FORMER WOLLENSACK OPTICAL

MONROE COUNTY

ROCHESTER, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C828209

Prepared for:

Jefferson Wollensack LLC

312 State Street

Rochester, NY 14614

Prepared by:

LaBella Associates D.P.C.

300 State Street

Rochester, NY 14614

585-454-6110

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

FEBRUARY 2021

CERTIFICATIONS

I DANIEL P. NOLL certify that I am currently a NYS registered professional and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

081996	2/12/2021	
NYS Professional Engineer #	Date	Signature

Table of Contents

TABLES

FIGURES

FIGURES

APPENDICES

List of Acronyms

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring
OSHA	Occupational Safety and Health Administration
OU	Operable Unit

PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

ES EXECUTIVE SUMMARY

The following provides a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan:

Site Identification:	#C828209, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York
Institutional Controls:	1. The property may be used for restricted residential; commercial and industrial uses.
	2. All ECs must be operated and maintained as specified in this SMP.
	3. All ECs must be inspected at a frequency and in a manner defined in the SMP.
	4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
	5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP.
	6. Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP.
	7. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
	8. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.

	9. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP.	
	10. Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.	
	11. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated.	
	12. Vegetable gardens and farming on the site are prohibited.	
Engineering Controls:	1. Cover system	
	2. Sub-Slab Depressurization System	
	3. Groundwater Treatment System	
Inspections:		**Frequency**
1. Cover inspection		Annually
2. Sub-Slab Depressurization System		Quarterly for the first year then semi-annually or as-needed
3. Treatment System		Annually
Monitoring:		
1. Groundwater Monitoring Wells BW-01, BW-03, RIBW-C, RIMW-02, RIMW-04, RIMW-05, RIMW-16R, RIMW-19S, RIMW-19D, SB-MW-07, SB-MW-15, and SB-MW-16		Quarterly for the first year then semi-annually thereafter.
Maintenance:		
1. Cover maintenance		As needed
2. Sub-Slab Depressurization System		Annually or as needed

3. Groundwater Treatment System	As needed
Reporting:	
1. Groundwater Data	Annually
2. Periodic Review Report	Annually
3. EDD submittals for EQuIS	As Needed

Further descriptions of the above requirements are provided in detail in the latter sections of this Site Management Plan.

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Former Wollensack Optical site located in Rochester, New York (hereinafter referred to as the "Site"). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C828209 which is administered by the New York State Department of Environmental Conservation (NYSDEC).

Jefferson Wollensack, LLC entered into a Brownfield Cleanup Agreement (BCA), on January 3, 2019 with the NYSDEC to remediate the site. On February 11, 2021 the BCA was amended to indicate that on May 10, 2019 Jefferson Wollensack LLC conveyed title to the Site to Jefferson Wollensack Housing Development Fund Corp. by Deed recorded in the Monroe County Clerk's Office in Liber 12185 of Deeds, at Page 393 on May 20, 2019. Jefferson Wollensack Housing Development Fund Corp.'s acquisition and holding of legal or record fee title is solely as a nominee of, and on behalf of Jefferson Wollensack LLC. Jefferson Wollensack LLC remains in full control of the Site with unlimited ability to enter, access, and manage the Site, and the party to the BCA. A figure showing the site location and boundaries of this site is provided in Figure 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement provided in Appendix A.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Monroe County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC project manager.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C828209-11-18; Site #C828209) for the site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix B of this SMP.

This SMP was prepared by LaBella Associates, D.P.C., on behalf of Jefferson Wollensack, LLC, the remedial party and party to the BCA, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May, 2010, and the guidelines provided by the NYSDEC project manager. This SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. The NYSDEC can also make changes to the SMP or request revisions from the remedial party. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shutdown of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions. In accordance with the Environmental Easement for the site, the NYSDEC project manager will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

Notifications will be submitted by the property owner to the NYSDEC, as needed, in accordance with NYSDEC's DER – 10 for the following reasons:

1. 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6 NYCRR Part 375 and/or Environmental Conservation Law.
2. 7-day advance notice of any field activity associated with the remedial program.
3. 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan. If the ground-intrusive activity qualifies as a change of use as defined in 6 NYCRR Part 375, the above mentioned 60-day advance notice is also required.
4. Notice within 48 hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
5. Notice within 48 hours of any non-routine maintenance activities.
6. Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

7. Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

8. At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (BCA), and all approved work plans and reports, including this SMP.
9. Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1.3 on the following page includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix B.

Table 1.3: Notifications*

Name	Contact Information	Required Notification**
NYSDEC Project Manager; Charlotte B Theobald	585-226-5354 charlotte.theobald@dec.ny.gov	All Notifications
NYSDEC Project Manager's Supervisor; David Pratt	585-226-5315 david.pratt@dec.ny.gov	All Notifications
NYSDOH Project Manager; Arunesh Ghosh	518-486-1443 Arunesh.ghosh@health.ny.gov	Notifications 4, 6, and 7

Name	Contact Information	Required Notification**
NYSDEC Site Control; Kelly Lewandowski	518-402-9547 kelly.lewandowski@dec.ny.gov	Notifications 1 and 8

* Note: Notifications are subject to change and will be updated as necessary.

** Note: Numbers in this column reference the numbered bullets in the notification list in this section.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in the City of Rochester, Monroe County, New York and is identified as Section 091 Block 2 Lot 58 and Block 2 Lot 59 on the City of Rochester Tax Map # 091.81-2-59 and #091.81-2-58 (see Figure 3). The site is an approximately 0.491-acre area and is bounded by Roycroft Drive and residential properties to the north, Avenue D and a convenience store to the south, residential properties to the east, and Hudson Avenue and residential properties to the west (see Figure 3 – Site Layout Map). The boundaries of the site are more fully described in Appendix A –Environmental Easement. The owner of the site parcels at the time of issuance of this SMP is:

Jefferson Wollensack Housing Development Fund Corp., however, as noted in Section 1.1 Jefferson Wollensack, LLC remains the remedial party and the party to the BCA.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: a 26,000 square (sq) foot (ft) four story former manufacturing facility that has undergone renovation/rehabilitation into residential apartment units and is currently occupied by tenants. The Site is zoned for C-1 Neighborhood Center.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial and residential properties. The properties immediately south of the Site include a convenience store and residential properties; the properties immediately north of the Site include residential properties; the properties immediately east of the Site include residential properties; and the properties to the west of the Site include residential properties.

2.2.2 Geology

Urban fill and construction and demolition debris (C&D debris) including apparent coke, brick, glass, concrete, asphalt, slag, and/or wood pieces, were encountered in discrete areas throughout the Site; however, generally not below the building footprint. Fill material was encountered ranging from near the ground surface to approximately 5-ft bgs. Most locations the fill material was not present immediately at the surface.

At the location where fill was encountered at the surface, it was found in trace amounts and to be mixed with sand and gravel. At the remaining locations, fill was found generally beneath a layer of brown silt or silty sand and gravel.

Underlying the fill materials, the soils encountered consisted mainly of brown or gray-brown coarse to fine sands or silts with varying amounts of coarse to fine subangular to subrounded gravel underlain by a layer of dense silty sand with varying amounts of gravel. Dense sand and gravel with trace amounts of silt was encountered below the layer of silty sand and above bedrock.

The top of bedrock was encountered during the environmental investigations at depths ranging from 21.5 to 26.5 feet (ft) below the ground surface (bgs) at the locations of the bedrock wells; however drilling equipment refusal on apparent bedrock during soil borings ranged from approximately 22.1 to 24.7 ft bgs. Bedrock encountered during drilling appeared to consist of the Decew Dolostone of the Clinton Group as indicated on the Geologic Map of New York, Finger Lakes Sheet (1970) from the NYS Museum and Science Service Map and Chart Series No. 15. The rock quality designation (RQD) values for each core run collected during the Remedial Investigation as well as those from previous studies are shown in Table 2.2.2 below:

Table 2.2.2 – Summary of RQDs in Bedrock

Location	Core Run (ft bgs)	Elevation (fmsl)	RQD (%)
RIBW-A	22.2-ft to 27.2-ft	461.07 - 456.07	76.3
	27.2-ft to 32.2-ft	456.07 - 451.07	73.3
RIBW-B	27.5-ft to 32.5-ft	457.74 - 452.74	79.2
	32.5-ft to 37.5-ft	452.74 - 447.74	70.2
RIBW-C	25.0-ft to 30.0-ft	457.83 - 452.83	10.3
	30.0-ft to 33.0-ft	452.83 - 449.83	56.9
	33.0-ft to 35.0-ft	449.83 - 447.83	75.0
RIBW-D	23.0-ft to 28.0-ft	460.27 - 455.27	89.1
	28.0-ft to 33.0-ft	455.27 - 450.27	91.6
BW-01	23.5-ft to 28.5-ft	458.87 - 453.87	72.5
	28.5-ft to 33.5-ft	453.87 - 448.87	50.0
BW-02	23.0-ft to 28.0-ft	461.78 - 456.78	97.5
	28.0-ft to 33.0-ft	456.78 - 451.78	92.5
BW-03	23.2-ft to 28.2-ft	459.43 - 454.43	30.0
	28.2-ft to 29.4-ft	454.43 -453.23	No Recovery

fmsl – feet above mean sea level

A geologic cross section is shown on Figure 4A (cross section key), Figure 4B (cross section A-A', and Figure 4C (cross-section B-B'). The cross section provided is generally representative of conditions prior to the Site redevelopment activities. Site specific boring logs are provided in Appendix C.

2.2.3 Hydrogeology

Overburden groundwater was generally measured at the Site between 8.08 ft and 12.84 ft below ground level based on static water level (SWL) readings. Overburden groundwater SWLs in the basement ranged between 0.71 ft and 4.23 ft below the basement floor. The basement is approximately 8-10 ft bgs. Bedrock groundwater SWLs ranged from 9.96 ft to 16.37 ft below ground level.

SWLs were collected on August 27, 2019 from all overburden and bedrock wells which included wells installed as part of the Remedial Investigation as well as all remaining wells that were installed during Phase II ESA and Preliminary Shallow Bedrock Groundwater Study. Four (4) wells installed during the Phase II ESA designated as SB-MW-02, SB-MW-11, SB-MW-12, and SB-MW-13 could not be located during collection of groundwater measurements. The wells appear to have been destroyed either during or prior to redevelopment activities that occurred at the Site.

Groundwater elevations were calculated using SWLs measured from top of casing elevations. Overburden groundwater elevations ranged from approximately 471 to 475 ft above mean sea level (fmsl). Groundwater flow modeling generated from the data collected indicates the overburden groundwater flow direction at the Site is generally towards the northwest. Groundwater elevation contours indicate there may be a high point or mound in proximity to well SB-MW-4 which shows some radial flow in this area of the Site. Overburden groundwater flow mapping completed during the Phase II ESA from water levels collected on August 8, 2018 depict a similar flow direction.

Bedrock groundwater elevations ranged from approximately 469 to 472 fmsl. RIBW-A appears to represent a high groundwater elevation and water elevations appear to decrease heading away from the well. Well RIBW-B appears to represent a low groundwater elevation at the Site which indicates water flowing towards the point from each direction.

Sewer invert elevations were obtained from the City of Rochester Mile Square Mapping. Invert elevations of a manhole within in Hudson Ave nearest to the Site are 473.86 and 479.06 fmsl which is similar to the groundwater elevations measured on-Site. The sewer within Hudson Avenue slopes to the north and the sewer invert and any sewer bedding (which likely extends below the sewer invert) may be influencing overburden groundwater flow seasonally. It appears the uppermost water table elevations may be below the sewer inverts directly west of the Site; however, seasonal fluctuations in the water table may contact the sewer in this area. The invert elevation obtained from Avenue D to the south of the Site is 481.04 fmsl (City of Rochester Mile Square Mapping).

Overburden Groundwater flow elevation contours from SWLs collected on August 27, 2019 are included on Figure 5A. Bedrock groundwater flow direction contours from SWLs collected on August 27, 2019 are included on Figure 5B.

2.3 Investigation and Remedial History

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below and are provided in Section 8.0 - References. A list of the approved investigation and remedial reports are provided below:

- *Phase I Environmental Site Assessment (ESA), 872 and 886 Hudson Avenue, Rochester, New York* completed by Seeler Engineering, P.C. ("Seeler"), September 2017
- *Phase II Environmental Site Assessment, 872 and 886 Hudson Avenue, Rochester, New York 14621*, by LaBella, August 2018
- *Preliminary Shallow Bedrock Groundwater Study Summary Letter, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella, October 11, 2018
- *Remedial Investigation Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester New York,* by LaBella dated December 26, 2018 (Revised April 4, 2018)

- *Remedial Investigation Report, NYSDEC BCP Site #C828209, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella, September 2019
- *Interim Remedial Measures Work Plan (IRMWP) for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by Labella dated August 2019
- *Interim Remedial Measure RAOC#1 Design Document, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 7, 2020
- *Sub-Slab Depressurization Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* completed by LaBella, dated June 18, 2019 and *Sub-Slab Depressurization Work Plan Addendum #1,* by LaBella, dated January 20, 2020
- *Construction Completion Report for Tank Removals and Construction Related Activities, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 2021
- *Construction Completion Report for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 2021
- *Remedial Alternatives Analysis and Remedial Action Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York* dated August 17, 2020 (Revised September 17, 2020) by LaBella
- *Final Engineering Report, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York* by LaBella dated February 2021

These aforementioned reports are on file with the NYSDEC.

2.3.1 Phase I Environmental Site Assessment (ESA), (Seeler, September 2017)

This Phase I ESA identified a Recognized Environmental Condition (REC) associated with seven (7) storage tanks in a vault beneath the sidewalk adjacent to the south of the Site building. Each tank is reportedly 275-gallons in capacity. This vault was accessible via a doorway from the Site building's basement. Based on NYSDEC Spill listing #0651965 and Seeler's Phase I ESA, the tanks reportedly contained fuel oil for heating the building.

LaBella discussed the Spill listing with the NYSDEC on June 8, 2018. The NYSDEC indicated that the Department had previously requested prior property owners to properly remove the tanks and perform a subsurface investigation consisting of the advancement of soil borings in the sidewalk surrounding the tank vault and within the vault itself, if possible.

In addition to the REC, the Phase I ESA described the Site's historical use for industrial purposes including optical lens manufacturing, printing and photographic mount (AKA mat) manufacturing from the early 1900s until at least the mid-1970s. Although not identified as a REC by Seeler, the Site appears to have at least been affiliated with various optical manufacturing companies from the mid-1970s until at least 2010, if not utilized for active manufacturing purposes. Based on this, LaBella recommended that a Phase II ESA also be implemented to assess the historical industrial operations at the Site.

2.3.2 Phase II Environmental Site Assessment (LaBella, August 2018)

This Phase II ESA was conducted to evaluate the Site subsurface based on the historical industrial operations and the presence of fuel storage tanks in the underground vault located immediately south of the Site. The Phase II ESA generally consisted of the following:

- Interior screening for detectable VOCs using a handheld photo-ionization detector (PID) capable of reading in units of parts per billion (ppb) was completed throughout the basement and 1st floor of the building. Features such as piping, floor and wall cracks, floor drains, sumps, etc., located in the basement and 1st floor of the building were screened for

potential infiltration sources of VOCs. This evaluation identified readings above background in the vicinity of a sump located on the 1st floor (4,434 ppb), from a crack in the floor on the western side of the first floor (1,260 ppb) and from cracks in the floor and wall in the southwestern quadrant of the basement (1,228-1,848 ppb).

- In addition to the VOC screening, LaBella utilized a Ludlum 3-97 Survey Meter on all floors throughout the building to assess for radiation levels above background levels based on the potential for radioactive materials to be stored/used in the building based on historical optical processes. Elevated radiation readings were not identified in any other portions of the building with the exception of one (1) area where a measurement (10 ur/hr) slightly above background (i.e., 0 to 2 ur/hr) was identified in the southwestern corner of the 1st floor.
- A total of seventeen (17) soil borings were advanced, including two (2) borings within the building and six (6) borings in the right-of-way (sidewalks) adjacent to the south and west of the Site. Ten (10) soil borings were converted to groundwater monitoring wells, including one (1) interior boring (SB-16).
- Due to the presence of friable asbestos containing materials (ACMs) within the building, interior work was limited and LaBella personnel who completed such work wore half-mask air purifying respirators as well as chemical resistant suits and gloves. Interior borings (SB-16 and SB-17) were advanced using handheld equipment, which limited the terminal depth of these borings. All borings were advanced to equipment refusal or several feet into the water table. Terminal depths of the borings ranged from approximately 5 to 20 ft bgs. Boring SB-16 was advanced within the building basement and boring SB-17 was advanced on the 1st floor of the building, in the vicinity of the sump. The floor of the basement is approximately 10 ft below the exterior ground surface. All other borings were advanced in exterior locations.

The following conclusions were made based on the results of the Phase II ESA:

- The primary contaminant of concern at the Site appears to be trichloroethene (TCE), a chlorinated solvent often historically utilized for metal degreasing. Tetrachloroethene (PCE) was also detected in groundwater at concentrations above NYCRR Part 703 groundwater standards in several wells with the greatest concentration (247 ug/l) detected in MW-SB-07 west of the Site building. Additional chlorinated VOCs (CVOCs), including breakdown products of TCE and PCE, were also identified at elevated concentrations in groundwater. Although the highest concentrations of TCE in groundwater were identified in the sidewalk adjacent to the south (up to 82,900 ug/l in MW-SB-14) and west (up to 28,600 ug/l in MW-SB-07) of the Site, these impacts appeared to be emanating from the Site. Groundwater flow modeling generated from data collected in August 2018 indicates groundwater flow in the immediately vicinity of the building is to the west-northwest. The highest concentrations of TCE in soil (0.605 mg/kg) were identified beneath the building's basement and to the south of the building, indicating the source of TCE impacts may be within the building's footprint.
- In addition to CVOC impacts, apparent petroleum-related VOCs were identified at concentrations slightly above their respective NYCRR Part 703 groundwater standards in well SB-MW-04. This well is located approximately 15-ft to the northeast of the tank vault located beneath the sidewalk along Avenue D. Based on the proximity of SB-MW-04 to the vault and the building's basement, these low-level impacts may be associated with a prior petroleum release from the tanks in the vault; however, groundwater flow modeling indicates this well is hydraulically upgradient of the vault. Additional petroleum impacts were not identified in wells and soil borings surrounding the vault, indicating substantial subsurface impacts are not present associated with this vault.
- Urban fill material including ash and cinders were identified at the Site, primarily in the top 3-ft of the soil column. Samples of this material were analyzed for SVOCs and metals; however, concentrations of targeted compounds were not identified above NYCRR Part 375 SCOs.

