS PER PLAN DETAILS; YES | 93. COLD OIL INTERLOCK: YES | 94. TEMPERATURE GAUGES AS PER PLAN DETAILS: YES | 95. ALL OIL PIPE LINES ADEQUATELY INSULATED: YES |
|---|---|---|---|---|
| X | X | X | X | X |

96A. ■ AUTOMATIC PRESSURE DEVICE TO MAINTAIN BOILER STEAM PRESSURE — LBS MIN: YES X NO — MFR. Honeywell; CAT. NO. L404A

96B. ■ AUTOMATIC TEMPERATURE DEVICE TO MAINTAIN BOILER WATER TEMP. — °F MIN: YES NO — MFR. — CAT. NO.

## GAS HANDLING

| 97. MECHANICAL VENTILATION FAN(S) YES | NO | 98. EXHAUST FAN(S) IN BOILER ROOM: NO | 99. LOUVERED OPENING: YES | NO | GROSS AREA SQ. IN. | EFFICIENCY % | NET AREA SQ. IN. |
|---|---|---|---|---|---|---|---|
| X | | X | | X | | | |

99A. LOUVERED OPENING IN A WALL TO THE OUTSIDE AIR HAVING A NET FREE AREA OF 12 SQUARE INCHES PER GALLON PER HOUR BASED ON THE BURNER OIL DELIVERY RATE AND IN NO CASE LESS THAN THE AVERAGE INTERNAL CROSS-SECTIONAL AREA OF THE CHIMNEY. IN ADDITION, THE NET FREE AREA OF THE LOUVER SHALL BE INCREASED IN SIZE EQUIVALENT TO THE OPENING OF A BAROMETRIC DAMPER OR DAMPERS. YES X

| 100. VENTILATION DUCT YES | NO | NEW | EX. | 101. LOUVER/DAMPER MOTORIZED: YES | NO |
|---|---|---|---|---|---|
| | X | | X | | X |

## DRAFT CONTROL

| 102. BAROMETRIC DAMPER: YES | NO | NOMINAL SIZE IN. | NOMINAL AREA SQ. IN. | 103. POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF T YES | NO | MFR. CAT. NO. |
|---|---|---|---|---|---|---|
| | X | | | | X | |

| 103A. T FULL-SIZE DAMPER YES | 103B. T AXIS-ROD OF DAMPER IS OF SQUARE X-SECTION OR IF ROUND IS WELDED TO THE CONTROL ARM YES | 103C. T ARROW PROVIDED ON AXIS-ROD TO INDICATE POSITION OF DAMPER YES | 103D. T DRAFT SAMPLING LINES ADEQUATELY SIZED AS PER PLAN DETAILS: YES |
|---|---|---|---|
| X | X | X | X |

| 104. T FULL SIZE CLEANOUT PLUG: YES | 105. ACCESS PORTS IN BREECHING AND IN ANY VENTILATION DUCT(S): YES | 106. SMOKE ALARM WITH COMBUSTION SHUTOFF: YES | NO | MFR. HeatTimer CAT. NO. MLS-A | 107. AUDIO-VISUAL ALARMS INSTALLED AS PER PLAN DETAILS: YES |
|---|---|---|---|---|---|
| X | X | X | | | X |

## EMISSION CONTROL

| 109. I.D. NO. | 110. STATUS NEW | EX. | 111. TYPE | 112. MANUFACTURER AND MODEL NUMBER | 114. % EFFICIENCY | 115. HOW DETERMINED |
|---|---|---|---|---|---|---|
| 01 | | | | | | |

## FOR AGENCY USE ONLY

| 143. LOCATION CODE | 144. I.D. NO. | 145. U T M (E) | 146. U T M (N) | 147. SIC NUMBER |
|---|---|---|---|---|
| | | | | |

WORK PERMIT

| 151. DATE ISSUED | 152. EXPIRATION DATE |
|---|---|
| 12/16/96 | 6/16/97 |

C. O. APPROVAL

| 155. DATE ISSUED | 156. EXPIRATION DATE |
|---|---|
| | |

PREMISES IDENTIFICATION NO.

SOURCE EMIS. PT. NO.

| OP | LOCATION | FACILITY | EMISSION | PT. | UNIT |
|---|---|---|---|---|---|
| C | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | |

NOTE: APPLICATION TO BE TYPEWRITTEN AND SUBMITTED WITH PLANS IN TRIPLICATE

RECEIVED FOR PERMIT ONLY:

BY R C Nanda P.E.
HEAD, FOSSIL FUEL DIVISION

BY A Rodger P.E.
DIRECTOR OF ENGINEERING

COPY TO NYS -- DEC

AUG- 9-95 WED 2:51 DONALD FRIEDLANDER PE/PC P.01

BLRF 4

DEPARTMENT OF AIR RESOURCES
120 WALL STREET, NEW YORK, N. Y. 10005
BUREAU OF ENGINEERING

(1) BOILER #4

CA#2804 f94P

DAR Premises Address 791 KENT AVE. BOROUGH BROOKLYN

Premises Identification No. CA 48014 / 94 Source Emis. Pt. No. 3 1

CYCLOTHERM 21000

## SUMMARY SHEET FOR STACK ADEQUACY

PACKAGED FORCED DRAFT BOILER

ORIGINAL-KEEP IN FILE

| | | | |
|---|---|---|---|
| 1. | Overfire draft: | ⊕ 1.0 | in. w.c. |
| 2. | Boiler draft loss: | + 7.95 | in. w.c. |
| 3. | Total friction loss due to straight run of ducts: | + 0.02376 | in. w.c. |
| 4. | Total friction loss due to bends: | + 1.06502 | in. w.c. |
| 5. | Total pressure drops or gains due to area changes: | ± 0 | in. w.c. |
| 6. | Other friction losses: | + 0 | in. w.c. |
| 7. | Stack effect: (Loss) | + 0.08117 | in. w.c. |
| | TOTAL ~~GAINS~~ LOSES (Sum of positive pressure differentials) | + 10.1199 | in. w.c. |
| NA | TOTAL LOSSES (Sum of negative pressure differentials): | - | in. w.c. |
| | Factor of safety (Note: e.g. 10% is to be entered as 1.10): | 1.1 | |

8. Net available draft (FORCED DRAFT FAN CAPACITY) = 11.2" w.c

(~~TOTAL GAINS~~) (TOTAL LOSSES) X (Factor of Safety) = 11.1319 in. w.c.
10.119 X 1.1 = 11.1319 | TOTAL LOSSES, THE STACK IS ADEQUATE.
If line 8 is positive the stack is adequate.
IF FORCED DRAFT FAN CAPACITY IS GREATER THAN 11.1319 " W.G
If line 8 is negative and an I.D. fan is to be used convert net loss to equivalent loss at 70°F and size I.D. fan accordingly:

Correction for sizing at 70°F: _____ in. w.c. X $\frac{Te + 460}{530}$ = _____ in. static pressure at 70°
SEE INDIVIDUAL CALC. SHEETS

Manufacturer: CYCLOTHERM Catalog number: 21,000 CFM: 6092 @ 70°F SP: 11.5

CFM to be provided by fan: _____ (Same as at boiler outlet temperature)

---

CALCULATION OF STACK EFFECT (FORCED DRAFT, NO CREDIT TAKEN)

Te= _____ °F, Tc= _____ °R, % excess air= _____, w= _____ #/sec,

X= _____ ft, Y= _____ ft, H= _____ ft, D= _____ ft,

NOTE: THESE CALCULATIONS DO NOT INCLUDE BOILER DERATING OF 25%

NOTE: CYCLOTHERM STATES THAT 2" W.G. OR RESISTANCE (BREECHINGS, STACK ETC) MAY BE ADDED TO BOILER.

B242F4

ORIGINAL-KEEP IN FILE

- 2 -

Premises 791 KENT AVE BROOKLYN CA CA28094

BEND LOSSES AT STACK TEMP

Bend location: 1. Type of bend: MITRE. Breeching equivalent diameter: 27 in.

Equivalent length determination:

round breeching: R:____ft. D:____ft. R/D:____. L/D:____. L:____ft.

rect. breeching: R: 3.0 ft. W: 3.0 ft. H: 1.5 ft. R/W: 0. H/W: 2.

L/W: 70. L: 210 ft. EQUIVALENT

Friction loss per 100 ft. (10,970 CFM. 27" Equiv. dia.):

0.35 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x0.483 (correction for temp.) x 1.0 (correction for roughness) = .0 in. w.c./100 ft.

Friction loss: 210 (Equiv. length) x0.169 (Fric. loss/100 ft.) = 0.355 in. w.c.

---

Bend location: 2. Type of bend: MITRE. Breeching equivalent diameter: 27 in.

Equivalent length determination:

round breeching: R:____ft. D:____ft. R/D:____. L/D:____. L:____ft.

rect. breeching: R:____ft. W: 3 ft. H: 1.5 ft. R/W:____. H/W: 2.

L/W:____. L:____ft.

Friction loss per 100 ft. (10,970 CFM. 27 Equiv. dia.):

0.35 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x0.483 (correction for temp.) 1.0 (correction for roughness = .0 in. w.c./100 ft.

Friction loss: 210 (Equiv. length) x 0.169 (Fric. loss/100 ft.) = 0.355 in. w.c

---

Bend location: 3. Type of Bend: MITRE. Breeching equivalent diameter: 27 in.

Equivalent length determination:

round breeching: R:____ft. D:____ft. R/D:____. L/D:____. L:____ft.

rect. breeching: R:____ft. W: 3 ft. H: 1.5 ft. R/W:____. H/W: 2.

Friction loss per 100 ft. (10,970 CFM. 27 Equiv. dia.):

0.35 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x0.483 (correction for temp.) 1.0 (correction for roughness) = .0 in. w.c./100 ft.

Friction loss: 210 (Equiv. length) x0.169 (Fric. loss/100 ft.) = 0.355 in. w.c.

TOTAL FRICTION LOSS DUE TO BENDS: 1.065 in. w.c.

ORIGINAL - 3 - KEEP IN FILE

Premises 791 KENT AVE CA 2804/94

STRAIGHT RUN FRICTION LOSSES AT STACK TEMP

Length of straight run duct: 5 ft. Equivalent diameter: 27 in.

Friction loss per 100 ft. (10,970 CFM. 27 Equiv. Dia.):

0.35 in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.) :

1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 5 (Equiv. length) x 0.35 (Fric. loss per 100 ft.) = 0.00845 in. w.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: 9 ft. Equivalent diameter: 27 in.

Friction loss per 100 ft. (10,970 CFM. 27 Equiv. Dia.):

0.35 in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.)

1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 9 (Equiv. length) x 0.35 (Fric. loss per 100 ft.) = 0.01521 in. w.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: ____ ft. Equivalent diameter: ____ in.

Friction loss per 100 ft. (____ CFM. ____ Equiv. Dia.):

____ in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x ____ (correction for temp.)

____ (correction for roughness) = ____ in. w.c./100 ft.

Friction loss: ____ (Equiv. length) x ____ (Fric. loss per 100 ft.) = ____ in. w.c.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: ____ ft. Equivalent diameter: ____ in.

Friction loss per 100 ft. (____ CFM. ____ Equiv. Dia.):

____ in w.c./100 ft. (Refer ASHRAE pp. 466-7) x ____ (correction for temp.) x

____ (correction for roughness) = ____ in w.c./100 ft.

Friction loss: ____ (Equiv. length) x ____ (Fric. loss per 100 ft.) = ____ in. w.c

TOTAL FRICTION LOSS DUE TO ST. RUN: 0.02367 in. w.

Premises: 791 KENT AVE BROOKLYN CA 2804/94

LOSSES OR GAINS DUE TO AREA CHANGES

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

ORIGINAL-KEEP IN FILE

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

Total Pressure drop due to area changes:_____in. w.c.

94=33 EJS Boiler #4 C-21,000 600 HP

OP | LOCATION | FACILITY | EMISSION POINT | C

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-4 BEFORE ANSWERING ANY QUESTION

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

# STATIONARY COMBUSTION INSTALLATION

## APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

**SECTION A**

| 1. NAME OF OWNER / FIRM | 9. NAME OF AUTHORIZED AGENT | 10. TELEPHONE | 19. FACILITY NAME (IF DIFFERENT FROM OWNER / FIRM) |
|---|---|---|---|
| Multi Color Ind., Inc. | Shapiro Engineering, P. C. | 718 531-8400 | |
| **2. NUMBER AND STREET ADDRESS** | **11. NUMBER AND STREET ADDRESS** | | **20. FACILITY LOCATION (NUMBER AND STREET ADDRESS)** |
| 791 Kent Avenue | 6315 Mill Lane | | |
| **3. CITY - TOWN - VILLAGE / 4. STATE / 5. ZIP** | **12. CITY - TOWN - VILLAGE / 13. STATE / 14. ZIP** | | **21. CITY - TOWN - VILLAGE / 22. ZIP** |
| Brooklyn / N.Y. / 11205 | Brooklyn / N.Y. / 11234 | | |
| **6. OWNER CLASSIFICATION** A. ☐ COMMERCIAL C. ☐ UTILITY E. ☐ STATE F. ☐ MUNICIPAL H. ☐ HOSPITAL I. ☐ RESIDENTIAL B. ☒ INDUSTRIAL D. ☐ FEDERAL G. ☐ EDUC. INST. J. ☐ OTHER | **15. NAME OF P.E. OR ARCHITECT PREPARING PLANS / 16. N.Y.S. P.E. OR ARCHITECT LICENSE NO. / 17. TELEPHONE** | | **23. BUILDING NAME OR NUMBER / 24. FLOOR NAME OR NUMBER** |
| | Elliot J. Shapiro, P.E. / 38645 / 718 531-8400 | | |
| **7. NAME & TITLE OF OWNERS REPRESENTATIVE / 8. TELEPHONE** | **18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT** | | **25. START UP DATE MO / YR / 26. DRAWING NUMBERS OF PLANS SUBMITTED** |
| Shapiro Engineering, P. C. / 718 531-8400 | | | / 94-33-1,2 & 3 |
| | | | **27. PERMIT TO CONSTRUCT** A. ☐ NEW SOURCE B. ☐ MODIFICATION |
| | | | **28. CERTIFICATE TO OPERATE** A. ☒ NEW SOURCE C. ☐ EXISTING B. ☐ MODIFICATION |

**SEC. B**

| 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSION(S) (IN.) | 34. EXIT TEMPERATURE (°F) | 35. EXIT VELOCITY (FT./SEC.) | 36. EXIT FLOW (ACFM) | 37. HEAT INPUT (MILLION BTU/HR) | 38. CONTINUOUS MONITOR(S) |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 37 | 19 | 54 | 29.5 | 937 | 51.74 | 13,970 | 26.6 | A. ☐ OPACITY B. ☐ SULFUR DIOXIDE C. ☐ NITROGEN OXIDES D. ☐ OXYGEN E. ☐ CARBON DIOXIDE F. ☐ OTHER |

**SECTION C**

| 39. UNIT TYPE | 40. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 41. UNIT HEAT INPUT | 42. AIR INTAKE | 43. SOURCE CODE |
|---|---|---|---|---|
| 01 | Cyclotherm C-21000B-6N-23 | 20.02 | 3 | |

| 44. BURNER TYPE | 45. NO. OF BURNERS | 46. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 47. FUEL TYPE | 48. AVG. QUANTITY OF FUEL / HR | 49. MAX. QUANTITY OF FUEL / HR | 50. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 51 | 1 | Cyclotherm C-21000B-6N-23 | 32 | 114 | 143 | 11,400 |

| 51. HRS./DAY | 52. DAYS/YEAR | 53. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 54. NAME OF SUPPLIER (S) |
|---|---|---|---|
| 10 | 10 | 9 / 9 / 0 / 0 / 0 / | Bergen Fuel Oil Co., Inc. |

| 55. BURNER TYPE | 56. NO. OF BURNERS | 57. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 58. FUEL TYPE | 59. AVG. QUANTITY OF FUEL / HR | 60. MAX. QUANTITY OF FUEL / HR | 61. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 62 | 1 | Cyclotherm C-21000B-6N-23 | 52 | 15,647 | 19,559 | 17,211,700 |

| 62. HRS./DAY | 63. DAYS/YEAR | 64. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 65. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 10 | 110 | 2 / 4 / 2 / 5 / 2 / 5 / 2 / 5 | Brooklyn Union Gas Company |

**SECTION D**

| EMISSION CONTROL EQUIP I. D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 66. | 67. | 68. | 69. | 70. | 71. |
| 72. | 73. | 74. | 75. | 76. | 77. |

**SECTION E**

CALCULATIONS

1. This is a Dual Fuel (Natural Gas - #2 Oil) Installation.
2. See Supplementary Sheets for specific Emissions
3. Section F Data is based on Natural Gas (the Primary Fuel) for all but the Annual Emissions.

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

**SECTION F**

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | PERMISS. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ | PERMISS. |
|---|---|---|---|---|---|---|---|---|---|---|
| 78. TOTAL PARTICULATES | 79. NY075-00-0 | 80. 0.0196 | 81. 11 | 82. 5 | 83. | 84. 0 | 85. 0.3128 | 86. 514.9 | 87. 0 | 88. |
| 89. SULFUR DIOXIDE | 90. 7446-09-5 | 91. 0.00059 | 92. 11 | 93. 5 | 94. | 95. 0 | 96. 0.0942 | 97. 588.8 | 98. 0 | 99. |
| 100. NITROGEN OXIDES | 101. NY210-00-0 | 102. 0.17157 | 103. 11 | 104. 5 | 105. | 106. 0 | 107. 2.7382 | 108. 3923.4 | 109. 0 | 110. |
| 111. | 112. | 113. | 114. | 115. | 116. | 117. | 118. | 119. | 120. | 121. |
| 122. | 123. | 124. | 125. | 126 | 127. | 128. | 129. | 130. | 131. | 132. |

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE STATIONARY COMBUSTION INSTALLATION HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

133. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT

DATE 10/3/94

**AGENCY USE ONLY**

| 134. LOCATION CODE | 135. FACILITY ID. NO. | 136. U.T.M. (E) | 137. U.T.M. (N) | 138. SIC NUMBER | 139. DATE APPL. RECEIVED | 140. DATE APPL. REVIEWED | 141. REVIEWED BY: |
|---|---|---|---|---|---|---|---|
| | | | | | / / | / / | |

**PERMIT TO CONSTRUCT**

| 142. DATE ISSUED | 143. EXPIRATION DATE | 144. SIGNATURE OF APPROVAL | 145. FEE |
|---|---|---|---|
| / / | / / | | |

146.
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

**RECOMMENDED ACTION RE: C.O.**

| 147. DATE ISSUED | 148. EXPIRATION DATE | 149. SIGNATURE OF APPROVAL | 150. FEE |
|---|---|---|---|
| / / | / / | | |

151.
1. ☐ INSPECTED BY _____ DATE _____
2. ☐ INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. ☐ ISSUE CERTIFICATE TO OPERATE FOR SOURCE
4. ☐ APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

152. SPECIAL CONDITIONS:

| | |
|---|---|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. |

94-33 EJS Boiler #4 C-21,000 600 HP (Gas)

OP LOCATION FACILITY EMISSION POINT UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

SEC. G

| 154 EMISSION POINT I.D. | 155 UNIT ID |
|---|---|
| C | A |

SECTION H

| 156 UNIT TYPE | 157 UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158 UNIT HEAT INPUT | 159 AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-21000B-6N-23 | 26.6 | 3 |

| 160 BURNER TYPE | 161 NO. OF BURNERS | 162 BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163 FUEL TYPE | 164 AVG. QUANTITY OF FUEL/HR | 165 MAX. QUANTITY OF FUEL/HR | 166 QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 167 HRS./DAY | 168 DAYS/YEAR | 169 % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 170 NAME OF SUPPLIER (S) |
|---|---|---|---|
| | | | |

| 171 BURNER TYPE | 172 NO. OF BURNERS | 173 BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174 FUEL TYPE | 175 AVG. QUANTITY OF FUEL/HR. | 176 MAX. QUANTITY OF FUEL/HR. | 177 QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 69 | | Cyclotherm C21000 | 52 | 15,647 | 19,559 | 17,211,700 |

| 178 HRS./DAY | 179 DAYS/YEAR | 180 % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 181 NAME OF SUPPLIER(S) |
|---|---|---|---|
| 10 | 110 | 24 / 25 / 25 / 25 | Brooklyn Union Gas Company |

SECTION I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184 | 185. | 186. | 187. |
| 188. | 189 | 190. | 191. | 192. | 193. |

SECTION J

CALCULATIONS

Emissions factors from AP-42 Table 1.4-1 (Gas)

Particulates = 0.0196 Lbs./$10^6$ BTU
SO2 = 0.00059 Lbs./$10^6$ BTU
NOX = 0.17157 Lbs./$10^6$ BTU

SECTION K

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) IO* |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.0196 | 197. 11 | 198. 5 | 199. 0 | 200. 0.3128 | 201. 344.1 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.00059 | 206. 11 | 207. 5 | 208. 0 | 209. 0.0942 | 210. 103.58 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.17157 | 215. 11 | 216. 5 | 217 0 | 218. 2.7382 | 219 3,012.1 | 220. 0 |
| 221. | 222. | 223. | 224 | 225. | 226. | 227 | 228 | 229 |
| 230. | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

239. SOURCE CODE

94-33 EJS Boiler #4 C-21,000 000 HP (Oil)

OP LOCATION FACILITY EMISSION POINT UNIT

| | | | | | | | | | | | | | | | C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

*PLEASE PRINT OR TYPE*

*COPIES*
*WHITE - ORIGINAL*
*BLUE - DIVISION OF AIR*
*WHITE - REGIONAL OFFICE*
*WHITE - FIELD REP*
*YELLOW - APPLICANT*

| SEC. G | 154 EMISSION POINT I.D. | | | | | 155. UNIT ID |
|---|---|---|---|---|---|---|
| | | | | | C | A |

**SECTION H**

| 156 UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158 UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-21000B-6N-23 | 20.02 | 3 |

| 160. BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 59 | 1 | Cyclotherm C-21000 | 32 | 114 | 143 | 11,400 |

| 167 HRS./DAY | 168. DAYS/YEAR | 169 % OPERATION BY SEASON Winter | Spring | Summer | Fall | 170. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| 10 | 10 | 9 9 | 0 | 0 | 0 | Bergen Fuel Oil Co., Inc. |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176 MAX. QUANTITY OF FUEL/HR. | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 178 HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| | | | | | | |

**SECTION I**

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184. | 185. | 186. | 187. |
| 188. | 189. | 190. | 191. | 192 | 193. |

**SECTION J**

CALCULATIONS

Emission factors from AP-42 Table 1.3-1 (Oil)

Particulates = 0.107 Lbs./$10^6$ BTU
SO2 = 0.304 Lbs./$10^6$ BTU
NOX = 0.571 Lbs./$10^6$ BTU

**SECTION K**

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.107 | 197. 11 | 198. 5 | 199 0 | 200. 1.7077 | 201. 170.77 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.304 | 206 11 | 207. 5 | 208. 0 | 209. 4.8518 | 210. 485.18 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.571 | 215. 11 | 216. 5 | 217. 0 | 218. 9.113 | 219 911.31 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227 | 228 | 229. |
| 230. | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

| 239. SOURCE CODE |
|---|
| |

# DEP

Cover Sheet

Registration #: CA 2806 94

94-33 EJS Boiler #2

DEP

Records Control Unit
(718) 595-3855

New York City
Department of
Environmental
Protection

DATE: 10/3/94

CA 2806-94 J
Installation Number

# INSPECTION SET

Bureau of
Air Resources

RE: 791 Kent Avenue Brooklyn, New York 11205
(PREMISE ADDRESS) (BORO)

## PROFESSIONAL CERTIFICATION

59-17 Junction Blvd.
Corona, New York
11368 - 5107

ALBERT F. APPLETON
Commissioner

Being duly mindful of my responsibilities as a licensed Professional Engineer in the State of New York and acting as designated agent for the applicant, I hereby certify that the application, plans and all supplementary documents submitted in connection with this filing are complete and fully comply with all applicable laws, codes, rules,regulations and directives of the Department of Environmental Protection, Bureau of Air Resources of the City of New York in effect at the time filed.

LICENSED PROFESSIONAL ENGINEER
ELLIOT J. SHAPIRO
NO. 038894
10/3/94
UNIVERSITY OF THE STATE OF NEW YORK

ELLIOT J. SHAPIRO, P. E.
P.E. Seal & Signature

Instructions: Pursuant to Engineering Directive #1-78, this certification must be submitted in triplicate with all APC 5-0, APC 5-R and APC5-PA applications and does not preclude the necessity to sign and seal the certification now contained on the appliction forms. This certification shall also be submitted in triplicate with all APC 5-0A applications submitted and certified by a professional engineer.

94-33 [illegible] Boiler #2 5200 150 HP

APC 8-0 (REV. 1/77)

# The City of New York
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## AIR RESOURCES - BUREAU OF ENGINEERING
59-17 JUNCTION BLVD., CORONA, QNS., N.Y. 11368

C BOROUGH: 2 C 6 | APPLICATION YEAR: 0 0 | APPLICATION NUMBER: 0 0 0 0 A

0 0 0 0 A
0 0 0 0 A
0 0 0 0 A
0 0 0 0 A

## FOSSIL FUEL COMBUSTION EQUIPMENT APPLICATION FOR CERTIFICATE OF OPERATION

1884 BLOCK | 70 LOT | M1-2 ZONING (BY APPLICANT)

FOR AGENCY USE ONLY

FEE: $ _____ DATE OF RECEIPT _____ 19 ____ RECEIPT # _____ CASHIER _____

25. DATE APPLICATION RECEIVED: / /

1. OWNER'S NAME: Multi Color Ind., Inc.

2. NUMBER AND STREET ADDRESS: 791 Kent Avenue

3. TOWN OR BORO: Brooklyn | 4. STATE: N.Y. | 5. ZIP: 11205

6. FACILITY CLASSIFICATION: H. ___ HOSPITAL L. ___ BD. OF ED. A. ___ COMMERCIAL C. ___ UTILITY J. ___ RESIDENTIAL M. ___ NYC HOSPITAL B. X INDUSTRIAL G. ___ SCHOOL K. ___ N.Y.C.H.A. N. ___ OTHER

7. OWNER OR OFFICERS NAME: Ben Hirsch | TITLE: President

I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the NYC Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Sec. 1403.2-19.29 of the NYC Air Pollution Cont. Code & Sec. 210.45 of Penal Law

8. OWNER OR OFFICER'S SIGNATURE | 9. TELEPHONE: 718 855 2700

10. NAME OF P.E.: Elliot J. Shapiro, P. E. Shapiro Engineering, P. C. | 11. TELEPHONE: 718 531-8400

12. NUMBER AND STREET ADDRESS: 6315 Mill Lane

13. TOWN OR BORO: Brooklyn | 14. STATE: N.Y. | 15. ZIP: 11234

16. LICENSED PROFESSIONAL ENGINEER ELLIOT J. SHAPIRO NO. 38645 STATE OF NEW YORK — PLACE SEAL ABOVE

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF TO THE ACCURACY OF THE TECHNICAL INFORMATION CONTAINED IN THIS APPLICATION, PLANS AND ANY SUPPLEMENTARY DATA SUBMITTED

10/13/94

17. NYS P.E. LIC. NO. 38645 | 18. SIGNATURE OF PROFESSIONAL ENGINEER: Elliot J. Shapiro, P. E.

19. FACILITY NAME (IF ANY): Multi Color Ind., Inc.

20. FACILITY LOCATION (NUMBER AND STREET ADDRESS): 70 Franklin Avenue

21. BORO: Brooklyn | 22. ZIP: N.Y. 11205 | 23. BLDG. SECTION OR NUMBER | 24. EQUIPMENT LOCATION: Boiler Room

24A. NO. OF FLOORS: NA | NO. OF APTS.: 0 | NO. OF ROOMS: 0 | TYPICAL FLOOR AREA: NA

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(A) INSTALLER IS NAMED AND
(B) WORKMENS COMP. & DISABILITY ARE ON FILE WITH DAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

COMPANY NAME OF INSTALLER: PACIFIC BOILER CORP. LEGALIZATION

COMPANY ADDRESS: 95-06 61 Ave | INSTALLER'S NAME: LINO BELCASTRONO | NYC OIL BURNER LIC. NO. _____

TOWN OR BORO: QNS | STATE: NY | ZIP: 11416 | INSTALLER'S SIGNATURE _____ | CLASS _____

29. EMISSION POINT I. D. NO.: 0 0 0 0

ALL PERTINENT DETAILS CONCERNING THE FOLLOWING ITEMS AS WELL AS ANY OTHER INFORMATION NOT CONTAINED HEREIN BUT REQUIRED IN THE ENGINEERING CRITERIA FOR FUEL BURNING EQUIPMENT EFFECTIVE JULY 1, 1973 MUST BE INDICATED ON THE PLANS OR SUBMITTED AS SUPPLEMENTARY DATA.

29A. CHIMNEY: NEW X EX. ___ | 29B. TYPE OF CHIMNEY: RESIDENTIAL Δ COMMERCIAL Σ | 29C. CLEAN CHAMBER: YES X NO ___

30. ELEVATION AT GROUND LEVEL (FT.): 37 | 32. CHIMNEY HT. (FT.): 44 | 33. CHIMNEY INSIDE DIMEN. AT OUTLET (IN.): 24 | 34.

34A. RAINCAP OR COVER: NO X | 35. EXIT VEL. (FT/SEC.): 1755 ~~41.83~~ AFS | 36. EXIT FLOW RATE (SCFM): 2,932 | 37. I. D. FAN: YES ___ NO X

38. INDUCED DRAFT FAN: NEW ___ EX. ___ | 41. PARTICULATE EMISSION RATE: NA | 42. $SO_2$ EMISSION RATE: NA

43. $NO_X$ EMISSION RATE: NA | 44. TOTAL HEAT INPUT (BTU X $10^6$/HR): 6.3

45. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS SMOKE MONITOR: NA | RECORDER YES ___ NO ___

INSPECTION SET

46. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $SO_2$ MONITOR: NA | RECORDER YES ___ NO ___

47. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $NO_X$ MONITOR: NA | RECORDER YES ___ NO ___

## BOILER

47A. NO. OF BOILERS APPLIED FOR: 1 | 48. UNIT I. D. LETTER: A | 49. BOILER NEW X EX. ___ | 50. BOILER TYPE: 10

51. BOILER MANUFACTURER AND MODEL NUMBER: Cyclotherm C5200 ~~2-23~~

51A. TYPE OF BOILER: STEEL X | CAST IRON ___ | STEAM X | HOT $H_2O$ ___

51B. CHECKERWORK COMB. CHAMBER FLOOR: NO. X

51C. HEATING SURFACE (FIRESIDE) SQ. FT.: 472 | 51D. GROSS OUTPUT, BTU/HR: 5,025,000

51E. GROSS OUTPUT FIRING RATE (GPH): 45 | 51F. ADDITIONAL COMBUSTION EQUIPMENT ON STACK OR IN BOILER ROOM: IF YES, COMPLETE DETAILS MUST BE SHOWN ON PLANS. YES X NO ___

51G. LEAD LAG SYSTEM (MULTIPLE BOILERS): YES ___ NO X | MFG. Stationary Engineer present | CAT. NO.

51H. TYPE OF LOAD ON BOILER

| SPACE HEATING | DOM. HOT $H_2O$ | AIR CONDITIONING | PROCESS |
|---|---|---|---|
| Δ | Δ | Σ | Σ X |

"I hereby certify that upon approval of this application, plans and any supplementary data I will make the installation of and adjustment to the equipment and/or apparatus described herein."

## BURNER

BURNER PERMANENTLY LIMITED AT BURNER OIL DELIVERY RATE AS PER PLAN NOTE

52. UNIT HEAT INPUT (BTU x $10^6$/HR): 6.3

| 58. TYPE | 59. BURNER NEW | EX. | 60. NUMBER OF BURNERS | 61. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 62. BURNER OIL DELIVERY RATE GPH |
|---|---|---|---|---|---|
| ~~59~~ 62 | X | | 1 | Cyclotherm C5200-~~23~~ | 45 |

| 63. HRS/DAY | 64. DAYS/YR | 66. FUEL TYPE | 70. AVG. QUANTITY PER HR. | 72. QUANTITY/YR. | 363. HRS/DAY | 364. DAYS/YR | 366. FUEL TYPE | 370. AVG. QUANTITY PER HOUR | 372. QUANTITY/YR |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 10 | 12 | ~~36~~ 45 | 3,600 | 10 | 110 | 21 | ~~4,941~~ 6300 | 5,435,294 |

## COMBUSTION CONTROLLER

| 74. ON-OFF | 75. LOW-HIGH-OFF WITH LOW FIRE START | 76. LOW-HIGH-LOW-OFF WITH PROVEN LOW FIRE START | 77. FULL MODULATION WITH PROVEN LOW FIRE START | 78. DIRECT RESPONSE LINKAGE: YES |
|---|---|---|---|---|
| | § | Ψ X | Ψ | X |

| 79. HIGH/LOW MODULATING MOTOR: | MFR. | CAT. NO. | 80. FIRING RATE CONTROL | MFR. | CAT. NO. | 81. RAPID-DISCONNECT LINKAGE | YES | N/A |
|---|---|---|---|---|---|---|---|---|
| §Ψ | Honeywell | M931 | Ψ | Honeywell | P455A | Accepted for this job only. | X | |

| 82. WINDBOX | YES | NO | 83. SHROUDED SECONDARY AIR DAMPER | YES | N/A | 84. PREPURGE AND POSTPURGE | YES | NO | 85. BURNER ELECTRICALLY INTERLOCKED WITH ANY MOTORIZED LOUVER(S), MOTORIZED DAMPER(S), MECHANICAL VENTILATION FAN(S), INDUCED DRAFT FAN(S) & FORCED DRAFT FAN(S): YES |
|---|---|---|---|---|---|---|---|---|---|
| | | X | | | X | | X | ~~X~~ | X |

## OIL HANDLING:

(FOR LOW SULFUR #6 OIL ONLY EXCEPT FOR ITEMS WITH (§) WHICH APPLY TO ALL INSTALLATIONS)

86. NO. OF PRIMARY OIL HEATERS: MFR.: CAT. NO.:

| 86A. STEAM | HOT $H_2O$ | ELECTRIC | 86B. |
|---|---|---|---|
| ~~Ψ~~ | ~~Ψ~~ | | CAPACITY: ____ GPH PER ____ °F OIL TEMP. RISE @ ____ LBS STEAM ____ °F $H_2O$ ____ WATTS |

| 87. CIRCULATION: GRAVITY | FORCED | 88. §Ψ NON-CONTAMINATING YES | 89. BLOWDOWN AND THROTTLING VALVES §Ψ YES | 90. NO. OF AUXILIARY (ELECTRIC) HEATER | 90A. CAPACITY (EA) WATTS |
|---|---|---|---|---|---|
| Ψ | | X | X | | |

| 91. ELECTRIC HEATER(S) UNDER CONSTANT TEMPERATURE CONTROL YES | 92. OILSTATS AS PER PLAN DETAILS: YES | 93. COLD OIL INTERLOCK: YES | 94. TEMPERATURE GAUGES AS PER PLAN DETAILS: YES | 95. ALL OIL PIPE LINES ADEQUATELY INSULATED: YES |
|---|---|---|---|---|
| X | X | X | X | X |

| 96A. AUTOMATIC PRESSURE DEVICE TO MAINTAIN BOILER STEAM PRESSURE LBS MIN: | YES | NO | MFR. | CAT. NO. | 96B. AUTOMATIC TEMPERATURE DEVICE TO MAINTAIN BOILER WATER TEMP. °F MIN: | YES | NO | MFR. | CAT. NO. |
|---|---|---|---|---|---|---|---|---|---|
| §Ψ | | X | Honeywell | L404A | §Ψ | | X | | |

## GAS HANDLING

| 97. MECHANICAL VENTILATION FAN(S) | YES | NO | 98. EXHAUST FAN(S) IN BOILER ROOM: NO | 99. LOUVERED OPENING: | YES | NO | GROSS AREA SQ. IN. | EFFICIENCY % | NET AREA SQ. IN. |
|---|---|---|---|---|---|---|---|---|---|
| | X | | X | | | X | | | |

99A. LOUVERED OPENING IN A WALL TO THE OUTSIDE AIR HAVING A NET FREE AREA OF 12 SQUARE INCHES PER GALLON PER HOUR BASED ON THE BURNER OIL DELIVERY RATE AND IN NO CASE LESS THAN THE AVERAGE INTERNAL CROSS-SECTIONAL AREA OF THE CHIMNEY. IN ADDITION, THE NET FREE AREA OF THE LOUVER SHALL BE INCREASED IN SIZE EQUIVALENT TO THE OPENING OF A BAROMETRIC DAMPER OR DAMPERS. YES X

| 100. VENTILATION DUCT | YES | NO | NEW | EX. | 101. LOUVER/DAMPER MOTORIZED: | YES | NO |
|---|---|---|---|---|---|---|---|
| | | X | | X | | | X |

## DRAFT CONTROL

| 102. BAROMETRIC DAMPER: | YES | NO | NOMINAL SIZE IN. | NOMINAL AREA SQ. IN. | 103. T POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF | YES | NO | MFR. | CAT. NO. |
|---|---|---|---|---|---|---|---|---|---|
| | | X | | | | | X | | |

| 103A. T FULL-SIZE DAMPER | YES | 103B. T AXIS-ROD OF DAMPER IS OF SQUARE X-SECTION OR IF ROUND IS WELDED TO THE CONTROL ARM | YES | 103C. T ARROW PROVIDED ON AXIS-ROD TO INDICATE POSITION OF DAMPER | YES | 103D. T DRAFT SAMPLING LINES ADEQUATELY SIZED AS PER PLAN DETAILS: | YES |
|---|---|---|---|---|---|---|---|
| | X | | X | | X | | X |

| 104. T FULL SIZE CLEANOUT PLUG: YES | 105. ACCESS PORTS IN BREECHING AND IN ANY VENTILATION DUCT(S): YES | 106. SMOKE ALARM WITH COMBUSTION SHUTOFF: YES | NO | MFR. | CAT. NO. | 107. AUDIO-VISUAL ALARMS INSTALLED AS PER PLAN DETAILS: YES |
|---|---|---|---|---|---|---|
| X | X | X | | HeatTimer | MLS-A | X |

## EMISSION CONTROL

| 109. I.D. NO. | 110. STATUS NEW | EX. | 111. TYPE | 112. MANUFACTURER AND MODEL NUMBER | 114. % EFFICIENCY | 115. HOW DETERMINED |
|---|---|---|---|---|---|---|
| 01 | | | | | | |

## FOR AGENCY USE ONLY

| 143. LOCATION CODE | 144. I.D. NO. | 145. U T M (E) | 146. U T M (N) | 147. SIC NUMBER |
|---|---|---|---|---|
| | | | | |

WORK PERMIT

| 151. DATE ISSUED | 152. EXPIRATION DATE |
|---|---|
| 6/28/96 | 12/28/96 |

C. O. APPROVAL

| 155. DATE ISSUED | 156. EXPIRATION DATE |
|---|---|
| | |

PREMISES IDENTIFICATION NO.

SOURCE EMIS. PT. NO.

| OP | LOCATION | FACILITY | EMISSION | PT. | UNIT |
|---|---|---|---|---|---|
| C | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | A |
| | | | 0 0 0 0 | | |

NOTE: APPLICATION TO BE TYPEWRITTEN AND SUBMITTED WITH PLANS IN TRIPLICATE

~~APPROVED~~ Accepted FOR PERMIT ONLY:

BY K Vanderhoef P.E.
~~HEAD, FOSSIL FUEL DIVISION~~

BY R Hodge, P.E.
DIRECTOR OF ENGINEERING

COPY TO NYS – DEC

94-33 EJS Boiler #2 C-5200 150 HP (Oil)

OP LOCATION FACILITY EMISSION POINT UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

SEC. G

| 154. EMISSION POINT I.D. | | | | | 155. UNIT ID |
|---|---|---|---|---|---|
| | | | | A | B |

SECTION H

| 156 UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158. UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-5200-2-23 | 6.3 | 3 |

| 160 BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 59 | 1 | Cyclotherm C-5200 | 32 | 36 | 45 | 3,600 |

| 167 HRS./DAY | 168. DAYS/YEAR | 169. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 170. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| 10 | 10 | 9 | 9 | | | Bergen Fuel Oil Co., Inc. |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176. MAX. QUANTITY OF FUEL/HR. | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 178. HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| | | | | | | |

SECTION I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184. | 185. | 186. | 187. |
| 188. | 189 | 190. | 191. | 192. | 193. |

SECTION J

CALCULATIONS

Emission Facotrs from AP-42 Table 1.3-1 (Oil)

a) Particulates = 0.107 Lbs./$10^6$ BTU
b) SO2 = 0.304 Lbs./$10^6$ BTU
c) NOX = 0.571 Lbs./$10^6$ BTU

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

SECTION K

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.107 | 197. 11 | 198. 5 | 199. 0 | 200. 0.5393 | 201. 53.93 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.304 | 206. 11 | 207. 5 | 208. 0 | 209. 1.532 | 210. 153.21 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.571 | 215. 11 | 216. 5 | 217. 0 | 218. 2.8777 | 219. 287.77 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228. | 229. |
| 230 | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

239. SOURCE CODE

76-19-13 (10/79)

94-33 EJS Boiler #2 C-5200 150 HP (Oil)

OP LOCATION | FACILITY | EMISSION POINT | UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

SEC. G

| 154. EMISSION POINT I.D. | | | | | 155. UNIT ID |
|---|---|---|---|---|---|
| | | | | A | B |

SECTION H

| 156 UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158. UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-5200-2-23 | 6.3 | 3 |

| 160 BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 59 | 1 | Cyclotherm C-5200 | 32 | 36 | 45 | 3,600 |

| 167 HRS./DAY | 168. DAYS/YEAR | 169. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 170. NAME OF SUPPLIER (S) |
|---|---|---|---|
| 10 | 10 | 9 / 9 / / / | Bergen Fuel Oil Co., Inc. |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176. MAX. QUANTITY OF FUEL/HR. | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 178 HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|
| | | / / / / | |

SECTION I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184. | 185. | 186. | 187. |
| 188. | 189 | 190. | 191. | 192. | 193. |

SECTION J

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c) NOX = 0.571 Lbs./$10^6$ BTU

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

SECTION K

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.107 | 197. 11 | 198. 5 | 199. 0 | 200. 0.5393 | 201. 53.93 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.304 | 206. 11 | 207. 5 | 208. 0 | 209. 1.532 | 210. 153.21 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.571 | 215. 11 | 216. 5 | 217. 0 | 218. 2.8777 | 219 287.77 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228. | 229. |
| 230 | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

| 239. SOURCE CODE |
|---|
| |

76-19-13 (10/79)

94-33 EJS Boiler #2 C-5200 150 HP

OP | LOCATION | FACILITY | EMISSION POINT | C

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-4 BEFORE ANSWERING ANY QUESTION

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP.
YELLOW - APPLICANT

# STATIONARY COMBUSTION INSTALLATION

## APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

**SECTION A**

| 1. NAME OF OWNER / FIRM | 9. NAME OF AUTHORIZED AGENT | 10. TELEPHONE | 19. FACILITY NAME (IF DIFFERENT FROM OWNER / FIRM) |
|---|---|---|---|
| Multi Color Ind., Inc. | Shapiro Engineering, P. C. | 718 531-8400 | |
| **2. NUMBER AND STREET ADDRESS** | **11. NUMBER AND STREET ADDRESS** | | **20. FACILITY LOCATION (NUMBER AND STREET ADDRESS)** |
| 791 Kent Avenue | 6315 Mill Lane | | |
| **3. CITY - TOWN - VILLAGE / 4. STATE / 5. ZIP** | **12. CITY - TOWN - VILLAGE / 13. STATE / 14. ZIP** | | **21. CITY - TOWN - VILLAGE / 22. ZIP** |
| Brooklyn / N.Y. / 11205 | Brooklyn / N.Y. / 11234 | | |
| **6. OWNER CLASSIFICATION** A. [ ] COMMERCIAL C. [ ] UTILITY E. [ ] STATE F. [ ] MUNICIPAL H. [ ] HOSPITAL I. [ ] RESIDENTIAL B. [X] INDUSTRIAL D. [ ] FEDERAL G. [ ] EDUC. INST. J. [ ] OTHER | **15. NAME OF P.E. OR ARCHITECT PREPARING PLANS / 16. N.Y.S. P.E. OR ARCHITECT LICENSE NO. / 17. TELEPHONE** | | **23. BUILDING NAME OR NUMBER / 24. FLOOR NAME OR NUMBER** |
| | Elliot J. Shapiro, P.E. / 38645 / 718 531-8400 | | |
| **7. NAME & TITLE OF OWNERS REPRESENTATIVE / 8. TELEPHONE** | **18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT** | | **25. START UP DATE MO / YR / 26. DRAWING NUMBERS OF PLANS SUBMITTED** |
| Shapiro Engineering, P. C. / 718 531-8400 | | | 11 / 87 / 94-33-1,2 &3 |
| | | | **27. PERMIT TO CONSTRUCT** A. [ ] NEW SOURCE B. [ ] MODIFICATION |
| | | | **28. CERTIFICATE TO OPERATE** A. [X] NEW SOURCE C. [ ] EXISTING B. [ ] MODIFICATION |

**SEC. B**

| 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSION(S) (IN.) | 34. EXIT TEMPERATURE (°F) | 35. EXIT VELOCITY (FT./SEC.) | 36. EXIT FLOW (ACFM) | 37. HEAT INPUT (MILLION BTU/HR) | 38. CONTINUOUS MONITOR(S) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37 | 19 | 54 | 24 | 937 | 41.83 | 7720 | 11.76 | A. [ ] OPACITY B. [ ] SULFUR DIOXIDE C. [ ] NITROGEN OXIDES D. [ ] OXYGEN E. [ ] CARBON DIOXIDE F. [ ] OTHER |

**SECTION C**

| 39. UNIT TYPE | 40. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 41. UNIT HEAT INPUT | 42. AIR INTAKE | 43. SOURCE CODE |
|---|---|---|---|---|
| 01 | Cyclotherm C-7000L-L6-SP | 11.6 | 3 | |

| 44. BURNER TYPE | 45. NO. OF BURNERS | 46. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 47. FUEL TYPE | 48. AVG. QUANTITY OF FUEL / HR | 49. MAX. QUANTITY OF FUEL / HR | 50. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 51 | 1 | Cyclotherm C-7000L-L6-SP | 32 | 48 | 60 | 4,800 |

| 51. HRS./DAY | 52. DAYS/YEAR | 53. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 54. NAME OF SUPPLIER (S) |
|---|---|---|---|---|---|---|
| 10 | 10 | 9 9 | 0 | 0 | 0 | Bergen Fuel Oil Co., Inc. |

| 55. BURNER TYPE | 56. NO. OF BURNERS | 57. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 58. FUEL TYPE | 59. AVG. QUANTITY OF FUEL / HR | 60. MAX. QUANTITY OF FUEL / HR | 61. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 62 | 1 | Cyclotherm C-7000L-L6-SP | 52 | 6,588 | 8,235.29 | 7,247,059 |

| 62. HRS./DAY | 63. DAYS/YEAR | 64. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 65. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| 10 | 110 | 2 5 | 2 5 | 2 5 | 2 5 | Brooklyn Union Gas Company |

**SEC. D**

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 66. | 67. | 68. | 69. | 70. | 71. |
| 72. | 73 | 74. | 75. | 76. | 77. |

**SECTION E**

CALCULATIONS

1. This is a Dual Fuel (Natural Gas - #2 Fuel Oil) Installation.
2. See Supplementary Sheets for specific Emissions.
3. Section F Data is on Natural Gas (the Primary Fuel) for all but the Annual Emissions.

This Emission Point serves Two Boilers.

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

**SECTION F**

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | PERMISS. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ | PERMISS. |
|---|---|---|---|---|---|---|---|---|---|---|
| 78. TOTAL PARTICULATES | 79. NY075-00-0 | 80. 0.0196 | 81. 11 | 82. 5 | 83. | 84. 0 | 85. 0.2306 | 86. 379.5 | 87. 0 | 88. |
| 89. SULFUR DIOXIDE | 90. 7446-09-5 | 91. 0.00059 | 92. 11 | 93. 5 | 94. | 95. 0 | 96. 0.007 | 97. 365.1 | 98. 0 | 99. |
| 100. NITROGEN OXIDES | 101. NY210-00-0 | 102. 0.17157 | 103. 11 | 104. 5 | 105. | 106. 0 | 107. 2.0176 | 108. 3039.5 | 109. 0 | 110. |
| 111. | 112. | 113. | 114. | 115. | 116. | 117. | 118. | 119. | 120. | 121. |
| 122. | 123. | 124. | 125. | 126. | 127. | 128. | 129. | 130. | 131. | 132. |

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE STATIONARY COMBUSTION INSTALLATION HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

133. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT: Elliot J. Shapiro

DATE: 10/3/94

**AGENCY USE ONLY**

| 134. LOCATION CODE | 135. FACILITY ID. NO. | 136. U.T.M. (E) | 137. U.T.M. (N) | 138. SIC NUMBER | 139. DATE APPL. RECEIVED | 140. DATE APPL. REVIEWED | 141. REVIEWED BY: |
|---|---|---|---|---|---|---|---|
| | | | | | / / | / / | |

**PERMIT TO CONSTRUCT**

| 142. DATE ISSUED | 143. EXPIRATION DATE | 144. SIGNATURE OF APPROVAL | 145. FEE |
|---|---|---|---|
| / / | / / | | |

146.
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

**RECOMMENDED ACTION RE: C.O.**

| 147. DATE ISSUED | 148. EXPIRATION DATE | 149. SIGNATURE OF APPROVAL | 150. FEE |
|---|---|---|---|
| / / | / / | | |

151.
1. [ ] INSPECTED BY _____ DATE _____
2. [ ] INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. [ ] ISSUE CERTIFICATE TO OPERATE FOR SOURCE
4. [ ] APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

152. SPECIAL CONDITIONS:

| | |
|---|---|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. |

**AGENCY USE ONLY**

76-10-2 (12/79)

# DEP

Cover Sheet

Registration #: CA 280794

94-33 EJS Boiler #1

DEP

Records Control Unit
(718) 595-3855

KBSO

New York City
Department of
Environmental
Protection

DATE: 10/3/94

CA 280-94R
Installation Number

ORIGINAL-KEEP IN FILE

Bureau of
Air Resources

RE: 791 Kent Avenue Brooklyn, New York 11205
(PREMISE ADDRESS) (BORO)

## PROFESSIONAL CERTIFICATION

59-17 Junction Blvd.
Corona, New York
11368-5107

Being duly mindful of my responsibilities as a licensed Professional Engineer in the State of New York and acting as designated agent for the applicant, I hereby certify that the application, plans and all supplementary documents submitted in connection with this filing are complete and fully comply with all applicable laws, codes, rules,regulations and directives of the Department of Environmental Protection, Bureau of Air Resources of the City of New York in effect at the time filed.

