Former Ozone Industries, Inc.

OZONE PARK

QUEENS, NEW YORK

Interim Site Management Plan

NYSDEC Site Number: 2-41-033

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This Interim Site Management Plan (ISMP) will guide site operation, monitoring and maintenance activities, including the start-up and operation of the Soil Vapor Extraction System (SVE) and Sub-slab Depressurization System (SSDS), as well as interim groundwater monitoring and an off-site soil vapor sampling element over the next approximately one to two years at the former Ozone Industries Inc. Site (the site). After that time, the effectiveness of the remedial systems will be evaluated to determine whether they must continue operating or whether they may be decommissioned. The need for continued groundwater monitoring, institutional controls (e.g., an environmental easement) with an updated site management plan (SMP) and long-term periodic review monitoring will be deferred and evaluated at that time.

1.1.1 General

Endzone, Inc. entered into an Order on Consent with the NYSDEC to remediate a 0.25 acre property located in Ozone Park, Queens, New York City, New York. This Order on Consent required the Remedial Party, Endzone, Inc., to investigate and remediate contaminated media at the site.

The contaminated soil excavation component of the remedy is complete but some residual soil contamination remains in the subsurface at the site. This ISMP was prepared to manage the remaining contamination at the site and can only be revised with the approval of the NYSDEC.

For proper implementation of this ISMP and to ensure the QA/QC of the sampling data (air, groundwater) is representative of the site conditions throughout, it is preferable that all 8 Bays (the site) remain vacant and be continuously accessible during initial system operation and monitoring (3 – 8 months).

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The site is located in a mixed commercial/industrial/residential area of the Ozone Park section of Queens County of New York City, New York and is identified as Block 9106 and Lot 70 on the New York City Tax Map. The site is an approximately 0.25-acre area bounded by 101st Avenue to the north, 103rd Avenue to the south, 101st Street to the east, and 100th Street to the west (see Figures 1 and 3). The site is located across the street from 101-32 101st Street, the location of the former Ozone Industries facility.

This Class 2 Inactive Hazardous Waste Disposal Site (Class 2 site) consists of eight Bays (totaling 12,000 square feet) situated beneath an abandoned, elevated Long Island Railroad (LIRR) (Figure 2). Each Bay, approximately 25 feet wide and 60 feet long, is property between the support columns of the elevate LIRR. The Bays are owned by the City of New York and leased to various tenants for different uses. Several of these Bays were used for storage of spent trichloroethene (TCE) in conjunction with the manufacture of aircraft parts (1948 to 1996).

1.2.2 Site History

For some period prior to 1998 the Ozone Industries facility rented, for storage purposes, several Bays beneath the LIRR that make up this Class 2 site. The Bays, typically constructed of cinder block walls and concrete or asphalt floors, were used to store solvents, hydraulic fluids, and scrap metal chips in roll-off containers that resulted from the Ozone Industries manufacturing activities. The facility manufactured aircraft parts including landing gears, hydraulic assemblies, aircraft steering assemblies and flight controls. It is believed that releases of solvents, oil and/or fluids may have occurred in one or more of these Bays. The Ozone Industries Facility was sold in 1998.

In 2002, the Department listed the site as a Class 2 site in the NYS Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

Several site investigations took place between 1996 and 2003 which involved the Ozone Industries site. In 1996, the New York City School Construction Authority conducted a Phase I and Phase II Environmental Site Assessment of the Former Voges Manufacturing Company property located south of 103rd Avenue on 99th Street (currently PS65). The 1996 Phase I Report identified Ozone Industries as having a 2000-gal storage

tank that was used to store TCE and reported TCE in the groundwater at the Former Voges Manufacturing Company property. This led to further investigations at and near the Ozone Industries facility.

Two Environmental Site Assessments, Phase I in 1997 and Phase II in 1998, were conducted at the Ozone Industries facility across the street from the site (Bays 8-15). These investigations included inspection of existing aboveground storage tanks, underground storage tanks and a depressed area for staging 55-gallon drums. Soil samples were also collected and tested for petroleum related compounds. Some petroleum contamination was detected and a 1,000 gallon underground storage tank and 2 open pits were later closed in October 1999. The 1997 Phase I Report also stated that waste TCE was placed in 55-gal drums and stored across the street in areas located underneath the elevated LIRR. No evidence of the use of polychlorinated biphenyls (PCBs) was found.

In the summer of 1999, the Department conducted a Preliminary Site Assessment (PSA) in the vicinity of the Former Voges Manufacturing Company property (103-22 99th Street) and the Ozone Industries facility (101-132 101st Street) to determine the source of the TCE contamination in the groundwater. Twenty one groundwater sampling points were installed in the sidewalks upgradient and west of the Ozone Industries facility and in the area of the Former Voges Manufacturing Company property. TCE was found in a majority of the samples at varying concentrations except the upgradient samples did not detect any TCE in the groundwater. The PSA findings indicated there was a source of TCE contamination near the Ozone Industries facility, possibly from stored drums beneath the elevated LIRR.

The Department conducted further field investigations in June 2001, July 2002, August 2002 and May 2003 to collect additional soil samples, groundwater samples and soil vapor samples. This investigative work expanded on the earlier PSA investigations and included temporary well points, soil borings for piezometers and 19 permanent soil vapor wells. The analysis of soil samples for VOCs did not indicate detectable levels in the majority of the samples. The groundwater sampling results indicated decreasing TCE concentrations with depth and TCE was detected in all the soil vapor samples.

The Remedial Investigation (RI) and Feasibility Study (FS) Report for the site was completed by AECOM (dated June 2009) and was approved by the NYSDEC in a letter dated October 14, 2009. The Record of Decision (ROD) was issued by NYSDEC in February 2010. The AECOM Remedial Design Work Plan (dated January 2011) for

completing the Remedial Design/Remedial Action Work Plan (RD/RAWP) was approved by the NYSDEC in a letter dated January 31, 2011. A draft RD/RAWP was submitted to NYSDEC and NYSDOH in August 2011. The NYSDEC issued an approval letter for the RD/RAWP on October 25, 2011, and the final RD/RAWP is dated November 2011. Soil excavation and partial system installation was completed in summer 2013. Subsequently, permitting and access tasks in regard to reconstruction of the Bay interiors and system installation were completed. The Bay interiors were reconstructed July through September 2015 and the remedial system began operation in April 2016.

1.2.3 **Geologic Conditions**

Based on soil borings advanced at the site during the RI/FS activities, the overburden consisted of a fill unit underlain by a sand unit. An unconsolidated silt-sand-gravel fill material (dark gray in color) was encountered in the borings underneath the Bays from 3 to 4 feet below ground surface (bgs) and in the off-site borings from 1 to 3 feet bgs. A native sandy soil was observed at all soil borings, underlying the unconsolidated fill material. This mostly homogenous native sandy soil consists of medium to coarse grained clean sands (light brown to yellowish orange in color) was encountered from an average depth of 2.5-feet bgs to the end of the deepest borehole (75-feet bgs). According to a Bedrock Geologic Map of the New York Metropolitan Area, the Ozone Park area is surrounded by unconsolidated glacial deposits. Bedrock in the area of the site consists of Early Paleozoic rock (mostly metamorphic) and it is encountered at a depth of over 500 feet bgs.

The nearest down slope surface water body to the site is the Shellbank Basin, which is 1.5-miles south of the site. Runoff is inferred to drain off-site via overland flow into storm drains located on the streets. Surface water runoff enters storm drains in the area, which discharge into the Jamaica Bay.

The presence of water saturated subsurface soils was noted in the RI/FS boring logs. In general, groundwater was encountered at approximately 30-feet bgs. Water level measurements rounds completed during the years 2004 through 2006 indicate similar groundwater level results. Based on these elevations, the apparent groundwater flow direction is south across the site vicinity, consistent with previous findings and reports. Groundwater elevations tables and groundwater contour maps depicting the groundwater elevations from 2005 and 2006 are included in the RI/FS report.

The average groundwater hydraulic conductivity (K) value at the site is approximately 120 feet per day. This value is within ranges for glacial outwash on Long

Island and is consistent with the site geology, which is medium to coarse grained sands. Assuming a hydraulic gradient of 0.1 foot water level decline every 100 feet and porosity typical of coarse sands of 0.3, groundwater velocity would be 0.4 ft./day. A groundwater flow figure from the RI/FS Report is attached as Figure 4.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the following reports:

- RI/FS Work Plan (May 2004) for the site approved in a letter by NYSDEC (dated July 8, 2004);
- February 15, 2006 Data Package Letter Report completed by AECOM submitted to NYSDEC followed by the final Data Package Letter Report dated June 8, 2006 (based upon NYSDEC comments provided in a letter dated May 23, 2006);
- RI/FS Work Plan Addendum submitted to NYSDEC (dated June 9, 2006);
- Additional Remedial Investigation Data Package Letter Report submitted on March 29, 2007 and on September 14, 2007 (final Additional Remedial Investigation Data Package Letter Report based on NYSDEC comments provided in a letter dated July 12, 2007); and
- Revised RI/FS Report and Conceptual Site Model Report (June 2009).

Generally, the RI determined that the presence of a localized area of VOC and TCE-impacted surface soil at the site. The VOC and TCE- impacted soil levels are noticeable higher directly beneath the concrete floor at the site; however, soil levels generally decrease with depth. The VOC levels found in the soil gas samples are probably attributed to such VOC impacted soils. Finally, due to the vertical distance between the VOC and TCE-impacted soils and the depth to water, and to the finding of non-detectable to low levels of VOCs in soils collected above the groundwater table, the results suggest that VOC contamination in groundwater in the site and off-site area may be affected by other possible sources.

The VOC levels in all of the soil samples utilized for the RI are below the Subpart 375-6 SCOs for Restricted Commercial and Industrial Use concentrations (used for comparison purposes). The levels of TCE and two other VOCs in soil samples collected

from the shallow levels beneath the site exceed the Subpart 375-6 SCOs for the Protection of Groundwater, however, these cleanup levels are not exceeded for all VOCs in all soil samples collected off-site and at the groundwater interface beneath the site. The results indicate that no significant impacts are present at depth beneath the site and in the soils in the immediate site vicinity.

The RI evaluated approximately 264 off-site grab and monitoring well groundwater samples collected since 1999. Groundwater analyses in 2005 and 2006 indicate the presence of VOCs generally consistent with previously detected levels. Levels (especially TCE) detected in 2006 are generally lower than previously detected in 2005 and considerably lower than those detected in 2002 and 2003. TCE was detected in the April 2005 and August 2006 samples from upgradient well PZ-01D (located along 101st Avenue), and samples from PZ-05 located east of the site on 101st Street (cross gradient or possibly upgradient of site) have contained levels of TCE in all samples collected since 2002 (and MTBE was detected in the April 2005 duplicate sample). See Figure 5 (Remedial Investigation Monitoring Well Locations) for well locations. The majority of the TCE levels in groundwater in the site vicinity are above the NYSDEC GA groundwater standard, but the levels appear to be decreasing with time.

The RI soil gas sampling included 13 sample locations in 2005, and 27 sample locations in 2006. Soil gas samples collected from site and off-site Bay locations indicate the presence of various VOCs and TCE. The highest levels of VOCs (and estimated TCE concentrations) we observed in soil gas samples collected directly beneath the concrete floor of Bays 8 through 15. Generally, lower VOC levels were detected in samples from the off-site soil gas sample locations (Bays north and south of the site and locations in streets east and west of the site). The soil gas sampling and analyses indicated the highest levels of VOCs (and estimated TCE concentrations) in soil gas samples collected directly beneath the site floor (Bays 8 – 15). Generally, lower VOC levels were detected in samples from the off-site locations (samples from adjacent Bays and streets).

A separate report (Conceptual Site Model Report) submitted simultaneously with the 2009 RI/FS Report presents the findings of three dimensional (3-D) modeling and the resulting figures. The soil and groundwater data from the various sampling events were evaluated graphically to determine if there were spatial trends in the data that could comment on potential sources within the site and off-site areas. This analysis allowed the data to be interpreted further in regard to separate and specific sources. The results of this work, which presents evidence about other possible sources of impacts in the area of the

site, are presented in the Conceptual Site Model Report (June 2009) by AECOM.

The presence of sumps in Bay 12 and soil impacts (headspace readings) deeper in this area than in other Bays were identified during pre-design assessment activities conducted in 2009. The assessment of the sumps is included in the Pre-Design Assessment Activities report, Attachment C to the RD/RAWP. Removal of these sumps is discussed in Section 1.4.1.1.

It was reported in 2009 that there is not a complete exposure pathway for contact with surface soils at the site due to the concrete and pavement floors in the Bays. If future construction work were to occur at the site, construction workers might potentially contact subsurface soils. The potential exposure pathway for indoor air is a complete pathway for workers at the site and off-site residents. Groundwater in the area is not used for drinking water. The only off-site receptor with a potential for direct contact with groundwater is a construction worker, but this is unlikely due to the depth of the groundwater (28 to 30 feet below grade). There are no surface water bodies within 1 mile of the site.

Below is a summary of site conditions when the RI was performed from 2004 to 2008:

1.3.1 **Soil**

The primary contaminants of concern (COCs) within the subsurface soil at this site are VOCs including TCE and its degradation product (cis-1,2 DCE). As part of the RI, subsurface soil samples from below the floors of the site (Bays 8-15) and off-site Bays 2, 4, 17, 24 and 28 were analyzed for VOCs. Subsurface soil samples below the sidewalks, both upgradient and downgradient of the site, were also investigated. Figure 6a presents the subsurface soil sampling results for TCE and cis-1,2 DCE in shallow soil and Figure 6b presents the results from deep soil.

Of the 90 subsurface soil samples collected, all were non-detect or well below the Unrestricted Use Soil Cleanup Objectives (SCOs) including upgradient and downgradient subsurface soil samples except for the shallow soils (0-2 feet deep). These shallow soil samples, collected directly beneath the asphalt or concrete Bay floors, were impacted by TCE and may have provided a continuing source of contamination for groundwater and soil vapor contamination. TCE was found as high as 150 ppm in the subsurface soil samples beneath the on-site Bay floors, with levels of TCE decreasing with depth, generally non-detectable near the groundwater table.

1.3.2 **Site-Related Groundwater**

Groundwater sampling was conducted near and in the vicinity of the site as early as 1996, prior to the RI. Then, in January 2005 to August 2006, as part of the RI, four rounds of groundwater sampling took place at 20 monitoring wells. The TCE levels detected in the groundwater in 2006 were generally lower than those detected in 2005 and considerably lower than those detected in 2002 and 2003. Figure 7a and Figure 7b depict TCE in groundwater over time. The applicable SCG (Class GA groundwater criteria) for TCE is 5 ppb.

In June 1999, the highest level of TCE in the groundwater was 22,000 ppb found just south of the site along 100th Street. The highest TCE level in the August 2006 groundwater sample was 260 ppb located along 99th Street. The August 2006 groundwater sample adjacent to the site (near Bay 7) had TCE at 7 ppb, slightly above the SCG for TCE.

Downgradient groundwater wells near 103rd Avenue, sampled in August 2006, had TCE concentrations ranging between 8.3 ppb and 74 ppb. TCE was also detected in the upgradient well along 101st Avenue in April 2005 (23 ppb) and in August 2006 (8 ppb).

The groundwater sampling results indicated decreasing TCE concentrations with depth with the highest concentrations at the groundwater/soil interface. Generally, three areas were found to have the highest concentrations of TCE in the groundwater: near Bays 14-20; near the intersection of 103rd Avenue and 99th Street; and on 98th street south of 103rd Avenue.

Given that the depth to water is approximately 30 feet and because analytical results for soils collected above the groundwater table indicate non-detectable to low levels of VOCs, it does not appear that VOCs are migrating from surface soil to groundwater.

1.3.3 **Site-Related Soil Vapor Intrusion**

The RI included soil vapor samples collected from beneath the site and off-site in 2005 and 2006. All samples, analyzed for VOCs, were collected between the depths of 4 and 8 feet bgs. Soil vapor sampling was also conducted in the vicinity of the site before the RI began, as early as 2002. The analytical results of TCE and cis-1,2 DCE in soil vapor for all samples from 2002 to 2006 are presented in Figure 8. The results were used to delineate the source area and evaluate the potential for exposures via soil vapor

intrusion. A concerted effort by Endzone, Inc., NYSDEC and NYSDOH was made to obtain off-site indoor air and sub-slab vapor data but access has not been granted by property owners.

The 2006 on-site soil vapor sample analyses found elevated sub-slab TCE contaminant levels in all eight Bays, as high as 675,000 ug/m3 (Bay 8). The 2006 off-site soil vapor samples were collected in the sidewalks outside the Bays and covered an area from 101st Avenue to below 103rd Avenue. The TCE soil vapor concentrations near 101st Avenue ranged from 252 ug/m3 to 5,960 ug/m3. South of the site, Bay 24 and Bay 28 were sampled (near 103rd Avenue). Bay 24 had TCE at 94,900 ug/m3 but Bay 28 was non-detect. Another four locations were sampled for soil vapor on 103rd Avenue and south toward Liberty Avenue and the all the 2006 results for TCE and cis-1,2 DCE were non-detect.

As discussed above, VOC and TCE- impacted soil levels are noticeably higher directly beneath the concrete floor at the site; however, impacted VOC and TCE soil levels generally decrease with depth. Therefore, the VOC levels found in the soil gas samples are probably attributed to such VOC impacted soils.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site contaminated soils were remediated in 2013 in accordance with the NYSDEC-approved Remedial Design/Remedial Action Work Plan dated November 2011.

The following is a summary of the Remedial Actions performed or to be performed at the site:

1. Excavation of as much, as practical, of the shallow soils beneath Bays 8 through 15 exceeding commercial SCOs listed in Table 1, to approximately 4 feet bgs as shown on Figures 9a and 9b;
2. Replacement of excavated shallow soils with “clean fill”;
3. Construction and maintenance of a SSD system, underlying HDPE liner and SVE system to remediate non-accessible remaining contaminated soil, and subsequent soil vapors, remaining at the site. The HDPE liner and SSD system will also eliminate potential for vapor intrusion into the Bays while the SVE system will remediate in place soils, not accessible for excavation, and also provide vapor control from deeper soils and groundwater;

4. Groundwater monitoring; and
5. After the SVE system and the SSDS system has operated for some time, an Off-site Soil Vapor Sampling Plan will be developed and submitted to the Department to collect off-site soil vapor data in the vicinity of the site.

1.4.1 Removal of Contaminated Materials from the Site

The remedial action, related to removal of contaminated materials, for the site was to remediate impacted source areas to a level protective of public health and the environment to the extent feasible. Soil standards, criteria, and guidance (SCGs) are based on 6 NYCRR Part 375, Subpart 375-6: Remedial Program SCOs. A list of the SCOs for the primary COCs and applicable land use for this site are provided in Tables 1 through 3.

1.4.1.1 Bay 12 Sumps

As discussed above, two sumps located in Bay 12 were identified during the November 2009 pre-design investigation work. One sump (Sump #1, closest to 100th street) was approximately 24 inches in diameter, approximately 26 inches deep and had a solid bottom. Sump #2, located in the approximate center of the Bay, was approximately 24 inches in diameter, approximately 32 inches deep and had a solid bottom. Field headspace readings indicated elevated VOC impacts and subsequent laboratory analyses of material from the sumps indicated 1,1,1-Trichloroethane and TCE concentrations of 26,000 and 550,000 mg/kg, respectively. During on-site demolition activities, in June 2013, a third sump was identified but was not sampled as part of the pre-investigation. Exact locations of these sumps are shown on Figure 10.

Per the NYSDEC approved RD/RAWP, each of the sumps in Bay 12 were cleaned, and their contents drummed and disposed of off-site, prior to commencing soil excavation activities discussed below. Each of the sumps was a buried 55 gallon drum. Sump 1 was fully intact, did not show any signs of significant deterioration and no infiltration was observed post-cleanout. Sump 2 showed minor signs of deterioration and a very slow infiltration rate was observed post-cleanout. Sump 3 had holes drilled (or manually punctured) through the bottom, presumably to drain its contents into the subsurface. Sumps 1 and 2 were connected with a 1.5” PVC pipe sloped such that Sump 2 would drain into Sump 1. There were also 2 other small (~1”) PVC pipes that were stubbed up on the wall adjacent to 100th street that fed into Sump 1.

A total of 5 drums of material were generated during the Bay 12 sump cleanout.

Three drums of material came from Sumps 1 and 2 and were disposed of as hazardous based upon sample analyses from November, 2009 (manifests will be provided in the Final Engineering Report). Two drums of material came from Sump 3 and were disposed of as hazardous based upon sample analyses from August, 2013 (manifests will be provided in the Final Engineering Report).

1.4.1.2 **Concrete Slabs and Subsurface Soils**

Preliminary calculations, using RI data, indicated that approximately 75-80% of the site VOC mass appears immediately below (0-2 ft. bgs) concrete slabs in Bays 8 through 13 and 15. To address this primary source contamination, the floors in Bays 8-15 were removed and as much of the contaminated shallow soil, to the extent practical, was excavated from beneath these 8 Bays (site). A figure showing areas where excavation was performed is shown in Figures 9a and 9b. Post-excavation soil sampling was conducted in each of the 8 Bays, to document the condition of the soil left in place, and all excavated contaminated soil was disposed of at a permitted disposal facility. Clean backfill, from an NYSDEC approved source, was used to replace the excavated shallow soils. A cross section figure showing the thickness of cut and backfill is shown in Figure 11.

Each Bay was excavated, backfilled and compacted in two sections, designated the 99th street and 100th street side (Figure 12), per the structural engineering report submitted with the NYSDEC approved RD/RAWP in Appendix C. Excavation activities consisted of breaking up and removing 1-3" thick asphalt or 8-10" thick concrete flooring and then excavating impacted soil material down to 4 feet bgs. Post-excavation sampling consisted of one 5-point composite sidewall sample every 15-feet around the excavation sidewalls and one 5-point composite sample for approximately every 25-foot x 25-foot area within the excavation bottom. Post-excavation samples were analyzed for VOCs and % Solids. Locations of all post-excavation samples are shown on Figure 13 and the results of analyses are summarized in Table 1. A dedicated volume of each sample collected was also screened in the field (i.e., head space screening) for VOCs using a PID. Excavation limits were then determined by a licensed NYS surveyor prior to the first lift of DOT #4 crushed stone being placed and compacted. In each Bay, two ~14" lifts of backfill were placed, compacted to ~12" and compaction tested to meet 95% compaction requirement.

A total of 847.5 tons of impacted concrete, asphalt and shallow subsurface soils were disposed of at the Seneca Meadows Inc. landfill, in Seneca Falls, NY under waste

profile 2013-083-15RIC from July 24th to August 5th, 2013 (manifests will be provided in the Final Engineering Report).

1.4.2 **Site-Related Treatment Systems**

Following the contaminated soil excavation, the subgrade piping for the approved SVE and SSDS systems was installed in the Bays. The SVE system consists of 24 vapor extraction wells (21 single levels, and 3 dual-level) spaced throughout the site. Similarly, the SSD system consists of 16 active horizontal SSD legs. The locations of the SVE and SSD systems are shown in Figure 14 and 15, respectively.

1.4.3 **Remaining Contamination**

Post-excavation soil sampling was conducted in each of the 8 Bays (site), to document the condition of the soil left in place after excavating as much shallow subsurface soils as practical per the structural engineering report and remedial design. Table 2 and Figure 16 (TCE only) summarize the results of all soil samples remaining at the site after completion of Remedial Action that exceed the unrestricted SCOs. Table 3 and Figure 17 (TCE only) summarize the results of all soil samples remaining at the site after completion of Remedial Action that exceed the site-specific restricted commercial SCOs. Base post-excavation samples represent the remaining levels of contamination at 4 feet bgs within the interior of each Bay. Sidewall post-excavation samples represent the remaining levels of contamination at 1.5-4 feet bgs along the 99th and 100th street edges of each Bay and the Bay 7 and Bay 16 edges, for Bays 8 and 15, respectively.

Several subsurface concrete structures were encountered during excavation activities at the site and are identified on Figure 18. The two main structures encountered ran the length of the Bays parallel to 99th and 100th street and included: 1) a 14” wide, poured concrete structure, of undetermined origin and purpose, beginning at approximately 2.5 feet bgs and extending below 4 feet bgs (exact depth extent undetermined) and 2) a 2’x2’ concrete encased group of empty (unused) ceramic conduits (6 total) beginning at approximately 2.5 feet bgs and extending down to 4.5 feet bgs. All subsurface infrastructures, with the exception of a 25 feet length of the concrete encased unused ceramic conduits (which was removed to determine depth extent), was excavated around, fully exposed, cleaned and left in place.

1.4.4 **Bay 12 Sumps**

As discussed above, in Section 1.4.1.1, Bay 12 contained three buried 55-gallon drum sumps with varying degrees of deterioration and potential for subsurface

infiltration. Sumps 1 and 2 did not show any signs of significant infiltration into the subsurface post-cleanout. However, Sump 3 had holes drilled (or manually punctured) through the bottom and the subsequent infiltration into the subsurface was observed during Bay 12 excavation activities. Material from Sump 3 appears to have been leaching into the subsurface of Bay 12 on the 99th street side. It was contained below a 3-4" concrete slab that was encountered at approximately 18" below ground surface. This slab was only encountered on the 99th street side of Bay 12. The observed distribution of this material within the subsurface between the secondary slab (1.5 ft. bgs) and the post-excavation depth (4 ft. bgs) is shown on Figure 19. A TPH fingerprint analysis on the composite post-excavation base sample (12W- SB-B-A) from the 99th street side of Bay 12 provided the following information: "Based on the data generated sample, 12W-SB-B-A (L1315909-01) contains material eluting in the low, mid and heavy molecular weight ranges of the chromatogram. The material appears to be similar to a combination of kerosene and heavy molecular weight material which is similar to lubricating oil. These products combined can be indicative of a cutting oil type product. In an analysis of an un-degraded product the n-alkanes are typically the dominant constituents, as seen in the petroleum reference chromatogram. As the product degrades, the n-alkanes are preferentially digested, leaving behind other constituents such as isoprenoids. The analytical testing of the sample identified a pattern of alkanes and isoprenoids. The presence of alkanes and isoprenoids indicate that the fuel oil has not undergone degradation." Additional information will be provided in the Final Engineering Report.

2.0 ENGINEERING CONTROLS

2.1 GENERAL

The approved remedy requires the installation of an SSDS system and an SVE system, both of which are Engineering Controls.

2.1.1 Sub-slab Depressurization System

The SSD system was installed to protect indoor air quality by eliminating potential for vapor intrusion into the Bays. According to the NYSDOH Indoor Air Guidance, the State of New York does not have any standards, criteria or guidance values for concentrations of VOCs in subsurface vapors. Therefore the remedial design for the SSD system included the reduction of sub-slab vapor to the extent practical and compliance with requirements set forth in 6 New York Codes Rules and Regulations (NYCRR) Part 257 – Air Quality Standards and DAR-1.

The SSD system was designed in order to maintain a negative pressure beneath the area of concern (Bays 8 through 15, the site) until VOCs have been reduced to the point that no significant risk is present for subsurface vapors to migrate into the breathing space in the site Bays. Soil excavation has been completed over the entire footprint of the area of concern and backfilled with permeable fill that is of equal or greater permeability to the excavated site materials (which had favorable results during pilot testing).

For the SSD system, based on industry standards, it is expected that a flow rate of 20 SCFM for every 1,000 square feet of space is required to maintain adequate protection for mitigation of potential subsurface vapor migration. The entire area of concern in this case is 12,000 square feet. Based on this standard, a total design flow rate of 240 SCFM is required to maintain adequate negative pressure beneath the entire area of concern or site. This flow rate will be achieved with a blower capable of producing a vacuum of 15 IWC. The blower will be connected to the network of horizontal SSD legs with independent piping and valves such that flow and pressure can be balanced across the area as necessary. A total of 16 horizontal SSD legs (two legs in each Bay) are installed at the site. The horizontal legs consist of 40 ft. long sections of 2” diameter 0.020-inch slotted Sch. 40 PVC well screen installed at approximately 1 foot bgs as shown on Drawings in Appendix A.

Individual 2” PVC pipes are connected to the combined slotted SSD system legs in each Bay and run back to the system, where they are connected to the SSD system

manifold. Piping, was installed with a 1% slope from the SSD system to the horizontal legs, to allow condensate to drain back into the horizontal legs. Each of the eight (8) 2-inch PVC pipes, which extend from the 16 SSD horizontal legs (2 legs per Bay connected to a common header) to the SSD system, are independently connected via 2-inch hoses to the SSD manifold. The manifold provides the capability to independently monitor VOCs, vapor flow rates, and applied vacuums. Refer to Appendix A for construction details.

The SSD Remedial System Housing consists of a temporary skid, containing a regenerative vent blower (10HP, 460VAC, 3-phase TEFC VFD controlled motor), 60 gallon moisture separator, passive heat exchanger, UL listed PLC based control panel with mounted VFD, installed within the 100th street side of Bay 8 as shown on Figure 20. Given the proximity to actively leased Bays and neighboring businesses, a galvanized steel sound enclosure, with sound attenuation lining, duct hoods and enclosure ventilation package, has been designed around the SSD regenerative vent blower to minimize noise.

In order to maintain best management practices and meet requirements of DER-10, and because the proposed remediation system is located in a residential area, vapor phase granular activated carbon (VGAC) will be utilized for off gas treatment. The off gas treatment is sized appropriately to maintain 95% destruction of system influent contaminants throughout its period of operation. Two 1,000lb VGAC vessels will be installed in series for SSD off gas treatment. During later stages of the system operation, when influent concentrations decrease to very low levels, it may not be possible to maintain 95% destruction. In this case the system will be evaluated against current standards, and the use of off gas treatment may be discontinued or other modifications may be made in order to meet current regulatory requirements.

A new power drop was procured and installed within the 100th street side of Bay-8 to power the SSD equipment. The 100th street side of Bay 8 will not be in use (i.e., rented and/or leased) during the operation of the SSD system. All underground piping has been extended from each set of SSD legs (2 legs per Bay, 8 sets total) to the system control location. Signs clearly indicating AECOM as the system operator with appropriate contact information are located outside of the Bay.

2.1.2 **Soil Vapor Extraction System**

The SVE system has been installed to remediate in place soils, not accessible for excavation due to structural concerns, and to provide vapor control from deeper soils and groundwater. The remedial goal for the SVE system will include the reduction of sub-

surface soil vapor to the extent practical. See Section 2.2.2 for the description of site conditions to discontinue operating the SVE system.

At a design flow rate of 25 SCFM at 5 IWC (at each well), the total anticipated required flow is approximately 675 SCFM and the total anticipated suction, including suction losses due to piping and discharge losses for off-gas treatment, is estimated to be approximately 10 IWC. Therefore, the network of 24 vapor extraction wells (21 single-level wells and 3 dual-level wells) is expected to provide adequate coverage over the target remediation zone. Each vertical SVE well is piped and valved independently to balance flow and vacuum/pressure. The SVE wells are positioned equidistant (~25') and on center within each Bay to ensure that the entire area from Bay 8 through 15 is under a constant vacuum. There are three vertical SVE wells installed within each Bay; dual level wells are installed within Bay 12 and single level wells are installed within the remainder of the Bays or site.

The SVE wells are constructed of 2" diameter Sch. 40 PVC. Screened sections of the SVE wells consist of approximately 10 feet of 0.020-inch slotted Sch. 40 PVC well screen, extending to approximately 15 feet below ground surface. The screened sections of the deep SVE wells (applicable only to the dual-level wells) consist of approximately 15 feet of 0.020-inch slotted Sch. 40 PVC well screen, extending to approximately 30 feet below ground surface (Bay 12 only). The annular space around the screened intervals was backfilled with sand, followed by a one-foot bentonite seal and bentonite/cement slurry to 4 feet bgs, the remainder of the borehole annulus was filled with natural backfill and 3/8" crushed pea stone as shown in Appendix A.

The screen lengths are each connected to a section of solid riser. The solid riser is connected to a PVC T which allows the piping to extend both to the surface, where access is available to the well in the field via a standard 8-inch road box, and to the SVE manifold. Individual 2" PVC pipes are connected to each SVE well and run back to the system, where they are connected to the SVE manifold. Each pipe is connected to a separate leg on the SVE System manifold. Piping was installed with a 1% slope from the SVE system to the wellheads to allow condensate to drain back into the SVE wells. Each of the twenty-seven (27) 2-inch PVC pipes, which extend from the 24 SVE wells (1 pipe for single level wells, 2 pipes for dual level wells) to the SVE system, are independently connected via 2-inch hoses to the SVE manifold. The manifold provides the capability to independently monitor VOCs, vapor flow rates, and applied vacuums. Refer to Appendix A for construction details.