2.3.3 Preliminary Shallow Bedrock Groundwater Study Summary Letter (LaBella, October 11, 2018)

This study was completed based on the identification of elevated concentrations of TCE and other chlorinated solvents in overburden soil and groundwater at the Site. The objective of this study was to determine if these impacts have descended into shallow bedrock groundwater and the rock matrix itself.

This preliminary investigation consisted of the advancement of three (3) shallow bedrock groundwater monitoring wells (i.e. BW-01, BW-02, and BW-03) to the east, west and south of the building. Wells to the west and south of the building were advanced in the right-of-way (i.e. sidewalk area) in close proximity to the overburden groundwater monitoring wells which had identified the highest concentrations of TCE. Bedrock was encountered between 23.2-ft to 24.0-ft bgs at the three (3) well locations. The wells were installed as open rock wells into the top 10-ft of competent bedrock, with the exception of well BW-03. Although well BW-03 was cored to 10-ft into bedrock, due to the low competency of the rock much of the core was lost back into the well during drilling, causing the sample interval of BW-03 to be limited to the top 6-ft of bedrock in this area.

During well installation, rock cores were examined, screened with a PID capable of measuring VOC concentrations in ppb and RQDs were calculated. Following installation and development, bedrock wells were sampled using low-flow methodology for target compound list (TCL) and NYSDEC Commissioner Policy 51 (CP-51) list VOCs. In addition to the groundwater samples, samples of the bedrock itself were submitted for laboratory analysis of these same parameters. Although New York State comparison criteria do not exist for bedrock, these samples were collected to determine CVOC levels in the rock matrix itself and thus the potential for back diffusion following groundwater remediation. Two (2) rock samples were collected from each core hole at two separate depths in an effort to delineate the extent of contamination within bedrock, if present. Samples were biased towards the top of bedrock and in areas of fractures.

The following conclusions were made based on the results of the Preliminary Shallow Bedrock Groundwater Study:

- Although CVOCs were detected in groundwater within wells BW-01 and BW-02, substantial CVOC concentrations were only identified in well BW-03, located to the west of the Site building. Concentrations of TCE and cis-1,2-dichloroethene were identified at 7,200 ug/l and 1,000 ug/l, respectively in BW-03. Overburden well SBMW-07 advanced in the immediate vicinity of BW-03 previously identified total VOCs at concentrations between approximately 10,500 ug/l and 29,000 ug/l.
- RQD values varied widely between the three (3) wells. RQDs calculated in the top 5-ft of each rock section were 72.5%, 97.5% and 30% in wells BW-01, BW-02 and BW-03, respectively. The poor rock competency identified in well BW-03 could explain the apparent contaminant infiltration into bedrock in this area indicated by the substantial levels of CVOCs in this bedrock well.
- In addition to TCE impacts, one (1) petroleum-related VOC (benzene) was identified at a concentration slightly above its respective NYCRR Part 703 groundwater standard in bedrock well BW-02. Benzene and methyl-tert butyl ether, which was identified at a concentration below the NYCRR Part 703 groundwater standard in well BW-01, are typically associated with gasoline. The source of these compounds in bedrock groundwater at the Site is unknown but could be associated with nearby historical gasoline filling stations.
- CVOCs were not identified above laboratory detection limits in any of the bedrock samples which the exception of 1,2-dichloroethane in BW-01 (24.7-24.9 ft bgs) and methylene chloride in all six (6) bedrock samples. It should be noted methylene chloride is utilized in laboratory analytical procedures and may not be a result of Site contaminants. Methylene chloride was also detected in the blank sample. At this time, it does not appear that any of the targeted CVOCs observed in other sample media have infiltrated into the bedrock matrix.

2.3.4 Remedial Investigation Work Plan (December 26, 2018 (Revised April 4, 2018))

The RIWP detailed the investigation that was completed to determine the nature and extent of contamination at the site and provide a qualitative risk assessment for any contaminants migrating off-site. The RIWP summarized the following investigation work that was completed:

1. **Radiation Survey –** This task was included based on the historical optical manufacturing at the Site, which may have used thoriated glass. A byproduct of this type of operation can be radioactive sand/dust. The radiation survey consisted of walkover surveys of the interior and exterior portions of the Site, as well as screening of surface soil and soil boring cores. The work was completed by a NYSDOH Radioactive Material Licensed (RML) contractor.
2. **Floor Slab Evaluation -** This task was designed to evaluate the presence of VOCs in sub-slab vapor beneath the lowest levels of the Site building and assess relevant plumbing infrastructure (drains, sumps, etc.). The objective of this sub-slab screening evaluation was to identify potential source areas of impact (and thus help to target soil boring and/or monitoring well locations).
3. **Shallow Soil Evaluation:** This task was completed to evaluate the potential for human exposure as well as the suitability of the soil cover for compliance with the Soil Cleanup Objectives.
4. **Overburden Soil and Groundwater Evaluation:** This task consisted of the resampling of existing overburden groundwater monitoring wells, advancement of numerous soil borings and installation of additional overburden groundwater monitoring wells. The objective of this task was to evaluate subsurface soils and overburden groundwater for impacts, particularly to identify potential source areas and further delineate the lateral and vertical extent of impacts in the overburden.
5. **Shallow Bedrock Groundwater Evaluation:** This task consisted of the installation of shallow bedrock groundwater monitoring wells.

6. **Subsurface Hydrologic Study:** This task consisted of the collection of seasonally high and low static water level measurements from monitoring wells at the Site and the use of that data to determine approximate groundwater flow direction. Hydraulic conductivity testing was completed of select overburden and bedrock wells.
7. **Soil Gas Survey:** This task consisted of the collection of soil gas samples near Site boundaries which border commercial and/or residential properties in locations at which VOC impacts in groundwater (and thus apparent off-site migration) have not already been identified. The objective of this task was to determine if soil gas may be migrating off-site in areas not yet investigated and whether off-site evaluation may be necessary.
8. **Fish and Wildlife Resources Impact Analysis (FWRIA) Part 1: Resource Characterization:** A Site characterization was conducted to identify all fish and wildlife resources in accordance with DER-10 Section 3.10.1.

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The above work was summarized in the Remedial Investigation Report (refer to Section 2.3.5).

2.3.5 Remedial Investigation Report (LaBella, September 2019)

The cumulative investigation work performed during the LaBella 2018 Phase II ESA, the LaBella 2018 Preliminary Bedrock Shallow Groundwater Study and the Remedial Investigation identified four (4) areas of concern at the Site. These areas are listed below:

- **AOC 1** – CVOC Impacts
- **AOC 2** – Building Materials Containing Radiation
- **AOC 3** – USTs and Petroleum-Related Impacts
- **AOC 4** – Miscellaneous Discrete Impacts (RIGP-06, SS-COMP-1, RIMW-02, RIMW-04, RIMW-17, RIBW-D)

The contaminants of concern at the Site included elevated levels of PCE and TCE and their associated breakdown products in groundwater and soil; residual radiological materials associated with building materials and prior Site operations; low-level petroleum related compounds in groundwater from multiple sources; metals and pesticide impacts to soil; and, metals, SVOC, PCB, and additional VOC impacts in groundwater.

- **AOC #1**: Widespread CVOC impacts (generally within the footprint of the Site building with the most elevated levels near the southwestern area of the building) were identified in soil, groundwater, bedrock and bedrock groundwater at Site. The precise source of impacts is unknown; however, impacts are most likely associated with former manufacturing operations that may have released solvents including TCE and PCE to the subsurface.

- **AOC #2:** Apparent thoriated sand suspected to have been used in prior Site operations was identified in two (2) areas at the Site: in a sump on the first floor of the Site building and in a small area on the wooden floor on the third floor of the building. In addition, building materials with radiation were identified at other locations throughout the building. The fire brick and tiles located in the basement and first floor, respectively, are considered naturally occurring radioactive materials (NORM) due to production of the materials, thus exempt from NYS regulations.

- **AOC #3:** Concentrations of petroleum-related compounds were identified in overburden soil and groundwater, as well as bedrock groundwater in AOC #3 throughout the Site. The petroleum impacts appear to be attributed to the two (2) USTs on-Site and past spills associated with ASTs in the former tank vault under the sidewalk south of the Site that was connected to the Site Building basement.

- **AOC #4:** Miscellaneous discrete impacts to soil and groundwater appear to be associated with urban fill materials, historical manufacturing activities and/or leaking potable water on Site. Impacts appear to extend from near the surface into shallow soils and in overburden and bedrock groundwater.

2.3.6 Interim Remedial Measures Work Plan (LaBella, August 2019)

The IRM work plan was developed to address an apparent source of chlorinated volatile organic compounds (CVOCs) in the overburden in the southwestern portion of the Site Building, that is designated as Remedial Area of Concern (RAOC #1). In addition, building materials containing levels of gamma radiation above background have been identified in discrete locations; these areas are designated RAOC #2. The Work Plan detailed remedial measures associated with in-situ chemical oxidation (ISCO) as an IRM for the overburden soil and groundwater in RAOC #1 and removal of building materials containing radiation as an IRM for RAOC #2.

2.3.7 IRM RAOC#1 Design Document (LaBella, January 7, 2020)

The Design Document provided additional detail on the planned IRM for RAOC #1. The Design Document was provided, as the IRM work plan was completed prior to the receipt of all bedrock data.

2.3.8 SSDS Work Plan (LaBella, June 18, 2019) and *Addendum #1* (LaBella, January 20, 2020)

The SSDS work plan and SSDS Addendum #1 includes the design of the SSDS to mitigate SVI concerns for the Site building. The SSDS was designed to depressurize the entire building footprint, including the ground level (approximately 5,000-square feet) and the basement (approximately 1,000-square feet) by trenching through the existing concrete floor to install the SSDS piping network. Two (2) separate systems were designed; one (1) in the basement and one (1) on the ground level.

2.3.9 CCR for Tank Removals and Construction Related Activities (LaBella, January 2021)

The CCR summarized and documented the following remedial activities:

- Removal/closure of seven (7) 275-gallon fuel oil ASTs located in the southern vault.
- Pumping of two (2) USTs and removal of the southern UST located immediately east of the Site building.
- Excavation of petroleum contaminated soil in the area of the southern UST pit and documentation soil sampling following the remedial excavation in accordance with DER-10 and NYSDEC approval.
- Installation of underground plumbing within the Site building footprint.
- Installation of a sanitary sewer lateral north of the Site building.
- Box-out of parking lot area and placement of NYSDEC-approved stone.
- Removal of the basement concrete slab.
- Importation and placement of NYSDEC approved backfill material.

The above items were conducted as part of the Draft ISMP to facilitate the redevelopment of the site prior to the completion of the RI and/or SMP.

AST Closure

Seven (7) unregistered 275-gallon heating oil (fuel oil) tanks were removed from a vault under the sidewalk along Avenue D and just south of the site building on May 22, 2019. The vault was connected to the Site building basement by a doorway and appeared to have a concrete bottom and cinder block or concrete block walls. The tank vault was located outside of the BCP Site boundary.

The seven (7) 275-gallon ASTs in the vault appeared to be highly corroded single-walled steel tanks. Each tank was observed to have rusted holes of varying size on the upper half of each tank. Inspection of each tank interior did not identify any liquid or sludge contents (i.e. the tanks were empty) and thus the tanks did not require any pumping prior to removal. After the ASTs were removed, the vault was filled with flowable fill.

UST Closure – Southern UST

During a site visit by LaBella personnel on November 7, 2019 a fuel oil odor was noted in the building. LaBella discovered approximately 6-inches of water in the former boiler pit within the basement with less than 1-inch of apparent fuel oil floating on top of it. Based on this discovery, Spill #1907970 was opened with the NYSDEC. LaBella also completed test pitting around the exterior underground storage tank (UST) located immediately east of the basement. Test pits completed to the north, south and east of the UST did not identify significant evidence of impairment but soils directly below the UST could not be accessed at this time. The maximum PID reading measured was 30 ppm at 5 ft below ground surface (bgs) directly south of the UST.

The UST was accessed using the excavator and was found to have filled with apparent rainwater with approximately 8-inches of oil floating on top of the water within the UST. When this UST was first discovered in June 2019, approximately 8.5-inches of oily water was observed in this tank.

The contents of each UST were removed on November 13, 2019. An oily water mixture was pumped out of the northern UST and an oil water mixture consisting of approximately 40-inches of water and 8-inches of oil was pumped from the Southern UST. At this time, water was also pumped from the basement boiler pit that appeared to have accumulated over-time as the building was vacant for several years.

On December 19, 2019 LaBella Environmental, LLC mobilized to the site and began by pumping out approximately 200 gallons of water that had appeared to re-enter the Southern UST since it was previously pumped-out on November 13, 2019. The 200-gallons of water was pumped into 55-gallon drums pending disposal. Soil was excavated above the tank segregating "clean" soil from petroleum impacted soil. Non-petroleum impacted soil from the top 2-ft of the soil column was staged in a separate pile on and covered by poly-sheeting. This pile was approximately 5 cubic yards in volume. This segregated pile was later shipped to the landfill during the parking lot box-out work.

The tank measured approximately 11-ft long and 4-ft in diameter indicating it was approximately 1,000 gallons in size. The City of Rochester Fire Marshal (Mr. Steve Ersteniuk) observed the tank removal work to confirm compliance with City of Rochester regulations. A permit was obtained from the City of Rochester for the tank removal. The UST was rendered inert by adding carbon dioxide into the tank. The final meter readings on the tank approved for removal by the City of Rochester Fire Marshal were zero (0) percent LEL and fourteen (14) percent oxygen. The tank was then removed from the subsurface and placed onto a LaBella trailer, cleaned, and transported to Metalico, Inc. and disposed as scrap metal. The UST was constructed of steel and was observed to have several holes in the tank due to rusting.

Following the collection of documentation samples, the bottom and sidewalls of the tank pit were lined with poly sheeting as a demarcation layer and the pit was backfilled with NYSDEC-approved imported stone.

Documentation samples were collected in accordance with NYSDEC DER-10 Section 5.4(b)(5)(2) and correspondence with the NYSDEC. Due to the size of the excavation, four (4) excavation sidewalls and one (1) bottom documentation samples were collected from the remedial excavation and analyzed for USEPA TCL and NYSDEC CP-51 list VOCs and USEPA TCL and NYSDEC CP-51 list SVOCs using USEPA Methods 8260 and 8270, respectively. The samples were designated as TANK-BOT-122019, TANK-EAST-122019, TANK-NORTH-122019, TANK-SOUTH-122019, and TANK-WEST-122019 were collected at depths of 11-ft bgs, 10-ft bgs, 8-ft bgs, 8-ft bgs and 8-ft bgs, respectively from the southern UST pit at the locations of the highest remaining PID readings. A summary of the documentation sample results are summarized in Table 2.3.8 below.

Table 2.3.8 – Summary of Southern UST Documentation Sample Results

Sample ID	Sample Depth (ft bgs)	PID Reading (ppm)	Summary of Results
TANK-BOT-122019	11	30	No VOCs or SVOCs detected at concentrations above the Unrestricted Use SCOs.
TANK-EAST-122019	10	2.8	No VOCs or SVOCs detected at concentrations above the Unrestricted Use SCOs.
TANK-NORTH-122019	8	2.7	No VOCs or SVOCs detected at concentrations above the Unrestricted Use SCOs, with the exception of the VOC acetone at an estimated concentration. The estimated concentrations of acetone was not detected above the Restricted Residential Use SCOs.
TANK-SOUTH-122019	8	45.4	No VOCs or SVOCs detected at concentrations above the Unrestricted Use SCOs.
TANK-WEST-122019	8	16.4	No VOCs or SVOCs detected at concentrations above the Unrestricted Use SCOs.

The sample results are below the Restricted Residential Use SCOs.

Parking Lot Box-Out Area and North Entrance Stabilization

In the spring of 2019 the site contractor excavated surface soil from the north entrance and placed an approximate 3-4 inch thick layer of recycled concrete to stabilize the entrance. A LaBella environmental monitor was not notified about or on-site for the excavation and stockpiling of soil or the importation of recycled concrete. The NYSDEC was then notified on May 23, 2019 and made aware of the soil pile generated and imported recycled concrete. Approximately 30-40 cubic yards of soil material was generated and staged in the parking lot area. The stockpile was not staged on poly sheeting but it was covered with plastic and the excavated material (and 2 ft of material beneath it) was disposed with the material as part of the parking lot box out discussed below.

Beginning on January 8, 2020, Victor Excavating began excavating soil at the site to place the subbase for the exterior parking lot, sidewalk, and other exterior rehabilitation work. The soil removal encompassed the north and east areas of the site building. Soil was generally excavated from the ground surface to approximately 2 feet below grade and loaded directly into Part 364 permitted trucks for disposal. Victor Excavating completed the parking lot soil excavation on January 10, 2020. This work also included disposal of the soil pile generated in spring 2019 and the top-cut of non-petroleum impacted soil generated during the Southern UST removal (see above). Approximately 2-feet of remaining material below the soil pile generated in spring 2019 was also removed as part of the parking lot box-out. Approximately 24-inches of NYSDEC-approved crusher run stone was placed within the footprint of the parking-lot box.

Basement Slab Removal and Subgrade Plumbing Installation at Site Building

As requested by the NYSDEC, LaBella conducted CAMP monitoring for the concrete basement slab removal during the timeframe of December 3 to 6, 2019. As part of this work additional water that accumulated in the basement was pumped into a holding tank and disposed of off-site. A new concrete basement slab was installed on February 18, 2020.

