



**DECISION DOCUMENT**  
**NYC VCP and E-Designation Remedial Action Work Plan Approval**

May 2, 2016

Re: **2655 Richmond Avenue (Staten Island Mall) – Hazardous Materials “E” Designation  
E-361: Block 2400, Lots 7, 20, 30, 70, 118, 140, 180, 190, 200, and 210, Staten Island, CD 02  
Staten Island Mall Enlargement - CEQR # 14 DCP 136R  
OER Project # 16EHAZ109R/ VCP Project # 16CVCP050R**

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated March 8, 2016 with Stipulation Letter dated March 21, 2016 for the above-referenced project.

The Plan was 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 April 2, 2016. There were no public comments.

**Project Description**

The proposed future use of the Site will consist of the expansion of the existing mall building (Lot 180). The newly constructed buildings and the expansion of the existing building will be constructed as slab on grade structures. Localized excavations will occur for footings and for utility installation ranging from 4 to 8 feet below land surface (ft bls). In addition, portions of the parking lot (Lots 7, 70, 118, 140, 190, 200, and 210) will be enhanced (e.g., upgraded lighting, landscaping, and new asphalt and striping, etc.). Additional future development (i.e., new buildings) is proposed for Lots 20 and 30. One area of the Site (Block 2400, Lot 140) will be slightly regraded to accommodate the building expansion. The current zoning designation is C4-1 used for commercial and office buildings. The proposed use is consistent with existing zoning for the Site.

**Statement of Purpose and Basis**

This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation Program project known as “2655 Richmond Avenue (Staten Island Mall)” 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**

The remedial action selected for the 2655 Richmond Avenue (Staten Island Mall) 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 New York City Voluntary Cleanup Program (NYC VCP) Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program (CAMP) for particulates and volatile organic carbon compounds.
3. Establishment of Track 2 Restricted Residential 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).
6. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a photoionization detector (PID). Appropriate segregation of excavated media on-Site.
7. 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.
8. Registration of tanks and reporting of any petroleum spills associated with underground storage tanks (USTs) and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
9. 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.
10. An engineered composite site cover will be placed over the entire footprint of the Site. The composite cover system will be comprised of a 5-inch thick concrete slab beneath all building areas. Outside of building areas, the composite cover system will be comprised of an asphalt layer with a 6-inch clean granular sub-base in parking lot areas, 4-inch poured concrete on a 6-inch sub-base in sidewalk areas, and one foot of clean soil in all open space and landscaped areas. The composite site cover for Lot 180 Eastern and Western parcels is shown on Detail 1 of Plates 10.1 and 10.2 provided as Appendix 10 in the Stipulation List.
11. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs. Removal actions for development purposes under this plan will be performed in conjunction with confirmation end-point soil sampling. Seven (7) confirmation samples will be collected from the base of the excavation for Lot 180 Western Parcel and three (3) confirmation samples will be collected from the base of excavation for Lot 180 Eastern Parcel at locations to be determined by OER. When Lots 20 and 30 are developed (i.e., new buildings), two (2) confirmation samples will be collected from the base of the excavation for Lot 20 and two (2) confirmation samples will be collected from the base of the excavation for Lot 30. To evaluate attainment of Track 2 Restricted Residential Use or Commercial Use SCOs, analytes will include those for which SCOs have been developed according to analytical methods described above. If Track 1 Unrestricted Use SCOs are pursued, samples will be analyzed for VOCs, SVOCs, pesticides, PCBs and metals according to analytical methods described above.
12. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
13. 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.
14. Dewatering if needed, in compliance with city, state, and federal laws and regulations. Extracted groundwater will either be containerized for off-site licensed or permitted disposal or will be treated under a permit from New York City Department of Environmental Protection (NYCDEP) to meet pretreatment requirements prior to discharge to the sewer system. Dewatering permit will be obtained from NYCDEP prior to construction activities.
15. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
16. Demarcation of residual soil/fill in landscaped areas.
17. 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.

18. 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.
19. The property will continue to be registered with an E-Designation at the NYC Buildings Department if Track 2 Commercial Use SCOs are not achieved and/ or operation of an active SSDS is required. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls will 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.