The SVE Remedial System Housing consists of a temporary skid, containing a regenerative vent blower (25HP, 208VAC, 3-phase TEFC VFD controlled motor), 120 gallon moisture separator, passive heat exchanger, UL listed PLC based control panel with mounted VFD, installed within the 100th street side of Bay 8 as shown on Figure 20. Given the proximity to actively leased Bays and neighboring businesses, a galvanized steel sound enclosure, with sound attenuation lining, duct hoods and enclosure ventilation package, has been installed around the SVE regenerative vent blower to minimize noise.

In order to maintain best management practices and meet requirements of DER-10, and because the proposed remediation system is located in a residential area, vapor phase granular activated carbon (VGAC) is being utilized for off gas treatment. The off gas treatment is sized appropriately to maintain 95% destruction of system influent contaminants throughout its period of operation. Currently, two 2,000lb VGAC vessels are installed in series for SVE off gas treatment. During later stages of the system operation, when influent concentrations decrease to very low levels, it may not be possible to maintain 95% destruction. In this case the system will be evaluated against current standards, and the use of off gas treatment may be discontinued or other modifications may be made in order to meet current regulatory requirements.

A new power drop was procured and installed within the 100th street side of Bay-8 to power the SVE equipment. The 100th street side of Bay 8 will not be in use (i.e., rented and/or leased) during the operation of the SVE system. All underground piping has been extended from each SVE well to the system control location. Signs clearly indicating AECOM as the system operator with appropriate contact information are located outside of the Bay.

2.2 CRITERIA FOR COMPLETION OF REMEDIATION/TERMINATION OF REMEDIAL SYSTEMS

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.1 Sub-slab Depressurization (SSD) System

The active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSD system is no longer required, a proposal to discontinue the SSD system will be submitted by

Endzone, Inc. or the property owner to the NYSDEC and NYSDOH. It is expected that air monitoring of the SSD system effluent over three consecutive quarters (3 months for each quarter) that indicate non-detectable levels would be sufficient to propose the discontinuation of the SSD system.

2.2.2 Soil Vapor Extraction (SVE) System

The SVE system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SVE system is no longer required, a proposal to discontinue the system will be submitted by Endzone, Inc. or the property owner. Conditions that warrant discontinuing the SVE system include contaminant concentrations in groundwater that reach levels that are consistently below ambient water quality standards, influent levels have become asymptotic to a low level over an extended period of time (3 quarters or approximately 9 months) as accepted by the NYSDEC, or the NYSDEC has determined that the SVE system has reached the limit of its effectiveness. This assessment will be based in part on system monitoring or other site data. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

2.3 MONITORED NATURAL ATTENUATION (MNA)

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components will be in accordance with the procedures and frequencies in the Monitoring Plan in Section 3.

A comprehensive site- wide inspection will be conducted annually. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this ISMP;

- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

2.4.2 Notifications

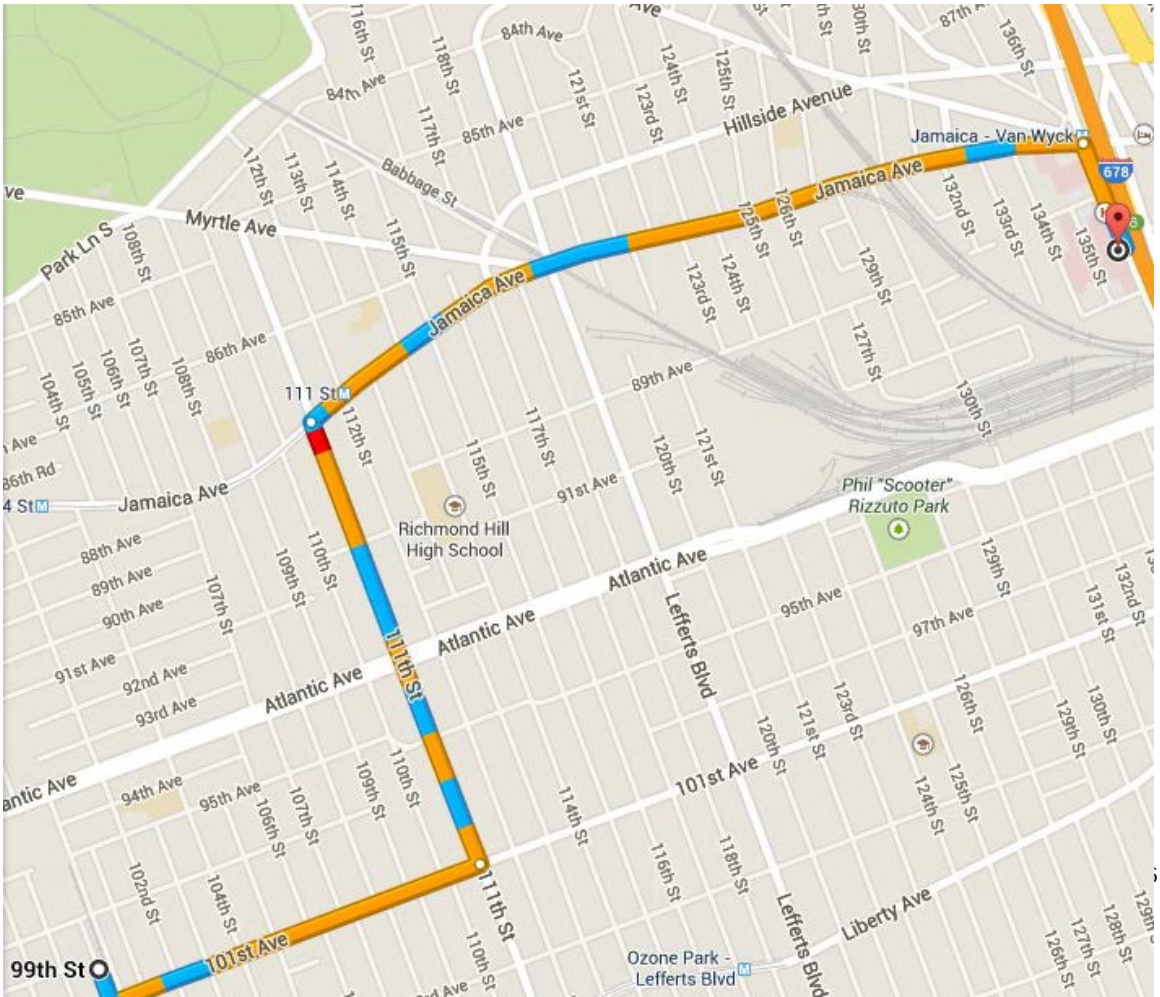
Notifications will be submitted by Endzone, Inc. to the NYSDEC (see Table 5) as needed for the following:

- Provide notice within 48-hours of any damage to the Engineering Controls that significantly reduces its the effectiveness.
- Email, by the following day, of any emergency, such as a fire, flood, or earthquake that reduces the effectiveness of Engineering Controls at the site.

These actions shall be described in the subsequent Monthly Progress Report submitted to the NYSDEC.

2.5 CONTINGENCY PLAN

2.5.1 Figure 21 Map of Route from Site to Hospital



Site Location: 101-61 99th St, Ozone Park, NY 11416
Nearest Hospital Name: Jamaica Hospital
Hospital Location: 8900 Van Wyck Express Way, Jamaica, NY 11418
Hospital Telephone: 718-206-6000
Directions to the Hospital:
Head south on 99th St toward 101st Ave.
Take the 1st left onto 101st Ave.
Turn left onto 111th St.
Turn right onto Jamaica Ave.
Turn right onto Van Wyck Expressway State Rd W.
Total Distance: 2.6 miles
Total Estimated Time: 8 minutes

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of an emergency. The list in Table 4 will also be posted prominently in the Bay containing the remedial system and made readily available to all personnel at all times.

Table 4: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility mark out)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 5: Other Contact Numbers

NYSDEC	John Durnin, 518 402 9797
Endzone, Inc.	Ted Coyle, 214 649 0590
AECOM	David Austin, 978 – 905 - 2114

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 **Corrective Measures Work Plan**

If any component of the SVE or SSDS systems requires repair involving excavation of the floor and vapor barrier, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the required work and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

2.5.2.1 **Remediated Site Conditions**

The site has been remediated as per the RAWP. The existing site conditions in all eight bays include (beginning at the surface):

- New six inch reinforced concrete slab,
- Continuous geotextile layer,
- Continuous HDPE liner, sealed at all the support structures and edges,
- 3”-6” DOT #4 crushed stone aggregate layer,
- 12”-15” of 3/8 dia. pea stone layer,
- Minimum of 24” of DOT #4 crushed stone aggregate layer.
- Total depth: approximately 45” to 51”

2.5.2.2 **Site Restoration**

Should any invasive activities occur, the new reinforced concrete floor and vapor

barrier will be restored to its original condition in a manner that complies with the approved RAWP.

No special handling of soil is required if the work does not extend below the existing clean DOT #4 crushed stone aggregate backfill (approximately 45” to 51”).

Any imported soils will meet the backfill soil quality standards established in 6NYCRR 375-6.7(d) and be pre-approved by NYSDEC.

A figure showing details of the final repair will be included in an updated ISMP.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site and all affected site media identified below.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media, including groundwater and soil vapor from SSD and SVE systems;
- An off-site soil vapor sampling component for potential vapor intrusion near the adjacent structures to be implemented after the SVE/SSDS systems have been operating and their effectiveness has been documented. At this point, detailed off-site soil vapor sampling plan would be submitted for approval.
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria;
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems ;
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements; and
- Inspection and maintenance requirements for monitoring wells.

Monitoring programs are summarized in Table 6 and outlined in detail in Sections 3.2 and 3.3 below.

Table 6: Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater	Quarterly, for at least 2 years, until approval from NYSDEC to modify or end the monitoring is obtained.	Groundwater	VOCs and MNA indicators
SVE System	Operation (on or off) - on- going by telemetry system. Influent and Effluent levels – as specified in Section 4 and quarterly for approximately 12 months to determine if the system has reached the limit of its effectiveness.	Air	VOCs
SSD System	Operation (on or off) - on- going by telemetry system. Influent (discharge from system/piping) - samples will be collected quarterly for approximately 12 months to determine if the SSD system has reached the limit of its effectiveness.	Air	VOCs
Off-site soil vapor sampling	After the SVE/SSDS systems have been operating and their effectiveness has been documented, a detailed off-site soil vapor sampling plan will be submitted for approval.	Air	VOCs

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

3.2 SSDS SYSTEM MONITORING (LABORATORY SAMPLES)

Any disturbance to or change in the Bay floor conditions will be recorded and included in the Quarterly Monitoring Report. The SSDS operation (is it operational or off) will be monitored by a telemetry system. Air samples will be collected from the system discharge when the SVE system operation and monitoring is indicating levels that have become asymptotic. At a minimum, samples will be collected quarterly for approximately 12 months for VOC analyses to determine if the SSDS has reached the limit of its effectiveness. The samples will be grab samples collected in a SUMMA canister, and analyses will be by EPA TO-15 Method. All SSDS samples will be utilized as needed to monitor the performance of the remedy and residual VOC levels in the

subsurface.

3.3 MEDIA (GROUNDWATER AND SVE) MONITORING PROGRAM

3.3.1 Groundwater Monitoring

The network of monitoring wells has been installed (or proposed) to monitor both up-gradient and down-gradient groundwater conditions at the site. The network of on-site (and off-site) 8 wells (existing) has been designed based on the following criteria that will be used for the monitoring program including:

- Upgradient – existing wells PZ-01 and PZ-01D on 101st Avenue;
- Next to site (Bays) along 99th Street – existing wells PZ-08 and PZ-09;
- Downgradient of site (Bays) – on 99th Street: existing wells PZ-10 (next to Bay 21) and MW-203 (across from Bay 25), and on 100th Street: existing wells MW-201S and MW-201D.

Figure 22 depicts the groundwater monitoring wells. Information on well construction, groundwater depths and flow, and groundwater quality is provided in previous reports including the Revised RI/FS Report and Conceptual Site Model Report (June 2009).

If any of the existing wells are no longer present or usable, an alternative plan for installing wells and / or monitoring will be presented to NYSDEC. Drilling methods will follow the procedures in the RI/FS Work Plan and well construction details will be provided subsequent to any new well installations.

The sampling frequency and duration will be quarterly for the first 2 years and then be re-evaluated for any the subsequent sampling frequency based on the historical data. Groundwater monitoring will continue until approval from NYSDEC to end the monitoring is obtained. Samples will be analyzed for VOCs via SW-846 Method 8260B and MNA indicator parameters.

The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

3.3.1.1 Groundwater Sampling Protocol

Groundwater sampling will be conducted in compliance with the procedures outlined in Sections 4.2.3, 4.3.2, 4.4 and 4.5 of the RD/RAWP.

3.3.1.2 **Monitoring Well Repairs, Replacement and Decommissioning**

Groundwater monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair of monitoring wells for the purpose of replacement. The repair and replacement process will be documented in the subsequent Quarterly Monitoring Report. Well decommissioning without replacement will be done only with a NYSDEC approved Well Decommissioning Plan and in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures". Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.3.2 **SVE System Monitoring (laboratory samples)**

Air samples will be collected from the system influent when the SVE system operation and monitoring is indicating influent levels that have become asymptotic. At a minimum, samples will be collected quarterly for approximately 12 months for VOC analyses to determine if the SVE system has reached the limit of its effectiveness. The samples will be grab samples collected in a SUMMA canister, and analyses will be by EPA TO-15 Method. All SVE system samples will be utilized as needed to monitor the performance of the remedy and residual VOC levels in the subsurface.

3.4 **OFF-SITE SOIL VAPOR SAMPLING**

After the SVE/SSDS systems have been operating and their effectiveness has been documented, a detailed off-site soil vapor sampling plan will be submitted for approval.

3.5 **SITE-WIDE INSPECTION**

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices.

3.6 **MONITORING QUALITY ASSURANCE/QUALITY CONTROL**

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site which was presented

in the RD/RAWP (2011) in Attachment A. Updates to the QAPP as appropriate will be made and submitted to NYSDEC.

3.7 MONITORING REPORTING REQUIREMENTS

The electronic submission of Monthly Progress Reports to NYSDEC will continue as per the Consent Order. In addition, Quarterly Monitoring Reports will be submitted to NYSDEC for the first two years and while the SVE and SSDS systems are operating. All Quarterly Monitoring Reports will be submitted in digital format and will include, at a minimum:

1. Description of the activities performed;
2. Type of samples collected;
3. Sampling results in comparison to appropriate standards/criteria;
4. A figure illustrating sample type and sampling locations;
5. Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC- identified format);
6. Any observations, conclusions, or recommendations; and
7. A determination as to whether groundwater and SSDS and SVE system influent and effluent conditions have changed since the last reporting event.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

This Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow qualified trained technicians familiar with the site to operate and maintain the SSDS and SVE systems;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS and SVE systems are operated and maintained.

A copy of this Operation and Maintenance Plan, along with the complete ISMP, will be kept at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the ISMP.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

4.2.1 SSD and SVE Systems

AECOM has completed the installation of the underground SSDS and SVE system components (SSDS/SVE extraction wells, monitoring wells, trenching and piping) as described in Sections 2.2.1.1 and 2.2.1.2. The above ground SSDS and SVE system mechanical equipment was installed in 2015 and 2016. T h e SSDS and SVE System Design with mechanical equipment drawings are included in Appendix A and will be replaced with as-built drawings (subsurface piping, SSDS extraction legs, SVE extraction wells, monitoring wells and stub-up locations). The system started operation in April 2016.

4.2.2 Scope

Monthly operation and maintenance (O&M) visits have begun as described below.

4.2.3 SSDS and SVE Systems Start-Up and Testing

4.2.3.1 Day One

The pre-startup inspection will be executed as follows:

- An inspection of the exterior and interior of control panel for damage that may have occurred during shipment will be performed. All interior components within panel will be checked for tightness (vibration during transport may loosen screw terminals, din rail mounted components, hardware, etc.). Motor starter overloads will be checked and reset if tripped.
- Before applying power to any equipment, the component manufacturers operation and start-up manual (compressor, blower, pump, etc.) will be reviewed. Some equipment cannot be operated in the wrong rotation even momentarily without damage therefore verifying proper rotation will only be done after thorough review of the associated equipment manual.
- All fluid levels, drive components, plumbing attachments, etc. will be inspected. The equipment will be initially started in a no-load condition with non-contaminated process fluid (i.e. SVE vacuum blower started with all recovery wells shut off, and the ambient air dilution valve open fully).

Once the pre-startup inspection has been performed the system startup will begin. First, the SSDS will be activated. AECOM will monitor the influent and effluent vapors removed from the shallow subsurface (SSDS horizontal piping) with a PID. The SSDS blower will be started at one half the intended vacuum. AECOM will operate the blower at this level for approximately 30 minutes. AECOM will gradually increase the vacuum of the SSDS blower until the vacuum being applied to the shallow subsurface in all bays meets or exceeds the design vacuum. To balance the SSDS the field technician will manually adjust the vacuum applied to each individual SSDS leg one at a time (using the valving present on the SSDS manifold) and will gauge respective shallow SSDS monitoring wells with a differential pressure gauge to determine that the design vacuum is being applied to the shallow subsurface within each bay to eliminate the chance of vapor migration to the interior of the Bays.

Once the SSD system has been activated and calibrated the SVE system will be activated. AECOM will monitor the influent and effluent vapors removed from the subsurface (SVE vertical wells) with a PID. The SVE blower will be started at one half the intended vacuum. AECOM will operate the blower at this level for approximately 30 minutes. AECOM will gradually increase the vacuum of the SVE blower until the vacuum being applied to the subsurface in all Bays meets or exceeds the design vacuum. To balance the SVE system the field technician will manually adjust the vacuum applied

to each individual SVE leg one at a time (using the valving present on the SVE manifold) until all legs have an equal contribution to the total soil vapor extraction flow rate. AECOM will gauge surrounding SVE monitoring wells with a differential pressure gauge to determine that the intended vacuum is being applied to the subsurface before proceeding to the off-gas screening.

Screening of the combined effluent vapors (SSDS and SVE) with a PID after both systems are running and calibrated will confirm that vapors are below established NYSDEC screening limits. If they are not, the SVE system will be adjusted to meet these limits.

The final step of the initial startup period will be testing of all the system alarm conditions. All alarm conditions (i.e. SVE moisture separator high level, SSDS blower low vacuum, etc.) will be manually actuated to ensure proper system response prior to departure. If unforeseen problems arise before the next scheduled O&M visit (1 week after initial startup) technicians will return to the site, as needed, to address the issues.

4.2.3.2 **Week One**

One week after initial startup, AECOM will conduct an O&M visit that will consist of the following:

- Monitor the influent and effluent vapors removed from the subsurface.
- Check the blower, gauges, piping, and other associated equipment to make sure everything is operating properly.
- Gauge the SSDS and SVE pressure monitoring points (pre-SVE optimization).
- Optimize the vapor phase removal the field technician will first isolate each SVE leg. Once an SVE leg has been isolated, several iterations of valve adjustments and influent organic vapor PID screenings will be performed to determine the optimal configuration of each SVE leg.

  Note: The SVE portion of the system will only be optimized to increase vapor mass removal once lab data can be properly correlated with PID readings in order to ensure that effluent vapors will remain significantly below NYSDEC levels.
- Gauge the SSDS and SVE pressure monitoring points (post-SVE optimization).

- Periodically monitor the effluent vapors to verify that the vapors discharged are well below NYSDEC limits.

  Note: This will include a second laboratory sampling event for confirmation after optimization of the SVE system.

If during week 1, SSDS and or SVE effluent concentrations are not found to be significantly below NYSDEC limits (i.e. below 30% of limits) then the system will continue to be operated in SSDS mode only. Visits will continue on a weekly basis until such a time that SVE influent concentrations have decreased to 30% of NYSDEC limits or lower. At that time the schedule will continue as specified above.

The system testing described above will be conducted if, in the course of the SSDS and SVE system lifetime, significant changes are made to the system, and the system must be restarted.

4.2.4 SVE and SSDS System Operation: Routine Operation Procedures and Schedule

The inspection frequency of the SVE and SSDS systems for the first month of operation will be executed as described in Section 4.2.1.2 System Start-Up and Testing. Once the startup activities are complete the inspection frequency of the systems will transition to two times per month (during each O&M visit). The O&M visits will consist of the following activities:

- Monitor the influent and effluent vapors removed from the subsurface.
- Check the blowers, gauges, piping, and other associated equipment to make sure everything is still installed and operating properly.
- Gauge the SSD and SVE pressure monitoring points (pre-adjustments).
- Isolate SVE legs to determine the optimal configuration for removing organic vapors.
- Monitor the effluent vapors to verify that effluent vapors are compliant with NYSDEC.
- Gauge the SSDS and SVE pressure monitoring points (post-adjustments; if applicable).

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the

SSDS and SVE system has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

4.2.5 Routine System Operation

Routine equipment maintenance will take place in accordance with the manufacturer's recommendations in the EC Maintenance Schedules for the SVE and SSDS systems which are provided in Appendix B.

4.3 ENGINEERING CONTROL SYSTEM PERFORMANCE MONITORING

4.3.1 SVE and SSDS System Monitoring

A visual inspection of the complete SVE and SSDS systems will be conducted during the monitoring event. SSDS system components to be monitored include, but are not limited to (also see Section 3.2: SSDS System Monitoring), the following:

- SSDS Vacuum blower, vacuum, flow, and temperature;
- Monitoring well head vacuums; and
- Effluent concentrations exiting the SSDS carbon vessels.

SVE system components to be monitored include, but are not limited to (also see Section 3.3.2: System Monitoring), the following:

- SVE Vacuum blower, vacuum, flow, and temperature;
- Monitoring well head vacuums; and
- Effluent concentrations exiting the SVE carbon vessels.

A complete list of components to be checked is provided in the Inspection Checklist, presented in Appendix C. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan are required immediately, and the respective system restarted.

4.3.2 SVE and SSDS System Monitoring Devices and Alarms

There will be a system monitoring device and alarm notification for the SVE and the SSDS systems for vacuum blower failure; vacuum blower low pressure; stream high temperature; and, for low, high, and high-high water level in moisture separator and an alarm notification for high-high moisture separator level.

The SVE and SSD systems will each have a warning device to indicate that the

system is not operating properly. In the event that the warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the respective system restarted. Operational problems will be noted in the subsequent Quarterly Monitoring Report.

4.3.3 SSDS and SVE System Sampling Event Protocol

Combined SSDS and SVE system effluent vapor samples will be collected and analyzed to confirm that vapor concentrations are below NYSDEC limits. These samples will be collected, shipped and analyzed in accordance with the 2011 QAPP and any applicable updates.

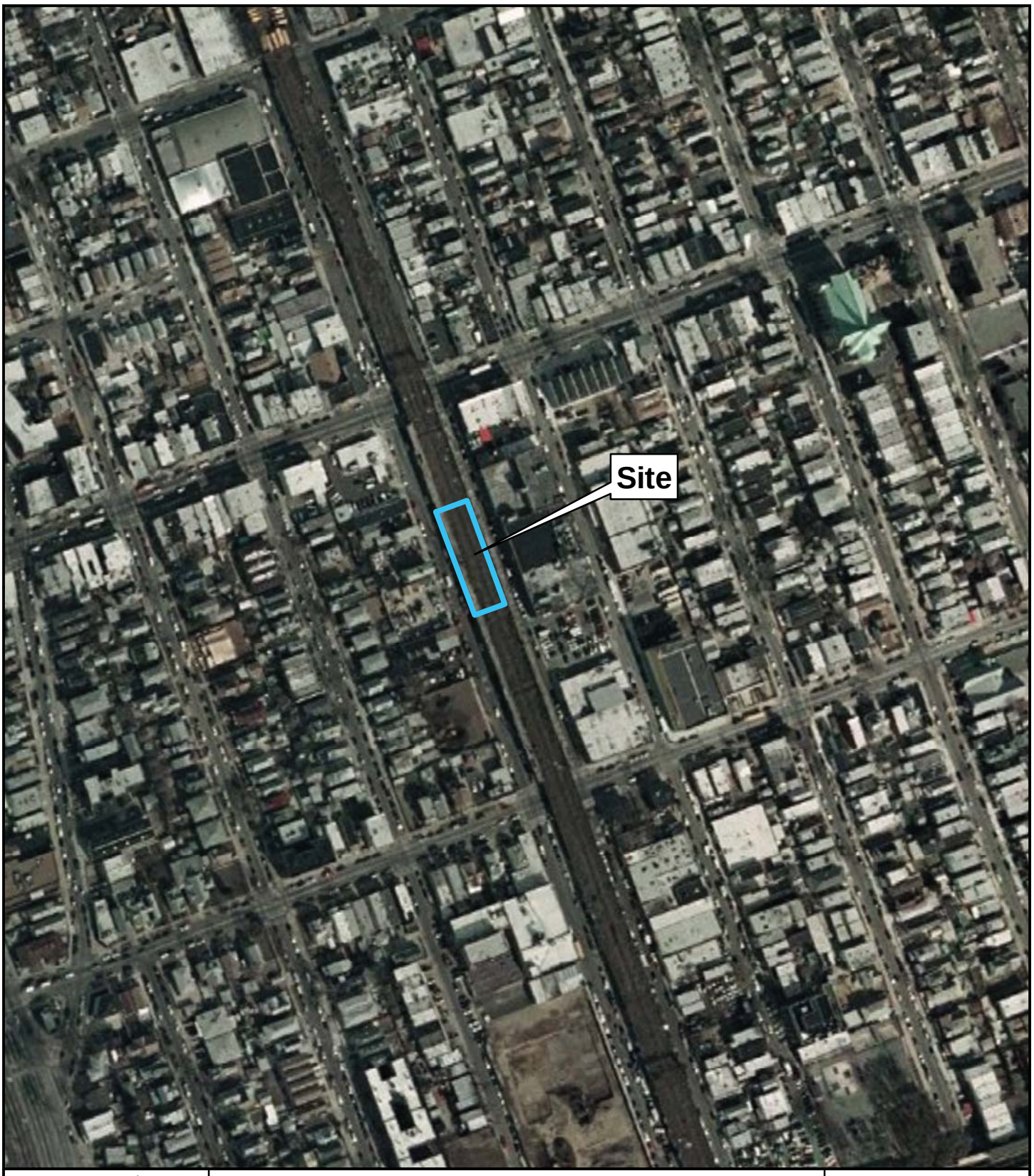
4.4 MAINTENANCE REPORTS

Maintenance reports and any other information generated during regular operations at the site will be kept on-file on-site. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC.

Applicable checklists or forms (see Appendix C) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Figures



Map Location

Site Locus Map

Former Ozone Industries, Inc.
NYSDEC Site #2-41-033
Block Bounded by 99th & 100th Streets
and 101st & 103rd Avenues
Ozone Park, Queens, Queens County, New York

0 50 100 200 300 400 500 600 Feet

0 10 20 40 60 80 100 120 140 160 Meters

Map Projection: State Plane, NAD 83, Feet.
Image Source: USGS Topographic Quadrangle: Jamaica, NY.

Scale: 1:24,000

AECOM

Figure 1

Date: August 2011

Project #: 60138748.A.1

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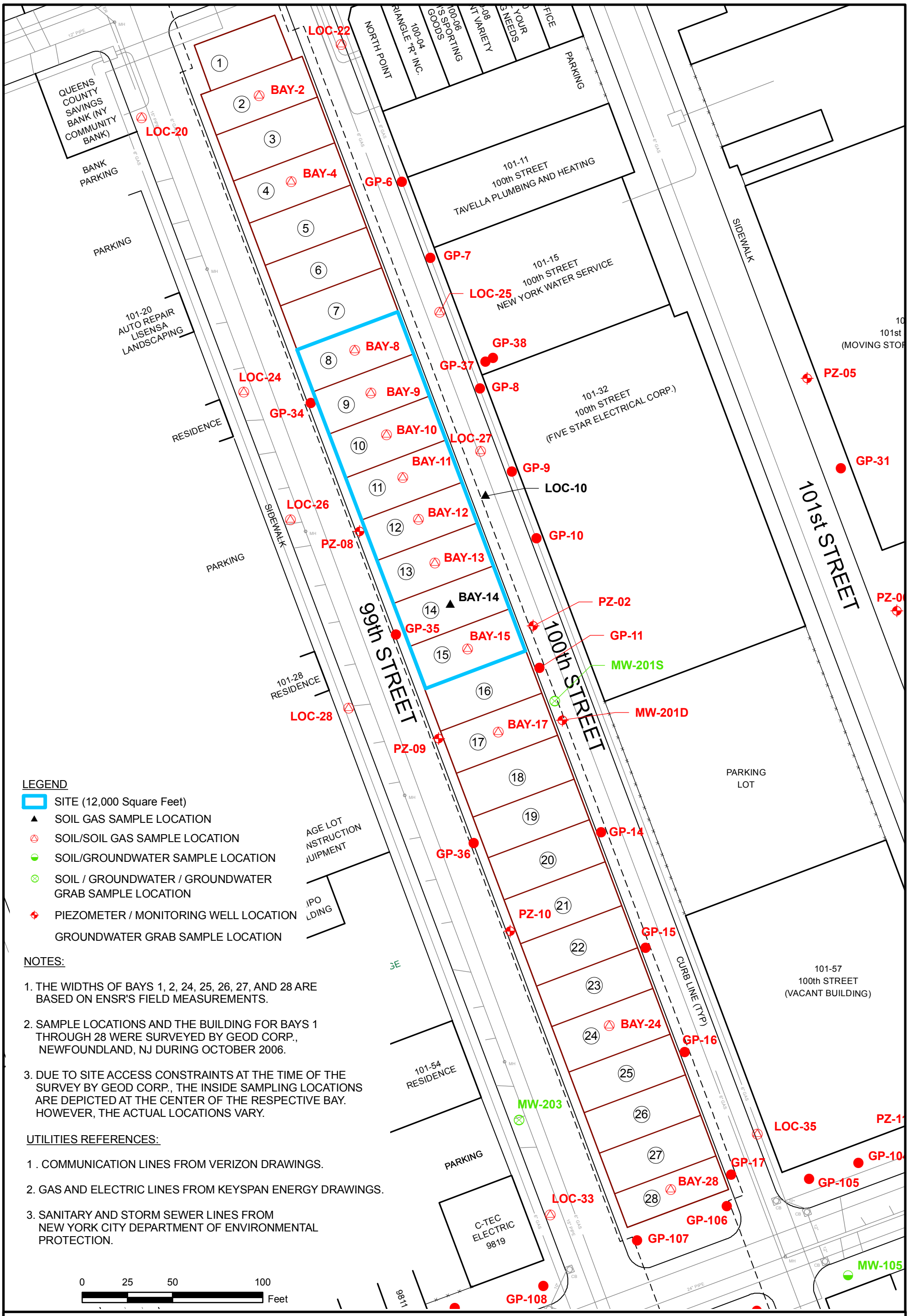

LEGEND

- SITE (12,000 Square Feet)
- SOIL GAS SAMPLE LOCATION
- SOIL/SOIL GAS SAMPLE LOCATION
- SOIL/GROUNDWATER SAMPLE LOCATION
- SOIL / GROUNDWATER / GROUNDWATER GRAB SAMPLE LOCATION
- PIEZOMETER / MONITORING WELL LOCATION
- GROUNDWATER GRAB SAMPLE LOCATION

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
2. SAMPLE LOCATIONS AND THE BUILDING FOR BAYS 1 THROUGH 28 WERE SURVEYED BY GEOD CORP., NEWFOUNDLAND, NJ DURING OCTOBER 2006.
3. DUE TO SITE ACCESS CONSTRAINTS AT THE TIME OF THE SURVEY BY GEOD CORP., THE INSIDE SAMPLING LOCATIONS ARE DEPICTED AT THE CENTER OF THE RESPECTIVE BAY. HOWEVER, THE ACTUAL LOCATIONS VARY.

UTILITIES REFERENCES:

1 . COMMUNICATION LINES FROM VERIZON DRAWINGS.