Intermittently from December 13, 2019 to January 16, 2020, excavations for the installation of the sub-grade plumbing were completed on the 1st floor of the building. A sump was also installed within the basement during this time. The soil excavated was placed on and covered with poly sheeting and characterized for reuse at the site. The NYSDEC approved the reuse of this material on December 26, 2019, and the material was used to backfill the plumbing excavations. Following reuse of this material, approximately 6 inches of concrete was poured over the reused soil/plumbing excavations.

Sanitary Sewer Lateral Installation

On February 4, 2020, Victor Excavating began excavation of a trench on-site for installation of a new sewer lateral line that was completed on February 5, 2020. The trench was excavated to approximately 6-ft wide and extended to a depth of approximately 8-ft and a portion of the excavation extended outside the BCP site boundary onto the Hudson Avenue right-of-way. Soil removed from the trench was placed on poly sheeting, sampled for waste characterization, covered with poly sheeting, and disposed off-site at a 6NYCRR Part 360 landfill under a contained-in demonstration. No excavated soil was reused as backfill.

2.3.10 RAA and RAWP (LaBella, August 17, 2020, Last Revised September 17, 2020)

The purpose of this RAA was to identify, evaluate, and select remedies to address the contamination identified by the RI. The selected remedy was designed to eliminate or mitigate the Site contamination identified during the RI to a condition acceptable to the NYSDEC under the BCP, using appropriate remedial technologies, engineering controls (ECs), and institutional controls (ICs). The RAWP detailed the remedial procedures of the selected remedy outlined in the RAA, which was a Soil Cover System.

2.3.11 CCR for RAOC #1 and RAOC #2 (LaBella, January 2021)

The CCR summarized and documented remedial activities associated with the following activities:

IRM RAOC #1 - In-Site Chemical Oxidation (ISCO)

Several chlorinated volatile organic compounds (CVOCs) including TCE, PCE and associated breakdown products have been detected in soil and groundwater above applicable Site cleanup goals (SGCs). TCE was detected in soil up to 98 milligrams per kilogram (mg/kg) at a depth of 13.5 ft bgs beneath the southwestern portion of the Site building. TCE was also detected in soil just above bedrock (21.5 ft bgs) and at 15 ft bgs at 27 mg/kg and 25 mg/kg, respectively. TCE and PCE were also detected in overburden groundwater at concentrations up to 180,000 micrograms per liter (ug/l) and 1,800 ug/l, respectively. Impacts were primarily located within the footprint of the southwestern portion of the Site building and in the right-of-way (i.e., the sidewalk) immediately adjacent to the south and west of the Site building.

In-situ chemical oxidation (ISCO) treatment was implemented as an IRM for overburden CVOC impacts. This IRM consisted of the injection of the treatment chemical permanganate (e.g. sodium permanganate) in the overburden within the southwestern portion of the Site building which is the inferred source of CVOCs in soil and groundwater. One (1) round of injections was completed to date as part of this IRM. Groundwater monitoring was being performed to assess the effectiveness of the IRM and to determine the need for subsequent injections using an ISCO or other types of treatment chemicals. Any need for subsequent injections and the plan for long-term monitoring will be outlined in the Site Management Plan.

The IRM for RAOC #1 consisted of the installation of approximately seventeen (17) overburden and nine (9) bedrock treatment wells within the southwestern portion of the Site Building on the ground level (i.e., first floor). Overburden treatment wells were spaced approximately 12 to 16 ft apart and extended to the top of bedrock (approximately 20-21.5 ft below the current finished floor) and the bedrock treatment wells were installed into 10 ft from the top of bedrock. Installation of the treatment system was completed by trenching and connecting piping beneath the floor slab to an exterior access point to allow for additional injections, if required, while the Site building is occupied. While this IRM was designed to treat overburden CVOC impacts, it is anticipated the treatment chemical will come into contact with the top of bedrock and may travel through bedrock fractures.

IRM RAOC #2 – Building Materials Containing Radiation

Radiological materials were identified during the RI by Austin Master Services (AMS) at discrete building areas. Elevated gamma count rate levels above background were identified in two (2) areas within the building; wooden floor boards at the southwestern portion of the third floor and within the first floor sump. In addition, NORM were identified as the clay tile located at the southwest corner of the first floor, fire brick within basement, and clay tile used for construction of the first floor sump. Clay tile and fire brick are commonly identified as NORM due to the presence of zircon in many refractory glazes.

AMS completed the removal of the contaminated wooden floor boards on the third floor and material within first floor sump in January 2020. The first floor sump was filled with concrete in January 2020, encapsulating the NORM in that feature. The fire brick in the basement was removed in December 2019 as part of the basement renovations. The clay tile at the southwestern portion of the first floor is covered with a layer of cement as part of building renovations. The NORM materials are exempt from NYS regulations and were not included as part of the RAOC #2 IRM work plan.

Location of the NORM and radiological material locations are shown on Figure 6B.

2.3.12 Final Engineering Report (LaBella, February 2021)

The FER summarized and documented remedial activities associated with the following activities:

SSDS Installation

Excavations associated with the SSDS installation were completed in conjunction with the installation of subgrade plumbing within the building footprint. The system was designed in accordance with the NYSDOH Final Guidance for Soil Vapor Intrusion in the State of New York dated October 2006. The installation of the additional vent systems was initiated on December 2019 and was substantially completed in August 2020. The SSDS was started on August 21, 2020.

The systems are primarily constructed of a series of 4-inch diameter perforated HDPE pipes wrapped in a geotextile fabric beneath the floor slab connected to solid schedule 40 PVC header pipes. The PVC header pipes penetrate the floor slab (i.e., riser pipe) and are routed through the building to above the roofline. To construct the SSDS, the horizontal perforated piping was placed in trenches within the building footprint in January and April 2020. All SSDS piping beneath the slab was installed in pea stone gravel subbase.

In addition to the perforated horizontal piping, the following depressurization points were installed:

A. A vertical depressurization point was installed in the northeastern portion of the Site building. This point was installed based on the need to raise the floor in this area of the building as part of Site redevelopment as well as the presence of a footer in this area. The vertical depressurization point was installed through the original floor slab by coring an approximately 5-6-inch diameter hole in the slab, removing approximately 1-cubic foot of material to create a void space, extending the vertical pipe to the bottom of the floor slab and sealing the pipe into the slab. Following installation of the point, structural fill was placed on top of the original floor slab and a second floor slab was poured on top of the structural fill. Pressure monitoring points #5 and #6 were also affected by this building renovation change and as such, these points are extend under the lower slab via ¼-inch diameter copper piping so they monitor the intended locations under the slab.

B. Two horizontal depressurization points were placed in the western portion of the building to depressurize the lobby of the building, which is isolated by a separate footer system. Due to the presence of historic tile in the lobby, trenching could not be completed and the horizontal depressurization points were installed through the northern and eastern lobby footers. These points consisted of 2-inch diameter, solid schedule 40 PVC piping. These points were installed by coring an approximately 3-inch diameter hole through the footer in each location and inserting the solid PVC piping through the corehole. The piping was sealed into each corehole using non-shrink, non-mechanical grout.

The horizontal perforated piping and other depressurization features were connected to the vertical PVC risers which extend above the roofline to fans. The first floor system is connected to a RadonAway GP-501 fan and the basement SSDS is connected to a RP-265 fan and are a minimum of 10-ft from any air intakes or building opening. The vertical piping is labeled indicating it is associated with the SSDS.

Each SSDS system is equipped with a RadonAway Checkpoint IIA Mitigation System audible alarm and U-tube pressure manometer. The audible alarm and fan for each system are connected to separate electrical circuits. Each audible alarm was confirmed to be operating by removing the rubber hose that connects to each SSDS riser to simulate a loss in pressure. Once the hose was removed, the audible alarm was triggered to confirm it was operating properly. Each U-tube manometer was visually checked to confirm the pressure in the pipe is below atmospheric pressure.

To confirm targeted depressurization of the sub-slab, one (1) temporary pressure monitoring point and nine (9) permanent pressure monitoring points were installed. The permanent pressure monitoring point consists of a stainless steel vapor pin installed in an approximately 5/8-inch corehole which extend through the floor slab or a ¼ inch copper tube that extended below the raised floor area (i.e. Monitoring Points 5 and 6).

The SSDS was started on August 21, 2020 and pressure field extension measurements were collected from the monitoring points on August 24, 2020. The measurements indicated there was sufficient negative pressure (i.e. a minimum of -0.004 inches of water column) at each monitoring location. The August 24, 2020 pressure measurements are shown in the following table:

Table 2.1.12A – August 2020 Pressure Field Extension Measurements

Monitoring Point Number	Inches of Water Column
1	-0.021
2	-0.058
3	-0.035
4	-0.010
5	-0.010
6	-0.023
7	-0.053
8	-0.077
9	-0.019
10	-0.010

LaBella submitted an Indoor Air Sampling Work Plan to the NYSDEC dated September 14, 2020. Following verbal discussions and email correspondence with the NYSDEC regarding the sampling plan, sampling was completed between September 17 and 18, 2020. Formal approval of the sampling plan was obtained from the NYSDEC on September 30, 2020. A letter summarizing the results of the indoor air sampling was submitted to the NYSDEC on September 23, 2020. These results are also summarized below.

Specifically, one (1) indoor air sample was collected from the basement, five (5) indoor air samples were collected from the first floor, and one (1) outdoor air sample was collected. Samples were collected over an approximately 24-hour period between September 17 and 18, 2020.

Because the sampling was conducted outside of the normal heating season or during the winter months, the heating units on the first floor were operated at least 24 hours prior to and during the sampling event.

Air samples were collected utilizing individually certified-clean 1 liter or 1.6 Liter Summa® canisters (or equivalent) equipped with laboratory calibrated flow controllers. The indoor air samples were collected at a height of approximately 3 to 5 ft above the floor or ground surface to simulate the breathing zone. The outdoor air sample was collected on the building roof. Immediately after opening each Summa® canister, the initial vacuum (inches of mercury) and time was noted and recorded on the laboratory chain-of-custody. After approximately 24-hours, the final vacuum readings (inches of mercury) were noted and the Summa® canisters were closed. All samples were collected over the same general time period and in the same manner at all locations.

Samples were sent under chain of custody control to a NYSDOH Environmental Laboratory Approval Program certified laboratory for testing. The samples were tested for VOCs using United States Environmental Protection Agency Method TO-15. In addition, a trip blank, blind sample duplicate and a matrix spike/matrix spike duplicate (MS/MSD) were collected as part of the sampling in accordance with the NYSDEC approved work plan. A DUSR was generated by Dataval, Inc. and indicated that the "Reported data should be considered technically defensible and completely usable in its present form."

As part of the sampling work, the NYSDOH Indoor Air Quality Questionnaire and Building Survey was completed. Several types of paints, wood stains, caulks, and cement sealing compounds were observed throughout the building at the time of the sampling. In addition, these chemicals had been recently used as part of the construction work and active painting was conducted at the time of sampling.

The sample results were compared to the guidance values listed in Table 3.1 of the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 (included updates). In addition, the NYSDOH SVI Guidance Appendix C, includes a USEPA 2001 Building Assessment and Survey Evaluation (BASE) Database which provides background levels of commercial and public buildings for comparison purposes for compounds not listed in the October 2006 NYSDOH guidance. For the purpose of this evaluation, the 90th percentile values were utilized. *It should be noted that this database is referenced to provide a relative benchmark for comparison to the indoor air sampling data, but does not represent regulatory standards or compliance values*.

The following is a summary of the sample results:

- Comparing the indoor air sample results to the NYSDOH Table 3.1 Indoor Air Guideline Values, no results were detected at concentrations above these values.
- For compounds compared to the USEPA BASE Database 90th Percentile, the following summarizes the overall results:

- 1,3,5-Trimethylbenzene was detected above the USEPA BASE Database 90th Percentile of 3.7 micrograms per cubic meter (ug/m^3) at sample locations IA-01 (6.3 ug/m^3), IA-03 (4.7 ug/m^3), and IA-04 (4.1 ug/m^3) (including the IA-04 blind sample duplicate (4.6 ug/m^3)).
- Ethylbenzene was detected above the USEPA BASE Database 90th Percentile of 5.7 ug/m^3 at sample locations IA-01 (7.4 ug/m^3), IA-02 (9.1 ug/m^3), IA-03 (13 ug/m^3), IA-04 (18 ug/m^3) (including the IA-04 blind sample duplicate (19 ug/m^3)), IA-05 (9.6 ug/m^3), and IA-Basement (7.8 ug/m^3).
- O-Xylene was detected above the USEPA BASE Database 90th Percentile of 7.9 ug/m^3 at sample locations IA-02 (8.2 ug/m^3), IA-03 (16 ug/m^3), IA-04 (18 ug/m^3) (including the IA-04 blind sample duplicate (5.9 ug/m^3)), and IA-05 (8.7 ug/m^3).
- Styrene was detected above the USEPA BASE Database 90th Percentile of 1.9 ug/m^3 at sample locations IA-01 (5.1 J ug/m^3), IA-03 (6.9 ug/m^3), and IA-04 (5.2 ug/m^3) (including the IA-04 blind sample duplicate (5.9 ug/m^3)).

The presence of 1,3,5-Trimethylbenzene, Ethylbenzene, o-Xylene, and Styrene appear to represent an indoor air source rather than a SVI concern. The compounds 1,3,5-Trimethylbenzene, Ethylbenzene, o-Xylene, and Styrene are commonly used in different types of paints, wood stains, caulks, and cement sealing compounds that were being stored at the Site at the time of sampling and recently used as part of the construction work. These items have been documented in the NYSDOH Indoor Air Quality Questionnaire and Building Survey. In addition, the compound Styrene was not detected at concentrations above the laboratory method detection limit in any of the soil and groundwater samples tested at the Site. Furthermore the primary chemicals of concern at the Site are TCE and its breakdown products. These compounds were generally not detected at concentrations above the laboratory method detection limit in the indoor air samples indicating the SSDS is effectively addressing potential SVI concerns for the Site building.

The NYSDEC requested further evaluation of the SSDS to approve the Change of Use (COU) for occupancy of the Site building. The further evaluation of SSDS included additional information be provided regarding the building heating, ventilation and air conditioning (HVAC) system and supplemental PFE testing. This information was provided to the NYSDEC in a letter dated November 5, 2020. Based on the evaluation, the NYSDEC conditionally approved the COU occupancy of the Site in a letter November 10, 2020. A part of the conditional COU approval, the NYSDEC requested an additional round of indoor air samples and further PFE testing during the heating season and when the building was occupied.

As required by the conditional COU approval an additional round of indoor air samples and PFE readings were collected during the heating season on January 19 and 20, 2021, and when the building was occupied. The indoor air sample were collected using the same methodology and at the same general locations as the samples collected in September 2020, and in accordance with the Indoor Air Sampling Work Plan dated September 14, 2020 and conditionally approved by the NYSDEC on September 30, 2020. Prior to sampling, a NYSDEC accepted fact sheet informing the tenants of the indoor air sampling was posted adjacent to each entrance to the Site building on January 5, 2021.

As required by the NYSDEC, PFE readings were collected prior to the start and at the end of the indoor air sampling event. PFE readings are summarized below:

Table 2.1.12B – January 2021 Pressure Field Extension Measurements

Monitoring Point ID	Prior to Indoor Air Sampling 01/19/2021	Post Indoor Air Sampling 01/20/2021
	Vacuum/Pressure (in-H20)	
#1	-0.030	-0.023
#2	-0.046	-0.065
#3	-0.019	-0.038
#4	-0.027	-0.044

Monitoring Point ID	Prior to Indoor Air Sampling 01/19/2021	Post Indoor Air Sampling 01/20/2021
#5	-0.014	-0.016
#6	-0.006	-0.006
#7	-0.057	-0.066
#8	-0.079	-0.083
#9	-0.014	-0.014
#10	-0.005	-0.019

A Velocicalc Model 9565 manometers with data logging capabilities were connected to point #9 to collect continuous pressure readings throughout the sampling period at 1 minute intervals. The monitoring data and graph from point #9 are included with the notes in Appendix D. A total of 1,529 readings were data logged at monitoring point #9, however, 1 reading (#237 of the data logger form) was detected less than -0.004 inches of water column (IWC) at -0.003 IWC. The prior and subsequent readings were -0.009 IWC and -0.010 IWC, respectively. The average reading at point #9 during the monitoring period was -0.015 IWC. As such, the 1 -0.003 IWC reading is considered an anomaly and not representative of typical sub-slab depressurization conditions. The PFE measurements indicated there was generally sufficient negative pressure (i.e. a minimum of -0.004 inches of water column) at each monitoring location in both the manually and continuously collected data.

Air samples were collected utilizing individually certified-clean 1 liter or 1.6 Liter Summa® canisters (or equivalent) equipped with laboratory calibrated flow controllers. The indoor air samples were collected at a height of approximately 3 to 5 ft above the floor or ground surface to simulate the breathing zone. The outdoor air sample was collected on the building roof. Immediately after opening each Summa® canister, the initial vacuum (inches of mercury) and time was noted and recorded on the laboratory chain-of-custody. After approximately 24-hours, the final vacuum readings (inches of mercury) were noted and the Summa® canisters were closed. All samples were collected over the same general time period and in the same manner at all locations.

Samples were sent under chain of custody control to a NYSDOH Environmental Laboratory Approval Program certified laboratory for testing. The samples were tested for VOCs using United States Environmental Protection Agency Method TO-15. In addition, a blind sample duplicate and a matrix spike/matrix spike duplicate (MS/MSD) were collected as part of the sampling in accordance with the NYSDEC approved work plan. A DUSR was generated by Dataval, Inc. and indicated that the "Reported data should be considered technically defensible and completely usable in its present form."

As part of the sampling work, the NYSDOH Indoor Air Quality Questionnaire and Building Survey was completed. Several types of paints, wood stains, caulks, and cement sealing compounds were observed throughout the building's basement at the time of the sampling.

