OFFICE OF ENVIRONMENTAL REMEDIATION
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DECISION DOCUMENT
NYC VCP and E-Designation
Remedial Action Work Plan Approval

May 24, 2016

Re: 912 Broadway / 374 Stockton Street
Brooklyn Block 1584, Lot 11
Hazardous Materials, Air Quality and Noise "E" Designation
E-285: 10/11/2012 Bedford-Stuyvesant North Rezoning - CEQR 12 DCP 156Y
OER Project Number 15EHAN355K / VCP Number 16CVCP049K

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated January 2016 with Stipulation Letter dated January 26, 2016 and the Remedial Action Plan for Air Quality and Noise dated April 2016 for the above-referenced project. These Plans were submitted to OER under the NYC Voluntary Cleanup Program and E-Designation Program.

The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on February 20, 2016. There were no public comments.

Project Description

The Site is located at 912 Broadway in the Stuyvesant Heights section of Brooklyn, New York, and is identified as Block 1584, Lot 11 on the New York City Tax Map. Lot 11 is an irregularly shaped lot consisting of 202 feet of street frontage on Stockton Street, 51 feet of street frontage on Broadway and a depth of approximately 100 feet for a total of approximately 21,123 ft^2. The Site is located on the west side of Broadway between Myrtle Avenue and Stockton Street and is bordered by commercial/residential buildings to the south, a vacant lot currently under construction to the west, Broadway to the east, and Stockton Street to the north. The entire footprint of Lot 11 is currently undeveloped with no structures.

The development project consists of one new mixed-use building. The building will be a six story mixed retail/commercial and residential structure with a basement. The footprint of the building will span the entire lot with no open space areas. The building will consist of retail space in the basement and 1st through 2nd floors, windowless retail storage space on the 3rd floor, and residential units on the 4th through 6th floors. In the future, changes to the project, including more sensitive uses (i.e. daycare facility) or changes to the facade, will be communicated to OER and more stringent requirements may apply. The entire Site will require excavation to a depth of approximately 14 feet below grade for construction of the building basement. Therefore, an estimated 10,952 cubic yards (15,333 tons) of soil will require excavation. The water table is expected at approximately 60 feet below grade surface (bgs), and will therefore not be encountered during excavation. The current zoning designation is C4-4L. The proposed use is consistent with existing zoning for the property.

Statement of Purpose and Basis

This document presents the remedial action for the E-Designation Program project known as "374 Stockton Street/912 Broadway" pursuant to Title 43 of the Rules of the City of New York Chapter 14, Subchapter 1 and the Zoning Resolution and §24-07 of the Rules of the City of New York.

Description of Selected Remedy for Hazardous Materials

The remedial action selected for the 374 Stockton Street/912 Broadway site is protective of public health and the environment. The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Site-Specific (Track 4) Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s). A Waste Characterization Report documenting sample procedures, location, analytical results shall be submitted to NYCOER prior to start of remedial action.
6. Excavation and removal of soil/fill exceeding Track 4 Site-Specific SCOs.
7. The entire footprint of the Site, excluding the sidewalk set-back will be excavated to a depth of approximately 14 feet below grade for the new building's basement level. An estimated 15,333 tons of soil will be removed.
8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.
9. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
10. Removal of all UST's that are encountered during soil/fill actions. Registration of tanks and reporting of any petroleum spills associated with UST's and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
11. Transportation and off-Site disposal of all soil/fill material at licensed or permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.
12. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
13. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
14. Construction of an engineered composite cover consisting of 6 inches of reinforced concrete slab underlain by 12 inches of clean gravel in building areas and 4-inch concrete sidewalks with 7-inch thickness at loading berth entrance and corner quadrants over the remainder of the Site.
15. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building. The vapor barrier system will consist of Raven Industries' 20-mil VaporBlock Plus which is a seven layer co-extruded barrier made from state-of-the art polyethylene and EVOH resins applied below the slab throughout the full building area and outside all sub-grade foundation sidewalls. The vapor barrier system is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building.
16. Installation of an active sub-slab depressurization system (SSDS) consisting of a network of horizontal pipe set in the middle of a gas permeable layer immediately beneath the building slab and vapor barrier system. The horizontal piping will consist of 3-inch diameter schedule 80 slotted PVC screen. PVC screens shall be connected to a 4-inch diameter schedule 80 PVC solid pipe and steel risers that penetrate the slab and travels through the building to the roof. The gas permeable layer will consistent of a 12-inch thick layer of 1-inch trap rock stone. Vapor effluent sampling ports shall be installed on the risers. The risers shall be raised at least 3-feet above the roofline. Rain caps shall be installed on the roof at the end of the risers. The active SSDS will be hardwired and will include a Radon Away 4-inch Mitigation Fan (RP-145) in-line centrifugal fan unit installed on the roofline atop each stack pipe. A pressure gauge and alarm will also be included in the design. The active SSDS is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the active SSDS was designed and properly installed

to establish a vacuum in the gas permeable layer and a negative (decreasing outward) pressure gradient across the building slab to prevent vapor migration into the building.

17. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
18. Submission of a Remedial Action Report (RAR) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.
19. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.
20. The property will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

Description of Selected Remedy for Air Quality

The elements of the remedial action selected for Air Quality for the 374 Stockton Street/912 Broadway site are as follows:

In order to satisfy the requirements of the E-designation, natural gas will be utilized at the site for space heating, hot water, and HVAC systems. Remaining systems will be powered electrically.