2. GAS AND ELECTRIC LINES FROM KEYSPAN ENERGY DRAWINGS.

3. SANITARY AND STORM SEWER LINES FROM NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

0 25 50 100 Feet

Figure Number: 2 Sheet Number: 1

PLAN DEPICTING SITE AND BAY AREAS

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 50'	2/09	10748-002-0003

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N W E S

Bay	Tenant (based upon site visit by ENSR)
1	Stevie Brown
2	Stevie Brown
3	Olympic Fence
4	Olympic Fence
5	Olympic Fence
6	Olympic Fence
7	Rumpersand Iron Workshop
8	Store contruction material - Bike shop/Bar
9	Store contruction material - Bike shop/Bar
10	Store contruction material - Bike shop/Bar
11	Store contruction material - Bike shop/Bar
12	LTDC Corp
13	Rajkumar Bisram - Iron and wood working shop
14	Rajkumar Bisram - Iron and wood working shop
15	Rajkumar Bisram - Iron and wood working shop
16	Rocco Constatino
17	Rocco Constatino
18	Richard Stevens - company vehicle storage
19	Tadco
20	Tadco
21	Tadco
22	Tadco
23	Marra
24	Adamira de al Cruz - company vehicle storage
25	Adamira de al Cruz - company vehicle storage
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage

LEGEND

- SITE (12,000 Square Feet)
- ▲ SOIL GAS SAMPLE LOCATION
- ⊕ SOIL GAS/GROUNDWATER GRAB SAMPLE LOCATION
- △ SOIL/SOIL GAS SAMPLE LOCATION
- ◒ SOIL/GROUNDWATER SAMPLE LOCATION
- ⊗ SOIL / GROUNDWATER / GROUNDWATER GRAB SAMPLE LOCATION
- PIEZOMETER / MONITORING WELL LOCATION
- ● GROUNDWATER GRAB SAMPLE LOCATION

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
2. SAMPLE LOCATIONS AND THE BUILDING FOR BAYS 1 THROUGH 28 WERE SURVEYED BY GEOD CORP., NEWFOUNDLAND, NJ DURING OCTOBER 2006.
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2. GAS AND ELECTRIC LINES FROM KEYSPAN ENERGY DRAWINGS.

3. SANITARY AND STORM SEWER LINES FROM NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

0 30 60 120 Feet

Sheet Number: 1

Figure Number: 3

SITE AND SITE VICINITY PLAN

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	08/26/11	60138748.A.1

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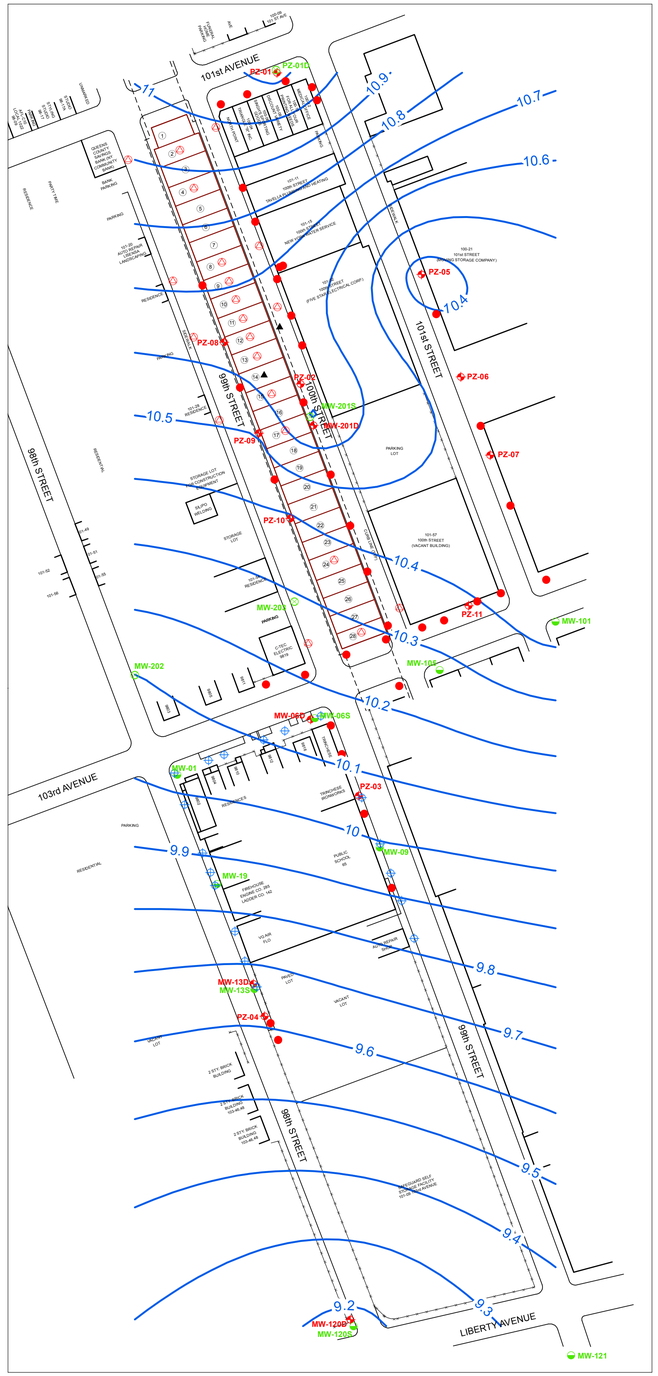
Designed By:	Revisions			
	No.:	Description:	Date:	By:
Drawn By: J.E.B.				
Checked By: R.M.				
Approved By: D.A.				

JANUARY 2005

APRIL 2005



AUGUST 2006

LEGEND

- SOIL/GROUNDWATER SAMPLE LOCATION
- SOIL / GROUNDWATER / GROUNDWATER GRAB SAMPLE LOCATION
- PIEZOMETER / MONITORING WELL LOCATION

NOTE:
1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.

0 45 90 180 Feet

Designed By:
Drawn By: J.E.B.
Checked By: R.M.
Approved By: D.A.

Revisions

No.:	Description:	Date:	By:

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GROUNDWATER CONTOUR PLANS

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
As Shown	2/09	10748-002-0003

Figure Number: 4

Sheet Number: 1

Bay	Tenant (based upon site visit by ENSR)
1	Stevie Brown
2	Stevie Brown
3	Olympic Fence
4	Olympic Fence
5	Olympic Fence
6	Olympic Fence
7	Rumpersand Iron Workshop
8	Store contruction material - Bike shop/Bar
9	Store contruction material - Bike shop/Bar
10	Store contruction material - Bike shop/Bar
11	Store contruction material - Bike shop/Bar
12	LTDC Corp
13	Rajkumar Bisram - Iron and wood working shop
14	Rajkumar Bisram - Iron and wood working shop
15	Rajkumar Bisram - Iron and wood working shop
16	Rocco Constatino
17	Rocco Constatino
18	Richard Stevens - company vehicle storage
19	Tadco
20	Tadco
21	Tadco
22	Tadco
23	Marra
24	Adamira de al Cruz - company vehicle storage
25	Adamira de al Cruz - company vehicle storage
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage

LEGEND

- SITE (12,000 Square Feet)
- SOIL GAS SAMPLE LOCATION
- SOIL GAS/GROUNDWATER GRAB SAMPLE LOCATION
- SOIL/SOIL GAS SAMPLE LOCATION
- SOIL/GROUNDWATER SAMPLE LOCATION
- SOIL / GROUNDWATER / GROUNDWATER GRAB SAMPLE LOCATION
- PIEZOMETER / MONITORING WELL LOCATION
- GROUNDWATER GRAB SAMPLE LOCATION

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
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UTILITIES REFERENCES:

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2. GAS AND ELECTRIC LINES FROM KEYSPAN ENERGY DRAWINGS.

3. SANITARY AND STORM SEWER LINES FROM NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

0 30 60 120 Feet

Remedial Investigation Monitoring Locations

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

Sheet Number: 1

Figure Number: 5

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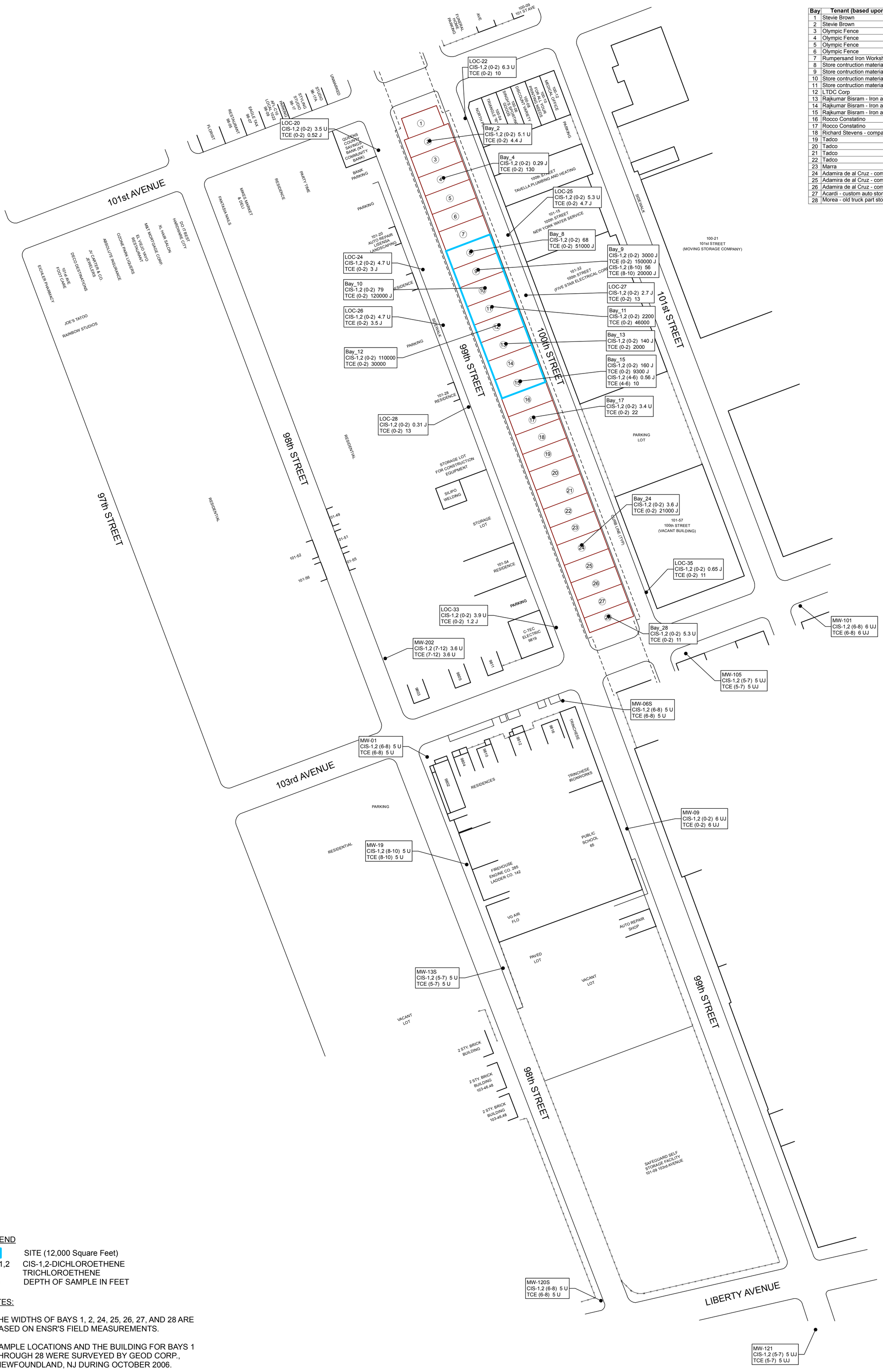
	No.:	Description:	Date:	By:
Drawn By: J.E.B.				
Checked By: R.M.				
Approved By: D.A.				

Bay	Tenant (based upon site visit by ENSR)
1	Stevie Brown
2	Stevie Brown
3	Olympic Fence
4	Olympic Fence
5	Olympic Fence
6	Olympic Fence
7	Rumpersand Iron Workshop
8	Store contruction material - Bike shop/Bar
9	Store contruction material - Bike shop/Bar
10	Store contruction material - Bike shop/Bar
11	Store contruction material - Bike shop/Bar
12	LTDC Corp
13	Rajkumar Bisram - Iron and wood working shop
14	Rajkumar Bisram - Iron and wood working shop
15	Rajkumar Bisram - Iron and wood working shop
16	Rocco Constatino
17	Rocco Constatino
18	Richard Stevens - company vehicle storage
19	Tadco
20	Tadco
21	Tadco
22	Tadco
23	Marra
24	Adamira de al Cruz - company vehicle storage
25	Adamira de al Cruz - company vehicle storage
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage



LEGEND

SITE (12,000 Square Feet)

CIS-1,2 CIS-1,2-DICHLOROETHENE
TCE TRICHLOROETHENE
(0-2) DEPTH OF SAMPLE IN FEET

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
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0 30 60 120 Feet

Figure Number: 6a
Sheet Number: 1

CIS-1,2-DICHLOROETHENE AND TRICHLOROETHENE IN SHALLOW SOIL (ug/kg)

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

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	No.:	Description:	Date:	By:
Drawn By: J.E.B.				
Checked By: R.M.				
Approved By: D.A.				

N W E S

Bay	Tenant (based upon site visit by ENSR)
1	Stevie Brown
2	Stevie Brown
3	Olympic Fence
4	Olympic Fence
5	Olympic Fence
6	Olympic Fence
7	Rumpersand Iron Workshop
8	Store contruction material - Bike shop/Bar
9	Store contruction material - Bike shop/Bar
10	Store contruction material - Bike shop/Bar
11	Store contruction material - Bike shop/Bar
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13	Rajkumar Bisram - Iron and wood working shop
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15	Rajkumar Bisram - Iron and wood working shop
16	Rocco Constatino
17	Rocco Constatino
18	Richard Stevens - company vehicle storage
19	Tadco
20	Tadco
21	Tadco
22	Tadco
23	Marra
24	Adamira de al Cruz - company vehicle storage
25	Adamira de al Cruz - company vehicle storage
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage

LEGEND

▭	SITE (12,000 Square Feet)
CIS-1,2	CIS-1,2-DICHLOROETHENE
TCE	TRICHLOROETHENE
(28-30)	DEPTH OF SAMPLE IN FEET

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
2. SAMPLE LOCATIONS AND THE BUILDING FOR BAYS 1 THROUGH 28 WERE SURVEYED BY GEOD CORP., NEWFOUNDLAND, NJ DURING OCTOBER 2006.
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0 30 60 120 Feet

Sheet Number: 1 | Figure Number: 6b

CIS-1,2-DICHLOROETHENE AND TRICHLOROETHENE IN DEEP SOIL (ug/kg)

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

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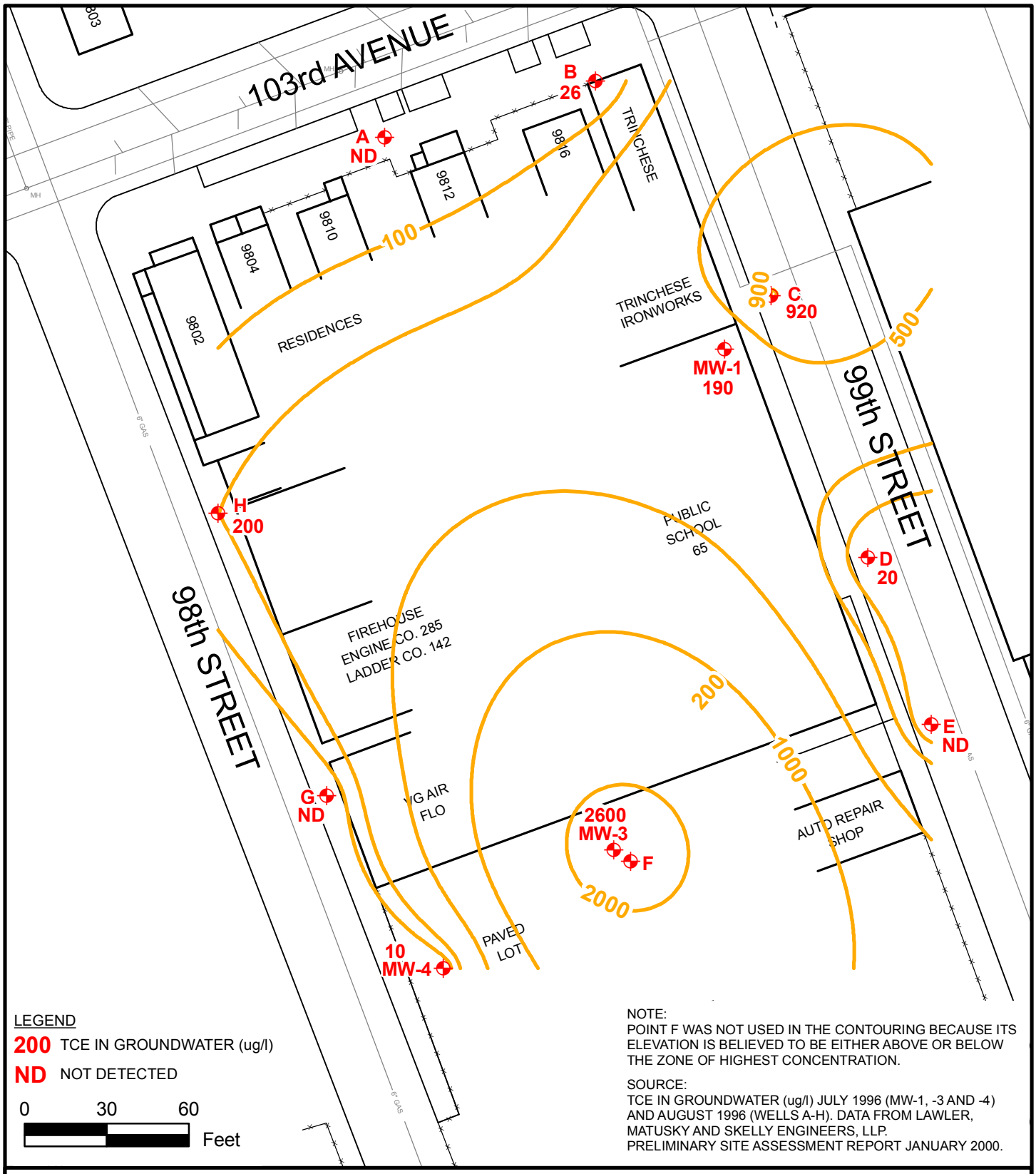
Checked By:				
R.M.				
Approved By:				
D.A.				

N W E S



LEGEND

200 TCE IN GROUNDWATER (ug/l)

ND NOT DETECTED

0 30 60 Feet

NOTE:
POINT F WAS NOT USED IN THE CONTOURING BECAUSE ITS ELEVATION IS BELIEVED TO BE EITHER ABOVE OR BELOW THE ZONE OF HIGHEST CONCENTRATION.

SOURCE:
TCE IN GROUNDWATER (ug/l) JULY 1996 (MW-1, -3 AND -4) AND AUGUST 1996 (WELLS A-H). DATA FROM LAWLER, MATUSKY AND SKELLY ENGINEERS, LLP. PRELIMINARY SITE ASSESSMENT REPORT JANUARY 2000.

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TCE IN GROUNDWATER 1996
PS65 VICINITY
FORMER OZONE INDUSTRIES. INC.
OZONE PARK. NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

Figure Number: 7a

Sheet Number: 1

Bay	Tenant (based upon site visit by ENSR)
1	Stevie Brown
2	Stevie Brown
3	Olympic Fence
4	Olympic Fence
5	Olympic Fence
6	Olympic Fence
7	Rumpersand Iron Workshop
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15	Rajkumar Bisram - Iron and wood working shop
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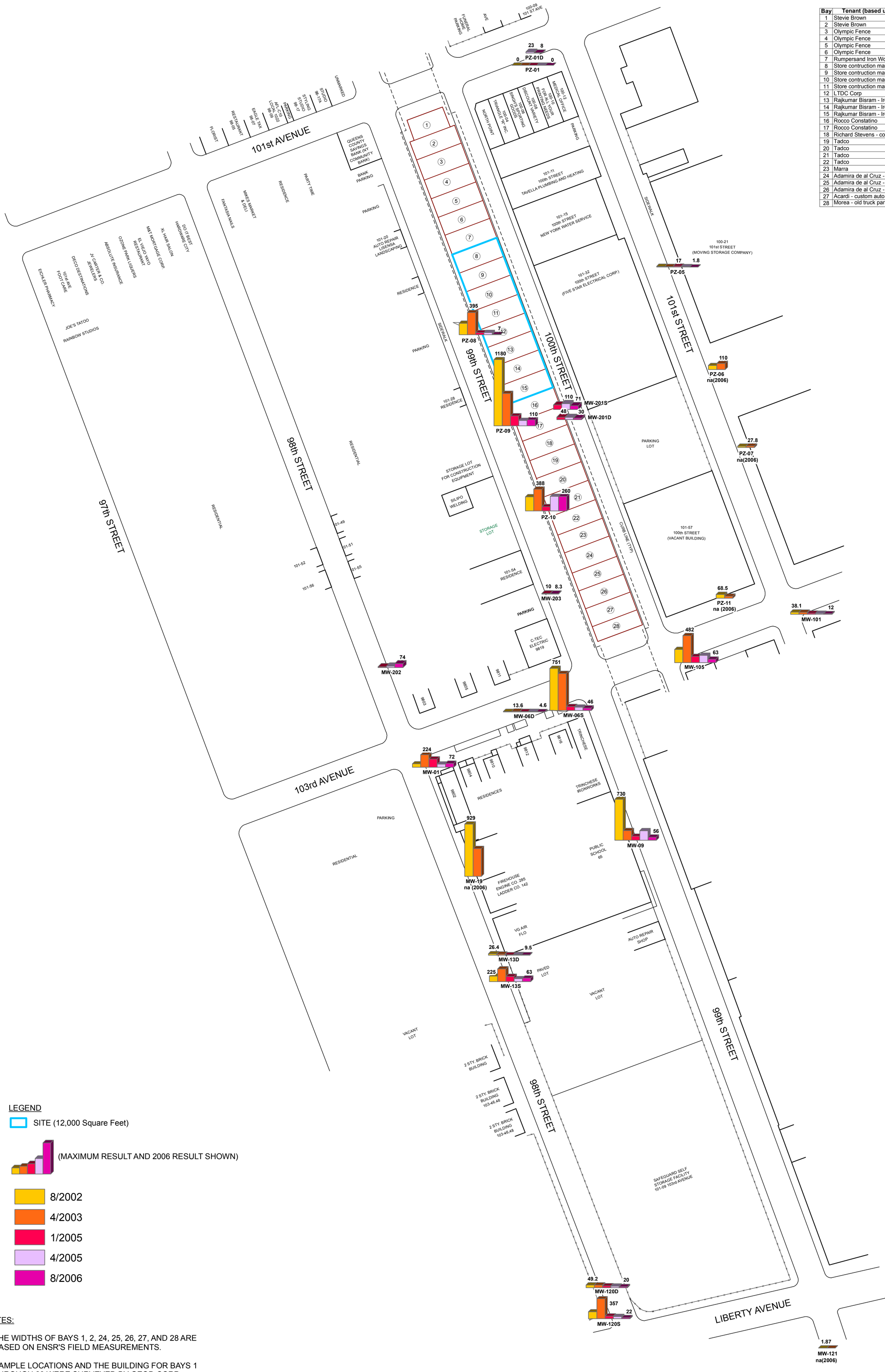
17	Rocco Constatino
18	Richard Stevens - company vehicle storage
19	Tadco
20	Tadco
21	Tadco
22	Tadco
23	Marra
24	Adamira de al Cruz - company vehicle storage
25	Adamira de al Cruz - company vehicle storage
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage



LEGEND

SITE (12,000 Square Feet)

(MAXIMUM RESULT AND 2006 RESULT SHOWN)

- 8/2002
- 4/2003
- 1/2005
- 4/2005
- 8/2006

NOTES:

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0 30 60 120 Feet

Sheet Number: 1

Figure Number: 7b

TRICHLOROETHENE IN GROUNDWATER (ug/l)

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

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Designed By:	Revisions			
	No.:	Description:	Date:	By:
Drawn By: J.E.B.				
Checked By: R.M.				
Approved By: D.A.				

N W E S

Bay	Tenant (based upon site visit by ENSR)
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15	Rajkumar Bisram - Iron and wood working shop
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17	Rocco Constatino
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22	Tadco
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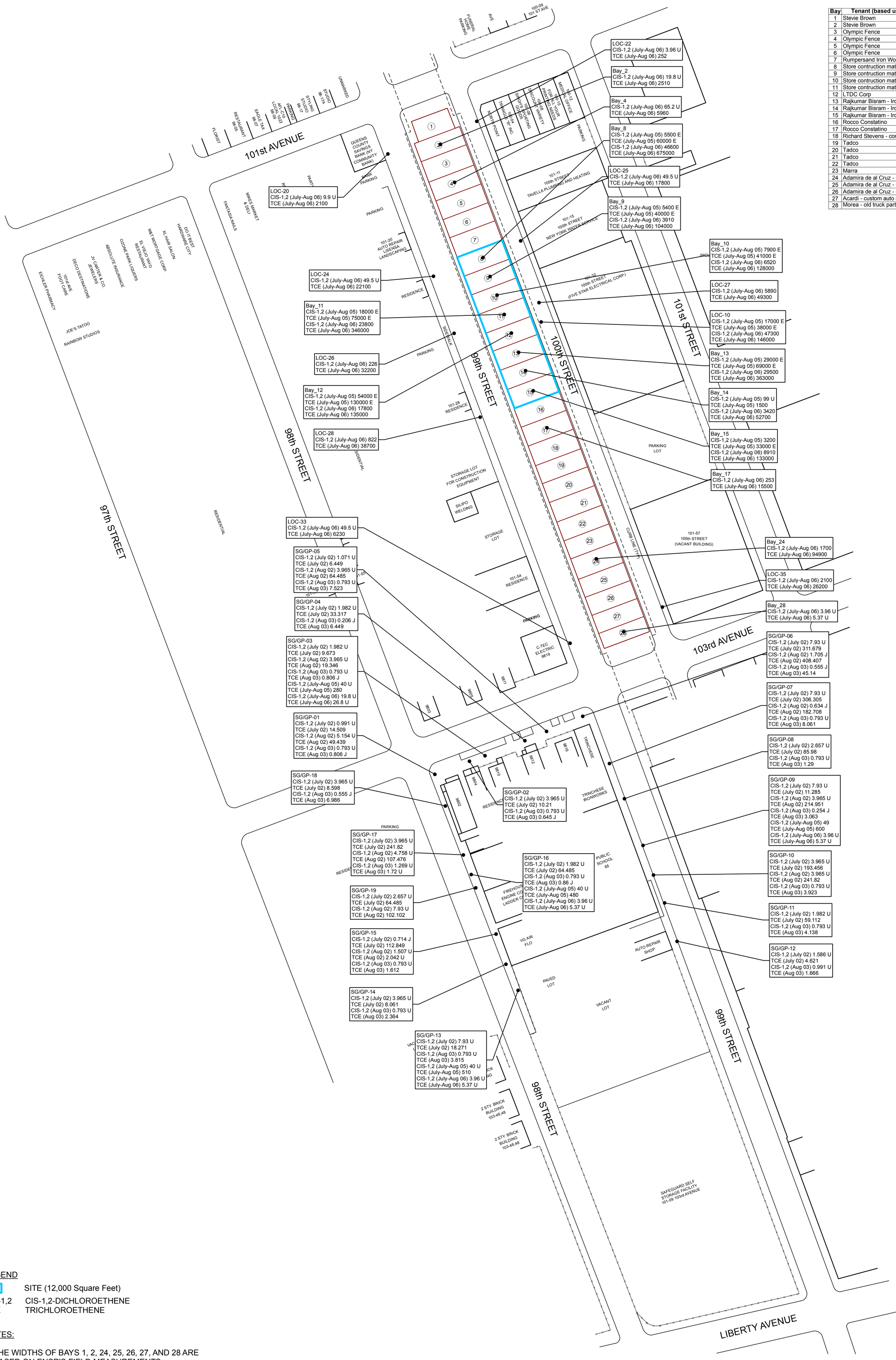
26	Adamira de al Cruz - company vehicle storage
27	Acardi - custom auto storage
28	Morea - old truck part storage



LEGEND

SITE (12,000 Square Feet)

CIS-1,2 CIS-1,2-DICHLOROETHENE
TCE TRICHLOROETHENE

NOTES:

1. THE WIDTHS OF BAYS 1, 2, 24, 25, 26, 27, AND 28 ARE BASED ON ENSR'S FIELD MEASUREMENTS.
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0 30 60 120 Feet

Sheet Number: 1

Figure Number: 8

CIS-1,2-DICHLOROETHENE AND TRICHLOROETHENE IN SOIL GAS (2002-2006) (ug/m3)

FORMER OZONE INDUSTRIES, INC. OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	2/09	10748-002-0003

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	No.:	Description:	Date:	By:
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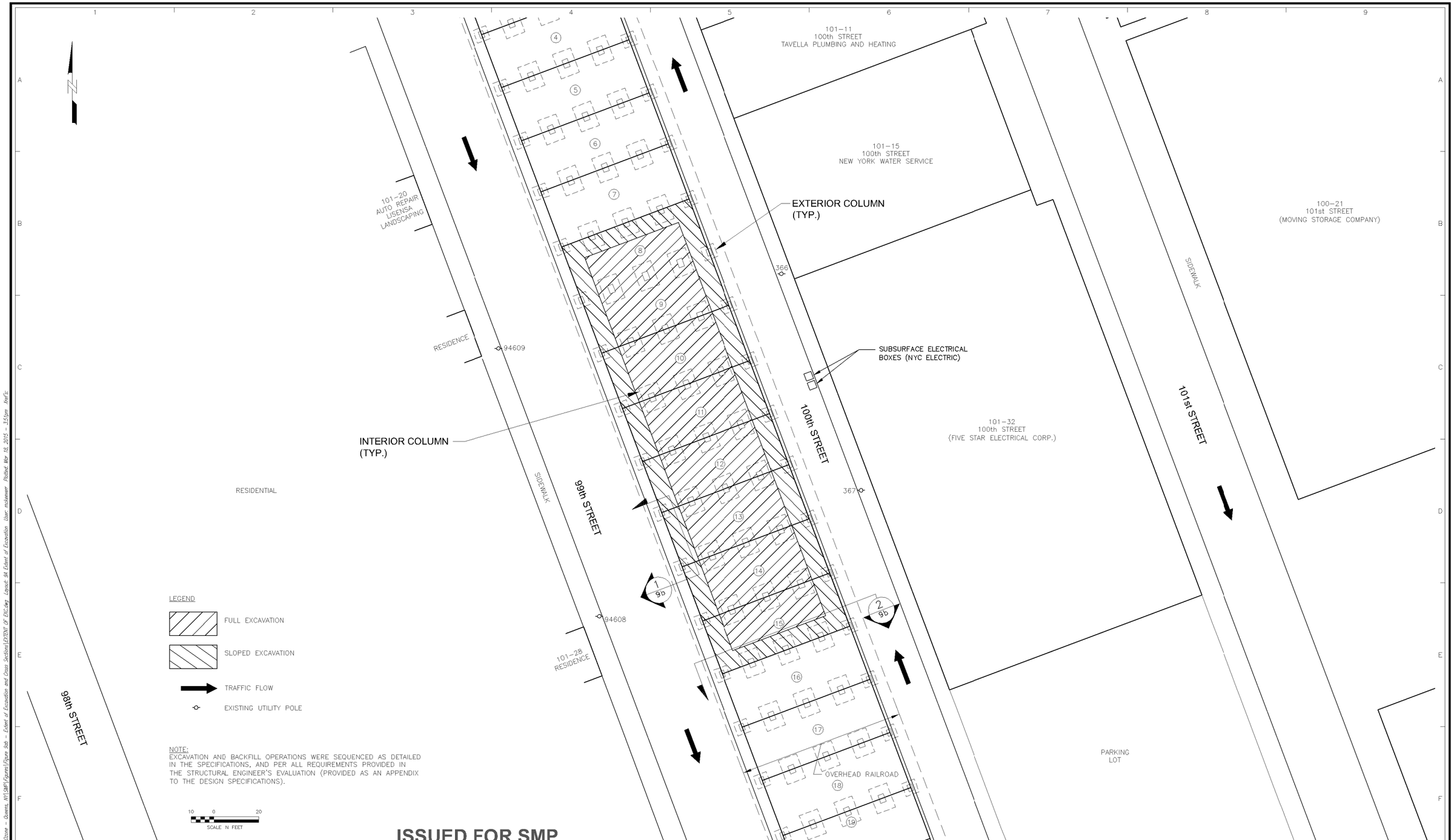
Checked By: R.M.				
Approved By: D.A.				