The sample results were compared to the guidance values listed in Table 3.1 of the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 (included updates). In addition, the NYSDOH SVI Guidance Appendix C, includes a USEPA 2001 Building Assessment and Survey Evaluation (BASE) Database which provides background levels of commercial and public buildings for comparison purposes for compounds not listed in the October 2006 NYSDOH guidance. For the purpose of this evaluation, the 90th percentile values were utilized.

The following is a summary of the sample results:

- Comparing the indoor air sample results to the NYSDOH Table 3.1 Indoor Air Guideline Values, the following summarizes the overall results:
    - TCE was detected the sample collected from the basement (i.e. IA-Basement-011921) at 290 ug/m^3, which is above the NYSDOH Indoor Air Guideline of 2.0 ug/m^3.
- For compounds compared to the USEPA BASE Database 90th Percentile, the following summarizes the overall results:

- TCE was detected the sample collected from the basement (i.e. IA-Basement-011921) at 290 ug/m^3, which is above the NYSDOH Indoor Air Guideline of 4.2 ug/m^3.

Due to the elevated concentrations of TCE in the basement, the NYSDEC was provided the results on January 26, 2021. The first floor residential apartment units were below standards and consistent with indoor air testing results conducted in September 2020. On January 27, 2021, measures were taken to identify and mitigate the potential source of TCE within the basement

- The walls and floor were visibly checked for cracks where there is a potential for SVI. Any cracks or gaps observed were patched or sealed.
- The sump in the basement was sealed and the sump discharge piping was modified from an open discharge location to solid discharge piping.
- A ppbRae was used to screen the basement for potential areas where there could be SVI.
- The paint cans and other building materials used for the recent building renovation present within the basement were removed from the Site.
- The basement discharge fan was switch from a model GP-501 to RP-265 to increase air flow beneath the sub slab.
- Since there are not HVAC systems within the basement space, the GP-501 fan was used to exhaust the indoor basement air to the exterior of the building from February 4, 2021 to 9:00am February 9, 2021. A box fan was also used in the basement during this time to help circulate air within the basement space.

Northern UST Removal

The UST previously located on the northern portion of the Site was removed on July 13 and July 14, 2020. This UST was originally discovered by LaBella during the May 24, 2019 Site

preparation meeting. Approximately 8.5-inches of oily water were measured in the tank at that time. Liquid was pumped from this tank as well as the Southern UST and the building basement on November 13, 2019. Note that the Southern UST was removed in December 2019 and was documented in the CCR for Tank Removals and Construction Related Activities, previously submitted to the NYSDEC under separate cover. The Northern UST could not be removed prior to July 2020 due to the presence of a temporary construction electrical line in the immediate vicinity of the tank. As indicated in the disposal documentation included in Appendix I, a total of 1,845-gallons of liquid were pumped from the two USTs and the building basement on November 13, 2019. Based on initial measurements collected on May 24, 2019, approximately 120-gallons of oily water were pumped from the Northern UST on November 13, 2019.

LaBella initially mobilized to the Site on July 13, 2020 and the Northern UST was removed on July 14, 2020. Prior to removal, the tank was uncovered and non-petroleum impacted soil from the top approximately 2-ft of the soil column was staged in a separate pile on and covered by poly-sheeting. This material was characterized and on August 7, 2020 was loaded in a roll-off dumpster, characterized and transported to High Acres Landfill for disposal with the impacted soil.

The tank measured approximately 10-ft, 8-inches long and 4-ft in diameter indicating it was approximately 1,000 gallons in size. The City of Rochester Fire Marshal observed the tank removal work to confirm compliance with City of Rochester regulations. A permit was obtained from the City of Rochester for the tank removal and included in Appendix F. Note that the permit was issued for a 1,000-gallon UST and a 500-gallon UST. The 1,000-gallon UST identified in the permit is the Southern UST, removed in December 2019 and documented in a separate CCR. The 500-gallon UST mentioned in the permit is the Northern UST, which is actually 1,000-gallons in capacity.

The tank was cleaned and one (1) drum of tank bottoms (sludge and rinse water) was generated. This drum was subsequently transported off-Site by Sun Environmental Corporation for disposal at Cycle-Chem, Inc. in Lewisberry, PA on July 30, 2020.

As part of removal, the UST was rendered inert by adding carbon dioxide into the tank. The final meter readings on the tank approved for removal by the City of Rochester Fire Marshal were 0% percent LEL and 14% percent oxygen. The tank was then removed from the subsurface and placed onto a LaBella trailer, cleaned, and transported to Metalico, Inc. in Rochester, NY and disposed as scrap metal. The UST was constructed of steel and was observed to have pitting and dime-sized holes in the tank.

Following the removal of impacted soil, confirmatory samples were collected from the northern, southern, eastern and western sidewalls as well as the excavation bottom. The following table summarizes sample depths.

Table 2.3.12C – Northern UST Confirmatory Sample Summary

Sample ID	Sample Depth (below ground surface)	Maximum PID Reading (PPM)
SW-North-G-071420	8.5-ft	424.2 PPM
SW-South-G-071420	8.0-ft	10.9 PPM
SW-East-G-071420	8.0-ft	12.0 PPM
SW-West-G-071420	8.7-ft	10.0 PPM
Bottom-G-071420*	9.0-ft	19.3 PPM

*Matrix spike/matrix spike duplicate and duplicate samples collected with this sample.

Samples were submitted for analysis of USEPA TCL and NYSDEC CP-51 list VOCs and up to 20 tentatively identified compounds (TICs) using USEPA Method 8260 and USEPA TCL and CP-51 list SVOCs and up to 20 tentatively identified compounds (TICs) using USEPA Method 8270. As shown on attached Tables 2A and 2B, all samples results met the Restricted Residential Use SCOs with the exception of the sample collected from the northern sidewall ("SW-North-G-071420"). This sample was collected below an approximately 12-inch thick concrete slab that appeared to be associated from a former structure (possibly a basement slab). The excavation could not be extended further north due to the presence of this structure. Naphthalene and 1,2,4-trimethylbenzene were both identified above their respective Restricted Residential SCOs as well as Unrestricted Use and Protection of Groundwater SCOs in the northern sidewall sample.

In addition, several other petroleum-related VOCs were detected above the Unrestricted Use and Protection of Groundwater SCOs but below Restricted Residential SCOs in this sample. VOCs were not detected above SCOs in any other confirmatory samples. SVOCs were not detected above SCOs in any confirmatory samples.

RAOC #1 Groundwater Monitoring

Post injection groundwater monitoring was conducted subsequent to the injection of sodium permanganate in April 2020 at approximately 6 weeks (May 2020) and 12 weeks (June 2020) followed by quarterly groundwater monitoring in September and December 2020. The 6 and 12 week post injection groundwater monitoring results and associated laboratory reports and DUSRs have been provided in the CCR for RAOC #1 and RAOC #2. As such, the results for the September and December 2020 groundwater sampling events are provided in the FER. Groundwater monitoring wells BW-01, BW-03, RIMW-02, RIMW-04, RIMW-16R, RIMW-19S, RIMW-19S, SB-MW-07, SB-MW-14, SB-MW-15, and SB-MW-16 were sampled during the September and December 2020 sampling events. Samples were collected in accordance with the NYSDEC approved IRM Work Plan, the NYSDEC approved IRM RAOC #1 Design

Document and LaBella's Quality Control Plan included in Appendix 3 of the IRM Work Plan which included collection of MS/MSD and duplicate samples for each event.

Samples were sent under chain of custody control to a NYSDOH Environmental Laboratory Approval Program certified laboratory for testing. The samples were tested for VOCs using United States Environmental Protection Agency Method 8260. A DUSR was generated by Dataval, Inc. and indicated that the "Reported data should be considered technically defensible and completely usable in its present form.

As part of the September and December 2020 groundwater sampling events, a round of SWLs were collected from each well present at the time of sample, as well as observations of NAPL and sodium permanganate. The observations of NAPL and sodium permanganate in each well were recorded on the groundwater sample logs. SWLs collected during the September and December 2020 sampling events.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated February, 2021 are as follows:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.5 Remaining Contamination

Remaining contamination at the Site is detailed below and refers to soil impacts above Unrestricted Use SCOs, Protection of Groundwater SCOs, and Restricted Residential Use SCOs; and groundwater impacts above Part 703 Groundwater Standards or NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 values. Additionally PFAS samples have been compared to values put forth in the January 2020 NYSDEC Guidelines for Sampling and Analysis of PFAS.

2.5.1 Soil Remaining Contamination

Remaining contamination in soil is summarized on Tables 2.5.1A (VOCs), 2.5.1B (SVOCs), 2.5.1C (metals), 2.5.1D (pesticides) and 2.5.1E (PFAS) and summarized on Figure 6.

AOC #1

CVOC impacts in soil above Unrestricted Use, Protection of Groundwater, and Restricted Residential SCOs have been identified in soil beneath the southern and eastern portions of the Site building, north of the Site building and off-site in the right-of-way just south of the Site building. Depths of detections above Unrestricted Use SCOs ranged from 6-ft bgs to 26.9-ft bgs with the highest impacts generally around 10-ft to 14-ft bgs or on top of bedrock within the footprint of the Site building. The source area of contamination appears to be located beneath the southwestern quadrant of the Site building in the general location of RIBW-A, RIMW-18 and RIMW-17. It should be noted that an active sewer line is located immediately north of the Site building at approximately 8-ft bgs.

Contaminants concentrations remained below Protection of Groundwater SCOs throughout the Site with the exception of TCE in two soil samples collected from RIBW-A at depths of 10.5-ft bgs (98 ppm) and 21.2-ft bgs (27 ppm in sample and 32 ppm in duplicate). Several samples collected from RIBW-A indicate the vertical extent of soil impacts range from approximately 6.5-ft bgs to the top of bedrock around approximately 21.5-ft bgs.

Only one of the off-Site investigation locations identified CVOCs above applicable soil clean up objectives. Specifically, TCE was detected in SB-08 (0.495 ppm) above Unrestricted Use and Protection of Groundwater SCOs. SB-08 is located in the right-of-way just south of the southeastern corner of the Site building.

Note that the samples discussed in this section were collected prior to ISCO treatment in March 2020. CVOC impacts to soil in this area of the Site have likely decreased since the injection of sodium permanganate. The approximate extent of the overburden treatment area is shown on Figure 6A.

AOC #3

Remaining petroleum contaminated soil is located at boring location RIGP-11 and confirmatory soil sample location SW-NORTH-G-071420 which are in the vicinity of the former UST ("Northern UST"). Contaminants were located at 12.5-ft bgs (in RIGP-11 and at 8.5-ft bgs in the north sidewall confirmatory sample collected during the removal of the Northern UST. Several compounds remain at concentrations above Unrestricted Use SCOs and above Protection of Groundwater SCOs including 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, n-propylbenzene, naphthalene, and p/m-xylene and toluene.

AOC #4

Acetone was identified above Unrestricted Use SCOs in a confirmatory sample designated as TANK-NORTH-122019 collected at a depth of 8-ft bgs following the removal of the Southern UST (formerly located immediately east of the Site building). In addition, lead (metal) and 4,4'-DDT (pesticide) have been identified from 2-ft to 5-ft bgs above Unrestricted Use SCOs at RIGP-06 that are likely related to fill material identified in the soil.

2.5.2 Groundwater

Remaining contamination in groundwater is summarized on Tables 2.5.2A (VOCs), 2.5.2B (SVOCs), 2.5.2C (Metals), 2.5.2D (PCBs) and 2.5.2E (PFAS). In addition, Figures 7A and 7B summarize the remaining impacts in groundwater above Part 703 Groundwater Standards or NYSDEC Technical and Operation Guidance Series (TOGS) 1.1.1 values.

Several wells were destroyed during development of the Site or decommissioned as part of IRM activities. It should be noted that VOC sample data for wells that were decommissioned prior to the application of sodium permanganate within the treatment area (shown on Figure 7A), is included in the remaining contamination tables for information purposes, but omitted from Figure 7A.

AOC #1

CVOCs including PCE, TCE, and cis-1,2,-DCE are present in the overburden and bedrock groundwater at the Site at elevated concentrations. Additional CVOCs including vinyl chloride, trans-1,2-dichloroethene and 1,1-dichloroethene are also present at concentrations above applicable standards however are generally lower in concentration and less common than PCE, TCE and cis-1,2-DCE.

Although ISCO treatment has reduced maximum concentrations, TCE, PCE and cis-1,2-dichloroethene remain in overburden groundwater at concentrations up to 120,000 ppb (estimated) (SB-MW-14), 6,300 ppb (estimated) (SB-MW-14) and 260 ppb (SB-MW-15), respectively based on the most recent data collected from wells following groundwater treatment within AOC #1. The approximate extent of the overburden treatment area is shown on Figure 7A. Well SB-MW-14 is located immediately south of the source/treatment area and well SB-MW-14 is located downgradient to the east of the source/treatment area. TCE, PCE and cis-1,2-dichloroethene remains in bedrock groundwater at concentrations up to 16,000 ppb (BW-01), 68 ppb (estimated) (BW-01) and 8,700 ppb (estimated) (BW-03).

Horizontally, CVOC contamination appears to be migrating from the source area located beneath the southwestern quadrant of the Site building to the south and northwest based on data collected from the wells located off-Site within the Hudson Avenue and Avenue D right-of-ways. The groundwater contamination in the overburden groundwater and bedrock groundwater both appear to be moving with the general direction of groundwater flow to the northwest.

AOC #3

Petroleum related compounds in groundwater remaining at the Site above applicable standards include benzene, p/m-xylene, naphthalene, ethylbenzene, n-propylbenzene, p-isopropyltoluene, sec-butylbenzene, 1,3,5-trimethylbenzene and 1,2,4-trimethylbenzene. Petroleum impacts are generally located in the following separate discrete locations which include the northwestern quadrant of the Site building, immediately east of the Site building near a former UST ("Southern UST") and former ASTs, and in the northeast corner of the Site near the location of a former UST ("Northern UST"). Concentrations of individual petroleum related compound in overburden groundwater range from 1.1 ppb (benzene in RIMW-14) to 67.8 ppb (1,2,4-trimethylbenzene in SB-MW-04). Additionally, benzene remains in bedrock groundwater in wells RIBW-B (1.4 ppb), RIBW-C (7 ppb) and BW-02 (2.3 ppb).

AOC #4

Several miscellaneous contaminants were detected in discrete locations in groundwater that remain at the Site. The remaining contaminations include VOCs, SVOCs, metals, PCBs and PFAS and are described in more detail below.

VOCs including chloroform, 2-butanone remain in overburden groundwater locations SB-MW-10 and SB-MW-12, respectively, at concentrations exceeding groundwater standards. The compounds were only detected in one location and therefore are not widespread. Acetone was detected in the nested overburden/bedrock groundwater wells RIMW-19S and RIMW-19D as wells as bedrock groundwater at BW-02 and BW-03.

SVOCs including benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene were detected in overburden groundwater in RIMW-17 at concentrations ranging from 0.04 ppb to 0.22 ppb. The presence of PAHs in water may be a result of historical manufacturing or due to elevated turbidity during sampling given their very low solubility in water. RIMW-17 is located in the southwestern portion of the Site building. Additionally naphthalene was detected at 11 ppb overburden groundwater in the duplicate sample for RIMW-11 located in the northeastern portion of the Site near the location of the former UST ("Northern UST").

Several metals were detected at concentrations above applicable standards in samples RIMW-08, RIMW-11, RIMW-12 and RIMW-17 located in the southeast corner of the Site, northeastern portion of the Site, northeastern portion of the Site building and southeastern portion of the Site building, respectively. Concentrations were attributed to turbidity in samples collected during the RI and likely not representative of actual groundwater concentrations.

Total PCBs (0.185 ppb) consisting of aroclors 1254 and 1260 were detected in overburden groundwater at RIMW-08 located in the southeastern corner of the Site exceeding applicable groundwater standards.

PFAS concentrations remain in overburden groundwater exceeding the NYSDEC Guidelines for Sampling and Analysis of PFAS remaining at RIMW-11. PFOA (11.9 ppt) and PFOS (10.7 ppt) were both detected exceeding the 10 ppt standard for the compounds and PFBA was detected above the 100 ppt value set for all other PFAS. RIMW-11 is located in the northeastern portion of the Site in the same area where surface soil samples detected low levels of PFAS.

2.5.3 Soil Gas

Although there are currently no comparison criteria for soil gas, it should be noted that VOCs were detected above laboratory MDLs in the soil gas samples located along the perimeter of the Site that were sampled as part of the RI. Soil gas sample results are summarized on Table 2.5.3 (attached) and Figure 7C.

2.5.4 Building Materials Containing Radiation

Although all elevated building materials containing elevated radioactivity have been remediated (i.e. removed from the Site) it should be noted that materials containing NORM remain at the Site. The NORM materials include clay tiles located at the southwestern area of first floor and material within the sump. The clay tile on the first floor was covered with cement and the former sump located on the first floor has been filled with concrete as part of the building development. The NORM is below standards and does not represent an exceedance. The locations from which the radioactive materials were removed and where the NORM materials remain in place are shown on Figure 6B.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

Since remaining contamination exists at the site, Institutional Controls (ICs) and Engineering Controls (ECs) are required to protect human health and the environment. This IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the site. The IC/EC Plan is one component of the SMP and is subject to revision by the NYSDEC project manager.

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix D) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC project manager.

3.2 Institutional Controls

A series of ICs is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to restricted residential, commercial, and industrial uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 2. These ICs are:

- The property may be used for : restricted residential; commercial, and industrial use;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.

- Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building from soil and/or groundwater within the IC boundaries noted on Figure 2;
- Vegetable gardens and farming on the site are prohibited; and
- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

3.3 Engineering Controls

3.3.1 Cover (or Cap)

Exposure to remaining contamination at the site is prevented by a cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, and concrete building slabs. Figure 8 presents the location of the cover system and applicable demarcation layers. The Excavation Work Plan (EWP) provided in Appendix D outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Special CAMP and Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix E. Any disturbance of the site's cover system must be overseen by a qualified environmental professional as defined in 6 NYCRR Part 375, a Professional Engineer (PE) who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

3.3.2 Groundwater Treatment Systems (GTS)

The groundwater treatment system consists of seventeen (17) overburden and nine (9) bedrock treatment wells within the southwestern portion of the Site building on the ground level (i.e., first floor). The overburden and bedrock treatment wells were installed during the period from January 20, 2020 to March 5, 2020. Overburden and bedrock treatment wells were spaced approximately 12 to 16 ft apart. The overburden treatment wells extended to the top of bedrock (approximately 20-21.5 ft below the current finished floor) and the bedrock treatment wells extended approximately 10 ft into the top of bedrock. Sodium permanganate was injected into the overburden treatment wells between the dates of March 9, 2020 to March 20, 2020.

One inch horizontal piping was installed beneath the first floor and connected to each treatment well to allow for the treatment chemical to be pumped or gravity fed from outside of the building while the Site building is occupied. The subgrade treatment system beneath the first floor was installed between the dates of March 31, 2020 to April 15, 2020.

Each horizontal 1-inch diameter PVC pipe was connected to each well head beneath the floor that was routed to a header pipe in the basement by coring a section through the concrete basement wall. The cored section was drilled at the elevation of the trenching through the basement wall which is approximately 8-feet above the basement floor. The 1-inch diameter pipes connected to each individual well (routed through the basement wall) and each connected to an individual shut off valve that will allow future applications of the treatment chemical to be targeted to a specific well/area.

The header pipes were routed just below the basement ceiling through the eastern exterior building wall. Piping was installed at a minimum of ¼ inch per foot pitch towards the treatment wells so that treatment chemical will not be trapped within the piping and allow treatment chemicals to be gravity fed into the treatment wells. On the exterior of the building, a header pipe was terminated and a locking cap outside of the eastern building wall where the treatment chemical can be applied for future injections. Refer to Figure 9A for the piping and well locations, Figure 9B for the general schematic of the treatment wells, and Figure 9C cross section (not to scale) for the treatment system, and. Refer to Appendix C for as-built construction diagram for each treatment well.

Procedures for operating and maintaining the groundwater treatment system are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). As built drawings, signed and sealed by a professional engineer, are included in Appendix F – Operations and Maintenance Manual.

3.3.3 Sub-Slab Depressurization System (SSDS)

Based on the presence of CVOCs within the soil and groundwater beneath the Site building, an SSDS was installed to mitigate the potential for SVI. In addition to the continual operation of the SSDS, that includes annual monitoring of the pressure field extension (PFE) monitoring points as well and annual monitoring of the SSDS that includes a check of the manometer and audible alarm for each SSDS. The layout and components of the SSDS system is shown on Figure 10A and SSDS details are shown on Figure 10B.

The SSDS was designed to depressurize the entire building footprint that includes the ground level (approximately 5,000-square feet) and the basement (approximately 1,000-square feet). Two (2) separate systems were installed; one (1) in the basement and one (1) on the ground level. A RadonAway model GP501 fan is used to depressurize the first floor and a RadonAway model RP265 fan is used to depressurize the basement.

The system was designed in accordance with the NYSDOH Final Guidance for Soil Vapor Intrusion in the State of New York dated October 2006. The installation of the additional vent systems was initiated on December 2019 and was substantially completed in August 2020. The SSDS was started on August 21, 2020.

Procedures for operating and maintaining the SSDS are documented in the Operation and Maintenance Plan (Section 5.0 of this SMP). As built drawings, signed and sealed by a professional engineer, are included in Appendix F – Operations and Maintenance Manual.

3.3.4 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when 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 6.4 of NYSDEC DER-10. Unless waived by the NYSDEC, confirmation samples of applicable environmental media are required before terminating any remedial actions at the site. Confirmation samples require Category B deliverables and a Data Usability Summary Report (DUSR).

As discussed below, the NYSDEC may approve termination of a groundwater monitoring program. When a remedial party receives this approval, the remedial party will decommission all site-related monitoring, injection and recovery wells as per the NYSDEC CP-43 policy.

The remedial party will also conduct any needed site restoration activities, such as asphalt patching and decommissioning treatment system equipment. In addition, the remedial party will conduct any necessary restoration of vegetation coverage, trees and wetlands, and will comply with NYSDEC and United States Army Corps of Engineers regulations and guidance. Also, the remedial party will ensure that no ongoing erosion is occurring on the site.

3.3.4.1 Cover (or Cap)

The composite cover system or site cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

3.3.4.2 Sub-Slab Depressurization System

The active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH project managers. If monitoring data indicates that the SSD system may no longer be required, a proposal to discontinue the SSD system will be submitted by the remedial party to the NYSDEC and NYSDOH project manager.

3.3.4.3 Groundwater Treatment System (GTS)

The GTS will not be discontinued unless prior written approval is granted by the NYSDEC project manager. In the event that monitoring data indicates that the GTS system may no longer be required, a proposal to discontinue the system, including the results of an impact study, will be submitted by the remedial party. Conditions that may warrant discontinuing the GTS include contaminant concentrations in groundwater that: (1) reach levels that are consistently below ambient water quality standards or the site SCGs as appropriate, (2) have become asymptotic to a low level over an extended period of time as accepted by the NYSDEC project manager; or (3) the NYSDEC project manager has determined that the GTS has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC project manager. Discontinuing the system will involve the removal of the treatment piping within the basement and capping the treatment piping that extend through the basement wall to each treatment well.

Groundwater monitoring activities to assess the GTS will continue, as determined by the NYSDEC project manager in consultation with NYSDOH project manager, until residual groundwater concentrations are found to be consistently below ambient water quality standards or the site SCGs, or have become asymptotic at an acceptable level over an extended period. If monitoring data indicates that monitoring may no longer be required, a proposal to discontinue the remedy will be submitted by the remedial party. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC project manager. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional injections, source removal, treatment and/or control measures will be evaluated.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC project manager. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Control Program provided in Appendix G.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils, etc.);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

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

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and

- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site-wide Inspection

Site-wide inspections will be performed annually or at a minimum of once per year. These periodic inspections must be conducted when the ground surface is visible (i.e. no snow cover). Site-wide inspections will be performed by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or duration of the inspections will require approval from the NYSDEC project manager. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix H – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- Whether stormwater management systems, such as basins and outfalls, are working as designed;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and
- If site records are complete and up to date.

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC project manager must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 calendar days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as defined in 6 NYCCR Part 375. Written confirmation must be provided to the NYSDEC project manager within 7 calendar days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.3 Treatment System Monitoring and Sampling

4.3.1 Remedial System Monitoring

Monitoring of the Site Cover, SSDS, and GTS will be performed on a routine basis, as identified in Table 4.3.1 Remedial System Monitoring Requirements and Schedule (see below). The monitoring of remedial systems must be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager. A visual inspection of the complete system will be conducted during each monitoring event. Unscheduled inspections and/or sampling may take place when a suspected failure of the Site Cover, SSDS, and GTS system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Site Cover, SSDS, and GTS system components to be monitored include, but are not limited to, the components included in Table 4.3.1 below.

Table 4.3.1 – Remedial System Monitoring Requirements and Schedule

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
SSDS			
Fans	Pressure	Should be within typical operating range	Quarterly for the first year then annually or as-needed*
Fans	Pressure Field Extension	Sub-Slab Pressures a minimum of 0.004 inches of water column lower than indoor air pressure or consistent with historic measurements	Quarterly for the first year then annually or as-needed

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
Alarms and piping	Operational/condition	Minimum 0.25 inches of water columns for fans or consistent with historic measurements	Quarterly for the first year then annually or as-needed*
Site Cover			
Building slab, Concrete Surface, Asphalt Surface	Condition of Cover	Should be no signs of cracks; no deterioration; the asphalt, building slab, concrete surface and no asphalt or concrete surfaces are missing.	Annually
Soil Cover or Vegetative Surface	Condition of Cover	Should be no signs of erosion, ruts, etc.; vegetative cover is intact and growing; etc.	Annually
GTS			
Visible General System Piping	Operational/condition	Should be no signs of cracks, breaks, leakage, or deterioration of piping.	Annually or as-needed

*Annual monitoring for the SSDS will be contingent upon the results of the quarterly monitoring.

A complete list of components to be inspected is provided in the Inspection Checklist, provided in Appendix H - Site Management Forms. If any equipment readings are not within their specified operation 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, is required immediately.

4.3.2 Remedial System Sampling

No remedial system sampling is required as part of the engineering controls at the Site. However, long-term groundwater sampling to assess remedy effectiveness will be completed as described in Section 4.3.3. As such, groundwater purge water is the only anticipated waste to be generated.

The remedial party will properly dispose of all groundwater purge water at off-site disposal facilities according to local, state and federal laws and regulations. Wastes will be tested before disposal to comply with the permit conditions of the disposal facility. Long-term groundwater sampling to assess remedy effectiveness will be completed as described in Section 4.3.3.

4.4 Post Remediation Media and Monitoring and Sampling

Samples shall be collected from the GTS on a routine basis. Sampling locations, required analytical parameters and schedule are provided in Table 4.4 – Remedial System Sampling Requirements and/or Sampling Requirements, and Schedule below. The sampling frequency may only be modified with the approval of the NYSDEC project manager. This SMP will be modified to reflect changes in sampling plans approved by the NYSDEC project manager.

Table 4.4 – Post Remediation Sampling Requirements and Schedule

Sampling Location	Analytical Parameters	Schedule
	TCL VOCs (EPA Method 8260)	
Wells: BW-01, BW-03, RIBW-C, RIMW-02, RIMW-04, RIMW-05, RIMW-16R, RIMW-19S, RIMW-19D, SB-MW-07, SB-MW-15, SB-MW-16	X	Quarterly for the first year then semi-annually*

Notes:

** Annual sampling will be continued after year 5 unless a reduced or altered frequency is approved by the NYSDEC Project Manager.*

Detailed sample collection and analytical procedures and protocols for groundwater are provided in Appendix G – Quality Control Program and discussed below. Location of the monitoring wells to be sampled are shown on Figure 11.

Wells will be sampled using low-flow techniques (e.g. bladder or peristaltic pump) and water quality parameters will be recorded at 3 or 5 minute intervals. Samples will be collected once the parameters have stabilized as noted below:

- Water level drawdown (<0.3')
- Temperature (+/- 3%)
- pH (+/- 0.1 unit)
- Dissolved oxygen (+/- 10%)
- Specific conductance (+/- 3%)
- Oxidation reduction potential (+/- 10 millivolts)
- Turbidity (+/- 10%, <50 NTU for metals)

If a treatment chemical is observed in a well, a sample may be collected with a bailer only or low flow pump (e.g. peristaltic or bladder) without the collection of the water quality parameters to avoid damage to the sampling equipment.

As an alternative to low-flow sampling methods, passive diffusion bag (PDB) samplers may be used to collect groundwater samples. Groundwater samples that are collected via passive methods (i.e., no-purge) will be collected according to the following procedures:

- PDB samplers will be deployed by hanging in the well at the middle of the well screen unless a low water table, need to deploy multiple samplers or the targeting of a specific depth interval is identified. The PDB samplers will be deployed at least 14 days prior to sampling.
- The PDB samplers will be deployed using a Teflon® coated string or synthetic rope.
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions at the time of sampling will be recorded. Each groundwater sample collected for laboratory analysis will be labeled and preserved in accordance with the QCP.

Laboratory sampling will include analysis of sample blanks as follows: one trip blank for VOC analysis only. The blanks will be provided at a rate of one per 20 samples collected for each parameter group, or one per shipment, whichever is greater. Additionally, one (1) Matrix Spike/Matrix Spike Duplicate (MS/MSD) and one (1) duplicate sample will be collected and analyzed for each twenty samples collected for each parameter group, or one per shipment, whichever is greater. Duplicate samples will be submitted to the laboratory as blind duplicates. The samples will be delivered under Chain of Custody procedures to a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratory. A NYSDEC ASP Category B Deliverables data package will be developed for all final samples or samples collected to modify the remedial component of the remedy but not for any routine monitoring samples. In addition, a DUSR will be completed for all ASP-B laboratory data packages per DER-10 for any final samples. When completed, the DUSRs will include the laboratory data summary pages showing corrections made by the data validator and each page will be initialed by the data validator. The laboratory data summary pages will be included even if no changes were made.

4.4.1 Groundwater Sampling

Groundwater monitoring will be performed quarterly for the first year (i.e. year 1) then semi-annually for years 2 to 5 to assess the performance of the remedy. The modification to the frequency of the groundwater monitoring will be contingent upon the response of the groundwater injections and the extent of rebound observed in the groundwater concentrations. Modification to the frequency or sampling requirements will require approval from the NYSDEC project manager.

The network of monitoring wells has been installed to monitor upgradient, on-site (within the contaminant plume) and downgradient groundwater conditions at the site. The network of on-site and off-site wells has been designed based on the following criteria:

- Monitor the performance of the injection of an In-Situ Chemical Oxidation (ISCO) or other types treatment chemicals in RAOC #1.
- Monitor the off-site migration of chemicals of concern at RAOC #1.

The monitoring well network includes five (5) sentinel wells that monitor downgradient plume migration. Sentinel wells are uncontaminated wells located directly downgradient of the plume and upgradient of sensitive receptors. The monitoring well network for this site includes the following sentinel wells: RIMW-05, RIBW-C, SB-MW-07, SB-MW-07, and BW-03.

Table 4.4.1 summarizes the wells identification number, as well as the purpose, location, depths, diameter and screened intervals of the wells. As part of the groundwater monitoring, 4 upgradient wells, 3 on-site wells within treatment area/plume, and 5 downgradient wells are sampled to evaluate the effectiveness of the remedial system. The remedial party will measure depth to the water table for each monitoring well in the network before sampling. The remedial party will also check all groundwater monitoring wells for NAPL and the observations will be noted on the groundwater sampling form.

Table 4.4.1 – Monitoring Well Construction Details

Monitoring Well ID	Well Location	Coordinates (longitude/ latitude)	Well Diameter (inches)	Elevation (above mean sea level)			
				Casing	Surface	Screen Top	Screen Bottom
BW-01	Upgradient	-77.598866, 43.1809053	3 7/8" open core	482.30	482.37	455.80	445.80
BW-03	Down-gradient	-77.599089, 43.181066	3 7/8" open core hole	482.25	482.63	459.05	452.85
RIBW-C	Down-gradient	-77.599902, 43.181208	3 7/8" open core hole	482.58	483.00	457.58	447.58
RIMW-02	Upgradient	-77.598815, 43.180950	2" PVC	479.14	475.40	474.14	469.14
RIMW-04	Upgradient	-77.598758, 43.180953	2" PVC	478.46	483.00	473.46	468.46
RIMW-05	Down-gradient	-77.599027 43.181192	2" PVC	482.53	483.00	473.53	458.53
RIMW-16R	Source	-77.587507, 43867447	2" PVC	485.45	488.92	482.92	467.92
RIMW-19S	Source	-77.587763, 43.8674773	2" PVC	485.92	488.92	483.22	468.22
RIMW-19D	Source	-77.587763, 43.8674773	2" PVC	485.67	488.92	466.64	458.14
SB-MW-07	Down-gradient	-77.599089, 43.181000	1" PVC	482.19	482.34	482.42	472.42
SB-MW-15	Down-gradient	-77.599069, 43.180921	1" PVC	482.53	482.61	472.53	462.53
SB-MW-16	Upgradient	-77.598818, 43.180987	1" PVC	475.63	475.39	472.63	467.63

Groundwater sampling will be conducted in accordance with procedures outlined in Section 4.3.3. Locations of the monitoring wells to be monitored are shown on Figure 11.

Monitoring well construction logs are included in Appendix C of this document.

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced, 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 project manager will be notified prior to any repair or decommissioning of any monitoring well for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent Periodic Review Report. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC project manager. Well abandonment will be performed in accordance with NYSDEC's guidance entitled "CP-43: Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be replaced in kind in the nearest available location, unless otherwise approved by the NYSDEC project manager.

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

Deliverables for the groundwater monitoring program are specified in Section 7.0 – Reporting Requirements.

4.4.2 Monitoring and Sampling Protocol

All sampling activities will be recorded in a field book and associated sampling log as provided in Appendix H - Site Management Forms. Other observations (e.g., groundwater monitoring well integrity, etc.) will be noted on the sampling log. The sampling log will serve as the inspection form for the monitoring network. Additional detail regarding monitoring and sampling protocols are provided in the site-specific Quality Control Program provided as Appendix G of this document.

4.5 Indoor Air Sampling Corrective Measures

Per the Site's Decision Document additional indoor air sampling was completed January 2021. The January 2021 sampling event indicated elevated TCE concentrations above NYSDOH guidance values (2 ug/m^3) in the basement area. The basement area is an unoccupied space that contains the building mechanical/utilities. Concentrations in the first-floor residential apartment units were below NYSDOH guidance values and were consistent with indoor air testing results conducted in September 2020.

As a result of elevated concentrations of TCE in the basement indoor air sample, corrective measures have been taken to reduce the concentration of TCE in the basement's indoor air. The following measures have been taken to identify and mitigate the potential source of TCE within the basement.

- The walls and floor were visibly checked for cracks where there is a potential for SVI.
- Any cracks or gaps observed were patched or sealed.
- The sump in the basement was sealed.
- A ppb Rae was used to screen the basement for potential areas where there could be SVI.
- The paint cans and other building materials used for the recent building renovation present within the basement were removed from the Site.
- Installation of a larger fan on that section/leg of the SSDS.

Indoor air screening was completed February 12 and 13, 2021 which indicated a reduction in the basement TCE indoor concentration from 290 ug/m^3 to 98 ug/m^3. The TCE levels were still significantly elevated above NYSDOH guidance value for TCE; therefore, additional mitigative and corrective actions are needed to reduce the TCE concentrations in the basement's indoor air. This will be an ongoing process given the age of the building and the number of penetrations of the basement walls and slab for buildings mechanical and utilities.

Preliminary air sampling of the basement space will be conducted to assess the effectiveness of corrective action measures completed. Preliminary air sampling will be completed consistent with previous preliminary air sampling as detailed in the February 2021 Final Engineering Report.

