EXPLANATION OF SIGNIFICANT DIFFERENCE
EBENEZER PLAZA 1 SITE

NEW YORK STATE OF OPPORTUNITY
Department of Environmental Conservation

Brooklyn / Kings County / Site No. C224240 / September 2018

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

The purpose of this notice is to describe the progress of the cleanup at the Ebenezer Plaza 1 Site and to inform you about a change in the Site remedy. The site is located at 94 New Lots Avenue, in an urban area in the Brownsville neighborhood of Brooklyn. The property is bounded by New Lots Avenue to the north, Sackman Street to the west, Powell Street to the east, and Hegeman Avenue to the south. On March 9, 2018, the New York State Department of Environmental Conservation issued a decision document which selected a remedy to clean up the Site. Upon the request of the remedial party, the Department has considered a revised remedial action plan. In lieu of excavating a total of 18,000 cubic yards of contaminated soil, 13,500 cubic yards of contaminated soil will be excavated and contaminated soils as depths exceeding 6.5 feet will be addressed through the installation of seventy-one (71) injection wells for the purpose of in situ chemical oxidation (ISCO). Like the original remedy, the revised remedy will aim to achieve a Track 2 Restricted Residential clean up.

This Explanation of Significant Difference (ESD) will become part of the Administrative Record for this Site. The information here is a summary of what can be found in greater detail in documents that have been placed in the following repositories:

Brooklyn Public Library
East Flatbush Branch
9612 Church Avenue
Brooklyn, NY 11212
(718) 922-0927

Brooklyn Community Board #16
444 Thomas S. Boyland Street – Room 103
Brooklyn, NY 11212
(718) 385-0323

Brooklyn Public Library
Sping Creek Branch
12143 Flatlands Avenue
Brooklyn, NY 11207
(718) 257-6571

The remedy modification, as detailed by this ESD, was made available for a thirty (30) day public comment period. The comment period closed on August 4, 2018.

2.0 SITE DESCRIPTION AND ORIGINAL REMEDY

2.1 Site History, Contamination, and Selected Remedy

The site is 1.26-acres and is bordered by New Lots Avenue to the north, Sackman Street to the west, Powell Street to the east, and Hegeman Avenue to the south. Please see Figure 1, Site Location Map. The site is currently vacant. The property appears to have been developed since 1928 with various uses including residential, an auto garage, drycleaner, gasoline filling station, auto repair, a car wash, warehouse, parking, used auto sales, public center, church, newspaper distribution, restaurant supply, and auto wrecking lot in two areas. Such historic uses led to contamination on-site.

In 2009, investigation of the site began under NYSDEC's Spills program which indicated soil and groundwater contamination by volatile organic compounds (VOCs). This resulted in the treatment of a portion of the site via in-situ chemical oxidation (ISCO) over a series of four applications, the most recent in 2016. Soil and groundwater were analyzed for VOCs, semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations conducted to date, the primary contaminants of concern include lead, barium, tetrachloroethene (or "PCE"), benzo(a)anthracene, and 1,2,4-trimethylbenzene.

Four monitoring wells were sampled in the most recent round of groundwater sampling in 2017. PCE was the only chlorinated solvent detected above groundwater standards, with one well impacted at a concentration of 17 parts per billion (ppb), slightly exceeding the groundwater standard of 5 ppb. Several petroleum-related VOCs were also detected above groundwater standards in one well, most notably 1,2,4-trimethylbezene, exceeding the groundwater standard of 5 ppb with a concentration of 450 ppb. Data does not indicate any off-site impacts in groundwater related to this site.

The original remedy called for the excavation and off-site disposal of approximately 28,000 cubic yards of soil. Of those 28,000 cubic yards, approximately 18,000 cubic yards were to be removed for remedial purposes and the additional 10,000 cubic yards were to be removed to accommodate site redevelopment. The original remedy also called for a cover system, a sub-slab depressurization system (SSDS) in any new buildings, and institutional and engineering controls. The remedy would have resulted in a Track 4 cleanup, however if the excavation achieved a Track 2 restricted residential cleanup, a cover system would not be required.

3.0 CURRENT STATUS

The Brownfield Cleanup Program applicant is a "volunteer" in the program. To date, all buildings on-site have been demolished and the remedial party is prepared to implement the remedial action. The remedial investigation was completed in May 2018. No remedial action has been performed on-site to date.