N W E S



ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
2	RWM	04/21/14	AS-BUILT EXTENT OF EXCAVATION				
1	RWM	02/09/12	ISSUED FOR BID				
0	JEB	10/28/11	ISSUED FOR DESIGN SPECIFICATIONS				

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

PROJ. NUMBER: 60221764

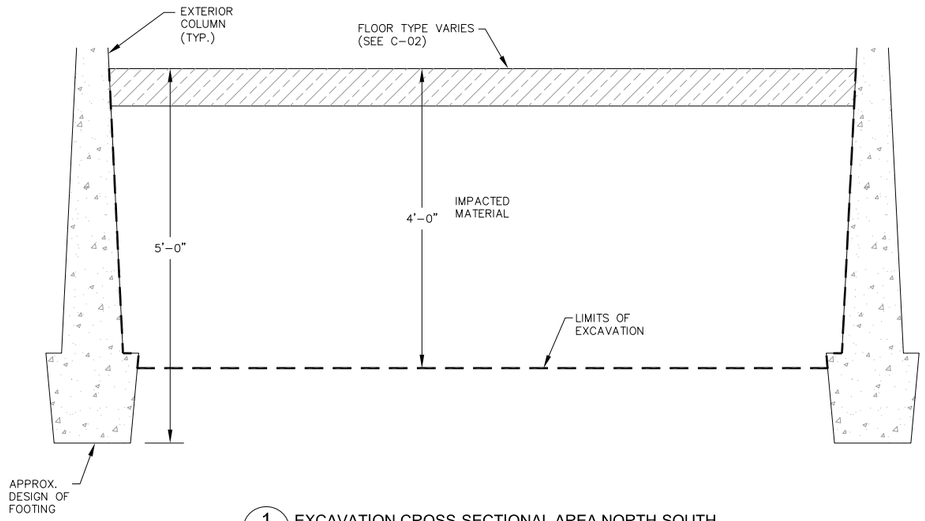
DATE: 04/21/14

EXTENT OF REMEDIAL EXCAVATION PERFOMED

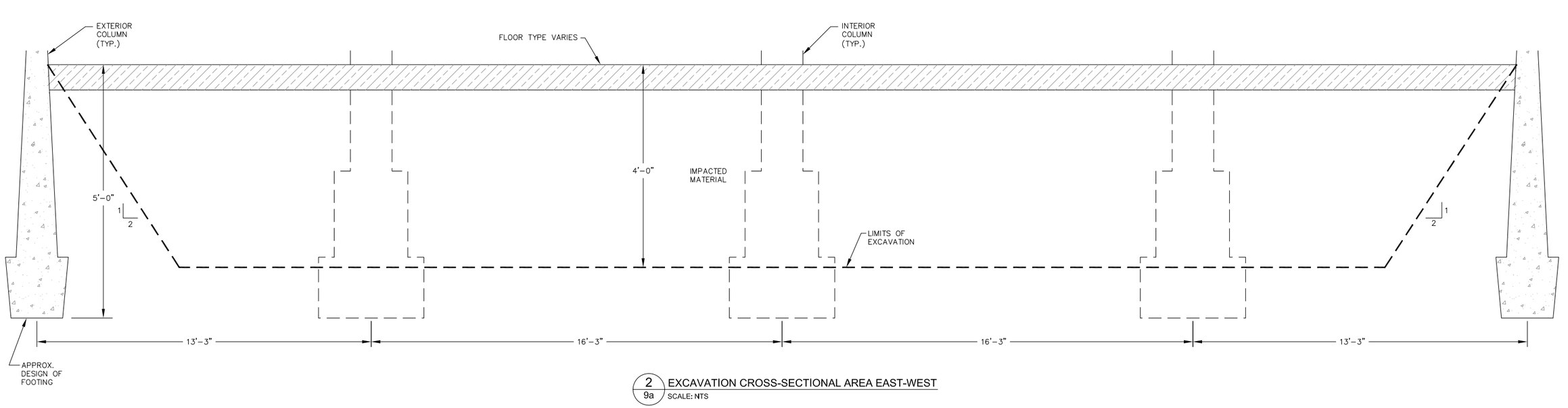
DRAWING NUMBER: 9a

SHEET NUMBER:

REVISION 2



1 / 9a EXCAVATION CROSS-SECTIONAL AREA NORTH-SOUTH
SCALE: NTS



2 / 9a EXCAVATION CROSS-SECTIONAL AREA EAST-WEST
SCALE: NTS

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
2	RWM	04/21/14	AS-BUILT EXCAVATION CROSS-SECTIONS				
1	RWM	02/09/12	ISSUED FOR BID				
0	JEB	10/28/11	ISSUED FOR DESIGN SPECIFICATIONS				

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

PROJ. NUMBER: 60221764

DATE: 04/21/14

EXCAVATION CROSS SECTIONS

DRAWING NUMBER: 9b

SHEET NUMBER:

REVISION 2

File: C:\Users\mckeever\Desktop\Ozone SMP\Figures\Figure 9 - Extent of Excavation\EXTENT OF EXC.dwg Layout: 9B Excavation Cross Sections User: mckeever Plotted: Apr 21, 2014 - 5:16pm Xref's:

99th STREET

100th STREET

11

12

13

SUMP 1

SUMP 2

SUMP 3

TWO 1" PVC STUB-UPS
ON WALL FEEDING
INTO SUMP 1

N

LEGEND

- - - - - - - SUB-GRADE SUMP PIPING

2 0 4
SCALE IN FEET

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0							

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60270935

DATE: 04/21/14

LOCATION OF SUMPS IN BAY 12

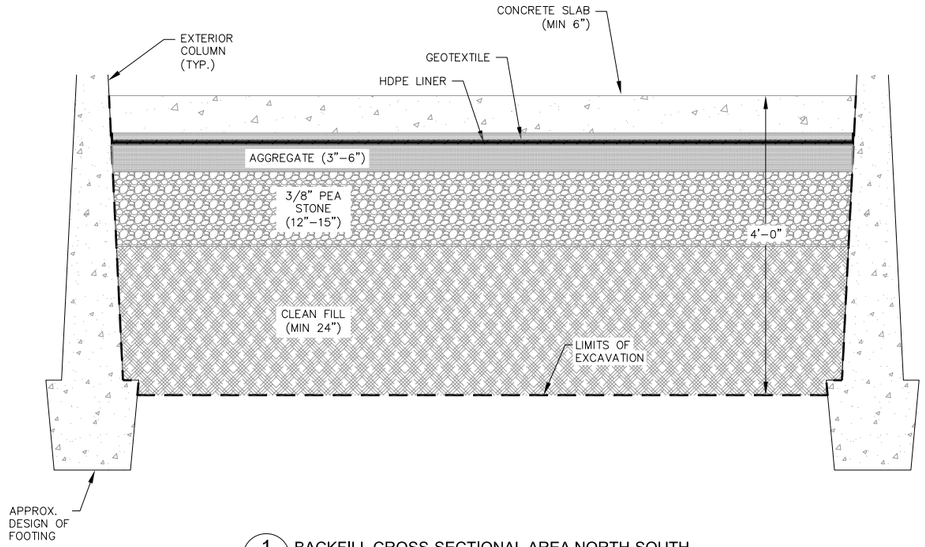
101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 10

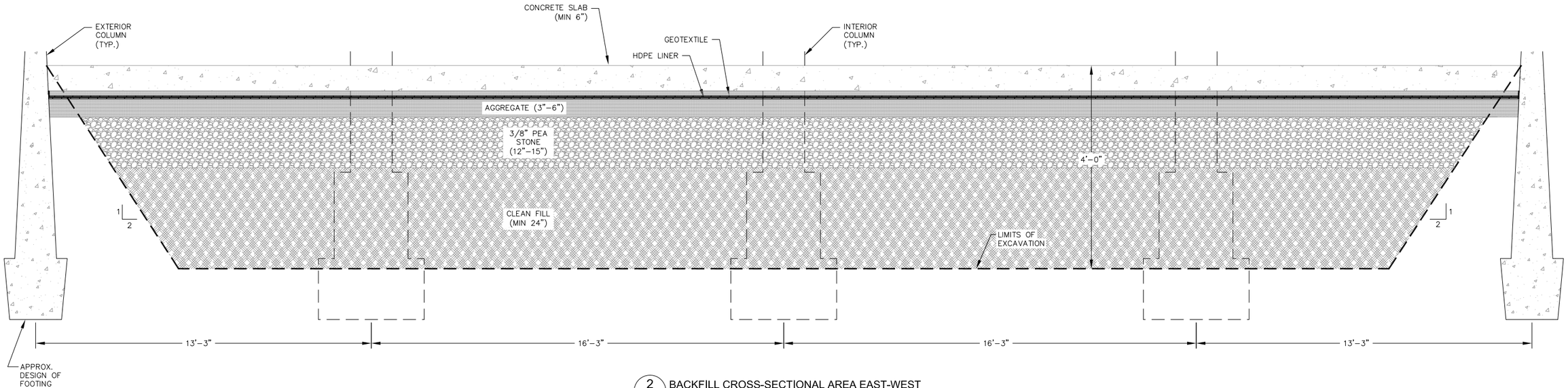
SHEET NUMBER: 1 of 1

REVISION 0

File: C:\Users\mckeever\Desktop\Ozone\SMP\Figures\Figure 10 - Location of Sumps in Bay 12\Location of Bay 12 Sumps.dwg Layout: Figure 10 User: mckeever Plotted: Apr 21, 2014 - 5:22pm Xref's:



1 / 9a BACKFILL CROSS-SECTIONAL AREA NORTH-SOUTH
SCALE: NTS



2 / 9a BACKFILL CROSS-SECTIONAL AREA EAST-WEST
SCALE: NTS

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
2	RWM	04/21/14	AS–BUILT BACKFILL CROSS–SECTIONS				
1	RWM	02/09/12	ISSUED FOR BID				
0	JEB	10/28/11	ISSUED FOR DESIGN SPECIFICATIONS				

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

PROJ. NUMBER: 60221764

DATE: 04/21/14

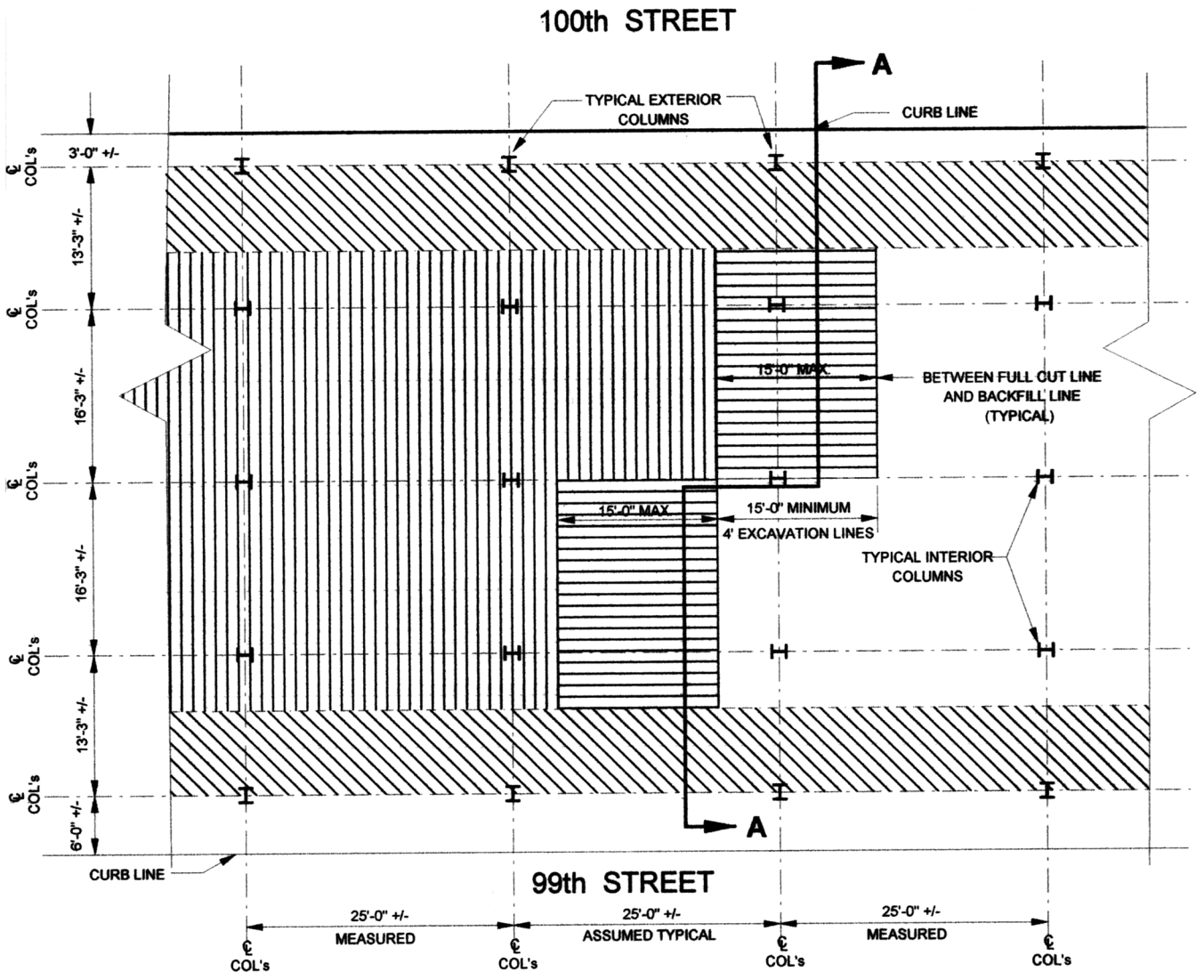
BACKFILL CROSS SECTIONS

DRAWING NUMBER: 11

SHEET NUMBER:

REVISION 2

File: C:\Users\mckeever\Desktop\Ozone\SMP\Figures\Figure 11 – Excavation and Backfill Contour\Excavation and Backfill Contour.dwg Layout: 11 Backfill Cross Sections User: mckeever Plotted: Apr 21, 2014 – 6:28pm Xref's:



TYPICAL EXCAVATION & BACKFILL SEQUENCING

0' 5' 15' 25'

GRAPHIC SCALE

UNEXCAVATED AREAS

4'-0" MAX. EXCAVATION

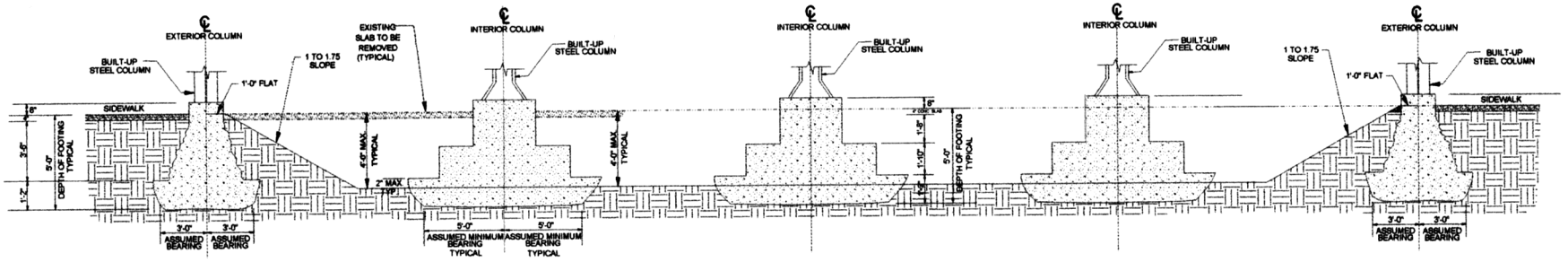
4'-0" EXCAVATION WITH 2'-0" COMPACTED BACKFILL

"SLOPED" EXCAVATION (SEE OTHER DWG's)

LEGEND

FORMER OZONE INDUSTRIES, INC. **OZONE PARK, NEW YORK, NY** AECOM PROJECT NO. 60138748.A.1		
ISSUE 08/08/11	**ARTECNICS ENGINEERING**	DRAWN BY D.L. CHK'D BY ℄
AECOM CORPORATION		

Figure 12: Excavation/Backfill Sequencing



SECTION A-A

(NOTE THAT THIS SECTION IS NOT COLINEAR)

5' 15' 25'

GRAPHIC SCALE

NOTE THAT THE LONG SECTION (PROJECT NORTH TO SOUTH) IS SIMILAR. BE SURE TO WORK WITH THE SEQUENCING SCHEME SHOWN ON AECOZN2-1. EXCAVATION TO 4'-0" ALL AROUND ANY COLUMN IS NOT PERMITTED.

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

AECOM PROJECT NO. 60138748.A.1

ISSUE 08/08/11

ARTECNICS ENGINEERING

DRAWN BY D.L.

CHK'D BY

AECOM CORPORATION

SECTION A-A

DWG. NO. AECOZN2-2

POST-EXC SAMPLE DESIGNATION KEY:

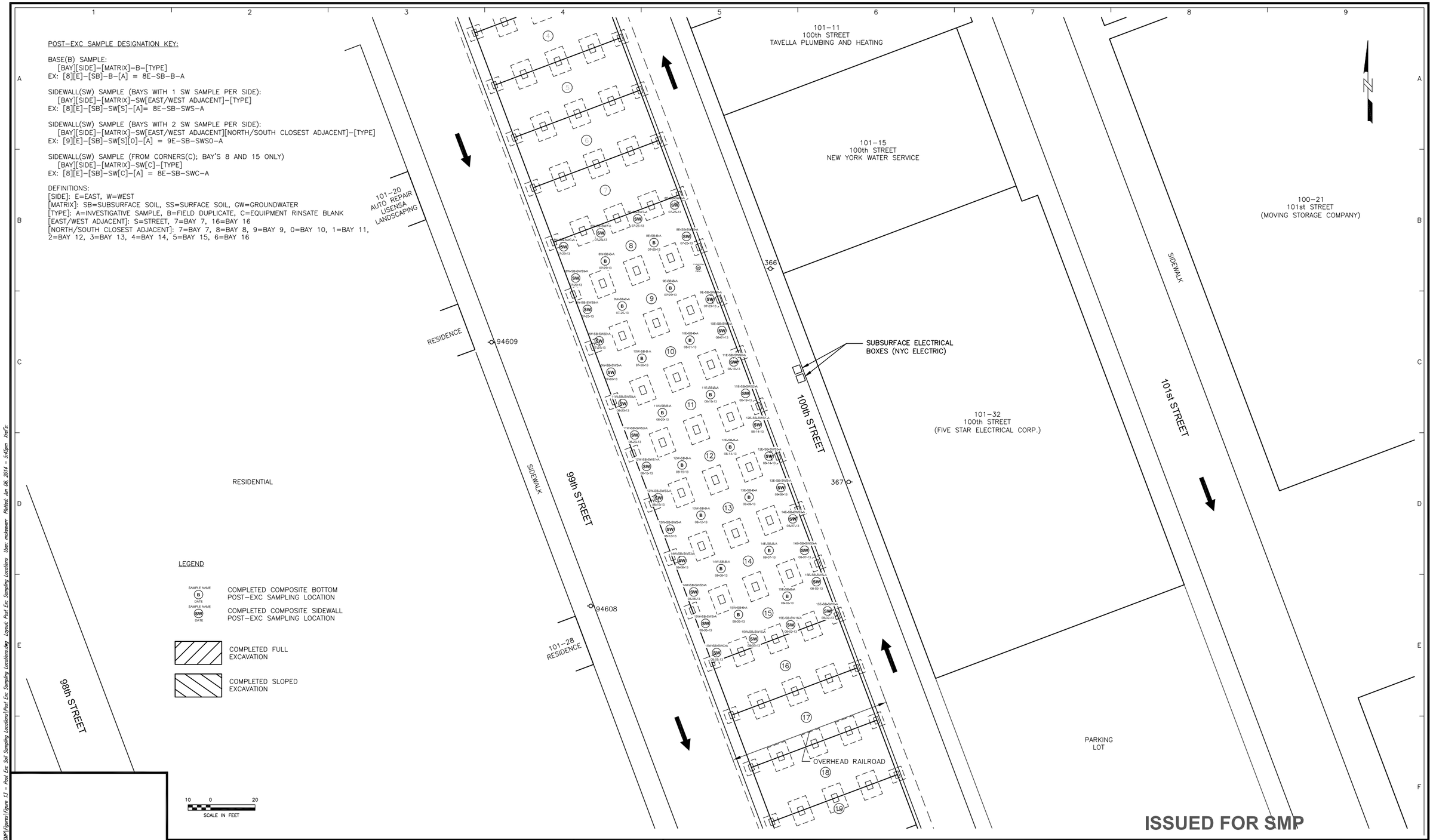
BASE(B) SAMPLE:
[BAY][SIDE]-[MATRIX]-B-[TYPE]
EX: [8][E]-[SB]-B-[A] = 8E-SB-B-A

SIDEWALL(SW) SAMPLE (BAYS WITH 1 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT]-[TYPE]
EX: [8][E]-[SB]-SW[S]-[A]= 8E-SB-SWS-A

SIDEWALL(SW) SAMPLE (BAYS WITH 2 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT][NORTH/SOUTH CLOSEST ADJACENT]-[TYPE]
EX: [9][E]-[SB]-SW[S][0]-[A] = 9E-SB-SWS0-A

SIDEWALL(SW) SAMPLE (FROM CORNERS(C); BAY'S 8 AND 15 ONLY)
[BAY][SIDE]-[MATRIX]-SW[C]-[TYPE]
EX: [8][E]-[SB]-SW[C]-[A] = 8E-SB-SWC-A

DEFINITIONS:
[SIDE]: E=EAST, W=WEST
[MATRIX]: SB=SUBSURFACE SOIL, SS=SURFACE SOIL, GW=GROUNDWATER
[TYPE]: A=INVESTIGATIVE SAMPLE, B=FIELD DUPLICATE, C=EQUIPMENT RINSATE BLANK
[EAST/WEST ADJACENT]: S=STREET, 7=BAY 7, 16=BAY 16
[NORTH/SOUTH CLOSEST ADJACENT]: 7=BAY 7, 8=BAY 8, 9=BAY 9, 0=BAY 10, 1=BAY 11, 2=BAY 12, 3=BAY 13, 4=BAY 14, 5=BAY 15, 6=BAY 16



LEGEND

- SAMPLE NAME / B / DATE — COMPLETED COMPOSITE BOTTOM POST-EXC SAMPLING LOCATION
- SAMPLE NAME / SW / DATE — COMPLETED COMPOSITE SIDEWALL POST-EXC SAMPLING LOCATION
- COMPLETED FULL EXCAVATION
- COMPLETED SLOPED EXCAVATION

10 0 20
SCALE IN FEET

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RM	6/6/14	AS-BUILT POST-EXC SOIL SAMPLING LOCATIONS				

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PROJ. NUMBER: 60221764

DATE: 6/6/14

POST-EXCAVATION SAMPLING LOCATIONS

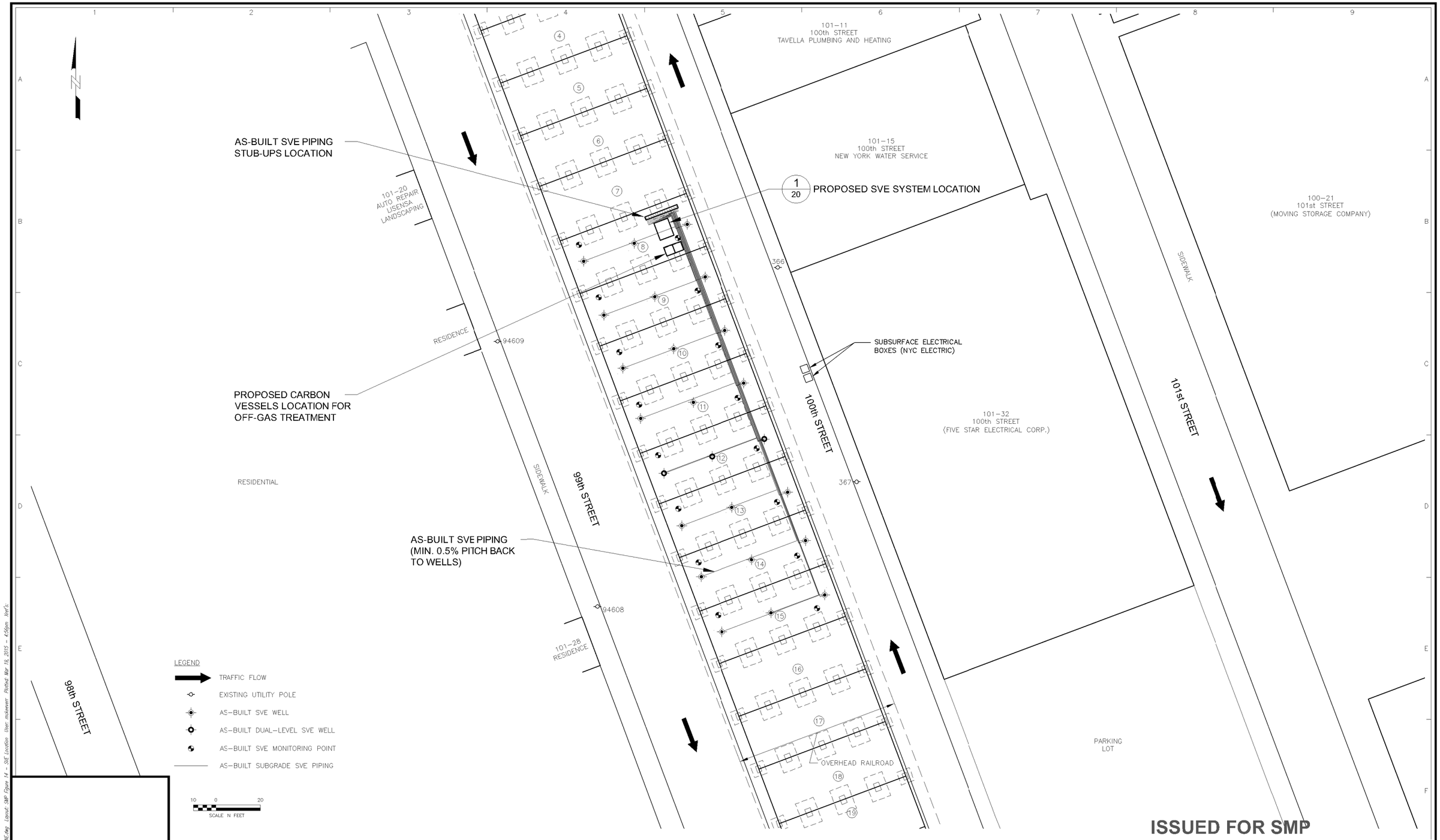
101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 13

SHEET NUMBER:

REVISION 0

File: C:\Users\mckeever\Desktop\Ozone\SMP\Figures\Figure 13 - Post Exc. Soil Sampling Locations\Post Exc. Sampling Locations.dwg Layout: Post Exc. Sampling Locations User: mckeever Plotted: Jun 06, 2014 - 5:45pm Xref's:



NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RWM	03/18/15	ISSUED FOR SMP	RM	03/19/15	SAC	03/19/15

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FORMER OZONE INDUSTRIES, INC.
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PROJ. NUMBER: 60221764

DATE: 03/18/15

LOCATION OF SOIL VAPOR EXTRACTION REMEDIAL TREATMENT SYSTEM

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 14

SHEET NUMBER: 14 of 22

REVISION 0

AS-BUILT SSD PIPING STUB-UPS LOCATION

PROPOSED CARBON VESSELS LOCATION FOR OFF-GAS TREATMENT

2/20 PROPOSED SSD SYSTEM LOCATION

101-11
100th STREET
TAVELLA PLUMBING AND HEATING

101-15
100th STREET
NEW YORK WATER SERVICE

101-20
AUTO REPAIR
LISENSA
LANDSCAPING

100-21
101st STREET
(MOVING STORAGE COMPANY)

RESIDENCE

94609

366

SUBSURFACE ELECTRICAL BOXES (NYC ELECTRIC)

SIDEWALK

100th STREET

101st STREET

101-32
100th STREET
(FIVE STAR ELECTRICAL CORP.)

RESIDENTIAL

SIDEWALK

99th STREET

94608

367

101-28
RESIDENCE

SCREEN INTERVAL (TYP.)

OVERHEAD RAILROAD

PARKING LOT

98th STREET

LEGEND

- TRAFFIC FLOW
- EXISTING UTILITY POLE
- AS-BUILT SSD MONITORING POINT
- AS-BUILT SUBGRADE SSD PIPING

10 0 20
SCALE IN FEET

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RWM	03/18/15	ISSUED FOR SMP	RM	03/19/15	SAC	03/19/15

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PROJ. NUMBER: 60221764

DATE: 03/18/15

LOCATION OF SUB-SLAB DEPRESSURIZATION REMEDIAL TREATMENT SYSTEM

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 15

SHEET NUMBER: 15 of 22

REVISION 0

POST-EXC SAMPLE DESIGNATION KEY:

BASE(B) SAMPLE:
[BAY][SIDE]-[MATRIX]-B-[TYPE]
EX: [8][E]-[SB]-B-[A] = 8E-SB-B-A

SIDEWALL(SW) SAMPLE (BAYS WITH 1 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT]-[TYPE]
EX: [8][E]-[SB]-SW[S]-[A]= 8E-SB-SWS-A

SIDEWALL(SW) SAMPLE (BAYS WITH 2 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT][NORTH/SOUTH CLOSEST ADJACENT]-[TYPE]
EX: [9][E]-[SB]-SW[S][0]-[A] = 9E-SB-SWS0-A

SIDEWALL(SW) SAMPLE (FROM CORNERS(C); BAY'S 8 AND 15 ONLY)
[BAY][SIDE]-[MATRIX]-SW[C]-[TYPE]
EX: [8][E]-[SB]-SW[C]-[A] = 8E-SB-SWC-A

DEFINITIONS:
[SIDE]: E=EAST, W=WEST
[MATRIX]: SB=SUBSURFACE SOIL, SS=SURFACE SOIL, GW=GROUNDWATER
[TYPE]: A=INVESTIGATIVE SAMPLE, B=FIELD DUPLICATE, C=EQUIPMENT RINSATE BLANK
[EAST/WEST ADJACENT]: S=STREET, 7=BAY 7, 16=BAY 16
[NORTH/SOUTH CLOSEST ADJACENT]: 7=BAY 7, 8=BAY 8, 9=BAY 9, 0=BAY 10, 1=BAY 11, 2=BAY 12, 3=BAY 13, 4=BAY 14, 5=BAY 15, 6=BAY 16

LEGEND

- COMPLETED COMPOSITE BOTTOM POST-EXC SAMPLING LOCATION WITH TCE CONCENTRATION (UG/KG)
- COMPLETED COMPOSITE SIDEWALL POST-EXC SAMPLING LOCATION WITH TCE CONCENTRATION (UG/KG)
- REMAINING SOIL CONTAMINATION (TCE) ABOVE NEW YORK UNRESTRICTED USE SOIL CLEANUP OBJECTIVES 375-6.8(a)

SCALE IN FEET: 10 0 20

101-11
100th STREET
TAVELLA PLUMBING AND HEATING

101-15
100th STREET
NEW YORK WATER SERVICE

101-20
AUTO REPAIR
LISENSA
LANDSCAPING

RESIDENCE

94609

366

SUBSURFACE ELECTRICAL BOXES (NYC ELECTRIC)

100th STREET

101-32
100th STREET
(FIVE STAR ELECTRICAL CORP.)