Clearance indoor air sampling will be completed to confirm TCE concentrations in the basement indoor air will be conducted in accordance with NYSDOH guidance. The clearance indoor air sampling will be completed in accordance with September 2020 Indoor Air Sampling Work Plan. See Appendix M for the work plan.

The BCP Applicant will be responsible for conducting corrective actions in a timely manner until the basement's indoor air TCE concentrations as well as all other Site related contaminants is below the NYSDOH guidance values. The corrective actions undertaken will be presented in a supplement report submitted to the State for review. The corrective measures activities will be complete once the State determines that the TCE and site related contaminant concentrations are consistently below NYSDOH guidance values.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

This Operation and Maintenance Plan provides a brief description of 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 procedures necessary to allow individuals unfamiliar with the site to operate and maintain the Site Cover, SSDS, and GTS systems;
- Will be updated periodically to reflect changes in site conditions or the manner in which the Site Cover, SSDS, and GTS systems are operated and maintained.

Further detail regarding the Operation and Maintenance of the Site Cover, SSDS, and GTS is provided in Appendix F - Operation and Maintenance Manual. A copy of this Operation and Maintenance Manual, along with the complete SMP, is to be maintained at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of this SMP.

5.2 Remedial System (or other Engineering Control) Performance Criteria

The following operating requirements for each remedial system area summarized in Table 5.2. For each element, routine and non-routine maintenance will be documented in the periodic Review Reports.

Table 5.2 - Remedial System Operating Requirements

Remedial System	Operating Requirements	Permit Requirements
Soil Cover	Annual visible inspection for cover condition (including building slabs, concrete, asphalt and soil or landscape	None

Remedial System	Operating Requirements	Permit Requirements
	cover, general photos of cover system	
SSDS	-Annual inspection of system components (i.e. piping, alarm, manometer) -Maintain 0.004 inches of water columns throughout target area or consistent with historical measurements -The above operating requirements for the SSDS will be monitored quarterly for the first year then annually thereafter per Table 4.3.1.	None
Groundwater Treatment System (GTS)	- Groundwater sampling in accordance with Table 4.4 of wells with additional possible injections pending results, piping condition, leaks, etc.	None

5.3 Operation and Maintenance of Sub-slab Depressurization System

The following sections provide a description of the operations and maintenance of the SSDS. Cut-sheets and as-built drawings for the SSDS are provided in Appendix F - Operations and Maintenance Manual. Routine and non-routine maintenance will be documented in the Periodic Review Reports.

5.3.1 System Start-Up and Testing

After the SSDS is installed or modified a start-up test will be performed to evaluate the effectiveness of the SSDS. The first step will be to start each of the SSDS fans on the roof of the building to document that the fans are functioning properly. Once the fans are fully operational at the roof level, a digital micro manometer will be used to collect vacuum readings from the pressure field extension (PFE) monitoring points in the buildings. PFE measurements will generally need to achieve a minimum of 0.004 inches of water vacuum in order to meet the performance requirements of the October 2006 NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. If these criteria are not met, adjustments may be made to the SSDS fans to increase air flow and vacuum influence including replacement of the fans with larger fans, if necessary.

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

Further detail regarding the Operation and Maintenance of the SSDS is provided in Appendix F - Operation and Maintenance Manual.

5.3.2 Routine System Operation and Maintenance

All fans must be kept in continuous operation. Fans must restart automatically in event of power loss. Fans and gauges must be inspected annually to verify that values have not changed significantly and the SSDS is operating. Annual inspection forms will be included in the Periodic Review Report.

Further detail regarding the Operation and Maintenance of the SSDS is provided in Appendix F - Operation and Maintenance Manual.

5.3.3 Non-Routine Operation and Maintenance

In the event of unusual fan noise, failure to start, physical damage or repeated circuit breaker trip, turn fan off and service or replace. Any significant changes in the structure, HVAC systems, slab conditions, etc. will require a re-evaluation of the SSDS. Any non-routine maintenance event will be recorded in a field log book and will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Other repairs or adjustments made to the system;
- Where appropriate, photographs or sketches showing the approximate location of any problems or incidents;
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc.; and
- A log of the Emergency Contact correspondence. For all non-routine EC maintenance completed, the work will be included in the PRR.

Table 5.3.3 provides a summary and schedule of routine maintenance.

Table 5.3.3 – SSDS Routine Operations and Maintenance

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule*
Fans	Pressure	Operation	Quarterly for the first year then annually or as-needed
Fan Gauge/ Manometer	Should be within typical operating range	-0 to 0.25 inches of water columns	Quarterly for the first year then annually or as-needed

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule*
Fans	Pressure at PFE points	0.004 inches of water column/negative pressure	Quarterly for the first year then annually or as-needed
Alarms and piping	Operational/condition	None	Quarterly for the first year then annually or as-needed

*Annual monitoring for the SSDS will be contingent upon the results of the quarterly monitoring

Further detail regarding the Operation and Maintenance of the SSDS is provided in Appendix F - Operation and Maintenance Manual.

5.3.4 System Monitoring and Devices and Alarms

The SSDS system has warning devices to indicate that the system is not operating properly. In the event that warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the SSDS system will be restarted. Operational problems will be noted in the Periodic Review Report to be prepared for that reporting period.

5.4 Operation and Maintenance of Groundwater Treatment System (GTS)

The following sections provide a description of the operations and maintenance of the GTS. Cut-sheets and as-built drawings for the GTS are provided in Appendix F - Operations and Maintenance Manual. Routine and non-routine maintenance will be documented in the Periodic Review Reports.

5.4.1 System Start-Up and Testing and Storage of Treatment Chemical

Prior to the application of a treatment chemical, potable water may be applied within the treatment system to observe if there are any visible leaks or malfunctioning valves. It is anticipated future applications of a treatment chemical will not take place during winter months which may result in freezing of the treatment chemical.

Secondary containment will be setup prior to delivery of sodium permanganate or other treatment chemical. When the delivery of sodium permanganate arrives, it will be placed directly into the secondary containment. The treatment chemical and mixing tank/ totes will be stored within the secondary containment at all times. Treatment chemical will be mixed in a 275 gallon tote or equivalent. Extension pipes/ hoses will be connected to the individual injection pipes on the exterior of the building or in the basement and the chemical will be injected from within the secondary containment area.

The secondary containment will consist of a spill containment berm or pad with capacity to contain 110% of the volume of solution that may be present at one time. A neutralizing agent (e.g., sodium thiosulfate) will be made readily available in the event that a spill of the sodium permanganate occurs. The neutralizing agent will only be applied in a diluted form. The neutralizing agent will be stored in a separate secondary containment berm.

A security fence (chain link fence) or Conex box (or equivalent) will be used to store the treatment chemical when on Site. The fence or Conex box will be locked when no one is working in the area of the treatment chemical. Caution signs will be attached to the fence or Conex box indicating to keep out.

5.4.2 Routine System Operation and Maintenance

Routine maintenance of the system is not anticipated due its limited use. The GTS visible piping will be inspected for integrity and leaks (using potable) water prior to the application of a treatment chemical. Annual inspection forms will be included in the Periodic Review Report.

5.4.3 Non-Routine Operation and Maintenance

In the event of failure to operate or if there is physical damage to the system, appropriate maintenance will be performed and documented in the Periodic Review Report. Any changes in the structure that could affect the GTS will require a re-evaluation of the GTS.

5.4.4 System Monitoring and Devices and Alarms

The GTS system consists of conduit for chemical treatment, does not continually operate and thus has no warning devices to indicate if the system is not operating properly. Visual checks of the GTS will occur when the system is in use, as specified in the Operation and Maintenance Plan. Operational problems will be noted in the Periodic Review Report to be prepared for that reporting period.

5.5 Operation and Maintenance of Soil Cover

The site cover system consists of a 2 ft thick layer of clean soil cover or impervious surfaces such as asphalt and/or concrete in the area depicted on Figure 8. This site cover system will be monitored for overall condition to determine if weathering and deterioration has occurred that would require maintenance. The vegetated soil cap should maintain a grass layer or landscaped cover, with no bare spots or erosion. The top layer of the soil cover should be maintained to minimize deterioration by promptly replacing the material when those problems are noted. The soil cap should be inspected at least annually in the spring or summer. The asphalt and concrete will be visibly observed for overall condition such as significant cracks or missing sections that may require repair. Photographs and notes of the condition, and whether preventative maintenance is required of the soil cover shall be recorded in the annual site inspection form included in Appendix H.

6.0 PERIODIC ASSESSMENT/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

Increases in both the severity and frequency of storms/weather events, an increase in sea level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuation, resulting from global climactic change and instability, have the potential to significantly impact the performance, effectiveness and protectiveness of a given site and associated remedial systems. Vulnerability assessments provide information so that the site and associated remedial systems are prepared for the impacts of the increasing frequency and intensity of severe storms/weather events and associated flooding.

This section provides a summary of vulnerability assessments that will be conducted for the site during periodic assessments, and briefly summarizes the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding.

- Flood Plain- The Site and surrounding area is not located within the Federal Emergency Management Agency (FEMA) 100-year or 500-year flood zone.
- Site Drainage and Storm Water Management- A new storm water management drainage system was installed during the Site development to prevent ponding and handle runoff from rain events.
- Erosion- The new storm water management drainage system is designed to handle rain events and prevent ponding and erosion. Vegetative cover in greenspace is intended to prevent erosion. Annual inspections of Site cover will also assess for any erosion.
- High Wind- High wind is not expected to affect remedial systems. Areas of greenspace will have vegetative cover prevent erosion due to wind. These areas will be assessed during the annual inspection of the cover system.
- Electricity- The SSDS could be affected by power loss and/or dips/surges in voltage during severe weather.

- Spill/Contaminant Release- The Site and engineering controls are not susceptible to spill or contaminant release.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the SMP provides a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

Where appropriate, quantification of these items will be provided:

- Waste Generation (describe the management of waste associated with the site and any waste reduction projects implemented).
- Energy usage (electrical usage for operation of remedial systems, site lighting, security systems, etc.).
- Emissions (vapor-phase remedial system emissions, fuel usage for transportation to and from the site for inspections and/or sampling, operation of gas-powered generators, etc.).
- Water usage (identify sources of decontamination water, irrigation water, etc.). Note that while infiltration systems for runoff may be appropriate green technologies for some sites, elevated protection of groundwater SCOs may indicate a need to minimize infiltration in certain areas and/or at certain sites.
- Land and/or ecosystems (describe any disturbances and restoration of land and/or ecosystems as part of implementation/operation of the remedy).

Methods proposed to reduce energy consumption, resource usage, waste generation, water usage, etc. should be included in the PRR.

6.2.1 Timing of Green Remediation Evaluation

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the NYSDEC project manager feels appropriate, e.g. during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

6.2.2 Remedial Systems

Remedial systems will be operated properly considering the current site conditions to conserve materials and resources to the greatest extent possible. Consideration will be given to operating rates and use of reagents and consumables. Spent materials will be sent for recycling, as appropriate.

6.2.3 Building Operations

Structures including buildings and sheds will be operated and maintained to provide for the most efficient operation of the remedy, while minimizing energy, waste generation and water consumption.

6.2.4 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site and use of consumables in relation to visiting the Site in order to conduct system checks and or collect samples and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

6.2.5 Metrics and Reporting

As discussed in Section 7.0 and as shown in Appendix H – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits; a set of metrics has been developed.

6.3 Remedial System Optimization

A Remedial Site Optimization (RSO) study will be conducted any time that the NYSDEC project manager or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;

- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

The RSO study will focuses on overall site cleanup strategy, process optimization and management with the intent of identifying impediments to cleanup and improvements to site operations to increase efficiency, cost effectiveness and remedial time frames. Green remediation technology and principals are to be considered when performing the RSO.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix H. These forms are subject to NYSDEC revision. All site management inspection, maintenance, and monitoring events will be conducted by a qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7.1 and summarized in the Periodic Review Report.

Table 7.1: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
Groundwater Monitoring	Annually
EDD submittals for EQuIS	As needed
Periodic Review Report	Annually

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC project manager.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;

- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- 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);
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- 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);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- 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).

Non-routine maintenance event reporting forms will include, at a minimum:

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

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS^{TM} database in accordance with the requirements found at this link http://www.dec.ny.gov/chemical/62440.html

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the NYSDEC project manager beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually to the NYSDEC project manager or at another frequency as may be required by the NYSDEC project manager. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix A -Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections, fire inspections and severe condition inspections, if applicable.

- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.

- Identification of any wastes generated during the reporting period, along with waste characterization data, manifests, and disposal documentation.

- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These tables and figures will include a presentation of past data as part of an evaluation of contaminant concentration trends, including but not limited to:
  - Trend monitoring graphs that present groundwater contaminant levels from before the start of the remedy implementation to the most current sampling data;
  - Trend monitoring graphs depicting system influent analytical data on a per event and cumulative basis;
  - O&M data summary tables;
  - A current plume map for sites with remaining groundwater contamination; and
  - A groundwater elevation contour map for each gauging event.
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS^{TM} database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.

- A site evaluation, which includes the following:
  - The compliance of the remedy with the requirements of the site-specific Remedial Action Work Plan (RAWP), ROD or Decision Document;
  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;
  - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan;

- An evaluation of trends in contaminant levels in the affected media to determine if the remedy continues to be effective in achieving remedial goals as specified by the RAWP, ROD or Decision Document; and
- The overall performance and effectiveness of the remedy.

- A performance summary for all treatment systems at the site during the calendar year, including information such as:
  - The number of days the system operated for the reporting period;
  - The average, high, and low flows per day;
  - The contaminant mass removed and the cost per pound of mass removed during the certification period and during the life of the treatment system;
  - A description of breakdowns and/or repairs along with an explanation for any significant downtime;
  - A description of the resolution of performance problems;
  - Alarm conditions;
  - Trends in equipment failure;
  - A summary of the performance, effluent and/or effectiveness monitoring; and
  - Comments, conclusions, and recommendations based on data evaluation. Recommendations must address how receptors would be impacted. Recommendations can include:
    - Proposals to address efficiency and costs such as: instituting remote operation, system changes to decrease maintenance costs and downtime, and system changes to decrease energy use; and
    - Proposals to modify or shut down a treatment system due to remediation completion, system performance or changed conditions. System shutdowns are addressed in Section 6.4 of DER-10.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*
- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement;*
- *The engineering control systems are performing as designed and are effective;*
- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative] for the site."

"I certify that the New York State Education Department has granted a Certificate of Authorization to provide Professional Engineering services to the firm that prepared this Periodic Review Report."

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager. The Periodic Review Report may also need to be submitted in hard-copy format if requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control or failure to conduct site management activities, a Corrective Measures Work Plan will be submitted to the NYSDEC project manager for approval. This plan will explain the failure 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 project manager.

7.4 Remedial Site Optimization Report

If an RSO is to be performed (see Section 6.3), upon completion of an RSO, an RSO report must be submitted to the NYSDEC project manager for approval. A general outline for the RSO report is provided in Appendix I. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC project manager. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC project manager and the NYSDOH project manager.

8.0 REFERENCES

6NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.

NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

Phase I Environmental Site Assessment (ESA), 872 and 886 Hudson Avenue, Rochester, New York completed by Seeler Engineering, P.C. ("Seeler"), September 2017

Phase II Environmental Site Assessment, 872 and 886 Hudson Avenue, Rochester, New York 14621, by LaBella, August 2018

Preliminary Shallow Bedrock Groundwater Study Summary Letter, 872 and 886 Hudson Avenue, Rochester, New York, completed by LaBella, October 11, 2018

Remedial Investigation Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester New York, by LaBella dated December 26, 2018 (Revised April 4, 2018)

Remedial Investigation Report, NYSDEC BCP Site #C828209, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, by LaBella, September 2019

Interim Remedial Measures Work Plan (IRMWP) for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, by Labella dated August 2019

Interim Remedial Measure RAOC#1 Design Document, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, by LaBella dated January 7, 2020

Sub-Slab Depressurization Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, completed by LaBella, dated June 18, 2019 and *Sub-Slab Depressurization Work Plan Addendum #1,* by LaBella, dated January 20, 2020

Construction Completion Report for Tank Removals and Construction Related Activities, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, by LaBella dated January 2021

Construction Completion Report for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York, by LaBella dated January 2021

Remedial Alternatives Analysis and Remedial Action Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York dated August 17, 2020, Last Revised September 17, 2020 by LaBella

Final Engineering Report, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York by LaBella dated February 2021

FIGURES

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP\Figure 1 - Site Location Map.mxd

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PROJECT/CLIENT
Client:
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Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE
SITE LOCATION MAP

ISSUED FOR: DRAFT
DESIGNED BY: MFP
DRAWN BY: SMR
REVIEWED BY: MM
DATE: 8/19/2020
INTENDED TO PRINT AS: 11" X 17"

PROJECT/DRAWING NUMBER
2182207

FIGURE 1

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) Property information obtained from LandMax Data Systems Inc. August 2018.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 2 - BCP Site Boundary.mxd

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STATE OF NEW YORK
DANIEL P. HOLT
LICENSED PROFESSIONAL ENGINEER

PROJECT / CLIENT
Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE
BCP SITE / INSTITUTIONAL CONTROL BOUNDARY

ISSUED FOR
FINAL
Tuesday, August 25, 2020

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER
[2182207]
[FIGURE 2]
INTENDED TO PRINT AS: 22" X 24"