ALBERT F. APPLETON
Commissioner

OCT 6 1994

LICENSED PROFESSIONAL ENGINEER
ELLIOT J. SHAPIRO
No. 038643
UNIVERSITY OF THE STATE OF NEW YORK

ELLIOT J. SHAPIRO P. E.
P.E. Seal & Signature

Instructions: Pursuant to Engineering Directive #1-78, this certification must be submitted in triplicate with all APC 5-0, APC 5-R and APC5-PA applications and does not preclude the necessity to sign and seal the certification now contained on the appliction forms. This certification shall also be submitted in triplicate with all APC 5-0A applications submitted and certified by a professional engineer.

94-33 EJS Boiler #1 C-7000 200 HP

APC 8-0 (REV. 1/77)

The City of New York
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR RESOURCES - BUREAU OF ENGINEERING
59-17 JUNCTION BLVD., CORONA, QNS., N.Y. 11368

# FOSSIL FUEL COMBUSTION EQUIPMENT APPLICATION FOR CERTIFICATE OF OPERATION

C BOROUGH: 2 C 6 | APPLICATION YEAR: 0 0 | 0 0 0 0 A
APPLICATION NUMBER: 0 0 0 0 A
0 0 0 0 A
0 0 0 0 A

1884 BLOCK | 70 LOT | M1-2 ZONING (BY APPLICANT)

FOR AGENCY USE ONLY

FEE: $ 345 DATE OF RECEIPT 10/6/94 19 ____
RECEIPT # 213905 CASHIER ____

25. DATE APPLICATION RECEIVED: 10/06/94

1. OWNER'S NAME: Multi Color Ind., Inc.

2. NUMBER AND STREET ADDRESS: 791 Kent Avenue

26. IDENTIFICATION # (A)88/94R

27. DATE APPLICATION REVIEWED: / /

28. FACILITY: NEW ☐ EX. ☒

3. TOWN OR BORO: Brooklyn | 4. STATE: N.Y. | 5. ZIP: 11205

29. EMISSION POINT I. D. NO.: 0 0 0 0

ALL PERTINENT DETAILS CONCERNING THE FOLLOWING ITEMS AS WELL AS ANY OTHER INFORMATION NOT CONTAINED HEREIN BUT REQUIRED IN THE ENGINEERING CRITERIA FOR FUEL BURNING EQUIPMENT EFFECTIVE JULY 1, 1973 MUST BE INDICATED ON THE PLANS OR SUBMITTED AS SUPPLEMENTARY DATA.

6. FACILITY CLASSIFICATION: H. ___ HOSPITAL L. ___ BD. OF ED. A. ___ COMMERCIAL C. ___ UTILITY I. ___ RESIDENTIAL M. ___ NYC HOSPITAL B. X INDUSTRIAL G. ___ SCHOOL K. ___ N.Y.C.H.A. N. ___ OTHER

29A. CHIMNEY: NEW ☒ EX. ☐
29B. TYPE OF CHIMNEY: RESIDENTIAL A | COMMERCIAL Σ X
29C. CLEAN CHAMBER: YES ☒ NO ☐

7. OWNER OR OFFICERS NAME: Ben Hirsch | TITLE: President

30. ELEVATION AT GROUND LEVEL (FT.): 37
32. CHIMNEY HT. (FT.): 44
33. CHIMNEY INSIDE DIMEN. AT OUTLET (IN.): 24
34.

I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the NYC Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Sec. 1403.2-19.2a of the NYC Air Pollution Cont. Code & Sec. 210.45 of Penal Law

34A. RAINCAP OR COVER: NO X
35. EXIT VEL. (FT/SEC): ~~45.83~~ 15.55 AFS
36. EXIT FLOW RATE (SCFM): ~~2,929~~ 2532
37. I. D. FAN: YES ☐ NO ☒

38. INDUCED DRAFT FAN: NEW ☐ EX. ☐
41. PARTICULATE EMISSION RATE: NA
42. $SO_2$ EMISSION RATE: NA

8. OWNER OR OFFICER'S SIGNATURE: (X) _____
9. TELEPHONE: 718 855 2700

43. $NO_X$ EMISSION RATE: NA
44. TOTAL HEAT INPUT (BTU x $10^6$/HR): 8.4

10. NAME OF P.E.: Elliot J. Shapiro, P. E. Shapiro Engineering, P. C.
11. TELEPHONE: 718 531-8400

45. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS SMOKE MONITOR: NA | RECORDER YES ☐ NO ☐

12. NUMBER AND STREET ADDRESS: ~~6315 Mill Lane~~ 681 South Franklin Ave Suite 305 Valley Stream, NY 11581

46. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $SO_2$ MONITOR: NA | RECORDER YES ☐ NO ☐

ORIGINAL. KEEP IN FILE

13. TOWN OR BORO: ~~Brooklyn~~ | 14. STATE: N.Y. | 15. ZIP: ~~11234~~

47. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $NO_X$ MONITOR: NA | RECORDER YES ☐ NO ☐

16. I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF TO THE ACCURACY OF THE TECHNICAL INFORMATION CONTAINED IN THIS APPLICATION, PLANS AND ANY SUPPLEMENTARY DATA SUBMITTED

LICENSED PROFESSIONAL ENGINEER ELLIOT J. SHAPIRO NO. 038645 STATE OF NEW YORK

PLACE SEAL ABOVE

10/13/94

17. NYS P.E. LIC. NO.: 38645
18. SIGNATURE OF PROFESSIONAL ENGINEER: Elliot J. Shapiro, P. E.

## BOILER

47A. NO. OF BOILERS APPLIED FOR: 1
48. UNIT I. D. LETTER: A
49. BOILER: NEW ☒ EX. ☐
50. BOILER TYPE: 10

51. BOILER MANUFACTURER AND MODEL NUMBER: Cyclotherm C7000L-L6-SP

19. FACILITY NAME (IF ANY): Multi Color Ind., Inc.

51A. TYPE OF BOILER: STEEL X | CAST IRON | STEAM X | HOT $H_2O$ |
51B. CHECKERWORK COMB. CHAMBER FLOOR: NO. X

51C. HEATING SURFACE (FIRESIDE) SQ. FT.: 652
51D. GROSS OUTPUT BTU/HR: 6,700,000

20. FACILITY LOCATION (NUMBER AND STREET ADDRESS): 70 Franklin Avenue

51E. GROSS OUTPUT FIRING RATE (GPH): 60
51F. ADDITIONAL COMBUSTION EQUIPMENT ON STACK OR IN BOILER ROOM: IF YES, COMPLETE DETAILS MUST BE SHOWN ON PLANS. YES X NO ☐

| 21. BORO | 22. ZIP | 23. BLDG. SECTION OR NUMBER | 24. EQUIPMENT LOCATION |
|---|---|---|---|
| Brooklyn | 11205 | | Boiler Room |

51G. LEAD LAG SYSTEM (MULTIPLE BOILERS): YES ☐ NO ☒ MFG. Stationary Engineer CAT. NO. PARENT

| 24A. NO. OF FLOORS | NO. OF APTS. | NO. OF ROOMS | TYPICAL FLOOR AREA |
|---|---|---|---|
| NA | 0 | 0 | NA |

51H. TYPE OF LOAD ON BOILER

| SPACE HEATING | DOM. HOT $H_2O$ | AIR CONDITIONING | PROCESS |
|---|---|---|---|
| Δ | Δ | Σ | Σ X |

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(A) INSTALLER IS NAMED AND
(B) WORKMENS COMP. & DISABILITY ARE ON FILE WITH BAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

"I hereby certify that upon approval of this application, plans and any supplementary data I will make the installation of and adjustment to the equipment and/or apparatus described herein."

COMPANY NAME OF INSTALLER: Pacific Boiler Corp. LEGALIZATION

COMPANY ADDRESS: 95-06 101 Ave

INSTALLER'S NAME: Lino Bellantuono

NYC OIL BURNER LIC. NO. ____

TOWN OR BORO: Qns STATE: NY ZIP: 11416

INSTALLER'S SIGNATURE ____

CLASS ____

## BURNER

FIRER PERMANENTLY LIMITED AT BURNER OIL DELIVERY RATE AS PER PLAN NOTE

52. UNIT HEAT INPUT (BTU x $10^6$/HR): 8.4

| 58. TYPE | 59. BURNER NEW | 59. BURNER EX. | 60. NUMBER OF BURNERS | 61. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 62. BURNER OIL DELIVERY RATE GPH |
|---|---|---|---|---|---|
| ~~5~~ 1,62 ~~59~~ | X | | 1 | Cyclotherm C7000L ~~L6-SP~~ | 60 |

| 63. HRS/DAY | 64. DAYS/YR | 66. FUEL TYPE | 70. AVG. QUANTITY PER HR. | 72. QUANTITY/YR. | 363. HRS/DAY | 364. DAYS/YR | 366. FUEL TYPE | 370. AVG. QUANTITY PER HOUR | 372. QUANTITY/YR |
|---|---|---|---|---|---|---|---|---|---|
| 10 | ~~110~~ 10 | 12 | ~~48~~ 60 | 4,800 | 10 | 110 | 21 | ~~6100~~ 6,588 | 7,246,800 |

## COMBUSTION CONTROLLER

| 74. ON-OFF | 75. LOW-HIGH-OFF WITH LOW FIRE START | 76. LOW-HIGH-LOW-OFF WITH PROVEN LOW FIRE START | 77. FULL MODULATION WITH PROVEN LOW FIRE START | 78. DIRECT RESPONSE LINKAGE: YES |
|---|---|---|---|---|
| | § | Ψ | Ψ X | X |

79. HIGH/LOW MODULATING MOTOR: §Ψ MFR. Honeywell CAT. NO. M931

80. FIRING RATE CONTROL Ψ MFR. Honeywell CAT. NO. P455A accepted for this job only.

81. RAPID-DISCONNECT LINKAGE YES X N/A

| 82. WINDBOX YES | 82. WINDBOX NO | 83. SHROUDED SECONDARY AIR DAMPER YES | 83. SHROUDED SECONDARY AIR DAMPER N/A | 84. PREPURGE AND POSTPURGE YES | 84. PREPURGE AND POSTPURGE NO |
|---|---|---|---|---|---|
| | X | | X | X | |

85. BURNER ELECTRICALLY INTERLOCKED WITH ANY MOTORIZED LOUVER(S), MOTORIZED DAMPER(S), MECHANICAL VENTILATION FAN(S), INDUCED DRAFT FAN(S) & FORCED DRAFT FAN(S): YES X

## OIL HANDLING:

(FOR LOW SULFUR #6 OIL ONLY EXCEPT FOR ITEMS WITH (Ψ) WHICH APPLY TO ALL INSTALLATIONS)

86. NO. OF PRIMARY OIL HEATERS MFR. CAT. NO.

| 86A. STEAM | 86A. HOT $H_2O$ | 86A. ELECTRIC |
|---|---|---|
| Ψ | Ψ | |

86B. CAPACITY: _____ GPH PER _____ °F OIL TEMP. RISE @ _____ LBS STEAM _____ °F $H_2O$ _____ WATTS

| 87. CIRCULATION: GRAVITY | 87. CIRCULATION: FORCED | 88. Ψ NON-CONTAMINATING YES X | 89. BLOWDOWN AND THROTTLING VALVES YES X | 90. NO. OF AUXILIARY (ELECTRIC) HEATER | 90A. CAPACITY (EA) WATTS |
|---|---|---|---|---|---|
| Ψ | | | Ψ | | |

| 91. ELECTRIC HEATER(S) UNDER CONSTANT TEMPERATURE CONTROL YES X | 92. OILSTATS AS PER PLAN DETAILS: YES X | 93. COLD OIL INTERLOCK: YES X | 94. TEMPERATURE GAUGES AS PER PLAN DETAILS: YES X | 95. ALL OIL PIPE LINES ADEQUATELY INSULATED: YES X |
|---|---|---|---|---|

96A. AUTOMATIC PRESSURE DEVICE TO MAINTAIN BOILER STEAM PRESSURE Ψ LBS MIN: YES NO MFR. Honeywell CAT. NO. L404A

96B. AUTOMATIC TEMPERATURE DEVICE TO MAINTAIN BOILER WATER TEMP. Ψ °F MIN: YES NO MFR. CAT. NO.

## GAS HANDLING

| 97. MECHANICAL VENTILATION FAN(S) YES | 97. MECHANICAL VENTILATION FAN(S) NO | 98. EXHAUST FAN(S) IN BOILER ROOM: NO X | 99. LOUVERED OPENING: YES | 99. LOUVERED OPENING: NO | GROSS AREA SQ. IN. | EFFICIENCY % | NET AREA SQ. IN. |
|---|---|---|---|---|---|---|---|
| X | | | | X | | | |

99A. LOUVERED OPENING IN A WALL TO THE OUTSIDE AIR HAVING A NET FREE AREA OF 12 SQUARE INCHES PER GALLON PER HOUR BASED ON THE BURNER OIL DELIVERY RATE AND IN NO CASE LESS THAN THE AVERAGE INTERNAL CROSS-SECTIONAL AREA OF THE CHIMNEY. IN ADDITION, THE NET FREE AREA OF THE LOUVER SHALL BE INCREASED IN SIZE EQUIVALENT TO THE OPENING OF A BAROMETRIC DAMPER OR DAMPERS. YES X

| 100. VENTILATION DUCT YES | 100. VENTILATION DUCT NO | NEW | EX. | 101. LOUVER/DAMPER MOTORIZED: YES | 101. LOUVER/DAMPER MOTORIZED: NO |
|---|---|---|---|---|---|
| | X | | X | | X |

## DRAFT CONTROL

| 102. BAROMETRIC DAMPER: YES | 102. BAROMETRIC DAMPER: NO | NOMINAL SIZE IN. | NOMINAL AREA SQ. IN. | 103. POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF YES | 103. POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF NO | MFR. CAT. NO. |
|---|---|---|---|---|---|---|
| | X | | | | X | |

| 103A. FULL-SIZE DAMPER YES | 103B. AXIS-ROD OF DAMPER IS OF SQUARE X-SECTION OR IF ROUND IS WELDED TO THE CONTROL ARM YES | 103C. ARROW PROVIDED ON AXIS-ROD TO INDICATE POSITION OF DAMPER YES | 103D. DRAFT SAMPLING LINES ADEQUATELY SIZED AS PER PLAN DETAILS: YES |
|---|---|---|---|
| X | X | X | X |

| 104. FULL SIZE CLEANOUT PLUG: YES | 105. ACCESS PORTS IN BREECHING AND IN ANY VENTILATION DUCT(S): YES | 106. SMOKE ALARM WITH COMBUSTION SHUTOFF: YES | 106. SMOKE ALARM WITH COMBUSTION SHUTOFF: NO | MFR. | CAT. NO. | 107. AUDIO-VISUAL ALARMS INSTALLED AS PER PLAN DETAILS: YES |
|---|---|---|---|---|---|---|
| X | X | X | | HeatTimer | MLS-A | X |

## EMISSION CONTROL

| 109. I.D. NO. | 110. STATUS NEW | 110. STATUS EX. | 111. TYPE | 112. MANUFACTURER AND MODEL NUMBER | 114. % EFFICIENCY | 115. HOW DETERMINED |
|---|---|---|---|---|---|---|
| 01 | | | | | | |

## FOR AGENCY USE ONLY

| 143. LOCATION CODE | 144. I.D. NO. | 145. U T M (E) | 146. UTM (N) | 147. SIC NUMBER |
|---|---|---|---|---|
| | | | | |

### WORK PERMIT

| 151. DATE ISSUED | 152. EXPIRATION DATE |
|---|---|
| 12/16/96 | 6/16/97 |

### C.O. APPROVAL

| 155. DATE ISSUED | 156. EXPIRATION DATE |
|---|---|
| | |

PREMISES IDENTIFICATION NO.

SOURCE EMIS. PT. NO.

| OP | LOCATION | FACILITY | EMISSION | PT. | UNIT |
|---|---|---|---|---|---|
| C | | | 0000 | | A |
| | | | 0000 | | A |
| | | | 0000 | | A |
| | | | 0000 | | A |
| | | | 0000 | | |

NOTE: APPLICATION TO BE TYPEWRITTEN AND SUBMITTED WITH PLANS IN TRIPLICATE

APPROVED FOR PERMIT ONLY:

BY _____ HEAD, FOSSIL FUEL DIVISION

BY _____ DIRECTOR OF ENGINEERING

COPY TO NYS – DEC

ENVIRONMENTAL PROTECTION ADMINISTRATION

DEPARTMENT OF AIR RESOURCES
120 WALL STREET, NEW YORK, N. Y. 10005
BUREAU OF ENGINEERING

(1) Boiler #1

DAR Premises Address 791 KENT AVE. BOROUGH BROOKLYN

Premises Identification No. CYCLOTHERM 7000 | 4 | A | 2 | 8 | 0 | 7 | / | 9 | 4 | | | | | | Source Emis. Pt. No. | 1 | | | |

SUMMARY SHEET FOR STACK ADEQUACY

PACKAGED FORCED DRAFT BOILER

ORIGINAL-KEEP IN FILE

| | | |
|---|---|---|
| 1. Overfire draft: | ⊕ 0.75 | in. w.c. |
| 2. Boiler draft loss: | + 5.78 | in. w.c. |
| 3. Total friction loss due to straight run. of ducts: | + 0.00776 | in. w.c. |
| 4. Total friction loss due to bends: | + 0.3530 | in. w.c. |
| 5. Total pressure drops or gains due to area changes: | ± 0 | in. w.c. |
| 6. Other friction losses: | - 0 | in. w.c. |
| 7. Stack effect: LOSS | +0.05385 | in. w.c. |
| TOTAL ~~GAINS~~ LOSSES (Sum of positive pressure differentials) | + 6.9446 | in. w.c. |
| NA TOTAL LOSSES (Sum of negative pressure differentials): | - _____ | in. w.c. |
| Factor of safety (Note: e.g. 10% is to be entered as 1.10): | 1.1 | |
| 8. Net available draft (FORCED DRAFT FAN CAPACITY) = 9.0" W.C., (~~TOTAL GAINS~~) - (TOTAL LOSSES) (Factor of Safety): 6.9446 X 1.1 = 7.639 TOTAL LOSSES, THE STACK IS | 7.639 | in. w.c. |

If line 8 is positive the stack is adequate.
ADEQUATE IF FORCED DRAFT FAN CAPACITY IS > 7.639" W.G.
If line 8 is negative and an I.D. fan is to be used convert net loss to equivalent loss at 70°F and size I.D. fan accordingly:

Correction for sizing at 70°F: _____ in. w.c. X $\frac{Te + 460}{530}$ = _____ in. static pressure at 70°

SEE INDIVIDUAL CALC. SHEETS

Manufacturer: CYCLOTHERM Catalog number: 7,000 CFM: 2017 @ 70°f SP: 9" W.G

CFM to be provided by fan: _____ (Same as at boiler outlet temperature)

---

CALCULATION OF STACK EFFECT (FORCED DRAFT, NO CREDIT TAKEN)

Te= _____ °F, Tc= _____ °R, % excess air= _____, w= _____ #/sec,

X= _____ ft, Y= _____ ft, H= _____ ft, D= _____ ft,

NOTE: CALCULATIONS BASED ON BOTH BOILERS #1 & 2 FIRING.

NOTE; CYCLOTHERM STATES THAT 2" W.G. OF RESISTANCE (BREECHINGS, STACK ETC.) MAY BE ADDED TO BOILER.

ORIGINAL-KEEP IN FILE

- 2 -

Premises 791 KENT AVE BROOKLYN CA 2807/94

BEND LOSSES AT STACK TEMP

Bend location: 1. Type of bend: MITRE. Breeching equivalent diameter: 24 in.

Equivalent length determination:

round breeching: R: 0 ft. D: 2 ft. R/D: NA. L/D: 55. L: 110 ft.

rect. breeching: R:____ft. W:____ft. H:____ft. R/W:____. H/W:____.
L/W:____. L:____ft.

Friction loss per 100 ft. (4412 CFM. 24 Equiv. dia.):

0.223 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x 0.483 (correction for temp.) x 1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 110 (Equiv. length) x 0.223 (Fric. loss/100 ft.) = 0.1183 in. w.c.

---

[2] 45° ELBOWS

Bend location: 2&3 Type of bend: 45°. Breeching equivalent diameter: 24 in.

Equivalent length determination:

round breeching: R: 1.5 ft. D: 2 ft. R/D: 0.75. L/D: 27. L: 54 ft.

rect. breeching: R:____ft. W:____ft. H:____ft. R/W:____. H/W:____.
L/W:____. L:____ft.

Friction loss per 100 ft. (7,721 CFM. 24 Equiv. dia.):

0.223 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x 0.483 (correction for temp.) 1.0 (correction for roughness = 0 in. w.c./100 ft. FOR EACH BEND

Friction loss: 54 (Equiv. length) x 0.223 (Fric. loss/100 ft.) = 0.0582 in. w.c

---

Bend location: 4. Type of Bend: MITRE. Breeching equivalent diameter: 24 in.

Equivalent length determination:

round breeching: R: 0 ft. D: 2 ft. R/D: NA. L/D: 55. L: 110 ft.

rect. breeching: R:____ft. W:____ft. H:____ft. R/W:____. H/W:____.

Friction loss per 100 ft. (7,721 CFM. 24 Equiv. dia.):

0.223 in. w.c./100 ft. (Refer Ashrae pp. 466-7) x 0.483 (correction for temp.) 1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 110 (Equiv. length) x 0.223 (Fric. loss/100 ft.) = 0.1183 in. w.c.

TOTAL FRICTION LOSS DUE TO BENDS: 0.3530 in. w.c.

ORIGINAL-KEEP IN FILE

Premises 791 KENT AVE BROOKLYN CA 2007/94

STRAIGHT RUN FRICTION LOSSES AT STRUCTEMP

Length of straight run duct: 1 ft. Equivalent diameter: 19 in.

Friction loss per 100 ft. (3663 CFM. 24 Equiv. Dia.):

0.27 in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.) :

1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 1 (Equiv. length) x 0.27 (Fric. loss per 100 ft.) = 0.0013 in. w.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: 1 ft. Equivalent diameter: 24 in.

Friction loss per 100 ft. (6411 CFM. 24 Equiv. Dia.):

0.223 in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.)

1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 1 (Equiv. length) x 0.223 (Fric. loss per 100 ft.) = 0.00108 in. w.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: 3 ft. Equivalent diameter: 24 in.

Friction loss per 100 ft. (6411 CFM. 24 Equiv. Dia.):

0.223 in. w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.)

1.0 (correction for roughness) = 0 in. w.c./100 ft.

Friction loss: 3 (Equiv. length) x 0.223 (Fric. loss per 100 ft.) = 0.00323 in. w.c.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

Length of straight run duct: 2 ft. Equivalent diameter: 24 in.

Friction loss per 100 ft. (6411 CFM. 24 Equiv. Dia.):

0.223 in w.c./100 ft. (Refer ASHRAE pp. 466-7) x 0.483 (correction for temp.) :

1.0 (correction for roughness) = 0 in w.c./100 ft.

Friction loss: 2 (Equiv. length) x 0.223 (Fric. loss per 100 ft.) = 0.00215 in. w.

TOTAL FRICTION LOSS DUE TO ST. RUN: 0.00776 in. w.

Premises: 791 KENT AVE BROOKLYN CA 2807/94

LOSSES OR GAINS DUE TO AREA CHANGES

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

ORIGINAL-KEEP IN FILE

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

---

$A_1$:____ft.$^2$ $A_2$:____ft.$^2$ $V_1$:____ft/min. $V_2$:____ft/min. Coefficient:_____.

Type of change:_____. Appropriate pressure drop formula:

Calculation:

Pressure Drop:_____in. w.c.

Total Pressure drop due to area changes:_____in. w.c.

94-33 Boiler #1 C-7000 200 HP (Gas)

OP LOCATION | FACILITY | EMISSION POINT | UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

| SEC. G | 154. EMISSION POINT I.D. | 155. UNIT ID |
|---|---|---|
| | A | A |

SECTION H

| 156. UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158. UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-7000L-L6-SP | 8.4 | 3 |

| 160. BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 167. HRS./DAY | 168. DAYS/YEAR | 169. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 170. NAME OF SUPPLIER (S) |
|---|---|---|---|---|---|---|
| | | | | | | |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176. MAX. QUANTITY OF FUEL/HR. | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 69 | 1 | Cyclotherm C-7000 | 52 | 6,588 | 8,235 | .7,247,059 |

| 178. HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON Winter | Spring | Summer | Fall | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|---|---|---|
| 10 | 110 | 24 | 25 | 25 | 25 | Brooklyn Union Gas Company |

SECTION I

| SEC. | EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|---|
| | 182. | 183. 99 | 184. | 185. | 186. | 187. |
| | 188. | 189 | 190. | 191. | 192. | 193. |

SECTION J

CALCULATIONS

Emission Factors from AP-42 Table 1.4-1 (Gas)
Particulates = 0.01961 Lbs./$10^6$ BTU
SO2 = 0.00059 Lbs./$10^6$ BTU
NOX = 0.17157 Lbs./$10^6$ BTU

OCT 6 1994

Fee $345.- Receipt No. 213905
D.A.R. Clerk

SECTION K

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^X$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.01961 | 197. 11 | 198. 5 | 199. 0 | 200. 0.1318 | 201. 144.95 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.00059 | 206. 11 | 207. 5 | 208. 0 | 209. 0.0040 | 210. 4.3612 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.17157 | 215. 11 | 216. 5 | 217. 0 | 218. 1.1529 | 219. 1268 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228. | 229. |
| 230. | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

239. SOURCE CODE

76-19-13 (10/79)

94-33 Boiler #1 C-7000 200 HP (Gas)

OP LOCATION FACILITY EMISSION POINT UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
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BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

SEC. G

| 154 EMISSION POINT I.D. | | | | | 155. UNIT ID |
|---|---|---|---|---|---|
| | | | | A | A |

SECTION H

| 156 UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | | | | 158 UNIT HEAT INPUT | 159 AIR INTAKE |
|---|---|---|---|---|---|---|
| 01 | Cyclotherm C-7000L-L6-SP | | | | 8.4 | 3 |
| **160 BURNER TYPE** | **161. NO. OF BURNERS** | **162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER** | **163. FUEL TYPE** | **164. AVG. QUANTITY OF FUEL/HR** | **165. MAX. QUANTITY OF FUEL/HR** | **166. QUANTITY OF FUEL/YR** |
| | | | | | | |
| **167 HRS./DAY** | **168. DAYS/YEAR** | **169. % OPERATION BY SEASON** Winter / Spring / Summer / Fall | **170. NAME OF SUPPLIER (S)** | | | |
| | | | | | | |
| **171. BURNER TYPE** | **172. NO. OF BURNERS** | **173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER** | **174. FUEL TYPE** | **175. AVG. QUANTITY OF FUEL/HR.** | **176. MAX. QUANTITY OF FUEL/HR.** | **177. QUANTITY OF FUEL/YR** |
| 69 | 1 | Cyclotherm C-7000 | 52 | 6,588 | 8,235 | 7,247,059 |
| **178 HRS./DAY** | **179. DAYS/YEAR** | **180. % OPERATION BY SEASON** Winter / Spring / Summer / Fall | **181. NAME OF SUPPLIER(S)** | | | |
| 10 | 110 | Winter 24 / Spring 25 / Summer 25 / Fall 25 | Brooklyn Union Gas Company | | | |

SECTION I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184. | 185. | 186. | 187. |
| 188. | 189 | 190. | 191. | 192. | 193 |

SECTION J

CALCULATIONS

Emission Factors from AP-42 Table 1.4-1 (Gas)
Particulates = 0.01961 Lbs./$10^6$ BTU
SO2 = 0.00059 Lbs./$10^6$ BTU
NOX = 0.17157 Lbs./$10^6$ BTU

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

SECTION K

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.01961 | 197. 11 | 198. 5 | 199. 0 | 200. 0.1318 | 201. 144.95 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.00059 | 206. 11 | 207. 5 | 208. 0 | 209 0.0040 | 210. 4.3612 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.17157 | 215. 11 | 216. 5 | 217. 0 | 218. 1.1529 | 219 1268 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228 | 229. |
| 230 | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

239. SOURCE CODE

76-19-13 (10/79)

94-33 Boiler #1 C-7000 200 HP (Gas)

OP LOCATION FACILITY EMISSION POINT UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

PLEASE PRINT OR TYPE

COPIES
WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

SEC. G

| 154. EMISSION POINT I.D. | | | | | 155. UNIT I.D |
|---|---|---|---|---|---|
| | | | | A | A |

SECTION H

| 156. UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158. UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-7000L-L6-SP | 8.4 | 3 |

| 160. BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 167. HRS./DAY | 168. DAYS/YEAR | 169. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 170. NAME OF SUPPLIER (S) |
|---|---|---|---|
| | | | |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176. MAX. QUANTITY OF FUEL/HR | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 69 | 1 | Cyclotherm C-7000 | 52 | 6,588 | 8,235 | 7,247,059 |

| 178. HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 10 | 110 | 24 / 25 / 25 / 25 | Brooklyn Union Gas Company |

SECTION I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184. | 185. | 186. | 187. |
| 188. | 189. | 190. | 191. | 192 | 193. |

SECTION J

CALCULATIONS

Emission Factors from AP-42 Table 1.4-1 (Gas)
Particulates = 0.01961 Lbs./$10^6$ BTU
SO2 = 0.00059 Lbs./$10^6$ BTU
NOX = 0.17157 Lbs./$10^6$ BTU

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

SECTION K

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | EMISSIONS UNIT | EMISSIONS HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | ANNUAL EMISSIONS $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.01961 | 197. 11 | 198. 5 | 199. 0 | 200. 0.1318 | 201. 144.95 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.00059 | 206. 11 | 207. 5 | 208. 0 | 209 0.0040 | 210. 4.3612 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.17157 | 215. 11 | 216. 5 | 217. 0 | 218. 1.1529 | 219 1268 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228. | 229. |
| 230 | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

239. SOURCE CODE

76-19-13 (10/79)

94-33 Boiler #1 C-7000 200 HP (Gas)

OP LOCATION FACILITY EMISSION POINT UNIT: C

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STATIONARY COMBUSTION INSTALLATION
## UNIT DATA

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WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

PLEASE PRINT OR TYPE

SEC. G

| 154. EMISSION POINT I.D. | 155. UNIT ID |
|---|---|
| A | A |

SECTION H

| 156. UNIT TYPE | 157. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 158. UNIT HEAT INPUT | 159. AIR INTAKE |
|---|---|---|---|
| 01 | Cyclotherm C-7000L-L6-SP | 8.4 | 3 |

| 160. BURNER TYPE | 161. NO. OF BURNERS | 162. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 163. FUEL TYPE | 164. AVG. QUANTITY OF FUEL/HR | 165. MAX. QUANTITY OF FUEL/HR | 166. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| | | | | | | |

| 167. HRS./DAY | 168. DAYS/YEAR | 169. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 170. NAME OF SUPPLIER (S) |
|---|---|---|---|
| | | | |

| 171. BURNER TYPE | 172. NO. OF BURNERS | 173. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 174. FUEL TYPE | 175. AVG. QUANTITY OF FUEL/HR. | 176. MAX. QUANTITY OF FUEL/HR. | 177. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 69 | 1 | Cyclotherm C-7000 | 52 | 6,588 | 8,235 | 7,247,059 |

| 178. HRS./DAY | 179. DAYS/YEAR | 180. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 181. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 10 | 110 | 24 / 25 / 25 / 25 | Brooklyn Union Gas Company |

SEC. I

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 182. | 183. 99 | 184 | 185. | 186. | 187. |
| 188. | 189 | 190. | 191. | 192. | 193. |

SECTION J

CALCULATIONS

Emission Factors from AP-42 Table 1.4-1 (Gas)
Particulates = 0.01961 Lbs./$10^6$ BTU
SO2 = 0.00059 Lbs./$10^6$ BTU
NOX = 0.17157 Lbs./$10^6$ BTU

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

SECTION K

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) $10^x$ |
|---|---|---|---|---|---|---|---|---|
| 194. TOTAL PARTICULATES | 195. NY075-00-0 | 196. 0.01961 | 197. 11 | 198. 5 | 199. 0 | 200. 0.1318 | 201. 144.95 | 202. 0 |
| 203. SULFUR DIOXIDE | 204. 7446-09-5 | 205. 0.00059 | 206. 11 | 207. 5 | 208. 0 | 209. 0.0040 | 210. 4.3612 | 211. 0 |
| 212. NITROGEN OXIDES | 213. NY210-00-0 | 214. 0.17157 | 215. 11 | 216. 5 | 217. 0 | 218. 1.1529 | 219. 1268 | 220. 0 |
| 221. | 222. | 223. | 224. | 225. | 226. | 227. | 228. | 229. |
| 230 | 231. | 232. | 233. | 234. | 235 | 236. | 237. | 238. |

| 239. SOURCE CODE |
|---|
| |

94-33 EJS Boiler #1 C-7000 200 HP

OF LOCATION / FACILITY / EMISSION POINT

[illegible] C

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-4 BEFORE ANSWERING ANY QUESTION

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

COPIES
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WHITE - REGIONAL OFFICE
WHITE - FIELD REP.
YELLOW - APPLICANT

# STATIONARY COMBUSTION INSTALLATION

## APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

CA 3807-94R

**SECTION A**

| 1. NAME OF OWNER/FIRM | 9. NAME OF AUTHORIZED AGENT | 10. TELEPHONE | 19. FACILITY NAME (IF DIFFERENT FROM OWNER/FIRM) |
|---|---|---|---|
| Multi Color Ind., Inc. | Shapiro Engineering, P. C. | 718 531-8400 | |
| **2. NUMBER AND STREET ADDRESS** | **11. NUMBER AND STREET ADDRESS** | | **20. FACILITY LOCATION (NUMBER AND STREET ADDRESS)** |
| 791 Kent Avenue | 6315 Mill Lane | | |
| **3. CITY - TOWN - VILLAGE / 4. STATE / 5. ZIP** | **12. CITY - TOWN - VILLAGE / 13. STATE / 14. ZIP** | | **21. CITY - TOWN - VILLAGE / 22. ZIP** |
| Brooklyn / N.Y. / 11205 | Brooklyn / N.Y. / 11234 | | |
| **6. OWNER CLASSIFICATION** A.☐ COMMERCIAL B.☒ INDUSTRIAL C.☐ UTILITY D.☐ FEDERAL E.☐ STATE F.☐ MUNICIPAL G.☐ EDUC. INST. H.☐ HOSPITAL I.☐ RESIDENTIAL J.☐ OTHER | **15. NAME OF P.E. OR ARCHITECT PREPARING PLANS / 16. N.Y.S. P.E. OR ARCHITECT LICENSE NO. / 17. TELEPHONE** | | **23. BUILDING NAME OR NUMBER / 24. FLOOR NAME OR NUMBER** |
| | Elliot J. Shapiro, P.E. / 38645 / 718 531-8400 | | |
| **7. NAME & TITLE OF OWNERS REPRESENTATIVE / 8. TELEPHONE** | **18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT** | | **25. START UP DATE MO/YR / 26. DRAWING NUMBERS OF PLANS SUBMITTED** |
| Shapiro Engin eering, P. C. / 718 531-8400 | | | 11/87 / 94-33-1,2 & 3 |
| | | | **27. PERMIT TO CONSTRUCT** A.☐ NEW SOURCE B.☐ MODIFICATION |
| | | | **28. CERTIFICATE TO OPERATE** A.☒ NEW SOURCE C.☐ EXISTING B.☐ MODIFICATION |

**SEC. B**

| 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSION(S) (IN.) | 34. EXIT TEMPERATURE (°F) | 35. EXIT VELOCITY (FT./SEC.) | 36. EXIT FLOW (ACFM) | 37. HEAT INPUT (MILLION BTU/HR) | 38. CONTINUOUS MONITOR(S) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 37 | 19 | 54 | 24 | 937 | 41.83 | 7720 | 11.76 | A.☐ OPACITY B.☐ SULFUR DIOXIDE C.☐ NITROGEN OXIDES D.☐ OXYGEN E.☐ CARBON DIOXIDE F.☐ OTHER |

**SECTION C**

| 39. UNIT TYPE | 40. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 41. UNIT HEAT INPUT | 42. AIR INTAKE | 43. SOURCE CODE |
|---|---|---|---|---|
| 01 | Cyclotherm C-70000L-L6-SP | 11.6 | 3 | |

| 44. BURNER TYPE | 45. NO. OF BURNERS | 46. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 47. FUEL TYPE | 48. AVG. QUANTITY OF FUEL/HR | 49. MAX. QUANTITY OF FUEL/HR | 50. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 51 | 1 | Cyclotherm C-7000L-L6-SP | 32 | 48 | 60 | 4,800 |

| 51. HRS./DAY | 52. DAYS/YEAR | 53. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 54. NAME OF SUPPLIER (S) |
|---|---|---|---|
| 10 | 10 | 9 / 9 / 0 / 0 / 0 | Bergen Fuel Oil Co., Inc. |

| 55. BURNER TYPE | 56. NO. OF BURNERS | 57. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 58. FUEL TYPE | 59. AVG. QUANTITY OF FUEL/HR | 60. MAX. QUANTITY OF FUEL/HR | 61. QUANTITY OF FUEL/YR |
|---|---|---|---|---|---|---|
| 62 | 1 | Cyclotherm C-7000L-L6-SP | 52 | 6,588 | 8,235.29 | 7,247,059 |

| 62. HRS./DAY | 63. DAYS/YEAR | 64. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 65. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 10 | 10 | 25 / 25 / 25 / 25 | Brooklyn Union Gas Company |

**SEC. D**

| EMISSION CONTROL EQUIP I. D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO./YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 66. | 67. | 68. | 69. | 70. | 71. |
| 72. | 73. | 74. | 75. | 76. | 77. |

**SECTION E**

CALCULATIONS

1. This is a Dual Fuel (Natural Gas - #2 Fuel Oil) Installation.
2. See Supplementary Sheets for Specific Emissions
3. Section F Data is based on Natural gas (The Primary Fuel) for all but the Annual Emissions.

This Emission Point serves Two Boilers.

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

**SECTION F**

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | PERMISS. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | $10^x$ | PERMISS. |
|---|---|---|---|---|---|---|---|---|---|---|
| 78. TOTAL PARTICULATES | 79. NY075-00-0 | 80. 0.0196 | 81. 11 | 82. 5 | 83. | 84. 0 | 85. 0.2306 | 86. 379.5 | 87. 0 | 88. |
| 89. SULFUR DIOXIDE | 90. 7446-09-5 | 91. 0.00059 | 92. 11 | 93. 5 | 94. | 95. 0 | 96. 0.007 | 97. 365.1 | 98. 0 | 99. |
| 100. NITROGEN OXIDES | 101. NY210-00-0 | 102. 0.17157 | 103. 11 | 104. 5 | 105. | 106. 0 | 107. 2.0176 | 108. 3039.5 | 109. 0 | 110. |
| 111. | 112. | 113. | 114. | 115. | 116. | 117. | 118. | 119. | 120. | 121. |
| 122. | 123. | 124. | 125. | 126. | 127. | 128. | 129. | 130. | 131. | 132. |

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE STATIONARY COMBUSTION INSTALLATION HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

133. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT: Elliot J. Shapiro — DATE: 10/3/94

**AGENCY USE ONLY**

| 134. LOCATION CODE | 135. FACILITY ID. NO. | 136. U.T.M. (E) | 137. U.T.M. (N) | 138. SIC NUMBER | 139. DATE APPL. RECEIVED | 140. DATE APPL. REVIEWED | 141. REVIEWED BY: |
|---|---|---|---|---|---|---|---|
| | | | | | / / | / / | |

**PERMIT TO CONSTRUCT**

| 142. DATE ISSUED | 143. EXPIRATION DATE | 144. SIGNATURE OF APPROVAL | 145. FEE |
|---|---|---|---|
| / / | / / | | |

146.
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

**RECOMMENDED ACTION RE: C.O.**

| 147. DATE ISSUED | 148. EXPIRATION DATE | 149. SIGNATURE OF APPROVAL | 150. FEE |
|---|---|---|---|
| / / | / / | | |

151.
1. ☐ INSPECTED BY _____ DATE _____
2. ☐ INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. ☐ ISSUE CERTIFICATE TO OPERATE FOR SOURCE
4. ☐ APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

152. SPECIAL CONDITIONS:

| | |
|---|---|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. |

76-19-2 (10/79)

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR RESOURCES
295 LAFAYETTE STREET, NEW YORK, N.Y. 10012 (212) 323-8580

HARVEY W. SCHULTZ
Commissioner

SAMUEL STEMPLER, P.E.
Assistant Commissioner

X559

DATE: 10/06/94

APPLICATION NO.: 2810-94K

RE: 2103 HONEYWELL AVENUE BRONX
(PREMISES ADDRESS)

## PROFESSIONAL CERTIFICATION

RECEIVED
D.E.P. BUREAU OF AIR
RESOURCES
AIR POLLUTION CONTROL UNIT
Oct 6 3 02 PM '94

Being duly mindful of my responsiblities as a licensed Professional Engineer in the State of New York and acting as designated agent for the applicant, I hereby certify that the application, plans and all supplementary documents submitted in connection with this filing are complete and fully comply with all applicable laws, codes, rules, regulations and directives of the Department of Environmental Protection, Bureau of Air Resources, of the City of New York in affect at the time filed.

OCT 6 1994

STATE OF NEW YORK
ROBERT F. GERMAIN
LICENSED PROFESSIONAL ENGINEER
NO. 047135

P.E. Seal & Signature

Instructions: Pursuant to Engineering Directive #1-78, this certification must be submitted in triplicate with all APC 5-O, APC 5-R, and APC 5-PA applications and does not preclude the necessity to sign and seal the certification now contained on the application forms. This certification shall also be submitted in triplicate with all APC 5-OA applications submitted and certified by a professional engineer.

ORIGINAL — KEEP IN FILE

APC 5-0 (REV. 1/77)

# The City of New York
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## AIR RESOURCES - BUREAU OF ENGINEERING
59-17 JUNCTION BLVD., CORONA, QNS., N.Y. 11368

## FOSSIL FUEL COMBUSTION EQUIPMENT APPLICATION FOR CERTIFICATE OF OPERATION

C BOROUGH: 2 C 6 | APPLICATION YEAR: 0 0 | APPLICATION NUMBER: 0 0 0 0 A

3124 BLOCK | 1 LOT | C1-4 PG 8D ZONING (BY APPLICANT)

FOR AGENCY USE ONLY

FEE: $ 470 DATE OF RECEIPT 10/6/94 19 ____ RECEIPT # 213907 CASHIER ____

25. DATE APPLICATION RECEIVED: 10/06/94

1. OWNER'S NAME: MOHEGAN APTS. C/O PENSON CORP

2. NUMBER AND STREET ADDRESS: 915 E. 179 ST

26. IDENTIFICATION #: CB210-94K

27. DATE APPLICATION REVIEWED: / /

28. FACILITY: NEW ☐ EX. XX

3. TOWN OR BORO: BX | 4. STATE: NY | 5. ZIP: 10460

29. EMISSION POINT I. D. NO.: 0 0 0 0 1

ALL PERTINENT DETAILS CONCERNING THE FOLLOWING ITEMS AS WELL AS ANY OTHER INFORMATION NOT CONTAINED HEREIN BUT REQUIRED IN THE ENGINEERING CRITERIA FOR FUEL BURNING EQUIPMENT EFFECTIVE JULY 1, 1973 MUST BE INDICATED ON THE PLANS OR SUBMITTED AS SUPPLEMENTARY DATA.

6. FACILITY CLASSIFICATION: H. ___ HOSPITAL L. ___ BD. OF ED. A. ___ COMMERCIAL C. ___ UTILITY I. X RESIDENTIAL M. ___ NYC HOSPITAL B. ___ INDUSTRIAL S. ___ SCHOOL N. ___ N.Y.C.H.A. N. ___ OTHER

29A. CHIMNEY: NEW ☐ EX. XX

29B. TYPE OF CHIMNEY: RESIDENTIAL Δ XX | COMMERCIAL Σ

29C. CLEAN CHAMBER: YES XX | NO ☐

7. OWNER OR OFFICERS NAME: NEIL OSTROW | TITLE: MGMT. AGENT

30. ELEVATION AT GROUND LEVEL (FT.): 150

32. CHIMNEY HT. (FT.): 78

33. CHIMNEY INSIDE DIMEN. AT OUTLET (IN.): 22 X 22

34.

I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the N.Y.C. Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Sec. 1403.2-19.29 of the N.Y.C. Air Pollution Cont. Code & Sec. 210-45 of Penal Law

34A. RAINCAP OR COVER: NO X

35. EXIT VEL. (FT/SEC): 9.4

36. EXIT FLOW RATE (SCFM): 1905

37. I. D. FAN: YES ☐ NO X

8. OWNER OR OFFICER'S SIGNATURE: [signature] | 9. TELEPHONE: 718 562-2000

38. INDUCED DRAFT FAN: NEW ☐ EX. ☐

41. PARTICULATE EMISSION RATE

42. $SO_2$ EMISSION RATE

43. $NO_X$ EMISSION RATE

44. TOTAL HEAT INPUT (BTU X $10^6$/HR): 5.250

10. NAME OF P.E.: ROBERT F. GERMAIN, PE | 11. TELEPHONE: 914 [illegible]-7086

Owner sign here

45. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS SMOKE MONITOR | RECORDER YES ☐ NO X

12. NUMBER AND STREET ADDRESS: 443 E 5 ST

46. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $SO_2$ MONITOR | RECORDER YES ☐ NO X

13. TOWN OR BORO: MT VERNON | 14. STATE: NY | 15. ZIP: 10553

47. NAME OF MANUFACTURER AND MODEL NUMBER OF CONTINUOUS $NO_X$ MONITOR | RECORDER YES ☐ NO X

16. STATE OF NEW YORK — ROBERT F. GERMAIN — LICENSED PROFESSIONAL ENGINEER — NO. 047135

PLACE SEAL ABOVE

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF TO THE ACCURACY OF THE TECHNICAL INFORMATION CONTAINED IN THIS APPLICATION, PLANS AND ANY SUPPLEMENTARY DATA SUBMITTED

BOILER

47A. NO. OF BOILERS APPLIED FOR: 1

48. UNIT I. D. LETTER: A

49. BOILER: NEW XX | EX. ☐

50. BOILER TYPE: 10

51. BOILER MANUFACTURER AND MODEL NUMBER: FEDERAL FST-125 (HOT WATER BOILER)

17. NYS P.E. LIC. NO.: 47135 | 18. SIGNATURE OF PROFESSIONAL ENGINEER: [signature]

51A. TYPE OF BOILER: STEEL XX | CAST IRON | STEAM | HOT $H_2O$ X

51B. CHECKERWORK COMB. CHAMBER FLOOR: NO. X

19. FACILITY NAME (IF ANY): AKA 883 E. 180 ST

51C. HEATING SURFACE (FIRESIDE) SQ. FT.: 625.0

51D. GROSS OUTPUT BTU/HR: 4,184,000

20. FACILITY LOCATION (NUMBER AND STREET ADDRESS): 2103 HONEYWELL AVE

51E. GROSS OUTPUT FIRING RATE (GPH): 38.0

51F. ADDITIONAL COMBUSTION EQUIPMENT ON STACK OR IN BOILER ROOM: IF YES, COMPLETE DETAILS MUST BE SHOWN ON PLANS. YES ☐ NO XX

| 21. BORO | 22. ZIP | 23. BLDG. SECTION OR NUMBER | 24. EQUIPMENT LOCATION |
|---|---|---|---|
| BX | 10460 | N/A | CELLAR |

51G. LEAD LAG SYSTEM (MULTIPLE BOILERS): YES ☐ NO XX | MFG. | CAT. NO.

| 24A. NO. OF FLOORS | NO. OF APTS. | NO. OF ROOMS | TYPICAL FLOOR AREA |
|---|---|---|---|
| 6 | 120 | 420 | 12,000 |

51H. TYPE OF LOAD ON BOILER

| SPACE HEATING | DOM. HOT $H_2O$ | AIR CONDITIONING | PROCESS |
|---|---|---|---|
| Δ XX | Δ XX | Σ | Σ |

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(A) INSTALLER IS NAMED AND
(B) WORKMENS COMP. & DISABILITY ARE ON FILE WITH DAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

"I hereby certify that upon approval of this application I will make the installation and adjustment to the equipment and/or apparatus described herein."