100-21
101st STREET
(MOVING STORAGE COMPANY)

SIDEWALK

101st STREET

99th STREET

SIDEWALK

367

94608

101-28
RESIDENCE

RESIDENTIAL

98th STREET

PARKING LOT

OVERHEAD RAILROAD

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RWM	03/18/15	ISSUED FOR SMP	RM	03/19/15	SAC	03/19/15

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101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 03/18/15

LOCATION OF REMAINING SOIL CONTAMINATION (TCE) ABOVE UNRESTRICTED LEVELS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 16

SHEET NUMBER: 16 of 22

REVISION: 0

File: C:\Users\mckeever\Desktop\Figure 16.dwg Layout: Figure 16 - Soil Contam Above Unrestricted User: mckeever Plotted: Mar 19, 2015 - 6:38pm Xref's:

POST-EXC SAMPLE DESIGNATION KEY:

BASE(B) SAMPLE:
[BAY][SIDE]-[MATRIX]-B-[TYPE]
EX: [8][E]-[SB]-B-[A] = 8E-SB-B-A

SIDEWALL(SW) SAMPLE (BAYS WITH 1 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT]-[TYPE]
EX: [8][E]-[SB]-SW[S]-[A]= 8E-SB-SWS-A

SIDEWALL(SW) SAMPLE (BAYS WITH 2 SW SAMPLE PER SIDE):
[BAY][SIDE]-[MATRIX]-SW[EAST/WEST ADJACENT][NORTH/SOUTH CLOSEST ADJACENT]-[TYPE]
EX: [9][E]-[SB]-SW[S][0]-[A] = 9E-SB-SWS0-A

SIDEWALL(SW) SAMPLE (FROM CORNERS(C); BAY'S 8 AND 15 ONLY)
[BAY][SIDE]-[MATRIX]-SW[C]-[TYPE]
EX: [8][E]-[SB]-SW[C]-[A] = 8E-SB-SWC-A

DEFINITIONS:
[SIDE]: E=EAST, W=WEST
[MATRIX]: SB=SUBSURFACE SOIL, SS=SURFACE SOIL, GW=GROUNDWATER
[TYPE]: A=INVESTIGATIVE SAMPLE, B=FIELD DUPLICATE, C=EQUIPMENT RINSATE BLANK
[EAST/WEST ADJACENT]: S=STREET, 7=BAY 7, 16=BAY 16
[NORTH/SOUTH CLOSEST ADJACENT]: 7=BAY 7, 8=BAY 8, 9=BAY 9, 0=BAY 10, 1=BAY 11, 2=BAY 12, 3=BAY 13, 4=BAY 14, 5=BAY 15, 6=BAY 16

LEGEND

- COMPLETED COMPOSITE BOTTOM POST-EXC SAMPLING LOCATION WITH TCE CONCENTRATION (UG/KG)
- COMPLETED COMPOSITE SIDEWALL POST-EXC SAMPLING LOCATION WITH TCE CONCENTRATION (UG/KG)
- REMAINING SOIL CONTAMINATION (TCE) ABOVE NEW YORK RESTRICTED COMMERCIAL USE SOIL CLEANUP OBJECTIVES 375-6.8(b)

10 0 20
SCALE IN FEET

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RWM	03/18/15	ISSUED FOR SMP	RM	03/19/15	SAC	03/19/15

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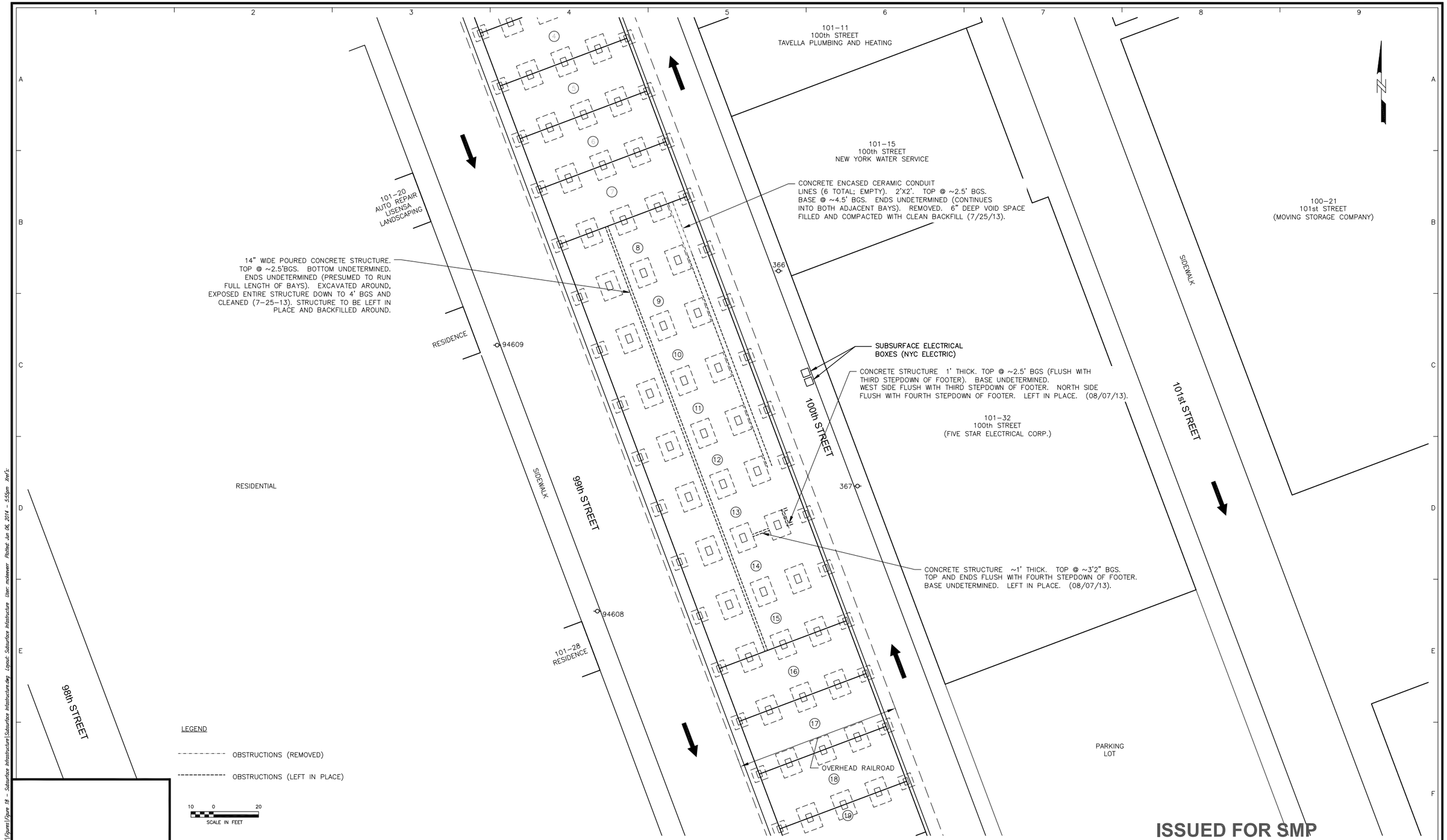
PROJ. NUMBER: 60221764
DATE: 03/18/15

LOCATION OF REMAINING SOIL CONTAMINATION (TCE) ABOVE SITE-SPECIFIC ACTION LEVELS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 17
SHEET NUMBER: 17 of 22
REVISION: 0



LEGEND

OBSTRUCTIONS (REMOVED)

OBSTRUCTIONS (LEFT IN PLACE)

10 0 20
SCALE IN FEET

ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RM	6/6/14	SUBSURFACE INFASTRUCTURE FOR SMP				

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101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 6/6/14

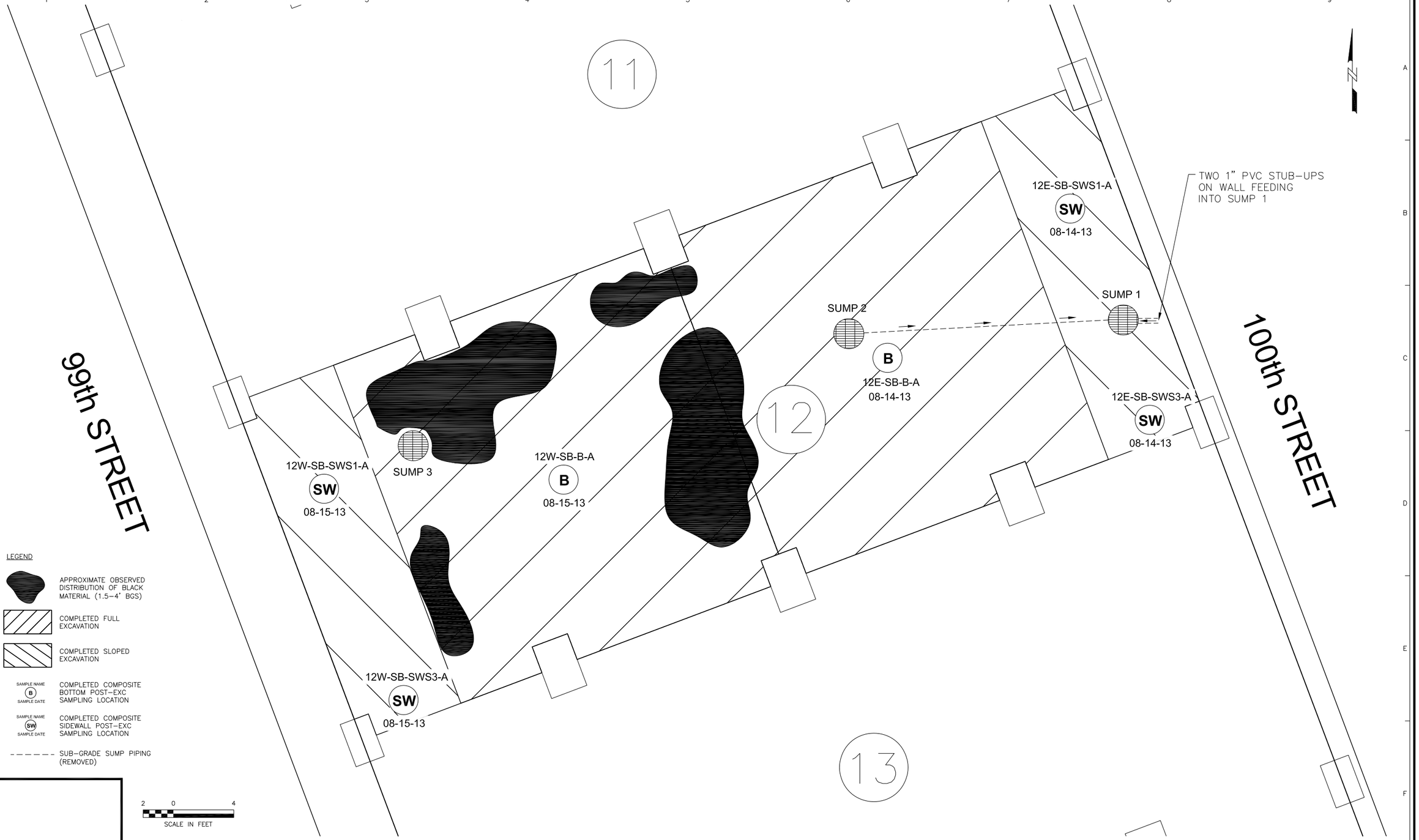
SUBSURFACE INFASTRUCTURE ENCOUNTERED DURING EXCAVATIONS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 18

SHEET NUMBER:

REVISION 0



NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
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5							
4							
3							
2							
1							
0							

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OZONE PARK
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PROJ. NUMBER: 60270935

DATE: 09/09/13

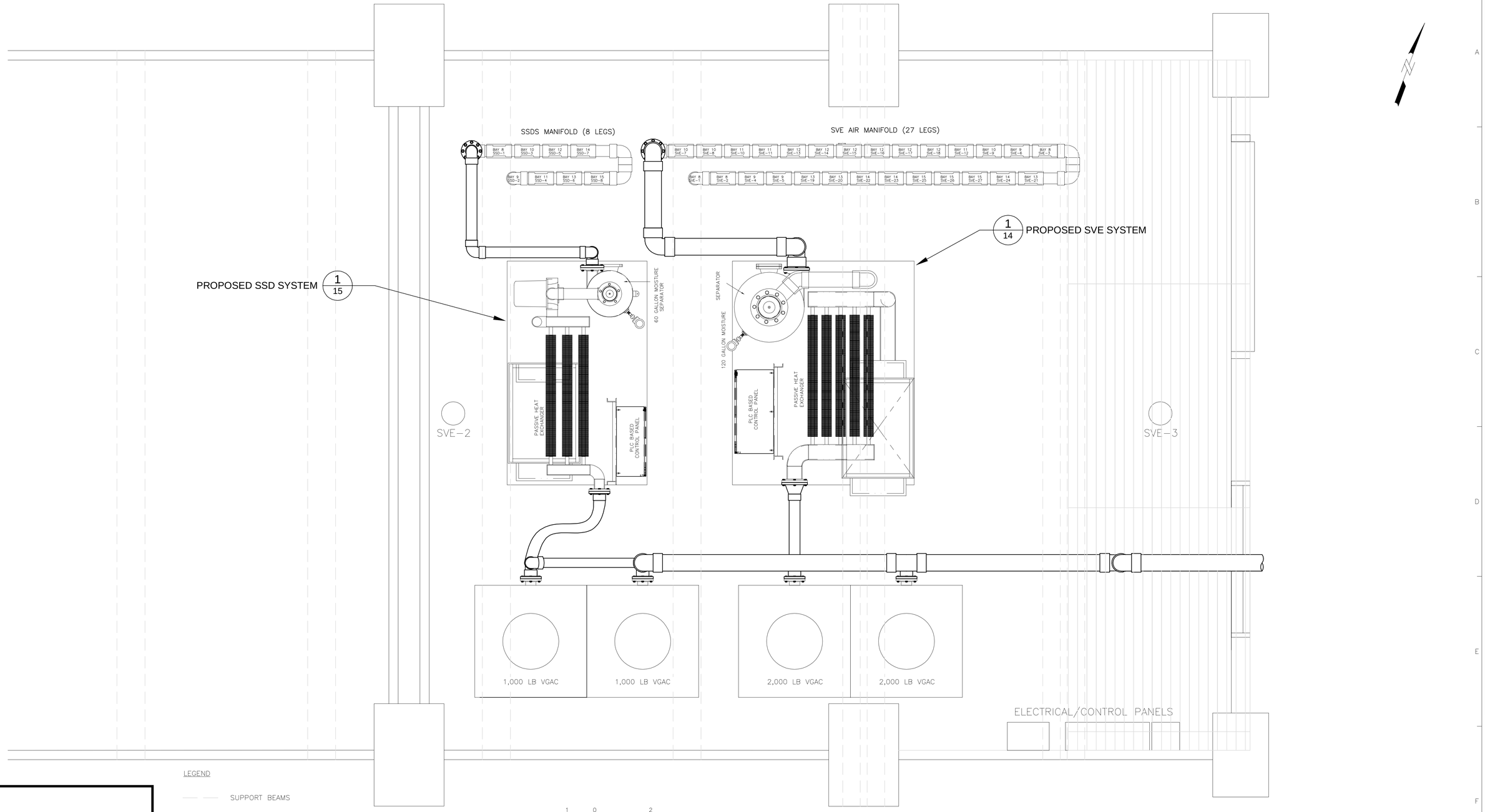
BAY 12 SUMP MATERIAL SUBSURFACE DISTRIBUTION

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 19

SHEET NUMBER:

REVISION 0



ISSUED FOR SMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1							
0	RWM	03/23/15	ISSUED FOR SMP	RM	03/24/15	SAC	03/24/15

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FORMER OZONE INDUSTRIES, INC.
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PROJ. NUMBER: 60221764

DATE: 03/23/15

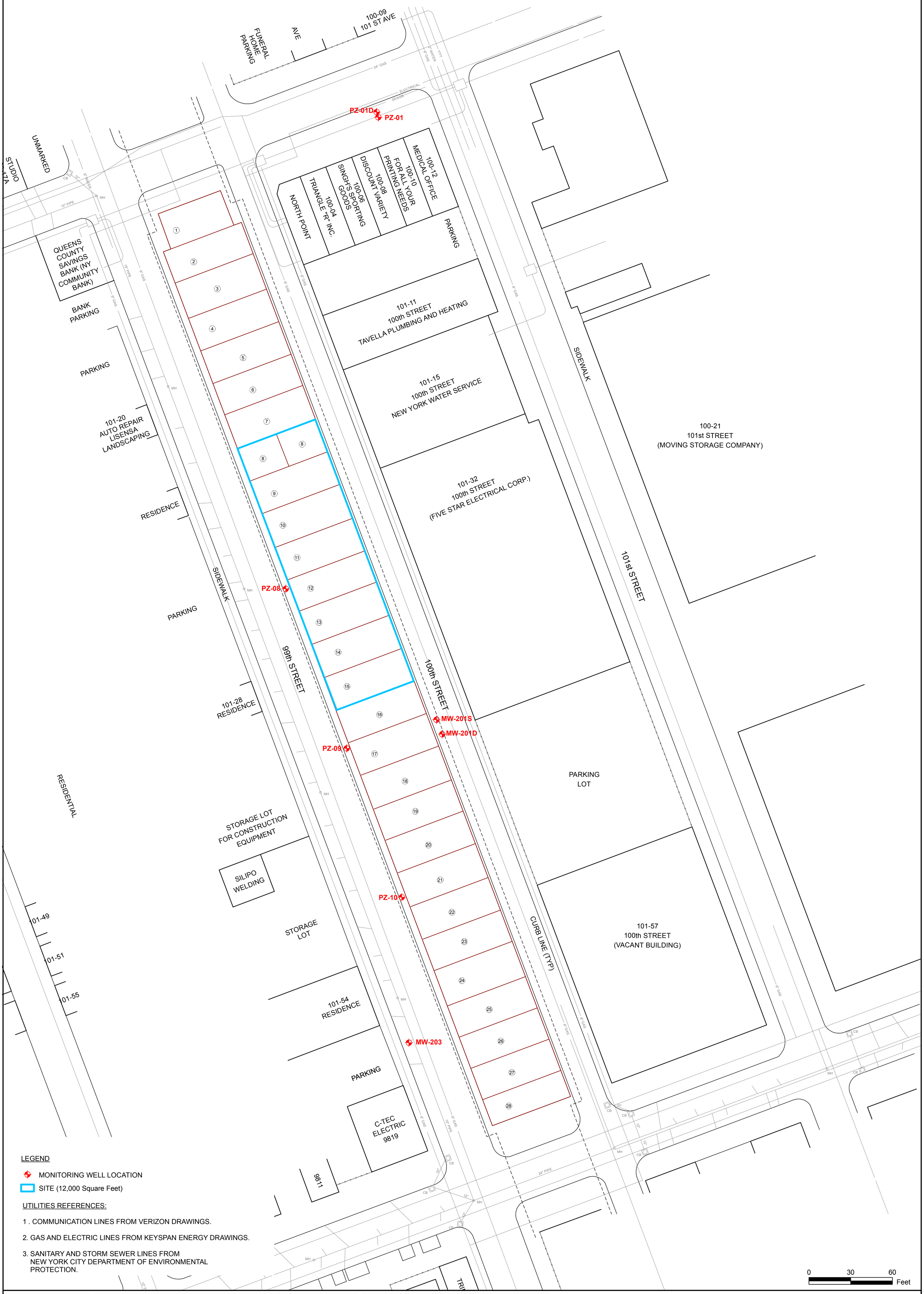
REMEDIAL SYSTEM DETAILS (BAY 8)

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 20

SHEET NUMBER: 20 of 22

REVISION 0



LEGEND

- MONITORING WELL LOCATION
- SITE (12,000 Square Feet)

UTILITIES REFERENCES:

1 . COMMUNICATION LINES FROM VERIZON DRAWINGS.

2. GAS AND ELECTRIC LINES FROM KEYSPAN ENERGY DRAWINGS.

3. SANITARY AND STORM SEWER LINES FROM NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION.

0 30 60 Feet

Figure Number: 22

Sheet Number: 1

GROUNDWATER MONITORING WELL NETWORK

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	07/26/2016	60270935.7

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Designed By:	Revisions			
	No.:	Description:	Date:	By:
Drawn By: J.E.B.				
Checked By: R.M.				
Approved By: D.A.				

N W E S

Path: \\USCHL1FP001\Data\Projects\Jobs\Indl_Service\Project Files\Endzone, Inc\Ozone - Queens, NY\400 Technical\403 - GIS\Projects\SMP\Fig_22_GW_Monitoring_Well_Network.mxd

Tables

Table 1: Post-Excavation Soil Analyses Results (2013)

						LOCATION:		8E-SB-SW7-A		8E-SB-SWC-A		8E-SB-SWS9-A		8E-SB-B-A		8E-SB-B-A		9W-SB-SWS8-A		9W-SB-SWS0-A		9W-SB-B-A
						SAMPLING DATE:		7/25/2013		7/25/2013		7/25/2013		7/25/2013		7/25/2013		7/25/2013		7/25/2013		7/25/2013
						SAMPLE TYPE:		Composite		Composite		Composite		Composite		Composite		Composite		Composite		Composite
						SAMPLE DEPTH (ft.):		0.5-4		0.5-4		0.5-4		4		4		0.5-4		0.5-4		4
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**		**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**
Volatile Organics by 8260/5035 - Westborough Lab																						
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	ND	1.2	ND	5.7	ND	22	ND	1.1	-	-	ND	3	ND	5.5	ND		
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	ND	0.18	ND	0.85	ND	3.3	ND	0.17	-	-	ND	0.45	ND	0.83	ND		
Chloroform	67-66-3	700	350	0.37	mg/kg	ND	0.18	ND	0.85	ND	3.3	ND	0.17	-	-	ND	0.45	ND	0.83	ND		
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.32	0.12	0.92	0.57	2.3	2.2	0.38	0.11	-	-	0.6	0.3	0.55	0.55	0.44		
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
Benzene	71-43-2	89	44	0.06	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
Toluene	108-88-3	1000	500	0.7	mg/kg	ND	0.18	ND	0.85	ND	3.3	ND	0.17	-	-	ND	0.45	ND	0.83	ND		
Ethylbenzene	100-41-4	780	390	1	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	ND	0.24	ND	1.1	ND	4.5	ND	0.22	-	-	ND	0.6	ND	1.1	ND		
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	ND	0.12	ND	0.57	ND	2.2	ND	0.11	-	-	ND	0.3	ND	0.55	ND		
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	ND	0.18	ND	0.85	ND	3.3	ND	0.17	-	-	ND	0.45	ND	0.83	ND		
Trichloroethene	79-01-6	400	200	0.47	mg/kg	16	0.12	79	0.57	220	2.2	27	0.11	27	0.3	30	0.3	42	0.55	26		
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	ND	0.24	ND	1.1	ND	4.5	ND	0.22	-	-	ND	0.6	ND	1.1	ND		
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.085J	0.12	0.72	0.57	5	2.2	0.37	0.11	-	-	0.25J	0.3	0.55	0.55	0.3		
Acetone	67-64-1	1000	500	0.05	mg/kg	ND	1.2	ND	5.7	ND	22	ND	1.1	-	-	ND	3	ND	5.5	ND		
2-Butanone	78-93-3	1000	500	0.12	mg/kg	ND	1.2	ND	5.7	ND	22	ND	1.1	-	-	ND	3	ND	5.5	ND		
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
Naphthalene	91-20-3	1000	500	12	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	ND	0.59	ND	2.8	ND	11	ND	0.56	-	-	ND	1.5	ND	2.8	ND		
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	ND	12	ND	57	ND	220	ND	11	-	-	ND	30	ND	55	ND		

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:		**8W-SB-SW7-A**		**8W-SB-SWC-A**		**8W-SB-SWS9-A**		**8W-SB-B-A**		**9E-SB-SWS8-A**		**9E-SB-SWS0-A**		**9E-SB-B-A**
					SAMPLING DATE:		**7/29/2013**		**7/29/2013**		**7/29/2013**		**7/29/2013**		**7/29/2013**		**7/29/2013**		**7/29/2013**
					SAMPLE TYPE:		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**
					SAMPLE DEPTH (ft.):		**0.5-4**		**0.5-4**		**0.5-4**		**4**		**0.5-4**		**0.5-4**		**4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**
Volatile Organics by 8260/5035 - Westborough Lab																			
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	2.8	ND	0.57	ND	0.52	ND	0.54	ND	0.53	ND	2.8	ND	2.5	ND
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	0.42	ND	0.085	ND	0.078	ND	0.081	ND	0.079	ND	0.43	ND	0.37	ND
Chloroform	67-66-3	700	350	0.37	mg/kg	0.42	ND	0.085	ND	0.078	ND	0.081	ND	0.079	ND	0.43	ND	0.37	ND
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.28	0.082	0.057	0.24	0.052	0.076	0.054	0.083	0.053	0.5	0.28	0.54	0.25	0.043J
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
Benzene	71-43-2	89	44	0.06	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
Toluene	108-88-3	1000	500	0.7	mg/kg	0.42	ND	0.085	ND	0.078	ND	0.081	ND	0.079	ND	0.43	ND	0.37	ND
Ethylbenzene	100-41-4	780	390	1	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	0.56	ND	0.11	ND	0.1	ND	0.11	ND	0.1	ND	0.57	ND	0.5	ND
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	ND	0.28	ND	0.25	ND
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	0.42	ND	0.085	ND	0.078	ND	0.081	ND	0.079	ND	0.43	ND	0.37	ND
Trichloroethene	79-01-6	400	200	0.47	mg/kg	0.28	2.3	0.057	5.8	0.052	3	0.054	1.8	0.053	55	0.28	31	0.25	2.1
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	0.56	ND	0.11	ND	0.1	ND	0.11	ND	0.1	ND	0.57	ND	0.5	ND
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.28	ND	0.057	ND	0.052	ND	0.054	ND	0.053	0.95	0.28	0.34	0.25	ND
Acetone	67-64-1	1000	500	0.05	mg/kg	2.8	ND	0.57	ND	0.52	ND	0.54	ND	0.53	ND	2.8	ND	2.5	ND
2-Butanone	78-93-3	1000	500	0.12	mg/kg	2.8	0.04J	0.57	ND	0.52	ND	0.54	ND	0.53	ND	2.8	ND	2.5	0.042J
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
Naphthalene	91-20-3	1000	500	12	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	1.4	ND	0.28	ND	0.26	ND	0.27	ND	0.26	ND	1.4	ND	1.2	ND
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	28	ND	5.7	ND	5.2	ND	5.4	ND	5.3	ND	28	ND	25	ND

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:		**10W-SB-SWS-A**		**10W-SB-B-A**		**10E-SB-B-A**		**10E-SB-B-A**		**10E-SB-SWS-A**		**15E-SB-B-A**		**15E-SB-SW16-A**
					SAMPLING DATE:		**7/30/2013**		**7/30/2013**		**8/1/2013**		**8/1/2013**		**8/1/2013**		**8/2/2013**		**8/2/2013**
					SAMPLE TYPE:		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**
					SAMPLE DEPTH (ft.):		**0.5-4**		**4**		**4**		**4**		**0.5-4**		**4**		**0.5-4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**
Volatile Organics by 8260/5035 - Westborough Lab																			
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	0.52	ND	0.55	ND	0.55	ND	0.57	-	-	ND	7.6	ND	1.1	ND
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	0.078	ND	0.083	ND	0.082	ND	0.086	-	-	ND	1.1	ND	0.16	ND
Chloroform	67-66-3	700	350	0.37	mg/kg	0.078	ND	0.083	ND	0.082	ND	0.086	-	-	ND	1.1	ND	0.16	ND
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.052	0.17	0.055	0.25	0.055	0.25	0.057	-	-	0.91	0.76	0.16	0.11	0.054J
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	0.19	0.11	0.094
Benzene	71-43-2	89	44	0.06	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
Toluene	108-88-3	1000	500	0.7	mg/kg	0.078	ND	0.083	ND	0.082	ND	0.086	-	-	ND	1.1	ND	0.16	0.05J
Ethylbenzene	100-41-4	780	390	1	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	0.1	ND	0.11	ND	0.11	ND	0.11	-	-	ND	1.5	ND	0.22	ND
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	0.052	ND	0.055	ND	0.055	ND	0.057	-	-	ND	0.76	ND	0.11	ND
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	0.078	ND	0.083	ND	0.082	ND	0.086	-	-	ND	1.1	ND	0.16	ND
Trichloroethene	79-01-6	400	200	0.47	mg/kg	0.052	3.9	0.055	9.8	0.055	15	0.057	15	0.29	85	0.76	9.5	0.11	3
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	0.1	ND	0.11	ND	0.11	ND	0.11	-	-	ND	1.5	ND	0.22	ND
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.052	ND	0.055	0.15	0.055	0.24	0.057	-	-	1.8	0.76	0.34	0.11	0.06
Acetone	67-64-1	1000	500	0.05	mg/kg	0.52	ND	0.55	ND	0.55	ND	0.57	-	-	ND	7.6	ND	1.1	ND
2-Butanone	78-93-3	1000	500	0.12	mg/kg	0.52	ND	0.55	ND	0.55	ND	0.57	-	-	ND	7.6	ND	1.1	ND
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
Naphthalene	91-20-3	1000	500	12	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	0.12J	0.55	ND
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	0.26	ND	0.28	ND	0.27	ND	0.29	-	-	ND	3.8	ND	0.55	ND
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	5.2	ND	5.5	ND	5.5	ND	5.7	-	-	ND	76	ND	11	ND

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:		**15E-SB-SWC-A**		**15E-SB-SWS-A**		**15W-SB-B-A**		**15W-SB-SW16-A**		**15W-SB-SWC-A**		**15W-SB-SWS-A**	
					SAMPLING DATE:		**8/2/2013**		**8/2/2013**		**8/5/2013**		**8/5/2013**		**8/5/2013**		**8/5/2013**	
					SAMPLE TYPE:		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**	
					SAMPLE DEPTH (ft.):		**0.5-4**		**0.5-4**		**4**		**0.5-4**		**0.5-4**		**0.5-4**	
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**
Volatile Organics by 8260/5035 - Westborough Lab																		
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	0.56	ND	2.4	ND	2.9	ND	0.51	ND	1	ND	0.54	ND	0.56
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	0.084	ND	0.37	ND	0.44	ND	0.077	ND	0.15	ND	0.081	ND	0.084
Chloroform	67-66-3	700	350	0.37	mg/kg	0.084	ND	0.37	ND	0.44	ND	0.077	ND	0.15	ND	0.081	ND	0.084
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	ND	0.054	ND	0.056
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.056	0.24	0.24	0.23J	0.29	0.18	0.051	0.38	0.1	0.18	0.054	0.28	0.056
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	ND	0.054	ND	0.056
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	ND	0.054	ND	0.056
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	0.056	0.26	0.24	0.38	0.29	0.011J	0.051	ND	0.1	ND	0.054	0.014J	0.056
Benzene	71-43-2	89	44	0.06	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	ND	0.054	ND	0.056
Toluene	108-88-3	1000	500	0.7	mg/kg	0.084	ND	0.37	ND	0.44	0.014J	0.077	ND	0.15	0.032J	0.081	0.14	0.084
Ethylbenzene	100-41-4	780	390	1	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	0.01J	0.054	0.01J	0.056
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	0.11	ND	0.49	ND	0.58	ND	0.1	ND	0.2	ND	0.11	ND	0.11
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	0.056	ND	0.24	ND	0.29	ND	0.051	ND	0.1	ND	0.054	ND	0.056
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	0.084	ND	0.37	ND	0.44	ND	0.077	ND	0.15	ND	0.081	ND	0.084
Trichloroethene	79-01-6	400	200	0.47	mg/kg	0.056	22	0.24	32	0.29	6.4	0.051	14	0.1	4	0.054	9	0.056
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	0.11	ND	0.49	ND	0.58	ND	0.1	ND	0.2	ND	0.11	ND	0.11
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.056	0.74	0.24	2.4	0.29	0.17	0.051	0.41	0.1	0.035J	0.054	0.16	0.056
Acetone	67-64-1	1000	500	0.05	mg/kg	0.56	ND	2.4	ND	2.9	ND	0.51	ND	1	ND	0.54	ND	0.56
2-Butanone	78-93-3	1000	500	0.12	mg/kg	0.56	ND	2.4	ND	2.9	ND	0.51	ND	1	ND	0.54	ND	0.56
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
Naphthalene	91-20-3	1000	500	12	mg/kg	0.28	ND	1.2	ND	1.4	0.057J	0.26	ND	0.5	0.07J	0.27	0.076J	0.28
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	0.28	ND	1.2	ND	1.4	ND	0.26	ND	0.5	ND	0.27	ND	0.28
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	5.6	ND	24	ND	29	ND	5.1	ND	10	ND	5.4	ND	5.6