N
W E
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0 15 30
Feet

1 inch = 30 feet

16-18 ROYCROFT DR
091.81-1-58
OWNER:
MASSOOD-UL HASSAN
35 COURTRIGHT LN
ROCHESTER, NY 14624

22 ROYCROFT DR
091.81-1-57
OWNER:
NUEZ CAPITAL MANAGEMENT LTD
1001 AVE OF THE AMERICAS
NEW YORK, NY 10018

17 ROYCROFT DR
091.81-2-13
OWNER:
BERTRAM C GRAMORY
PO BOX 92431
ROCHESTER, NY 14692

26 ROYCROFT DR
091.81-1-56
OWNER:
MARIETTA L YOUMANS
26 ROYCROFT DR
ROCHESTER, NY 14621

896-898 HUDSON AVE
091.81-2-11
OWNER:
PROPERTY MANAGEMENT CM LLC
167 PARMA CENTER RD
HILTON, NY 14468

Dayton St

Roycroft Dr

899 HUDSON AVE
091.81-2-9.001
OWNER:
MORNING STAR
MISSIONARY BAPTIST CHURCH
PO BOX 24294
ROCHESTER, NY 14624

892 HUDSON AVE
091.81-2-12
OWNER:
CITY OF ROCHESTER
30 CHURCH ST
ROCHESTER, NY 14614

25 ROYCROFT DR
091.81-2-14
OWNER:
HENRY JR & TURNER BAKER
104 WOOLACOTT RD
ROCHESTER, NY 14617

914 AVENUE D
091.81-2-57
OWNER:
LUZ AWILDA NUNEZ
914 AVENUE D
ROCHESTER, NY 14621

891 HUDSON AVE
091.81-2-60
OWNER:
VINH HUNG DANG
793 CURTIS ST
ROCHESTER, NY 14606

887-889 HUDSON AVE
091.81-2-61
OWNER:
887-889 HUDSON AVENUE LLC
33 ARTHUR ST
ROCHESTER, NY 14621

872 HUDSON AVE
091.81-2-59
OWNER:
JEFFERSON WOLLENSACK, LLC

877 HUDSON AVE
091.81-2-62
OWNER:
KAYTA KARIUK FUENTES
160 WALKER RD
HILTON, NY 14468

Avenue D

886 HUDSON AVE
091.81-2-58
OWNER:
JEFFERSON WOLLENSACK, LLC

865 HUDSON AVE
091.81-3-7
OWNER:
SALEH K SALEH
865 HUDSON AVE
ROCHESTER, NY 14621

858-860 HUDSON AVE
091.81-3-9
OWNER:
YASMIN S FELIPE
1008 BRITTON RD
ROCHESTER, NY 14616

862-864 HUDSON AVE
091.81-3-8
OWNER:
ALI MOHAMED NASHER
862 HUDSON AVE
ROCHESTER, NY 14621

Hudson Ave

Legend

BCP Site Parcels

Surrounding Properties

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) Property information obtained from LandMax Data Systems Inc. August 2018.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 3 - Surrounding Sites.mxd

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NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

SITE LAYOUT MAP

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 3]

INTENDED TO PRINT AS: 22" X 24"

N
W E
S

0 10 20
Feet

1 inch = 20 feet

Invert Elevation:
469.79'

A

A'

B

B'

RIBW-C

RIBW-B

RIBW-A

RIBW-D

SB-05

SB-06

SB-MW-11

SB-MW-12

SB-MW-02

SB-03

SB-01

SB-MW-13

BW-02

SB-17

SB-MW-16

SB-MW-04

SB-MW-10

BW-01

SB-09

SB-MW-15

SB-08

SB-MW-14

SB-MW-07

BW-03

RIMW-05

RIMW-11

RIMW-14

RIMW-12

RIMW-06R

RIMW-16

RIMW-17

RIMW-18

RIMW-19S/19D

RIMW-13

RIMW-22

RIMW-21

RIMW-03

RIMW-08

RIMW-11

RIRB-01

RIRB-02

RIRB-03

RIRB-04

RIRB-05

RIRB-06

RIRB-07

RIRB-08

RIRB-09

RIRB-10

RIRB-11

RIRB-12

RIRB-13

RIRB-14

RIRB-15

RIRB-16

RIRB-17

RIRB-18

RIRB-19

RIRB-20

RIRB-21

36" RPC
Sewer Line

Invert Elevation:
North: 473.86'
South: 479.09'

12" Sewer
Pipe

Invert Elevation:
481.04'

Hudson Ave

Avenue D

Legend

- Manhole
- Sanitary Sewer
- RI Bedrock wells (approximate location)
- RI Soil Boring
- RI Monitoring Well/Soil Boring
- Pre-BCP Overburden Monitoring Well
- Pre-BCP Soil Boring
- Pre-BCP Bedrock Wells
- BCP / IC Site Boundary
- Basement (Approx.)
- Sump (Approx.)
- Former AST Vault

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3) Investigation locations were measured with an EOS Arrow Gold GPS capable of cm accuracy or using a optical level and survey rod.
4) Four wells from Phase II ESA could not be located during the RI and appear to have been destroyed during Site redevelopment activities.
5) Sanitary sewer and manhole locations and inverts obained from City of Rochester Mile Square mapping.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 4A - Cross section key.mxd

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ROCHESTER, NEW YORK

DRAWING TITLE

CROSS SECTION KEY

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

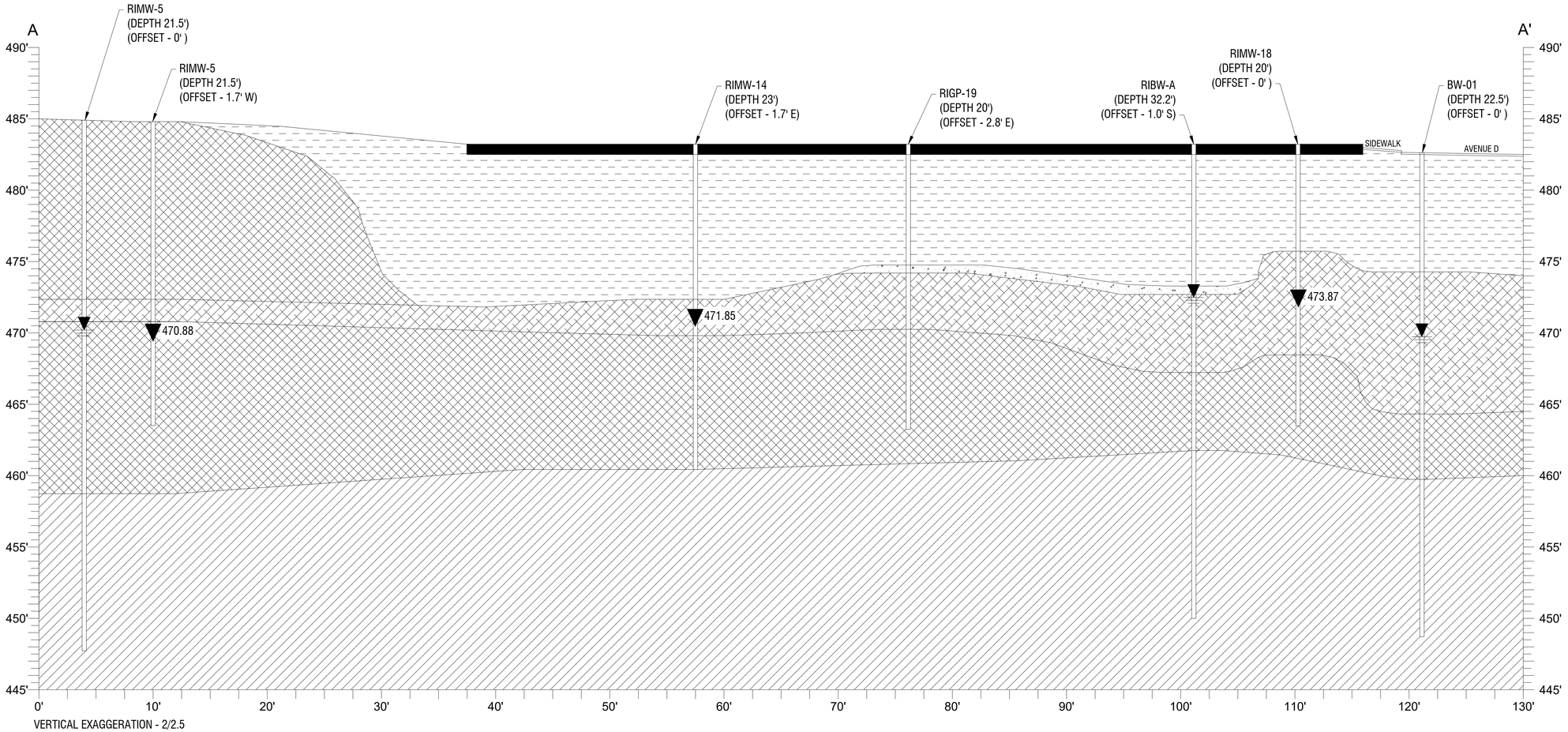
ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 4A]

INTENDED TO PRINT AS: 22" X 24"



NOTES:

1. CROSS SECTIONS BASED ON REPRESENTATIVE OF CONDITIONS PRIOR TO SITE DEVELOPMENT AND AT THE TIME THE INVESTIGATION LOCATION WAS COMPLETED.

NO.	REVISION	BY	DATE
:	:	:	:

STATE OF NEW YORK
DANIEL P. NOLL
No. 081998
LICENSED PROFESSIONAL ENGINEER

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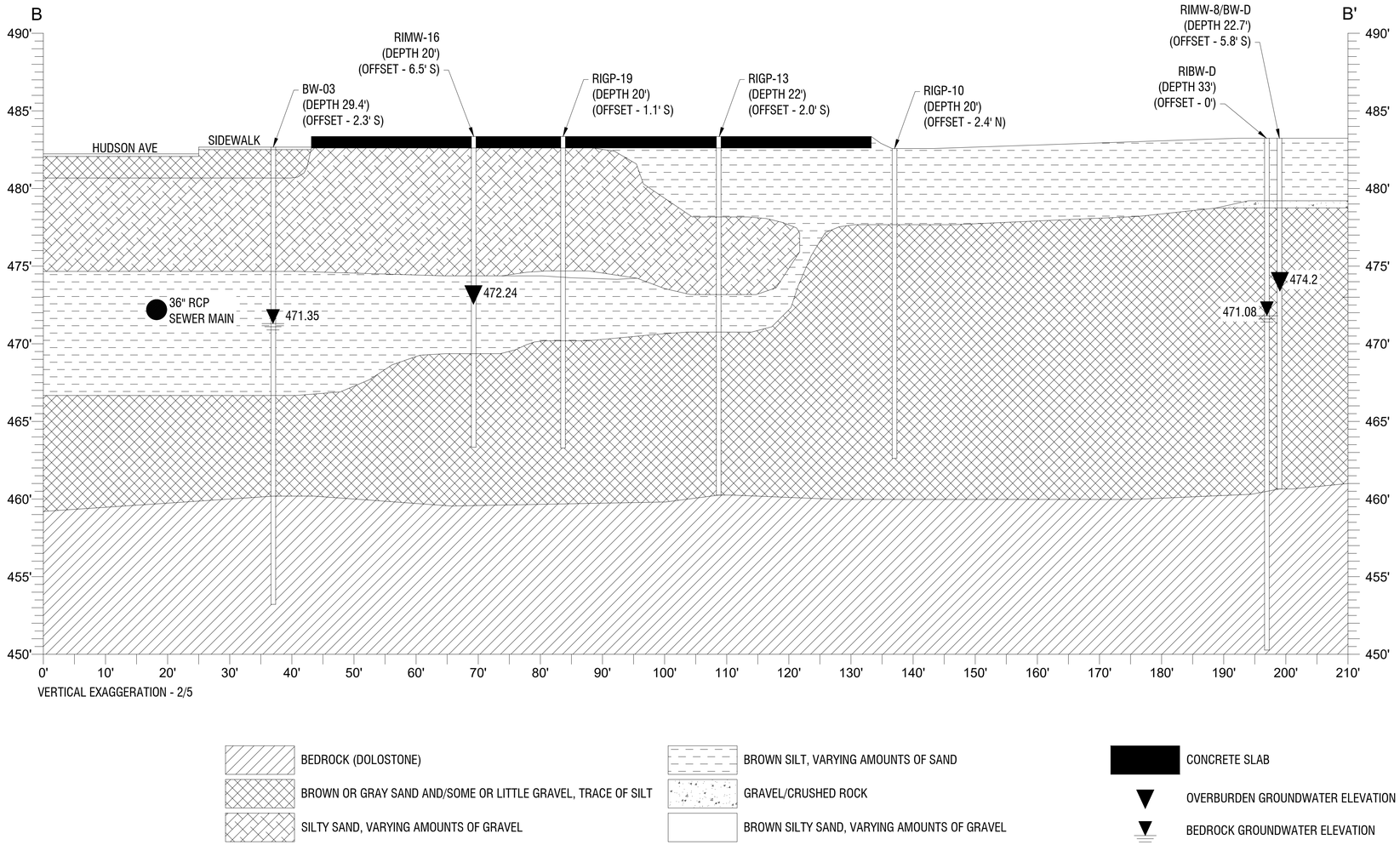
FORMER WOLLENSACK OPTICAL

DRAWING TITLE
CROSS SECTION A-A'

DESIGNED BY: AB
DRAWN BY: DRP
REVIEWED BY: AB
ISSUED FOR: FINAL
DATE: JANUARY, 2018

PROJECT/DRAWING NUMBER
2182207

FIGURE 4B



NOTES:

1. CROSS SECTIONS BASED ON REPRESENTATIVE OF CONDITIONS PRIOR TO SITE DEVELOPMENT AND AT THE TIME THE INVESTIGATION LOCATION WAS COMPLETED.

NO.	REVISION	BY	DATE
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

STATE OF NEW YORK
DANIEL P. NOLL
No. 081998
LICENSED PROFESSIONAL ENGINEER

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SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL

DRAWING TITLE
CROSS SECTION B-B'

DESIGNED BY: AB
DRAWN BY: DRP
REVIEWED BY: AB
ISSUED FOR: FINAL
DATE: MAY, 2018

PROJECT/DRAWING NUMBER
2182207

FIGURE 4C

N
W E
S

0 10 20 Feet

1 inch = 20 feet

Dayton St

Invert Elevation:
469.79'

Invert Elevation:
477.80'

Roycroft Dr

RIMW-11
(471.83 ft)

RIMW-05
(470.88 ft)

RIMW-13
(471.87 ft)

RIMW-14
(471.88 ft)

RIMW-12
(472.49 ft)

RIMW-16S

RIMW-16D

RIMW-17
(472.44 ft)

RIMW-18
(472.29 ft)

RIMW-19S/19D

SB-MW-07
(471.40 ft)

SB-MW-15
(472.08 ft)

SB-MW-16
(474.92 ft)

SB-MW-04
(475.51 ft)

SB-MW-10
(474.59 ft)

SB-MW-14
(473.40 ft)

RIMW-01
(474.91 ft)

RIMW-03
(473.88 ft)

RIMW-02
(474.91 ft)

RIMW-08
(474.16 ft)

Invert Elevation:
North: 473.86'
South: 479.09'

36" RPC
Sewer Line

12" Sewer
Pipe

Hudson Ave

Avenue D

Invert Elevation:
481.04'

Legend

- Manhole
- Flow Direction
- Sanitary Sewer
- RI Monitoring Well/Soil Boring
- Groundwater Elevation Contour
- Pre-BCP Overburden Monitoring Well
- Basement (Approx.)
- Former AST Vault
- BCP / IC Site Boundary

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3) Testing locations were measured using an EOS Arrow Gold GPS or using an optical level and leveling rod.
4) Groundwater elevation in fmsl collected on August 27, 2019.
5) Groundwater flow modeling generated using Golden Software Surfer 14.0, Kriging method. Modeling is approximate.
6) Sanitary sewer and manhole locations and inverts obtained from City of Rochester Mile Square mapping.
7) Monitoring wells shown were used in generating the groundwater flow model.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 5A - OB GW Elevation Contours 8-27-2019 (zoomed in).mxd

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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

OVERBURDEN GROUNDWATER FLOW CONTOURS
(AUGUST 27, 2019)

ISSUED FOR
FINAL
Wednesday, August 26, 2020

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 5A]

INTENDED TO PRINT AS: 22" X 24"

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3) Testing locations were measured using an EOS Arrow Gold GPS or using an optical level and leveling rod.
4) Groundwater elevation in fmsl collected on August 27, 2019.
5) Groundwater flow modeling generated using Golden Software Surfer 14.0, Kriging method. Modeling is approximate.
6) Sanitary sewer and manhole locations and inverts obtained from City of Rochester Mile Square mapping.
7) Monitoring wells shown were used in generating the groundwater flow model.