Installer sign here

COMPANY NAME OF INSTALLER: APEX MECHANICAL

ORIGINAL — KEEP IN FILE

COMPANY ADDRESS: 2800 WEBSTER AVE

INSTALLER'S NAME: REED RICKMAN

NYC OIL BURNER LIC. NO.: 2698

TOWN OR BORO: BX | STATE: NY | ZIP: 10458

INSTALLER'S SIGNATURE: [signature] | CLASS: A

## BURNER

BURNER PERFORMANCE LIMITED AT BURNER OIL DELIVERY RATE AS PER PLAN NOTE

52. UNIT HEAT INPUT (BTU x $10^6$/HR): 5.25

| 58. TYPE | 59. BURNER NEW | EX. | 60. NUMBER OF BURNERS | 61. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 62. BURNER OIL DELIVERY RATE GPH |
|---|---|---|---|---|---|
| 53 | XX | | 1 | NEW HEVE DEG-54 P | 37.5 GPH |

| 63. HRS/DAY | 64. DAYS/YR | 66. FUEL TYPE | 70. AVG. QUANTITY PER HR. | 72. QUANTITY/YR. | 363. HRS/DAY | 364. DAYS/YR | 366. FUEL TYPE | 370. AVG. QUANTITY PER HOUR | 372. QUANTITY/YR |
|---|---|---|---|---|---|---|---|---|---|
| 3.0 ~~4.5~~ | 355 ~~365~~ | ~~34~~ 2 | ~~34~~ 52.50 CFH | CFH ~~55845~~ 5.5 $NO^6$ | 3.0 | 10 | 14 | 37.5 | 1125 |

| COMBUSTION CONTROLLER | 74. ON-OFF | 75. LOW-HIGH-OFF WITH LOW FIRE START | 76. LOW-HIGH-LOW-OFF WITH PROVEN LOW FIRE START | 77. FULL MODULATION WITH PROVEN LOW FIRE START | 78 DIRECT RESPONSE LINKAGE: YES |
|---|---|---|---|---|---|
| | | $ | Ψ | Ψ YES | X |

| 79. HIGH/LOW MODULATING MOTOR: MFR. | CAT. NO. | 80. FIRING RATE CONTROL MFR. | CAT. NO. | 81. RAPID-DISCONNECT LINKAGE YES | N/A |
|---|---|---|---|---|---|
| $Ψ | M954C | Ψ HONEYWELL | T991 | | X |

| 82. WINDBOX YES | NO | 83. SHROUDED SECONDARY AIR DAMPER YES | N/A | 84. PREPURGE AND POSTPURGE YES | NO | 85. BURNER ELECTRICALLY INTERLOCKED WITH ANY MOTORIZED LOUVER(S), MOTORIZED DAMPER(S), MECHANICAL VENTILATION FAN(S), INDUCED DRAFT FAN(S) & FORCED DRAFT FAN(S): YES |
|---|---|---|---|---|---|---|
| | XX | | XX | XX | | X |

| OIL HANDLING: (FOR LOW SULFUR #6 OIL ONLY EXCEPT FOR ITEMS WITH (●) WHICH APPLY TO ALL INSTALLATIONS) | 86. NO. OF PRIMARY OIL HEATERS | MFR. | CAT. NO. |
|---|---|---|---|
| | | | |

| 86A. STEAM | HOT $H_2O$ | ELECTRIC | 86B. |
|---|---|---|---|
| $ | Ψ | | |
| | | | CAPACITY: ____ GPH PER ____ °F OIL TEMP. RISE @ ____ LBS STEAM ____ °F $H_2O$ ____ WATTS |

| 87. CIRCULATION: GRAVITY | FORCED | 88. $Ψ NON-CONTAMINATING YES | 89. BLOWDOWN AND THROTTLING VALVES YES | 90. NO. OF AUXILIARY (ELECTRIC) HEATER | 90A. CAPACITY (EA) WATTS |
|---|---|---|---|---|---|
| Ψ | | X | $Ψ X | | |

| 91. ELECTRIC HEATER(S) UNDER CONSTANT TEMPERATURE CONTROL YES | 92. OILSTATS AS PER PLAN DETAILS: YES | 93. COLD OIL INTERLOCK: YES | 94. TEMPERATURE GAUGES AS PER PLAN DETAILS: YES | 95. ALL OIL PIPE LINES ADEQUATELY INSULATED: YES |
|---|---|---|---|---|
| X | X | X | X | X |

| 96A. ● AUTOMATIC PRESSURE DEVICE TO MAINTAIN BOILER STEAM PRESSURE LBS MIN: YES | NO | MFR. CAT. NO. | 96B. ● AUTOMATIC TEMPERATURE DEVICE TO MAINTAIN BOILER WATER TEMP. @ 180 °F MIN: YES | NO | MFR. HONEYWELL CAT. NO. L4006 |
|---|---|---|---|---|---|
| | XXX | | XXX | | |

| GAS HANDLING | 97. MECHANICAL VENTILATION FAN(S) YES | NO | 98. EXHAUST FAN(S) IN BOILER ROOM: NO | 99. LOUVERED OPENING: YES | NO | GROSS AREA SQ. IN | EFFICIENCY % | NET AREA SQ. IN. |
|---|---|---|---|---|---|---|---|---|
| | | XX | X | XX | | 2124 | 60 | 1274.5 |

99A. LOUVERED OPENING IN A WALL TO THE OUTSIDE AIR HAVING A NET FREE AREA OF 12 SQUARE INCHES PER GALLON PER HOUR BASED ON THE BURNER OIL DELIVERY RATE AND IN NO CASE LESS THAN THE AVERAGE INTERNAL CROSS-SECTIONAL AREA OF THE CHIMNEY. IN ADDITION, THE NET FREE AREA OF THE LOUVER SHALL BE INCREASED IN SIZE EQUIVALENT TO THE OPENING OF A BAROMETRIC DAMPER OR DAMPERS. YES X

| 100. VENTILATION DUCT YES | NO | NEW | EX. | 101. LOUVER/DAMPER MOTORIZED: YES | NO |
|---|---|---|---|---|---|
| | X | | | | X |

| DRAFT CONTROL | 102. BAROMETRIC DAMPER: YES | NO | NOMINAL SIZE IN. | NOMINAL AREA SQ. IN. | 103. Ψ POWER OPERATED DRAFT REGULATOR WITH LOW DRAFT CUTOFF YES | NO | MFR. CAT. NO. |
|---|---|---|---|---|---|---|---|
| | XX | | 18" DIA | 254.4 | | XX | |

| 103A. Ψ FULL-SIZE DAMPER YES | 103B. Ψ AXIS-ROD OF DAMPER IS OF SQUARE X-SECTION OR IF ROUND IS WELDED TO THE CONTROL ARM YES | 103C. Ψ ARROW PROVIDED ON AXIS-ROD TO INDICATE POSITION OF DAMPER YES | 103D. Ψ DRAFT SAMPLING LINES ADEQUATELY SIZED AS PER PLAN DETAILS: YES |
|---|---|---|---|
| X | X | X | X |

| 104. Ψ FULL SIZE CLEANOUT PLUG: YES | 105. ACCESS PORTS IN BREECHING AND IN ANY VENTILATION DUCT(S): YES | 106. SMOKE ALARM WITH COMBUSTION SHUTOFF: YES | NO | MFR CAT. NO. | 107. AUDIO-VISUAL ALARMS INSTALLED AS PER PLAN DETAILS: YES |
|---|---|---|---|---|---|
| X | X | | | HEAT TIMER MLSA | X |

## EMISSION CONTROL

| 109. I.D. NO. | 110. STATUS NEW | EX. | 111. TYPE | 112. MANUFACTURER AND MODEL NUMBER | 114. % EFFICIENCY | 115. HOW DETERMINED |
|---|---|---|---|---|---|---|
| 01 | | | 999 | | | |

## FOR AGENCY USE ONLY

| 143. LOCATION CODE | 144. I.D. NO. | 145. UTM (E) | 146. UTM (N) | 147. SIC NUMBER |
|---|---|---|---|---|
| | | | | |

WORK PERMIT

| 151. DATE ISSUED | 152. EXPIRATION DATE |
|---|---|
| 8/3/95 | 8/3/95 |

C.O. APPROVAL

| 155. DATE ISSUED | 156. EXPIRATION DATE |
|---|---|
| | |

PREMISES IDENTIFICATION NO.

SOURCE EMIS. PT. NO.

| OP | LOCATION | FACILITY | EMISSION PT. | UNIT |
|---|---|---|---|---|
| C | | | 0000 | A |
| | | | 0000 | A |
| | | | 0000 | A |
| | | | 0000 | A |
| | | | 0000 | A |

NOTE: APPLICATION TO BE TYPEWRITTEN AND SUBMITTED WITH PLANS IN TRIPLICATE

Accepted.

~~APPROVED~~ FOR PERMIT ONLY:

R Nowak P.E.

BY HEAD, FOSSIL FUEL DIVISION

DIRECTOR OF ENGINEERING

COPY TO NYS - DEC

ROBERT F. GERMAIN, M.E., P.E.
443 East Fifth Street
Mount Vernon, NY 10553
914-668-7086
Consulting Engineer

# SPECIFICATIONS

1] Installation shall comply in all respects with the Engineering Criteria "Fuel Oil Burning Equipment", effective July 1, 1973 & all subsequent Amendments & Directives, as published by the NYC Dept of Air Resources as well as the Oil Burner Rules of the Board of Standards & Appeals, the NYC Building Code and State Code 4, the NYC Fire Dept & Dept of Ports & Terminals.

2] Legal chimney to be in good condition with cleanout provided & raincap removed.

3] A Performance Test shall be run by the Contractor with an Air Resources Representative present. Indicating at the oil burner delivery rate [and low fire when applicable] a 20% or less stack loss, Bacharach Smoke Scale Reading of [3] or less and adequate corrected draft. The oil burner must be limited prior to the Dept of Air Resources Inspection.

4] To facilitate performance testing, Installer to provide breeching test holes, each 5/16" diameter as follows;

(3) - 4" apart - with the first, closest to the boiler outlet (1) breeching diameter downstream from the boiler outlet, placement such that air infiltration from a damper or smoke alarm port does not affect the composition of the combustion gases.

(2) - Same side of breeching on either side of any power operated draft regulator equipment, each (1) breeching diameter from the damper centerline. If a power operated draft regulator is furnished, the sampling line connection shall be in the furnace & a minimum of 1|" Ø.

(1) - Within (1) breeching diameter of the breeching connection to the stack.

5] All test holes, a minimum of (1) breeching diameter from any flow disturbance, such as a bend or transition section. All holes in breeching capped when not in use & clearly marked. All insulation to be neatly removed from a 4" x 4" area surrounding each test hole.

6] A clean chimney, clean boiler and furnace, in good repair are to be provided for test purposes.

7] Contractor will conduct a performance test prior to requesting Inspection to be sure that installation meets Dept of Air Resources requirements before a Final Test.







Contractor to verify all conditions & dimensions in field & report any differences between Plans and Installation to Engineer, prior to requesting Inspection.

ORIGINAL — KEEP IN FILE

ENVIRONMENTAL PROTECTION ADMINISTRATION
DEPARTMENT OF AIR RESOURCES
295 LAFAYETTE STREET, NEW YORK, N.Y. 10012
BUREAU OF ENGINEERING

DAR Premises Address 2103 HONEYWELL AVE BOROUGH: BRONX

Premises Identification No. Source Emis. Pt. No.

SUMMARY SHEET FOR STACK ADEQUACY REF: 8.92
DATE: 4/14/90

| | |
|---|---|
| 1. Overfire Draft: | 0.4200 in. w.c. |
| 2. Boiler Draft Loss: | -0.4200 in. w.c. |
| 3. Total friction loss due to straight run of ducts: | -0.0081 in. w.c. |
| 4. Total friction loss due to bends: | -0.1311 in. w.c. |
| 5. Total pressure drops or gains due to area changes: | 0.0255 in. w.c. |
| 6. Other friction losses: (MANUAL DAMPER) | -0.0011 in. w.c. |
| 7. Stack effect: | 0.3184 in. w.c. |
| TOTAL GAINS(Sum of positive pressure differentials) | 0.7639 in. w.c. |
| TOTAL LOSSES(Sum of negative pressure differential) | -0.5604 in. w.c. |
| Factor of safety (Note: e.g. 10% is to be entered as 1.10): | -0.6164 in. w.c. |
| 8. Net available draft (TOTAL GAINS) - (TOTAL LOSSES) (Factor of Safety): | 0.1476 in. w.c. |

If line 8 is positive the stack is adequate
If line 8 is negative and an I.D. fan is to be used convert net loss to equivalent loss at 70F and size I.D. fan accordingly;

ID FAN:NO
Corr size @ 70F: 0 in. w.c. X (Te+460)/530= 0 in. stat pres @70F

Mfgr: XXX Catlg #: XXX CFM: XXX SP: XXX
CFM provided by fan: XXX (Same as @boiler outlet temperature)

---

CALCULATION OF STACK EFFECT

Te=910 F Tc=859.0 R %exc air=0.35 W=1.543 #/s
X=1.833 ft Y=1.833 ft H=78 ft D=0.00 ft

W = 37.5 [0.031+0.35(0.029)] = 1.543 #/sec

Te = 450+460 = 910

Tstkb = 910-12 = 898

$$Tc = \frac{898+898-78}{2} = 859.0$$

$X+Y = 3.667$ ft

$(XY)^{\frac{3}{3}} = 37.971$ ft

$$Dr = 78*[88.563*(0.000156-(0.09/859))-(0.0000023)(859)^{2}(1.5431)(3.7))/(38)]$$

Dr= 0.3184

$$DAMPER = 0.0255\ ((18.000/12)/1.767)\ (1196/4005)^{2}\ (530/910)$$

LOSS = -0.0011






Premises: 2103 HONEYWELL AVE CA:

BEND LOSSES

Bend location: 1 Type of bend: MIT 90 Breech equiv diam: 18.0in.

Equivalent length determination:

round breeching: R:0.0ft D:1.5ft R/D:0.0 L/D:65.0 L:97.5ft

rect. breeching: R:0.0ft W:0.0ft H:0.0ft R/W:0.0 H/W:0.0
L/W:0.0ft L:0.0ft

friction loss per 100 ft. ( 2107.1 CFM. 18.0 Equiv. dia.):

0.1068in wc/100ft(Refer Ashrae pp 466-7) x 0.63(correct for temp) x 1.0(correction for roughness) = 0.0675in wc/100ft

Friction loss: 0.98(Equ length) x 0.0675(Fric loss/100ft)= 0.0658in wc

---

Bend location: 2 Type of bend: MIT 90 Breech equiv diam: 18.0in.

Equivalent length determination:

round breeching: R:0.0ft D:1.5ft R/D:0.0 L/D:65.0 L:0.0ft

rect. breeching: R:0.0ft W:0.0ft H:0.0ft R/W:0.0 H/W:0.0
L/W:0.0ft L:0.0ft

friction loss per 100 ft. ( 2086.2 CFM. 18.0 Equiv. dia.):

0.1048in wc/100ft(Refer Ashrae pp 466-7) x 0.64(correct for temp) x 1.0(correction for roughness) = 0.0670in wc/100ft

Friction loss: 0.98(Equ length) x 0.0670(Fric loss/100ft)= 0.0653in wc

---

Bend location: 0 Type of bend: 3PC 0 Breech equiv diam: 0.0in.

Equivalent length determination:

round breeching: R:0.0ft D:0.0ft R/D:0.0 L/D:0.0 L:0.0ft

rect. breeching: R:0.0ft W:0.0ft H:0.0ft R/W:0.0 H/W:0.0
L/W:0.0ft L:0.0ft

friction loss per 100 ft. ( 0.0 CFM. 0.0 Equiv. dia.):

0.0000in wc/100ft(Refer Ashrae pp 466-7) x 0.00(correct for temp) x 0.0(correction for roughness) = 0.0000in wc/100ft

Friction loss: 0.00(Equ length) x 0.0000(Fric loss/100ft)= 0.0000in wc

TOTAL FRICTION LOSS DUE TO BENDS: 0.1311

ORIGINAL — KEEP IN FILE

Premises: 2103 HONEYWELL AVE CA:

## STRAIGHT RUN FRICTION LOSSES

Length of straight run duct: 12ft. Equivalent diameter: 18.000in.

Friction loss per 100ft. ( 2114 CFM. 18.000 Equiv. Dia.):

0.107 in. w.c./100 ft.(Refer ASHRAE pp. 466-7) x 0.630 x
1 (correction for roughness) = 0.068 in. w.c./100 ft.

Friction loss: 0.12(Equ length) x 0.068(Fric loss/100 ft)= 0.0081in wc

---

Length of straight run duct: 0ft. Equivalent diameter: 0.000in.

Friction loss per 100ft. ( 0 CFM. 0.000 Equiv. Dia.):

0.000 in. w.c./100 ft.(Refer ASHRAE pp. 466-7) x 0.000 x
0 (correction for roughness) = 0.000 in. w.c./100 ft.

Friction loss: 0.00(Equ length) x 0.000(Fric loss/100 ft)= 0.0000in wc

---

Length of straight run duct: 0ft. Equivalent diameter: 0.000in.

Friction loss per 100ft. ( 0 CFM. 0.000 Equiv. Dia.):

0.000 in. w.c./100 ft.(Refer ASHRAE pp. 466-7) x 0.000 x
0 (correction for roughness) = 0.000 in. w.c./100 ft.

Friction loss: 0.00(Equ length) x 0.000(Fric loss/100 ft)= 0.0000in wc

---

Length of straight run duct: 0ft. Equivalent diameter: 0.000in.

Friction loss per 100ft. ( 0 CFM. 0.000 Equiv. Dia.):

0.000 in. w.c./100 ft.(Refer ASHRAE pp. 466-7) x 0.000 x
0 (correction for roughness) = 0.000 in. w.c./100 ft.

Friction loss: 0.00(Equ length) x 0.000(Fric loss/100 ft)= 0.0000in wc

TOTAL FRICTION LOSS DUE TO ST. RUN: 0.0081in w.c.






Premises: 2103 HONEYWELL AVE CA:

## LOSSES OR GAINS DUE TO AREA CHANGES

Location:2
A1:1.77sqft A2:3.36sqft V1:1180.6ft/min V2:620.7ft/min Coeff: 0.23
18 in. 22x22 C1=0.23
Type of change: EXPANSION Appropriate pressure drop formula:

Calculation:
CFM = 37.5 [ 24.2 + 0.35(22.9) ] 898/520 = 2086.2

$$P1-P2 = ((1-0.23)\ ((1180.6/4005)^2 - (620.7/4005)^2)\ (530/898) = 0.0255$$

Pressure Drop: 0.0255in w.c.

---

Location:3
A1:3.36sqft A2:0.00sqft V1:566.8ft/min V2:0.0ft/min Coeff: 0.02
22x22 C2=0.02
Type of change: CONTRACTION Appropriate pressure drop formula:

Calculation:
CFM = 37.5 [ 24.2 + 0.35(22.9) ] 820/520 = 1905.0

$$P1-P2 = -((1+0.02)(0.0\ /4005)^2)-(566.8/4005)^2)\ (530/820) = 0.0000$$

Pressure Drop: 0.0000in w.c.

---

Location:
A1:0.00sqft A2:0.00sqft V1:0.0ft/min V2:0.0ft/min Coeff: 0.00

Type of change: CONTRACTION Appropriate pressure drop formula:

Calculation:
CFM = 0.0 [ 24.2 + 0.00(22.9) ] 0/520 = 0.0

$$P1-P2 = -((1+0.00)(0.0\ /4005)^2)-(0.0/4005)^2)\ (530/0) = 0.0000$$

Pressure Drop: 0.0000in w.c.

---

Location:
A1:0.00sqft A2:0.00sqft V1:0.0ft/min V2:0.0ft/min Coeff: 0.00

Type of change: CONTRACTION Appropriate pressure drop formula:

Calculation:
CFM = 0.0 [ 24.2 + 0.00(22.9) ] 0/520 = 0.0

$$P1-P2 = -((1+0.00)(0.0\ /4005)^2)-(0.0/4005)^2)\ (530/0) = 0.0000$$

Pressure Drop: 0.0000in w.c.

EXIT CFM = 37.5 [24.2 + 0.35(22.9)] 820/520 = 1905.0
EXIT VEL = 1905.0 / (3.4 * 60 ) = 9.4

Total Pressure drop due to area changes: 0.0255in w.c.

ORIGINAL — KEEP IN FILE

OP | LOCATION | FACILITY | EMISSION POINT | C

A ADD
C CHANGE
D DELETE

READ INSTRUCTIONS CONTAINED IN FORM 76-11-4 BEFORE ANSWERING ANY QUESTION

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

WHITE - ORIGINAL
BLUE - DIVISION OF AIR
WHITE - REGIONAL OFFICE
WHITE - FIELD REP
YELLOW - APPLICANT

CITY OF NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION AIR RESOURCES

# STATIONARY COMBUSTION INSTALLATION

## APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

BASED ON US EPA AP-42 FOR NATURAL GAS

**SECTION A**

1. NAME OF OWNER / FIRM: GREENTREE MOHEGAN LLC
2. NUMBER AND STREET ADDRESS: 975 WALTON AVENUE
3. CITY - TOWN - VILLAGE: BRONX
4. STATE: NY
5. ZIP: 10952
6. OWNER CLASSIFICATION: A. [ ] COMMERCIAL C. [ ] UTILITY E. [ ] MUNICIPAL I. [X] RESIDENTIAL B. [ ] INDUSTRIAL D. [ ] FEDERAL G. [ ] COOP. INST. J. [ ] OTHER H. [ ] HOSPITAL
7. NAME & TITLE OF OWNERS REPRESENTATIVE: ERAN GOHARI/OWNER'S REP
8. TELEPHONE: 917-335-1035
9. NAME OF AUTHORIZED AGENT: NEAL M. RUDIKOFF
10. TELEP.: (631) 753-0333
11. NUMBER AND STREET ADDRESS: 270 SPAGNOLI ROAD - SUITE 204
12. CITY - TOWN - VILLAGE: MELVILLE
13. STATE: NEW YORK
14. ZIP: 11747
15. NAME OF P.E. OR ARCHITECT PREPARING PLANS: NEAL M. RUDIKOFF PROFESSIONAL ENGINEER
16. N.Y.S. P.E. OR ARCHITECT LICENSE NO.: 050[illegible]
17. TELEPHONE: (631) 753-0333
18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT
19. FACILITY NAME (IF DIFFERENT FROM OWNER / FIRM): ----------
20. FACILITY LOCATION (NUMBER AND STREET ADDRESS): 2103 HONEYWELL AVENUE
21. CITY - TOWN - VILLAGE: BRONX
22. ZIP: 10460
23. BUILDING NAME OR NUMBER: ----------
24. FLOOR NAME OR NUMBER: CELLAR
25. START UP DATE MO / YR: /
26. DRAWING NUMBERS OF PLANS SUBMITTED: NYEA 1045 / 12
27. PERMIT TO CONSTRUCT: A. [ ] NEW SOURCE B. [ ] MODIFICATION
28. CERTIFICATE TO OPERATE: A. [ ] NEW SOURCE C. [ ] EXISTING B. [ ] MODIFICATION

**SECTION B**

| 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSION(S) (IN.) | 34. EXIT TEMPERATURE (°F) | 35. EXIT VELOCITY (FT/SEC.) | 36. EXIT FLOW (ACFM) | 37. HEAT INPUT (MILLION BTU/HR) |
|---|---|---|---|---|---|---|---|---|
| 00001 | ---------- | SEE PREVIOUS APPLICATION FILED | | | | | | 5.25 |

38. CONTINUOUS MONITOR(S): A. [ ] OPACITY B. [ ] SULFUR DIOXIDE C. [ ] NITROGEN OXIDES D. [ ] OXYGEN E. [ ] CARBON DIOXIDE F. [ ] OTHER

**SECTION C**

| 39. UNIT TYPE | 40. UNIT MANUFACTURER'S NAME AND MODEL NUMBER | 41. UNIT HEAT INPUT | 42. AIR INTAKE | 43. SOURCE CODE |
|---|---|---|---|---|
| 02 | EASTMOND FST 125 HW | 5.25 | 1 | |

| 44. BURNER TYPE | 45. NO OF BURNERS | 46. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 47. FUEL TYPE | 48. AVG. QUANTITY OF FUEL / HR | 49. MAX. QUANTITY OF FUEL / HR | 50. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 62 | 1 | ICI DEG 54P | 52 | 5250 CFH | 5250 CFH | 5.59x10^6 CF |

| 51. HRS./DAY | 52. DAYS/YEAR | 53. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 54. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 3 | 355 | 60 / 15 / 10 / 15 | CON EDISON |

| 55. BURNER TYPE | 56. NO OF BURNERS | 57. BURNER MANUFACTURER'S NAME AND MODEL NUMBER | 58. FUEL TYPE | 59. AVG. QUANTITY OF FUEL / HR | 60. MAX. QUANTITY OF FUEL / HR | 61. QUANTITY OF FUEL / YR |
|---|---|---|---|---|---|---|
| 53 | 1 | ICI DEG 54P | 34 | 37.5 | 37.5 | 1125 |

| 62. HRS./DAY | 63. DAYS/YEAR | 64. % OPERATION BY SEASON (Winter / Spring / Summer / Fall) | 65. NAME OF SUPPLIER(S) |
|---|---|---|---|
| 3 | 10 | 60 / 15 / 10 / 15 | UNKNOWN |

**SECTION D**

| EMISSION CONTROL EQUIP I.D. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | DISPOSAL METHOD | DATE INSTALLED MO. / YR. | USEFUL LIFE |
|---|---|---|---|---|---|
| 66. | 67. 99 | 68. | 69. | 70. | 71. |
| 72. | 73. | 74. | 75. | 76. | 77. |

ORIGINAL - KEEP IN FILE

**SECTION E**

| CALCULATIONS | | LB/106 FT3 | | CFH | | LBS/HR | | HRS/DAY | | DAYS/YR | | LBS/YR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARTICULATES | = | 5 | X | 5250 | = | 0.026 | X | 3 | X | 365 | = | 28.7 |
| SUFLUR DIOXIDE | = | 0.6 | X | 5250 | = | 0.003 | X | 3 | X | 365 | = | 3.4 |
| NITROGEN OXIDES | = | 100 | X | 5250 | = | 0.525 | X | 3 | X | 365 | = | 574.9 |
| CARBON MONOXIDE | = | 20 | X | 5250 | = | 0.105 | X | 3 | X | 365 | = | 115.0 |

**SECTION F**

TO BE COMPLETED FOR ALL SOURCES USING ITEM 27 AND OTHER SOURCES AS DEFINED IN THE INSTRUCTION FORM 76-11-4

| CONTAMINANT NAME | CAS NUMBER | EMISSIONS ACTUAL | UNIT | HOW DET. | PERMISS. | % CONTROL EFFICIENCY | HOURLY EMISSIONS (LBS/HR) ACTUAL | ANNUAL EMISSIONS (LBS/YR) ACTUAL | 10^x | PERMISS. |
|---|---|---|---|---|---|---|---|---|---|---|
| 78. TOTAL PARTICULATES | 79. NY075-00-0 | 80. 0.005 | 81. 11 | 82. 6 | 83. | 84. 0 | 85. 0.026 | 86. 28.7 | 87. 0 | 88. |
| 89. SULFUR DIOXIDE | 90. 7446-09-5 | 91. 0.0006 | 92. 11 | 93. 6 | 94. | 95. 0 | 96. 0.003 | 97. 3.4 | 98. 0 | 99. |
| 100. NITROGEN OXIDES | 101. NY210-00-0 | 102. 0.10 | 103. 11 | 104. 6 | 105. | 106. 0 | 107. 0.525 | 108. 574.9 | 109. 0 | 110. |
| 111. CARBON MONOXIDE | 112. 0063-08-0 | 113. 0.020 | 114. 11 | 115. 6 | 116. | 117. 0 | 118. 0.105 | 119. 115.0 | 120. 0 | 121. |
| 122. | 123. | 124. | 125. | 126. | 127. | 128. | 129. | 130. | 131. | 132. |

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE STATIONARY COMBUSTION INSTALLATION HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

133. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT | DATE

**AGENCY USE ONLY**

| 134. LOCATION CODE | 135. FACILITY ID. NO. | 136. U.T.M. (E) | 137. U.T.M. (N) | 138. SIC NUMBER | 139. DATE APPL. RECEIVED | 140. DATE APPL. REVIEWED | 141. REVIEWED BY: |
|---|---|---|---|---|---|---|---|
| | | | | | / / | / / | |

**PERMIT TO CONSTRUCT**

| 142. DATE ISSUED | 143. EXPIRATION DATE | 144. SIGNATURE OF APPROVAL | 145. FEE |
|---|---|---|---|
| / / | / / | | |

146
1. DEVIATION FROM APPROVED APPLICATION SHALL VOID THIS PERMIT
2. THIS IS NOT A CERTIFICATE TO OPERATE
3. TESTS AND/OR ADDITIONAL EMISSION CONTROL EQUIPMENT MAY BE REQUIRED PRIOR TO THE ISSUANCE OF A CERTIFICATE TO OPERATE

**RECOMMENDED ACTION RE C.O.**

| 147. DATE ISSUED | 148. EXPIRATION DATE | 149. SIGNATURE OF APPROVAL | 150. FEE |
|---|---|---|---|
| / / | / / | | |

151
1. [ ] INSPECTED BY _____ DATE _____
2. [ ] INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM
3. [ ] ISSUE CERTIFICATE TO OPERATE FOR SOURCE
4. [ ] APPLICATION FOR C.O. DENIED _____ DATE _____ INITIALED

152. SPECIAL CONDITIONS:

1. | 2.
3. | 4.
5. | 6.
7. | 8.

mailed 9-24-15

TCO Rev 05/2014

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373
Records Control (718) 595-3855

Environmental Protection
Emily Lloyd
Commissioner

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

# TRIENNIAL CERTIFICATE OF OPERATION

## DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT

| ☒PA ☐PB Application | Date Inspected | Date Issued | Expiration Date | E.P. # | E.R. | Issued By |
|---|---|---|---|---|---|---|
| 018075M | 07/28/15 | 08/25/15 | 11/06/18 | 2 | A | MA |

**Professional Engineer:**

**Owner:**
Silverman Shaw Inc.
62 Franklin Avenue
Brooklyn, NY 11205
Attn: Raymond Lee

APPLICATION FOR RENEWAL OF THIS CERTIFICATE OF OPERATION MUST BE FILED AT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION **NO LATER THAN NINETY (90) DAYS PRIOR TO ITS EXPIRATION DATE.**

**Premise Information:**

| Street Address | Name of Premise (if any) | | | | | |
|---|---|---|---|---|---|---|
| 62 Franklin Avenue | - | | | | | |
| **Floor** | **Room No** | **Borough** | **Zip Code** | **BIN** | **Block** | **Lot** |
| 1st | - | Brooklyn | 11205 | - | - | - |

The holder of this Certificate is responsible for the use of the equipment in accordance with all applicable requirements and provisions of the New York City Air Pollution Control Code. The Commissioner may suspend or revoke this Certificate for willful or continued violation of the Code. Any purported or attempted transfer of a Certificate of Operation from one location to another or from one piece of equipment to another automatically revokes the Certificate. Section 24-135 NYC Air Pollution Code.

| **Description of Installation:** | **USED:** Hours / Day | Days / Year |
|---|---|---|
| Surface treatment of steel | 8 | 200 |

**Description of Equipment:** One caustic tank, one soap tank, one hydrochloric acid tank
Three vents connected to one exhaust system

**Exhaust Equipment:** One exhaust fan delivering 3,000 CFM @70F

**Control Equipment:** None

Should significant scientific evidence from a recognized institution should result in a decision by NYSDEC that lower ambient guideline concentrations must be established, it may be necessary to reduce emissions from this source(s) prior to the expiration of this Triennial Certificate of Operation.

**SPECIAL CONDITIONS / REMARKS**

**RECERTIFICATION**

R. Radhakrishnan, P.E.
Director of Engineering / For the Commissioner

**FOR GENERAL INFORMATION, QUESTIONS, AND INQUIRIES:** Please visit our website at www.nyc.gov/dep or call 311

APC - SPA
(Rev. 1/76)

The City of New York

ENVIRONMENTAL PROTECTION ADMINISTRATION
DEPARTMENT OF AIR RESOURCES
120 WALL STREET, NEW YORK, N. Y. 10005
BUREAU OF ENGINEERING
PROCESS EXHAUST OR VENTILATION SYSTEM
APPLICATION FOR CERTIFICATE OF OPERATION

CP | LOCATION | FACILITY | EMISS.
2 | I | 6 | 1 0 0 0 0 | 1 8 | 0 0 0

BLOCK | LOT | ZONING
(By Applicant)

PLEASE PRINT OR TYPE XX

SECTION A

1. COMPANY NAME: Silverman-Shaw Inc.

2 NUMBER AND STREET ADDRESS: 62 Franklin Ave.

3. TOWN OR BORO: Bklyn | 4 STATE: NY | 5 ZIP:

6. OWNER CLASSIFICATION
A. ☐ COMMERCIAL C. ☐ UTILITY E. ☐ STATE F. ☐ MUNICIPAL H. ☐ HOSPITAL I. ☐ RESIDENTIAL
B. ☒ INDUSTRIAL D. ☐ FEDERAL G. ☐ EDUC. INST. J. ☐ OTHER

7. OWNER OR OFFICER'S NAME | TITLE

8. OWNER OR OFFICER'S SIGNATURE | 9. TELEPHONE

*I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the NYC Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Section 1403.2-15.25 of the NYC Air Pollution Control Code and Section 210.45 of the Penal Law.*

10. NAME OF P.E.: Stanley Wald | 11. TELEPHONE

12. NUMBER AND STREET ADDRESS: 2316 E. 64 Street

13. TOWN OR BORO: Bklyn | 14. STATE: NY | 15 ZIP: 11234

16. application includes:
A. ☐ NEW EQUIP'T C. ☒ EXISTING EQUIP'T ONLY
B. ☐ MODIFICATION

I hereby certify to the best of my knowledge and belief to the accuracy of the technical information contained in this application, plans and any supplementary data submitted.

PLACE SEAL ABOVE

17. NYS P.E. Lic. NO. 36068 | 18. SIGNATURE OF PROFESSIONAL ENGINEER

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(a) INSTALLER IS NAMED AID
(b) WORKMEN'S COMP. & DISABILITY ARE ON FILE WITH DAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW, RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

*I hereby certify that upon approval of this application, plans and any supplementary data, I will make the installation of and adjustments to the equipment and/or apparatus described herein.*

Installer's Signature

Company Name of Installer: Deidan Industries | Installer's Name | Title

Company Address: 81 Skillman Street | Town or Boro: Bklyn | State: NY | Zip

19. FACILITY NAME (IF DIFFERENT FROM COMPANY NAME)

20 FACILITY LOCATION (NUMBER AND STREET ADDRESS): Same

21. BORO | 22. ZIP

23. BLDG. NAME OR NUMBER | 24. FLOOR NAME OR NUMBER: 1

25. DATE APPLICATION RECEIVED: 7/1/75 | 26. IDENTIFICATION #: PA 180/75

27. DATE APPLICATION REVIEWED: / /

28. APPLICATION INCLUDES:
A. ☐ NEW EQUIP'T C. ☐ EXISTING EQUIP'T ONLY
B. ☐ MODIFICATION

ASSIGN NYC - DAR PREMISES I.D. NO. AND SOURCE EM. PT. NO. IN SECTION B

FEE: $_____ DATE OF RECEIPT _____ 19____

RECEIPT #_____ CASHIER_____

40. CONDITIONS OF WORK PERMIT:
a) PROPOSED DEVIATION FROM APPROVED APPLICATION MUST BE BY FILING OF AMENDMENT, AND APPROVAL OF SAME.
b) STACK TEST REQUIRED YES ☐ NO ☐
c) APPROVAL OF THIS APPLICATION DOES NOT IN ANY WAY ALTER, AFFECT OR CHANGE THE REQUIREMENT(S) FOR OTHER LICENCES OR PERMITS AS MAY BE REQUIRED BY OTHER GOVERNMENTAL AGENCIES AND DEPARTMENTS.

APPROVED FOR WORK PERMIT ONLY:

by Head, Industrial Processes Division

by Director of Engineering

FOR AGENCY USE ONLY

| 29. LOCATION CODE | 30. FACILITY ID. NO. | 31. U.T.M.(E) | 32. U.T.M.(N) | 33. SIC NUMBER | WORK PERMIT 37. DATE ISSUED | 38. DATE EXPIRES |
|---|---|---|---|---|---|---|
| 6 1 0 0 0 0 | 0 1 8 0 | | | 6 5 1 2 | / / | / / |

C.O. APPROVAL
41. DATE ISSUED: 10/22/75 | 42. EXPIRATION DATE: 10/22/78

EN No. /Yr.: 1

Date: / / COPY TO NYS - DEC

SECTION B

43. SPRAY BOOTHS: (FURNISH DATA &/OR CHECK APPROPRIATE BOXES)

| Mfr. | Model | Frontal opening: Height x Width C. D. | Baffles: Single E. | Baffles: Triple F. | Filters G. | Water Wash H. |
|---|---|---|---|---|---|---|
| A. | B. | | | | | |

| Handgun I. | Automatic J. | Air atomizing K. | Airless L. | Electrostatic M. | Coating Mat'l. N. | O. Use Rate Max. ___ Gals./Hr. ___ Hrs./Day | P. Odor Yes _ No _ |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

(CONTINUED ON OTHER SIDE)

SEC. B

| 44. DIP TANKS: Mfr. A. | Model B. | Dimensions: Height x Width x Length C. | Coating Mat'l D. | Use Rate E. Makeup/8 Hrs. | F. Door Yes / No |
|---|---|---|---|---|---|
| | | | | | |

| 43. STACK HT (FT) | 49. INSIDE DIAM. (IN.) | 50. EXIT TEMP (°F) | 51. EXIT VELOCITY (FT/SEC) | 52. EXIT FLOW RATE (SCFM) | 53. DRAFT TYPE (N / F / I) | 54 | 55. RECEPTOR DISTANCE (FT) TO PREMISES LOT LINE |
|---|---|---|---|---|---|---|---|
| 40 | | | | | | | |

45. Source Emis. Pt. No.

46. Ground Elevation (Ft.)

56. Premises Identification No.

NYC - DAR Agency Use Only

SEC. C

57. DESCRIBE PROCESS OR UNIT

Surface Treatment of Steel 40 HRS/Wk.

58. TOTAL NUMBER OF SIMILAR PROCESSES OR UNITS:

SEC. D

| 59. CONTROL TYPE | 60. MANUFACTURER'S NAME AND MODEL NUMBER | 61. FUEL TYPE | 62. FLOW RATE (SCFM) | 63. TEMP (°F) | 64. PRESSURE DROP (IN. $H_2O$) | 65. HORSE POWER | 66. | 67. EFFICIENCY (%) | 68. HOW DET. | 69. | 70. | 71. | 72. | 73. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | American - #182 | | 3000 | 70 | | 3 | 1000 | | | | | | | |
| 74. | 75. | 76. | 77. | 78. | 79. | 80. | 81. | 82. | 83. | 84. | 85. | 86. | 87. | 88. |
| 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 |

SEC. E

CALCULATIONS IN DETERMINING INPUT OR PRODUCTION RATE, EMISSION RATE POTENTIAL AND ACTUAL EMISSIONS:

SECTION F

| CONTAMINANT NAME | % | CODE | INPUT OR PRODUCTION | UNITS | ERP (LBS/HR) | HRS/DAY | DAYS/YR | PROPOSED RATING | ACTUAL EMISSIONS | UNITS | ACTUAL EMISSIONS (LBS/HR) | ACTUAL EMIS. PPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 89. Alkaline Mist (L) | 90. | 91. 104 | 92. | 93. | 94. | 95. 8 | 96. | 97. D | 98. | 99. | 100. .03 | 100A |
| 104. Muriatic Mist (L) | 105. | 106. 103 | 107. | 108. | 109. | 110. X | 111. | 112. D | 113. | 114. | 115. .015 | 115A |
| 119. Sulphuric Acid Mist (L) | 120. | 121. 100 | 122. | 123. | 124. | 125. 8 | 126. | 127. D | 128. | 129. | 130. .015 | 130A |
| 134. | 135. | 136. | 137. | 138. | 139. | 140. | 141. | 142. | 143. | 144. | 145. | 145A |
| 149. | 150. | 151. | 152. | 153. | 154. | 155. | 156. | 157. | 158. | 159. | 160. | 160A |
| 164. | 165. | 166. | 167. | 168. | 169. | 170. | 171. | 172. | 173. | 174. | 175. | 175A |

AGENCY USE ONLY

| ENV. RATING | ALLOWABLE EMISSIONS | UNITS |
|---|---|---|
| 101. | 102. | 103. |
| 116. | 117. | 118. |
| 131. | 132. | 133. |
| 146. | 147. | 148. |
| 161. | 162 | 163. |
| 176. | 177. | 178. |

| PROCESS CODE | APPLICABLE CODE (S) |
|---|---|
| 194. | 195. |

SEC. G

| SOLID FUEL TYPE | LBS/HR | %S | OIL TYPE | GPH | %S | GAS TYPE | CFH | BTU/CF | BTU/HR |
|---|---|---|---|---|---|---|---|---|---|
| 179. | 180. | 181. | 182. | 183. | 184. | 185. | 186. | 187. | 188. |

Note: Application and Plans must be submitted in triplicate.

| OP | LOCATION | FACILITY | EMISSION POINT |
|---|---|---|---|
| 2 I | 6 1 0 0 0 0 0 | 1 8 | 0 0 0 0 2 |

Mailed 9-24-15

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Compliance
59-17 Junction Boulevard, 9th Floor, Flushing, New York 11373
Records Control (718) 595-3855

TCO Rev 09/2014

Environmental Protection
Emily Lloyd
Commissioner

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

# TRIENNIAL CERTIFICATE OF OPERATION

## DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT

| ☒PA ☐PB Application | Date Inspected | Date Issued | Expiration Date | E.P. # | E.R. | Issued By |
|---|---|---|---|---|---|---|
| 098974Z | 07/28/15 | 08/25/15 | 11/06/18 | 1 | A | MA |

**Professional Engineer:**

**Owner:**
Silverman Shaw Inc.
62 Franklin Avenue
Brooklyn, NY 11205
Attn: Raymond Lee

APPLICATION FOR RENEWAL OF THIS CERTIFICATE OF OPERATION MUST BE FILED AT THE DEPARTMENT OF ENVIRONMENTAL PROTECTION **NO LATER THAN NINETY (90) DAYS PRIOR TO ITS EXPIRATION DATE.**

**Premise Information:**

| Street Address | Name of Premise (if any) | | | | | |
|---|---|---|---|---|---|---|
| 62 Franklin Avenue | - | | | | | |
| **Floor** | **Room No.** | **Borough** | **Zip Code** | **BIN** | **Block** | **Lot** |
| 1st | - | Brooklyn | 11205 | - | - | - |

The holder of this Certificate is responsible for the use of the equipment in accordance with all applicable requirements and provisions of the New York City Air Pollution Control Code. The Commissioner may suspend or revoke this Certificate for willful or continued violation of the Code. Any purported or attempted transfer of a Certificate of Operation from one location to another or from one piece of equipment to another automatically revokes the Certificate. Section 24-135 NYC Air Pollution Code.

| **Description of Installation:** | **USED:** Hours / Day: | Days / Year: |
|---|---|---|
| Surface treatment of steel | 8 | 200 |

**Description of Equipment:** Two caustic tanks, one hydrochloric acid tank

**Exhaust Equipment:** One exhaust fan delivering 7,500 CFM @70F

**Control Equipment:** None

Should significant scientific evidence from a recognized institution should result in a decision by NYSDEC that lower ambient guideline concentrations must be established, it may be necessary to reduce emissions from this source(s) prior to the expiration of this Triennial Certificate of Operation.

**SPECIAL CONDITIONS / REMARKS**

**RECERTIFICATION**

R. Radhakrishnan, P.E.
Director of Engineering / For the Commissioner

**FOR GENERAL INFORMATION, QUESTIONS, AND INQUIRIES:** Please visit our website at www.nyc.gov/dep or call 311

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SEQNC NO: 2-R-0417
RUN DATE: 05/02/88

C 610000 X1PS I0001 W I01
LOCATION FAC EP UNIT

# CERTIFICATE TO OPERATE AN AIR CONTAMINATION SOURCE
## PROCESS, EXHAUST OR VENTILATION SYSTEM UNIT
## RENEWAL APPLICATION

| OWNER | FACILITY | |
|---|---|---|
| (1) SILVERMAN SHAW INC | (6) SILVERMAN SHAW INC | (11) CONFIDENTIAL STATUS: NON-CONFIDNTL |
| (2) 62 FRANKLIN AVENUE | (7) 62 FRANKLIN AVENUE | (12) APPLICATION STATUS: IN COMPLIANCE |
| (3) BROOKLYN (4) NY | (8) BROOKLYN (9) 11205 | DATE OF LAST CHANGE: 06/04/87 |
| (5) 11205 | (10) REP: S SILVERMAN | PRIOR CO ISSUE DATE: 11/06/85 |
| | | PRIOR CO EXPIRATION DATE: 11/06/88 |

EMISSION POINT I0001
(41)UTM-E: 587.9 KM. (42)STACK HEIGHT: 30 FT. (43)EXIT VELOCITY: 40.00 FT/SEC (44)SIC: 3446 (45)AGENCY-CODE-1:
(46)UTM-N: 505.4 KM. (47)HT ABV STRUC: 6 FT. (48)EXIT FLOW: 7500.00 ACFM (49)CO FEE: $420.00 (50)AGENCY-CODE-2: C (N.Y.C.)
(51)GRND ELEV: 25 FT. (52)STK DIAM: 24 IN. (53)EXIT TEMP: 70 DEGR F (54)CO CONDITIONS: 1 3

UNIT I01 (55)HOURS/DAY: 8.0 (56)DAYS/YEAR: 200 (57)% OP BY SEASON: 25 25 25 25 (58)SOURCE CODE: A1202 ALKALINE (CAUSTIC) D

PROCESS/UNIT DESCRIPTION (72)DESCRIPTION 1. TANK #1 DESCALING

CONTROL EQUIPMENT (73)TYPE: 099 NONE

| AIR CONTAMINANTS | | CAS NUMBER | EMISSIONS ACTUAL | | UNIT | | HOW DET | | % CONTROL EFFICIENCY | HRLY ACTUAL LBS/HOUR | | ANNUAL EMISSIONS (LBS/YEAR) ACTUAL | | 10× | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIQUID MIST NEC | (085) | NY105-00-0 | (087) | .018 | (088) | 01 | (089) | 06 | (091) | (092) | .018 | (093) | 28.000 | (094) | 0 |



CONTINUED ON NEXT PAGE

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SEQNC NO: 2-R-0418
RUN DATE: 05/02/88

C 610000 X1PS I0001 W I02
LOCATION FAC EP UNIT

# CERTIFICATE TO OPERATE AN AIR CONTAMINATION SOURCE
## PROCESS, EXHAUST OR VENTILATION SYSTEM UNIT
## RENEWAL APPLICATION

| OWNER | FACILITY | |
|---|---|---|
| (1) SILVERMAN SHAW INC | (6) SILVERMAN SHAW INC | (11) CONFIDENTIAL STATUS NON-CONFIDNTL |
| (2) 62 FRANKLIN AVENUE | (7) 62 FRANKLIN AVENUE | (12) APPLICATION STATUS IN COMPLIANCE |
| (3) BROOKLYN (4) NY | (8) BROOKLYN (9) 11205 | DATE OF LAST CHANGE 06/04/87 |
| (5) 11205 | (10) REP: S SILVERMAN | PRIOR CO ISSUE DATE 11/06/85 |
| | | PRIOR CO EXPIRATION DATE 11/06/88 |

PAGE 2
CONTINUED FROM PREVIOUS PAGE

EMISSION POINT I0001
(41)UTM-E: 587.9 KM. (42)STACK HEIGHT: 30 FT. (43)EXIT VELOCITY: 40.00 FT/SEC (44)SIC: 3446 (45)AGENCY-CODE-1:
(46)UTM-N: 505.4 KM. (47)HT ABV STRUC: 6 FT. (48)EXIT FLOW: 7500.00 ACFM (49)CO FEE: $420.00 (50)AGENCY-CODE-2: C (N.Y.C.)
(51)GRND ELEV: 25 FT. (52)STK DIAM: 24 IN. (53)EXIT TEMP: 70 DEGR F (54)CO CONDITIONS: 1 3

UNIT I02 (55)HOURS/DAY: 8.0 (56)DAYS/YEAR: 200 (57)% OP BY SEASON: 25 25 25 25 (58)SOURCE CODE: A1202 ALKALINE (CAUSTIC) D

PROCESS/UNIT DESCRIPTION (72)DESCRIPTION 1. TANK #2 CLEANER

CONTROL EQUIPMENT (73)TYPE: 099 NONE

| AIR CONTAMINANTS | | CAS NUMBER | EMISSIONS ACTUAL | | UNIT | | HOW DET | | % CONTROL EFFICIENCY | HRLY ACTUAL LBS/HOUR | | ANNUAL EMISSIONS (LBS/YEAR) ACTUAL | | 10× | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIQUID MIST NEC | (085) | NY105-00-0 | (087) | .012 | (088) | 01 | (089) | 06 | (091) | (092) | .012 | (093) | 19.000 | (094) | 0 |

CONTINUED ON NEXT PAGE

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SEQNC NO: 2-R-0419
RUN DATE: 05/02/88

C 610000 X1PS I0001 W I03
LOCATION FAC EP UNIT

# CERTIFICATE TO OPERATE AN AIR CONTAMINATION SOURCE
## PROCESS, EXHAUST OR VENTILATION SYSTEM UNIT
## RENEWAL APPLICATION

| OWNER | FACILITY | |
|---|---|---|
| (1) SILVERMAN SHAW INC | (6) SILVERMAN SHAW INC | (11) CONFIDENTIAL STATUS: NON-CONFIDNTL |
| (2) 62 FRANKLIN AVENUE | (7) 62 FRANKLIN AVENUE | (12) APPLICATION STATUS: IN COMPLIANCE |
| (3) BROOKLYN (4) NY | (8) BROOKLYN (9) 11205 | DATE OF LAST CHANGE: 06/04/87 |
| (5) 11205 | (10) REP: S SILVERMAN | PRIOR CO ISSUE DATE: 11/06/85 |
| | | PRIOR CO EXPIRATION DATE: 11/06/88 |

PAGE 3
CONTINUED FROM PREVIOUS PAGE

EMISSION POINT I0001
(41)UTM-E: 587.9 KM. (42)STACK HEIGHT: 30 FT. (43)EXIT VELOCITY: 40.00 FT/SEC (44)SIC: 3446 (45)AGENCY-CODE-1:
(46)UTM-N: 505.4 KM. (47)HT ABV STRUC: 6 FT. (48)EXIT FLOW: 7500.00 ACFM (49)CO FEE: $420.00 (50)AGENCY-CODE-2: C (N.Y.C.)
(51)GRND ELEV: 25 FT. (52)STK DIAM: 24 IN. (53)EXIT TEMP: 70 DEGR F (54)CO CONDITIONS: 1 3

UNIT I03 (55)HOURS/DAY: 8.0 (56)DAYS/YEAR: 200 (57)% OP BY SEASON: 25 25 25 25 (58)SOURCE CODE: A1201 ACID CLEANING OR DIP

PROCESS/UNIT DESCRIPTION (72)DESCRIPTION 1. TANK #3 MURIATIC ACID

CONTROL EQUIPMENT (73)TYPE: 099 NONE

| AIR CONTAMINANTS | | CAS NUMBER | EMISSIONS ACTUAL | | UNIT | | HOW DET | | % CONTROL EFFICIENCY | HRLY ACTUAL LBS/HOUR | | ANNUAL EMISSIONS (LBS/YEAR) ACTUAL | | 10^x | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACID MIST NEC | (085) | NY103-00-0 | (087) | .012 | (088) | 01 | (089) | 06 | (091) | (092) | .012 | (093) | 19.000 | (094) | 0 |

CONTINUED ON NEXT PAGE

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SEQNC NO: 2-R-0420
RUN DATE: 05/02/88

C 610000 X1PS I0001 W I
LOCATION FAC EP

# CERTIFICATE TO OPERATE AN AIR CONTAMINATION SOURCE
## PROCESS, EXHAUST OR VENTILATION SYSTEM UNIT
## RENEWAL APPLICATION

| OWNER | FACILITY | |
|---|---|---|
| (1) SILVERMAN SHAW INC | (6) SILVERMAN SHAW INC | (11) CONFIDENTIAL STATUS: NON-CONFIDNTL |
| (2) 62 FRANKLIN AVENUE | (7) 62 FRANKLIN AVENUE | (12) APPLICATION STATUS: IN COMPLIANCE |
| (3) BROOKLYN (4) NY | (8) BROOKLYN (9) 11205 | DATE OF LAST CHANGE: 06/04/87 |
| (5) 11205 | (10) REP: S SILVERMAN | PRIOR CO ISSUE DATE: 11/06/85 |
| | | PRIOR CO EXPIRATION DATE: 11/06/88 |

PAGE 4
CONTINUED FROM PREVIOUS PAGE

EMISSION POINT I0001
(41)UTM-E: 587.9 KM. (42)STACK HEIGHT: 30 FT. (43)EXIT VELOCITY: 40.00 FT/SEC (44)SIC: 3446 (45)AGENCY-CODE-1:
(46)UTM-N: 505.4 KM. (47)HT ABV STRUC: 6 FT. (48)EXIT FLOW: 7500.00 ACFM (49)CO FEE: $420.00 (50)AGENCY-CODE-2: C (N.Y.C.)
(51)GRND ELEV: 25 FT. (52)STK DIAM: 24 IN. (53)EXIT TEMP: 70 DEGR F (54)CO CONDITIONS: 1 3

UNIT I
(55)HOURS/DAY: 8.0 (56)DAYS/YEAR: 200 (57)% OP BY SEASON: 25 25 25 25 (58)SOURCE CODE: A
(59)BLDG: 62 (60)FLOOR NAME: 1ST (61)RULE 1: 212.00 (62)RULE 2:

PROCESS/UNIT DESCRIPTION (72)DESCRIPTION
1. EXHAUST SYSTEM FOR CLEANING OF STEEL PARTS
5. THREE 76-19-4 ATTACHED
7. JOB PLATING SHOP

CONTROL EQUIPMENT (79)TYPE: 099 NONE

| AIR CONTAMINANTS | CAS NUMBER | ENV RATING | EMISSIONS ACTUAL | EMISSIONS UNIT | EMISSIONS NOM DET | EMISSIONS PERMISSIBLE | % CONTROL EFFICIENCY | HRLY ACTUAL LBS/HOUR | ANNUAL EMISSIONS (LBS/YEAR) ACTUAL | ANNUAL EMISSIONS (LBS/YEAR) 10× | ANNUAL EMISSIONS (LBS/YEAR) PERMISSIBLE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ACID MIST NEC | (085) NY103-00-0 | (086) B | (087) .012 | (088) 01 | (089) 06 | (090) .012 | (091) | (092) .012 | (093) 19.000 | (094) 0 | (095) 19.000 |
| LIQUID MIST NEC | (096) NY105-00-0 | (097) B | (098) .030 | (099) 01 | (100) 06 | (101) .030 | (102) | (103) .030 | (104) 47.000 | (105) 0 | (106) 47.000 |

SPECIAL CONDITIONS (151)CONDITION
1. PA 98774
2. RECERTIFICATION
3. EN 437
5. BS

989-114

(15)PRIOR COMMENTS (16)BY (17)DATE
1.
2.
3.
4.
5.