#### Additional Requirements for Lot 180 Eastern and Lot 180 Western Portion

20. Excavation and removal of soil/fill exceeding Track 2 Restricted Residential SCOs. For development purposes, eastern portion will be excavated to depths of up to 4 feet and western portion of Lot 180 will be excavated to depths of up to 8 feet. Approximately 1,750 tons of soil/fill be excavated and removed from these areas.
21. Construction of an engineered composite cover consisting of 5-inch thick concrete slab beneath all building areas.
22. Installation of a vapor barrier system beneath the building slabs for Lot 180 Eastern and Lot 180 Western Parcels. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab to mitigate soil vapor migration into the building. The vapor barrier system will consist of a Stego® Wrap below the slab throughout the full building area. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. 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.
  - a. A 15-mil vapor barrier will be installed beneath the structure's slab. The barrier chosen for this project is manufactured by Stego® Wrap Vapor Barrier 15-mil. Stipulation List provides manufactures specifications and PE/RA certified building plans with the extent of the vapor barrier installation details (penetrations, joints, etc.) with respect to the proposed foundation, footings, etc.
23. Installation and operation of active SSDS's for Lot 180 Eastern and Western Parcels. The SSDS will consist of a network of horizontal pipe set in the middle of a gas permeable layer immediately beneath the building slab and vapor barrier system. A separate design document will be provided for additional details regarding the SSDS. The horizontal piping will consist of fabric wrapped, perforated schedule 40 4-inch PVC pipe connected to a 6-inch steel riser pipe that travels through the building to the roof. The gas permeable layer will consist of a 12-inch thick layer of 3/4-inch gravel. The 6-inch steel riser pipe will be connected to the blower. On the Lot 180 Eastern Parcel, the active SSDS will be hardwired and will include an Ametek Rotron EN505AX72ML blower installed on the roof. On the Lot 180 Western Parcel, the active SSDS will be hardwired and will include an Ametek Rotron EN858BA72WL blower installed on the roof. The active SSDS's are an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the active SSDS's were 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.
24. Installation of methane mitigation system for Lot 180 Eastern parcel.

#### Additional Requirements for Lot(s) 20 and Lot 30:

25. When Lots 20 and 30 are developed (i.e., new buildings), excavation and removal of soil/fill exceeding Track 2 Restricted Residential SCOs. For development purposes, these two Lots will be excavated to depths of up to 4 feet. Approximately 700 tons of soil/fill will be excavated and removed from these areas. If lots 20 and 30 are not developed, they will handled in accordance with the Soil/Materials Management Plan in Appendix D.

26. When Lots 20 and 30 are developed (i.e., new buildings), construction of an engineered composite cover consisting of 5-inch thick concrete slab beneath all building areas.
27. When Lots 20 and 30 are developed (i.e., new buildings), installation of a vapor barrier system beneath the building slabs for Lots 20 and 30. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab. The vapor barrier system would consist of a Stego® Wrap vapor barrier below the slab throughout the full building area. All welds, seams, and penetrations would be properly sealed to prevent preferential pathways for vapor migration. The vapor barrier system would be an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the vapor barrier systems were designed and properly installed to mitigate soil vapor migration into the buildings.

Additional Requirements for Lot(s) 7, 70, 118, 140, 190, 200 and 210:

28. Limited ground disturbance is anticipated on lots 7, 70, 118, 140, 190, 200 and 210 as a result of parking lot improvements (e.g., new asphalt, planters, lighting). Excavation, handling and disposal on these lots will be conducted in accordance with the Soil/Materials Management Plan in Appendix D. Discrete contaminant sources (such as hotspots) identified during the remedial action will be identified by GPS or surveyed. This information will be provided in the Remedial Action Report.
29. Construction of an engineered composite cover consisting of asphalt layer with a 6-inch clean granular sub-base, 4-inch poured concrete on a 6-inch sub-base in sidewalk areas, and one feet of clean soil in all open space and landscaped areas for Lots 7, 20, 30, 70, 118, 140, 190, 200, and 210. A portion of Lot 140 will be slightly regraded to accommodate the adjacent building expansion.

The remedy for Hazardous Materials described above conforms 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 2, 2016



Date

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May 2, 2016



Date

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May 2, 2016



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