4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCE

4.1 New Information

Based upon the request of the remedial party, the Department agreed to examine the effectiveness of ISCO to treat deeper soils and groundwater in lieu of deeper soil excavation. Based on that assessment the Department has agreed to permit that all soils within the first six and a half feet below grade be removed. Additional urban fill and soils will also be excavated to accommodate redevelopment. Remaining soils and groundwater will receive a minimum of two rounds of ISCO injections and groundwater concentrations will be monitored.

The revised remedy remains protective of human health in achieving remedial action objectives while reducing the carbon footprint of the remedial actions. By utilizing ISCO to treat impacted soils on-site there is a reduction of soil transportation, a reduction in energy required to de-water and treat groundwater at the site, and a reduction in landfilling soils. In addition, there will also be reduced traffic, noise, and emissions in the surrounding neighborhood through a reduction of soil transportation. For the reasons stated above the Department supports the revised remedy.

4.2 Comparison of Changes with Original Remedy

The following compares elements of the modified remedy to the original:

1. The revised remedy calls for all surface soils to a depth of 6.5 feet below grade surface, which exceed restricted residential soil cleanup objectives (RRSCOs), will be excavated and transported off site for disposal. It is estimated that the entire site will be excavated of urban fill to an approximate depth of 6.5 feet, in addition to a chlorinated volatile organic compound hot spot for a total of approximately 13,500 cubic yards of contaminated soils.

   The original remedy included the removal of 18,000 cubic yards of contaminated soil across the site. Please refer to Figure 2. The soil removal will provide for protection of public health and the environment.

2. The revised remedy will address contaminated soils and groundwater at depth by utilizing chemical oxidation. Hydrogen Peroxide in conjunction with Ferrous Sulfate Heptahydrate will be used to oxidize the contaminants at depth. Seventy-one infusion wells will be installed in a tight grid and gravity fed with the oxidizing agent. Please see Figure 3. The revised remedy calls for two rounds of ISCO infusion. Post ISCO, confirmation samples will be taken to confirm whether a Track 2 cleanup is achieved.

   The original remedy did not call for ISCO injections.

3. For the revised remedy a site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs. If a Track 2 restricted residential cleanup is achieved, a Cover System will not be a required element of the remedy.

   The original remedy called for a similar site cover system.

4. Both remedies require that on-site buildings are constructed to include an SSDS, or other acceptable measures, to mitigate the migration of vapors into the building from remaining soil and groundwater contamination.

5. Both remedies require the imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below. The remedy will achieve a Track 4 restricted residential cleanup at a minimum and will include an environmental easement, and site management plan as described below.

6. Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

a. require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
b. allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
c. restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
d. require compliance with the Department approved Site Management Plan.

7. A Site Management Plan is required, which includes the following:
   a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
      i. Institutional Controls: The Environmental Easement discussed in paragraph 6, above.
      ii. Engineering Controls: The cover system discussed in paragraph 3 and the SSDS discussed in paragraph 4.

   b. this plan includes, but may not be limited to:
      i. an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
      ii. descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
      iii. maintaining site access controls and Department notification; and
      iv. the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

   c. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

      i. monitoring of groundwater to assess the performance and effectiveness of the remedy;
      ii. a schedule of monitoring and frequency of submittals to the Department; and

   d. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
      i. procedures for operating and maintaining the remedy; and
      ii. compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

5.0 SCHEDULE AND MORE INFORMATION

Excavation of urban fill has begun at the site. Hot spot excavation is expected to be completed by Fall 2018. The In-situ Chemical Oxidation (ISCO) point installation and the chemical injection program is expected to be completed in Fall 2018. If you have questions or need additional information you may contact any of the following:

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625 Broadway
Albany, NY 12233
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Long Island City, NY 11101
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Eamonn O'Neil
NYSDOH
Bureau of Environmental Exposure
ESP Corning Tower, Rm 1787
Albany, NY 11237
(518) 402-7860
beei@health.ny.gov

09/05/2018
Date

Aaron Fischer, Project Manager
Division of Environmental Remediation, Bureau B, Section D

9/07/2018
Date

Sally Dewes, Section Chief
Division of Environmental Remediation, Bureau B, Section D