(18)CURRENT COMMENTS (19)BY _____ (20)DATE / /
1. _____
2. _____
3. _____
4. _____
5. _____

(27)LAST INSPECTION DATE / /
(21)INSPECTION STATUS _____
(22)DATE OF NEXT ACTION / /
(23)ISSUE DATE / /
(24)EXPIRATION DATE / /
(25)CO FEE _____

FIRM REP'S SIGNATURE: DATE: ISSUING OFFICER'S SIGNATURE: DATE:

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Vincent Sapienza, P.E.
Commissioner

Bureau of Environmental Compliance
59-17 Junction Blvd. 9th Floor, Flushing, NY 11373
Records Control (718) 595-3855

Michael Gilsenan
Assistant Commissioner
Environmental Compliance

# CERTIFICATE TO OPERATE

**PREMISES ADDRESS: SILVERMAN SHAW INC, 62 FRANKLIN AVENUE, Brooklyn, NY 11205**

OWNER Information: SILVERMAN-SHAW INC, 60 FRANKLIN AVENUE BROOKLYN NY 11205

Installation #: **PA018075**
Issued: **12/5/2018**
Expiration: **11/6/2021**
Request ID: **249580**

Legalization: Yes

Environmental Rating: A

Emission Point: 2

Operational Hours/day: 8

Days/year: 200

Number of units: 1

ACFM/Unit: 3000

Contaminant(s): Other - Caustic mist,Sulfuric acid

Control(s):

Description: Exhaust Fan.

Installation Type: Other Industrial Sources

Equipment Type:

Material Being Processed: Steel
Desc.: Caustic tank, Hydrochloric Tank, and soap tank.
1 - Custom

## Description of Process:

Metal Plating in Chemical Tanks.

## Special Conditions:

NA

The holder of this certificate of operation is responsible for the use of the equipment in accordance with all the applicable requirements and provisions of the New York City Air Pollution Control Code. Violations of the Air Pollution Control Code can result in the imposition of penalties by the Environmental Control Board. This Certificate must be posted in the vicinity of the designated equipment. It may not be transferred to any other equipment.

**Application for Renewal of this certificate of operation must be submitted no later than ninety (90) days prior to the expiration date.**

***DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT***

PA018075

**R. Radhakrishnan, P.E.**
**Director of Engineering/For the Commissioner**

# DEP Registrations

Installation #:

PA 043194

APC - SPA (Rev. 1/76) RAL

# DEPT. OF ENVIRONMENTAL PROTECTION
## AIR RESOURCES
59-17 JUNCTION BLVD., CORONA, QNS., N.Y. 11368
## BUREAU OF ENGINEERING
PROCESS EXHAUST OR VENTILATION SYSTEM
APPLICATION FOR CERTIFICATE OF OPERATION

The City of New York

INSPECTION NEEDED

LOCATION I | FACILITY | EMISSION POINT

1884 BLOCK | 12 LOT | M1-2 ZONING (By Applicant)

PLEASE PRINT OR TYPE

**SECTION A**

1. COMPANY NAME: Multi Color Ind., Inc.

10. NAME OF P.E. Robert A. Lo Pinto, P.E. Shapiro Engineering, P.C.

11. TELEPHONE 718 531-8400

19. FACILITY NAME (IF DIFFERENT FROM COMPANY NAME)

2. NUMBER AND STREET ADDRESS: 791 Kent Avenue

12. NUMBER AND STREET ADDRESS: 6315 Mill Lane

20. FACILITY LOCATION (NUMBER AND STREET ADDRESS)

3. TOWN OR BORO: Brooklyn | 4. STATE: N.Y. | 5. ZIP: 11205

13. TOWN OR BORO: Brooklyn | 14. STATE: N.Y. | 15. ZIP: 11234

21. BORO | 22. ZIP

6. OWNER CLASSIFICATION
A. [X] COMMERCIAL B. [X] INDUSTRIAL C. [ ] UTILITY D. [ ] FEDERAL E. [ ] STATE F. [ ] MUNICIPAL G. [ ] EDUC INST. H. [ ] HOSPITAL I. [ ] RESIDENTIAL J. [ ] OTHER

16. application includes:
A. [X] NEW EQUIP'T C. [ ] EXISTING EQUIP'T ONLY
B. [ ] MODIFICATION

23. BLDG. NAME OR NUMBER | 24. FLOOR NAME OR NUMBER: 1

7. OWNER OR OFFICER'S NAME: Ben Hirsch | TITLE: President

8. OWNER OR OFFICER'S SIGNATURE

9. TELEPHONE: 718 855-2700

"I hereby affirm under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief, and that the equipment and/or apparatus concerned will be installed, altered and operated in accordance with the requirements of the NYC Air Pollution Control Code. I hereby authorize the P.E. named herein to file this application on my behalf. I hereby acknowledge that false statements are punishable as a Class A misdemeanor pursuant to Section 1408.2-15.25 of the NYC Air Pollution Control Code and Section 210.45 of the Penal Law."

STATE OF NEW YORK — ROBERT A. LO PINTO — No. 053312 — LICENSED PROFESSIONAL ENGINEER

I hereby certify to the best of my knowledge and belief to the accuracy of the technical information contained in this application, plans and any supplementary data submitted.

PLACE SEAL ABOVE 6/29/94

17. NYS P.E. Lic. NO.: 53312 | SIGNATURE OF PROFESSIONAL ENGINEER: Robert A. Lo Pinto, P.E.

WORK PERMIT WILL NOT BE ISSUED UNLESS:
(a) INSTALLER IS NAMED AND
(b) WORKMEN'S COMP. & DISABILITY ARE ON FILE WITH DAR

FINAL APPROVAL OF THE INSTALLATION IN THE FORM OF A CERTIFICATE OF OPERATION WILL NOT BE ISSUED UNTIL COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF LAW, RULE AND REGULATION OF THE N.Y.C. AIR POLLUTION CONTROL CODE HAS BEEN VERIFIED AT THE INSTALLATION SITE BY A REPRESENTATIVE OF THE DEPARTMENT.

"I hereby certify that upon approval of this application, plans and any supplementary data, I will make the installation of and adjustments to the equipment and/or apparatus described herein."

Installer's Signature: LEGALIZATION

Company Name of Installer _____ Installer's Name _____ Title _____

Company Address _____ Town or Boro _____ State _____ Zip _____

25. DATE APPLICATION RECEIVED: / /

26. IDENTIFICATION #

27. DATE APPLICATION REVIEWED: 7/05/94

28. APPLICATION INCLUDES:
A. [ ] NEW EQUIP'T C. [X] EXISTING EQUIP'T ONLY
B. [ ] MODIFICATION

ASSIGN NYC - DAR PREMISES I.D. NO. AND SOURCE EM. PT. NO. IN SECTION B

FEE: $_____ DATE OF RECEIPT _____ 19____

RECEIPT #_____ CASHIER_____

30. CONDITIONS OF WORK PERMIT:
a) PROPOSED DEVIATION FROM APPROVED APPLICATION MUST BE BY FILING OF AMENDMENT, AND APPROVAL OF SAME.
b) STACK TEST REQUIRED YES [ ] NO [X]
c) APPROVAL OF THIS APPLICATION DOES NOT IN ANY WAY ALTER, AFFECT OR CHANGE THE REQUIREMENT(S) FOR OTHER LICENCES OR PERMITS AS MAY BE REQUIRED BY OTHER GOVERNMENTAL AGENCIES AND DEPARTMENTS.

APPROVED FOR WORK PERMIT ONLY:

_____, P.E.
Industrial Processes Division

_____, P.E.
Director of Engineering

**FOR AGENCY USE ONLY**

| 29. LOCATION CODE | 30. FACILITY ID NO. | 31. U.T.M.(E) | 32. U.T.M.(N) | 33. SIC NUMBER |
|---|---|---|---|---|
| | | | | |

WORK PERMIT
37. DATE ISSUED: 8/5/94 | 38. DATE EXPIRES: 2/15/95

C.O. APPROVAL
41. DATE ISSUED: / / | 42. EXPIRATION DATE: / /

EM No. /Yr.: 1537/94

Date / /

COPY TO NYS - DEC

**SECTION B**

43. SPRAY BOOTHS: (FURNISH DATA &/OR CHECK APPROPRIATE BOXES)

| Mfr. | Model | Frontal opening: Height x Width C. D. | Baffles: Single E. | Baffles: Triple F. | Filters G. | Water wash H. |
|---|---|---|---|---|---|---|
| A. | B. | | | | | |

| Handgun I. | Automatic J. | Air atomizing K. | Airless L. | Electrostatic M. | Coating Mat'l. N. | O. Use Rate Max. ___ Gals./Hr. ___ Hrs./Day | P. Odor Yes _ No _ |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

(CONTINUED ON OTHER SIDE)

## SEC B

| 44. DIP TANKS: Mfr. A. | Model B. | Dimensions: Height x Width x Length C. | Coating Mat'l D. | Use Rate E. Makeup/8 Hrs. | F. Odor Yes _ No _ |
|---|---|---|---|---|---|
| | | | | | |

45. Source Emis. Pt. No.

46. Ground Elevation (ft.)

47

| 48 STACK HT (FT) | 49 INSIDE DIAM. (IN.) | 50 EXIT TEMP (°F) | 51 EXIT VELOCITY (FT/SEC) | 52 EXIT FLOW RATE (SCFM) | 53 DRAFT TYPE (N F S) | 54 | 55. RECEPTOR DISTANCE (FT) TO PREMISES LOT LINE |
|---|---|---|---|---|---|---|---|
| | | | | | ☐ ☐ ☐ | | |

56. Premises Identification No.

NYC - DAR Agency Use Only

## SEC C

57. DESCRIBE PROCESS OR UNIT

58. TOTAL NUMBER OF SIMILAR PROCESSES OR UNITS:

## SEC D

| CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER | FUEL TYPE | FLOW RATE (SCFM) | TEMP (°F) | PRESSURE DROP (IN. $H_2O$) | HORSE POWER | | EFFICIENCY (%) | HOW DET. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59. | 60. | 61. | 62. | 63. | 64. | 65. | 66. | 67. | 68. | 69. | 70. | 71. | 72 | 73. |
| 74. | 75. | 76. | 77. | 78. | 79. | 80. | 81. | 82. | 83. | 84. | 85. | 86. | 87. | 88. |
| 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 |

## SEC E

CALCULATIONS IN DETERMINING INPUT OR PRODUCTION RATE, EMISSION RATE POTENTIAL AND ACTUAL EMISSIONS:

## SECTION F

| CONTAMINANT NAME | % | CODE | INPUT OR PRODUCTION | UNITS | E R P (LBS/HR) | HRS/DAY | DAYS/YR | PROPOSED RATING | ACTUAL EMISSIONS | UNITS | ACTUAL EMISSIONS (LBS/HR) | ACTUAL EMIS. PPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 89. | 90. | 91. | 92. | 93. | 94. | 95. | 96. | 97. | 98. | 99. | 100. | 100A |
| 104. | 105. | 106. | 107. | 108. | 109. | 110. | 111. | 112. | 113. | 114. | 115. | 115A |
| 119. | 120. | 121. | 122. | 123. | 124. | 125. | 126. | 127. | 128. | 129. | 130. | 130A |
| 134. | 135. | 136. | 137. | 138. | 139. | 140. | 141. | 142 | 143. | 144. | 145. | 145A |
| 149. | 150. | 151. | 152. | 153. | 154. | 155. | 156. | 157. | 158. | 159. | 160. | 160A |
| 164. | 165. | 166. | 167. | 168. | 169. | 170. | 171. | 172. | 173. | 174. | 175. | 175A |

AGENCY USE ONLY

| ENV. RATING | ALLOWABLE EMISSIONS | UNITS |
|---|---|---|
| 101. | 102. | 103 |
| 116. | 117. | 118. |
| 131. | 132. | 133. |
| 146. | 147. | 148. |
| 161. | 162 | 163. |
| 176. | 177. | 178. |

| PROCESS CODE | APPLICABLE CODE (S) |
|---|---|
| 194. | 195. |

## SEC G

| SOLID FUEL TYPE | SOLID FUEL LBS/HR | SOLID FUEL %S | OIL TYPE | OIL GPH | OIL %S | GAS TYPE | GAS CFH | GAS BTU/CF | BTU/HR |
|---|---|---|---|---|---|---|---|---|---|
| 179. | 180. | 181. | 182. | 183. | 184. | 185. | 186. | 187. | 188. |

Note: Application and Plans must be submitted in triplicate.

OP | LOCATION | FACILITY | EMISSION POINT

I

94-33 RAL Equip. A(40)Internally Vented Tumblers (Dryers)

INSPECTION SET

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR RESOURCES
59-17 JUNCTION BLVD.,CORONA, QNS.,N.Y. 11368 (718) 595-3855

ALBERT F. APPLETON
Commissioner

SAMUEL STEMPLER, P.E.
Assistant Commissioner

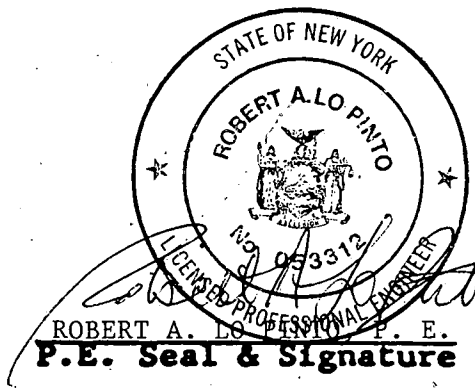
DATE: 6/29/94

APPLICATION No. _____

RE: 791 Kent Avenue, Brooklyn, New York 11205
(PREMISES ADDRESS)

## PROFESSIONAL CERTIFICATION

Being duly mindful of my responsiblities as a licensed Professional Engineer in the State of New York and acting as designated agent for the applicant, I hereby certify that the application, plans and all supplementary documents submitted in connection with this filing are complete and fully comply with all applicable laws, codes, rules, regulations and directives of the Department of Environmental Protection, Bureau of Air Resources, of the City of New York in affect at the time filed.




ROBERT A. LO PINTO P. E.
**P.E. Seal & Signature**

**Instructions: Pursuant to Engineering Directive #1-78, this certification must be submitted in triplicate with all APC 5-O, APC 5-R, and APC 5-PA applications and does not preclude the necessity to sign and seal the certification now contained on the application forms. This certification shall also be submitted in triplicate with all APC 5-OA applications submitted and certified by a professional engineer.**

INSPECTION SET

EMISSION POINT (A):
40 - STEAM HEATED TUMBLERS (DRYERS) EACH TO EXHAUST 3736 CFM @ 200°F FOR A TOTAL OF 149,440 CFM @ 200°F.

ISSUED 29 JUNE '94

ISSUES AND REVISIONS

KENT AVENUE

12-TUMBLERS

E.P. (A)

5-TUMBLERS

9 (none) 8-TUMBLERS

1-TUMBLER

4-TUMBLERS

2-TUMBLERS

AP 9/13/94

63 5/8"

49 7/8"

78 1/8"

DOOR

16"ϕ VENT

FABRIC DUST COLLECTOR

• SIDE VIEW OF TUMBLER •

AMERICAN LAUNDRY MACHINERY, INC. AJAX
MODEL Nº 21 STEAM HEATED TUMBLER (OR EQUAL)

FLUSHING AVE.

LITTLE NASSAU ST.

KENT AVE

FRANKLIN AVE

PARK AVE

BLOCK 1884
LOT 12
ZONE M1-2

○ = EMISSION POINT

□ = ROOF ELEV. (±)

THE CITY OF NEW YORK
DEPARTMENT OF AIR RESOURCES
APPROVED for comstruction in accordance with Application, Amendment(s) and Work Permit No.

PA 431/94 J

7/15/94 Date — A. Polerezhsky APC

Bureau of Industrial Air Pollutics Control

NOTE:

THIS PLAN IS FOR AIR EMISSION CONTROL PURPOSES ONLY.

• PART FIRST FLOOR PLAN •

• 1" = 20'-0" •

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

STATE OF NEW YORK — ROBERT A. D. PINTO — No. 059312 — LICENSED PROFESSIONAL ENGINEER

CMS GROUP / SHAPIRO ENGINEERING P.C.

CONSULTING ENGINEERS

6315 MILL LANE — BROOKLYN, NEW YORK 11234

| | | |
|---|---|---|
| SCALE AS NOTED | JOB Nº 94-33 | DRAWN BY TH. H. |
| DATE 17 JUNE '94 | | REVISED |

MULTI COLOR INDUSTRIES, INC.
791 KENT AVENUE, BROOKLYN, NEW YORK

TUMBLER INSTALLATION

DRAWING NUMBER 1 OF 1

DATAPRINT CORP. 700 SO. CLAREMONT ST. SAN MATEO, CA. 94402

STOCKDRAFTING FORM NO. 101-61

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Environmental Protection

**Vincent Sapienza, P.E.**
Commissioner

Bureau of Environmental Compliance
59-17 Junction Blvd. 9th Floor, Flushing, NY 11373
Records Control (718) 595-3855

**Michael Gilsenan**
Assistant Commissioner
Environmental Compliance

# CERTIFICATE TO OPERATE

**PREMISES ADDRESS: SILVERMAN SHAW INC., 62 FRANKLIN AVENUE, Brooklyn, NY 11205**

OWNER Information: SILVERMAN SHAW INC., 60 FRANKLIN AVENUE BROOKLYN NY 11205

Installation #: **PA098974**
Issued: **12/5/2018**
Expiration: **11/6/2021**
Request ID: **249572**

Legalization: Yes

Environmental Rating: B

Emission Point: 1

Operational Hours/day: 8

Days/year: 200

Number of units: 1

ACFM/Unit: 7500

Contaminant(s): Other - Caustic Mist, Muriatic Acid

Control(s):

Description: Exhaust Fan.

Installation Type: Other Industrial Sources

Equipment Type:

Material Being Processed: Steel
Desc.: Caustic solutions tanks.
2 - Custom
Desc.: Muriatic Acid Tank.
1 - Custom

## Description of Process:
Metals plating in chemical tanks.

## Special Conditions:
NA

The holder of this certificate of operation is responsible for the use of the equipment in accordance with all the applicable requirements and provisions of the New York City Air Pollution Control Code. Violations of the Air Pollution Control Code can result in the imposition of penalties by the Environmental Control Board. This Certificate must be posted in the vicinity of the designated equipment. It may not be transferred to any other equipment.

**Application for Renewal of this certificate of operation must be submitted no later than ninety (90) days prior to the expiration date.**

***DISPLAY CERTIFICATE ON PREMISES NEAR EQUIPMENT***

PA098974

**R. Radhakrishnan, P.E.**
**Director of Engineering/For the Commissioner**

Environmental Protection
**Vincent Sapienza, P.E.**
Commissioner

**THE CITY OF NEW YORK**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Bureau of Environmental Compliance
59-17 Junction Blvd. 9th Floor, Flushing, NY 11373
Records Control (718) 595-3855

**Michael Gilsenan**
Assistant Commissioner
Environmental Compliance

# Industrial Combustion Registration

**Business Owner Information**

Verizon Wireless

4 Centerock Road, West Nyack, NY 10994

Application ID: PB042111
Issued Date: 9/7/2018
Expiration Date: 1/3/2021
Request ID: 243297

**FACILITY ADDRESS:**70 Franklin Avenue, Brooklyn, NY 11205

| Equipment Information | |
|---|---|
| **Manufacturer:** Katolight | **Serial No.(s):** 160143-0308 |
| **Model:** NL60FPG4 | |
| **Number of Identical Units:** 1 | |
| **Fuel Type:** NaturalGas | |
| **Max. Fuel Delivery Rate (gph/cfh):** 660 | |
| **Gross Input (million Btu/hr):** 0.66 | |
| **Horsepower:** 80 | |
| **KW Rating (If applicable):** 60 | |

| Usage Information | |
|---|---|
| **Primary Use:** Emergency Generator | **Noise Control:** Enclosure |

| Average Use | |
|---|---|
| **Hours/day:** 1 | **Hours/year:** 52 |

Special Conditions:

1. Smoke test must be performed within three months of submittal of the Registration Renewal using either USEPA Method 9 or USEPA Method 5 stack test and certified by a professional engineer or registered architect.
2. Equipment shall not operate if the smoke test exceeds standard of 20 percent for any two consecutive minutes in any 60-minute period.
3. First time registered portable generators shall conduct a smoke test using either USEPA Method 9 or USEPA Method 5 stack test and certified by a professional engineer or registered architect unless the DEP contacts the applicant to perform the smoke test within five days of submittal of the registration.

*The holder of this registration is responsible for the use of the equipment in accordance with all the application requirements of the New York City Air Pollution Control Code. The Commissioner may suspend or revoke this registration for willful or continued violation of the Air Code. Any purported or attempted transfer of a registration from one location to another from one piece of equipment to another automatically revokes the registration. Section 24-135 NYC Air Pollution Code.*

PB042111

**R. Radhakrishnan, P.E.**
**Director of Air Engineering / For the Commissioner**

***DISPLAY REGISTRATION ON PREMISES NEAR EQUIPMENT***

# DEP

## Cover Sheet

Registration #: CA 2245 94X

DEP

REGISTRATION APPROVAL/DISAPPROVAL/REFERRALS
(Technical Personnel)

New York City
Department of
Environmental
Protection

59-17 Junction Blvd.
Elmhurst, New York
11373-5107
718-595-6579

ALBERT F. APPLETON
Commissioner

INSTALLATION NO: CA 8245-94X

REVIEW RESULTS: APPROVED/DISAPPROVED (A/D) A

(For Disapproval attach Disapproval Notice)

REVIEW DATE: 9-7-94

ENGINEER I.D.: E088

DATE ENGINEERING FOLDER RETURNED TO RECORDS CONTROL: _____

REMARKS: _____

_____

_____

EXPIRATION DATE: 9-7-97

SEP 22 1994

NOTE: COPY OF COMPLETED FORM TO BE PLACED IN ENGINEERING FOLDER.

Printed on recycled paper

(REV 11/96)

The City of New York DEPARTMENT OF ENVIRONMENTAL PROTECTION
JOEL A. MIELE, SR., P.E. Commissioner
59-17 Junction Boulevard, 9th Floor, Corona, New York 11368-5107

AIR NOISE HAZMAT
RECORDS CONTROL UNIT
1997 AUG -4 P 8:00

# TRIENNIAL
# CERTIFICATE EXPIRATION NOTICE

ROBERT C. AVALTRONI
Deputy Commissioner
Bureau of Air, Noise
& Hazardous Materials

RECORDS CONTROL
(718) 595-3855

DATE: 05/07/97

LEMRAL KNITWEAR
70 FRANKLIN AVENUE (2ND FLOOR)
BROOKLYN, NY 11205

RE: REGISTRATION
TO OPERATE FUEL BURNING
EQUIPMENT -- BOILER/BURNER
or HOT WATER HEATER
(NEW) FULTON FB-015A
(NEW) FULTON INTEGRAL

Fee $ 110 Receipt No. 285621
B.A.R. Clerk

INSTALLATION # CA224594X

EXPIRATION DATE: 09/07/97

**INSTRUCTIONS:** COMPLETE AND SIGN THIS RENEWAL APPLICATION FORM AND RETURN IT WITH YOUR CHECK OR MONEY ORDER PAYABLE TO: NYC DEPT. OF ENVIRONMENTAL PROTECTION, 9TH FLOOR, RECORDS CONTROL, 59-17 JUNCTION BLVD. CORONA, NY 11368-5107. FINAL FEE DETERMINATION WILL BE MADE BY D.E.P.; FEES ARE NON-TRANSFERABLE. RENEW NINETY (90) DAYS PRIOR TO EXPIRATION DATE.

EQUIPMENT LOCATED AT: 70 FRANKLIN AVENUE, BKLYN

**Superintendent, contractor or other authorized agent who can be contacted to schedule an inspection, provide access, and operate equipment to demonstrate compliance:**

ABE SCHON
(Superintendent/Authorized Agent Name)

(718) 596-7600
Telephone Number

70 FRANKLIN AVE., BROOKLYN
Address of Superintendent/Authorized Agent

2
Apt. # or Floor #

I REQUEST RENEWAL OF THE OPERATING CERTIFICATE/REGISTRATION FOR THE EQUIPMENT WHICH IS THE SUBJECT OF THE ABOVE REFERENCED INSTALLATION NUMBER AND WHICH HAS BEEN INSPECTED BY THE OWNER/OWNER'S AGENT AND IS READY FOR INSPECTION BY THE DIVISION OF AIR NOISE PERMITTING AND ENFORCEMENT.

I AM AWARE THAT IF THERE IS EXPOSED FRIABLE ASBESTOS IN A DAMAGED OR DETERIORATED CONDITION IN THE ROOM/AREA WHERE THE EQUIPMENT IS LOCATED THE INSPECTION WILL NOT BE COMPLETED AND A NOTICE OF DISAPPROVAL WILL BE ISSUED.

I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT THE INFORMATION PROVIDED ON THIS FORM IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE EQUIPMENT WILL BE OPERATED IN ACCORDANCE WITH REQUIREMENTS OF THE N.Y.C AIR POLLUTION CONTROL CODE AND ACKNOWLEDGE THAT ANY ALTERATION OF THE EQUIPMENT WILL BE DONE IN ACCORDANCE WITH THE N.Y.C. AIR POLLUTION CONTROL CODE AND APPROPRIATE REQUIREMENTS OF OTHER AGENCIES. I RECOGNIZE THAT FALSE STATEMENTS ARE PUNISHABLE AS A MISDEMEANOR PURSUANT TO SECTION 24-190 OF THE N.Y.C. AIR POLLUTION CODE AND SECTION 210-45 OF THE PENAL LAW. **PLEASE MAKE ANY CORRECTIONS TO THE OWNER'S NAME AND ADDRESS IF NECESSARY.**

Computer Estimated Fee is $ 110.00
See Note Above Regarding Final Fee Determination
CRLO

AUG 20 1997

OWNER/REPRESENTATIVE' S SIGNATURE

(illegible)
TITLE

7/2/97
DATE

APC 501
(Rev 5/92)

678/94

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR ORGANIZATIONS
59-17 JUNCTION BLVD., CORONA, NY 11368

(718) 595-3655
RECORDS CONTROL

3XB-V2

APPLICATION FOR REGISTRATION
(INSTRUCTIONS ON REVERSE SIDE)

CA 2245/94X
(AGENCY USE ONLY)

PLEASE MAIL COPY TO AGENT:

NEAL M. RUDIKOFF, P.E.
NEW YORK ENGINEERING
ASSOCIATES, P.C.
270 SPAGNOLI ROAD - SUITE 204
MELVILLE, NY 11747

Fee $ 110.- Receipt No.
D.A.R. Clerk 209902

FEE ENCLOSED: $ 110 + $10 FOR AGENTS COPY

PREMISE ADDRESS: 70 FRANKLIN AVENUE BROOKLYN
(BORO)

NUMBER OF APTS. OR TOTAL SQUARE FEET OF FLOOR AREA: FACTORY-NOT A HEATING BOILER

BOILER OR HOT WATER HEATER MAKE: FULTON (NEW) BURNER MAKE: FULTON (NEW)

MODEL FB-015A MODEL: INTEGRAL

MAX. OUTPUT FIRING RATE: 630,000 (BTU'S HOUR) MAX OUTPUT: 502,000 (BTU'S HOUR)

MAX. FIRING RATE: (GALLONS PER HOUR) OR 630 (CUBIC FEET PER HOUR)

FUEL TYPE: #2 OIL NATURAL GAS: X

Fee $ 10.- Receipt No.
D.A.R. Clerk 209902

NEW X OR EXISTING UNIT?

IS THIS EQUIPMENT A REPLACEMENT FOR EQUIPMENT PRESENTLY REGISTERED? YES NO X

IF YES, WHAT IS THE INSTALLATION NUMBER OF THE EQUIPMENT IT IS REPLACING? CA

AVERAGE USE OF THIS BOILER/HOT WATER HEATER: 3 HR/DAY 6 DAY/WK 52 WK/YEAR

IDENTIFY BY INSTALLATION NUMBER, IF KNOWN, OTHER COMBUSTION EQUIPMENT CONNECTED TO CHIMNEY:

CA CA CA OR MAKE MODEL

OWNER SIGN HERE

I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT THE INFORMATION PROVIDED ON THIS FORM IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THE EQUIPMENT WILL BE OPERATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AIR POLLUTION CONTROL CODE, CHAPTER 1 OF TITLE 24, NEW YORK CITY ADMINISTRATIVE CODE, AND APPROPRIATE REQUIREMENTS OF OTHER AGENCIES. I RECOGNIZE THAT FALSE STATEMENTS ARE PUNISHABLE AS A MISDEMEANOR PURSUANT TO SECTION 24-190 OF THE AIR POLLUTION CONTROL CODE AND SECTION 210-45 OF THE PENAL LAW.

OWNER/AGENT SIGNATURE

LEMRAL KNITWEAR
OWNER NAME (PLEASE PRINT)

6/20/94
DATE

70 FRANKLIN AVENUE, 2ND FLOOR, BROOKLYN, NY 11205
OWNER ADDRESS

( 718 ) 596-7600
TELEPHONE NUMBER

DEP

Cover Sheet

Registration #: CA 2247 94K

The City of New York DEPARTMENT OF ENVIRONMENTAL PROTECTION
JOEL A. MIELE, SR., P.E. *Commissioner*
59-17 Junction Boulevard, 9th Floor, Corona, New York 11368-5107

(REV 11/96)

DEP AIR NOISE & HAZMAT
RECORDS CONTROL UNIT
1997 AUG -4 P 8:00

# TRIENNIAL
# CERTIFICATE EXPIRATION NOTICE

ROBERT C. AVALTRONI
Deputy Commissioner
Bureau of Air, Noise
& Hazardous Materials

RECORDS CONTROL
(718) 595-3855

DATE: 05/07/97

LEMRAL KNITWEAR
70 FRANKLIN AVENUE, 2ND FLOOR
BROOKLYN, NY 11205

RE: REGISTRATION
TO OPERATE FUEL BURNING
EQUIPMENT -- BOILER/BURNER
or HOT WATER HEATER
(NEW) FULTON FB-020
(NEW) FULTON INTEG

Amt $ 110 Receipt No. 285624
B.A.N.R. Clerk

INSTALLATION # CA224794K

EXPIRATION DATE: 09/13/97

**INSTRUCTIONS:** COMPLETE AND SIGN THIS RENEWAL APPLICATION FORM AND RETURN IT WITH YOUR CHECK OR MONEY ORDER PAYABLE TO: NYC DEPT. OF ENVIRONMENTAL PROTECTION, 9TH FLOOR, RECORDS CONTROL, 59-17 JUNCTION BLVD. CORONA, NY 11368-5107. FINAL FEE DETERMINATION WILL BE MADE BY D.E.P. FEES ARE NON-TRANSFERABLE. RENEW NINETY (90) DAYS PRIOR TO EXPIRATION DATE.

EQUIPMENT LOCATED AT: 70 FRANKLIN AVENUE, BKLYN

**Superintendent, contractor or other authorized agent who can be contacted to schedule an inspection, provide access, and operate equipment to demonstrate compliance:**

ABE SCHON
(Superintendent/Authorized Agent Name)

(718) 596-7600
Telephone Number

70 FRANKLIN AVE. BROOKLYN
Address of Superintendent/Authorized Agent

2
Apt. # or Floor #

I REQUEST RENEWAL OF THE OPERATING CERTIFICATE/REGISTRATION FOR THE EQUIPMENT WHICH IS THE SUBJECT OF THE ABOVE REFERENCED INSTALLATION NUMBER AND IS READY FOR INSPECTION BY THE DIVISION OF AIR NOISE PERMITTING AND ENFORCEMENT.

I AM AWARE THAT IF THERE IS EXPOSED FRIABLE ASBESTOS IN A DAMAGED OR DETERIORATED CONDITION IN THE ROOM/AREA WHERE THE EQUIPMENT IS LOCATED THE INSPECTION WILL NOT BE COMPLETED AND A NOTICE OF DISAPPROVAL WILL BE ISSUED.

I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT THE INFORMATION PROVIDED ON THIS FORM IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE EQUIPMENT WILL BE OPERATED IN ACCORDANCE WITH REQUIREMENTS OF THE N.Y.C AIR POLLUTION CONTROL CODE AND ACKNOWLEDGE THAT ANY ALTERATION OF THE EQUIPMENT WILL BE DONE IN ACCORDANCE WITH THE N.Y.C. AIR POLLUTION CONTROL CODE AND APPROPRIATE REQUIREMENTS OF OTHER AGENCIES. I RECOGNIZE THAT FALSE STATEMENTS ARE PUNISHABLE AS A MISDEMEANOR PURSUANT TO SECTION 24-190 OF THE N.Y.C. AIR POLLUTION CODE AND SECTION 210-45 OF THE PENAL LAW. **PLEASE MAKE ANY CORRECTIONS TO THE OWNER'S NAME AND ADDRESS IF NECESSARY.**

Computer Estimated Fee is $ 110.00
See Note Above Regarding Final Fee Determination
CRLO

AUG 20 1997

AJP 97-00

OWNER/REPRESENTATIVE'S SIGNATURE

(OFFICER) SERGEANT
TITLE

7/2/97
DATE

DEP

REGISTRATION APPROVAL/DISAPPROVAL/REFERRALS
(Technical Personnel)

New York City
Department of
Environmental
Protection

59-17 Junction Blvd.
Elmhurst, New York
11373-5107
718-595-6579

ALBERT F. APPLETON
Commissioner

INSTALLATION NO: CA 2247-94K

REVIEW RESULTS: APPROVED/DISAPPROVED (A/D) A

(For Disapproval attach Disapproval Notice)

REVIEW DATE: 9-13-94

ENGINEER I.D.: E088

DATE ENGINEERING FOLDER RETURNED TO RECORDS CONTROL: _____

REMARKS: _____

_____

_____

EXPIRATION DATE: 9-13-97

NOTE: COPY OF COMPLETED FORM TO BE PLACED IN ENGINEERING FOLDER.

SEP 20 1994

Filed on received date

APC 501
(Rev. 5/92)

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR RESOURCES
59-17 JUNCTION BLVD., CORONA, NY 11368

(718) 595-3855
RECORDS CONTROL

DEP
ALBERT F. APPLETON
Commissioner

AUG 11 2 37 PM '94

3XBV2

APPLICATION FOR REGISTRATION
(INSTRUCTIONS ON REVERSE SIDE)

CA 2247/94K
(AGENCY USE ONLY)

PLEASE MAIL COPY TO AGENT:

NEAL M. RUDIKOFF, P.E.
NEW YORK ENGINEERING
ASSOCIATES, P.C.
270 BRAGNOLI ROAD - SUITE 204
MELVILLE, NY 11747

Fee $ 110.- Receipt No. 209903
D.A.R. Clerk

FEE ENCLOSED: $ 110 + $10 FOR AGENTS COPY

PREMISE ADDRESS: 70 FRANKLIN AVENUE BROOKLYN
(BORO)

NUMBER OF APTS. OR TOTAL SQUARE FEET OF FLOOR AREA: FACTORY-NOT A HEATING BOILER

BOILER OR HOT WATER HEATER MAKE: FULTON (NEW) BURNER MAKE: FULTON (NEW)

MODEL: FB-020A MODEL: INTEGRAL

MAX. OUTPUT FIRING RATE: 840,000 (BTU'S HOUR) MAX OUTPUT: 670,000 (BTU'S HOUR)

MAX. FIRING RATE: _____ (GALLONS PER HOUR) OR 840 (CUBIC FEET PER HOUR)

FUEL TYPE: #2 OIL _____ NATURAL GAS: X

Fee $ 10.- Receipt No. 209903
D.A.R. Clerk

NEW X OR EXISTING UNIT? _____

IS THIS EQUIPMENT A REPLACEMENT FOR EQUIPMENT PRESENTLY REGISTERED? YES _____ NO X

IF YES, WHAT IS THE INSTALLATION NUMBER OF THE EQUIPMENT IT IS REPLACING? CA _____

AVERAGE USE OF THIS BOILER/HOT WATER HEATER: 3 HR/DAY 6 DAY/WK 52 WK/YEAR

IDENTIFY BY INSTALLATION NUMBER, IF KNOWN, OTHER COMBUSTION EQUIPMENT CONNECTED TO CHIMNEY:

CA _____ CA _____ CA _____, OR MAKE _____ MODEL _____

I HEREBY AFFIRM UNDER PENALTY OF PERJURY THAT THE INFORMATION PROVIDED ON THIS FORM IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THE EQUIPMENT WILL BE OPERATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AIR POLLUTION CONTROL CODE, CHAPTER 1 OF TITLE 24, NEW YORK CITY ADMINISTRATIVE CODE, AND APPROPRIATE REQUIREMENTS OF OTHER AGENCIES. I RECOGNIZE THAT FALSE STATEMENTS ARE PUNISHABLE AS A MISDEMEANOR PURSUANT TO SECTION 24-190 OF THE AIR POLLUTION CONTROL CODE AND SECTION 210-45 OF THE PENAL LAW.

OWNER SIGN HERE

OWNER/AGENT SIGNATURE

LEMRAL KNITWEAR
OWNER NAME (PLEASE PRINT)

6/20/94
DATE

70 FRANKLIN AVENUE, 2ND FLOOR, BROOKLYN, NY 11205
OWNER ADDRESS

( 718 ) 596-7600
TELEPHONE NUMBER

Environmental Protection
**Vincent Sapienza, P.E.**
Commissioner

**THE CITY OF NEW YORK**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Bureau of Environmental Compliance
59-17 Junction Blvd. 9th Floor, Flushing, NY 11373
Records Control (718) 595-3855

**Michael Gilsenan**
Assistant Commissioner
Environmental Compliance

# BOILER REGISTRATION PERMIT

## Owner Information

SILVERMAN SHAW INC.

60 FRANKLIN AVE
BROOKLYN, NY 11205

Application ID: CA301081
Issued Date: 5/5/2020
Expiration Date: 7/1/2022
Request ID: 268173

**FACILITY ADDRESS:** 62 FRANKLIN AVENUE, Brooklyn, NY 11205

**Boiler:**

| Manufacturer | Model | # of Units | Input (BTU/Hr) | Output (BTU/Hr) |
|---|---|---|---|---|
| Fulton | 20 E | 1 | 866000 | 695000 |

**Burner:**

| Manufacturer | Model | Fuel Type | Hours/Day | Days/Week | Weeks/Year |
|---|---|---|---|---|---|
| Fulton | 20 E | NaturalGas | 7 | 5 | 50 |
| | | None | | | |

**Additional Equipment: None**

**Comments:**

NA

*The holder of this registration certification is responsible for the use of the equipment in accordance with all the application requirements and provisions of the New York City Air Pollution Control Code. Violations of the Air Pollution Control Code can result in the imposition of penalties by the Environmental Control Board. This Certificate must be posted in the vicinity of the designated equipment. It may not be transferred to any other equipment.*
*Application for renewal of this registration certificate must be submitted no later than **ninety (90) days** prior to the expiration date.*

CA301081

Kit Liang

**Kit Liang, P.E.**
**Director of Engineering**

Environmental Protection
**Vincent Sapienza, P.E.**
Commissioner

**THE CITY OF NEW YORK**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Bureau of Environmental Compliance
59-17 Junction Blvd. 9th Floor, Flushing, NY 11373
Records Control (718) 595-3855

**Michael Gilsenan**
Assistant Commissioner
Environmental Compliance

# BOILER REGISTRATION PERMIT

## Owner Information

SILVERMAN INC.

60 FRANKLIN AVENUE
BROOKLYN, NY 11205

Application ID: CA301181
Issued Date: 12/12/2017
Expiration Date: 2/19/2021
Request ID: 222520

**FACILITY ADDRESS:** 60 FRANKLIN AVENUE, Brooklyn, NY 11205

**Boiler:**

| Manufacturer | Model | # of Units | Input (BTU/Hr) | Output (BTU/Hr) |
|---|---|---|---|---|
| CYCLOTHERM | CF 2100 -60 H.P | 1 | 2512000 | 2010000 |

**Burner:**

| Manufacturer | Model | Fuel Type | Hours/Day | Days/Week | Weeks/Year |
|---|---|---|---|---|---|
| CYCLOTHERM | CF 2100 -60 H.P | No2Fuel | 4 | 5 | 50 |
| | | None | | | |

**Additional Equipment: None**

**Comments:**

NA

*The holder of this registration certification is responsible for the use of the equipment in accordance with all the application requirements and provisions of the New York City Air Pollution Control Code. Violations of the Air Pollution Control Code can result in the imposition of penalties by the Environmental Control Board. This Certificate must be posted in the vicinity of the designated equipment. It may not be transferred to any other equipment.*
*Application for renewal of this registration certificate must be submitted no later than **ninety (90) days** prior to the expiration date.*

CA301181

**R. Radhakrishnan, P.E.**
**Director of Engineering / For the Commissioner**

# APPENDIX E-1

## Phase I Environmental Site Assessment

equity environmental engineering

January 27, 2015

Mr. Yoel Horowitz
417 Flushing Avenue
Brooklyn, New York 11205

Re: Environmental Site Assessment, Phase I
448 Park Ave Phase I ESA
448 Park Avenue
Brooklyn, NY 11205

Please find enclosed the Phase I Environmental Site Assessment we have completed for the above referenced site. We appreciate this opportunity to serve you. If you have any questions or concerns about the report, please contact me at 973-527-7451 Ext. 207.

Sincerely,

Neha Gautam
Junior Project Engineer

cc: James Heineman/ Equity

227 Route 206, Suite 6; Flanders, NJ 07836-9122
973-527-7451 973-858-0280 fax
www.equityenvironmental.com

# Phase I
# Environmental Site Assessment Report

## 448 Park Avenue
## 448 Park Avenue
## (Block 1898 / Lots 37 & 38)
## Brooklyn, NY 11205

*Prepared for*

Mr. Yoel Horowitz
417 Flushing Avenue
Brooklyn, New York 11205

*Prepared by*

Equity Environmental Engineering
227 Route 206
Flanders, NJ 07836
Phone: 9735277451

Job Number: 2015002
1/23/2015

Powered By PARCEL

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# 1.0 GENERAL INFORMATION

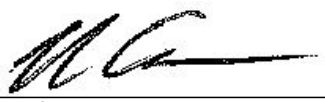
**Project Information:**
448 Park Ave Phase I ESA Report
**Project Number:**
2015002

**Consultant Information:**
Equity Environmental Engineering
227 Route 206
Flanders, NJ 07836
**Phone:** 9735277451
**Fax:** 9738580280
**E-mail Address:** neha.gautam@equityenvironmental.com
**Inspection Date:** 01/13/2015
**Report Date:** 01/27/2015

**Site Information:**
448 Park Avenue
448 Park Avenue
Brooklyn, NY 11205
**Latitude, Longitude:** 40.696500, -73.958700
**Site Access Contact:** Mr. Yoel Horowitz

**Client Information:**
Mr. Yoel Horowitz
YCHorowitz12345@gmail.com
417 Flushing Avenue
Brooklyn, New York 11205

**Site Assessor**



Neha Gautam
Junior Project Engineer

**Senior Reviewer**



Robert L. Jackson
Managing Director

**Certification:**

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Robert L. Jackson - Managing Director

# 2.0 EXECUTIVE SUMMARY

## 2.1 Subject Property Description

The subject property is located on the south side of Park Avenue, bounded by Franklin Avenue on the east and by Kent Avenue on the west. The approximately 3,300 square-foot subject property currently consists of an empty recreational trailer at the southern end of the lot, demolition debris at the eastern end, and new construction materials at the northern end. The subject property is identified as Tax Block 1898/Lots 37 and 38, and is located in an M1-1 zoning district within the Bedford-Stuyvesant neighborhood of Brooklyn, New York. Site maps may be found in Appendix A, and site photographs in Appendix B.

According to the owner of the property, Mr. Yoel Horowitz, there was once a three-story building on the site, which was demolished about six months ago. According to historical records provided by EDR, the subject property historically consisted of two buildings on the northern end of the property, one of which was a store and a dwelling unit, and other was a three-story residential building. Historical and regulatory records from EDR may be found in Appendices C and D, respectively.

## 2.2 Data Gaps

There were no data gaps identified.

## 2.3 Environmental Report Summary

| Report Section | | No Further Action | REC | HREC | CREC | Issue/Further Investigation | Comments |
|---|---|---|---|---|---|---|---|
| **4.4** | **Current Use of Property** | X | | | | | |
| **4.6** | **Adjoining Property Information** | X | | | | | |
| **6.1** | **Standard Environmental Records Sources** | X | | | | | |
| **6.4.1** | **Historical Summary** | X | | | | | |
| **6.4.7** | **Other Environmental Reports** | | | | | | N/A |
| **7.3.1** | **Hazardous Substances** | | | | | | N/A |
| **7.3.2** | **Petroleum Products** | | | | | | N/A |
| **7.3.3** | **USTs** | | | | | | N/A |
| **7.3.4** | **ASTs** | | | | | | N/A |
| **7.3.5** | **Other Suspect Containers** | X | | | | | Rusted buckets and containers of unknown substances located on eastern end of property |
| **7.3.6** | **Equipment Likely to Contain PCBs** | | | | | | N/A |
| **7.3.7** | **Interior Staining/Corrosion** | | | | | | N/A |
| **7.3.8** | **Discharge Features** | X | | | | | All utilities disconnected prior to demolition of building |
| **7.3.9** | **Pits, Ponds, And Lagoons** | | | | | | N/A |
| **7.3.10** | **Solid Waste Dumping/Landfills** | | | | | | N/A |
| **7.3.11** | **Stained Soil/Stressed Vegetation** | | X | | | X | Small areas of stained soil across subject property lots. |
| **7.3.12** | **Wells** | | | | | | N/A |

## 2.4 Recommendations

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. Historic RECs

## 2.4 Recommendations (continued)

are RECs previously remediated to government standards. De minimis RECs are those that do not present a threat to health or the environment, and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis and Historic RECs, are discussed. No significant data gaps were identified by this assessment.