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

						LOCATION:		14E-SB-SWS5-A		14E-SB-SWS3-A		14E-SB-B-A		14W-SB-SWS5-A		14W-SB-SWS3-A		14W-SB-B-A		13E-SB-B-A	
						SAMPLING DATE:		8/7/2013		8/7/2013		8/7/2013		8/8/2013		8/8/2013		8/8/2013		8/8/2013	
						SAMPLE TYPE:		Composite		Composite		Composite		Composite		Composite		Composite		Composite	
						SAMPLE DEPTH (ft.):		0.5-4		0.5-4		4		0.5-4		0.5-4		4		4	
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**			**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**
Volatile Organics by 8260/5035 - Westborough Lab																					
Methylene chloride	75-09-2	1000	500	0.05	mg/kg		0.77J	3.3	1.3J	5.3	0.27J	1	0.26J	1	0.25J	1	0.26J	1.1	ND	0.58	
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg		ND	0.5	ND	0.79	ND	0.15	ND	0.15	ND	0.16	ND	0.16	ND	0.086	
Chloroform	67-66-3	700	350	0.37	mg/kg		ND	0.5	ND	0.79	ND	0.15	ND	0.15	ND	0.16	ND	0.16	ND	0.086	
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg		0.56	0.33	0.59	0.53	0.24	0.1	0.43	0.1	0.51	0.1	0.43	0.11	0.072	0.058	
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
Benzene	71-43-2	89	44	0.06	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
Toluene	108-88-3	1000	500	0.7	mg/kg		ND	0.5	ND	0.79	ND	0.15	ND	0.15	ND	0.16	ND	0.16	ND	0.086	
Ethylbenzene	100-41-4	780	390	1	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
Vinyl chloride	75-01-4	27	13	0.02	mg/kg		ND	0.67	ND	1	ND	0.2	ND	0.2	ND	0.21	ND	0.22	ND	0.12	
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg		ND	0.33	ND	0.53	ND	0.1	ND	0.1	ND	0.1	ND	0.11	ND	0.058	
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg		ND	0.5	ND	0.79	ND	0.15	ND	0.15	ND	0.16	ND	0.16	ND	0.086	
Trichloroethene	79-01-6	400	200	0.47	mg/kg		44	0.33	44	0.53	9.5	0.1	14	0.1	13	0.1	13	0.11	2.1	0.058	
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg		ND	0.67	ND	1	ND	0.2	ND	0.2	ND	0.21	ND	0.22	ND	0.12	
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg		2.4	0.33	1.5	0.53	0.33	0.1	0.36	0.1	0.23	0.1	0.27	0.11	0.3	0.058	
Acetone	67-64-1	1000	500	0.05	mg/kg		ND	3.3	ND	5.3	ND	1	ND	1	ND	1	ND	1.1	ND	0.58	
2-Butanone	78-93-3	1000	500	0.12	mg/kg		ND	3.3	ND	5.3	ND	1	ND	1	ND	1	ND	1.1	ND	0.58	
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
Naphthalene	91-20-3	1000	500	12	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg		ND	1.7	ND	2.6	ND	0.51	ND	0.51	ND	0.52	ND	0.55	ND	0.29	
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg		ND	33	ND	53	ND	10	ND	10	ND	10	ND	11	ND	5.8	

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:	**13E-SB-SWS-A**		**13W-SB-SWS-A**		**13W-SB-B-A**		**12E-SB-B-A**		**12E-SB-SWS1-A**		**12E-SB-SWS3-A**		**12W-SB-B-A**	
					SAMPLING DATE:	**8/8/2013**		**8/12/2013**		**8/12/2013**		**8/14/2013**		**8/14/2013**		**8/14/2013**		**8/15/2013**	
					SAMPLE TYPE:	**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**	
					SAMPLE DEPTH (ft.):	**0.5-4**		**0.5-4**		**4**		**4**		**0.5-4**		**0.5-4**		**4**	
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**
Volatile Organics by 8260/5035 - Westborough Lab																			
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	ND	5.3	0.67J	1.1	0.68J	1.1	0.74J	2.4	7.2J	22	1.7J	5.1	0.87J	2.3
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	ND	0.8	ND	0.16	ND	0.16	ND	0.37	ND	3.4	ND	0.76	ND	0.34
Chloroform	67-66-3	700	350	0.37	mg/kg	ND	0.8	ND	0.16	ND	0.16	ND	0.37	ND	3.4	ND	0.76	ND	0.34
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	4	0.53	0.72	0.11	0.27	0.11	0.33	0.24	2.3	2.2	ND	0.51	0.5	0.23
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
Benzene	71-43-2	89	44	0.06	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
Toluene	108-88-3	1000	500	0.7	mg/kg	ND	0.8	0.11J	0.16	0.046J	0.16	ND	0.37	ND	3.4	ND	0.76	ND	0.34
Ethylbenzene	100-41-4	780	390	1	mg/kg	ND	0.53	0.032J	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	ND	1.1	ND	0.21	ND	0.22	0.18J	0.49	ND	4.5	ND	1	ND	0.46
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	ND	0.53	ND	0.11	ND	0.11	ND	0.24	ND	2.2	ND	0.51	ND	0.23
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	ND	0.8	ND	0.16	ND	0.16	ND	0.37	ND	3.4	ND	0.76	ND	0.34
Trichloroethene	79-01-6	400	200	0.47	mg/kg	74	0.53	16	0.11	7.7	0.11	20	0.24	160	2.2	37	0.51	26	0.23
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	ND	1.1	ND	0.21	ND	0.22	ND	0.49	ND	4.5	ND	1	ND	0.46
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	12	0.53	0.36	0.11	0.26	0.11	7.5	0.24	17	2.2	10	0.51	3.9	0.23
Acetone	67-64-1	1000	500	0.05	mg/kg	ND	5.3	ND	1.1	ND	1.1	0.8J	2.4	7J	22	1.6J	5.1	0.75J	2.3
2-Butanone	78-93-3	1000	500	0.12	mg/kg	ND	5.3	ND	1.1	ND	1.1	ND	2.4	ND	22	ND	5.1	ND	2.3
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
Naphthalene	91-20-3	1000	500	12	mg/kg	ND	2.6	0.099J	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	ND	2.6	ND	0.53	ND	0.54	ND	1.2	ND	11	ND	2.5	ND	1.1
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	ND	53	ND	11	ND	11	ND	24	ND	220	ND	51	ND	23

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:	**12W-SB-SWS1-A**		**12W-SB-SWS3-A**		**11E-SB-B-A**		**11E-SB-SWS0-A**		**11E-SB-SWS2-A**		**11W-SB-B-A**		**11W-SB-SWS0-A**
					SAMPLING DATE:	**8/15/2013**		**8/15/2013**		**8/19/2013**		**8/19/2013**		**8/19/2013**		**8/20/2013**		**8/20/2013**
					SAMPLE TYPE:	**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**		**Composite**
					SAMPLE DEPTH (ft.):	**0.5-4**		**0.5-4**		**4**		**0.5-4**		**0.5-4**		**4**		**0.5-4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**	**RL**	**Result**
Volatile Organics by 8260/5035 - Westborough Lab																		
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	0.21J	0.58	0.21J	0.54	ND	1.1	ND	21	ND	28	ND	0.58	ND
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	ND	0.087	ND	0.08	ND	0.16	ND	3.1	ND	4.1	ND	0.087	ND
Chloroform	67-66-3	700	350	0.37	mg/kg	ND	0.087	ND	0.08	ND	0.16	ND	3.1	ND	4.1	ND	0.087	ND
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.41	0.058	0.5	0.054	0.62	0.11	3.3	2.1	12	2.8	0.13	0.058	0.18
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
Benzene	71-43-2	89	44	0.06	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
Toluene	108-88-3	1000	500	0.7	mg/kg	ND	0.087	ND	0.08	ND	0.16	ND	3.1	ND	4.1	ND	0.087	ND
Ethylbenzene	100-41-4	780	390	1	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	ND	0.12	ND	0.11	ND	0.22	ND	4.2	ND	5.5	ND	0.12	ND
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	ND	0.058	ND	0.054	ND	0.11	ND	2.1	ND	2.8	ND	0.058	ND
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	0.052J	0.087	ND	0.08	ND	0.16	ND	3.1	ND	4.1	ND	0.087	ND
Trichloroethene	79-01-6	400	200	0.47	mg/kg	8.2	0.058	3.8	0.054	11	0.11	140	2.1	230	2.8	2.6	0.058	2.7
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	ND	0.12	ND	0.11	ND	0.22	ND	4.2	ND	5.5	ND	0.12	ND
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	4.7	0.058	1.3	0.054	0.28	0.11	4.5	2.1	9.9	2.8	ND	0.058	ND
Acetone	67-64-1	1000	500	0.05	mg/kg	0.2J	0.58	ND	0.54	ND	1.1	ND	21	ND	28	ND	0.58	ND
2-Butanone	78-93-3	1000	500	0.12	mg/kg	ND	0.58	ND	0.54	ND	1.1	ND	21	ND	28	ND	0.58	ND
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
Naphthalene	91-20-3	1000	500	12	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	ND	0.29	ND	0.27	ND	0.55	ND	10	ND	14	ND	0.29	ND
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	ND	5.8	ND	5.4	ND	11	ND	210	ND	280	ND	5.8	ND

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 1: Post-Excavation Soil Analyses Results (2013)

					LOCATION:		**11W-SB-SWS2-A**	
					SAMPLING DATE:		**8/20/2013**	
					SAMPLE TYPE:		**Composite**	
					SAMPLE DEPTH (ft.):		**0.5-4**	
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**RL**	**Result**	**RL**
Volatile Organics by 8260/5035 - Westborough Lab								
Methylene chloride	75-09-2	1000	500	0.05	mg/kg	0.5	ND	0.57
1,1-Dichloroethane	75-34-3	480	240	0.27	mg/kg	0.074	ND	0.086
Chloroform	67-66-3	700	350	0.37	mg/kg	0.074	ND	0.086
Carbon tetrachloride	56-23-5	44	22	0.76	mg/kg	0.05	ND	0.057
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.05	0.39	0.057
Chlorobenzene	108-90-7	1000	500	1.1	mg/kg	0.05	ND	0.057
1,2-Dichloroethane	107-06-2	60	30	0.02	mg/kg	0.05	ND	0.057
1,1,1-Trichloroethane	71-55-6	1000	500	0.68	mg/kg	0.05	ND	0.057
Benzene	71-43-2	89	44	0.06	mg/kg	0.05	ND	0.057
Toluene	108-88-3	1000	500	0.7	mg/kg	0.074	ND	0.086
Ethylbenzene	100-41-4	780	390	1	mg/kg	0.05	ND	0.057
Vinyl chloride	75-01-4	27	13	0.02	mg/kg	0.099	ND	0.11
1,1-Dichloroethene	75-35-4	1000	500	0.33	mg/kg	0.05	ND	0.057
trans-1,2-Dichloroethene	156-60-5	1000	500	0.19	mg/kg	0.074	ND	0.086
Trichloroethene	79-01-6	400	200	0.47	mg/kg	0.05	6.3	0.057
1,2-Dichlorobenzene	95-50-1	1000	500	1.1	mg/kg	0.25	ND	0.28
1,3-Dichlorobenzene	541-73-1	560	280	2.4	mg/kg	0.25	ND	0.28
1,4-Dichlorobenzene	106-46-7	250	130	1.8	mg/kg	0.25	ND	0.28
Methyl tert butyl ether	1634-04-4	1000	500	0.93	mg/kg	0.099	ND	0.11
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.05	0.16	0.057
Acetone	67-64-1	1000	500	0.05	mg/kg	0.5	ND	0.57
2-Butanone	78-93-3	1000	500	0.12	mg/kg	0.5	ND	0.57
tert-Butylbenzene	98-06-6	1000	500	5.9	mg/kg	0.25	ND	0.28
Naphthalene	91-20-3	1000	500	12	mg/kg	0.25	ND	0.28
1,3,5-Trimethylbenzene	108-67-8	380	190	8.4	mg/kg	0.25	ND	0.28
1,2,4-Trimethylbenzene	95-63-6	380	190	3.6	mg/kg	0.25	ND	0.28
1,4-Dioxane	123-91-1	250	130	0.1	mg/kg	5	ND	5.7

Notes:

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

RL exceeds **NY-UNRES**

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Result exceeds **NY-RESI**

Table 2: Summary of Remaining Soil Contamination Above Unrestricted Levels

					LOCATION:	**8E-SB-SW7-A**	**8E-SB-SWC-A**	**8E-SB-SWS9-A**	**8E-SB-B-A**	**9W-SB-SWS8-A**	**9W-SB-SWS0-A**	**9W-SB-B-A**	**8W-SB-SW7-A**	**8W-SB-SWC-A**	**8W-SB-SWS9-A**	**8W-SB-B-A**	**9E-SB-SWS8-A**	**9E-SB-SWS0-A**	**9E-SB-B-A**	**10W-SB-SWS-A**	**10W-SB-B-A**	**10E-SB-B-A**	**10E-SB-SWS-A**	**15E-SB-B-A**
					SAMPLING DATE:	**7/25/2013**	**7/25/2013**	**7/25/2013**	**7/25/2013**	**7/25/2013**	**7/25/2013**	**7/25/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/29/2013**	**7/30/2013**	**7/30/2013**	**8/1/2013**	**8/1/2013**	**8/2/2013**
					SAMPLE TYPE:	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**
					SAMPLE DEPTH (ft.):	**0.5-4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**4**	**4**	**0.5-4**	**4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.32	0.92	2.3	0.38	0.6	0.55	0.44	0.082	0.24	0.076	0.083	0.5	0.54	0.043J	0.17	0.25	0.25	0.91	0.16
Trichloroethene	79-01-6	400	200	0.47	mg/kg	16	79	220	27	30	42	26	2.3	5.8	3	1.8	55	31	2.1	3.9	9.8	15	85	9.5
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.085J	0.72	5	0.37	0.25J	0.55	0.3	ND	ND	ND	ND	0.95	0.34	ND	ND	0.15	0.24	1.8	0.34

Notes:

Volatile Organics by 8260/5035 - Westborough Lab

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Table 2: Summary of Remaining Soil Contamination Above Unrestricted Levels

					LOCATION:	**15E-SB-SW16-A**	**15E-SB-SWC-A**	**15E-SB-SWS-A**	**15W-SB-B-A**	**15W-SB-SW16-A**	**15W-SB-SWC-A**	**15W-SB-SWS-A**	**14E-SB-SWS5-A**	**14E-SB-SWS3-A**	**14E-SB-B-A**	**14W-SB-SWS5-A**	**14W-SB-SWS3-A**	**14W-SB-B-A**	**13E-SB-B-A**	**13E-SB-SWS-A**	**13W-SB-SWS-A**	**13W-SB-B-A**	**12E-SB-B-A**
					SAMPLING DATE:	**8/2/2013**	**8/2/2013**	**8/2/2013**	**8/5/2013**	**8/5/2013**	**8/5/2013**	**8/5/2013**	**8/7/2013**	**8/7/2013**	**8/7/2013**	**8/8/2013**	**8/8/2013**	**8/8/2013**	**8/8/2013**	**8/8/2013**	**8/12/2013**	**8/12/2013**	**8/14/2013**
					SAMPLE TYPE:	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**
					SAMPLE DEPTH (ft.):	**0.5-4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**0.5-4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**4**	**4**	**0.5-4**	**0.5-4**	**4**	**4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	0.054J	0.24	0.23J	0.18	0.38	0.18	0.28	0.56	0.59	0.24	0.43	0.51	0.43	0.072	4	0.72	0.27	0.33
Trichloroethene	79-01-6	400	200	0.47	mg/kg	3	22	32	6.4	14	4	9	44	44	9.5	14	13	13	2.1	74	16	7.7	20
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	0.06	0.74	2.4	0.17	0.41	0.035J	0.16	2.4	1.5	0.33	0.36	0.23	0.27	0.3	12	0.36	0.26	7.5

Notes:

Volatile Organics by 8260/5035 - Westborough Lab

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Table 2: Summary of Remaining Soil Contamination Above Unrestricted Levels

					LOCATION:	**12E-SB-SWS1-A**	**12E-SB-SWS3-A**	**12W-SB-B-A**	**12W-SB-SWS1-A**	**12W-SB-SWS3-A**	**11E-SB-B-A**	**11E-SB-SWS0-A**	**11E-SB-SWS2-A**	**11W-SB-B-A**	**11W-SB-SWS0-A**	**11W-SB-SWS2-A**
					SAMPLING DATE:	**8/14/2013**	**8/14/2013**	**8/15/2013**	**8/15/2013**	**8/15/2013**	**8/19/2013**	**8/19/2013**	**8/19/2013**	**8/20/2013**	**8/20/2013**	**8/20/2013**
					SAMPLE TYPE:	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**	**Composite**
					SAMPLE DEPTH (ft.):	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**	**4**	**0.5-4**	**0.5-4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	2.3	ND	0.5	0.41	0.5	0.62	3.3	12	0.13	0.18	0.39
Trichloroethene	79-01-6	400	200	0.47	mg/kg	160	37	26	8.2	3.8	11	140	230	2.6	2.7	6.3
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	17	10	3.9	4.7	1.3	0.28	4.5	9.9	ND	ND	0.16

Notes:

Volatile Organics by 8260/5035 - Westborough Lab

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Table 3: Summary of Remaining Soil Contamination Above Site-Specific Action Levels

					LOCATION:	**8E-SB-SWS9-A**	**11E-SB-SWS2-A**
					SAMPLING DATE:	**7/25/2013**	**8/19/2013**
					SAMPLE TYPE:	**Composite**	**Composite**
					SAMPLE DEPTH (ft.):	**0.5-4**	**0.5-4**
Contaminant	**CasNum**	**NY-RESI**	**NY-RESC**	**NY-UNRES**	**Units**	**Result**	**Result**
Tetrachloroethene	127-18-4	300	150	1.3	mg/kg	2.3	12
Trichloroethene	79-01-6	400	200	0.47	mg/kg	220	230
cis-1,2-Dichloroethene	156-59-2	1000	500	0.25	mg/kg	5	9.9

Notes:

Volatile Organics by 8260/5035 - Westborough Lab

ND = Not Detected

RL = Reporting Limit

NY-UNRES = New York Unrestricted Use Soil Cleanup Objectives 375-6.8(a)

NY-RESC = New York Restricted Commercial Use Soil Cleanup Objectives 375-6.8(b)

NY-RESI = New York Restricted Industrial Use Soil Cleanup Objectives 375-6.8(b)

Result exceeds **NY-UNRES**

Result exceeds **NY-RESC**

Appendix A

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, 101-61 99 ST, QUEENS, NY
SOIL EXCAVATION, SOIL VAPOR EXTRACTION AND SUB-SLAB DEPRESSURIZATION REMEDIAL DESIGN

NOTE:

To the best of my knowledge, belief and professional judgement, all work under this application is exempt from the NYCECC. The scope of work is entirely in an unconditioned low-energy space.

PREPARED BY:

AECOM
250 APOLLO DRIVE
CHELMSFORD, MA 01824
www.aecom.com

PROJ. NUMBER: 60221764

Block: 9106
Lot: 70
Zoning Map: 18A
Zoning District: R5
Construction Classification: NON-FIREPROOF STRUCTURES

ISSUED FOR ISMP

SHEET	SHEET TITLE	REVISION	DATE
T-001.00	TITLE SHEET	REV 1	09/28/15
M-001.00	AS-BUILT SOIL VAPOR EXTRACTION SYSTEM LAYOUT	REV 1	09/28/15
M-002.00	AS-BUILT SUB-SLAB DEPRESSION SYSTEM LAYOUT	REV 1	09/28/15
M-003.00	AS-BUILT PIPING DETAILS	REV 1	09/28/15
M-004.00	PROPOSED BAY 8A LAYOUT	REV 1	09/28/15
M-005.00	PROPOSED SVE & SSD SYSTEM PIPE MANIFOLD DETAILS	REV 1	09/28/15
M-006.00	PROPOSED INTERIOR AND EXTERIOR PIPING DETAILS	REV 1	09/28/15
M-007.00	SVE SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM	REV 1	09/28/15
M-008.00	SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM	REV 1	09/28/15
M-009.00	PROCESS AND INSTRUMENTATION DIAGRAM LEGEND	REV 1	09/28/15

SHEET	SHEET TITLE	REVISION	DATE

NOTE:

Installation of Soil Vapor Extraction System and Sub-Slab Depression system and associated internal and external piping. Building reconstruction permitted separately. No change in use, egress, or occupancy.

TR1 INSPECTIONS:

a) Mechanical Systems

CURRENT DATE	09/28/15	DRAWING NUMBER	T-001.00	SHEET NUMBER	1 of 10	REVISION	1

NOTE:

1) MECHANICAL DRAWINGS SHALL NOT BE USED FOR STRUCTURAL, ARCHITECTURAL, UTILITY, OR OTHER REFERENCE EXCEPT FOR INSTALLATION OF PIPING OR EQUIPMENT ASSOCIATED WITH THE SVE AND SSDS SYSTEM.

2) BELOW GRADE PORTIONS OF THE SYSTEM WERE PREVIOUSLY INSTALLED.

3) PIPING AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK CITY MECHANICAL CODE.

4)CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND ENSURING THE COMPLETION OF ALL INSPECTIONS AS SPECIFIED IN SECTION 107 OF THE NYC MECHANICAL CODE.

5) SEE PROCESS DRAWINGS (M-007.00 THROUGH M-009.00) FOR DELINEATION OF VENDOR SUPPLIED EQUIPMENT VS. EXISTING COMPONENTS AND THAT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.

LEGEND

- TRAFFIC FLOW
- EXISTING UTILITY POLE
- AS-BUILT SVE WELL
- AS-BUILT DUAL-LEVEL SVE WELL
- AS-BUILT MONITORING POINT
- AS-BUILT SUBGRADE SVE PIPING

10 0 20
SCALE IN FEET

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

AECOM
250 APOLLO DRIVE
CHELMSFORD, MA 01824
www.aecom.com

FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

AS-BUILT SOIL VAPOR EXTRACTION SYSTEM LAYOUT

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-001.00

SHEET NUMBER: 2 of 10

REVISION: 1

NOTE:

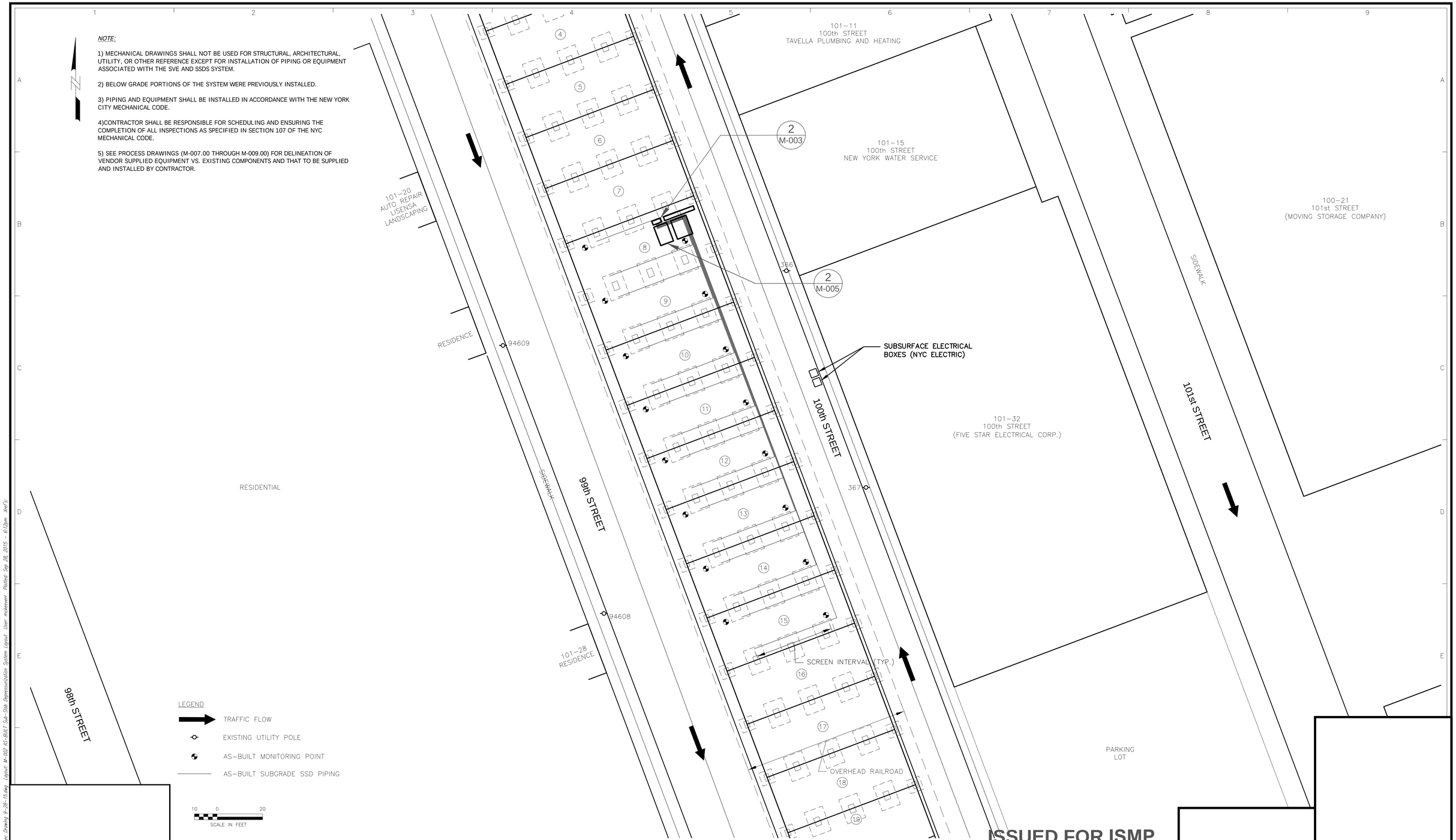
1) MECHANICAL DRAWINGS SHALL NOT BE USED FOR STRUCTURAL, ARCHITECTURAL, UTILITY, OR OTHER REFERENCE EXCEPT FOR INSTALLATION OF PIPING OR EQUIPMENT ASSOCIATED WITH THE SVE AND SSDS SYSTEM.

2) BELOW GRADE PORTIONS OF THE SYSTEM WERE PREVIOUSLY INSTALLED.

3) PIPING AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEW YORK CITY MECHANICAL CODE.

4)CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND ENSURING THE COMPLETION OF ALL INSPECTIONS AS SPECIFIED IN SECTION 107 OF THE NYC MECHANICAL CODE.

5) SEE PROCESS DRAWINGS (M-007.00 THROUGH M-009.00) FOR DELINEATION OF VENDOR SUPPLIED EQUIPMENT VS. EXISTING COMPONENTS AND THAT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.



ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

AS-BUILT SUB-SLAB DEPRESURIZATION SYSTEM LAYOUT

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-002.00

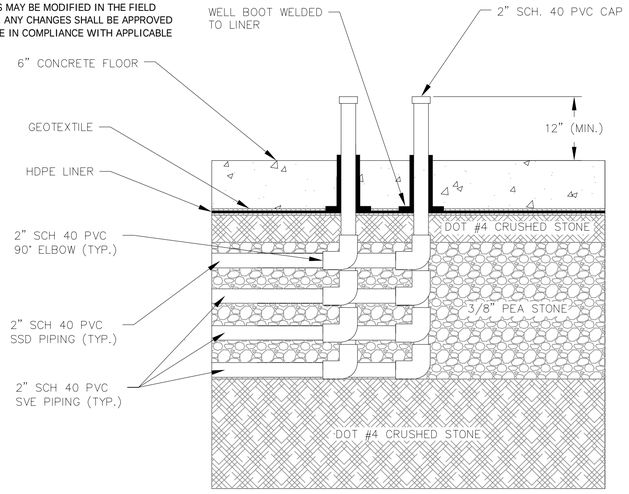
SHEET NUMBER: 3 of 10

REVISION: 1

NOTE:

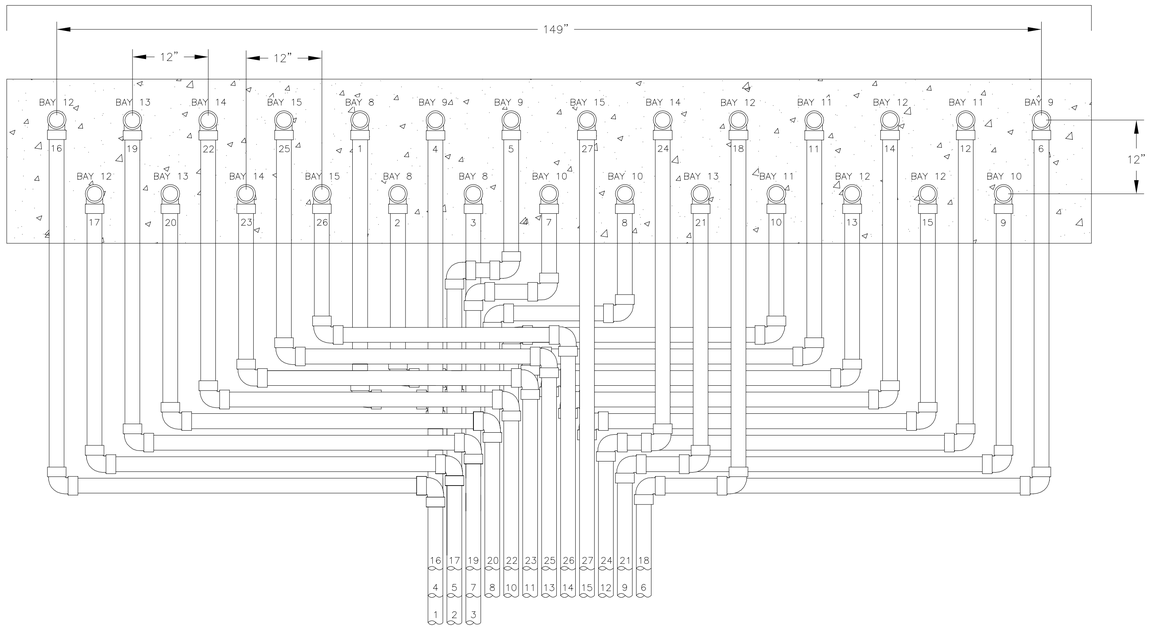
1) PVC MANIFOLD PROVIDED AS INTEGRAL UNIT WITH SYSTEM COMPONENTS BY VENDOR. PVC MEETS THE INTENT OF THE CODE FOR THIS APPLICATION SINCE THE ROOM IS ISOLATED, VENTILATED, AND NOT DESIGNED FOR CONTINUOUS OCCUPANCY.

2) ORIENTATION AND FITTINGS MAY BE MODIFIED IN THE FIELD FOR BEST FIT OF COMPONENTS. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER AND SHALL BE IN COMPLIANCE WITH APPLICABLE NYC CODES.