9/7/2018
Date

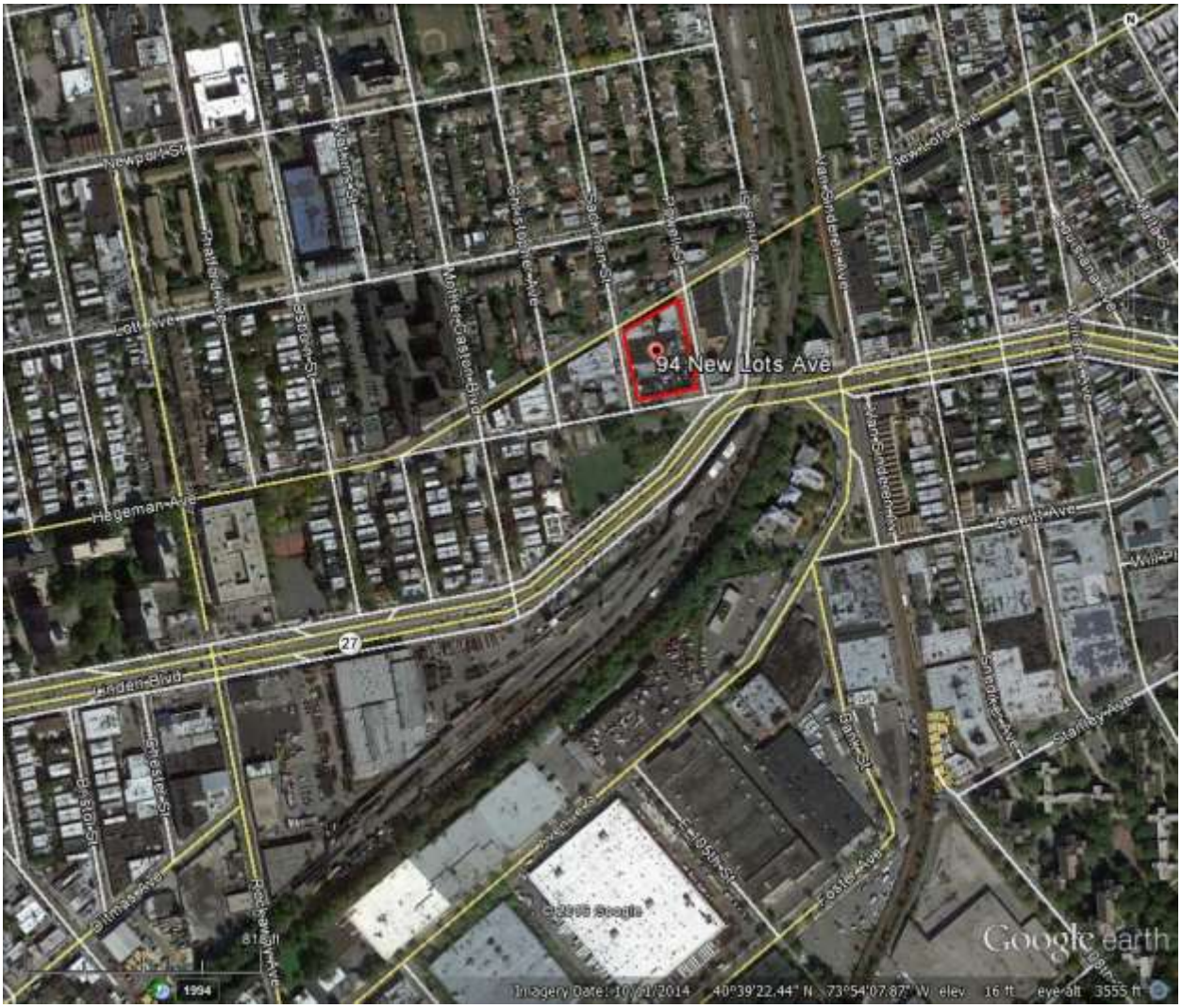
Gerard Burke, Bureau Director
Division of Environmental Remediation, Bureau B

DECLARATION

The selected remedy is protective of public health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