Equity performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 at the subject property. Any exceptions to, or deviations from, this practice are described in Section 3.0 of this report. This assessment has revealed the following RECs for the subject property:

**RECs** - The following two RECs were identified in connection with the subject property:

- **Staining/Corrosion** - Small areas of stained soil were identified on the subject property in various locations.

**HRECs** - Equity found no HRECs associated with the subject property.

**CRECs** - Equity found no CRECs associated with the subject property.

**VECs** - Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) can be ruled out for the subject property.

Equity recommends further investigation for the areas of stained soil on the subject property.

# 3.0 INTRODUCTION

## 3.1 Purpose

Equity was retained by Mr. Yoel Horowitz to conduct a Phase I Environmental Site Assessment (ESA) of the subject property located at 448 Park Avenue (Tax Block 1898, Lots 37 and 38), Brooklyn, NY in accordance with the American Society for Testing and Materials (ASTM) Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The ASTM Standard constitutes all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice. The ASTM Standard also satisfies the requirements of the United States Environmental Protection Agency (EPA) All Appropriate Inquiry Standard, 40 CFR Part 312, which is required to qualify for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The purpose of the Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify recognized environmental conditions (RECs) in connection with the subject property. A recognized environmental condition is defined by ASTM as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

The identification of RECs in connection with the subject property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

## 3.2 Scope of Work

The Phase I ESA conducted at the subject property was in accordance with ASTM Standard E 1527-13 and included the following:

- Review of historic environmental and regulatory records;
- Interview with the client and owner of the property (Mr. Yoel Horowitz);
- Site Reconnaissance; and
- Evaluation of information and preparation of the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. For this Phase I ESA, no additions to the ASTM E 1527-13 standard were made.

## 3.3 Significant Assumptions

Equity has prepared this Phase I ESA report in accordance with the contractual scope of work, using reasonable efforts to attempt to identify RECs. The conclusions presented in this report are based solely on visual observations, readily available records, interviews, and other secondary sources, which are assumed accurate unless otherwise documented. Equity does not warrant the accuracy or completeness of information provided by secondary sources. Equity does not warrant that contamination that may exist on the site has been discovered, that the site is suitable for any particular purpose, or that the site is clear and free of liability.

This report is intended for use in its entirety. No excerpts may be taken to be representative of the findings of this assessment. Opinions and recommendations presented in this report apply to the site conditions and features, as they existed at the time of the site visit, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Equity is unaware and has not had an opportunity to evaluate.

## 3.4 Limitations and Exceptions

The environmental assessment is non-invasive, and does not include any testing or sampling of materials, such as soil, water, air, or building materials such as asbestos containing material (ACM) and lead-based paint (LBP). The environmental assessment does not include a review of the following: Industrial Hygiene, Health and Safety, Indoor Air Quality, Soil Gas, Radon, Lead in Drinking Water, Mold, Wetlands, Regulatory Compliance, Cultural and Historic Resources, Ecological Resources, Endangered Species, and Biological Agents. RECs do not include de minimus conditions that do not present a threat to health or the environment, and that would not be subject to an enforcement action by government agencies.

## 3.5 Deviations

No deviations from the recommended scope of ASTM Standard E 1527-13 were performed as part of this Phase I ESA with the exception of any additions noted in Detailed Scope of Services.

## 3.6 Special Terms and Conditions

Authorization to perform this assessment was given by the client on December 28, 2014. Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by Mr. Yoel Horowitz.

No additional services were requested.

## 3.7 Reliance

This Phase I report has been prepared for the exclusive use, and sole benefit, of Mr. Yoel Horowitz. Photocopying this document, in part or in whole, by parties other than those designated by Mr. Yoel Horowitz, or use of this document for purposes other than its intended use, is prohibited. The report may not be relied upon by any other person or entity without the express written consent of Equity and Mr. Yoel Horowitz.

# 4.0 SITE DESCRIPTION

## 4.1 Location and Legal Description

The subject property is located at 448 Park Avenue (Tax Block 1898, Lots 37 and 38), Brooklyn, New York. According to the NYC Department of Finance Property Benefits database, the subject property is owned by the 446-448 Park Realty Corporation. Lot 37 is 1,830 square feet (sf) in total area, while lot 38 is 1,425 square feet. Site maps and photographs may be found in Appendices A and B, respectively.

## 4.2 Activity/Use Limitations

Equity has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the property located at 448 Park Avenue, Brooklyn, NY. Any exceptions to or deletions from this practice are described in Section 3.5 of this report.

This assessment has revealed one REC (stained soil) at the subject property.

No Activity and Use Limitations (physical, i.e. engineering controls) or environmental liens were identified in connection with the subject property.

## 4.3 Site and Vicinity Description

The subject property consists of approximately 3,300 square-foot of undeveloped land. The surrounding area is developed primarily with residential buildings to the east, south, and west, and industrial warehouses to the north along Park Avenue. The I-278 Brooklyn-Queens Expressway overpass is located approximately 0.2 miles to the west of the subject property. The Brooklyn Navy Yard Basin and Wallabout Channel of the East River are located approximately one (1) mile to the northwest of the subject property. The site is predominantly flat with no slopes, depressions, or hills observed in the vicinity.

## 4.4 Current Use of Property

The subject property is currently undeveloped. An empty recreational trailer used for storage is situated on the southern end of Lot 38. Debris from the previous building's demolition is located along the eastern side of Lot 38, and new construction materials are located along the northern side of Lot 38.

## 4.5 Description of Structures and Other Improvements

There are no structures or any other improvements that exist on the subject property. All utilities to the building were disconnected before demolition activities occurred.

## 4.6 Adjoining Property Information

The subject property is adjoined to the east and south by a five-story and three-story residential building, respectively. Adjoining to the west of the subject property is a three-story residential building. Adjacent to the north of the subject property across Park Avenue are industrial warehouse buildings. During the site reconnaissance, Equity observed the following land use on properties in the immediate vicinity of the subject property:

- North - To the north of the subject property are industrial warehouses
- South - To the south are residential buildings
- East - To the east are residential buildings
- West - To the west are vacant lots and residential buildings

# 5.0 USER PROVIDED INFORMATION

## 5.1 Specialized Knowledge

Equity has no specialized knowledge of the subject property outside of the research which was conducted and reported herein. The property manager, Mr. Yoel Horowitz, who was interviewed as part of this ESA, did not report any specialized knowledge of the property outside of what is contained in this report.

## 5.2 Valuation Reduction for Environmental Issues

Equity has not been provided with an appraisal for the subject property. No environmental issues were identified by the client that could result in property value reduction.

## 5.3 Owner, Property Manager, and Occupant Information

The subject property is presently owned by the 446-448 Park Realty Corporation, according to the NYC Department of Finance database. The property manager is Mr. Yoel Horowitz.

## 5.4 Reason For Performing Phase I ESA

This Phase I Environmental Site Assessment (ESA) is being conducted as part of the due diligence process to obtain a use variance from the Board of Standards and Appeals to allow a residential development within an M1-1 zoning district. The client proposes to develop a new five-story, nine-unit residential building on the subject property lot.

# 6.0 RECORDS REVIEW

## 6.1 Standard Environmental Records Sources

Equity contracted Environmental Data Resources, Inc. (EDR) to conduct a search of Federal and State databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-13 are summarized in the following table. Detailed information for sites identified within the AMSDs is provided below, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property. Copies of the EDR research data and a description of the databases are included in Appendix D of this report.

The database provides the topographic elevations and can be used to assess the potential impacts of nearby uses on the subject property. Although groundwater flow often follows the topographic gradient of the ground surface, its flow direction can be affected by other variables, such as soils, geology, seasonal fluctuations, production wells, and underground structures. On-site groundwater monitoring wells are required to determine the actual flow direction at a particular site.

The database search is a tool to identify various environmental situations and/or activities within the required radius of the subject property. Many of these databases will only acknowledge the presence of a specific item on a property such as an underground storage tank or a dry cleaner. They do not determine the potential impact to the subject property and cannot take into account natural and man-made impediments that would limit or prevent the migration of contaminants from one site to another. Other databases provide sufficient knowledge to determine if there was an incident and what the severity of that incident was. For example, the majority of items within the LTANKS (leaking tanks) and/or HIST LTANKS (historic leaking tanks) deal with tank test failures that have de minimis releases or small enough quantity releases that are addressed by the owner/operator and do not migrate beyond the location of the tank.

**Map Findings Summary**

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NPL | | 1 | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | | 1 | 0 | 0 | 0 | 0 | NR | 0 |
| DELISTED NPL | | 1 | 0 | 0 | 0 | 0 | NR | 0 |
| CERCLIS | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |
| CERCLIS-NFRAP | | 0.5 | 0 | 0 | 4 | NR | NR | 4 |
| CORRACTS | | 1 | 0 | 0 | 1 | 1 | NR | 2 |
| RCRA-TSDF | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |
| RCRA-LQG | | 0.25 | 3 | 4 | NR | NR | NR | 7 |
| RCRA-SQG | | 0.25 | 0 | 2 | NR | NR | NR | 2 |
| RCRA-CESQG | | 0.25 | 7 | 7 | NR | NR | NR | 14 |
| US ENG CONTROLS | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROL | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |
| ERNS | | TP | NR | NR | NR | NR | NR | 0 |
| FUDS | | 1 | 0 | 0 | 0 | 1 | NR | 1 |
| EDR US Hist Cleaners | | 0.25 | 3 | 4 | NR | NR | NR | 7 |
| EDR US Hist Auto Stat | | 0.25 | 16 | 25 | NR | NR | NR | 41 |
| RCRA NonGen / NLR | | 0.25 | 9 | 52 | NR | NR | NR | 61 |
| NY MANIFEST | | 0.25 | 16 | 54 | NR | NR | NR | 70 |
| NY HIST UST | | 0.25 | 3 | 9 | NR | NR | NR | 12 |
| NY DRYCLEANERS | | 0.25 | 1 | 1 | NR | NR | NR | 2 |
| NY HIST SPILLS | | 0.125 | 0 | NR | NR | NR | NR | 0 |
| NY LTANKS | | 0.5 | 5 | 11 | 26 | NR | NR | 42 |
| NY SPILLS | X | 0.125 | 21 | NR | NR | NR | NR | 23 |
| NY RES DECL | | 0.125 | 2 | NR | NR | NR | NR | 2 |
| NY CBS UST | | 0.25 | 0 | 1 | NR | NR | NR | 1 |
| NY HIST LTANKS | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |
| NJ MANIFEST | | 0.25 | 7 | 10 | NR | NR | NR | 17 |
| NY E DESIGNATION | | 0.125 | 28 | NR | NR | NR | NR | 28 |
| NY AST | | 0.25 | 7 | 9 | NR | NR | NR | 16 |
| NY UST | | 0.25 | 8 | 16 | NR | NR | NR | 24 |
| NY BROWNFIELDS | | 0.5 | 1 | 2 | 1 | NR | NR | 4 |

## 6.1 Standard Environmental Records Sources (continued)

| Database | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| NY SHWS | | 1 | 0 | 0 | 1 | 4 | NR | 5 |
| NY INST CONTROL | | 0.5 | 0 | 0 | 1 | NR | NR | 1 |
| NY ENG CONTROLS | | 0.5 | 0 | 0 | 0 | NR | NR | 0 |

## 6.2 Additional Environmental Record Sources

Equity did not search any additional environmental record sources. The EDR database reports did not find any indication that underground storage tanks existed on-site.

## 6.3 General Site Setting

The general site setting in which the subject property is located is primarily residential with a few manufacturing uses to the north of the subject property across Park Avenue.

### 6.3.1 Topography

Based on a review of the 1995 USGS 7.5 Minute topographic map for the subject property area, groundwater is inferred to flow to the north-northwest toward the East River. The elevation of the subject property is 32 feet above MSL, and the general topographic gradient slopes up to the north-northeast. The surrounding area topography is relatively flat.

### 6.3.2 Surface Water Bodies

The nearest surface water in the vicinity of the subject property is Wallabout Channel (a tributary of the East RIver) located approximately one (1) mile to the northwest of the subject property. No surface water is located on the property.

### 6.3.3 Geology and Hydrology

Based on the soil survey maps published by the USDA Soil Conservation Service, the geologic age identification of the rock at the subject property is the Stratified Sequence category, and the rock stratigraphic units are made up of the Mesozoic Era, Cretaceous System, Upper Cretaceous Series, and Code uK. The soil is described as Urban Land, which does not qualify as hydric soil.

No on-site water wells or springs were observed during the site reconnaissance. No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the Property during this investigation.

## 6.4 Historical Use

### 6.4.1 Historical Summary

Historical information identifying the past site use was obtained from a variety of sources as detailed in Appendix C of this report and included: City Directories, Aerial Photographs, Sanborn Fire Insurance Maps, and Topographic Maps.

According to the property manager, the subject property building previously on-site was a vacant residential building which was in poor condition and on the verge of collapse. According to historical records provided by EDR (particularly, the Sanborn fire insurance maps), the subject property historically consisted of two buildings on the northern end of the property, one of which was a store and a dwelling unit, and other was a three-story residential building.

### 6.4.1 Historical Summary (continued)

| Source Reviewed | Date(s) | Source Details |
|---|---|---|

### 6.4.1 Historical Summary (continued)

| | | |
|---|---|---|
| EDR Aerial Photo Decade Package (Inquiry Number 4177220.9S) | 1944, 1951, 1954, 1961, 1966, 1974, 1976, 1984, 2006, 2009, 2011 | EDR, 440 Wheelers Farms Road, Milford, CT 06461, (800) 352-0050. |
| EDR City Directory Abstract (Inquiry Number 4177220.5S) | 1928, 1934, 1940, 1945, 1949, 1960, 1965, 1970, 1973, 1976, 1980, 1985, 1992, 1997, 2000, 2005, 2008, 2013 | EDR, 440 Wheelers Farms Road, Milford, CT 06461, (800) 352-0050. |
| EDR Historical Topo Map (Inquiry Number 4177220.4S) | 1900, 1924, 1947, 1956, 1967, 1979, 1995 | EDR, 440 Wheelers Farms Road, Milford, CT 06461, (800) 352-0050. |
| EDR Sanborn Map Search/Print (Inquiry Number 4177220.3S) | 1887, 1904, 1918, 1935, 1947, 1950, 1965, 1977, 1979-1982, 1984, 1986, 1987, 1989, 1991, 1992, 1993, 1995, 1996, 2001-2007 | EDR, 440 Wheelers Farms Road, Milford, CT 06461, (800) 352-0050. |
| EDR Radius Map Report (Inquiry Number 4177220.2S) | | EDR, 440 Wheelers Farms Road, Milford, CT 06461, (800) 352-0050. |

### 6.4.2 Title Records

**Recorded Land Title Records** - Equity reviewed the title information for 448 Park Avenue using the NYC ACRIS and Department of Finance websites. The owner of the property is currently '446-448 Park Realty Corp.'

**Zoning/Land Use Records** - The subject property is located in an M1-1 zoning district primarily for light manufacturing. The zoning map is provided in Appendix A.

### 6.4.3 City Directories

Equity reviewed local street directory listings for the subject property as well as for the immediate area around the subject property from 1928 through 2013. Directory information lists the subject property as 'Air Power Generation' in 2013, and as various resident names in 2005, 1965, 1960, 1949, and 1934. Surrounding properties are listed primarily as names of residential homeowners, as well as light manufacturing and commercial uses, including a plastics processing company, commercial offices, a tire shop, a deli/grocery shop, a unisex salon, a bank, etc.

### 6.4.4 Aerial Photos

Equity reviewed 12 aerial photographs provided from 1944 to 2011. The subject property features are not clearly distinguishable due to the large scale and low resolution of the photographs. The property is located in a densely developed area with very little to no open space. The I-278 Brooklyn-Queens Expressway overpass is shown after the year 1961.

### 6.4.5 Sanborn/Historical Maps

According to the historic Sanborn maps provided by EDR, a residential building existed on the northeastern portion of the property from 1887 through 2007. The building on Lot 37 was a store 1918, and a residential building from 1887 through 1979.

### 6.4.5 Sanborn/Historical Maps (continued)

**Summary**

| Date(s) | Property Comments | Surrounding Area Comments |
|---|---|---|

### 6.4.5 Sanborn/Historical Maps (continued)

| Date(s) | Property Comments | Surrounding Area Comments |
|---|---|---|
| 1887 | Two dwellings on northern end of property, as well as a small, unknown structure on the southeast portion | To the east of the property at the intersection of Park and Franklin Avenues are two lots; the adjoining lot is a laundry and the corner lot is a store. Adjoining to the west is a vacant lot and adjacent to the west along Park Avenue are several dwellings. To the north across Park Avenue are stables and dwellings. |
| 1904 | The unknown structure on the subject property is no longer present. | The laundry to the east is now a store. The vacant lot to the west now consists of a dwelling unit. The stables across Park Ave are no longer present. |
| 1918 | The western dwelling unit is now a store. | The properties across Park Ave to the northwest are labeled as 'Jacobson & Sons Lumber.' |
| 1935, 1947, 1950, 1965 | The western unit is once again labeled as dwelling. | The properties to the northwest and north of the property along Park Ave are primarily storage buildings. |
| 1977, 1979, | (same as above) | The properties to the northwest and north along Park Ave are now one- and two-story manufacturing warehouses. |
| 1980, 1981 | The western portion of the property is now a vacant lot. | (same as above) |
| 1982, 1984, 1986, 1987, 1989, 1991, 1992, 1993, 1995, 1996, 2001-2006 | The dwelling unit on the eastern portion of the lot is now labeled as a three-story residential building. | The two lots adjoining to the east are now one vacant lot. |
| 2007 | (same as above) | The building adjoining to the east is now an apartment building. Adjacent lots to the west are labeled as used auto sales. |

### 6.4.6 Historical Topographic Maps

Equity reviewed a total of seven (7) historic topographic maps (Brooklyn quad) from 1900 through 1995. The 1900, 1924, and 1947 maps are of too large a scale to discern any meaningful site features of the subject property and surrounding areas. The maps from 1956 and onward show several schools, playgrounds, and a fire station within a few blocks of the subject property.

### 6.4.7 Other Environmental Reports

No other environmental reports were reviewed as part of this assessment.

### 6.4.8 Building Department Records

An overview of the subject property profile was provided by the NYC Department of Buildings (DOB) database. There are two standing orders (stop work and full vacate) and one violation (failure to certify correction of Class 1 violation) that currently exist in connection with the property. A copy of the DOB document is provided in Appendix E.

## 6.5 Environmental Liens and Activity/Use Limitations

No Activity and Use Limitations (physical, i.e. engineering controls) or environmental liens were identified in connection with the subject property.

## 6.6 Vapor Encroachment Evaluation

Equity conducted an analysis of the various properties listed in the Phase I database search with respect to the Vapor Encroachment Screening (VES) in accordance with the requirements of the American Society for Testing and Materials (ASTM) 2600-10. A Tier I screen was done within the required database search distances from the subject property boundary for the items listed in Section 8 of the standard.

The subject property is listed twice on the 'NY Spills' database for a release of an unknown petroleum by Con Edison during maintenance of manholes located adjacent to the subject property. It was reported that two quarts were released on 300 gallons of water and remediated. Based on the quantity of petroleum spilled and the fact that it was remediated, there is no impact to the site.

Based on the above information and professional judgment, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) can be ruled out for the subject property. The VES analysis records provided by EDR are provided in Appendix F.

# 7.0 SITE RECONNAISSANCE

## 7.1 Methodology and Limiting Conditions

The site reconnaissance was conducted on Tuesday, January 15, 2015 by Ms. Neha Gautam, Junior Project Engineer with Equity. The visual reconnaissance consisted of observing the boundaries of the property and systematically traversing the site to provide an overlapping field of view, wherever possible.

## 7.2 General Site Setting

The subject property consists of one large vacant, soil-covered lot. There is an empty recreational trailer on the southeastern part of the property, as well as demolition debris on the eastern side, and new construction materials on the northern part of the property. According to the property manager, there was a three-story vacant residential building that previously existed on-site, and was demolished approximately six (6) months ago due to an emergency order issued by the local fire department due to the building's unsafe conditions (leaning over, roof collapsed, etc.).

The general site setting in which the subject property is located is primarily residential with a light manufacturing uses.

Section 7.3 below evaluates the potential presence of recognized environmental conditions (RECs).

## 7.3 Site Visit Findings

### 7.3.1 Hazardous Substances

No hazardous substances were identified on the subject property during the site reconnaissance.

### 7.3.2 Petroleum Products

No petroleum product containers were identified on the subject property during the site reconnaissance.

### 7.3.3 USTs

There are no known underground storage tanks (USTs) on the subject property.

### 7.3.4 ASTs

No above-ground storage tanks (ASTs) were identified on the subject property during the site reconnaissance.

### 7.3.5 Other Suspect Containers

Rusted buckets and containers of unknown substances were observed on the eastern subject property during the site reconnaissance.

### 7.3.6 Equipment Likely to Contain PCBs

No PCB equipment was identified on the subject property during the site reconnaissance.

### 7.3.7 Interior Staining/Corrosion

Not applicable to the subject property since there is no longer a building structure on-site. The property is a vacant lot.

### 7.3.8 Discharge Features

All utilities (associated with the residential building previously on-site) were disconnected prior to demolition of building.

### 7.3.9 Pits, Ponds, And Lagoons

No pits, ponds, or lagoons were identified on the subject property during the site reconnaissance.

### 7.3.10 Solid Waste Dumping/Landfills

No solid waste dumping or landfill sites were identified on the subject property during the site reconnaissance.

### 7.3.11 Stained Soil/Stressed Vegetation

Small areas of stained soil were identified across subject property lot during the site reconnaissance.

### 7.3.12 Wells

No wells were identified on the subject property during the site reconnaissance.

## 8.0 INTERVIEWS

During the time of the site reconnaissance, Ms. Neha Gautam of Equity interviewed the property manager, Mr. Yoel Horowitz, to gain further information regarding the subject property. Mr. Horowitz said he is unaware of any storage tanks associated with the subject property. According to Mr. Horowitz, the building previously on-site was infested with ferrets, and was baited with poison to prevent further spread. The building had been demolished upon an emergency order by the New York City Fire Department due to its poor condition. The recreational trailer situated on the southern part of Lot 38 was previously used as an office, but is now vacant and will be removed from the property.

## FINDINGS

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. Historic RECs are RECs previously remediated to government standards. De minimis RECs are those that do not present a threat to health or the environment, and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis and Historic RECs, are discussed. No significant data gaps were identified by this assessment.

Equity performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 at the subject property. Any exceptions to, or deviations from, this practice are described in Section 3.0 of this report. This assessment has revealed the following RECs for the subject property:

**RECs** - The following are the four RECs that were identified in connection with the subject property:

- **Stained Soil** - Small areas of stained soil were identified in various locations throughout the subject property.

**HRECs** - Equity found no HRECs associated with the subject property.

**CRECs** - Equity found no CRECs associated with the subject property.

**VECs** - Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) can be ruled out for the subject property.

Equity recommends further investigation for the areas of stained soil on the subject property.

## CONCLUSIONS

Equity concludes that further investigation is required for the RECs associated with the subject property, namely the stained soil areas on-site.

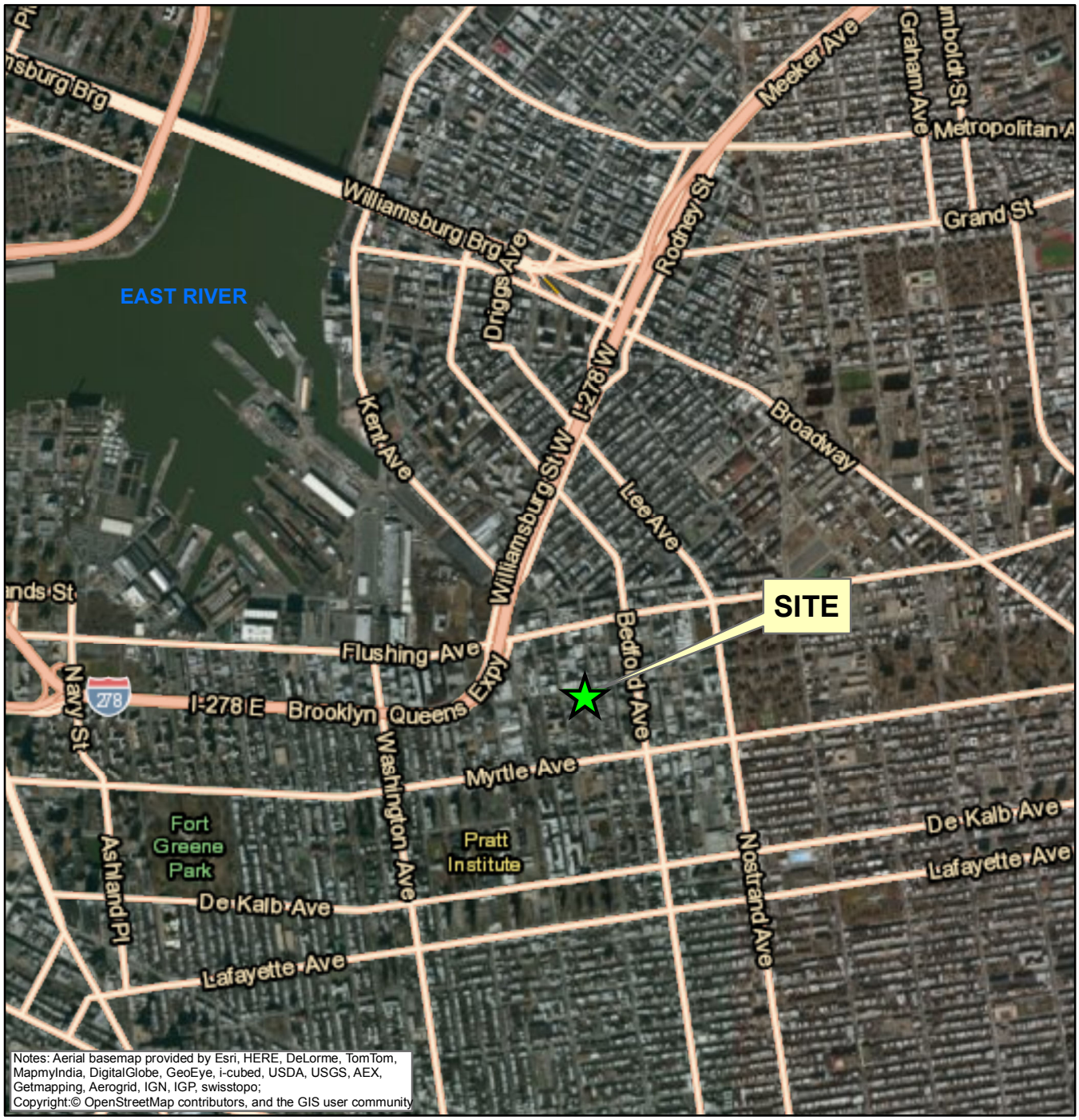
## REFERENCES

The following references were used in the preparation of this report:

1. EDR Environmental Databases
2. Aerial Photographs
3. City Directories
4. Historic Topographic Maps
5. Sanborn Maps
6. NYC Oasis Database
7. NYC Department of Finance records
8. NYC Department of Buildings records

# Appendix A:

# Figures




0 0.1 0.2 0.4 0.6 0.8 Miles

1 inch = 0 miles

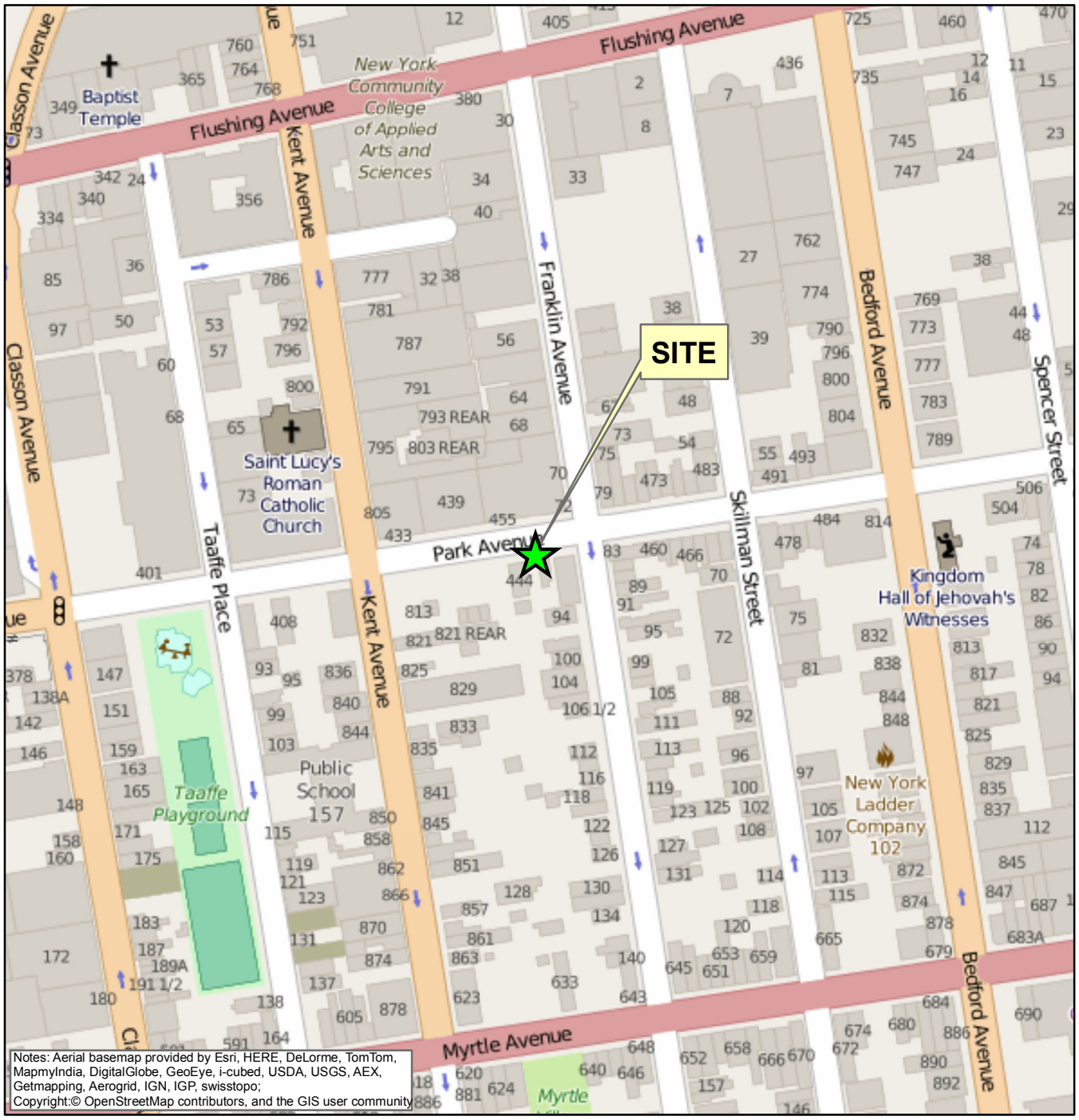
N

# USGS SITE LOCATION MAP

PHASE I ESA REPORT
448 PARK AVENUE
(BLOCK 1898, LOTS 37 & 38)
BROOKLYN, NEW YORK 11205

**equity environmental engineering**
227 Route 206, Suite 6, Flanders, NJ 07836, (973) 527-7451

| DRAWN BY/ DATE | CHK/DATE | DRAWING NUMBER |
|---|---|---|
| NG / 01-23-15 | | 2015002 |




0 0.0125 0.025 0.05 0.075 0.1 Miles

1 inch = 0 miles

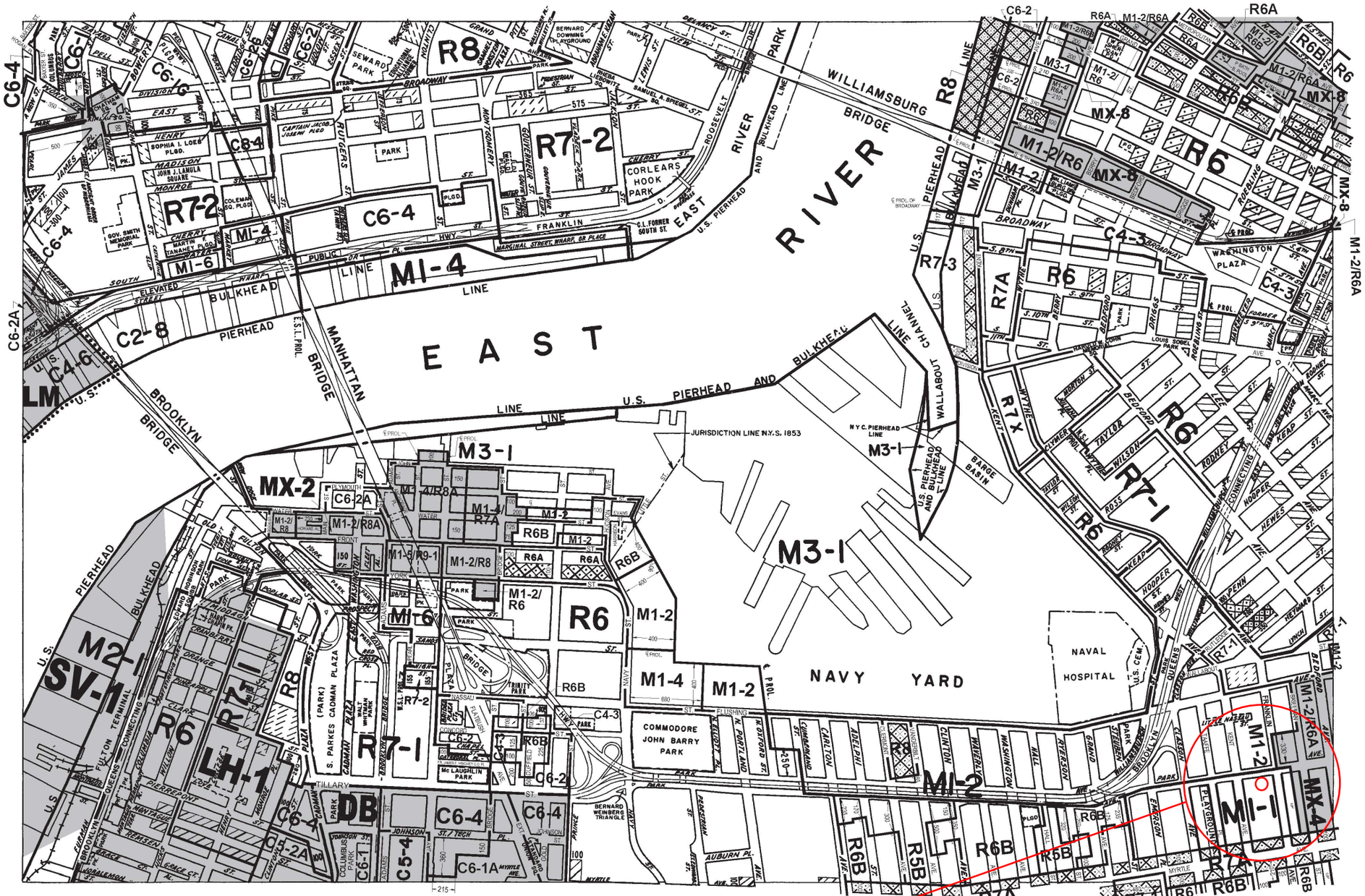
N

# LOCAL STREETS MAP

PHASE I ESA REPORT
448 PARK AVENUE
(BLOCK 1898, LOTS 37 & 38)
BROOKLYN, NEW YORK 11205

**equity environmental engineering**
227 Route 206, Suite 6, Flanders, NJ 07836, (973) 527-7451

| DRAWN BY/ DATE | CHK/DATE | DRAWING NUMBER |
|---|---|---|
| NG / 01-23-15 | | 2015002 |




# ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

## Major Zoning Classifications:

The number(s) and/or letter(s) that follows an **R**, **C** or **M** District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

R – RESIDENTIAL DISTRICT

C – COMMERCIAL DISTRICT

M – MANUFACTURING DISTRICT

SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.

AREA(S) REZONED

## Effective Date(s) of Rezoning:

03–20–2013 C 130052 ZMM

## Special Requirements:

For a list of lots subject to CEQR environmental requirements, see APPENDIX C.

For a list of lots subject to "D" restrictive declarations, see APPENDIX D.

For Inclusionary Housing designated areas on this map, see APPENDIX F.

**MAP KEY**

N

| | | |
|---|---|---|
| 12a | 12c | 13a |
| 12b | **12d** | 13b |
| 16a | 16c | 17a |

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C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5

**NOTE:** Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

**NOTE:** Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: **www.nyc.gov/planning** or contact the Zoning Information Desk at (212) 720-3291.

ZONING MAP **12d**

PREMISES

NYC Finance

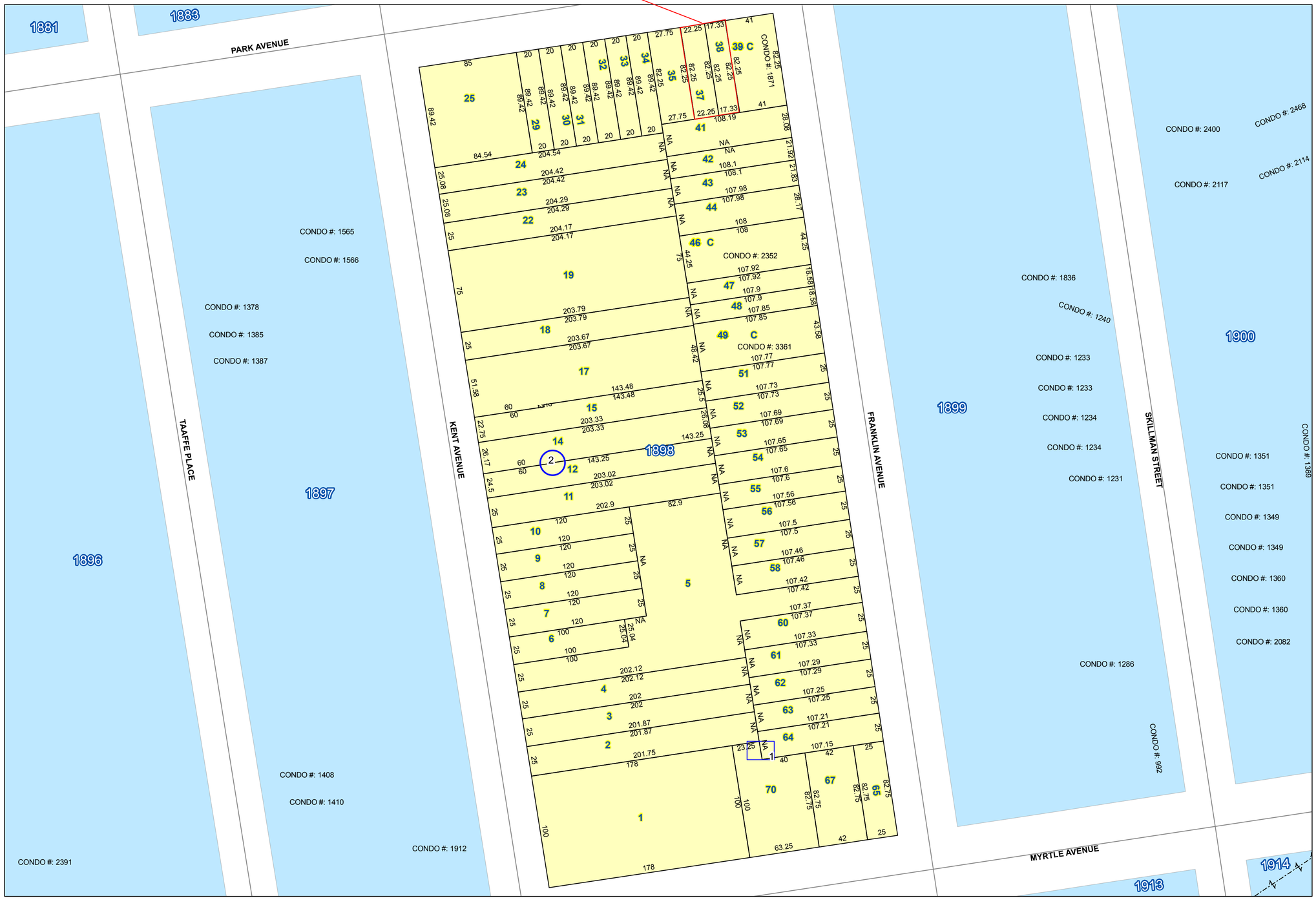
# NYC Digital Tax Map

Effective Date : 10-07-2013 09:54:44
End Date : Current

Brooklyn Block: 1898

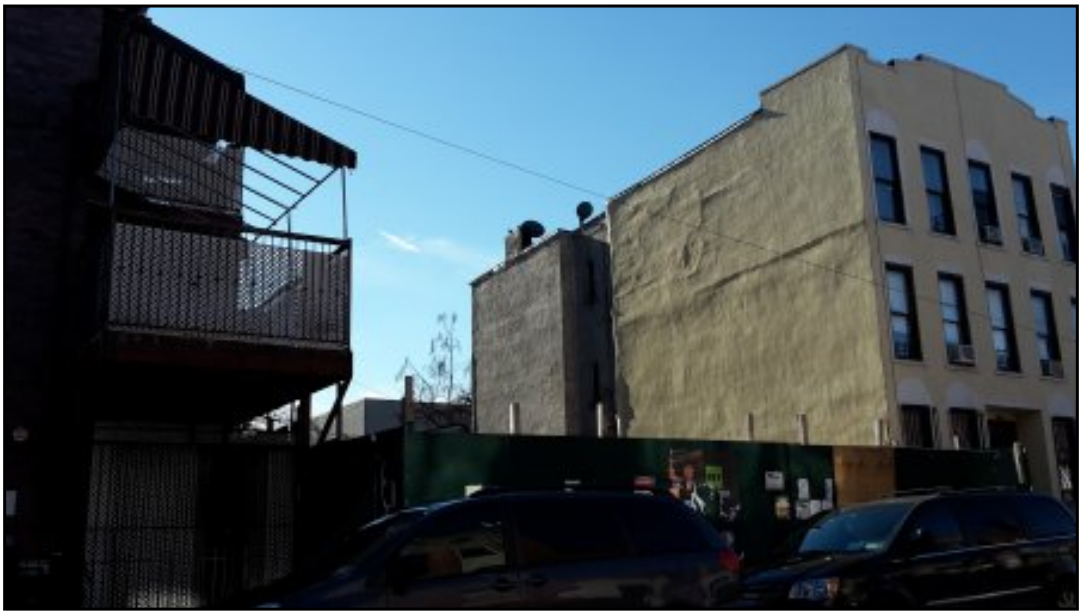
**Legend**

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon



# Appendix B:

# Photographs



Vacant subject property;
direction looking: southwest

Photograph Number: 1 of 8
Taken: 1/13/15 by Neha Gautam



Boarded entrance at northern end
of property;
direction looking: southeast

Photograph Number: 2 of 8
Taken: 1/13/15 by Neha Gautam



Disturbed soil at entrance of property;
direction looking: southeast

Photograph Number: 3 of 8
Taken: 1/13/15 by Neha Gautam



Northern portion of property;
direction looking: northwest

Photograph Number: 4 of 8
Taken: 1/13/15 by Neha Gautam



Demolition debris on eastern end of property;
direction looking: northeast

Photograph Number: 5 of 8
Taken: 1/13/15 by Neha Gautam



Remnants of brick foundation of previous building

Photograph Number: 6 of 8
Taken: 1/13/15 by Neha Gautam



Bent metal pole near property entrance

Photograph Number: 7 of 8
Taken: 1/13/15 by Neha Gautam



Building construction materials

Photograph Number: 8 of 8
Taken: 1/13/15 by Neha Gautam

# APPENDIX E-2

## Remedial Investigation Work Plan

# Phase II Site Investigation Workplan

For

**446-448 Park Realty**
446 - 448 Park Avenue
Block 1898 / Lots 37 and 38
Brooklyn, NY 11205

Prepared by

equity environmental engineering

500 International Drive, Suite 150
Mt. Olive, New Jersey 07828

June 2018
Revised September 2018

## Table of Contents

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2. Site Description ..... 1
   2.1. Location ..... 1
   2.2. Site and Vicinity Characteristics ..... 1
   2.3. Current Use of the Property ..... 1
   2.4. Current Uses of Adjoining Properties ..... 2
   2.5. Proposed Development Plan ..... 2
3. Phase I ESA Summary ..... 2
4. Scope of Work ..... 2
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**Figures**

1 – USGS Site Location Plan
2 - Proposed Sampling Plan

# Phase II Site Investigation Workplan

The following is the Phase II Site Investigation (SI) Workplan for the subject property located at 446-448 Park Avenue, Brooklyn, New York. The workplan outlines the subject property background and the various tasks required for the investigation. The workplan is based on the New York State Department of Environmental Conservation (NYSDEC), Department of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10) and knowledge of the subject property obtained from the Phase I Environmental Site Assessment (ESA) and the Environmental Assessment Statement (EAS) prepared for the site.

## 1. Background

The preparation of the Phase II SI Workplan was conducted for the subject property based on the Phase I ESA as well as the historic industrial land uses in the surrounding area.

## 2. Site Description

### 2.1. Location

The subject property is located at 446 - 448 Park Avenue (Block 1898 / Lots 37 and 38) in Brooklyn, New York. Lot 37 is approximately 1,830 square feet (sq. ft.) and Lot 38 is approximately 1,426 sq. ft. When combined both lots will have an approximate total square footage of 3,256 sq. ft. The subject property is located on the south side of Park Avenue, bounded by Franklin Avenue on the east and by Kent Avenue to the west and is also within the Bedford Stuyvesant section of Community District 3 in Brooklyn.

### 2.2. Site and Vicinity Characteristics

The subject property is located in an area with mixed residential and industrial use. The property is within a M1-1 zoning district. M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts and typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. The surrounding area is developed primarily with residential buildings to the east, south, and west, and industrial warehouses to the north along Park Avenue. The I-278 Brooklyn-Queens Expressway overpass is located approximately 0.2 miles to the west of the subject property. The Brooklyn Navy Yard Basin and Wallabout Channel of the East River are located approximately one (1) mile to the northwest of the subject property. The site is predominantly flat with no slopes, depressions, or hills observed in the vicinity.

### 2.3. Current Use of the Property

The subject property is currently undeveloped. An empty recreational trailer used for storage is situated on the southern end of Lot 38. Debris from the previous building's demolition is located along the eastern side of Lot 38, and new construction materials are located along the northern side of Lot 38.

### 2.4. Current Uses of Adjoining Properties

The surrounding area is developed primarily with residential buildings to the east, south, and west and industrial warehouses to the north along Park Avenue. The adjoining properties to the east and south of the property consist of one (1) five-story residential building and one (1) three-story residential building, respectively. Adjoining to the west of the subject property is one (1) three-story residential building.

### 2.5. Proposed Development Plan

The subject property will be improved with a 6-story residential building with a cellar. The building will consist of: (1) approximately 11,959 sq. ft. of floor space, (2) 30-foot rear yard, (3) roof access, (4) Floor Area Ratio (FAR) of 3.67. Floors 1 through 6 would consist of 8 total apartments. The proposed building height is 65 feet.

## 3. Phase I ESA Summary

A Phase I ESA was completed on January 27, 2015 by Equity Environmental Engineering, LLC (Equity), where one (1) Recognized Environmental Concern (REC) was identified.

- REC-1: Small areas of stained soil identified at various locations throughout the subject property. However, a disturbed area in the soil was identified at the front of the subject property and indicates that an underground storage tank may have been previously excavated on-site. The rectangular patch is approximately 6-feet wide by 10-feet long and is located on the northeastern portion of the property where a building once stood. This area will be taken into consideration during the Phase II site investigation.

Based on the findings of the Phase I EAS, a Phase II SI is warranted.

## 4. Scope of Work

The implementation of the Phase II SI is warranted based on the RECs identified during the Phase I ESA and potentially hazardous historical uses within the vicinity of the subject property. Equity has prepared this Phase II SI Workplan to include the following tasks:

### 4.1. Task 1: Site Investigation

The SI will consist of the installation of four (4) soil borings, three (3) temporary monitoring wells, and four (4) soil-gas points. The number of borings is based on the New York City Office of Environmental Remediation (NYC OER) – Remedial Investigation Sampling Scope Guidelines. These activities are described below.

Prior to conducting any field work, a site-specific Health and Safety Plan (HASP) will be prepared. The HASP will be prepared in accordance with the Occupational Health and Safety Administration (OSHA) requirements in 29 CFR 1910.120.

- ***Soil Sampling***

  Equity will oversee the installation of four (4) soil borings on the subject property. See Figure 2 for soil boring locations. The borings will be installed to the water table or approximately 30 feet below the bottom of the proposed building excavation whichever comes first. The water table depth is currently unknown at the subject property. The proposed excavation depth is 14 feet below ground surface (bgs).

  Equity will provide oversight to monitor the soil boring installations, log the soil cuttings, and collect the necessary environmental samples. The soil will be continuously retrieved from the borings using sampling equipment appropriate for the drill rig used. As the soil is retrieved, the following soil characteristics will be determined: soil lithology, color, and presence of staining or odors will be described and classified. The borings will be screened using visual and olfactory senses, and a Photo-Ionization Detector (PID) to detect for the presence of Volatile Organic Compounds (VOCs). The soil boring locations and hot spots, if any are detected, will be measured against a fixed position and photographed.

  Two (2) soil samples will be collected from each boring if possible. The first sample will be collected from the top two-foot interval of the boring. The second sample will be collected from the appropriate interval based on observations made during the boring installation. The samples will be collected based on the following:

  - The 2-foot interval where there is evidence of contamination based on observations, and PID readings;
  - The 2-foot interval below the proposed excavation depth if no evidence of contamination is observed; or
  - The 2-foot interval immediately above the water table if above the excavation depth.