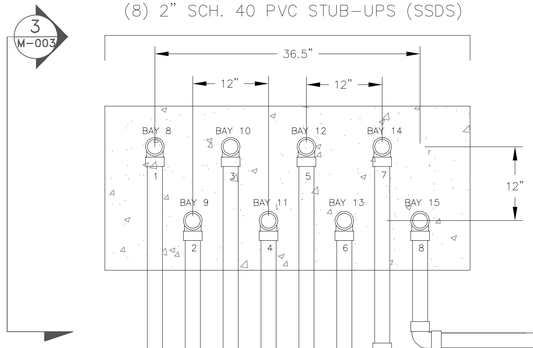
3 M-003 TYPICAL STUB-UP PROFILE
SCALE: NTS

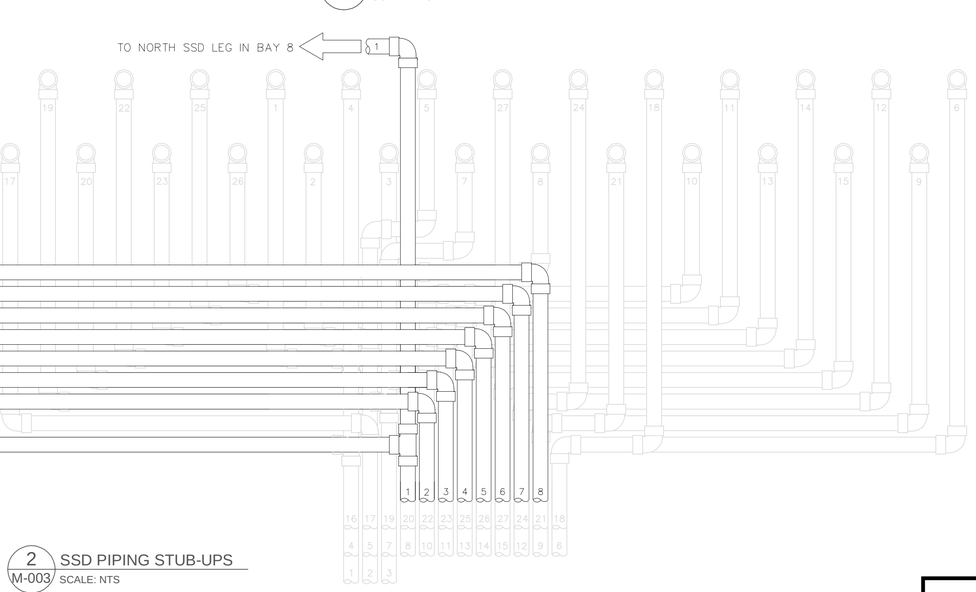
(27) 2" SCH. 40 PVC STUB-UPS (SVE)



1 M-003 SVE PIPING STUB-UPS
SCALE: NTS

(8) 2" SCH. 40 PVC STUB-UPS (SSDS)





2 M-003 SSD PIPING STUB-UPS
SCALE: NTS

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	08/09/13	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

AS-BUILT PIPING DETAILS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-003.00

SHEET NUMBER: 4 of 10

REVISION 1

NOTE:

1) PVC MANIFOLD PROVIDED AS INTEGRAL UNIT WITH SYSTEM COMPONENTS BY VENDOR. PVC MEETS THE INTENT OF THE CODE FOR THIS APPLICATION SINCE THE ROOM IS ISOLATED, VENTILATED, AND NOT DESIGNED FOR CONTINUOUS OCCUPANCY.

2) ORIENTATION AND FITTINGS MAY BE MODIFIED IN THE FIELD FOR BEST FIT OF COMPONENTS. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER AND SHALL BE IN COMPLIANCE WITH APPLICABLE NYC CODES.

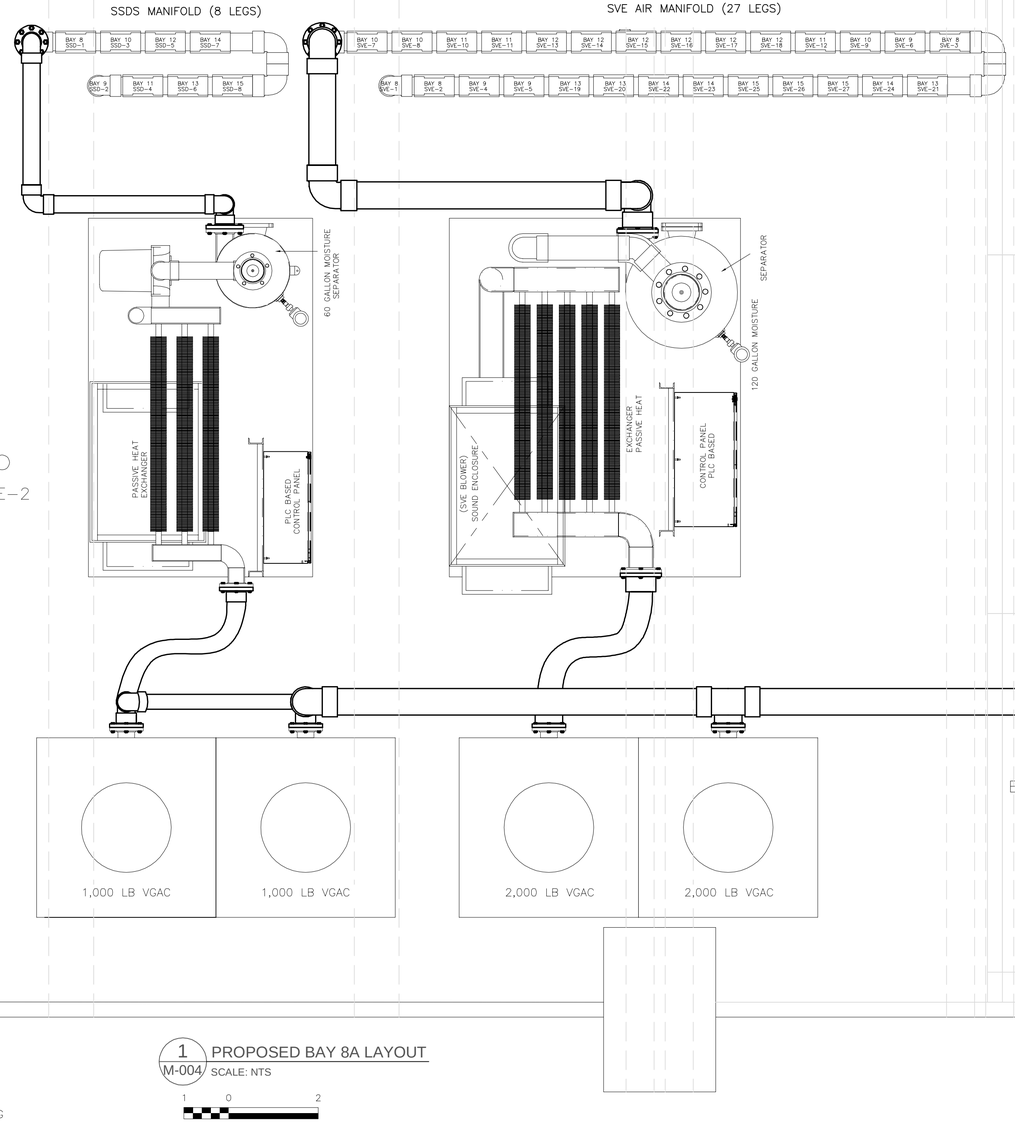
3) PIPING SHALL HAVE A MINIMUM SLOPE OF 1% TO GROUND THROUGH THE SYSTEM.

4) ALL INSTALLED ABOVE-GRADE PIPING SHALL BE LABELED FOR USE AS SSD-VENT OR SVE-VENT.

5) PIPE SUPPORTS SHALL BE PROVIDED AS NECESSARY WITH MAXIMUM HORIZONTAL SPANS OF 4 FEET FOR PVC PIPING AND 12 FEET FOR STEEL PIPING. VERTICAL SUPPORTS SHALL SPAN A MAXIMUM OF 10 FEET FOR BOTH PVC AND STEEL PIPING.

6) THE EFFLUENT STACK SHALL TERMINATE A MINIMUM OF 6 INCHES ABOVE THE ROOF LINE AND AT LEAST 10 FEET FROM ANY OPERABLE OPENINGS OR INTAKES.

7) SEE M-007.00 AND M-008.00 FOR MATERIAL DESIGNATIONS.



LEGEND

SUPPORT BEAMS

ABOVE-GRADE SYSTEM PIPING, FITTINGS, HOSE AND DUCTING TO BE SUPPLIED AND INSTALLED BY CONTRACTOR

1 M-004 PROPOSED BAY 8A LAYOUT
SCALE: NTS

1 0 2
SCALE IN FEET

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

PROPOSED BAY 8A LAYOUT

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-004.00

SHEET NUMBER: 5 of 10

REVISION 1

NOTE:

1) PVC MANIFOLD PROVIDED AS INTEGRAL UNIT WITH SYSTEM COMPONENTS BY VENDOR. PVC MEETS THE INTENT OF THE CODE FOR THIS APPLICATION SINCE THE ROOM IS ISOLATED, VENTILATED, AND NOT DESIGNED FOR CONTINUOUS OCCUPANCY.

2) ORIENTATION AND FITTINGS MAY BE MODIFIED IN THE FIELD FOR BEST FIT OF COMPONENTS. ANY CHANGES SHALL BE APPROVED BY THE ENGINEER AND SHALL BE IN COMPLIANCE WITH APPLICABLE NYC CODES.

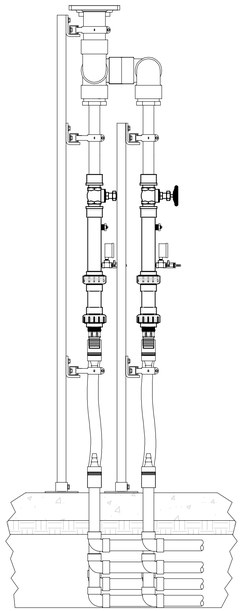
3) PIPING SHALL HAVE A MINIMUM SLOPE OF 1% TO GROUND THROUGH THE SYSTEM.

4) ALL INSTALLED ABOVE-GRADE PIPING SHALL BE LABELED FOR USE AS SSD-VENT OR SVE-VENT.

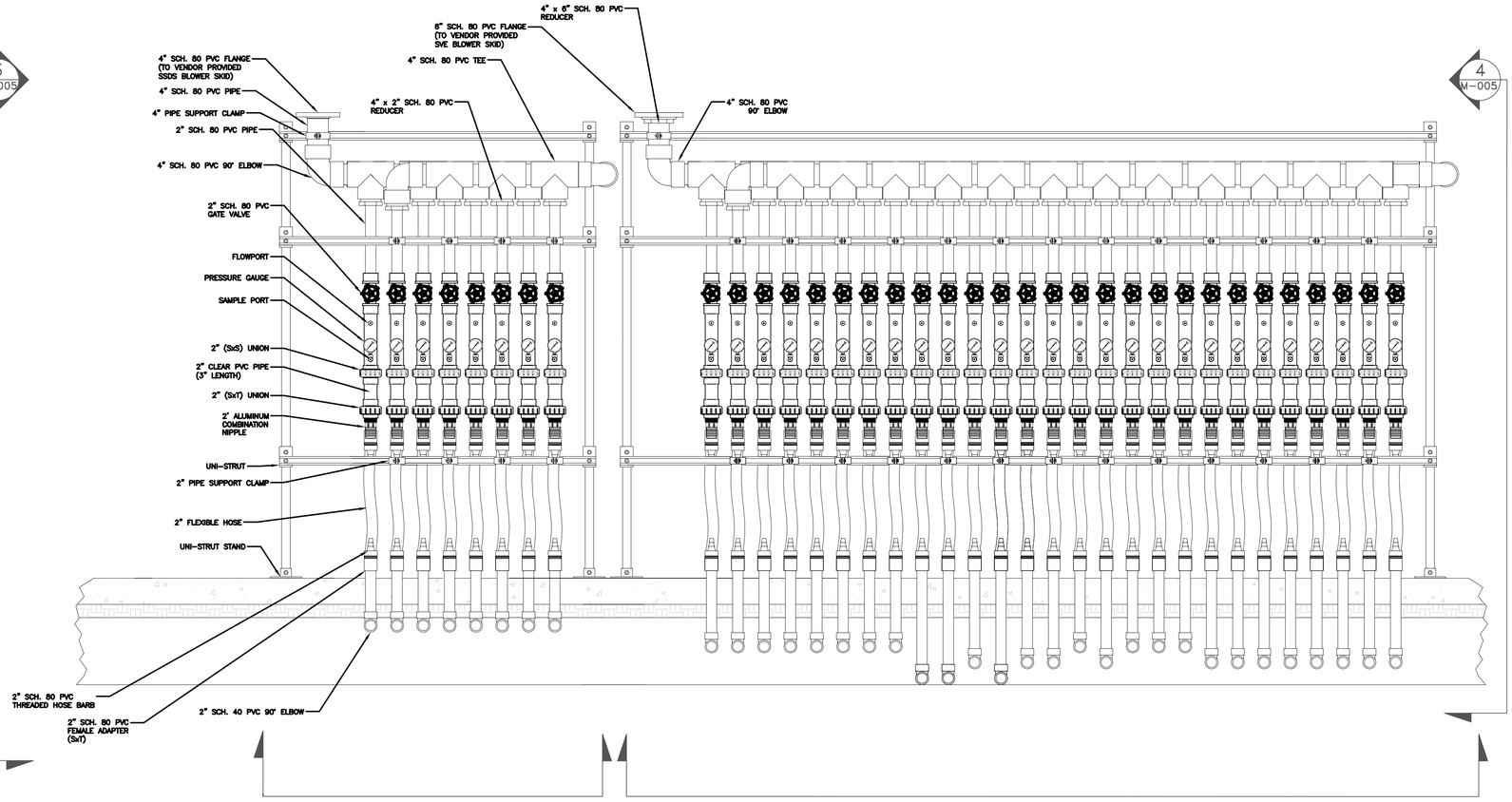
5) PIPE SUPPORTS SHALL BE PROVIDED AS NECESSARY WITH MAXIMUM HORIZONTAL SPANS OF 4 FEET FOR PVC PIPING AND 12 FEET FOR STEEL PIPING. VERTICAL SUPPORTS SHALL SPAN A MAXIMUM OF 10 FEET FOR BOTH PVC AND STEEL PIPING.

6) THE EFFLUENT STACK SHALL TERMINATE A MINIMUM OF 6 INCHES ABOVE THE ROOF LINE AND AT LEAST 10 FEET FROM ANY OPERABLE OPENINGS OR INTAKES.

7) SEE M-007.00 AND M-008.00 FOR MATERIAL DESIGNATIONS.

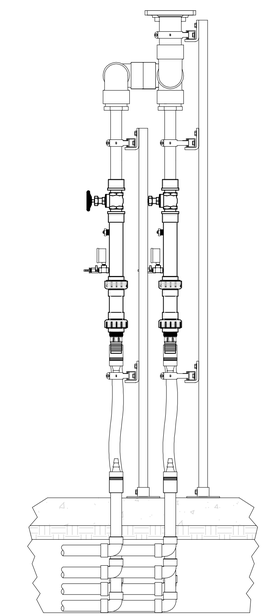


3 M-005 MANIFOLD PROFILE (SSD SIDE)
SCALE: NTS



2 M-005 PROPOSED SSD PIPING MANIFOLD
SCALE: NTS

1 M-005 PROPOSED SVE SYSTEM PIPING MANIFOLD
SCALE: NTS



4 M-005 MANIFOLD PROFILE (SVE SIDE)
SCALE: NTS

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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PROJ. NUMBER: 60221764

DATE: 09/28/15

PROPOSED SVE & SSD SYSTEM PIPE MANIFOLD DETAILS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-005.00

SHEET NUMBER: 6 of 10

REVISION 1

NOTE:

1) PVC MANIFOLD PROVIDED AS INTEGRAL UNIT WITH SYSTEM COMPONENTS BY VENDOR. PVC MEETS THE INTENT OF THE CODE FOR THIS APPLICATION SINCE THE ROOM IS ISOLATED, VENTILATED, AND NOT DESIGNED FOR CONTINUOUS OCCUPANCY.

2) ORIENTATION AND FITTINGS MAY BE MODIFIED IN THE FIELD FOR BEST FIT OF COMPONENTS. ANY CHANGES SHALL BE APPROVED BY THEN ENGINEER AND SHALL BE IN COMPLIANCE WITH APPLICABLE NYC CODES.

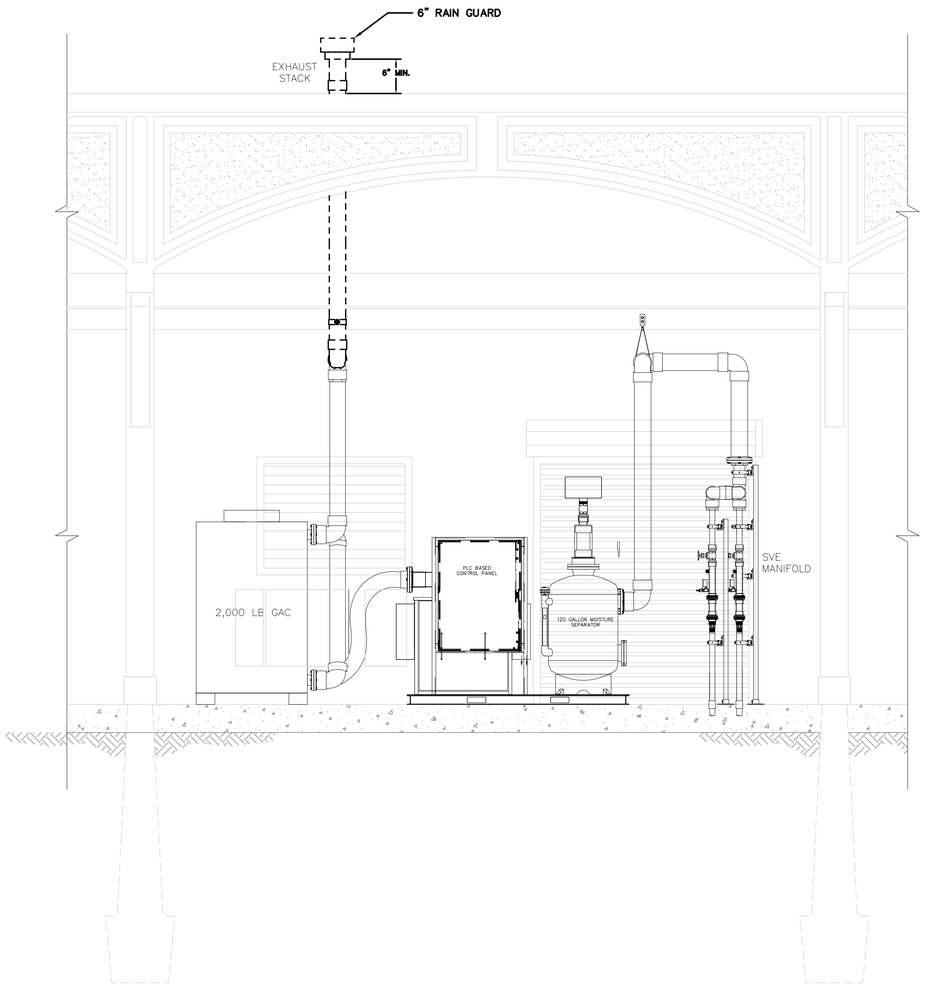
3) PIPING SHALL HAVE A MINIMUM SLOPE OF 1% TO GROUND THROUGH THE SYSTEM.

4) ALL INSTALLED ABOVE-GRADE PIPING SHALL BE LABELED FOR USE AS SSD-VENT OR SVE-VENT.

5) PIPE SUPPORTS SHALL BE PROVIDED AS NECESSARY WITH MAXIMUM HORIZONTAL SPANS OF 4 FEET FOR PVC PIPING AND 12 FEET FOR STEEL PIPING. VERTICAL SUPPORTS SHALL SPAN A MAXIMUM OF 10 FEET FOR BOTH PVC AND STEEL PIPING.

6) THE EFFLUENT STACK SHALL TERMINATE A MINIMUM OF 6 INCHES ABOVE THE ROOF LINE AND AT LEAST 10 FEET FROM ANY OPERABLE OPENINGS OR INTAKES.

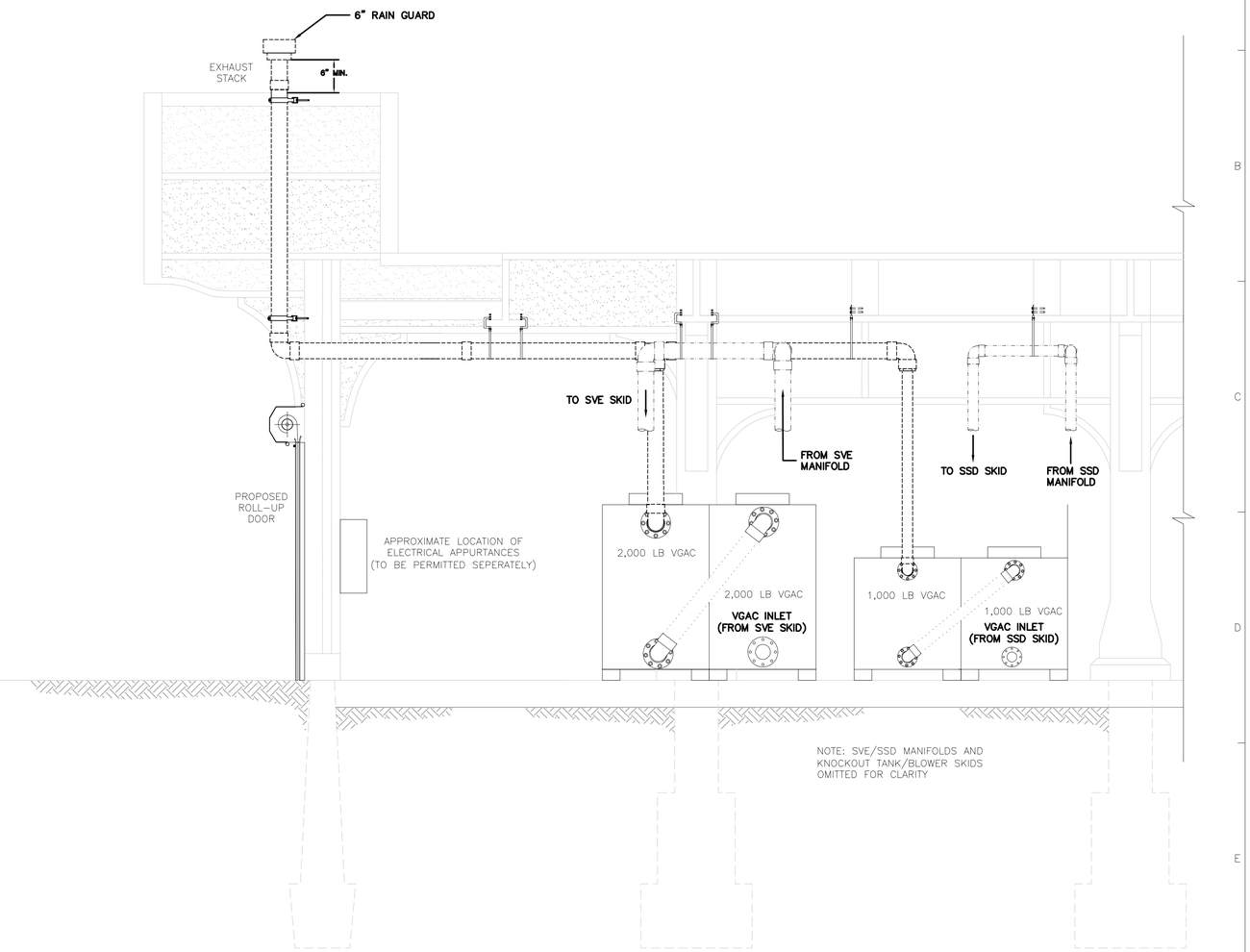
7) SEE M-007.00 AND M-008.00 FOR MATERIAL DESIGNATIONS.



1 M-006 BAY 8A SYSTEM PROFILE VIEW (FROM 100TH ST)
SCALE: NTS

LEGEND 1

- - - - EXTERIOR PIPING, FITTINGS AND SUPPORTS



2 M-006 BAY 8A SYSTEM PROFILE VIEW (FROM BAY 7)
SCALE: NTS

LEGEND 2

———— SCH. 40 STEEL
..... STAINLESS STEEL BRAIDED HOSE
— · — SCH. 80 PVC

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

PROPOSED INTERIOR AND EXTERIOR PIPING DETAILS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-006.00

SHEET NUMBER: 7 of 10

REVISION: 1

NOTE:

1) PROCESS DRAWINGS ARE PROVIDED IN ORDER TO DETAIL PIPING MATERIALS AND GENERAL EQUIPMENT.

2) SOME COMPONENTS MAY DIFFER FROM THOSE SHOWN AND SHALL BE APPROVED BY THE ENGINEER.

3) ALL COMPONENTS SHALL BE IN COMPLIANCE WILL APPLICABLE NYC CODES FOR THEIR INTENDED USE AS ENVIRONMENTAL REMEDIATION EQUIPMENT.

D-1
MOISTURE KNOCKOUT
120 GAL
CARBON STEEL

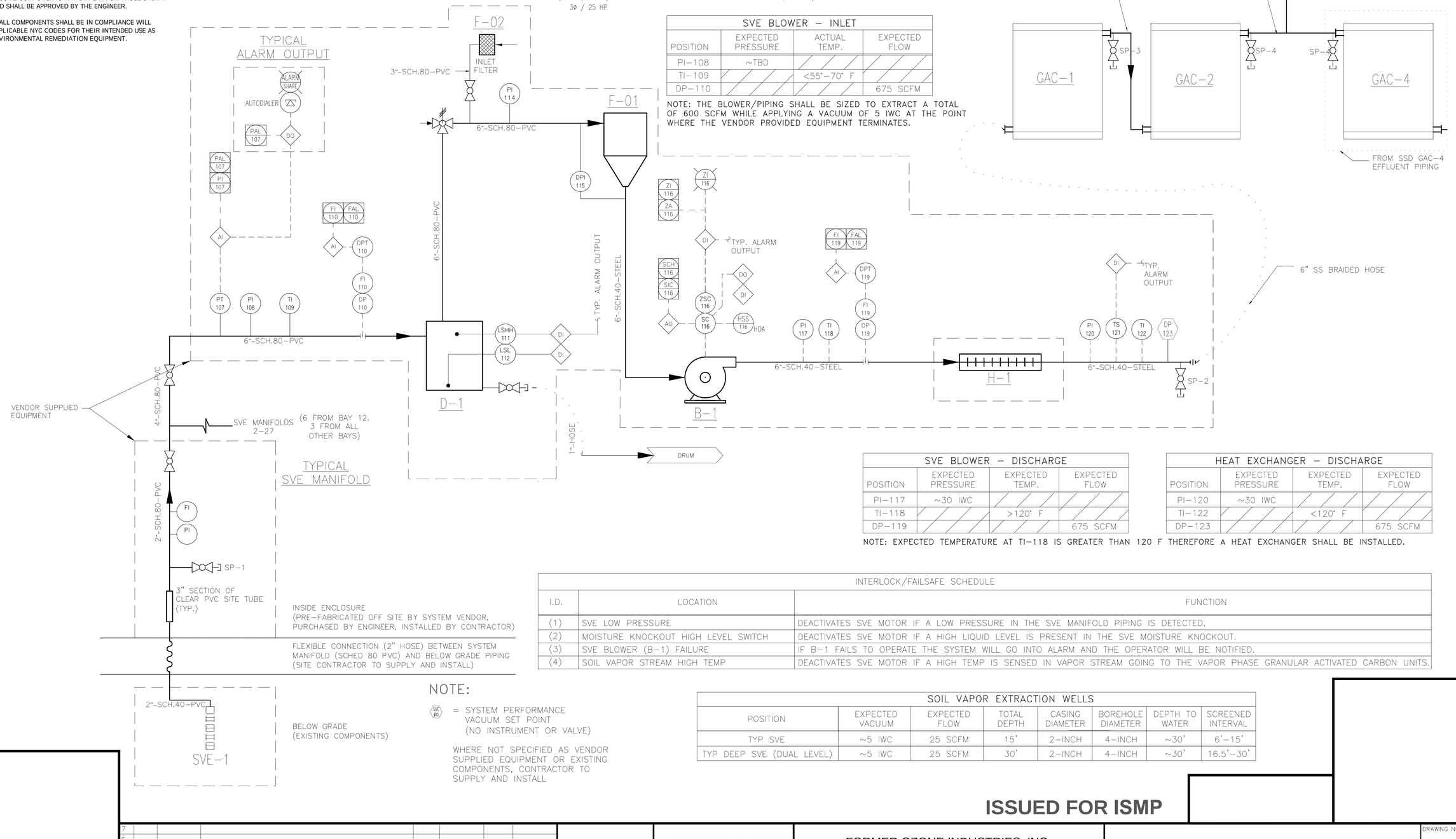
F-01
INLET FILTER
W/FILTER ELEMENT

F-02
IN-LINE AIR FILTER
W/FILTER ELEMENT

B-1
SVE BLOWER
675 SCFM @ 30 IWC-V
240/480V / TEFC / 60Hz
3ø / 25 HP

H-1
PASSIVE HEAT EXCHANGER
CARBON STEEL

GAC-1&2
VAPOR PHASE
GRANULAR ACTIVATED CARBON
2,000 LB. / CARBON STEEL



SVE BLOWER – INLET			
POSITION	EXPECTED PRESSURE	ACTUAL TEMP.	EXPECTED FLOW
PI-108	~TBD		
TI-109		<55°-70° F	
DP-110			675 SCFM

NOTE: THE BLOWER/PIPING SHALL BE SIZED TO EXTRACT A TOTAL OF 600 SCFM WHILE APPLYING A VACUUM OF 5 IWC AT THE POINT WHERE THE VENDOR PROVIDED EQUIPMENT TERMINATES.

SVE BLOWER – DISCHARGE			
POSITION	EXPECTED PRESSURE	EXPECTED TEMP.	EXPECTED FLOW
PI-117	~30 IWC		
TI-118		>120° F	
DP-119			675 SCFM

HEAT EXCHANGER – DISCHARGE			
POSITION	EXPECTED PRESSURE	EXPECTED TEMP.	EXPECTED FLOW
PI-120	~30 IWC		
TI-122		<120° F	
DP-123			675 SCFM

NOTE: EXPECTED TEMPERATURE AT TI-118 IS GREATER THAN 120 F THEREFORE A HEAT EXCHANGER SHALL BE INSTALLED.

INTERLOCK/FAILSAFE SCHEDULE		
I.D.	LOCATION	FUNCTION
(1)	SVE LOW PRESSURE	DEACTIVATES SVE MOTOR IF A LOW PRESSURE IN THE SVE MANIFOLD PIPING IS DETECTED.
(2)	MOISTURE KNOCKOUT HIGH LEVEL SWITCH	DEACTIVATES SVE MOTOR IF A HIGH LIQUID LEVEL IS PRESENT IN THE SVE MOISTURE KNOCKOUT.
(3)	SVE BLOWER (B-1) FAILURE	IF B-1 FAILS TO OPERATE THE SYSTEM WILL GO INTO ALARM AND THE OPERATOR WILL BE NOTIFIED.
(4)	SOIL VAPOR STREAM HIGH TEMP	DEACTIVATES SVE MOTOR IF A HIGH TEMP IS SENSED IN VAPOR STREAM GOING TO THE VAPOR PHASE GRANULAR ACTIVATED CARBON UNITS.