BROWNFIELD CLEANUP PROGRAM

Figure 1: Site Location Map



EXCAVATION PLAN

URBAN FILL > RRSCOs

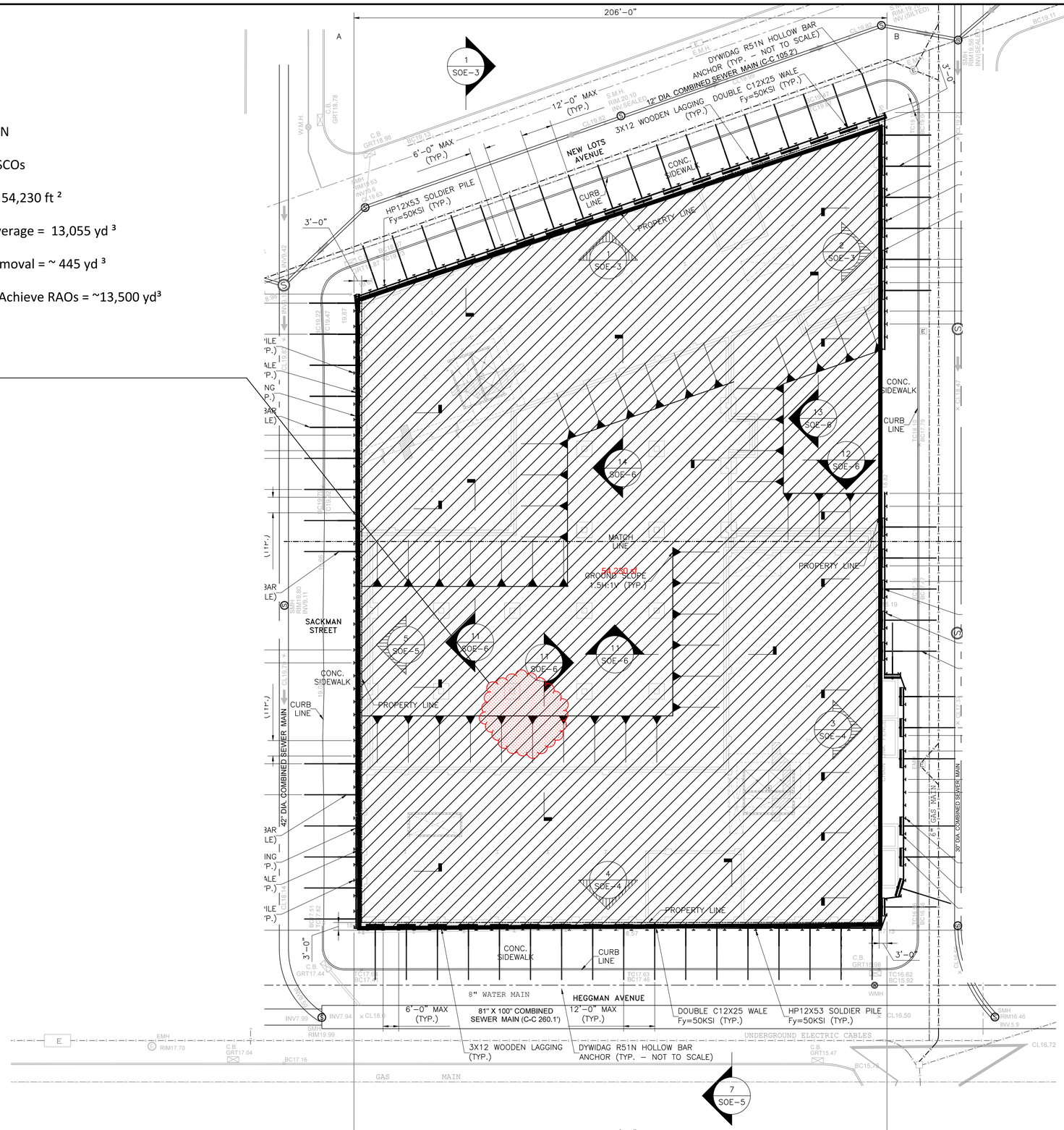
Entire Property = 54,230 ft ²

To 6.5 feet bgs average = 13,055 yd ³

CVOC hot spot removal = ~ 445 yd ³

Total removal to Achieve RAOs = ~13,500 yd³

CVOC Hot Spot



PLAN VIEW

SCALE: 1" = 20'

Base map prepared by Pillori Engineering for SOE Plans.

LEGEND

- GROUNDWATER LEVEL BEFORE DEWATERING
- GROUNDWATER LEVEL AFTER DEWATERING
- GROUND SLOPE

THE Chazen COMPANIES 70 1947 – 2017 YEARS

Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers

PROJECT NAME:

EBENEZER PLAZA
96 NEW LOTS AVENUE
BROOKLYN, NEW YORK

CLIENT NAME:

EBENEZER PLAZA LLC.
c/o PROCIDA DEVELOPMENT GRP.
456 EAST 173RD STREET
BRONX, NEW YORK

C224240
Revised RAWP
Figure 2
Soil Excavation Limits for RRSCOs

GEOTECHNICAL ENGINEER:

PILLORI ASSOCIATES, P.A.
Geotechnical Engineering

71 Route 35
Laurence Harbor, New Jersey 08879
Tel. 732.335.0059 Fax. 732.335.8515

333 Meadowlands Parkway, Suite 102
Secaucus, New Jersey 07094
Tel. 201.558.0065 Fax. 201.558.1427

email : office@pilloriassociates.com

No.	DRAWINGS/REVISIONS	DATE

DRAWING TITLE:

SUPPORT OF EXCAVATION
PLAN VIEW

DRAWN :	CHECKED :	REVIEWED :
RM		GP

DATE : 07-25-2017

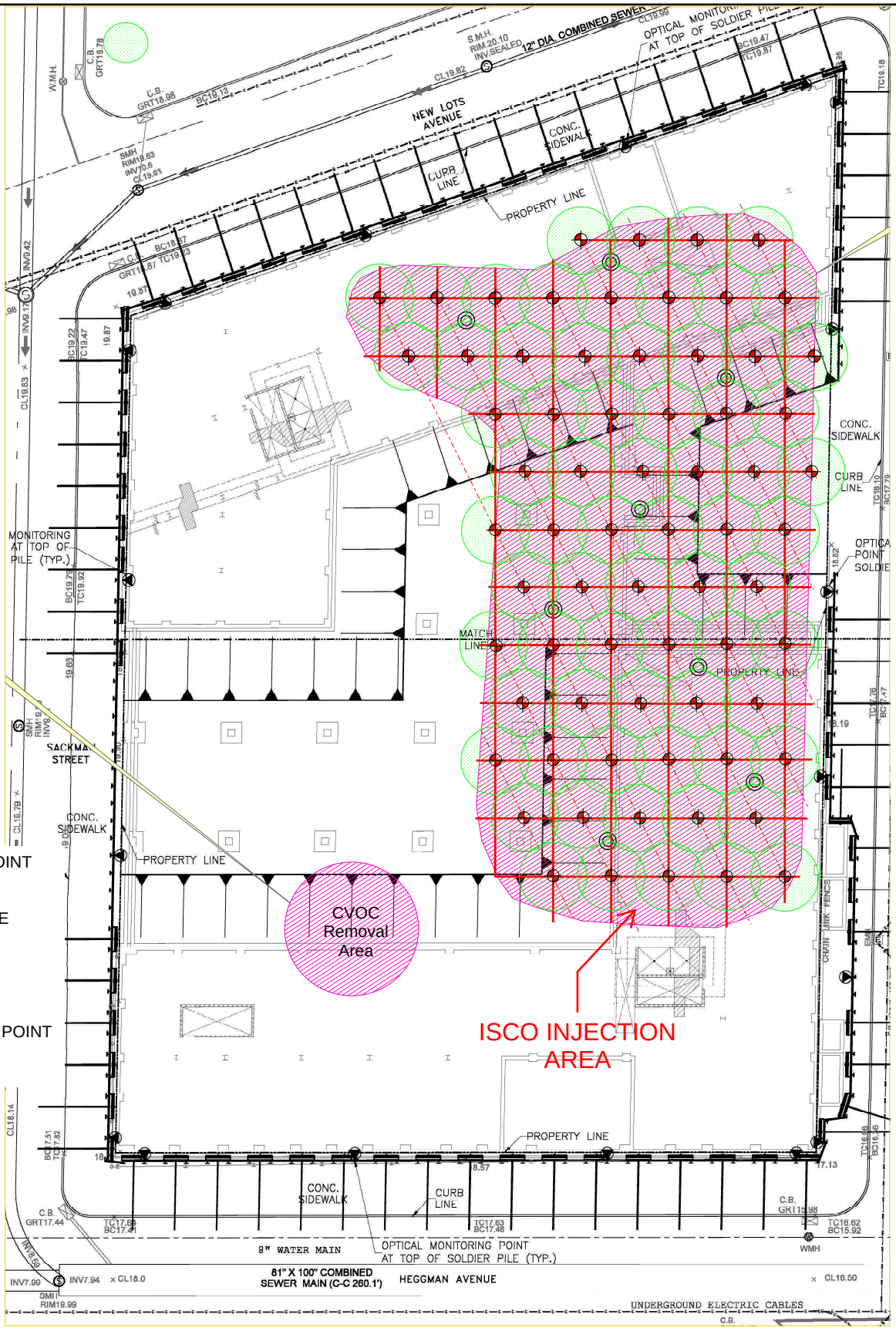
SCALE : 1" = 20'

JOB NO. : 160611

DRAWING NO. SOE-002.00

SHEET 2 OF 7

STATE OF NEW YORK · GREGORY PILLORI · 058605 · LICENSED PROFESSIONAL ENGINEER



INJECTION POINT

APPROXIMATE RADIUS OF INFLUENCE

INTERSTIAL MONITORING POINT

THE Chazen COMPANIES 70 1947 – 2017 YEARS

Civil Engineers
Land Surveyors
Planners
Environmental & Safety Professionals
Landscape Architects
Transportation Planners & Engineers

EBENZER PLAZA 1 - BCP Site C224240
Figure 3
ISCO Infusion grid