  The soil samples will be analyzed for the suite of parameters shown on Table 1 below. The Quality Assurance/Quality Control (QA/QC) samples are also shown on Table 1 below:

**Table 1**
**Soil Sampling**

| Media | Analytical Parameters | No. of Samples |
|---|---|---|
| Soil | • Volatile Organic Compounds (VOCs) with MTBE by USEPA method 8260B<br>• Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs) by USEPA method 8270C | 8 samples<br>1 duplicate<br>1 field blank |

| | | |
|---|---|---|
| | • Polychlorinated Biphenyls (PCBs) by USEPA method 8082<br>• Pesticides by USEPA method 8081A<br>• Target Analyte List Metals (TAL Metals) by USEPA Method-6010/ 6020/7471 | |

The soil samples will be placed in laboratory-supplied containers, preserved with ice, and submitted under chain-of-custody procedures to the contract laboratory for analysis. All samples will be shipped to a laboratory certified in the New York State Department of Health (DOH) Environmental Laboratory Analysis Program (ELAP). Upon completion of the analyses, Category B data deliverables will be provided.

- ***Groundwater Sampling***

  Three (3) groundwater samples will be collected from the soil borings if groundwater is encountered. Three (3) of the soil borings will be converted into temporary monitoring well points. The groundwater samples will be analyzed for the same parameters as the soil samples including filtered metals. The metals sample will be filtered in the field utilizing a 0.45-micron filter.

  The groundwater samples, including QA/QC samples will be analyzed for the suite of parameters shown on Table 2 below:

**Table 2**
**Groundwater Sampling**

| Media | Analytical Parameters | No. of Samples |
|---|---|---|
| Groundwater | • Volatile Organic Compounds (VOCs) by USEPA method 8260B<br>• Target Compound List (TCL) Semi-Volatile Organic Compounds (SVOCs) by USEPA method 8270C<br>• Polychlorinated Biphenyls (PCBs) by USEPA method 8082<br>• Pesticides by USEPA method 8081A<br>• Target Analyte List Metals (TAL Metals) by EPA Method6010/6020/7471 (filtered and unfiltered) | 3 sample<br>1 duplicate<br>1 field blank<br>1 trip blank |

The groundwater samples will be placed in laboratory-supplied containers, preserved with ice, and submitted under chain-of-custody procedures to the contracted laboratory for analysis. The sample will be shipped to a DOH-ELAP certified laboratory. Upon completion of the analyses, Category B data deliverables will be provided.

- ***Soil Gas Sampling***

  Four (4) soil gas vapor sampling points will be installed to the depth of the proposed building foundation or directly above the water table if groundwater is encountered above that. Four (4) samples will be collected to mimic conditions of the new building and determine if vapor intrusion is a concern for the subject property. The

Soil Gas Sampling Points are shown on Figure 2. The soil gas samples will be collected in accordance with New York State Department of Health (NYSDOH) guidance using helium as a tracer gas. The soil gas sample will be collected over a 2-hour duration in a stainless steel, summa canister and analyzed for TO-15 (volatiles).

- ***Above/Underground Storage Tanks***

  Should any Above-ground Storage Tanks (ASTs) and/or Under-ground Storage Tanks (USTs) and associated piping be discovered during the course of the investigation, 446-448 Park Realty (Client) will be notified immediately and the proper steps taken to secure the tanks and their contents. Upon authorization from the Client, the tank(s) will be properly emptied, cleaned, excavated and disposed of. Any residual contamination observed will be properly addressed in accordance with New York City and New York State regulations. The tank(s) will be administratively closed out in a proper manner.

- ***Management of Investigation Derived Waste***

  Soil cuttings from the Phase II SI will be backfilled into the boreholes. Any extra soil cuttings will be spread on the ground surface. It is assumed that the purge water from the sampling of the temporary well points will be discharged to a pervious ground surface. As mentioned previously, following sample collection, all equipment will be decontaminated on-site using methods outlined in the site-specific HASP.

- ***Observed and/or Suspected Releases***

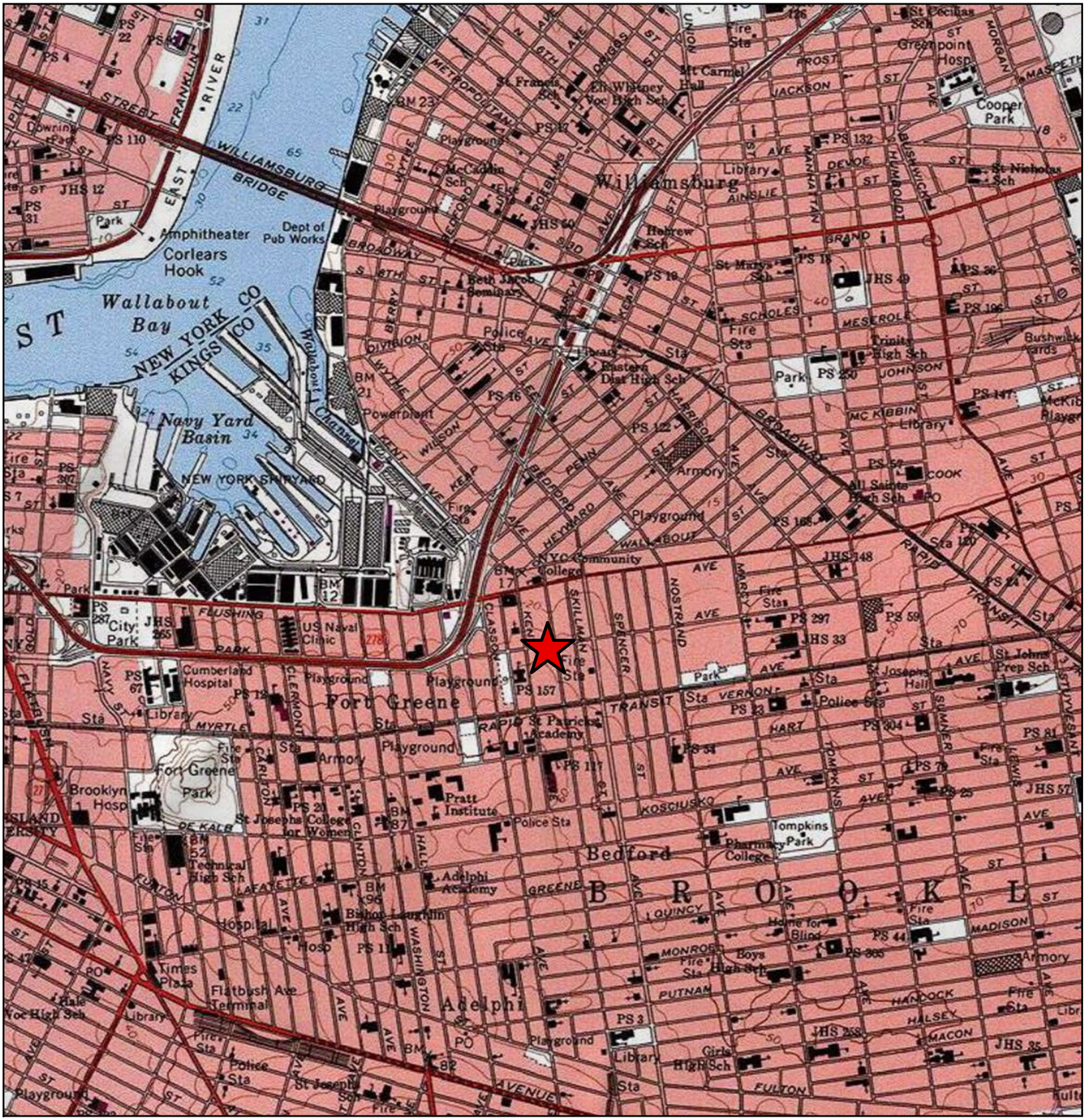
  If soil or groundwater contamination is observed, or it is suspected that a release of a hazardous substance has occurred at the subject property, Equity will notify the Client immediately. Per the NYSDEC requirements, it is required that the Responsible Party notifies the NYSDEC Spill Hotline (1-800-457-7362) within two (2) hours.

### 4.2. Task 2: Site Investigation Report

A Phase II Site Investigation Report (SIR) will be prepared for the subject property based on the results of the completed scope of work. The document will summarize the methodologies used during the field activities, observations, any deviations from the proposed scope of work, conclusions based on the observations and analytical data, and recommendations, for additional work, if necessary. The soil and groundwater sampling data will be quantitatively compared to appropriate DEC guidelines and standards. Soils will be compared to the DEC NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives (SCOs); unrestricted and restricted use. Groundwater results will be compared to the DEC Class GA water quality standards in the Technical & Operational Guidance Series (TOGS). The Soil Gas results will be compared to the applicable 2006 Guidance for Evaluation Soil Vapor Intrusion in the State of NY. If remedial action is required, a

Remedial Action Plan (RAP) will be prepared and submitted for review and approval by the appropriate regulatory agencies.

# Figures




## Legend

Subject Property

N

0 0.13 0.25 0.5 0.75 1 Miles

# FIGURE 1
# USGS Site Location Plan

Phase II Remedial Investigation Workplan
448 Park Avenue
Brooklyn, New York

**equity environmental engineering**
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/6/5/18 | | 2015002-01 |




## Legend

- Subject Property
- Proposed Soil Boring Location
- Proposed Temporary Well Location
- Proposed Soil Gas Sample Location

N

0 5 10 20 30 40 Feet

# FIGURE 2
# Proposed Sampling Plan

Phase II Remedial Investigation Workplan
448 Park Avenue
Brooklyn, New York

**equity environmental engineering**
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/6/5/18 | | 2015002-02 |

# APPENDIX E-3

## Remedial Investigation Report

equity environmental engineering
WORKING TOGETHER TO DESIGN SOLUTIONS
500 International Drive, Suite 150, Mount Olive, NJ 07828
4 World Trade Center, Suite 2963, New York, NY 10007
www.equityenvironmental.com

## PHASE II REMEDIAL INVESTIGATION REPORT

# 448 Park Avenue Rezoning

**Subject Property Adderss: 446-448 Park Avenue, Brooklyn, NY 11205**
**Subject Property Block: 1898 Lots: 37 and 38**
**Prepared For: Yoel Horowitz**

**CEQR Reference Number:**
**21DCP09K4**

**Prepared by:**
**Equity Environmental Engineering**

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2 Remedial Investigation Activities ..... 2
2.1 Soil Vapor Investigation ..... 3
2.2 Soil Investigation ..... 3
2.3 Ground Water Investigation ..... 4
2.4 Analytical Methods ..... 4
3 Analytical Results ..... 4
3.1 Soil Vapor ..... 4
3.2 Soil ..... 5
4 Summary ..... 6
5 Recommendations ..... 6

**FIGURES**

Figure 1 – USGS Site Location Map
Figure 2 – Site Boundary Map
Figure 3 – Sample Location Map

**TABLES**

Table 1 – Analytical Summary Table
Table 2 - Soil Vapor Analytical Data Summary
Table 3 – Soil Analytical Data Summary

**APPENDICES**

Appendix A – Soil Vapor Analytical Data Report
Appendix B - Soil Boring Logs
Appendix C – Soil Analytical Data Report

# 1 BACKGROUND

The Subject Property is located at 446-448 Park Avenue (Block 1898/Lots 37 and 38) in the Bedford Stuyvesant Neighborhood of Brooklyn, New York, Community District 3. Figure 1 shows the Site location and Figure 2 shows the property boundary. The Subject Property is in an area comprised of commercial and residential uses. The Subject Property is approximately 3,256 square feet in size. The Subject Property was purchased by 446-448 Park Realty Corp. in 2014. Lot 37 is an unlicensed parking lot. Lot 38 is improved with a 3-story residential building with a total floor area of approximately 2,462 sf.

The Proposed Development Plan seeks a zoning map amendment from M1-1 to an MX M1-4/R6A District to include a zoning text amendment to designate the Block as a Mandatory Inclusionary Housing Area (MIHA) requiring up to 30% of all residential units to be made affordable. It is our understanding that the zoning actions sought are to support 446-448 Park Realty's proposal to build a six-story, 3.49 FAR residential dwelling with 11 units on Lot 37.

The Phase I ESA completed on January 13, 2015, by Equity Environmental Engineering identified one REC on the Subject Property:

> REC 1.) Staining/corrosion: small areas of stained soil were identified on the Subject Property in various locations. Equity concluded that further investigation was required based on the REC associated with the Subject Property. Review of the Radius Map Report identified one location on the radius map within the Subject Property due to a release of petroleum. The spill date is listed as February 1, 2001. Manhole 803 located on the Subject Property had a 1-gallon quantity petroleum spill. Approximately 150 feet northeast of the Subject Property at 465 Park Avenue, is a NJ Manifest site and a generator. The site handles hazardous waste and generates 100 kg or less of hazardous waste per month. At approximately 50 feet to the west, a used auto sales location has existed since 1991, according to the Sanborn Fire Insurance Maps.

The Phase II Site Investigation was completed on December 22, 2021, by Equity Environmental Engineering LLC and consisted of the installation of four soil borings and four soil vapor points. Groundwater was not encountered to a depth of approximately 30 feet bgs.

# 2 REMEDIAL INVESTIGATION ACTIVITIES

Equity performed the following scope of work at the Subject Property:

1. Installed four soil vapor points on the Subject Property and collected four soil vapor samples for chemical analysis to evaluate soil vapor quality.
2. Installed four soil borings on the Subject Property and collected nine soil samples (eight samples, one duplicate) for chemical analysis to evaluate soil quality.

## 2.1 Soil Vapor Investigation

On December 22, 2021, Equity personnel and drilling contractor Aquifer Drilling and Testing Inc. (ADT) installed and sampled four soil vapor points designated SG-1, SG-2, SG-3, and SG-4. Soil vapor sampling locations are shown in Figure 3.

The soil vapor sampling points were driven using a, direct-push drill rig to approximately 10-feet below grade surface (bgs) and properly filled with sand and grouted to surface grade in accordance with New York State Department of Health (DOH) requirements. Helium was used as a tracer vapor to ensure a proper seal before collecting the sample. Two-hour air samples were collected in 2.7-Liter summa canisters for TO-15 analysis at each location. Upon completion of the sampling, the tubing was removed from the ground and the hole cemented closed. Table 1 lists the various analytical parameters and analytical methods.

All samples were collected in a laboratory-supplied, stainless-steel, summa canisters and submitted under chain-of-custody procedures to Alpha Analytical Laboratories, a DOH Environmental laboratory Approval Program (ELAP) certified laboratory, for analysis. Upon completion of the analyses, Category B data deliverables were provided (See Appendix A). Methodologies used for soil vapor assessment conform to the New York State Dept. of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion, October 2006 and 2017 revisions.

## 2.2 Soil Investigation

On December 22, 2021, Equity personnel and ADT installed and sampled four soil borings designated SB-1, SB-2, SB-3, and SB-4. Soil boring locations are shown in Figure 3.

Equity provided oversight of the soil boring installation, logged the soil cuttings, and collected the necessary environmental samples. The borings were advanced onsite using a direct-push drill rig and 2-inch diameter cores in 5-foot intervals and collected in acetate sleeves. The borings were advanced to 30 feet below grade surface (bgs) to determine the presence of groundwater. Groundwater was not encountered across the Subject Property. As the soil was retrieved, the following soil characteristics were determined: soil lithology, color, and presence of staining or odors were described and classified. The borings were screened using visual and olfactory senses, and a Photo-Ionization Detector (PID) to detect for the presence of Volatile Organic Compounds (VOCs).

Two soil samples were collected from each boring. The first sample was collected from the top 0 – 2-foot interval of the boring. The second sample was collected from the 10-12-foot interval. One field blank and one duplicate were collected for QA/QC (quality assurance/quality control) purposes. The soil samples were analyzed for the parameters shown in Table 1.

The soil samples were placed in laboratory-supplied containers, preserved with ice, and submitted under chain-of-custody procedures to the contract laboratory for analysis. All samples were shipped to a laboratory certified in the New York State Department of Health (DOH) Environmental Laboratory Analysis Program (ELAP). Upon completion of the analyses, Category B data deliverables were provided (See Appendix C).

## 2.3 Ground Water Investigation

Soil borings were installed to a maximum depth of 30 feet bgs without encountering groundwater. This was a deviation from the RIWP in that the soil borings should have gone to approximately 40 feet bgs or 30 feet below the approximate excavation depth. Anecdotal information from the environmental driller suggested that groundwater was approximately 45 feet bgs. Therefore, none of the three proposed temporary wells were installed and no groundwater samples were collected.

## 2.4 Analytical Methods

The analytical methods for the samples are provided on Tables 1. The analytical data packages are available in Appendix A and C. The following is an overview of the analytical methods:

**Table 1**
**Analytical Methods Summary for All Media**

| Factor | Description |
|---|---|
| Quality Assurance Officer | The chemical analytical quality assurance is directed by selected lab manager. |
| Chemical Analytical Laboratory | Chemical analytical laboratory(s) used in the RI is NYS ELAP certified and was Alpha Analytical |
| Chemical Analytical Methods | **Soil analytical methods:**<br>• TAL Metals by EPA Methods 6010/6020/7471<br>• TCL VOCs by EPA Method 8260B<br>• TCL SVOCs by EPA Method 8270C<br>• Pesticides by EPA Method 8081A<br>• PCBs by EPA Method 8082<br><br>**Soil vapor analytical methods:**<br>• VOCs by TO-15 VOC parameters. |

# 3 ANALYTICAL RESULTS

The analytical results for the samples are provided on Tables 2 and 3. The analytical data packages are available in Appendix A. The following is a discussion of the results:

## 3.1 Soil Vapor

The following is a summary of the soil vapor analytical results:

- The soil vapor samples (SG-1, SG-2, SG-3, and SG-4) contained numerous VOCs; however, there is no criterion in New York to directly compare soil vapor results to. Therefore, soil

vapor assessment methodologies conform to the NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006, revised 2017. All results were compared to Table 3.1 – Air Guidelines Values derived by the NYSDOH. Tetrachloroethene (PCE), and Trichloroethene (TCE) were detected in the soil vapor and sub-slab samples. PCE was detected at concentrations ranging from 24 ug/$m^3$ to 102 ug/$m^3$ and TCE was detected at concentrations ranging from 0.86 ug/$m^3$ to 3.8 ug/$m^3$. PCE and TCE exceeded their Table 3.1 air guideline values of 30 ug/$m^3$ and 2 ug/$m^3$, respectively. Methylene chloride did not exceed the Table 3.1 air guideline value of 60 ug/$m^3$; the maximum concentration detected was 4.9 ug/$m^3$. The analytical results are presented in Table 2.

- Concentrations of total benzene (maximum of 10 ug/$m^3$), toluene (maximum of 52 ug/$m^3$), ethylbenzene (maximum of 5.2 ug/m3), total xylenes (maximum of 23 ug/$m^3$), collectively known as BTEX and Tertiary Butyl alcohol (TBA) (maximum of 17 ug/$m^3$) are indicative of the presence of petroleum-related materials.

## 3.2 Soil

The following is a summary of the soil analytical results:

- There were six different VOCs detected in the soil samples with no exceedances above any of the soil criteria. The VOCs detected included Acetone, 2-Butanone (MEK), ethylbenzene, PCE, m,p-Xylene, 0-Xylene, Xylene (total), and Toluene. The only VOC detected in SB-2 was PCE with an estimated concentration of 0.00072 mg/kg. Ethylbenzene was detected in SB-1 (0-2') and SB-1 (10-12') with a maximum concentration of 0.0016 mg/kg. Acetone was detected in every soil boring except for SB-2; the maximum concentration detected was 0.0484 mg/kg. Acetone is a known laboratory contaminant. 2-Butanone (MEK) was detected in SB3-301 (10-12'), SB-4 (0-2'), and SB-4 (10-12') with a maximum estimated concentration of 0.0042 mg/kg. Xylene was detected in every soil boring except for SB-2. The maximum concentration of m,p-Xylene was 0.0086 mg/kg. The maximum concentration of o-Xylene was 0.00096 mg/kg, and the maximum concentration of m,p-Xylene 0.0128 was mg/kg. The analytical results are provided on Table 3.

- SVOCs were more prominent in the samples with detections of 23 SVOCs with two exceedances. Exceedances above the Unrestricted Use, Residential, and Restricted Residential Use criteria were detected in sample SB-2 (10-12'). The SVOCS with exceedances included Benzo(b)fluoranthene (maximum of 1.01 mg/kg) and Indeno(1,2,3-cd)pyrene (maximum of 0.676 mg/kg).

- A total of six different pesticides were detected in which two of them had exceedances. The two Unrestricted exceedances included 4,4'-DDE (maximum of 0.0062 mg/kg) and 4,4'-DDT (maximum of 0.0094 mg/kg). 4,4'-DDT exceeded the Unrestricted Use Criteria in every soil sample, except for SB-3(0-2') and SB-3(10-12'). 4,4'DDE exceeded the Unrestricted Use Criteria only in SB-1 (0-2'). The other pesticides detected include 4,4'DDD (maximum of 0.00085 mg/kg), Dieldrin (maximum of 0.0047 mg/kg), gamma-Chlordane (maximum

expected concentration of 0.00069 mg/kg), and alpha Chlordane (maximum of 0.0024 mg/kg).

- No PCBs were detected in the samples.

- A total of 19 metals were detected in all samples collected with six of them in exceedance of the applicable criteria. Metals that were in exceedance of all criteria in at least one sample include Barium (maximum of 480 mg/kg, sample SB-3 (0-2')), Lead (maximum of 535 mg/kg, sample SB-3 (0-2')), and Mercury (0.83 mg/kg, sample SB-3 (0-2')). Exceedances were detected in other samples, but SB-3 (0-2') was the only sample that exceeded all criterion for each of those three metals. The metal in exceedance of just Residential Use Criteria was Iron (maximum of 20,800 mg/kg). The metals that were in exceedance of just the Unrestricted Use Criteria included Copper (maximum of 81.9 mg/kg), and Zinc (maximum of 807 mg/kg). Iron exceeded the Restricted Residential Criteria in all samples with a maximum concentration of 35,900 mg/kg. The full analytical results are presented in Table 2.

# 4 SUMMARY

The Phase II Site Investigation included the following activities:

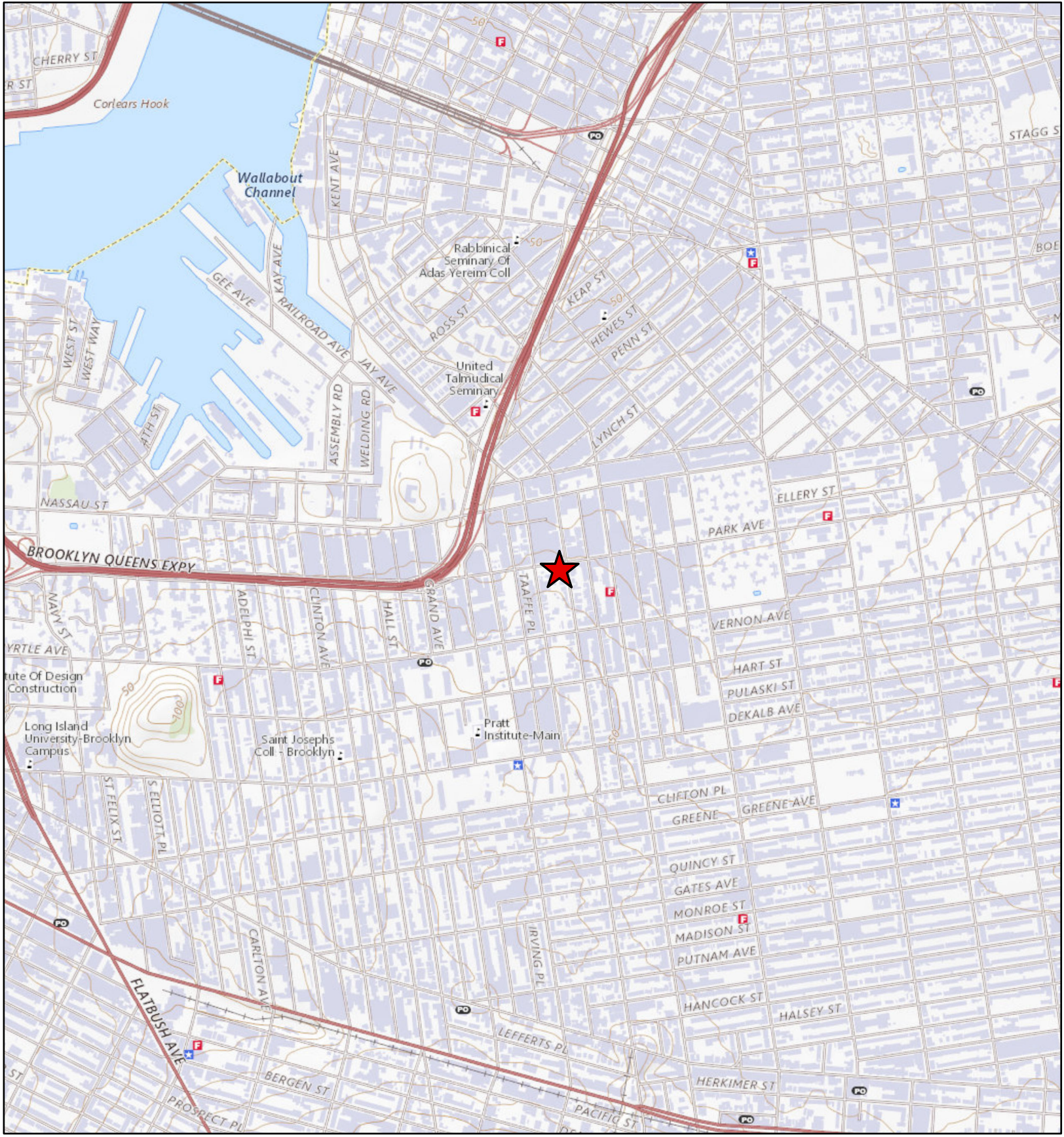
- Four soil vapor points were installed and sampled. Soil vapor samples were collected from these locations at 10 feet bgs over a 2-hour period. All samples were analyzed for TO-15.
- The soil vapor results indicated that, in general, the concentrations of most of the VOCs were below any applicable criteria. PCE and TCE were detected above their current NYSDOH standard. There was some indication that the contaminants detected were related to petroleum products.
- Four soil borings were installed and nine samples were collected.
- Numerous VOCs and SVOCs were detected in soil, but the only Benzo(b)fluoranthene (maximum of 1.01 mg/kg) and Indeno(1,2,3-cd)pyrene (maximum of 0.676 mg/kg) were above all soil criterion at SB-2 (10-12').
- Two pesticide exceedances were detected above Unrestricted Use Criteria.
- 19 metals were detected in the soil samples. Several metals were detected above all three applicable criteria. Two metals were detected above Unrestricted and Residential Use, and one metal above the Restricted Residential Use Criteria.
- Distribution of contaminants were fairly uniform among the sample areas.

# 5 RECOMMENDATIONS

Based on the analytical results discussed above and the proposed residential building, a Remedial Action Workplan (RAWP) should be prepared to address the soil and soil vapor contaminants, primarily VOCs, SVOCs and metals. The RAWP will be developed in conjunction with the proposed construction plans for the proposed building. The RAWP will include the following:

1. A vapor barrier should be installed to prevent possible vapor intrusion from the soil into the proposed building. It should be at minimum, 20-mil thick and properly anchored to the foundation walls and booted around all pipe penetrations, etc. Preprufe 300 R or equivalent should be used.
2. The preparation of a Construction Health and Safety Plan (CHASP) for the protection of onsite workers during construction.
3. The onsite soil will be excavated to the necessary construction depth and transported offsite for the construction of the new building.
4. The onsite soil will be sampled for waste classification purposes based on the volume of soil to be excavated.

# Figures




# Legend

448 Park Avenue

N

0 0.15 0.3 0.6 Miles

**Figure 1**
**Remedial Investigation Report**
**USGS Site Location Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/12.23.21 | | 2019101-01 |




## Legend

448 Park Avenue

N

0 12.5 25 50 US Feet

**Figure 2**
**Remedial Investigation Report**
**Site Boundary Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/12.23.21 | | 2019101-02 |




## Legend

- 448 Park Avenue
- Soil Gas Point
- Soil Boring

N

0 5 10 20 US Feet

**Figure 3**
**Remedial Investigation Report**
**Sample Location Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/12.23.21 | | 2019101-03 |

# Tables

Table 2
Soil Vapor Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | SG-1 | SG-3 | SG-4 | SG-2 |
|---|---|---|---|---|---|
| Lab Sample ID: | | JD37294-1 | JD37294-2 | JD37294-3 | JD37294-4 |
| Date Sampled: | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | Soil Vapor Comp. | Soil Vapor Comp. | Soil Vapor Comp. | Soil Vapor Comp. |
| **MS Volatiles (TO-15) - ug/m3** | | | | | |
| Acetone (2-Propanone) | ug/m3 | 147 | 78.6 | 96.9 | 73.4 |
| 1,3-Butadiene | ug/m3 | ND (0.75) | ND (0.75) | ND (0.75) | ND (0.75) |
| Benzene | ug/m3 | 7.3 | 5.4 | 10 | 5.4 |
| Bromodichloromethane | ug/m3 | ND (0.80) | ND (0.80) | ND (0.80) | ND (0.80) |
| Bromoform | ug/m3 | ND (2.9) | ND (2.9) | ND (2.9) | ND (2.9) |
| Bromomethane | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| Bromoethene | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Benzyl Chloride | ug/m3 | ND (0.77) | ND (0.77) | ND (0.77) | ND (0.77) |
| Carbon disulfide | ug/m3 | 29 | 12 | 13 | 2.6 |
| Chlorobenzene | ug/m3 | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) |
| Chloroethane | ug/m3 | ND (0.71) | ND (0.71) | ND (0.71) | ND (0.71) |
| Chloroform | ug/m3 | 3.4 J | 2.7 J | ND (0.73) | 3.2 J |
| Chloromethane | ug/m3 | 3.1 | 1.0 J | 2.9 | 1.1 J |
| 3-Chloropropene | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| 2-Chlorotoluene | ug/m3 | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) |
| Carbon tetrachloride | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Cyclohexane | ug/m3 | 4.8 | 2.7 J | 5.2 | 4.8 |
| 1,1-Dichloroethane | ug/m3 | ND (0.93) | ND (0.93) | ND (0.93) | ND (0.93) |
| 1,1-Dichloroethylene | ug/m3 | ND (0.95) | ND (0.95) | ND (0.95) | ND (0.95) |
| 1,2-Dibromoethane (EDB) | ug/m3 | ND (3.0) | ND (3.0) | ND (3.0) | ND (3.0) |
| 1,2-Dichloroethane | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| 1,2-Dichloropropane | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| 1,4-Dioxane | ug/m3 | ND (1.7) | ND (1.7) | ND (1.7) | ND (1.7) |
| Dichlorodifluoromethane | ug/m3 | 2.3 J | 2.1 J | 2.2 J | 2.4 J |
| Dibromochloromethane | ug/m3 | ND (1.8) | ND (1.8) | ND (1.8) | ND (1.8) |
| trans-1,2-Dichloroethylene | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| cis-1,2-Dichloroethylene | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| cis-1,3-Dichloropropene | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| m-Dichlorobenzene | ug/m3 | ND (0.96) | ND (0.96) | ND (0.96) | ND (0.96) |
| o-Dichlorobenzene | ug/m3 | ND (3.7) | ND (3.7) | ND (3.7) | ND (3.7) |
| p-Dichlorobenzene | ug/m3 | ND (0.90) | ND (0.90) | ND (0.90) | ND (0.90) |
| trans-1,3-Dichloropropene | ug/m3 | ND (1.8) | ND (1.8) | ND (1.8) | ND (1.8) |
| Ethanol | ug/m3 | 14 | 12 | 17 | 17 |
| Ethylbenzene | ug/m3 | 3.7 | 5.2 | 5.2 | 2.3 J |
| Ethyl Acetate | ug/m3 | 12 | 13 | 21 | 6.5 |
| 4-Ethyltoluene | ug/m3 | ND (1.9) | ND (1.9) | ND (1.9) | ND (1.9) |
| Freon 113 | ug/m3 | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) |
| Freon 114 | ug/m3 | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) |
| Heptane | ug/m3 | 14 | 9 | 11 | 5.7 |
| Hexachlorobutadiene | ug/m3 | ND (2.7) | ND (2.7) | ND (2.7) | ND (2.7) |
| Hexane | ug/m3 | 31 | 16 | 28 | 14 |
| 2-Hexanone | ug/m3 | ND (2.4) | ND (2.4) | ND (2.4) | ND (2.4) |
| Isopropyl Alcohol | ug/m3 | 9.1 | 8.6 | 7.4 | 7.4 |
| Methylene chloride | ug/m3 | 4.9 | 4.2 | 4.9 | 4.9 |
| Methyl ethyl ketone | ug/m3 | 41.9 | 33.9 | 56 | 32.4 |
| Methyl Isobutyl Ketone | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| Methyl Tert Butyl Ether | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| Methylmethacrylate | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| Propylene | ug/m3 | 503 | 292 | 467 | 326 |
| Styrene | ug/m3 | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) |
| 1,1,1-Trichloroethane | ug/m3 | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) |
| 1,1,2,2-Tetrachloroethane | ug/m3 | ND (1.3) | ND (1.3) | ND (1.3) | ND (1.3) |
| 1,1,2-Trichloroethane | ug/m3 | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) |

Table 2
Soil Vapor Analytical Data
448 Park Avenue, Brooklyn

| | | | | | |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/m3 | ND (3.6) | ND (3.6) | ND (3.6) | ND (3.6) |
| 1,2,4-Trimethylbenzene | ug/m3 | 3.4 J | 4.1 | 3.5 J | 2.5 J |
| 1,3,5-Trimethylbenzene | ug/m3 | ND (1.6) | ND (1.6) | ND (1.6) | ND (1.6) |
| 2,2,4-Trimethylpentane | ug/m3 | 9.8 | 7 | 22 | 7.9 |
| Tertiary Butyl Alcohol | ug/m3 | ND (1.1) | 17 | 12 | 15 |
| Tetrachloroethylene | ug/m3 | 24 | 41 | 27 | 102 |
| Tetrahydrofuran | ug/m3 | ND (1.1) | 5.9 | 5 | 4.1 |
| Toluene | ug/m3 | 45.6 | 52 | 44.1 | 34 |
| Trichloroethylene | ug/m3 | 1 | 3.8 | 0.86 | 0.91 |
| Trichlorofluoromethane | ug/m3 | 7.3 | ND (0.79) | ND (0.79) | ND (0.79) |
| Vinyl chloride | ug/m3 | ND (0.72) | ND (0.72) | 1.6 | ND (0.72) |
| Vinyl Acetate | ug/m3 | ND (1.6) | ND (1.6) | ND (1.6) | ND (1.6) |
| m,p-Xylene | ug/m3 | 12 | 17 | 17 | 6.9 |
| o-Xylene | ug/m3 | 4.1 | 6.1 | 6.5 | 2.5 J |
| Xylenes (total) | ug/m3 | 16 | 23 | 23 | 9.6 |
| | | | | | |

Table 3
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| **MS Volatiles (SW846 8260D)** | | | | | | | | | | | | | |
| Acetone | mg/kg | 0.05 | 100 | 100 | ND (0.0046) | 0.0051 J | 0.0106 | 0.0058 J | 0.019 | 0.0484 | 0.0175 | ND (0.0040) | ND (0.0043) |
| Benzene | mg/kg | 0.06 | 2.9 | 4.8 | ND (0.00050) | ND (0.00048) | ND (0.00047) | ND (0.00041) | ND (0.00041) | ND (0.00049) | ND (0.00038) | ND (0.00044) | ND (0.00047) |
| Bromochloromethane | mg/kg | - | - | - | ND (0.00062) | ND (0.00060) | ND (0.00057) | ND (0.00051) | ND (0.00051) | ND (0.00060) | ND (0.00047) | ND (0.00054) | ND (0.00058) |
| Bromodichloromethane | mg/kg | - | - | - | ND (0.00047) | ND (0.00046) | ND (0.00044) | ND (0.00039) | ND (0.00039) | ND (0.00046) | ND (0.00036) | ND (0.00041) | ND (0.00044) |
| Bromoform | mg/kg | - | - | - | ND (0.0015) | ND (0.0014) | ND (0.0014) | ND (0.0012) | ND (0.0012) | ND (0.0015) | ND (0.0011) | ND (0.0013) | ND (0.0014) |
| Bromomethane | mg/kg | - | - | - | ND (0.00084) | ND (0.00081) | ND (0.00078) | ND (0.00069) | ND (0.00069) | ND (0.00082) | ND (0.00065) | ND (0.00074) | ND (0.00079) |
| 2-Butanone (MEK) | mg/kg | 0.12 | 100 | 100 | ND (0.0027) | ND (0.0026) | ND (0.0025) | ND (0.0022) | 0.0026 J | 0.0042 J | 0.0033 J | ND (0.0023) | ND (0.0025) |
| Carbon disulfide | mg/kg | - | 100 | | ND (0.00059) | ND (0.00057) | ND (0.00055) | ND (0.00048) | ND (0.00048) | ND (0.00057) | ND (0.00045) | ND (0.00052) | ND (0.00055) |
| Carbon tetrachloride | mg/kg | 0.76 | 1.4 | 2.4 | ND (0.00068) | ND (0.00066) | ND (0.00063) | ND (0.00056) | ND (0.00056) | ND (0.00066) | ND (0.00052) | ND (0.00060) | ND (0.00064) |
| Chlorobenzene | mg/kg | 1.1 | 100 | 100 | ND (0.00050) | ND (0.00049) | ND (0.00047) | ND (0.00042) | ND (0.00042) | ND (0.00049) | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Chloroethane | mg/kg | - | | | ND (0.00065) | ND (0.00063) | ND (0.00061) | ND (0.00054) | ND (0.00053) | ND (0.00063) | ND (0.00050) | ND (0.00057) | ND (0.00061) |
| Chloroform | mg/kg | 0.37 | 10 | 49 | ND (0.00057) | ND (0.00055) | ND (0.00053) | ND (0.00047) | ND (0.00047) | ND (0.00055) | ND (0.00044) | ND (0.00050) | ND (0.00053) |
| Chloromethane | mg/kg | - | - | - | ND (0.0022) | ND (0.0021) | ND (0.0020) | ND (0.0018) | ND (0.0018) | ND (0.0021) | ND (0.0017) | ND (0.0019) | ND (0.0020) |
| Cyclohexane | mg/kg | - | - | - | ND (0.00072) | ND (0.00070) | ND (0.00067) | ND (0.00060) | ND (0.00059) | ND (0.00070) | ND (0.00056) | ND (0.00063) | ND (0.00068) |
| 1,2-Dibromo-3-chloropropane | mg/kg | - | - | - | ND (0.00076) | ND (0.00074) | ND (0.00071) | ND (0.00063) | ND (0.00063) | ND (0.00074) | ND (0.00059) | ND (0.00067) | ND (0.00072) |
| Dibromochloromethane | mg/kg | - | | | ND (0.00062) | ND (0.00060) | ND (0.00057) | ND (0.00051) | ND (0.00051) | ND (0.00060) | ND (0.00047) | ND (0.00054) | ND (0.00058) |
| 1,2-Dibromoethane | mg/kg | - | - | - | ND (0.00046) | ND (0.00045) | ND (0.00043) | ND (0.00038) | ND (0.00038) | ND (0.00045) | ND (0.00036) | ND (0.00041) | ND (0.00043) |
| 1,2-Dichlorobenzene | mg/kg | 1.1 | 100 | 100 | ND (0.00060) | ND (0.00058) | ND (0.00056) | ND (0.00049) | ND (0.00049) | ND (0.00058) | ND (0.00046) | ND (0.00053) | ND (0.00056) |
| 1,3-Dichlorobenzene | mg/kg | 2.4 | 17 | 49 | ND (0.00055) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| 1,4-Dichlorobenzene | mg/kg | 1.8 | 9.8 | 13 | ND (0.00054) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| Dichlorodifluoromethane | mg/kg | - | - | - | ND (0.00080) | ND (0.00077) | ND (0.00075) | ND (0.00066) | ND (0.00066) | ND (0.00078) | ND (0.00061) | ND (0.00070) | ND (0.00075) |
| 1,1-Dichloroethane | mg/kg | 0.27 | 19 | 26 | ND (0.00054) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| 1,2-Dichloroethane | mg/kg | 0.02 | 2.3 | 3.1 | ND (0.00052) | ND (0.00050) | ND (0.00048) | ND (0.00043) | ND (0.00043) | ND (0.00050) | ND (0.00040) | ND (0.00045) | ND (0.00048) |
| 1,1-Dichloroethene | mg/kg | 0.33 | 100 | 100 | ND (0.00072) | ND (0.00070) | ND (0.00067) | ND (0.00059) | ND (0.00059) | ND (0.00070) | ND (0.00055) | ND (0.00063) | ND (0.00068) |
| cis-1,2-Dichloroethene | mg/kg | 0.25 | 59 | 100 | ND (0.00092) | ND (0.00089) | ND (0.00086) | ND (0.00076) | ND (0.00076) | ND (0.00090) | ND (0.00071) | ND (0.00081) | ND (0.00087) |
| trans-1,2-Dichloroethene | mg/kg | 0.19 | 100 | 100 | ND (0.00067) | ND (0.00065) | ND (0.00063) | ND (0.00055) | ND (0.00055) | ND (0.00065) | ND (0.00052) | ND (0.00059) | ND (0.00063) |
| 1,2-Dichloropropane | mg/kg | - | | | ND (0.00052) | ND (0.00050) | ND (0.00049) | ND (0.00043) | ND (0.00043) | ND (0.00050) | ND (0.00040) | ND (0.00046) | ND (0.00049) |
| cis-1,3-Dichloropropene | mg/kg | - | - | - | ND (0.00052) | ND (0.00051) | ND (0.00049) | ND (0.00043) | ND (0.00043) | ND (0.00051) | ND (0.00040) | ND (0.00046) | ND (0.00049) |
| trans-1,3-Dichloropropene | mg/kg | - | - | - | ND (0.00050) | ND (0.00049) | ND (0.00047) | ND (0.00041) | ND (0.00041) | ND (0.00049) | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Ethylbenzene | mg/kg | 1 | 30 | 41 | 0.0011 | 0.0016 | ND (0.00046) | ND (0.00041) | ND (0.00041) | ND (0.00048) | ND (0.00038) | ND (0.00044) | ND (0.00047) |
| Freon 113 | mg/kg | - | 100 | | ND (0.0029) | ND (0.0028) | ND (0.0027) | ND (0.0024) | ND (0.0024) | ND (0.0028) | ND (0.0023) | ND (0.0026) | ND (0.0028) |
| 2-Hexanone | mg/kg | - | - | - | ND (0.0023) | ND (0.0023) | ND (0.0022) | ND (0.0019) | ND (0.0019) | ND (0.0023) | ND (0.0018) | ND (0.0020) | ND (0.0022) |
| Isopropylbenzene | mg/kg | - | 100 | | ND (0.0016) | ND (0.0015) | ND (0.0015) | ND (0.0013) | ND (0.0013) | ND (0.0015) | ND (0.0012) | ND (0.0014) | ND (0.0015) |
| Methyl Acetate | mg/kg | - | - | - | ND (0.0015) | ND (0.0015) | ND (0.0014) | ND (0.0013) | ND (0.0013) | ND (0.0015) | ND (0.0012) | ND (0.0013) | ND (0.0014) |
| Methylcyclohexane | mg/kg | - | - | - | ND (0.00096) | ND (0.00093) | ND (0.00090) | ND (0.00079) | ND (0.00079) | ND (0.00093) | ND (0.00074) | ND (0.00085) | ND (0.00090) |
| Methyl Tert Butyl Ether | mg/kg | 0.93 | 62 | 100 | ND (0.00052) | ND (0.00050) | ND (0.00048) | ND (0.00042) | ND (0.00042) | ND (0.00050) | ND (0.00040) | ND (0.00045) | ND (0.00048) |
| 4-Methyl-2-pentanone(MIBK) | mg/kg | - | | | ND (0.0025) | ND (0.0024) | ND (0.0023) | ND (0.0021) | ND (0.0021) | ND (0.0024) | ND (0.0019) | ND (0.0022) | ND (0.0023) |
| Methylene chloride | mg/kg | 0.05 | 51 | 100 | ND (0.0029) | ND (0.0028) | ND (0.0027) | ND (0.0024) | ND (0.0024) | ND (0.0028) | ND (0.0022) | ND (0.0025) | ND (0.0027) |
| Styrene | mg/kg | - | | | ND (0.00044) | ND (0.00043) | ND (0.00041) | ND (0.00036) | ND (0.00036) | ND (0.00043) | ND (0.00034) | ND (0.00039) | ND (0.00041) |
| 1,1,2,2-Tetrachloroethane | mg/kg | - | 35 | | ND (0.00066) | ND (0.00064) | ND (0.00061) | ND (0.00054) | ND (0.00054) | ND (0.00064) | ND (0.00051) | ND (0.00058) | ND (0.00062) |
| Tetrachloroethene | mg/kg | 1.3 | 5.5 | 19 | ND (0.00064) | ND (0.00062) | ND (0.00060) | ND (0.00053) | ND (0.00052) | ND (0.00062) | ND (0.00049) | ND (0.00056) | 0.00072 J |
| Toluene | mg/kg | 0.7 | 100 | 100 | ND (0.00058) | ND (0.00056) | ND (0.00054) | ND (0.00048) | ND (0.00048) | ND (0.00056) | ND (0.00044) | ND (0.00051) | ND (0.00054) |
| 1,2,3-Trichlorobenzene | mg/kg | - | | | ND (0.0027) | ND (0.0027) | ND (0.0026) | ND (0.0023) | ND (0.0023) | ND (0.0027) | ND (0.0021) | ND (0.0024) | ND (0.0026) |
| 1,2,4-Trichlorobenzene | mg/kg | - | | | ND (0.0027) | ND (0.0027) | ND (0.0026) | ND (0.0023) | ND (0.0023) | ND (0.0027) | ND (0.0021) | ND (0.0024) | ND (0.0026) |
| 1,1,1-Trichloroethane | mg/kg | 0.68 | 100 | 100 | ND (0.00053) | ND (0.00051) | ND (0.00050) | ND (0.00044) | ND (0.00044) | ND (0.00052) | ND (0.00041) | ND (0.00047) | ND (0.00050) |
| 1,1,2-Trichloroethane | mg/kg | - | - | - | ND (0.00061) | ND (0.00059) | ND (0.00057) | ND (0.00050) | ND (0.00050) | ND (0.00059) | ND (0.00047) | ND (0.00054) | ND (0.00057) |
| Trichloroethene | mg/kg | 0.47 | 10 | 21 | ND (0.00084) | ND (0.00081) | ND (0.00078) | ND (0.00069) | ND (0.00069) | ND (0.00081) | ND (0.00064) | ND (0.00074) | ND (0.00079) |
| Trichlorofluoromethane | mg/kg | - | - | - | ND (0.00075) | ND (0.00073) | ND (0.00070) | ND (0.00062) | ND (0.00062) | ND (0.00073) | ND (0.00058) | ND (0.00066) | ND (0.00071) |
| Vinyl chloride | mg/kg | 0.02 | 0.21 | 0.9 | ND (0.00053) | ND (0.00051) | ND (0.00049) | ND (0.00044) | ND (0.00044) | ND (0.00051) | ND (0.00041) | ND (0.00046) | ND (0.00050) |
| m,p-Xylene | mg/kg | 0.26 | 100 | 100 | 0.0058 | 0.0086 | 0.0019 | 0.0013 | 0.0017 | 0.0019 | ND (0.00076) | ND (0.00087) | ND (0.00092) |
| o-Xylene | mg/kg | 0.26 | 100 | 100 | 0.0025 | 0.0042 | 0.00079 J | 0.00065 J | 0.00096 | 0.00094 J | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Xylene (total) | mg/kg | 0.26 | 100 | 100 | 0.0083 | 0.0128 | 0.0027 | 0.002 | 0.0027 | 0.0028 | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| **MS Semi-volatiles (SW846 8270E)** | | | | | | | | | | | | | |
| 2-Chlorophenol | mg/kg | - | 100 | | ND (0.019) | ND (0.040) | ND (0.037) | ND (0.036) | ND (0.036) | ND (0.036) | ND (0.017) | ND (0.036) | ND (0.019) |
| 4-Chloro-3-methyl phenol | mg/kg | - | - | - | ND (0.023) | ND (0.049) | ND (0.047) | ND (0.045) | ND (0.045) | ND (0.045) | ND (0.022) | ND (0.045) | ND (0.024) |
| 2,4-Dichlorophenol | mg/kg | - | 100 | | ND (0.032) | ND (0.068) | ND (0.065) | ND (0.063) | ND (0.063) | ND (0.063) | ND (0.030) | ND (0.062) | ND (0.033) |
| 2,4-Dimethylphenol | mg/kg | - | - | - | ND (0.068) | ND (0.14) | ND (0.14) | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.062) | ND (0.13) | ND (0.070) |
| 2,4-Dinitrophenol | mg/kg | - | 100 | | ND (0.14) | ND (0.30) | ND (0.29) | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.13) | ND (0.27) | ND (0.15) |
| 4,6-Dinitro-o-cresol | mg/kg | - | - | - | ND (0.041) | ND (0.086) | ND (0.081) | ND (0.079) | ND (0.079) | ND (0.079) | ND (0.038) | ND (0.078) | ND (0.042) |
| 2-Methylphenol | mg/kg | 0.33 | 100 | 100 | ND (0.024) | ND (0.051) | ND (0.048) | ND (0.047) | ND (0.047) | ND (0.047) | ND (0.022) | ND (0.047) | ND (0.025) |
| 3&4-Methylphenol | mg/kg | - | - | - | ND (0.031) | ND (0.066) | ND (0.062) | ND (0.060) | ND (0.060) | ND (0.060) | ND (0.029) | ND (0.060) | ND (0.032) |
| 2-Nitrophenol | mg/kg | - | | | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| 4-Nitrophenol | mg/kg | - | | | ND (0.10) | ND (0.21) | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.094) | ND (0.19) | ND (0.10) |
| Pentachlorophenol | mg/kg | 0.8 | 2.4 | 6.7 | ND (0.036) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.033) | ND (0.068) | ND (0.037) |
| Phenol | mg/kg | 0.33 | 100 | 100 | ND (0.020) | ND (0.042) | ND (0.040) | ND (0.038) | ND (0.038) | ND (0.038) | ND (0.018) | ND (0.038) | ND (0.020) |
| 2,3,4,6-Tetrachlorophenol | mg/kg | - | - | - | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| 2,4,5-Trichlorophenol | mg/kg | - | 100 | | ND (0.028) | ND (0.060) | ND (0.057) | ND (0.055) | ND (0.055) | ND (0.055) | ND (0.026) | ND (0.055) | ND (0.029) |
| 2,4,6-Trichlorophenol | mg/kg | - | | | ND (0.023) | ND (0.048) | ND (0.045) | ND (0.044) | ND (0.044) | ND (0.044) | ND (0.021) | ND (0.043) | ND (0.023) |
| Acenaphthene | mg/kg | 20 | 100 | 100 | 0.0591 | 0.0913 | 0.0481 J | 0.0491 J | 0.0271 J | 0.0592 J | 0.0159 J | 0.0504 J | 0.233 |
| Acenaphthylene | mg/kg | 100 | 100 | 100 | 0.0453 | 0.0517 J | 0.0429 J | ND (0.037) | ND (0.037) | 0.139 | 0.0207 J | ND (0.037) | 0.0461 |
| Acetophenone | mg/kg | - | - | - | ND (0.0082) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| Anthracene | mg/kg | 100 | 100 | 100 | 0.176 | 0.238 | 0.107 | 0.123 | 0.0844 | 0.174 | 0.0441 | 0.123 | 0.413 |