NOTE:

SVE/AE = SYSTEM PERFORMANCE VACUUM SET POINT (NO INSTRUMENT OR VALVE)

WHERE NOT SPECIFIED AS VENDOR SUPPLIED EQUIPMENT OR EXISTING COMPONENTS, CONTRACTOR TO SUPPLY AND INSTALL

SOIL VAPOR EXTRACTION WELLS							
POSITION	EXPECTED VACUUM	EXPECTED FLOW	TOTAL DEPTH	CASING DIAMETER	BOREHOLE DIAMETER	DEPTH TO WATER	SCREENED INTERVAL
TYP SVE	~5 IWC	25 SCFM	15'	2-INCH	4-INCH	~30'	6'-15'
TYP DEEP SVE (DUAL LEVEL)	~5 IWC	25 SCFM	30'	2-INCH	4-INCH	~30'	16.5'-30'

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
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6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	RWM	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

PROPOSED SOIL VAPOR EXTRACTION SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-007.00

SHEET NUMBER: 8 of 10

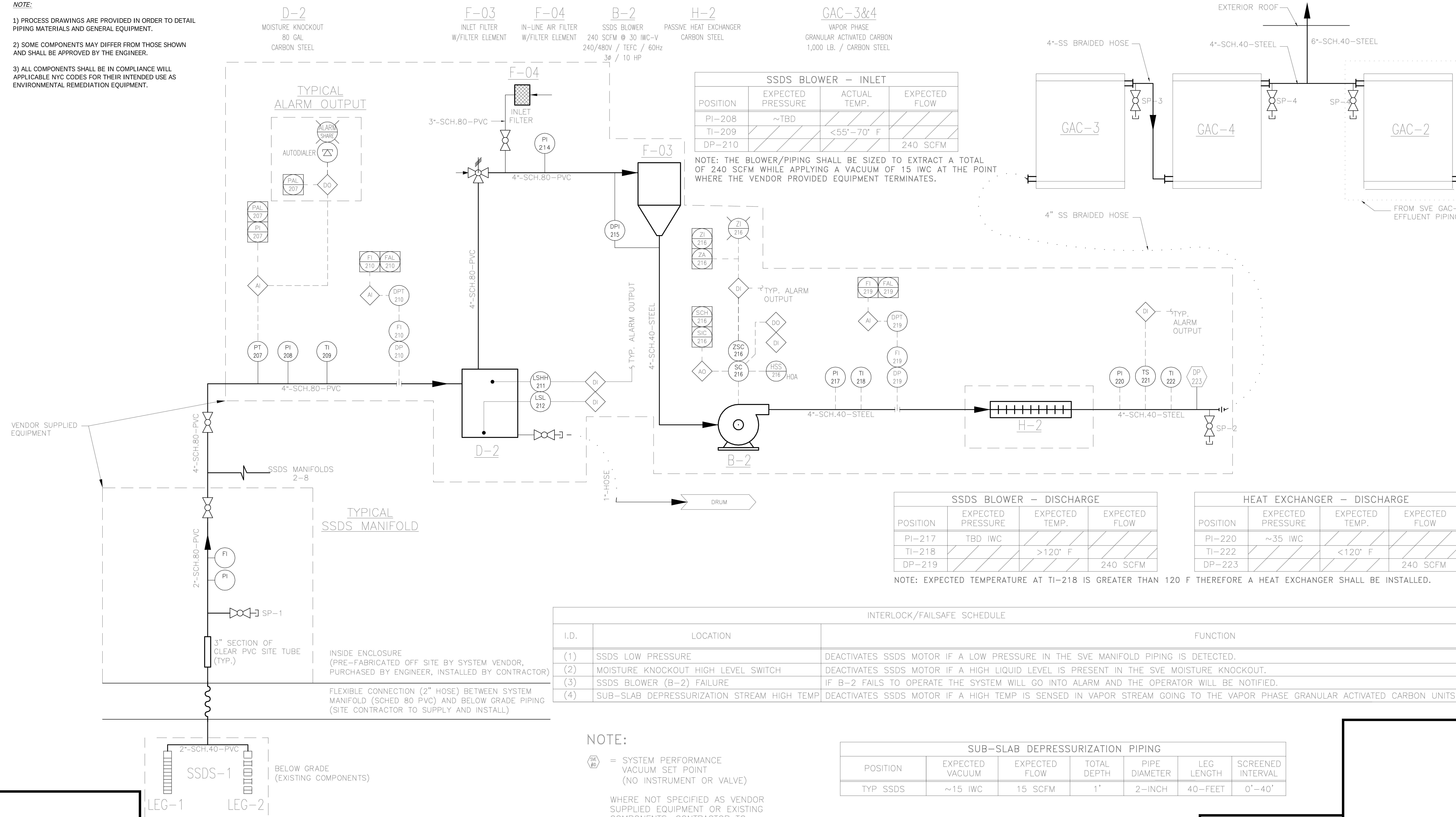
REVISION: 1

NOTE:

1) PROCESS DRAWINGS ARE PROVIDED IN ORDER TO DETAIL PIPING MATERIALS AND GENERAL EQUIPMENT.

2) SOME COMPONENTS MAY DIFFER FROM THOSE SHOWN AND SHALL BE APPROVED BY THE ENGINEER.

3) ALL COMPONENTS SHALL BE IN COMPLIANCE WILL APPLICABLE NYC CODES FOR THEIR INTENDED USE AS ENVIRONMENTAL REMEDIATION EQUIPMENT.



D-2
MOISTURE KNOCKOUT
80 GAL
CARBON STEEL
F-03
INLET FILTER
W/FILTER ELEMENT
F-04
IN-LINE AIR FILTER
W/FILTER ELEMENT
B-2
SSDS BLOWER
240 SCFM @ 30 IWC-V
240/480V / TEFC / 60Hz
3ø / 10 HP
H-2
PASSIVE HEAT EXCHANGER
CARBON STEEL
GAC-3&4
VAPOR PHASE
GRANULAR ACTIVATED CARBON
1,000 LB. / CARBON STEEL
TO ATMOSPHERE
EXTERIOR ROOF
4"-SS BRAIDED HOSE
4"-SCH.40-STEEL
6"-SCH.40-STEEL
GAC-3
GAC-4
GAC-2
SP-3
SP-4
FROM SVE GAC-2 EFFLUENT PIPING
4" SS BRAIDED HOSE
TYPICAL ALARM OUTPUT
AUTODIALER
INLET FILTER
3"-SCH.80-PVC
4"-SCH.80-PVC
4"-SCH.40-STEEL
TYP. ALARM OUTPUT
VENDOR SUPPLIED EQUIPMENT
SSDS MANIFOLDS 2-8
2"-SCH.80-PVC
SP-1
SP-2
3" SECTION OF CLEAR PVC SITE TUBE (TYP.)
TYPICAL SSDS MANIFOLD
INSIDE ENCLOSURE
(PRE-FABRICATED OFF SITE BY SYSTEM VENDOR, PURCHASED BY ENGINEER, INSTALLED BY CONTRACTOR)
FLEXIBLE CONNECTION (2" HOSE) BETWEEN SYSTEM MANIFOLD (SCHED 80 PVC) AND BELOW GRADE PIPING (SITE CONTRACTOR TO SUPPLY AND INSTALL)
1"-HOSE
DRUM
2"-SCH.40-PVC
SSDS-1
LEG-1
LEG-2
BELOW GRADE (EXISTING COMPONENTS)

SSDS BLOWER – INLET			
POSITION	EXPECTED PRESSURE	ACTUAL TEMP.	EXPECTED FLOW
PI-208	~TBD		
TI-209		<55°-70° F	
DP-210			240 SCFM

NOTE: THE BLOWER/PIPING SHALL BE SIZED TO EXTRACT A TOTAL OF 240 SCFM WHILE APPLYING A VACUUM OF 15 IWC AT THE POINT WHERE THE VENDOR PROVIDED EQUIPMENT TERMINATES.

SSDS BLOWER – DISCHARGE			
POSITION	EXPECTED PRESSURE	EXPECTED TEMP.	EXPECTED FLOW
PI-217	TBD IWC		
TI-218		>120° F	
DP-219			240 SCFM

HEAT EXCHANGER – DISCHARGE			
POSITION	EXPECTED PRESSURE	EXPECTED TEMP.	EXPECTED FLOW
PI-220	~35 IWC		
TI-222		<120° F	
DP-223			240 SCFM

NOTE: EXPECTED TEMPERATURE AT TI-218 IS GREATER THAN 120 F THEREFORE A HEAT EXCHANGER SHALL BE INSTALLED.

INTERLOCK/FAILSAFE SCHEDULE		
I.D.	LOCATION	FUNCTION
(1)	SSDS LOW PRESSURE	DEACTIVATES SSDS MOTOR IF A LOW PRESSURE IN THE SVE MANIFOLD PIPING IS DETECTED.
(2)	MOISTURE KNOCKOUT HIGH LEVEL SWITCH	DEACTIVATES SSDS MOTOR IF A HIGH LIQUID LEVEL IS PRESENT IN THE SVE MOISTURE KNOCKOUT.
(3)	SSDS BLOWER (B-2) FAILURE	IF B-2 FAILS TO OPERATE THE SYSTEM WILL GO INTO ALARM AND THE OPERATOR WILL BE NOTIFIED.
(4)	SUB-SLAB DEPRESSURIZATION STREAM HIGH TEMP	DEACTIVATES SSDS MOTOR IF A HIGH TEMP IS SENSED IN VAPOR STREAM GOING TO THE VAPOR PHASE GRANULAR ACTIVATED CARBON UNITS.

NOTE:

= SYSTEM PERFORMANCE VACUUM SET POINT (NO INSTRUMENT OR VALVE)

WHERE NOT SPECIFIED AS VENDOR SUPPLIED EQUIPMENT OR EXISTING COMPONENTS, CONTRACTOR TO SUPPLY AND INSTALL

SUB-SLAB DEPRESSURIZATION PIPING						
POSITION	EXPECTED VACUUM	EXPECTED FLOW	TOTAL DEPTH	PIPE DIAMETER	LEG LENGTH	SCREENED INTERVAL
TYP SSDS	~15 IWC	15 SCFM	1'	2-INCH	40-FEET	0'-40'

ISSUED FOR ISMP

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	RWM	09/28/15	ISSUED FOR CONSTRUCTION	RM	09/28/15	SAC	09/28/15
0	MRP	06/10/15	ISSUED FOR BID	RM	06/10/15	SAC	06/10/15

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OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764 DATE: 09/28/15

PROPOSED SUB-SLAB DEPRESURIZATION SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-008.00

SHEET NUMBER: 9 of 10

REVISION 1

INSTRUMENT LEGEND

First-Letter	Initiating or Measured Variable *2	Primary Element	Transmitters: Indicator	Transmitters: Blind	Readout Devices: Recorder	Readout Devices: Indicator	Readout Devices: Integrating Indicator	Controllers: Recorder	Controllers: Indicator	Controllers: Blind	Alarm Devices: HIGH	Alarm Devices: LOW	Alarm Devices: HIGH & LOW	Control Valve	Self Actuated Control Valve	Switch
A	Analysis (*3)	AE	AIT	AT	AR	AI		ARC	AIC	AC	AAH	AAL	AAHL			AS
B	Burner/Combustion	BE	BIT	BT	BR	BI		BRC	BIC	BC	BAH	BAL	BAHL			BS
C	User's Choice															
D	User's Choise															
E	Voltage	EE	EIT	ET	ER	EI		ERC	EIC	EC	EAH	EAL	EAHL			ES
F	Flow Rate	FE	FIT	FT	FR	FI	FQI	FRC	FIC	FC	FAH	FAL	FAHL	FV	FCV	FS
G	User's Choice															
H	Hand								HIC	HC			HA	HV		HS
I	Current	IE	IIT	IT	IR	II	IQI	IRC	IIC		IAH	IAL	IAHL			IS
J	Power	JE	JIT	JT	JR	JI	JQI	JRC	JIC		JAH	JAL	JAHL			JS
K	Time	KE	KIT	KT	KR	KI	KQI	KRC	KIC	KC	KAH	KAL	KAHL		KCV	KS
L	Level	LE	LIT	LT	LR	LI		LRC	LIC	LC	LAH	LAL	LAHL	LV	LCV	LS
M	TORQUE	ME	MI	MT	MR	MI		MRC	MIC	MC	MAH	MAL	MAHL			
N	User's Choice															
O	User's Choice															
P	Pressure or Vacuum	PE	PIT	PT	PR	PI		PRC	PIC	PC	PAH	PAL	PAHL	PV	PCV	PS
Q	Quantity or Event	QE	QIT	QT	QR	QI	QQI	QRC	QIC		QAH	QAL	QAHL			QS
R	Radiation	RE	RIT	RT	RR	RI		RRC	RIC	RC	RAH	RAL	RAHL			RS
S	Speed or Frequency	SE	SIT	ST	SR	SI	SQI	SRC	SIC	SC	SAH	SAL	SSHL		SCV	SS
T	Temperature	TE	TIT	TT	TR	TI		TRC	TIC	TC	TAH	TAL	TAHL	TV	TCV	TS
U	Multivariable				UR	UI										
V	Vibration/Mach. Anal	VE	VIT	VT	VRC	VI					VAH	VAL	VAHL			VS
W	Weight or Force	WE	WIT	WT	WR	WI	WQI	WRC	WIC	WC	WAH	WAL	WAHL		WCV	WS
X	Unclassified															
Y	Event State Presence	YE		YT	YR	YI			YIC	YC	YAH	YAL		YZ		YS
Z	Position or Dimension	ZE	ZIT	ZT	ZR	ZI		ZRC	ZIC	ZC	ZAH	ZAL	ZAHL		ZCV	ZS

SPECIAL NOTES:

1. Process equipment symbols may vary to show a better resemblance to equipment being used.
2. To simplify routing of process flow lines, some pieces of equipment may appear in more than one place on the flow diagram. Equipment so duplicated will be indicated by dashed lines.

*NOTES:

* NOTES:
1. The instrument legend is based on ISA STANDARD S5.1–1984

2. Any "First Letter" may be modified by the following letters,

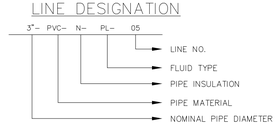
D=	Differential	PD=	Pressure Differential
J=	Scan	TJR=	Scanning Temperature Recorder
Q=	Integrate or Totalize	FQI=	Flow Integrating Indicator
A=	Auto Mode	FO=	Flow Restriction Orifice
FF=	Flow Ratio	FFC=	Flow Ratio Controller
SS=	Speed Ratio	SSC=	Speed Ratio Controller
LL=	Level Ratio		

3. The letter "A" is to be used for all analysis variables. The following terms are placed outside the instrument circle of a loop to denote the specific variable.

CO	Carbon Monoxide	H2 S	Hydrogen Sulfide
CO_2	Carbon Dioxide	O_2	Gaseous Oxygen
Comb	Combustible	pH	pH
OP	Opacity	Smoke	Smoke Density
		FID	Flame Ionization Detector

TAG CONSTRUCTION

LINE DESIGNATION



MATERIAL
- CS: CARBON STEEL
- SS: STAINLESS STEEL
- PVC : Rigid Poly–Vinyl –Chloride
- ABS : Acrylonitrile Butadiene Styrene

INSULATION TYPE
- N: None
- I: Insulation Hot
- C: Insulation Cold
- T: Steam Tracing

PIPE RATING
- RF: Raised Face Flange
- FF: Flat Face Flange
- T: Threaded

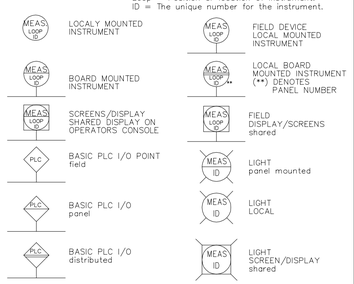
FLUID TYPE
- PW: Potable Water
- PL: Process Liquid
- S: Sludge
- PG: Process Gas
- A: Compressed Air
- IA: Instrument Air
- NG: Natural Gas
- C: Chemical

ABBREVIATIONS

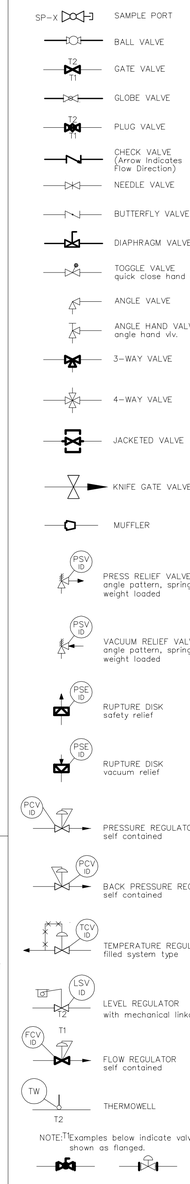
CSO	Carr Seal Open	IAS	Iinstrument Air Supply
CSC	Carr Seal Closed	Iac	Insulation Acoustic
BF	Blind Flange	Ic	Insulation Cold
CO	Chain Operated	Ih	Insulation Hot
CW	Cooling Water	Is	Insulation Safety
CS	Carbon Steel	LC	Locked Closed
DE	De–Energize	LO	Locked Opened
(F)	Furnish	L.Pt	Low Point
FC	Fail Closed	NC	Normally Closed
FI	Fail Indeterminate	NDE	Normally De–Energized
FL	Fail Locked	NE	Normally Energized
FO	Fail Open	RW	Refrigerated Water
FP	Full Port	SO	Steam Out
FV	Full Vacuum	SP	Set Point
HOA	Hand–Off–Auto	SS	Stainless Steel
H.Pt	High Point	VB	Vortex Breaker
IAS	Instrument Air Supply		

INSTRUMENTATION SYMBOLS

INSTRUMENT TAGGING — Measurement = instrument name. Loop = Position or location of instrument. ID = The unique number for the instrument.

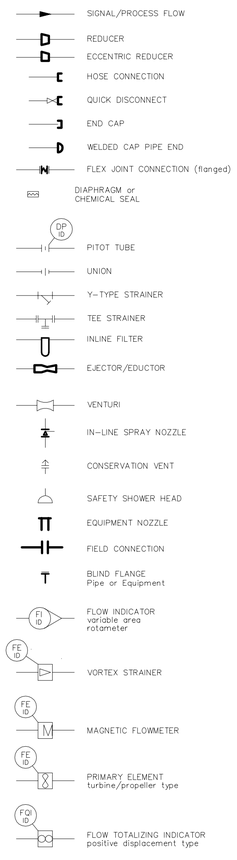


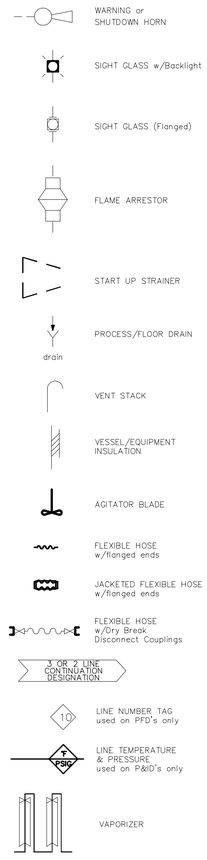
VALVE SYMBOLS

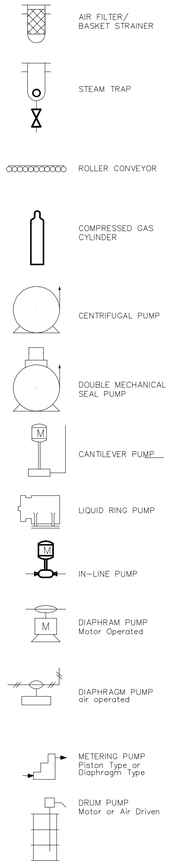


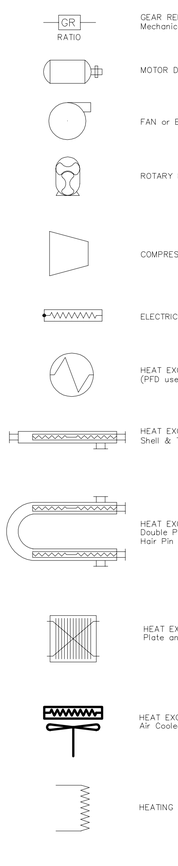
NOTE: Examples below indicate valve shown as flanged.

GRAPHIC SYMBOLS

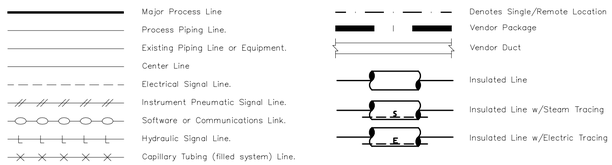




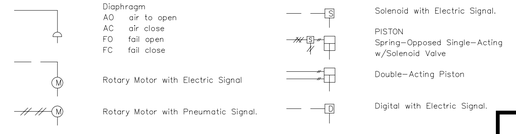




LINE SYMBOLS



VALVE ACTUATOR SYMBOLS



ISSUED FOR ISMP

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FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 09/28/15

SVE AND SSDS SYSTEM P&ID LEGEND

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: M-009.00

SHEET NUMBER: 10 of 10

REVISION 1

Appendix B

MAINTENANCE SCHEDULE A - SOIL VAPOR EXTRACTION SYSTEM

COMPONENT	TAG	QTY	MFT	MODEL	SERIAL NUMBER	ACTION	FREQUENCY			
							WEEKLY	MONTHLY	YEARLY	OTHER
BLOWER ENCLOSURE ACCESSORIES										
EXHAUST FAN, 12"", 1286 CFM @ 0" S.P., 115 VAC, 1-PHASE	EF-1	1	DAYTON	10D963	13987006	CLEAN FAN PROPELLER AND HOUSING				AS NEEDED
						INSPECT AND TIGHTEN SET-SCREWS		@3		
PROCESS EQUIPMENT & VALVES										
REGENERATIVE BLOWER (675 SCFM @ 30"W.C. MANIFOLD INLET)	B-1	1	FPZ	SCL K09-TS-25-3	F03927 2015	REPLACE MECHANICAL SEALS AND BEARINGS			@4	[OR] 25,000 WORKING HOURS
BLOWER MOTOR, 25 HP 208 VAC, 3-PHASE, TEFC			LAFERT	AM160LXA2	1126288					
MOISTURE SEPARATOR, TANK STYLE, 120 GALLONS	D-1	1	NES	120 GAL	N/A	CHECK SUMP FOR COLLECTED LIQUID/SOLIDS		X		
						DRAIN LIQUID AND/OR REMOVE SOLIDS				AS NEEDED
VACUUM RELIEF VALVE, 3" FNPT, ADJUSTABLE	VRV-01	1	FPZ	VRL8	N/A	FUNCTIONALITY CHECK		X		
INLINE FILTER, T-STYLE, 6"	F-01	1	SOLBERG	CT-275P-600 C	N/A	CLEAN		X		
						REPLACE		@3		[OR] AS NEEDED
DILUTION FILTER SILENCER, 3"	F-02	1	SOLBERG	FS-235P-300	N/A	CLEAN		X		
						REPLACE		@3		[OR] AS NEEDED
HEAT EXCHANGER, PASSIVE, PARALLEL STEEL FINNED	H-1	1	NES	CUSTOM	N/A	NO ROUTINE MAINTENANCE REQUIRED				
VAPOR PHASE CARBON VESSELS, 2000 LB MEDIA (BY OTHERS)	GAC-1, 2	2				REPLACE SPENT CARBON				AS NEEDED
PROCESS INSTRUMENTATION										
MS HIGH LEVEL SWITCH, 1-FLOAT STYLE, SS FLOATS, 0.6 SG	LSHH-111	1	FPI	L500-1POS	N/A	FUNCTIONALITY CHECK		X		
MANIFOLD VACUUM GAUGES, (-)100-0" WC VAC.	PI-SVE1/SVE27	27	DWYER	LPG4-D7722N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET VACUUM GAUGES, (-)100-0" WC VAC.	PI-108, 114	2	DWYER	LPG4-D7722N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET PRESSURE TRANSMITTER, 0-15 PSIA	PT-107	1	DWYER	626-00-GH-P1-E3-S1	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET LOW VACUUM SWITCH, 4 - 20 IWC	VSL-107	1	DWYER	1950-20-2F	N/A	ROTATE VENT DRAIN PLUG AND RETURN TO ORIGINAL POSITION TO DISLODGE DEPOSITS		@3		[OR] AS NEEDED
INLET FLOWSENSOR PITOT TUBE, 6"	DP-110	1	DWYER	DS-300-6	N/A	NO ROUTINE MAINTENANCE REQUIRED				
PITOT TUBE INDICATING TRANSMITTER, 0-10" WC DP	FI & DPT-110	1	DWYER	605-10	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLINE FILTER DIFFERENTIAL PRESSURE GAUGE, 0-10" WC DP	DPI-115	1	DWYER	2010	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE FLOWSENSOR PITOT TUBE, 6"	DP-119	1	DWYER	DS-300-6	N/A	NO ROUTINE MAINTENANCE REQUIRED				
PITOT TUBE INDICATING TRANSMITTER, 0-10" WC DP	FI & DPT-119	1	DWYER	605-10	N/A	NO ROUTINE MAINTENANCE REQUIRED				
TEMPERATURE INDICATORS, 0-250 DEGF	TI-109, 118, 123	3	AV	1NFY4	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE PRESSURE GAUGES, 0-100" WC PRESS.	PI-117, 121	2	DWYER	LPG4-D8622N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE TEMPERATURE SWITCH, 0-225 DEGF ADJUSTABLE	TS-122	1	UNITED ELECTRIC	B54-103	N/A	NO ROUTINE MAINTENANCE REQUIRED				

MAINTENANCE SCHEDULE B - SUB-SLAB DEPRESSURIZATION SYSTEM

COMPONENT	TAG	QTY	MFT	MODEL	SERIAL NUMBER	ACTION	FREQUENCY			
							WEEKLY	MONTHLY	YEARLY	OTHER
BLOWER ENCLOSURE ACCESSORIES										
EXHAUST FAN, 12"', 1286 CFM @ 0" S.P., 115 VAC, 1-PHASE	EF-2	1	DAYTON	10D963	13986999	CLEAN FAN PROPELLER AND HOUSING				AS NEEDED
						INSPECT AND TIGHTEN SET-SCREWS		@3		
PROCESS EQUIPMENT & VALVES										
REGENERATIVE BLOWER (240 SCFM @ 30"W.C. MANIFOLD INLET)	B-2	1	FPZ	SCL K08-MS-10-3	U13457 2015	REPLACE MECHANICAL SEALS AND BEARINGS			@4	[OR] 25,000 WORKING HOURS
BLOWER MOTOR, 10 HP 208 VAC, 3-PHASE, TEFC			LAFERT	AM112MCA2	1105673					
MOISTURE SEPARATOR, TANK STYLE, 80 GALLONS	D-2	1	NES	80 GAL	N/A	CHECK SUMP FOR COLLECTED LIQUID/SOLIDS		X		
						DRAIN LIQUID AND/OR REMOVE SOLIDS				AS NEEDED
VACUUM RELIEF VALVE, 2" FNPT, ADJUSTABLE	VRV-02	1	FPZ	VRL6	N/A	FUNCTIONALITY CHECK		X		
INLINE FILTER, T-STYLE, 4"	F-03	1	SOLBERG	CT-235P-400C	N/A	CLEAN		X		
						REPLACE		@3		[OR] AS NEEDED
DILUTION FILTER SILENCER, 3"	F-04	1	SOLBERG	FS-235P-300	N/A	CLEAN		X		
						REPLACE		@3		[OR] AS NEEDED
HEAT EXCHANGER, PASSIVE, PARALLEL STEEL FINNED	H-2	1	NES	CUSTOM	N/A	NO ROUTINE MAINTENANCE REQUIRED				
VAPOR PHASE CARBON VESSELS, 2000 LB MEDIA (BY OTHERS)	GAC-3, 4	2				REPLACE SPENT CARBON				AS NEEDED
PROCESS INSTRUMENTATION										
MS HIGH LEVEL SWITCH, 1-FLOAT STYLE, SS FLOATS, 0.6 SG	LSHH-211	1	FPI	L500-1POS	N/A	FUNCTIONALITY CHECK		X		
MANIFOLD VACUUM GAUGES, (-)100-0" WC VAC.	PI-SSD1 / SSD8	8	DWYER	LPG4-D7722N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET VACUUM GAUGES, (-)100-0" WC VAC.	PI-208, 214	2	DWYER	LPG4-D7722N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET PRESSURE TRANSMITTER, 0-15 PSIA	PT-207	1	DWYER	626-00-GH-P1-E3-S1	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLET LOW VACUUM SWITCH, 4 - 20 IWC	VSL-207	1	DWYER	1950-20-2F	N/A	ROTATE VENT DRAIN PLUG AND RETURN TO ORIGINAL POSITION TO DISLODGE DEPOSITS		@3		[OR] AS NEEDED
INLET FLOWSENSOR PITOT TUBE, 4"	DP-210	1	DWYER	DS-300-4	N/A	NO ROUTINE MAINTENANCE REQUIRED				
PITOT TUBE INDICATING TRANSMITTER, 0-10" WC DP	FI & DPT-210	1	DWYER	605-10	N/A	NO ROUTINE MAINTENANCE REQUIRED				
INLINE FILTER DIFFERENTIAL PRESSURE GAUGE, 0-10" WC DP	DPI-215	1	DWYER	2010	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE FLOWSENSOR PITOT TUBE, 4"	DP-219	1	DWYER	DS-300-4	N/A	NO ROUTINE MAINTENANCE REQUIRED				
PITOT TUBE INDICATING TRANSMITTER, 0-10" WC DP	FI & DPT-219	1	DWYER	605-10	N/A	NO ROUTINE MAINTENANCE REQUIRED				
TEMPERATURE INDICATORS, 0-250 DEGF	TI-209, 218, 223	3	AV	1NFY4	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE PRESSURE GAUGES, 0-100" WC PRESS.	PI-217, 221	2	DWYER	LPG4-D8622N	N/A	NO ROUTINE MAINTENANCE REQUIRED				
DISCHARGE TEMPERATURE SWITCH, 0-225 DEGF ADJUSTABLE	TS-222	1	UNITED ELECTRIC	B54-103	N/A	NO ROUTINE MAINTENANCE REQUIRED				

Appendix C

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978.905.2100 tel
978.905.2101 fax

Project: _____ **Date:** _____

Location: _____ **Time:** _____

Performed By: _____

Site Wide Assessment Form

Checklist	Yes/No/NA	Comments:
Wells:		
• **Monitoring wells are intact, road boxes secured with bolts/gaskets**		
• **Monitoring well caps are on and locked.**		
Any physical signs of concrete/asphalt cracking or liner damage		
Remediation Equipment Piping free of cracks or obvious leaks		
No obvious signs of indoor contaminant leaks, odor's/screen with PID in each bay.		
Site entrances and building doors are locked and secured.		
Building is intact. No signs of forced entry.		
Site equipment is locked away and secured (i.e., equipment, field instruments, etc.)		
Slip, trip and fall hazards have been removed and/or marked out and made visible.		
Proper signage throughout site (speed limit, licenses, project information, contacts etc.)		
Decontamination liquids and solids are properly contained.		
Waste material is properly contained and secured.		
Equipment decontamination pad and berms are functioning and are in good condition.		
No hazardous spills/debris observed outside of the exclusion zone.		
Personnel decontamination stations are functioning and present.		
Exclusion zone adequately delineated and construction fencing is intact.		
Site is clean of debris/garbage.		
Other Comments:		

Reviewed By:_____ Date:_____

O&M System Data Sheet

Client/Location: Ozone Park, NY **AECOM JOB # :** 60221764

SSDS System **Date:**

Status On Arrival: **Up** **Down** **Off** **Status On Departure:** **Up** **Down** **Off**

System Well	Valve Position (% Open)		Pressure ("H_2O)		Temp. (°F)		Flow Rate (ft^3/min or ft/min)		Δ Pressure ("H_2O)		PID 10.6 EV ppm or ppb	
ID	A	D	A	D	A	D	A	D	A	D	A	D
SSD-1												
SSD-2												
SSD-3												
SSD-4												
SSD-5												
SSD-6												
SSD-7												
SSD-8												
SSD-SP01												
SSD-SP02												
SSD-DIL												
SSD-SP03												

Well ID	Vac	DTW	VOC's

TECHNICIAN COMMENTS

Type of Check: Full Quick Other

TECHNICAL REVIEW Date:

By:

Motor ID	% Load A	% Load D	Blower Frequency (HZ) A	Blower Frequency (HZ) D	Hour Meter (hr's) A
SSD-B					@
					@
					@
Electric Meter Reading					@

Carbon	PID A	PID D
Midfluent		
Effluent		
Total Off Gas		

O&M System Data Sheet

Client/Location: Ozone Park, NY **AECOM JOB # :** 60221764

SOIL VAPOR EXTRACTION SYSTEM **Date:**

Status On Arrival: **Up** **Down** **Off** **Status On Departure:** **Up** **Down** **Off**

System Well ID	Valve Position (% Open)		Pressure ("H_2O)		Temp. (°F)		Flow Rate (ft^3/min or ft/min)		Δ Pressure ("H_2O)		PID 10.6 EV ppm or ppb		Well ID	Vac	DTW	VOC's
	A	D	A	D	A	D	A	D	A	D	A	D				
SVE-1																
SVE-2																
SVE-3																
SVE-4																
SVE-5																
SVE-6																
SVE-7																
SVE-8																
SVE-9																
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SVE-23																
SVE-24																
SVE-25																
SVE-26																
SVE-27																
SVE-SP01																
SVE-SP02																
SVE-DIL																
SVE-SP03																

TECHNICIAN COMMENTS

Type of Check: Full Quick Other

TECHNICAL REVIEW Date:

By:

Motor ID	% Load A	% Load D	Blower Frequency (HZ) A	Blower Frequency (HZ) D	Hour Meter (hr's) A
SVE-B					@
					@
					@
Electric Meter Reading					@

Carbon	PID A	PID D
Midfluent		
Effluent		
Total Off Gas		

Office-White, Field-Yellow