Each residential apartment on the 4th through 6th floors of the new building will be heated and cooled using electric heat pump (mini-split) units. The make and model of these units (Trane TAM4A and Mitsubishi MSZ-FE Series) are included in M-005 under the heading Split Type Air Conditioning Unit. The rooftop packaged heating and cooling units (RTU) shown on drawing M-202 shall provide heating (gas-fired), cooling, and ventilation into the commercial portions of the building.

Description of Selected Remedy for Noise

The elements of the remedial action selected for Noise for the 374 Stockton Street/912 Broadway site are as follows:

1. 38 dBA for residential spaces above the elevated train on the North, East, and West facades;
2. 36 dBA for commercial spaces based on allowed reduction of 5 dBA from the residential requirement of 41 dBA requirement outlined in the E-Designation on floors below the elevated train on the North, East and West facades;
3. 33 dBA for residential spaces on the South façade above the elevated train, based on the allowed shielding reduction of 5 dBA for the rear of the building;
4. 31 dBA for commercial spaces at the South façade below the elevated train, based on the allowed shielding reduction of 5 dBA for the rear of the building;

The following windows will be installed:

Façade Floor Range	**OITC Rating**	**OITC Certification**	**Manufacturer and Model**	**Glazing**
North, East, and West Façades Floors 1-2 (Retail)	36 (glazing only)	Glass only rating based on Manufacturer data in Appendix G. Glass only ASTM E-90 test report to be provided to OER prior to purchase and installation.	Storefront Window Glass manufactured by Viracon	1/4” exterior lite – 1/2” air space – 3/16” - 0.060” - 3/16” laminated interior lite, or approved substitute

Façade Floor Range	OITC Rating	OITC Certification	Manufacturer and Model	Glazing
North, East, and West Façades Floors 4-6 (Residential)	42 (glazing only) (OITC 38 full assembly required)	Glass only rating based on Manufacturer data in Appendix G. Full window assembly ASTM E-90 Lab Test Report to be provided to OER prior to purchase and installation	Window Wall Glass manufactured by Saflex	5/16" - 0.060" – 1/4" laminated exterior lite – 13/16" air space – 3/16" - 0.030" - 3/16" laminated interior lite, or approved substitute
South Façade Floors 4-6 (Residential)	36 (glazing only) (OITC 33 full assembly required)	Glass only rating based on Manufacturer data in Appendix G. Full window assembly ASTM E-90 Lab Test Report to be provided to OER prior to purchase and installation	Window Wall Glass manufactured by Viracon	1/4" exterior lite – 1/2" air space – 3/16" - 0.060" - 3/16" laminated interior lite, or approved substitute
North and West Façades Floors 4-6 (Residential)	42 (glazing only) (OITC 38 full assembly required)	Glass-only rating based on Manufacturer data in Appendix G. Full assembly ASTM E-90 Lab Test Report or letter from the manufacturer stating doors perform comparably to tested windows to be provided to OER prior to purchase and installation	Terrace Doors Glass manufactured by Saflex	5/16" - 0.060" – 1/4" laminated exterior lite – 13/16" air space – 3/16" - 0.030" - 3/16" laminated interior lite, or approved substitute
South Façade Floors 4-6 (Residential)	36 (glazing only) (OITC 33 full assembly required)	Glass only rating based on Manufacturer data in Appendix G. Full assembly ASTM E-90 Lab Test Report or letter from the manufacturer stating doors perform comparably to tested windows to be provided to OER prior to purchase and installation	Terrace Doors Glass manufactured by Viracon	1/4" exterior lite – 1/2" air space – 3/16" - 0.060" - 3/16" laminated interior lite, or approved substitute

Once performed, the acoustical tests and corresponding reports described above will be representative of the acoustical performance of all proposed windows, and doors which will use the same glazing, gaskets and frame as the tested windows and therefore expected to have the same OITC rating as the tested windows. For each door, a manufacturer's letter will be provided certifying that the proposed door has the same make-up (glazing, gaskets and frame) as the tested windows and verifying that the performance of the window is representative of the respective performance of the door with the same glazing.

While the window manufacturer has not been selected at this time, the applicant commits to demonstrating that the selected product to be installed achieves the minimum OITC ratings outlined above. If the selected manufacturer does not have ASTM E90 test data on file for the specific window assembly to be installed, a mock-up will be laboratory tested as per ASTM E90 to demonstrate compliance with the attenuation requirements. The glazing-only OITC ratings presented in the table may reduce substantially once noise transmission through the window frames is evaluated. The glazing presented above may need to be reevaluated if the attenuation losses due to framing elements cannot be compensated for with façade wall elements.

In order to satisfy the requirements of the E-Designation, Alternate Means of Ventilation (AMV) will be installed in order to maintain a closed window condition. AMV for this project will be achieved by:

1. **Combination of Dedicated Fresh Air/ HVAC System**. Installing two (2) dedicated Renzor Model RDH-100 make-up air supply fan systems on the roof to supply ducted outdoor air to each bedroom and living room in all residential units. In addition, installing eight (8) dedicated Trane Model YHD240F3 Rooftop Unit systems located on the second floor roof to supply outdoor air to the commercial retail space on Floors 1 through 3.
2. **Compliance with Mechanical Code:** Providing outside air to commercial spaces and common areas such as lobbies and corridors in accordance with the 2014 NYC Mechanical Code. The rooftop packaged heating and cooling units (RTU) shown on drawing M-202 shall provide heating (gas-fired), cooling, and ventilation into the commercial portions of the building.

The remedies for Hazardous Materials, Air Quality, and Noise described above conform to the promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration OER guidance, as appropriate.

May 24, 2016
Date

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May 24, 2016
Date

Shaminder Chawla
Deputy Director - VCP

May 24, 2016
Date

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