Table 3
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Atrazine | mg/kg | - | - | - | ND (0.016) | ND (0.034) | ND (0.032) | ND (0.031) | ND (0.031) | ND (0.031) | ND (0.015) | ND (0.031) | ND (0.017) |
| Benzo(a)anthracene | mg/kg | 1 | 1 | 1 | 0.55 | 0.524 | 0.402 | 0.283 | 0.334 | 0.448 | 0.186 | 0.323 | 0.837 |
| Benzo(a)pyrene | mg/kg | 1 | 1 | 1 | 0.544 | 0.453 | 0.378 | 0.269 | 0.31 | 0.433 | 0.182 | 0.29 | 0.795 |
| Benzo(b)fluoranthene | mg/kg | 1 | 1 | 1 | 0.663 | 0.519 | 0.461 | 0.326 | 0.35 | 0.577 | 0.245 | 0.328 | **1.01** |
| Benzo(g,h,i)perylene | mg/kg | 100 | 100 | 100 | 0.372 | 0.342 | 0.3 | 0.21 | 0.24 | 0.396 | 0.148 | 0.202 | 0.571 |
| Benzo(k)fluoranthene | mg/kg | 0.8 | 1 | 3.9 | 0.267 | 0.204 | 0.157 | 0.112 | 0.13 | 0.236 | 0.0817 | 0.139 | 0.351 |
| 4-Bromophenyl phenyl ether | mg/kg | - | - | - | ND (0.015) | ND (0.031) | ND (0.029) | ND (0.028) | ND (0.028) | ND (0.028) | ND (0.014) | ND (0.028) | ND (0.015) |
| Butyl benzyl phthalate | mg/kg | - | 100 | | 0.0590 J | ND (0.020) | 0.702 | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0086) | ND (0.018) | 0.141 |
| 1,1'-Biphenyl | mg/kg | - | | | 0.0088 J | ND (0.011) | ND (0.010) | ND (0.010) | ND (0.010) | ND (0.010) | 0.0052 J | ND (0.010) | 0.0211 J |
| Benzaldehyde | mg/kg | - | - | - | ND (0.0094) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0087) | ND (0.018) | ND (0.0097) |
| 2-Chloronaphthalene | mg/kg | - | - | - | ND (0.0090) | ND (0.019) | ND (0.018) | ND (0.017) | ND (0.018) | ND (0.017) | ND (0.0084) | ND (0.017) | ND (0.0093) |
| 4-Chloroaniline | mg/kg | - | 100 | | ND (0.014) | ND (0.029) | ND (0.027) | ND (0.026) | ND (0.026) | ND (0.026) | ND (0.013) | ND (0.026) | ND (0.014) |
| Carbazole | mg/kg | - | - | - | 0.0784 | 0.0890 J | 0.0522 J | 0.0603 J | ND (0.011) | 0.103 J | 0.0216 J | 0.0489 J | 0.222 |
| Caprolactam | mg/kg | - | - | - | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.029) | ND (0.029) | ND (0.029) | ND (0.014) | ND (0.029) | ND (0.015) |
| Chrysene | mg/kg | 1 | 1 | 3.9 | 0.567 | 0.502 | 0.399 | 0.284 | 0.34 | 0.512 | 0.19 | 0.291 | 0.85 |
| bis(2-Chloroethoxy)methane | mg/kg | - | - | - | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| bis(2-Chloroethyl)ether | mg/kg | - | - | - | ND (0.016) | ND (0.035) | ND (0.033) | ND (0.032) | ND (0.032) | ND (0.032) | ND (0.015) | ND (0.031) | ND (0.017) |
| 2,2'-Oxybis(1-chloropropane) | mg/kg | - | - | - | ND (0.014) | ND (0.029) | ND (0.027) | ND (0.026) | ND (0.026) | ND (0.026) | ND (0.013) | ND (0.026) | ND (0.014) |
| 4-Chlorophenyl phenyl ether | mg/kg | - | - | - | ND (0.012) | ND (0.026) | ND (0.025) | ND (0.024) | ND (0.024) | ND (0.024) | ND (0.011) | ND (0.024) | ND (0.013) |
| 2,4-Dinitrotoluene | mg/kg | - | - | - | ND (0.012) | ND (0.025) | ND (0.024) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.011) | ND (0.023) | ND (0.012) |
| 2,6-Dinitrotoluene | mg/kg | - | 1.03 | | ND (0.019) | ND (0.040) | ND (0.038) | ND (0.037) | ND (0.037) | ND (0.037) | ND (0.018) | ND (0.037) | ND (0.020) |
| 3,3'-Dichlorobenzidine | mg/kg | - | - | - | ND (0.032) | ND (0.067) | ND (0.063) | ND (0.061) | ND (0.061) | ND (0.061) | ND (0.029) | ND (0.061) | ND (0.033) |
| 1,4-Dioxane | mg/kg | 0.1 | 9.8 | 13 | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| Dibenzo(a,h)anthracene | mg/kg | 0.33 | 0.33 | 0.33 | 0.107 | 0.0959 | 0.0914 | 0.0591 J | 0.0636 J | 0.119 | 0.0454 | 0.0698 J | 0.157 |
| Dibenzofuran | mg/kg | 7 | 14 | 59 | 0.0394 J | 0.0556 J | ND (0.031) | 0.0424 J | ND (0.030) | 0.0411 J | ND (0.014) | ND (0.030) | 0.143 |
| Di-n-butyl phthalate | mg/kg | - | 100 | | 0.0154 J | ND (0.013) | ND (0.012) | ND (0.012) | ND (0.012) | ND (0.012) | 0.0167 J | ND (0.012) | ND (0.0064) |
| Di-n-octyl phthalate | mg/kg | - | 100 | | ND (0.0095) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0087) | ND (0.018) | ND (0.0098) |
| Diethyl phthalate | mg/kg | - | 100 | | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0083) |
| Dimethyl phthalate | mg/kg | - | 100 | | ND (0.0068) | ND (0.014) | ND (0.014) | ND (0.013) | ND (0.013) | ND (0.013) | ND (0.0062) | ND (0.013) | ND (0.0070) |
| bis(2-Ethylhexyl)phthalate | mg/kg | - | 50 | | 0.0781 | ND (0.019) | 5.55 | 0.105 J | ND (0.017) | 0.142 J | 0.226 | ND (0.017) | 0.205 |
| Fluoranthene | mg/kg | 100 | 100 | 100 | 1.13 | 1.26 | 0.888 | 0.695 | 0.687 | 1.1 | 0.341 | 0.687 | 1.99 |
| Fluorene | mg/kg | 30 | 100 | 100 | 0.0589 | 0.0827 | ND (0.035) | 0.0469 J | ND (0.034) | 0.0572 J | ND (0.016) | 0.0419 J | 0.187 |
| Hexachlorobenzene | mg/kg | 0.33 | 0.41 | 1.2 | ND (0.0096) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0089) | ND (0.018) | ND (0.0099) |
| Hexachlorobutadiene | mg/kg | - | - | - | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.030) | ND (0.030) | ND (0.030) | ND (0.014) | ND (0.029) | ND (0.016) |
| Hexachlorocyclopentadiene | mg/kg | - | | | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.029) | ND (0.029) | ND (0.029) | ND (0.014) | ND (0.029) | ND (0.016) |
| Hexachloroethane | mg/kg | - | - | - | ND (0.019) | ND (0.040) | ND (0.038) | ND (0.036) | ND (0.036) | ND (0.036) | ND (0.017) | ND (0.036) | ND (0.019) |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.5 | 0.5 | 0.5 | 0.459 | 0.367 | 0.332 | 0.248 | 0.257 | 0.455 | 0.173 | 0.235 | **0.676** |
| Isophorone | mg/kg | - | 100 | | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| 2-Methylnaphthalene | mg/kg | - | 0.41 | | 0.0161 J | 0.0241 J | ND (0.017) | 0.0171 J | ND (0.017) | 0.0214 J | ND (0.0079) | ND (0.016) | 0.0587 |
| 2-Nitroaniline | mg/kg | - | | | ND (0.0090) | ND (0.019) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.017) | ND (0.0083) | ND (0.017) | ND (0.0092) |
| 3-Nitroaniline | mg/kg | - | | | ND (0.0095) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0088) | ND (0.018) | ND (0.0098) |
| 4-Nitroaniline | mg/kg | - | - | - | ND (0.0098) | ND (0.021) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0091) | ND (0.019) | ND (0.010) |
| Naphthalene | mg/kg | 12 | 100 | 100 | 0.0297 J | 0.0412 J | ND (0.021) | 0.0500 J | ND (0.021) | 0.0308 J | ND (0.0099) | ND (0.021) | 0.098 |
| Nitrobenzene | mg/kg | - | 3.7 | 15 | ND (0.015) | ND (0.031) | ND (0.029) | ND (0.028) | ND (0.028) | ND (0.028) | ND (0.014) | ND (0.028) | ND (0.015) |
| N-Nitroso-di-n-propylamine | mg/kg | - | - | - | ND (0.011) | ND (0.023) | ND (0.022) | ND (0.021) | ND (0.021) | ND (0.021) | ND (0.010) | ND (0.021) | ND (0.011) |
| N-Nitrosodiphenylamine | mg/kg | - | | | ND (0.014) | ND (0.029) | ND (0.028) | ND (0.027) | ND (0.027) | ND (0.027) | ND (0.013) | ND (0.027) | ND (0.014) |
| Phenanthrene | mg/kg | 100 | 100 | 100 | 0.855 | 0.983 | 0.58 | 0.55 | 0.384 | 0.668 | 0.204 | 0.492 | 2.15 |
| Pyrene | mg/kg | 100 | 100 | 100 | 1.22 | 1.03 | 0.769 | 0.571 | 0.643 | 0.865 | 0.362 | 0.572 | 1.92 |
| 1,2,4,5-Tetrachlorobenzene | mg/kg | - | - | - | ND (0.0096) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0089) | ND (0.018) | ND (0.0099) |
| **GC/LC Semi-volatiles (SW846 8081B)** | | | | | | | | | | | | | |
| Aldrin | mg/kg | 0.005 | 0.019 | 0.097 | ND (0.00064) | ND (0.00065) | ND (0.00060) | ND (0.00061) | ND (0.00062) | ND (0.00058) | ND (0.00057) | ND (0.00059) | ND (0.00062) |
| alpha-BHC | mg/kg | 0.02 | 0.097 | 0.48 | ND (0.00063) | ND (0.00064) | ND (0.00059) | ND (0.00060) | ND (0.00061) | ND (0.00057) | ND (0.00057) | ND (0.00058) | ND (0.00061) |
| beta-BHC | mg/kg | 0.036 | 0.072 | 0.36 | ND (0.00070) | ND (0.00071) | ND (0.00066) | ND (0.00067) | ND (0.00068) | ND (0.00063) | ND (0.00063) | ND (0.00065) | ND (0.00068) |
| delta-BHC | mg/kg | 0.04 | 100 | 100 | ND (0.00075) | ND (0.00075) | ND (0.00070) | ND (0.00071) | ND (0.00072) | ND (0.00067) | ND (0.00067) | ND (0.00069) | ND (0.00073) |
| gamma-BHC (Lindane) | mg/kg | 0.1 | 0.28 | 1.3 | ND (0.00057) | ND (0.00058) | ND (0.00054) | ND (0.00055) | ND (0.00056) | ND (0.00052) | ND (0.00051) | ND (0.00053) | ND (0.00056) |
| alpha-Chlordane | mg/kg | 0.094 | 0.91 | 4.2 | ND (0.00063) | ND (0.00063) | ND (0.00059) | ND (0.00060) | ND (0.00061) | 0.0013 [a] | 0.00058 J [a] | 0.0024 | 0.0013 [a] |
| gamma-Chlordane | mg/kg | - | 0.54 | | ND (0.00035) | ND (0.00036) | ND (0.00033) | ND (0.00034) | ND (0.00034) | ND (0.00032) | ND (0.00032) | 0.00069 J [a] | ND (0.00034) |
| Dieldrin | mg/kg | 0.005 | 0.039 | 0.2 | ND (0.00053) | ND (0.00054) | ND (0.00050) | 0.0047 | ND (0.00052) | 0.0018 | 0.0015 | 0.0028 | 0.0021 |
| 4,4'-DDD | mg/kg | 0.0033 | 2.6 | 13 | 0.0019 | 0.0013 [a] | 0.00080 [a] | 0.0032 [a] | ND (0.00069) | 0.0014 | 0.00085 | 0.0015 [a] | 0.0016 [a] |
| 4,4'-DDE | mg/kg | 0.0033 | 1.8 | 8.9 | **0.0062** | 0.0021 | 0.00098 [a] | ND (0.00065) | 0.0028 | 0.0015 | 0.0009 | 0.0012 | 0.0014 |
| 4,4'-DDT | mg/kg | 0.0033 | 1.7 | 7.9 | **0.0062** | **0.0045** | 0.0016 | 0.0017 | **0.0058** | **0.0094** | **0.0063** | **0.0044** | 0.0028 |
| Endrin | mg/kg | 0.014 | 2.2 | 11 | ND (0.00060) | ND (0.00061) | ND (0.00057) | ND (0.00058) | ND (0.00059) | ND (0.00055) | ND (0.00054) | ND (0.00056) | ND (0.00059) |
| Endosulfan sulfate | mg/kg | 2.4 | 4.8 | 24 | ND (0.00061) | ND (0.00061) | ND (0.00057) | ND (0.00058) | ND (0.00059) | ND (0.00055) | ND (0.00054) | ND (0.00056) | ND (0.00059) |
| Endrin aldehyde | mg/kg | - | - | - | ND (0.00044) | ND (0.00045) | ND (0.00041) | ND (0.00042) | ND (0.00043) | ND (0.00040) | ND (0.00039) | ND (0.00041) | ND (0.00043) |
| Endosulfan-I | mg/kg | 2.4 | 4.8 | 24 | ND (0.00045) | ND (0.00045) | ND (0.00042) | ND (0.00043) | ND (0.00043) | ND (0.00040) | ND (0.00040) | ND (0.00041) | ND (0.00044) |
| Endosulfan-II | mg/kg | 2.4 | 4.8 | 24 | ND (0.00048) | ND (0.00049) | ND (0.00046) | ND (0.00046) | ND (0.00047) | ND (0.00044) | ND (0.00043) | ND (0.00045) | ND (0.00047) |
| Heptachlor | mg/kg | 0.042 | 0.42 | 2.1 | ND (0.00067) | ND (0.00068) | ND (0.00063) | ND (0.00064) | ND (0.00065) | ND (0.00060) | ND (0.00060) | ND (0.00062) | ND (0.00065) |
| Heptachlor epoxide | mg/kg | - | 0.077 | | ND (0.00054) | ND (0.00055) | ND (0.00051) | ND (0.00052) | ND (0.00053) | ND (0.00049) | ND (0.00049) | ND (0.00050) | ND (0.00053) |
| Methoxychlor | mg/kg | - | 100 | | ND (0.00062) | ND (0.00062) | ND (0.00058) | ND (0.00059) | ND (0.00060) | ND (0.00056) | ND (0.00055) | ND (0.00057) | ND (0.00060) |
| Endrin ketone | mg/kg | - | - | - | ND (0.00056) | ND (0.00057) | ND (0.00053) | ND (0.00054) | ND (0.00055) | ND (0.00051) | ND (0.00050) | ND (0.00052) | ND (0.00055) |
| Toxaphene | mg/kg | - | - | - | ND (0.018) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.018) | ND (0.016) | ND (0.016) | ND (0.017) | ND (0.018) |
| **GC/LC Semi-volatiles (SW846 8082A)** | | | | | | | | | | | | | |
| Aroclor 1016 | mg/kg | 0.1 | 1 | 1 | ND (0.018) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.018) | ND (0.016) | ND (0.016) | ND (0.017) | ND (0.018) |

Table 3
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Aroclor 1221 | mg/kg | 0.1 | 1 | 1 | ND (0.024) | ND (0.024) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.022) | ND (0.022) | ND (0.022) | ND (0.023) |
| Aroclor 1232 | mg/kg | 0.1 | 1 | 1 | ND (0.025) | ND (0.024) | ND (0.023) | ND (0.024) | ND (0.024) | ND (0.022) | ND (0.022) | ND (0.023) | ND (0.024) |
| Aroclor 1242 | mg/kg | 0.1 | 1 | 1 | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.014) | ND (0.014) | ND (0.015) | ND (0.016) |
| Aroclor 1248 | mg/kg | 0.1 | 1 | 1 | ND (0.035) | ND (0.034) | ND (0.033) | ND (0.033) | ND (0.034) | ND (0.031) | ND (0.031) | ND (0.032) | ND (0.034) |
| Aroclor 1254 | mg/kg | 0.1 | 1 | 1 | ND (0.021) | ND (0.020) | ND (0.020) | ND (0.020) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.020) |
| Aroclor 1260 | mg/kg | 0.1 | 1 | 1 | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.016) |
| Aroclor 1268 | mg/kg | 0.1 | 1 | 1 | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.016) |
| Aroclor 1262 | mg/kg | 0.1 | 1 | 1 | ND (0.025) | ND (0.025) | ND (0.024) | ND (0.024) | ND (0.025) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.025) |
| **Metals Analysis** | | | | | | | | | | | | | |
| Aluminum | mg/kg | - | | | 14600 | 13300 | 10300 | 12600 | 12900 | 12100 | 10600 | 11300 | 14400 |
| Antimony | mg/kg | - | | | <2.3 | <2.4 | <2.3 | <2.1 | <4.5 [b] | <12 [b] | <2.1 | <2.2 | <2.2 |
| Arsenic | mg/kg | 13 | 16 | 16 | 6.3 | 6.7 | 8.5 | 6.6 | 9.5 | 8 | 5.2 | 6.4 | 6.6 |
| Barium | mg/kg | 350 | 350 | 400 | 161 | 161 | **480** | 217 | **351** | **2080** | 166 | 127 | 199 |
| Beryllium | mg/kg | 7.2 | 14 | 72 | 0.64 | 0.65 | 0.57 | 0.61 | 0.64 | 0.79 | 0.7 | 0.56 | 0.63 |
| Cadmium | mg/kg | 2.5 | 2.5 | 4.3 | <0.57 | <0.61 | 0.65 | <0.54 | <0.56 | <3.0 [b] | <0.53 | <0.54 | <0.56 |
| Calcium | mg/kg | - | | | 3660 | 34300 | 23200 | 17900 | 18200 | 31700 | 15400 | 24700 | 13700 |
| Chromium | mg/kg | - | - | - | 21.1 | 22.7 | 18 | 18.5 | 20.7 | 29.4 | 27.9 | 21.1 | 26.9 |
| Cobalt | mg/kg | - | 30 | | 7.8 | 7.4 | 5.8 | 6.5 | 8.3 | 6.5 | 6.7 | 7.2 | 7.7 |
| Copper | mg/kg | 50 | 270 | 270 | **68.6** | **62.1** | **81.9** | 47.6 | **67.2** [b] | **126** [b] | 49.5 | **50.1** | **54.3** |
| Iron | mg/kg | - | 2000 | | **20200** | **20800** | **15200** | **17000** | **22500** | **35900** | **19300** | **18000** | **20700** |
| Lead | mg/kg | 63 | 400 | 400 | **277** | **384** | **535** | **241** | **241** [b] | **462** [b] | **148** | **209** | **270** |
| Magnesium | mg/kg | - | - | - | 2730 | 5990 | 7800 | 3570 | 3840 | 5370 | 4120 | 5320 | 4340 |
| Manganese | mg/kg | 1600 | 2000 | 2000 | 341 | 496 | 380 | 319 | 377 [b] | 394 [b] | 415 | 382 | 365 |
| Mercury | mg/kg | 0.18 | 0.81 | 0.81 | **0.45** | **0.34** | **0.83** | **0.34** | **0.35** | **0.41** | 0.11 | **0.35** | **0.24** |
| Nickel | mg/kg | 30 | 140 | 310 | 17.1 | 18.6 | 16.9 | 16.3 | 18.6 | 22.4 | 17.5 | 20.6 | 18.5 |
| Potassium | mg/kg | - | - | - | <1100 | 1210 | <1100 | <1100 | <1100 | 1210 | 1150 | 1110 | 1120 |
| Selenium | mg/kg | 3.9 | 36 | 180 | <2.3 | <2.4 | <2.3 | <2.1 | <4.5 [b] | <12 [b] | <2.1 | <2.2 | <2.2 |
| Silver | mg/kg | 2 | 36 | 180 | 0.7 | 0.92 | 0.85 | 0.72 | <1.1 [b] | <3.0 [b] | 0.7 | 0.63 | 0.82 |
| Sodium | mg/kg | - | - | - | <1100 | <1200 | <1100 | <1100 | <1100 | <1200 | <1100 | <1100 | <1100 |
| Thallium | mg/kg | - | | | <1.1 | <1.2 | <1.1 | <1.1 | <2.3 [b] | <6.0 [b] | <1.1 | <1.1 | <1.1 |
| Vanadium | mg/kg | - | 100 | | 34.9 | 33.3 | 24.4 | 26.3 | 27.2 | 34.7 | 29.9 | 30.6 | 32.9 |
| Zinc | mg/kg | 109 | 2200 | 10000 | **180** | **158** | **337** | **188** | **216** | **807** | **150** | **130** | **163** |
| **General Chemistry** | | | | | | | | | | | | | |
| Solids, Percent | % | - | - | - | 85.8 | 82.5 | 87 | 89 | 87.7 | 88.4 | 91 | 89.2 | 85.1 |

**Footnotes:**

[a] More than 40 % RPD for detected concentrations between the two GC columns.

[b] Elevated detection limit due to dilution required for high interfering element.

**Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. SGS assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.**

# APPENDIX E-4

## Remedial Action Work Plan

equity environmental engineering
WORKING TOGETHER TO DESIGN SOLUTIONS
500 International Drive, Suite 150, Mount Olive, NJ 07828
4 World Trade Center, Suite 2963, New York, NY 10007
www.equityenvironmental.com

## REMEDIAL ACTION WORKPLAN AND REMEDIAL DEISGN

# 448 Park Avenue Rezoning

**Subject Property Adderss: 446-448 Park Avenue, Brooklyn, NY 11205**
**Subject Property Block: 1898 Lots: 37 and 38**
**Prepared For: Yoel Horowitz**

**CEQR Reference Number:**
**21DCP094K**

**Prepared by:**
**Equity Environmental Engineering**

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# 1 BACKGROUND

The Subject Property is located at 446-448 Park Avenue (Block 1898/Lots 37 and 38) in the Bedford Stuyvesant Neighborhood of Brooklyn, New York, Community District 3. Figure 1 shows the Site location and Figure 2 shows the property boundary. The Subject Property is in an area comprised of commercial and residential uses. The Subject Property is 3,256 square feet in size and was purchased by 446-448 Park Realty Corp. in 2014. Lots 37 and 38, which comprise 3,256-sf, are currently used as an unlicensed parking lot.

The Proposed Development Plan seeks a zoning map amendment from a M1-1 to a MX M1-4/R6A District to include a zoning text amendment to designate the Block as a Mandatory Inclusionary Housing Area (MIHA), requiring up to 30% of all residential units to be made affordable. The zoning actions sought are to support 446-448 Park Realty's proposal to build a six-story, residential building with 11 units on Lots 37 and 38.

The Phase I ESA completed on January 13, 2015, by Equity Environmental Engineering (Equity) identified one REC on the Subject Property:

> Staining/corrosion: small areas of stained soil were identified on the Subject Property in various locations. Equity concluded that further investigation was required based on the REC associated with the Subject Property. Review of the Radius Map Report identified Manhole 803 located on the Subject Property which had a 1-gallon petroleum spill. The spill date is listed as February 1, 2001. Approximately 150 feet northeast of the Subject Property at 465 Park Avenue, is a NJ Manifest site and a generator of hazardous waste. The site generates 100 kg or less of hazardous waste per month. At approximately 50 feet to the west of the Subject Property, a used auto sales location has existed since 1991, according to the Sanborn Fire Insurance Maps.

The Phase II Site Investigation was completed on December 22, 2021, by Equity and consisted of the installation of four soil borings and four soil vapor points. Groundwater was not encountered to a depth of approximately 30 feet bgs, and therefore, no wells were installed or groundwater samples collected.

## 2 PHASE II SITE INVESTIGATION

The Phase II Site Investigation was completed on December 22, 2021, by Equity Environmental Engineering LLC and consisted of the installation of four soil borings and four soil vapor points. Equity performed the following scope of work at the Subject Property:

1. Installed four soil borings on the Subject Property and collected nine soil samples (eight samples, one duplicate) for chemical analysis to evaluate soil quality.

2. Installed four soil vapor points on the Subject Property and collected four soil vapor samples for chemical analysis to evaluate soil vapor quality.

On December 22, 2021, Equity personnel and ADT installed and sampled four soil borings designated SB-1, SB-2, SB-3, and SB-4. Soil boring locations are shown in Figure 3. Equity provided oversight of the soil boring installation, logged the soil cuttings, and collected the necessary environmental samples. The borings were advanced onsite using a direct-push drill rig and 2-inch diameter cores in 5-foot intervals and collected in acetate sleeves. The borings were advanced to 30 feet below grade surface (bgs) to determine the presence of groundwater. Groundwater was not encountered across the Subject Property.

As the soil was retrieved, the following soil characteristics were determined: soil lithology, color, and presence of staining or odors were described and classified. The borings were screened using visual and olfactory senses, and a Photo-Ionization Detector (PID) to detect for the presence of Volatile Organic Compounds (VOCs).

Two soil samples were collected from each boring. The first sample was collected from the top 0 – 2-foot interval of the boring. The second sample was collected from the 10-12-foot interval. One field blank and one duplicate were collected for QA/QC (quality assurance/quality control) purposes. The soil samples were analyzed for the following parameters:

- TCL (Target Compound List) VOCs by EPA Method 8260
- SVOCs (Semi-Volatile Organic Compounds) (SVOCs) by EPA Method 8270
- Pesticides and PCBs (Polychlorinated biphenyls) by EPA Methods 8081/8082
- TAL (Target Analyte List) metals by EPA Method 6020

Soil samples were placed in laboratory-supplied containers, preserved with ice, and submitted under chain-of-custody procedures to the contract laboratory for analysis. All samples were shipped to a laboratory certified in the New York State Department of Health (DOH) Environmental Laboratory Analysis Program (ELAP). Upon completion of the analyses, Category B data deliverables were provided.

On December 22, 2021, Equity personnel and drilling contractor Aquifer Drilling and Testing Inc. (ADT) installed and sampled four soil vapor points designated SG-1, SG-2, SG-3, and SG-4. Soil vapor sampling locations are shown in Figure 3.

The soil vapor sampling points were driven using a direct-push drill rig to approximately 10-feet below grade surface (bgs) and properly filled with sand and grouted to surface grade in accordance with New York State Department of Health (DOH) requirements. Helium was used as a tracer vapor to ensure a proper seal before collecting the sample. Two-hour air samples were collected in 2.7-Liter summa canisters for TO-15 analysis at each location. Upon completion of the sampling, the tubing was removed from the ground.

All samples were collected in a laboratory-supplied, stainless-steel, summa canisters and submitted under chain-of-custody procedures to Alpha Analytical Laboratories, a DOH Environmental laboratory Approval Program (ELAP) certified laboratory, for analysis under TO-15 VOC parameters. Upon completion of the analyses, Category B data deliverables were provided. Methodologies used for soil vapor assessment conform to the New York State Dept. of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion, October 2006 and 2017 revisions.

## 2.1 Analytical Results

**Soil**

There were six different VOCs detected in the soil samples with no exceedances above any of the soil criteria. The VOCs detected included Acetone, 2-Butanone (MEK), ethylbenzene, PCE, m,p-Xylene, 0-Xylene, Xylene (total), and Toluene. The only VOC detected in SB-2 was PCE with an estimated concentration of 0.00072 mg/kg. Ethylbenzene was detected in SB-1 (0-2') and SB-1 (10-12') with a maximum concentration of 0.0016 mg/kg. Acetone was detected in every soil boring except for SB-2; the maximum concentration detected was 0.0484 mg/kg. Acetone is a known laboratory contaminant. 2-Butanone (MEK) was detected in SB3-301 (10-12'), SB-4 (0-2'), and SB-4 (10-12') with a maximum estimated concentration of 0.0042 mg/kg. Xylene was detected in every soil boring except for SB-2. The maximum concentration of m,p-Xylene was 0.0086 mg/kg. The maximum concentration of o-Xylene was 0.00096 mg/kg, and the maximum concentration of m,p-Xylene 0.0128 was mg/kg.

SVOCs were more prominent in the samples with detections of 23 SVOCs with two exceedances. Exceedances above the Unrestricted Use, Residential, and Restricted Residential Use criteria were detected in sample SB-2 (10-12'). The SVOCs with exceedances included Benzo(b)fluoranthene (maximum of 1.01 mg/kg) and Indeno(1,2,3-cd)pyrene (maximum of 0.676 mg/kg).

A total of six different pesticides were detected in which two of them had exceedances. The two Unrestricted exceedances included 4,4'-DDE (maximum of 0.0062 mg/kg) and 4,4'-DDT (maximum of 0.0094 mg/kg). 4,4'-DDT exceeded the Unrestricted Use Criteria in every soil sample, except for SB-3(0-2') and SB-3(10-12'). 4,4'DDE exceeded the Unrestricted Use Criteria only in SB-1 (0-2'). The other pesticides detected include 4,4'DDD (maximum of 0.00085 ug/$m^3$), Dieldrin (maximum of 0.0047 ug/$m^3$), gamma-Chlordane (maximum expected concentration of 0.00069 ug/$m^3$), and alpha Chlordane (maximum of 0.0024 ug/$m^3$).

No PCBs were detected in the samples.

A total of 19 metals were detected in all samples collected with six of them in exceedance of the applicable criteria. Metals that were in exceedance of all criteria in at least one sample include Barium (maximum of 480 mg/kg, sample SB-3 (0-2')), Lead (maximum of 535 mg/kg, sample SB-3 (0-2')), and Mercury (0.83 mg/kg, sample SB-3 (0-2')). Exceedances were detected in other samples, but SB-3 (0-2') was the only sample that exceeded all criterion for each of those three metals. The metal in exceedance of just the Residential Use Criteria was Iron (maximum of 20,800 mg/kg). The metals that were in exceedance of just the Unrestricted Use Criteria included Copper (maximum of 81.9 mg/kg), and Zinc (maximum of 807 mg/kg). Iron exceeded the Restricted Residential Criteria in all samples with a maximum concentration of 35,900 mg/kg. The full analytical results are presented in Table 1.

**Soil Vapor**

The soil vapor samples (SG-1, SG-2, SG-3, and SG-4) contained numerous VOCs; however, there is no criterion in New York to directly compare soil vapor results to. Therefore, soil vapor assessment methodologies conform to the NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006, revised 2017. All results were compared to Table 3.1 – Air Guidelines Values derived by the NYSDOH. Tetrachloroethene (PCE), and Trichloroethene (TCE) were detected in the soil vapor and sub-slab samples. PCE was detected at concentrations ranging from 24 ug/$m^3$ to

102 ug/$m^3$ and TCE was detected at concentrations ranging from 0.86 ug/$m^3$ to 3.8 ug/$m^3$. PCE and TCE exceeded their Table 3.1 air guideline values of 30 ug/$m^3$ and 2 ug/$m^3$, respectively. Methylene chloride did not exceed the Table 3.1 air guideline value of 60 ug/$m^3$; the maximum concentration detected was 4.9 ug/$m^3$. The analytical results are presented in Table 2.

Concentrations of total benzene (maximum of 10 ug/$m^3$), toluene (maximum of 52 ug/$m^3$), ethylbenzene (maximum of 5.2 ug/m3), total xylenes (maximum of 23 ug/$m^3$), collectively known as BTEX and Tertiary Butyl alcohol (TBA) (maximum of 17 ug/$m^3$) are indicative of the presence of petroleum-related materials. The analytical results are presented in Table 2.

# 3 REMEDIAL ACTION WORK PLAN

The following tasks comprise the Remedial Action Work Plan:

1. The preparation of a (CHASP) Construction Health and Safety Plan for the protection of onsite workers during construction (Appendix C).
2. Waste Classification soil sampling will be required for offsite soil disposal approvals.
3. Review of the onsite soil excavation plans, to determine depths of excavation and applicable T&D (Transportation and Disposal) facilities for offsite disposal for soil spoils created during construction activities on the Subject Property.
4. A vapor barrier will be designed and installed under the proposed building slab and on the sidewalls of the foundation. The vapor barrier, W.R. Grace Florprufe 120 or an approved equivalent, will be designed in conjunction with the proposed building architect and be at least 20 mils thick. A geosynthetic liner or 2-inch-thick foam core will be placed between the sub-grade and the vapor barrier. The barrier will be installed under the entire slab and be anchored into the foundation walls. A cross section of the vapor barrier is shown on Figure 4. The seams will overlap as required by the vendor and taped. Pipe penetrations will be sealed with liquid

Bithuthene or equivalent. Specifications of the proposed barrier shall be forwarded to the DEP for review and approval prior to construction. Specifications are provided in Appendix B.

5. Contaminated soil from within the proposed building footprint will be excavated to the extent necessary for construction with proper disposal at an offsite disposal facility. Approximately 1,350 tons of soil will be excavated from the site. The excavation area is shown on Figure 5.

6. During the soil excavation and or movement onsite, a Community Air Monitoring Program (CAMP) will be implemented to monitor the site for potential offsite migration of dust and volatile organic emissions for the soil. The program is in accordance with the NYSDEC Division of Environmental Remediation DER-10. The CAMP will consist of upwind and downwind monitoring stations onsite with preset limits above which alarms will be triggered for mitigative measures to be taken. The details of the CAMP are provided in Appendix A.

7. The CAMP data will be provided to the DEP in periodic construction reports.

8. Should visual observations and or the CAMP monitors indicate that there is a dust problem, water will be available to spray the appropriate areas. In addition, the activity that caused the dust will be modified as appropriate to prevent further occurrences. Soil stockpiles, if any, will be covered when not in use and at the end of each day they are onsite. A tracking pad will be established at the site entrance to minimize the offsite transport of soil on truck tires.

9. Trucks transporting excavated soil offsite will be logged using the truck number if any, license plate, manifest of bill of lading, company name, and destination, at a minimum.

## 3.1 Soils Excavation & Soils Management

If the soil is stockpiled onsite, it will be done on and covered with plastic sheeting. This includes any petroleum contaminated soil if observed onsite.

The excavated material shall be properly handled, transported, and disposed of in accordance with applicable local, state, and federal laws and regulations. Dust suppression will be maintained by the contractor during soil excavation and grading operations.

Should any USTs (Underground Storage Tanks) or ASTs (Above ground Storage Tanks) (including dispensers, piping, and fill-ports) be found during the site excavation they will be properly managed and closed/removed in accordance with applicable local, state, and federal laws and regulations.

Although not anticipated, should site dewatering and discharge into New York City storm/sewer drains be required, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained prior to the start of any dewatering activities.

**Backfill**

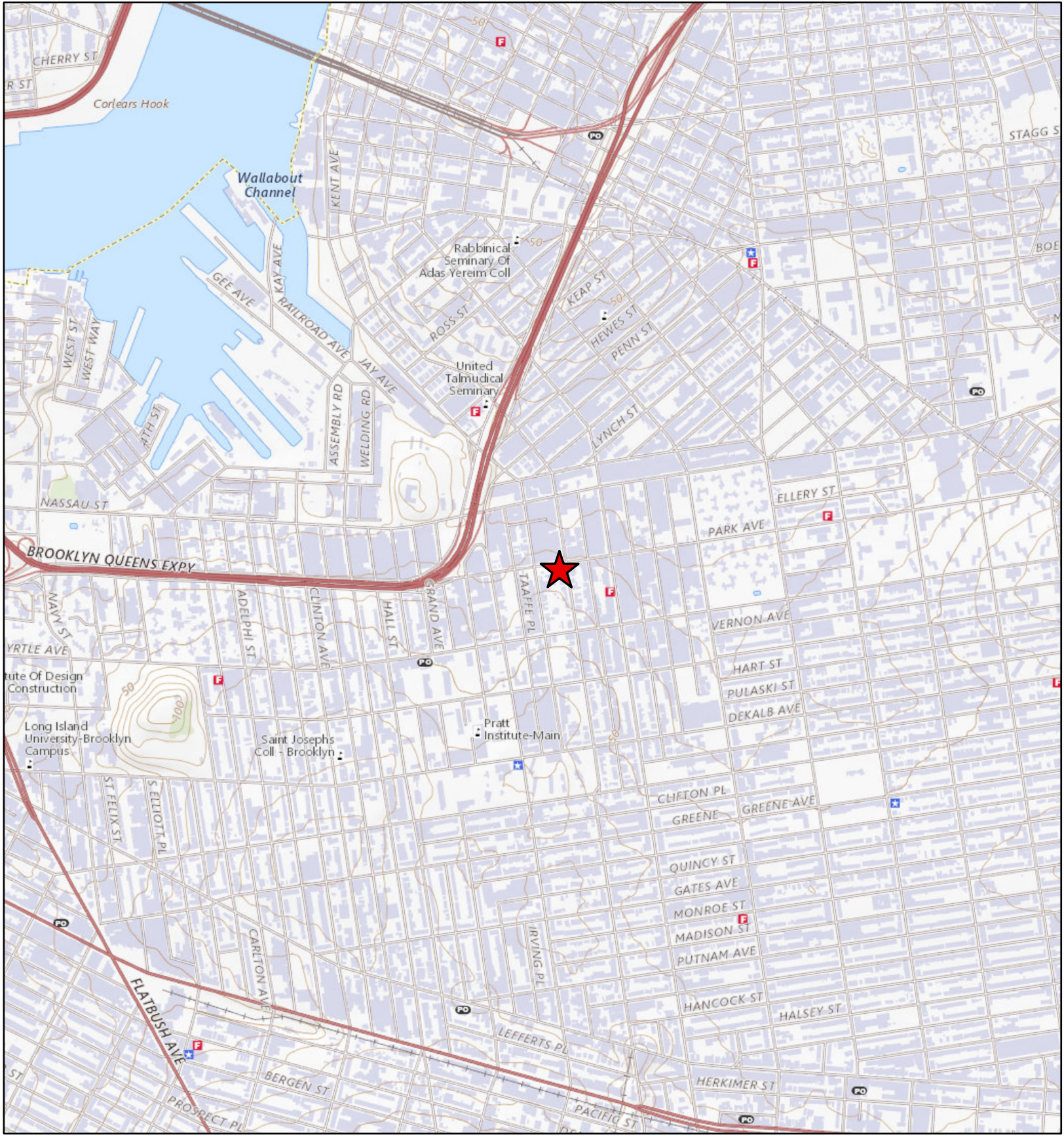
Any areas of the site to be landscaped or covered with grass (not capped with an impervious surface) must have a minimum of 2-feet of DEP approved clean fill/top soil imported from an approved facility/source and graded across the landscaped/grass areas. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, and TAL metals by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory, and compared to the NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs. Upon completion of the investigation activities, the applicant should submit a detailed clean soil report for DEP review and approval. The report should include, at a minimum, an executive summary, narrative of

the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

# 4 REMEDIAL CLOSURE REPORT

Upon completion of the activities in this RAP, a RCR will be prepared and certified by a NY licensed P.E. and submitted to the DEP. The RCR will demonstrate that the various remedial requirements have been properly implemented and provide the required documentation. The report will include any deviations from the RAP based on changed conditions and/or construction issues.

**FIGURES**




# Legend

448 Park Avenue

N

0 0.15 0.3 0.6 Miles

**Figure 1**
**Remedial Investigation Report**
**USGS Site Location Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/12.23.21 | | 2019101-01 |




## Legend

448 Park Avenue

N

0 12.5 25 50 US Feet

**Figure 2**
**Remedial Investigation Report**
**Site Boundary Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
| GB/12.23.21 | | 2019101-02 |




## Legend

- 448 Park Avenue
- Soil Gas Point
- Soil Boring

N

0 5 10 20 US Feet

**Figure 3**
**Remedial Investigation Report**
**Sample Location Map**

448 Park Avenue
Brooklyn, New York

equity environmental engineering
4 World Trade Center New York, NY 10007
Office: (973) 527-7451 / Fax: (973) 858-0280

| DRAWN BY / DATE | REV / DATE | DRAWING NUMBER |
|---|---|---|
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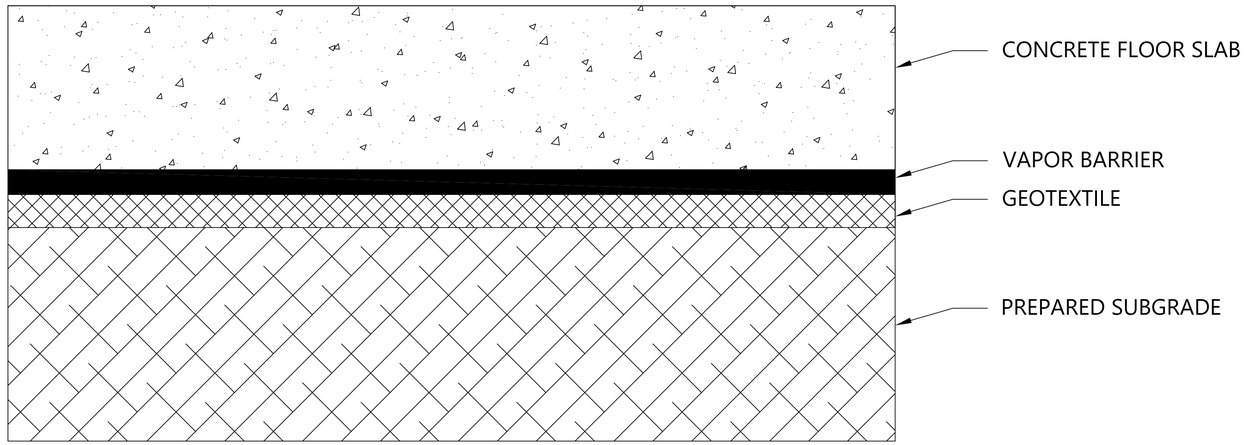


# TYPICAL VAPOR BARRIER CROSS-SECTION DETAIL

VAPOR BARRIER NOTES:

1. VAPOR BARRIER MUST BE AT LEAST 20-MIL THICK

PREPARED BY:

equity environmental engineering

Equity Environmental Engineering LLC
4 WORLD TRADE CENTER, SUITE 2963
NEW YORK, NY 10006
500 INTERNATIONAL DRIVE, SUITE 150
MOUNT OLIVE, NJ 07828
PHONE: (973)527-7451
EMAIL: INFO@EQUITYENVIRONMENTAL.COM
WEB: WWW.EQUITYENVIRONMENTAL.COM

CLIENT:

PH:
FAX:
ATTN:
EMAIL:

STATEMENT:
IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER/ARCHITECT, TO ALTER IN ANY WAY, ANY ITEM ON THESE DRAWINGS. IF AN ITEM BEARING THE SEAL OF AN ENGINEER/ARCHITECT IS ALTERED, THE ALTERING ENGINEER/ARCHITECT SHALL AFFIX TO THIS ITEM THEIR SEAL AND THE NOTATION "ALTERED BY", FOLLOWED BY HIS/HER SIGNATURE AND THE DATE OF SUCH ALTERATION, ALONG WITH A SPECIFIC DESCRIPTION OF THE ALTERATION ON THE DRAWING.

| NO. | DATE | DESCRIPTION |
|---|---|---|
| 1 | 2/9/22 | SCHEMATIC DRAWINGS |
| | | |
| | | |
| | | |
| | | |
| | | |

FIGURE 4:

REMEDIAL ACTION WORKPLAN
448 PARK AVENUE
BROOKLYN, NY 11205

| | | |
|---|---|---|
| DESIGN BY: | | 2/9/22 |
| DRAWN BY: | MG | 2/9/22 |
| CHECKED BY: | | |
| FINAL CK BY: | | |



PROJECT NO.:
2019101

DRAWING TITLE:
VAPOR BARRIER DETAIL

DRAWING NO.:
AA-000.00

ENGINEER SEAL:
PRELIMINARY

B-SCAN:

DOB STAMP:

# TABLES

Table 1
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| **MS Volatiles (SW846 8260D)** | | | | | | | | | | | | | |
| Acetone | mg/kg | 0.05 | 100 | 100 | ND (0.0046) | 0.0051 J | 0.0106 | 0.0058 J | 0.019 | 0.0484 | 0.0175 | ND (0.0040) | ND (0.0043) |
| Benzene | mg/kg | 0.06 | 2.9 | 4.8 | ND (0.00050) | ND (0.00048) | ND (0.00047) | ND (0.00041) | ND (0.00041) | ND (0.00049) | ND (0.00038) | ND (0.00044) | ND (0.00047) |
| Bromochloromethane | mg/kg | - | - | - | ND (0.00062) | ND (0.00060) | ND (0.00057) | ND (0.00051) | ND (0.00051) | ND (0.00060) | ND (0.00047) | ND (0.00054) | ND (0.00058) |
| Bromodichloromethane | mg/kg | - | - | - | ND (0.00047) | ND (0.00046) | ND (0.00044) | ND (0.00039) | ND (0.00039) | ND (0.00046) | ND (0.00036) | ND (0.00041) | ND (0.00044) |
| Bromoform | mg/kg | - | - | - | ND (0.0015) | ND (0.0014) | ND (0.0014) | ND (0.0012) | ND (0.0012) | ND (0.0015) | ND (0.0011) | ND (0.0013) | ND (0.0014) |
| Bromomethane | mg/kg | - | - | - | ND (0.00084) | ND (0.00081) | ND (0.00078) | ND (0.00069) | ND (0.00069) | ND (0.00082) | ND (0.00065) | ND (0.00074) | ND (0.00079) |
| 2-Butanone (MEK) | mg/kg | 0.12 | 100 | 100 | ND (0.0027) | ND (0.0026) | ND (0.0025) | ND (0.0022) | 0.0026 J | 0.0042 J | 0.0033 J | ND (0.0023) | ND (0.0025) |
| Carbon disulfide | mg/kg | - | 100 | | ND (0.00059) | ND (0.00057) | ND (0.00055) | ND (0.00048) | ND (0.00048) | ND (0.00057) | ND (0.00045) | ND (0.00052) | ND (0.00055) |
| Carbon tetrachloride | mg/kg | 0.76 | 1.4 | 2.4 | ND (0.00068) | ND (0.00066) | ND (0.00063) | ND (0.00056) | ND (0.00056) | ND (0.00066) | ND (0.00052) | ND (0.00060) | ND (0.00064) |
| Chlorobenzene | mg/kg | 1.1 | 100 | 100 | ND (0.00050) | ND (0.00049) | ND (0.00047) | ND (0.00042) | ND (0.00042) | ND (0.00049) | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Chloroethane | mg/kg | - | | | ND (0.00065) | ND (0.00063) | ND (0.00061) | ND (0.00054) | ND (0.00053) | ND (0.00063) | ND (0.00050) | ND (0.00057) | ND (0.00061) |
| Chloroform | mg/kg | 0.37 | 10 | 49 | ND (0.00057) | ND (0.00055) | ND (0.00053) | ND (0.00047) | ND (0.00047) | ND (0.00055) | ND (0.00044) | ND (0.00050) | ND (0.00053) |
| Chloromethane | mg/kg | - | - | - | ND (0.0022) | ND (0.0021) | ND (0.0020) | ND (0.0018) | ND (0.0018) | ND (0.0021) | ND (0.0017) | ND (0.0019) | ND (0.0020) |
| Cyclohexane | mg/kg | - | - | - | ND (0.00072) | ND (0.00070) | ND (0.00067) | ND (0.00060) | ND (0.00059) | ND (0.00070) | ND (0.00056) | ND (0.00063) | ND (0.00068) |
| 1,2-Dibromo-3-chloropropane | mg/kg | - | - | - | ND (0.00076) | ND (0.00074) | ND (0.00071) | ND (0.00063) | ND (0.00063) | ND (0.00074) | ND (0.00059) | ND (0.00067) | ND (0.00072) |
| Dibromochloromethane | mg/kg | - | | | ND (0.00062) | ND (0.00060) | ND (0.00057) | ND (0.00051) | ND (0.00051) | ND (0.00060) | ND (0.00047) | ND (0.00054) | ND (0.00058) |
| 1,2-Dibromoethane | mg/kg | - | - | - | ND (0.00046) | ND (0.00045) | ND (0.00043) | ND (0.00038) | ND (0.00038) | ND (0.00045) | ND (0.00036) | ND (0.00041) | ND (0.00043) |
| 1,2-Dichlorobenzene | mg/kg | 1.1 | 100 | 100 | ND (0.00060) | ND (0.00058) | ND (0.00056) | ND (0.00049) | ND (0.00049) | ND (0.00058) | ND (0.00046) | ND (0.00053) | ND (0.00056) |
| 1,3-Dichlorobenzene | mg/kg | 2.4 | 17 | 49 | ND (0.00055) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| 1,4-Dichlorobenzene | mg/kg | 1.8 | 9.8 | 13 | ND (0.00054) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| Dichlorodifluoromethane | mg/kg | - | - | - | ND (0.00080) | ND (0.00077) | ND (0.00075) | ND (0.00066) | ND (0.00066) | ND (0.00078) | ND (0.00061) | ND (0.00070) | ND (0.00075) |
| 1,1-Dichloroethane | mg/kg | 0.27 | 19 | 26 | ND (0.00054) | ND (0.00053) | ND (0.00051) | ND (0.00045) | ND (0.00045) | ND (0.00053) | ND (0.00042) | ND (0.00048) | ND (0.00051) |
| 1,2-Dichloroethane | mg/kg | 0.02 | 2.3 | 3.1 | ND (0.00052) | ND (0.00050) | ND (0.00048) | ND (0.00043) | ND (0.00043) | ND (0.00050) | ND (0.00040) | ND (0.00045) | ND (0.00048) |
| 1,1-Dichloroethene | mg/kg | 0.33 | 100 | 100 | ND (0.00072) | ND (0.00070) | ND (0.00067) | ND (0.00059) | ND (0.00059) | ND (0.00070) | ND (0.00055) | ND (0.00063) | ND (0.00068) |
| cis-1,2-Dichloroethene | mg/kg | 0.25 | 59 | 100 | ND (0.00092) | ND (0.00089) | ND (0.00086) | ND (0.00076) | ND (0.00076) | ND (0.00090) | ND (0.00071) | ND (0.00081) | ND (0.00087) |
| trans-1,2-Dichloroethene | mg/kg | 0.19 | 100 | 100 | ND (0.00067) | ND (0.00065) | ND (0.00063) | ND (0.00055) | ND (0.00055) | ND (0.00065) | ND (0.00052) | ND (0.00059) | ND (0.00063) |
| 1,2-Dichloropropane | mg/kg | - | | | ND (0.00052) | ND (0.00050) | ND (0.00049) | ND (0.00043) | ND (0.00043) | ND (0.00050) | ND (0.00040) | ND (0.00046) | ND (0.00049) |
| cis-1,3-Dichloropropene | mg/kg | - | - | - | ND (0.00052) | ND (0.00051) | ND (0.00049) | ND (0.00043) | ND (0.00043) | ND (0.00051) | ND (0.00040) | ND (0.00046) | ND (0.00049) |
| trans-1,3-Dichloropropene | mg/kg | - | - | - | ND (0.00050) | ND (0.00049) | ND (0.00047) | ND (0.00041) | ND (0.00041) | ND (0.00049) | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Ethylbenzene | mg/kg | 1 | 30 | 41 | 0.0011 | 0.0016 | ND (0.00046) | ND (0.00041) | ND (0.00041) | ND (0.00048) | ND (0.00038) | ND (0.00044) | ND (0.00047) |
| Freon 113 | mg/kg | - | 100 | | ND (0.0029) | ND (0.0028) | ND (0.0027) | ND (0.0024) | ND (0.0024) | ND (0.0028) | ND (0.0023) | ND (0.0026) | ND (0.0028) |
| 2-Hexanone | mg/kg | - | - | - | ND (0.0023) | ND (0.0023) | ND (0.0022) | ND (0.0019) | ND (0.0019) | ND (0.0023) | ND (0.0018) | ND (0.0020) | ND (0.0022) |
| Isopropylbenzene | mg/kg | - | 100 | | ND (0.0016) | ND (0.0015) | ND (0.0015) | ND (0.0013) | ND (0.0013) | ND (0.0015) | ND (0.0012) | ND (0.0014) | ND (0.0015) |
| Methyl Acetate | mg/kg | - | - | - | ND (0.0015) | ND (0.0015) | ND (0.0014) | ND (0.0013) | ND (0.0013) | ND (0.0015) | ND (0.0012) | ND (0.0013) | ND (0.0014) |
| Methylcyclohexane | mg/kg | - | - | - | ND (0.00096) | ND (0.00093) | ND (0.00090) | ND (0.00079) | ND (0.00079) | ND (0.00093) | ND (0.00074) | ND (0.00085) | ND (0.00090) |
| Methyl Tert Butyl Ether | mg/kg | 0.93 | 62 | 100 | ND (0.00052) | ND (0.00050) | ND (0.00048) | ND (0.00042) | ND (0.00042) | ND (0.00050) | ND (0.00040) | ND (0.00045) | ND (0.00048) |
| 4-Methyl-2-pentanone(MIBK) | mg/kg | - | | | ND (0.0025) | ND (0.0024) | ND (0.0023) | ND (0.0021) | ND (0.0021) | ND (0.0024) | ND (0.0019) | ND (0.0022) | ND (0.0023) |
| Methylene chloride | mg/kg | 0.05 | 51 | 100 | ND (0.0029) | ND (0.0028) | ND (0.0027) | ND (0.0024) | ND (0.0024) | ND (0.0028) | ND (0.0022) | ND (0.0025) | ND (0.0027) |
| Styrene | mg/kg | - | | | ND (0.00044) | ND (0.00043) | ND (0.00041) | ND (0.00036) | ND (0.00036) | ND (0.00043) | ND (0.00034) | ND (0.00039) | ND (0.00041) |
| 1,1,2,2-Tetrachloroethane | mg/kg | - | 35 | | ND (0.00066) | ND (0.00064) | ND (0.00061) | ND (0.00054) | ND (0.00054) | ND (0.00064) | ND (0.00051) | ND (0.00058) | ND (0.00062) |
| Tetrachloroethene | mg/kg | 1.3 | 5.5 | 19 | ND (0.00064) | ND (0.00062) | ND (0.00060) | ND (0.00053) | ND (0.00052) | ND (0.00062) | ND (0.00049) | ND (0.00056) | 0.00072 J |
| Toluene | mg/kg | 0.7 | 100 | 100 | ND (0.00058) | ND (0.00056) | ND (0.00054) | ND (0.00048) | ND (0.00048) | ND (0.00056) | ND (0.00044) | ND (0.00051) | ND (0.00054) |
| 1,2,3-Trichlorobenzene | mg/kg | - | | | ND (0.0027) | ND (0.0027) | ND (0.0026) | ND (0.0023) | ND (0.0023) | ND (0.0027) | ND (0.0021) | ND (0.0024) | ND (0.0026) |
| 1,2,4-Trichlorobenzene | mg/kg | - | | | ND (0.0027) | ND (0.0027) | ND (0.0026) | ND (0.0023) | ND (0.0023) | ND (0.0027) | ND (0.0021) | ND (0.0024) | ND (0.0026) |
| 1,1,1-Trichloroethane | mg/kg | 0.68 | 100 | 100 | ND (0.00053) | ND (0.00051) | ND (0.00050) | ND (0.00044) | ND (0.00044) | ND (0.00052) | ND (0.00041) | ND (0.00047) | ND (0.00050) |
| 1,1,2-Trichloroethane | mg/kg | - | - | - | ND (0.00061) | ND (0.00059) | ND (0.00057) | ND (0.00050) | ND (0.00050) | ND (0.00059) | ND (0.00047) | ND (0.00054) | ND (0.00057) |
| Trichloroethene | mg/kg | 0.47 | 10 | 21 | ND (0.00084) | ND (0.00081) | ND (0.00078) | ND (0.00069) | ND (0.00069) | ND (0.00081) | ND (0.00064) | ND (0.00074) | ND (0.00079) |
| Trichlorofluoromethane | mg/kg | - | - | - | ND (0.00075) | ND (0.00073) | ND (0.00070) | ND (0.00062) | ND (0.00062) | ND (0.00073) | ND (0.00058) | ND (0.00066) | ND (0.00071) |
| Vinyl chloride | mg/kg | 0.02 | 0.21 | 0.9 | ND (0.00053) | ND (0.00051) | ND (0.00049) | ND (0.00044) | ND (0.00044) | ND (0.00051) | ND (0.00041) | ND (0.00046) | ND (0.00050) |
| m,p-Xylene | mg/kg | 0.26 | 100 | 100 | 0.0058 | 0.0086 | 0.0019 | 0.0013 | 0.0017 | 0.0019 | ND (0.00076) | ND (0.00087) | ND (0.00092) |
| o-Xylene | mg/kg | 0.26 | 100 | 100 | 0.0025 | 0.0042 | 0.00079 J | 0.00065 J | 0.00096 | 0.00094 J | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| Xylene (total) | mg/kg | 0.26 | 100 | 100 | 0.0083 | 0.0128 | 0.0027 | 0.002 | 0.0027 | 0.0028 | ND (0.00039) | ND (0.00044) | ND (0.00047) |
| **MS Semi-volatiles (SW846 8270E)** | | | | | | | | | | | | | |
| 2-Chlorophenol | mg/kg | - | 100 | | ND (0.019) | ND (0.040) | ND (0.037) | ND (0.036) | ND (0.036) | ND (0.036) | ND (0.017) | ND (0.036) | ND (0.019) |
| 4-Chloro-3-methyl phenol | mg/kg | - | - | - | ND (0.023) | ND (0.049) | ND (0.047) | ND (0.045) | ND (0.045) | ND (0.045) | ND (0.022) | ND (0.045) | ND (0.024) |
| 2,4-Dichlorophenol | mg/kg | - | 100 | | ND (0.032) | ND (0.068) | ND (0.065) | ND (0.063) | ND (0.063) | ND (0.063) | ND (0.030) | ND (0.062) | ND (0.033) |
| 2,4-Dimethylphenol | mg/kg | - | - | - | ND (0.068) | ND (0.14) | ND (0.14) | ND (0.13) | ND (0.13) | ND (0.13) | ND (0.062) | ND (0.13) | ND (0.070) |
| 2,4-Dinitrophenol | mg/kg | - | 100 | | ND (0.14) | ND (0.30) | ND (0.29) | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.13) | ND (0.27) | ND (0.15) |
| 4,6-Dinitro-o-cresol | mg/kg | - | - | - | ND (0.041) | ND (0.086) | ND (0.081) | ND (0.079) | ND (0.079) | ND (0.079) | ND (0.038) | ND (0.078) | ND (0.042) |
| 2-Methylphenol | mg/kg | 0.33 | 100 | 100 | ND (0.024) | ND (0.051) | ND (0.048) | ND (0.047) | ND (0.047) | ND (0.047) | ND (0.022) | ND (0.047) | ND (0.025) |
| 3&4-Methylphenol | mg/kg | - | - | - | ND (0.031) | ND (0.066) | ND (0.062) | ND (0.060) | ND (0.060) | ND (0.060) | ND (0.029) | ND (0.060) | ND (0.032) |
| 2-Nitrophenol | mg/kg | - | | | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| 4-Nitrophenol | mg/kg | - | | | ND (0.10) | ND (0.21) | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.094) | ND (0.19) | ND (0.10) |
| Pentachlorophenol | mg/kg | 0.8 | 2.4 | 6.7 | ND (0.036) | ND (0.075) | ND (0.071) | ND (0.069) | ND (0.069) | ND (0.069) | ND (0.033) | ND (0.068) | ND (0.037) |
| Phenol | mg/kg | 0.33 | 100 | 100 | ND (0.020) | ND (0.042) | ND (0.040) | ND (0.038) | ND (0.038) | ND (0.038) | ND (0.018) | ND (0.038) | ND (0.020) |
| 2,3,4,6-Tetrachlorophenol | mg/kg | - | - | - | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| 2,4,5-Trichlorophenol | mg/kg | - | 100 | | ND (0.028) | ND (0.060) | ND (0.057) | ND (0.055) | ND (0.055) | ND (0.055) | ND (0.026) | ND (0.055) | ND (0.029) |
| 2,4,6-Trichlorophenol | mg/kg | - | | | ND (0.023) | ND (0.048) | ND (0.045) | ND (0.044) | ND (0.044) | ND (0.044) | ND (0.021) | ND (0.043) | ND (0.023) |
| Acenaphthene | mg/kg | 20 | 100 | 100 | 0.0591 | 0.0913 | 0.0481 J | 0.0491 J | 0.0271 J | 0.0592 J | 0.0159 J | 0.0504 J | 0.233 |
| Acenaphthylene | mg/kg | 100 | 100 | 100 | 0.0453 | 0.0517 J | 0.0429 J | ND (0.037) | ND (0.037) | 0.139 | 0.0207 J | ND (0.037) | 0.0461 |
| Acetophenone | mg/kg | - | - | - | ND (0.0082) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| Anthracene | mg/kg | 100 | 100 | 100 | 0.176 | 0.238 | 0.107 | 0.123 | 0.0844 | 0.174 | 0.0441 | 0.123 | 0.413 |

Table 1
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Atrazine | mg/kg | - | - | - | ND (0.016) | ND (0.034) | ND (0.032) | ND (0.031) | ND (0.031) | ND (0.031) | ND (0.015) | ND (0.031) | ND (0.017) |
| Benzo(a)anthracene | mg/kg | 1 | 1 | 1 | 0.55 | 0.524 | 0.402 | 0.283 | 0.334 | 0.448 | 0.186 | 0.323 | 0.837 |
| Benzo(a)pyrene | mg/kg | 1 | 1 | 1 | 0.544 | 0.453 | 0.378 | 0.269 | 0.31 | 0.433 | 0.182 | 0.29 | 0.795 |
| Benzo(b)fluoranthene | mg/kg | 1 | 1 | 1 | 0.663 | 0.519 | 0.461 | 0.326 | 0.35 | 0.577 | 0.245 | 0.328 | **1.01** |
| Benzo(g,h,i)perylene | mg/kg | 100 | 100 | 100 | 0.372 | 0.342 | 0.3 | 0.21 | 0.24 | 0.396 | 0.148 | 0.202 | 0.571 |
| Benzo(k)fluoranthene | mg/kg | 0.8 | 1 | 3.9 | 0.267 | 0.204 | 0.157 | 0.112 | 0.13 | 0.236 | 0.0817 | 0.139 | 0.351 |
| 4-Bromophenyl phenyl ether | mg/kg | - | - | - | ND (0.015) | ND (0.031) | ND (0.029) | ND (0.028) | ND (0.028) | ND (0.028) | ND (0.014) | ND (0.028) | ND (0.015) |
| Butyl benzyl phthalate | mg/kg | - | 100 | | 0.0590 J | ND (0.020) | 0.702 | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0086) | ND (0.018) | 0.141 |
| 1,1'-Biphenyl | mg/kg | - | | | 0.0088 J | ND (0.011) | ND (0.010) | ND (0.010) | ND (0.010) | ND (0.010) | 0.0052 J | ND (0.010) | 0.0211 J |
| Benzaldehyde | mg/kg | - | - | - | ND (0.0094) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0087) | ND (0.018) | ND (0.0097) |
| 2-Chloronaphthalene | mg/kg | - | - | - | ND (0.0090) | ND (0.019) | ND (0.018) | ND (0.017) | ND (0.018) | ND (0.017) | ND (0.0084) | ND (0.017) | ND (0.0093) |
| 4-Chloroaniline | mg/kg | - | 100 | | ND (0.014) | ND (0.029) | ND (0.027) | ND (0.026) | ND (0.026) | ND (0.026) | ND (0.013) | ND (0.026) | ND (0.014) |
| Carbazole | mg/kg | - | - | - | 0.0784 | 0.0890 J | 0.0522 J | 0.0603 J | ND (0.011) | 0.103 J | 0.0216 J | 0.0489 J | 0.222 |
| Caprolactam | mg/kg | - | - | - | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.029) | ND (0.029) | ND (0.029) | ND (0.014) | ND (0.029) | ND (0.015) |
| Chrysene | mg/kg | 1 | 1 | 3.9 | 0.567 | 0.502 | 0.399 | 0.284 | 0.34 | 0.512 | 0.19 | 0.291 | 0.85 |
| bis(2-Chloroethoxy)methane | mg/kg | - | - | - | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| bis(2-Chloroethyl)ether | mg/kg | - | - | - | ND (0.016) | ND (0.035) | ND (0.033) | ND (0.032) | ND (0.032) | ND (0.032) | ND (0.015) | ND (0.031) | ND (0.017) |
| 2,2'-Oxybis(1-chloropropane) | mg/kg | - | - | - | ND (0.014) | ND (0.029) | ND (0.027) | ND (0.026) | ND (0.026) | ND (0.026) | ND (0.013) | ND (0.026) | ND (0.014) |
| 4-Chlorophenyl phenyl ether | mg/kg | - | - | - | ND (0.012) | ND (0.026) | ND (0.025) | ND (0.024) | ND (0.024) | ND (0.024) | ND (0.011) | ND (0.024) | ND (0.013) |
| 2,4-Dinitrotoluene | mg/kg | - | - | - | ND (0.012) | ND (0.025) | ND (0.024) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.011) | ND (0.023) | ND (0.012) |
| 2,6-Dinitrotoluene | mg/kg | - | 1.03 | | ND (0.019) | ND (0.040) | ND (0.038) | ND (0.037) | ND (0.037) | ND (0.037) | ND (0.018) | ND (0.037) | ND (0.020) |
| 3,3'-Dichlorobenzidine | mg/kg | - | - | - | ND (0.032) | ND (0.067) | ND (0.063) | ND (0.061) | ND (0.061) | ND (0.061) | ND (0.029) | ND (0.061) | ND (0.033) |
| 1,4-Dioxane | mg/kg | 0.1 | 9.8 | 13 | ND (0.025) | ND (0.053) | ND (0.050) | ND (0.049) | ND (0.049) | ND (0.049) | ND (0.023) | ND (0.048) | ND (0.026) |
| Dibenzo(a,h)anthracene | mg/kg | 0.33 | 0.33 | 0.33 | 0.107 | 0.0959 | 0.0914 | 0.0591 J | 0.0636 J | 0.119 | 0.0454 | 0.0698 J | 0.157 |
| Dibenzofuran | mg/kg | 7 | 14 | 59 | 0.0394 J | 0.0556 J | ND (0.031) | 0.0424 J | ND (0.030) | 0.0411 J | ND (0.014) | ND (0.030) | 0.143 |
| Di-n-butyl phthalate | mg/kg | - | 100 | | 0.0154 J | ND (0.013) | ND (0.012) | ND (0.012) | ND (0.012) | ND (0.012) | 0.0167 J | ND (0.012) | ND (0.0064) |
| Di-n-octyl phthalate | mg/kg | - | 100 | | ND (0.0095) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0087) | ND (0.018) | ND (0.0098) |
| Diethyl phthalate | mg/kg | - | 100 | | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0083) |
| Dimethyl phthalate | mg/kg | - | 100 | | ND (0.0068) | ND (0.014) | ND (0.014) | ND (0.013) | ND (0.013) | ND (0.013) | ND (0.0062) | ND (0.013) | ND (0.0070) |
| bis(2-Ethylhexyl)phthalate | mg/kg | - | 50 | | 0.0781 | ND (0.019) | 5.55 | 0.105 J | ND (0.017) | 0.142 J | 0.226 | ND (0.017) | 0.205 |
| Fluoranthene | mg/kg | 100 | 100 | 100 | 1.13 | 1.26 | 0.888 | 0.695 | 0.687 | 1.1 | 0.341 | 0.687 | 1.99 |
| Fluorene | mg/kg | 30 | 100 | 100 | 0.0589 | 0.0827 | ND (0.035) | 0.0469 J | ND (0.034) | 0.0572 J | ND (0.016) | 0.0419 J | 0.187 |
| Hexachlorobenzene | mg/kg | 0.33 | 0.41 | 1.2 | ND (0.0096) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0089) | ND (0.018) | ND (0.0099) |
| Hexachlorobutadiene | mg/kg | - | - | - | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.030) | ND (0.030) | ND (0.030) | ND (0.014) | ND (0.029) | ND (0.016) |
| Hexachlorocyclopentadiene | mg/kg | - | | | ND (0.015) | ND (0.032) | ND (0.030) | ND (0.029) | ND (0.029) | ND (0.029) | ND (0.014) | ND (0.029) | ND (0.016) |
| Hexachloroethane | mg/kg | - | - | - | ND (0.019) | ND (0.040) | ND (0.038) | ND (0.036) | ND (0.036) | ND (0.036) | ND (0.017) | ND (0.036) | ND (0.019) |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.5 | 0.5 | 0.5 | 0.459 | 0.367 | 0.332 | 0.248 | 0.257 | 0.455 | 0.173 | 0.235 | **0.676** |
| Isophorone | mg/kg | - | 100 | | ND (0.0081) | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.0075) | ND (0.016) | ND (0.0084) |
| 2-Methylnaphthalene | mg/kg | - | 0.41 | | 0.0161 J | 0.0241 J | ND (0.017) | 0.0171 J | ND (0.017) | 0.0214 J | ND (0.0079) | ND (0.016) | 0.0587 |
| 2-Nitroaniline | mg/kg | - | | | ND (0.0090) | ND (0.019) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.017) | ND (0.0083) | ND (0.017) | ND (0.0092) |
| 3-Nitroaniline | mg/kg | - | | | ND (0.0095) | ND (0.020) | ND (0.019) | ND (0.018) | ND (0.018) | ND (0.018) | ND (0.0088) | ND (0.018) | ND (0.0098) |
| 4-Nitroaniline | mg/kg | - | - | - | ND (0.0098) | ND (0.021) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0091) | ND (0.019) | ND (0.010) |
| Naphthalene | mg/kg | 12 | 100 | 100 | 0.0297 J | 0.0412 J | ND (0.021) | 0.0500 J | ND (0.021) | 0.0308 J | ND (0.0099) | ND (0.021) | 0.098 |
| Nitrobenzene | mg/kg | - | 3.7 | 15 | ND (0.015) | ND (0.031) | ND (0.029) | ND (0.028) | ND (0.028) | ND (0.028) | ND (0.014) | ND (0.028) | ND (0.015) |
| N-Nitroso-di-n-propylamine | mg/kg | - | - | - | ND (0.011) | ND (0.023) | ND (0.022) | ND (0.021) | ND (0.021) | ND (0.021) | ND (0.010) | ND (0.021) | ND (0.011) |
| N-Nitrosodiphenylamine | mg/kg | - | | | ND (0.014) | ND (0.029) | ND (0.028) | ND (0.027) | ND (0.027) | ND (0.027) | ND (0.013) | ND (0.027) | ND (0.014) |
| Phenanthrene | mg/kg | 100 | 100 | 100 | 0.855 | 0.983 | 0.58 | 0.55 | 0.384 | 0.668 | 0.204 | 0.492 | 2.15 |
| Pyrene | mg/kg | 100 | 100 | 100 | 1.22 | 1.03 | 0.769 | 0.571 | 0.643 | 0.865 | 0.362 | 0.572 | 1.92 |
| 1,2,4,5-Tetrachlorobenzene | mg/kg | - | - | - | ND (0.0096) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.0089) | ND (0.018) | ND (0.0099) |
| **GC/LC Semi-volatiles (SW846 8081B)** | | | | | | | | | | | | | |
| Aldrin | mg/kg | 0.005 | 0.019 | 0.097 | ND (0.00064) | ND (0.00065) | ND (0.00060) | ND (0.00061) | ND (0.00062) | ND (0.00058) | ND (0.00057) | ND (0.00059) | ND (0.00062) |
| alpha-BHC | mg/kg | 0.02 | 0.097 | 0.48 | ND (0.00063) | ND (0.00064) | ND (0.00059) | ND (0.00060) | ND (0.00061) | ND (0.00057) | ND (0.00057) | ND (0.00058) | ND (0.00061) |
| beta-BHC | mg/kg | 0.036 | 0.072 | 0.36 | ND (0.00070) | ND (0.00071) | ND (0.00066) | ND (0.00067) | ND (0.00068) | ND (0.00063) | ND (0.00063) | ND (0.00065) | ND (0.00068) |
| delta-BHC | mg/kg | 0.04 | 100 | 100 | ND (0.00075) | ND (0.00075) | ND (0.00070) | ND (0.00071) | ND (0.00072) | ND (0.00067) | ND (0.00067) | ND (0.00069) | ND (0.00073) |
| gamma-BHC (Lindane) | mg/kg | 0.1 | 0.28 | 1.3 | ND (0.00057) | ND (0.00058) | ND (0.00054) | ND (0.00055) | ND (0.00056) | ND (0.00052) | ND (0.00051) | ND (0.00053) | ND (0.00056) |
| alpha-Chlordane | mg/kg | 0.094 | 0.91 | 4.2 | ND (0.00063) | ND (0.00063) | ND (0.00059) | ND (0.00060) | ND (0.00061) | 0.0013 [a] | 0.00058 J [a] | 0.0024 | 0.0013 [a] |
| gamma-Chlordane | mg/kg | - | 0.54 | | ND (0.00035) | ND (0.00036) | ND (0.00033) | ND (0.00034) | ND (0.00034) | ND (0.00032) | ND (0.00032) | 0.00069 J [a] | ND (0.00034) |
| Dieldrin | mg/kg | 0.005 | 0.039 | 0.2 | ND (0.00053) | ND (0.00054) | ND (0.00050) | 0.0047 | ND (0.00052) | 0.0018 | 0.0015 | 0.0028 | 0.0021 |
| 4,4'-DDD | mg/kg | 0.0033 | 2.6 | 13 | 0.0019 | 0.0013 [a] | 0.00080 [a] | 0.0032 [a] | ND (0.00069) | 0.0014 | 0.00085 | 0.0015 [a] | 0.0016 [a] |
| 4,4'-DDE | mg/kg | 0.0033 | 1.8 | 8.9 | **0.0062** | 0.0021 | 0.00098 [a] | ND (0.00065) | 0.0028 | 0.0015 | 0.0009 | 0.0012 | 0.0014 |
| 4,4'-DDT | mg/kg | 0.0033 | 1.7 | 7.9 | **0.0062** | **0.0045** | 0.0016 | 0.0017 | **0.0058** | **0.0094** | **0.0063** | **0.0044** | 0.0028 |
| Endrin | mg/kg | 0.014 | 2.2 | 11 | ND (0.00060) | ND (0.00061) | ND (0.00057) | ND (0.00058) | ND (0.00059) | ND (0.00055) | ND (0.00054) | ND (0.00056) | ND (0.00059) |
| Endosulfan sulfate | mg/kg | 2.4 | 4.8 | 24 | ND (0.00061) | ND (0.00061) | ND (0.00057) | ND (0.00058) | ND (0.00059) | ND (0.00055) | ND (0.00054) | ND (0.00056) | ND (0.00059) |
| Endrin aldehyde | mg/kg | - | - | - | ND (0.00044) | ND (0.00045) | ND (0.00041) | ND (0.00042) | ND (0.00043) | ND (0.00040) | ND (0.00039) | ND (0.00041) | ND (0.00043) |
| Endosulfan-I | mg/kg | 2.4 | 4.8 | 24 | ND (0.00045) | ND (0.00045) | ND (0.00042) | ND (0.00043) | ND (0.00043) | ND (0.00040) | ND (0.00040) | ND (0.00041) | ND (0.00044) |
| Endosulfan-II | mg/kg | 2.4 | 4.8 | 24 | ND (0.00048) | ND (0.00049) | ND (0.00046) | ND (0.00046) | ND (0.00047) | ND (0.00044) | ND (0.00043) | ND (0.00045) | ND (0.00047) |
| Heptachlor | mg/kg | 0.042 | 0.42 | 2.1 | ND (0.00067) | ND (0.00068) | ND (0.00063) | ND (0.00064) | ND (0.00065) | ND (0.00060) | ND (0.00060) | ND (0.00062) | ND (0.00065) |
| Heptachlor epoxide | mg/kg | - | 0.077 | | ND (0.00054) | ND (0.00055) | ND (0.00051) | ND (0.00052) | ND (0.00053) | ND (0.00049) | ND (0.00049) | ND (0.00050) | ND (0.00053) |
| Methoxychlor | mg/kg | - | 100 | | ND (0.00062) | ND (0.00062) | ND (0.00058) | ND (0.00059) | ND (0.00060) | ND (0.00056) | ND (0.00055) | ND (0.00057) | ND (0.00060) |
| Endrin ketone | mg/kg | - | - | - | ND (0.00056) | ND (0.00057) | ND (0.00053) | ND (0.00054) | ND (0.00055) | ND (0.00051) | ND (0.00050) | ND (0.00052) | ND (0.00055) |
| Toxaphene | mg/kg | - | - | - | ND (0.018) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.018) | ND (0.016) | ND (0.016) | ND (0.017) | ND (0.018) |
| **GC/LC Semi-volatiles (SW846 8082A)** | | | | | | | | | | | | | |
| Aroclor 1016 | mg/kg | 0.1 | 1 | 1 | ND (0.018) | ND (0.018) | ND (0.017) | ND (0.017) | ND (0.018) | ND (0.016) | ND (0.016) | ND (0.017) | ND (0.018) |

Table 1
Soil Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | NY SCO - Unrestricted Use (6 NYCRR 375-6 12/06) | NY SCO - Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | NY SCO - Restricted Residential w/CP-51 (10/10) (6 NYCRR 375-6 12/06) | SB-1 (0'-2') | SB-1 (10'-12') | SB-3 (0'-2') | SB-3 (10'-12') | SB-301 (10'-12') | SB-4 (0'-2') | SB-4 (10'-12') | SB-2 (0'-2') | SB-2 (10'-12') |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID: | | | | | JD37275-1 | JD37275-2 | JD37275-3 | JD37275-4 | JD37275-5 | JD37275-6 | JD37275-7 | JD37275-8 | JD37275-9 |
| Date Sampled: | | | | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| Aroclor 1221 | mg/kg | 0.1 | 1 | 1 | ND (0.024) | ND (0.024) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.022) | ND (0.022) | ND (0.022) | ND (0.023) |
| Aroclor 1232 | mg/kg | 0.1 | 1 | 1 | ND (0.025) | ND (0.024) | ND (0.023) | ND (0.024) | ND (0.024) | ND (0.022) | ND (0.022) | ND (0.023) | ND (0.024) |
| Aroclor 1242 | mg/kg | 0.1 | 1 | 1 | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.014) | ND (0.014) | ND (0.015) | ND (0.016) |
| Aroclor 1248 | mg/kg | 0.1 | 1 | 1 | ND (0.035) | ND (0.034) | ND (0.033) | ND (0.033) | ND (0.034) | ND (0.031) | ND (0.031) | ND (0.032) | ND (0.034) |
| Aroclor 1254 | mg/kg | 0.1 | 1 | 1 | ND (0.021) | ND (0.020) | ND (0.020) | ND (0.020) | ND (0.020) | ND (0.019) | ND (0.019) | ND (0.019) | ND (0.020) |
| Aroclor 1260 | mg/kg | 0.1 | 1 | 1 | ND (0.017) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.016) |
| Aroclor 1268 | mg/kg | 0.1 | 1 | 1 | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.016) | ND (0.016) | ND (0.015) | ND (0.015) | ND (0.015) | ND (0.016) |
| Aroclor 1262 | mg/kg | 0.1 | 1 | 1 | ND (0.025) | ND (0.025) | ND (0.024) | ND (0.024) | ND (0.025) | ND (0.023) | ND (0.023) | ND (0.023) | ND (0.025) |
| **Metals Analysis** | | | | | | | | | | | | | |
| Aluminum | mg/kg | - | | | 14600 | 13300 | 10300 | 12600 | 12900 | 12100 | 10600 | 11300 | 14400 |
| Antimony | mg/kg | - | | | <2.3 | <2.4 | <2.3 | <2.1 | <4.5 [b] | <12 [b] | <2.1 | <2.2 | <2.2 |
| Arsenic | mg/kg | 13 | 16 | 16 | 6.3 | 6.7 | 8.5 | 6.6 | 9.5 | 8 | 5.2 | 6.4 | 6.6 |
| Barium | mg/kg | 350 | 350 | 400 | 161 | 161 | **480** | 217 | **351** | **2080** | 166 | 127 | 199 |
| Beryllium | mg/kg | 7.2 | 14 | 72 | 0.64 | 0.65 | 0.57 | 0.61 | 0.64 | 0.79 | 0.7 | 0.56 | 0.63 |
| Cadmium | mg/kg | 2.5 | 2.5 | 4.3 | <0.57 | <0.61 | 0.65 | <0.54 | <0.56 | <3.0 [b] | <0.53 | <0.54 | <0.56 |
| Calcium | mg/kg | - | | | 3660 | 34300 | 23200 | 17900 | 18200 | 31700 | 15400 | 24700 | 13700 |
| Chromium | mg/kg | - | - | - | 21.1 | 22.7 | 18 | 18.5 | 20.7 | 29.4 | 27.9 | 21.1 | 26.9 |
| Cobalt | mg/kg | - | 30 | | 7.8 | 7.4 | 5.8 | 6.5 | 8.3 | 6.5 | 6.7 | 7.2 | 7.7 |
| Copper | mg/kg | 50 | 270 | 270 | **68.6** | **62.1** | **81.9** | 47.6 | **67.2** [b] | **126** [b] | 49.5 | **50.1** | **54.3** |
| Iron | mg/kg | - | 2000 | | **20200** | **20800** | **15200** | **17000** | **22500** | **35900** | **19300** | **18000** | **20700** |
| Lead | mg/kg | 63 | 400 | 400 | **277** | **384** | **535** | **241** | **241** [b] | **462** [b] | **148** | **209** | **270** |
| Magnesium | mg/kg | - | - | - | 2730 | 5990 | 7800 | 3570 | 3840 | 5370 | 4120 | 5320 | 4340 |
| Manganese | mg/kg | 1600 | 2000 | 2000 | 341 | 496 | 380 | 319 | 377 [b] | 394 [b] | 415 | 382 | 365 |
| Mercury | mg/kg | 0.18 | 0.81 | 0.81 | **0.45** | **0.34** | **0.83** | **0.34** | **0.35** | **0.41** | 0.11 | **0.35** | **0.24** |
| Nickel | mg/kg | 30 | 140 | 310 | 17.1 | 18.6 | 16.9 | 16.3 | 18.6 | 22.4 | 17.5 | 20.6 | 18.5 |
| Potassium | mg/kg | - | - | - | <1100 | 1210 | <1100 | <1100 | <1100 | 1210 | 1150 | 1110 | 1120 |
| Selenium | mg/kg | 3.9 | 36 | 180 | <2.3 | <2.4 | <2.3 | <2.1 | <4.5 [b] | <12 [b] | <2.1 | <2.2 | <2.2 |
| Silver | mg/kg | 2 | 36 | 180 | 0.7 | 0.92 | 0.85 | 0.72 | <1.1 [b] | <3.0 [b] | 0.7 | 0.63 | 0.82 |
| Sodium | mg/kg | - | - | - | <1100 | <1200 | <1100 | <1100 | <1100 | <1200 | <1100 | <1100 | <1100 |
| Thallium | mg/kg | - | | | <1.1 | <1.2 | <1.1 | <1.1 | <2.3 [b] | <6.0 [b] | <1.1 | <1.1 | <1.1 |
| Vanadium | mg/kg | - | 100 | | 34.9 | 33.3 | 24.4 | 26.3 | 27.2 | 34.7 | 29.9 | 30.6 | 32.9 |
| Zinc | mg/kg | 109 | 2200 | 10000 | **180** | **158** | **337** | **188** | **216** | **807** | **150** | **130** | **163** |
| **General Chemistry** | | | | | | | | | | | | | |
| Solids, Percent | % | - | - | - | 85.8 | 82.5 | 87 | 89 | 87.7 | 88.4 | 91 | 89.2 | 85.1 |

**Footnotes:**

[a] More than 40 % RPD for detected concentrations between the two GC columns.

[b] Elevated detection limit due to dilution required for high interfering element.

**Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. SGS assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.**

Table 2
Soil Vapor Analytical Data
448 Park Avenue, Brooklyn

| Client Sample ID: | | SG-1 | SG-3 | SG-4 | SG-2 |
|---|---|---|---|---|---|
| Lab Sample ID: | | JD37294-1 | JD37294-2 | JD37294-3 | JD37294-4 |
| Date Sampled: | | 12/21/2021 | 12/21/2021 | 12/21/2021 | 12/21/2021 |
| Matrix: | | Soil Vapor Comp. | Soil Vapor Comp. | Soil Vapor Comp. | Soil Vapor Comp. |
| **MS Volatiles (TO-15)** | | | | | |
| Acetone (2-Propanone) | ug/m3 | 61.9 | 33.1 | 40.8 | 30.9 |
| 1,3-Butadiene | ug/m3 | ND (0.34) | ND (0.34) | ND (0.34) | ND (0.34) |
| Benzene | ug/m3 | 2.3 | 1.7 | 3.2 | 1.7 |
| Bromodichloromethane | ug/m3 | ND (0.12) | ND (0.12) | ND (0.12) | ND (0.12) |
| Bromoform | ug/m3 | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.28) |
| Bromomethane | ug/m3 | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.28) |
| Bromoethene | ug/m3 | ND (0.24) | ND (0.24) | ND (0.24) | ND (0.24) |
| Benzyl Chloride | ug/m3 | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) |
| Carbon disulfide | ug/m3 | 9.3 | 4 | 4.2 | 0.82 |
| Chlorobenzene | ug/m3 | ND (0.30) | ND (0.30) | ND (0.30) | ND (0.30) |
| Chloroethane | ug/m3 | ND (0.27) | ND (0.27) | ND (0.27) | ND (0.27) |
| Chloroform | ug/m3 | 0.70 J | 0.55 J | ND (0.15) | 0.65 J |
| Chloromethane | ug/m3 | 1.5 | 0.50 J | 1.4 | 0.53 J |
| 3-Chloropropene | ug/m3 | ND (0.33) | ND (0.33) | ND (0.33) | ND (0.33) |
| 2-Chlorotoluene | ug/m3 | ND (0.29) | ND (0.29) | ND (0.29) | ND (0.29) |
| Carbon tetrachloride | ug/m3 | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) |
| Cyclohexane | ug/m3 | 1.4 | 0.78 J | 1.5 | 1.4 |
| 1,1-Dichloroethane | ug/m3 | ND (0.23) | ND (0.23) | ND (0.23) | ND (0.23) |
| 1,1-Dichloroethylene | ug/m3 | ND (0.24) | ND (0.24) | ND (0.24) | ND (0.24) |
| 1,2-Dibromoethane (EDB) | ug/m3 | ND (0.39) | ND (0.39) | ND (0.39) | ND (0.39) |
| 1,2-Dichloroethane | ug/m3 | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.28) |
| 1,2-Dichloropropane | ug/m3 | ND (0.25) | ND (0.25) | ND (0.25) | ND (0.25) |
| 1,4-Dioxane | ug/m3 | ND (0.47) | ND (0.47) | ND (0.47) | ND (0.47) |
| Dichlorodifluoromethane | ug/m3 | 0.47 J | 0.43 J | 0.45 J | 0.49 J |
| Dibromochloromethane | ug/m3 | ND (0.21) | ND (0.21) | ND (0.21) | ND (0.21) |
| trans-1,2-Dichloroethylene | ug/m3 | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.28) |
| cis-1,2-Dichloroethylene | ug/m3 | ND (0.31) | ND (0.31) | ND (0.31) | ND (0.31) |
| cis-1,3-Dichloropropene | ug/m3 | ND (0.25) | ND (0.25) | ND (0.25) | ND (0.25) |
| m-Dichlorobenzene | ug/m3 | ND (0.16) | ND (0.16) | ND (0.16) | ND (0.16) |
| o-Dichlorobenzene | ug/m3 | ND (0.62) | ND (0.62) | ND (0.62) | ND (0.62) |
| p-Dichlorobenzene | ug/m3 | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) |
| trans-1,3-Dichloropropene | ug/m3 | ND (0.40) | ND (0.40) | ND (0.40) | ND (0.40) |
| Ethanol | ug/m3 | 7.5 | 6.3 | 9.2 | 9.1 |
| Ethylbenzene | ug/m3 | 0.86 | 1.2 | 1.2 | 0.53 J |
| Ethyl Acetate | ug/m3 | 3.3 | 3.6 | 5.9 | 1.8 |
| 4-Ethyltoluene | ug/m3 | ND (0.38) | ND (0.38) | ND (0.38) | ND (0.38) |
| Freon 113 | ug/m3 | ND (0.12) | ND (0.12) | ND (0.12) | ND (0.12) |
| Freon 114 | ug/m3 | ND (0.20) | ND (0.20) | ND (0.20) | ND (0.20) |
| Heptane | ug/m3 | 3.5 | 2.2 | 2.7 | 1.4 |
| Hexachlorobutadiene | ug/m3 | ND (0.25) | ND (0.25) | ND (0.25) | ND (0.25) |
| Hexane | ug/m3 | 8.9 | 4.4 | 8 | 4 |
| 2-Hexanone | ug/m3 | ND (0.58) | ND (0.58) | ND (0.58) | ND (0.58) |
| Isopropyl Alcohol | ug/m3 | 3.7 | 3.5 | 3 | 3 |
| Methylene chloride | ug/m3 | 1.4 | 1.2 | 1.4 | 1.4 |
| Methyl ethyl ketone | ug/m3 | 14.2 | 11.5 | 19 | 11 |
| Methyl Isobutyl Ketone | ug/m3 | ND (0.29) | ND (0.29) | ND (0.29) | ND (0.29) |
| Methyl Tert Butyl Ether | ug/m3 | ND (0.32) | ND (0.32) | ND (0.32) | ND (0.32) |
| Methylmethacrylate | ug/m3 | ND (0.28) | ND (0.28) | ND (0.28) | ND (0.28) |
| Propylene | ug/m3 | 293 | 170 | 272 | 190 |
| Styrene | ug/m3 | ND (0.47) | ND (0.47) | ND (0.47) | ND (0.47) |
| 1,1,1-Trichloroethane | ug/m3 | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) |
| 1,1,2,2-Tetrachloroethane | ug/m3 | ND (0.19) | ND (0.19) | ND (0.19) | ND (0.19) |
| 1,1,2-Trichloroethane | ug/m3 | ND (0.15) | ND (0.15) | ND (0.15) | ND (0.15) |
| 1,2,4-Trichlorobenzene | ug/m3 | ND (0.48) | ND (0.48) | ND (0.48) | ND (0.48) |
| 1,2,4-Trimethylbenzene | ug/m3 | 0.70 J | 0.83 | 0.71 J | 0.51 J |

Table 2
Soil Vapor Analytical Data
448 Park Avenue, Brooklyn

| | | | | | |
|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | ug/m3 | ND (0.32) | ND (0.32) | ND (0.32) | ND (0.32) |
| 2,2,4-Trimethylpentane | ug/m3 | 2.1 | 1.5 | 4.8 | 1.7 |
| Tertiary Butyl Alcohol | ug/m3 | ND (0.37) | 5.7 | 3.9 | 5 |
| Tetrachloroethylene | ug/m3 | 3.5 | 6 | 4 | 15 |
| Tetrahydrofuran | ug/m3 | ND (0.36) | 2 | 1.7 | 1.4 |
| Toluene | ug/m3 | 12.1 | 13.8 | 11.7 | 8.9 |
| Trichloroethylene | ug/m3 | 0.19 | 0.7 | 0.16 | 0.17 |
| Trichlorofluoromethane | ug/m3 | 1.3 | ND (0.14) | ND (0.14) | ND (0.14) |
| Vinyl chloride | ug/m3 | ND (0.28) | ND (0.28) | 0.62 | ND (0.28) |
| Vinyl Acetate | ug/m3 | ND (0.45) | ND (0.45) | ND (0.45) | ND (0.45) |
| m,p-Xylene | ug/m3 | 2.7 | 3.8 | 3.9 | 1.6 |
| o-Xylene | ug/m3 | 0.94 | 1.4 | 1.5 | 0.57 J |
| Xylenes (total) | ug/m3 | 3.6 | 5.2 | 5.4 | 2.2 |
| | | | | | |
| **MS Volatiles (TO-15) - ug/m3** | | | | | |
| | | | | | |
| Acetone (2-Propanone) | ug/m3 | 147 | 78.6 | 96.9 | 73.4 |
| 1,3-Butadiene | ug/m3 | ND (0.75) | ND (0.75) | ND (0.75) | ND (0.75) |
| Benzene | ug/m3 | 7.3 | 5.4 | 10 | 5.4 |
| Bromodichloromethane | ug/m3 | ND (0.80) | ND (0.80) | ND (0.80) | ND (0.80) |
| Bromoform | ug/m3 | ND (2.9) | ND (2.9) | ND (2.9) | ND (2.9) |
| Bromomethane | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| Bromoethene | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Benzyl Chloride | ug/m3 | ND (0.77) | ND (0.77) | ND (0.77) | ND (0.77) |
| Carbon disulfide | ug/m3 | 29 | 12 | 13 | 2.6 |
| Chlorobenzene | ug/m3 | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) |
| Chloroethane | ug/m3 | ND (0.71) | ND (0.71) | ND (0.71) | ND (0.71) |
| Chloroform | ug/m3 | 3.4 J | 2.7 J | ND (0.73) | 3.2 J |
| Chloromethane | ug/m3 | 3.1 | 1.0 J | 2.9 | 1.1 J |
| 3-Chloropropene | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| 2-Chlorotoluene | ug/m3 | ND (1.5) | ND (1.5) | ND (1.5) | ND (1.5) |
| Carbon tetrachloride | ug/m3 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Cyclohexane | ug/m3 | 4.8 | 2.7 J | 5.2 | 4.8 |
| 1,1-Dichloroethane | ug/m3 | ND (0.93) | ND (0.93) | ND (0.93) | ND (0.93) |
| 1,1-Dichloroethylene | ug/m3 | ND (0.95) | ND (0.95) | ND (0.95) | ND (0.95) |
| 1,2-Dibromoethane (EDB) | ug/m3 | ND (3.0) | ND (3.0) | ND (3.0) | ND (3.0) |
| 1,2-Dichloroethane | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| 1,2-Dichloropropane | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| 1,4-Dioxane | ug/m3 | ND (1.7) | ND (1.7) | ND (1.7) | ND (1.7) |
| Dichlorodifluoromethane | ug/m3 | 2.3 J | 2.1 J | 2.2 J | 2.4 J |
| Dibromochloromethane | ug/m3 | ND (1.8) | ND (1.8) | ND (1.8) | ND (1.8) |
| trans-1,2-Dichloroethylene | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| cis-1,2-Dichloroethylene | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| cis-1,3-Dichloropropene | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| m-Dichlorobenzene | ug/m3 | ND (0.96) | ND (0.96) | ND (0.96) | ND (0.96) |
| o-Dichlorobenzene | ug/m3 | ND (3.7) | ND (3.7) | ND (3.7) | ND (3.7) |
| p-Dichlorobenzene | ug/m3 | ND (0.90) | ND (0.90) | ND (0.90) | ND (0.90) |
| trans-1,3-Dichloropropene | ug/m3 | ND (1.8) | ND (1.8) | ND (1.8) | ND (1.8) |
| Ethanol | ug/m3 | 14 | 12 | 17 | 17 |
| Ethylbenzene | ug/m3 | 3.7 | 5.2 | 5.2 | 2.3 J |
| Ethyl Acetate | ug/m3 | 12 | 13 | 21 | 6.5 |
| 4-Ethyltoluene | ug/m3 | ND (1.9) | ND (1.9) | ND (1.9) | ND (1.9) |
| Freon 113 | ug/m3 | ND (0.92) | ND (0.92) | ND (0.92) | ND (0.92) |
| Freon 114 | ug/m3 | ND (1.4) | ND (1.4) | ND (1.4) | ND (1.4) |
| Heptane | ug/m3 | 14 | 9 | 11 | 5.7 |
| Hexachlorobutadiene | ug/m3 | ND (2.7) | ND (2.7) | ND (2.7) | ND (2.7) |
| Hexane | ug/m3 | 31 | 16 | 28 | 14 |
| 2-Hexanone | ug/m3 | ND (2.4) | ND (2.4) | ND (2.4) | ND (2.4) |
| Isopropyl Alcohol | ug/m3 | 9.1 | 8.6 | 7.4 | 7.4 |
| Methylene chloride | ug/m3 | 4.9 | 4.2 | 4.9 | 4.9 |
| Methyl ethyl ketone | ug/m3 | 41.9 | 33.9 | 56 | 32.4 |
| Methyl Isobutyl Ketone | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| Methyl Tert Butyl Ether | ug/m3 | ND (1.2) | ND (1.2) | ND (1.2) | ND (1.2) |
| Methylmethacrylate | ug/m3 | ND (1.1) | ND (1.1) | ND (1.1) | ND (1.1) |
| | | | | | |
| Propylene | ug/m3 | 503 | 292 | 467 | 326 |

Table 2
Soil Vapor Analytical Data
448 Park Avenue, Brooklyn

| | | | | | |
|---|---|---|---|---|---|
| Styrene | ug/m3 | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) |
| 1,1,1-Trichloroethane | ug/m3 | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) |
| 1,1,2,2-Tetrachloroethane | ug/m3 | ND (1.3) | ND (1.3) | ND (1.3) | ND (1.3) |
| 1,1,2-Trichloroethane | ug/m3 | ND (0.82) | ND (0.82) | ND (0.82) | ND (0.82) |
| 1,2,4-Trichlorobenzene | ug/m3 | ND (3.6) | ND (3.6) | ND (3.6) | ND (3.6) |
| 1,2,4-Trimethylbenzene | ug/m3 | 3.4 J | 4.1 | 3.5 J | 2.5 J |
| 1,3,5-Trimethylbenzene | ug/m3 | ND (1.6) | ND (1.6) | ND (1.6) | ND (1.6) |
| 2,2,4-Trimethylpentane | ug/m3 | 9.8 | 7 | 22 | 7.9 |
| Tertiary Butyl Alcohol | ug/m3 | ND (1.1) | 17 | 12 | 15 |
| Tetrachloroethylene | ug/m3 | 24 | 41 | 27 | 102 |
| Tetrahydrofuran | ug/m3 | ND (1.1) | 5.9 | 5 | 4.1 |
| Toluene | ug/m3 | 45.6 | 52 | 44.1 | 34 |
| Trichloroethylene | ug/m3 | 1 | 3.8 | 0.86 | 0.91 |
| Trichlorofluoromethane | ug/m3 | 7.3 | ND (0.79) | ND (0.79) | ND (0.79) |
| Vinyl chloride | ug/m3 | ND (0.72) | ND (0.72) | 1.6 | ND (0.72) |
| Vinyl Acetate | ug/m3 | ND (1.6) | ND (1.6) | ND (1.6) | ND (1.6) |
| m,p-Xylene | ug/m3 | 12 | 17 | 17 | 6.9 |
| o-Xylene | ug/m3 | 4.1 | 6.1 | 6.5 | 2.5 J |
| Xylenes (total) | ug/m3 | 16 | 23 | 23 | 9.6 |
| | | | | | |