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PROJECT / CLIENT

Client:
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Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

BEDROCK GROUNDWATER FLOW CONTOURS
(AUGUST 27, 2019)

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

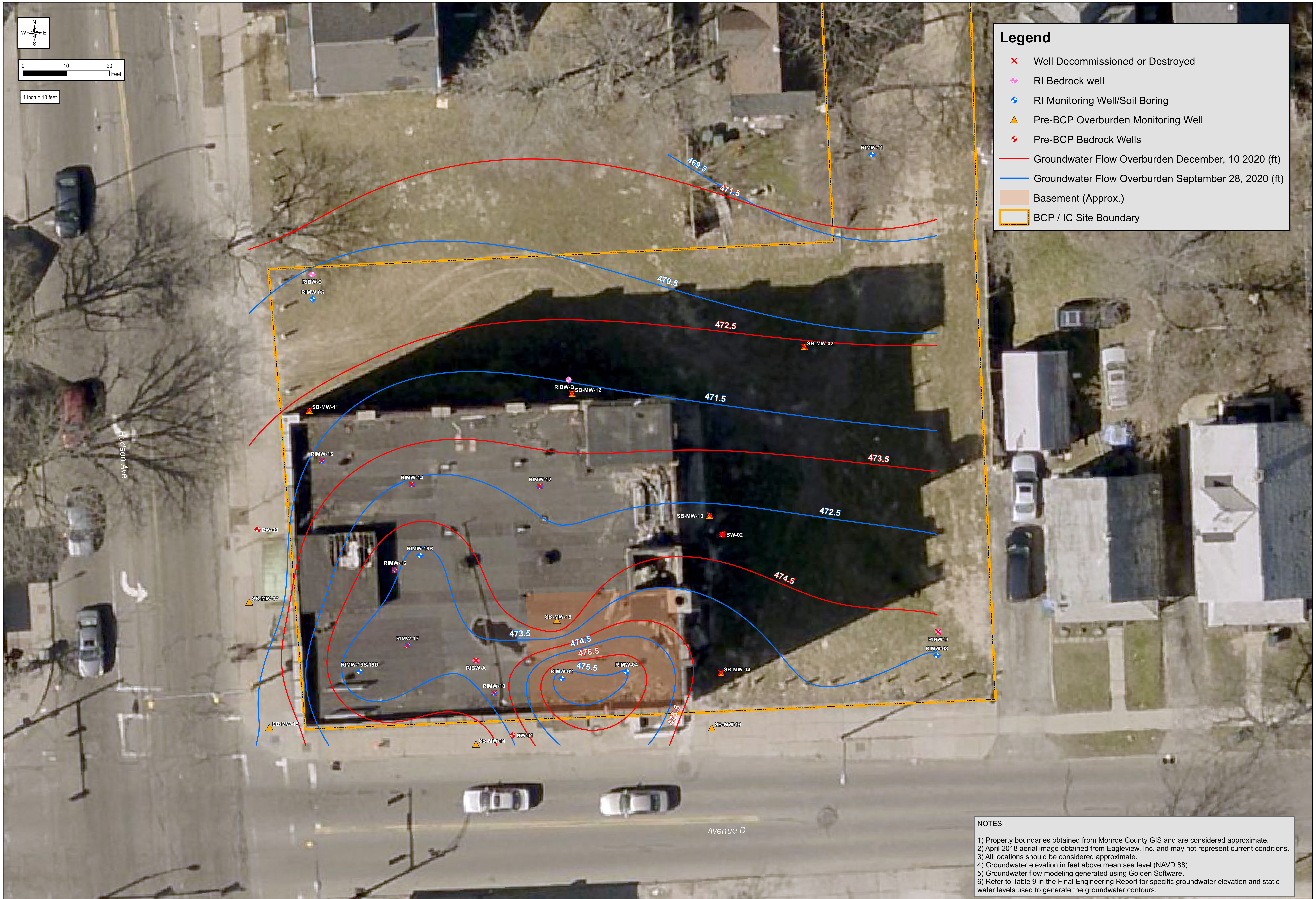
ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 5B]

INTENDED TO PRINT AS: 22" X 24"



NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.
4) Groundwater elevation in feet above mean sea level (NAVD 88)
5) Groundwater flow modeling generated using Golden Software.
6) Refer to Table 9 in the Final Engineering Report for specific groundwater elevation and static water levels used to generate the groundwater contours.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\FER\Figure 8A - Overburden GW Flow.mxd

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It is a violation of New York Education Law Article 145 Sec.7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMET PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

OVERBURDEN GROUNDWATER CONTOUR FLOW ELEVATION AND DIRECTION

ISSUED FOR: FINAL
Thursday, February 18, 2021

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 5C]

INTENDED TO PRINT AS: 22" X 24"

NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.
4) Groundwater elevation in feet above mean sea level (NAVD 88)
5) Groundwater flow modeling generated using Golden Software.
6) Refer to Table 9 in the Final Engineering Report for specific groundwater elevation and static water levels used to generate the groundwater contours.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\FER\Figure 8B - Bedrock GW Flow.mxd

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PROJECT / CLIENT

Client:
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Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

BEDROCK GROUNDWATER CONTOUR
FLOW ELEVATION AND DIRECTION

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Thursday, February 18, 2021

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 5D]

INTENDED TO PRINT AS: 22" X 24"

N
W E
S

0 20 40 Feet

1 inch = 20 feet

Dayton St

Roycroft Dr

Avenue D

Hudson Ave

SW-NORTH-G-071420
7/14/2020 (Sample Depth 8.5')

VOCs	
1,2,4- trimethylbenzene	**130 ppm**
1,3,5- trimethylbenzene	31 ppm
benzene	0.12 ppm
ethylbenzene	6.1 ppm
n-propylbenzene	6.2 ppm
naphthalene	**170 ppm**
toluene	2.8 ppm
SVOCs	
naphthalene	34 ppm

SS-COMP-01 (0-2-inches)
6/19/2019 (Sample Depth 0-2")
Pesticides
Dieldrin 0.00622 ppm

8/7/2019 (Sample Depth 0-2")
PFAS
Perfluorooctanesulfonic Acid (PFOS) 2 ppb

1/21/2020 (Sample Depth 0-2")
SPLP PFAS
Perfluorooctanesulfonic Acid (PFOS) **15.1 ppt**

RIGP-06
6/19/2019 (Sample Depth 2'-5')

VOCs	Result	
trichloroethene	0.82 J ppm	
Metals		Duplicate
lead	118 ppm	Detected Below Unrestricted
Pesticides		
4,4'-DDT	0.00464 ppm	0.00714 ppm

RIBW-C
7/29/2019 (Sample Depth 26.7-26.9-ft')
VOCs
cis-1/2-Dichloroethene 3.8 ppm
trichloroethene 5.5 ppm

RIBW-B
7/29/2019 (Sample Depth 26.2-ft')

VOCs		Duplicate
cis-1,2-dichloroethene	1.4 ppm	1.0 ppm
trichloroethene	4.3 J ppm	1.3 J ppm

RIGP-15
7/21/2019 (Sample Depth 22')

VOCs		Duplicate
trichloroethene	0.86 J ppm	1.3 ppm

RIGP-19
6/21/2019 (Sample Depth 12')
VOCs
trichloroethene 1.9 J ppm

RIGP-16
7/21/2019 (Sample Depth 14')
VOCs
trichloroethene 20 ppm

CVOC impacts to soil within and in close proximity to the overburden treatment area have likely declined in concentration since the application of sodium permanganate in March 2020.

RIMW-17 (RIGP-17)
6/21/2019 (Sample Depth 15')
VOCs
trichloroethene **25 J ppm**
tetrachloroethene 5.4 ppm

SB-08
6/26/2018 (Sample Depth 13')
VOCs
trichloroethene 0.495 ppm

RIBW-A

VOCs	Result	
7/24/2019 (Sample Depth 6.5')		
trichloroethene	1.3 ppm	
7/24/2019 (Sample Depth 10.5')		
tetrachloroethene	4.4 ppm	
trichloroethene	**98 J ppm**	
7/24/2019 (Sample Depth 13.5')		
tetrachloroethene	2.5 ppm	
trichloroethene	16 J ppm	
7/24/2019 (Sample Depth 16.5')		
trichloroethene	7.9 ppm	
7/24/2019 (Sample Depth 19.5')		
trichloroethene	13 J ppm	
7/25/2019 (Sample Depth 21.5')		Duplicate
cis-1,2-Dichloroethene	0.38 ppm	0.48
trichloroethene	**27 J ppm**	**32 J**

TANK-NORTH-122019
12/20/2019 (Sample Depth 8')
VOCs
acetone 0.064 ppm

SB-16
7/16/2018 (Sample Depth 8')
VOCs
trichloroethene 0.605 ppm

RIGP-18
6/21/2019 (Sample Depth 14')
VOCs
tetrachloroethene 2.7 ppm
trichloroethene 16 J ppm

RIGP-02
6/5/2019 (Sample Depth 6'-6.5')

VOCs	Result	Duplicate
cis-1,2-dichloroethene	0.34 ppm	0.32 ppm
trichloroethene	3.4 J ppm	3.1 J ppm

RIGP-11
6/19/2019 (Sample Depth 12.5')

VOCs	
1,2,4- trimethylbenzene	**78 ppm**
1,3,5- trimethylbenzene	20 ppm
ethylbenzene	4.5 ppm
n-propylbenzene	5.7 ppm
p/m-xylene	22 ppm

RIGP-07
6/19/2019 (Sample Depth 18.5')
VOCs
trichloroethene 2.0 J ppm

SW-NORTH-G-071420
SW-WEST-G-071420
BOTTOM-G-071420
SW-SOUTH-G-071420
SW-EAST-G-071420
SS-DIS-01
SS-DIS-02
RIGP-21
RIGP-20
RIMW-11
SB-05
RIBW-C
RIMW-05
RIGP-06
SB-MW-02
SB-06
RIBW-B
SB-MW-12
SB-MW-11
RIGP-07
SB-03
RIMW-15
RIMW-14
RIMW-12
SB-01
SB-17
SB-MW-13
RIGP-22
BW-03
BW-02
RIGP-19
RIMW-16
RIMW-16R
RIGP-13
RIGP-10
TANK-NORTH-202019
SB-MW-07
SB-MW-16
RIGP-01
TANK-BOT-122019
RIGP-09
TANK-EAST-122019
TANK-WEST-122019
RIMW-17
RIBW-A
RIMW-04
TANK-SOUTH-122019
RIBW-D
RIMW-08
RIMW-19S/19D
RIMW-18
RIMW-02
SB-MW-04
SB-MW-15
RIGP-03
SB-MW-10
SB-09
BW-01
SB-08
SB-MW-14

Legend

- Shallow Surface Sample
- Well Decommissioned or Destroyed
- RI Bedrock wells (approximate location)
- RI Soil Boring
- RI Monitoring Well/Soil Boring
- Pre-BCP Overburden Monitoring Well
- Pre-BCP Soil Boring
- Pre-BCP Bedrock Wells
- Southern UST Documentation Sample
- Northern UST Documentation Sample
- Approximate Overburden Treatment Area
- Northern_UST_Petroleum_Excavation_Area
- SS-COMP-01
- Southern UST Petroleum Excavation Area
- Basement (Approx.)
- BCP / IC Site Boundary

NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.
4) Concentrations that exceed NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs) are shown. Concentrations in **BOLD** font exceed Restricted Residential Use SCOs or NYSDEC Guidelines For Sampling and Analysis of PFAS SPLP values for imported soil.
5) J denotes estimated result
5) Soil concentrations in miligrams per kilogram (mg/kg) or parts per million (ppm). PFAS soil concentrations are displayed in micrograms/kilogram (ug/kg) or parts per billion (ppb). SPLP PFAS testing concentrations are in nanograms per liter (ng/L) or parts per trillion.

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PROJECT / CLIENT
Client:
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Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

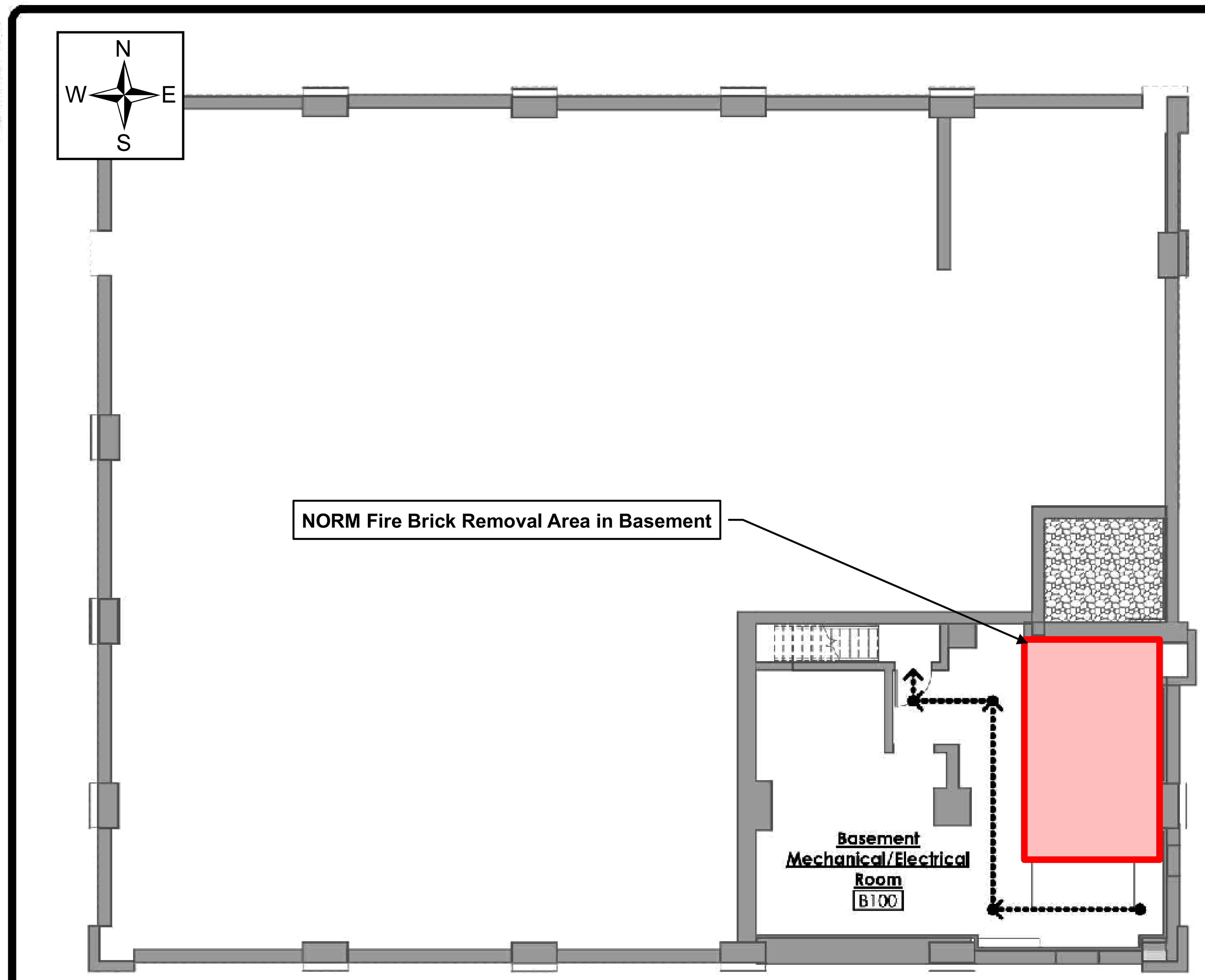
DRAWING TITLE
REMAINING CONTAMINATION:
SOIL CONCENTRATIONS ABOVE
SOIL CLEANUP OBJECTIVES

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

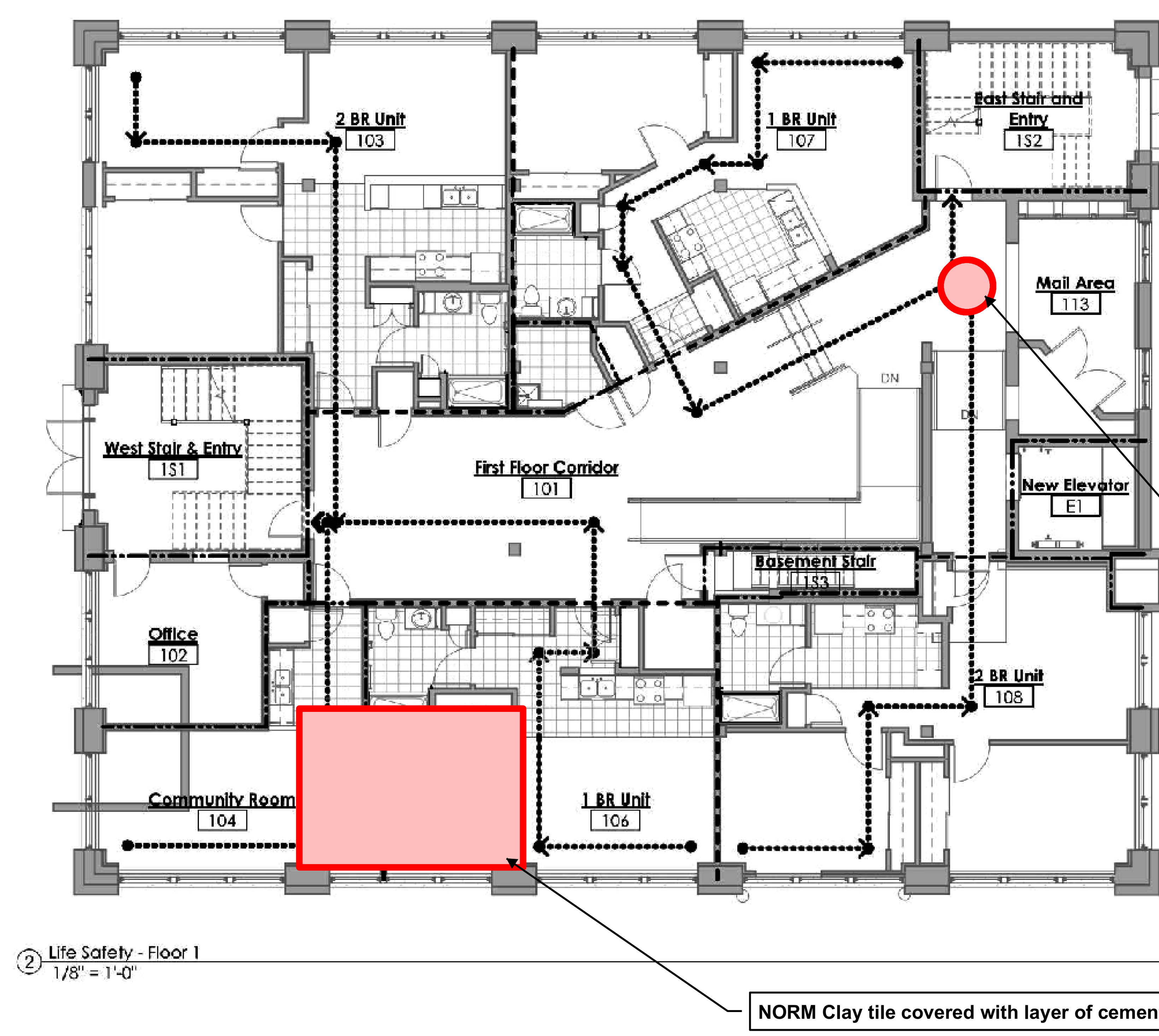
ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER
[2182207]
[FIGURE 6A]
INTENDED TO PRINT AS: 22" X 24"

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 6A- Soil Remaining Contamination.mxd



1 Life Safety - Basement
1/8" = 1'-0"



2 Life Safety - Floor 1
1/8" = 1'-0"

Path ID	Travel Distance
	0'
103	55'
104	44'
106	67'
107	81'
108	74'
203	88'
205	87'
206	84'
208	71'
B	38'
R	122'

Travel Distance

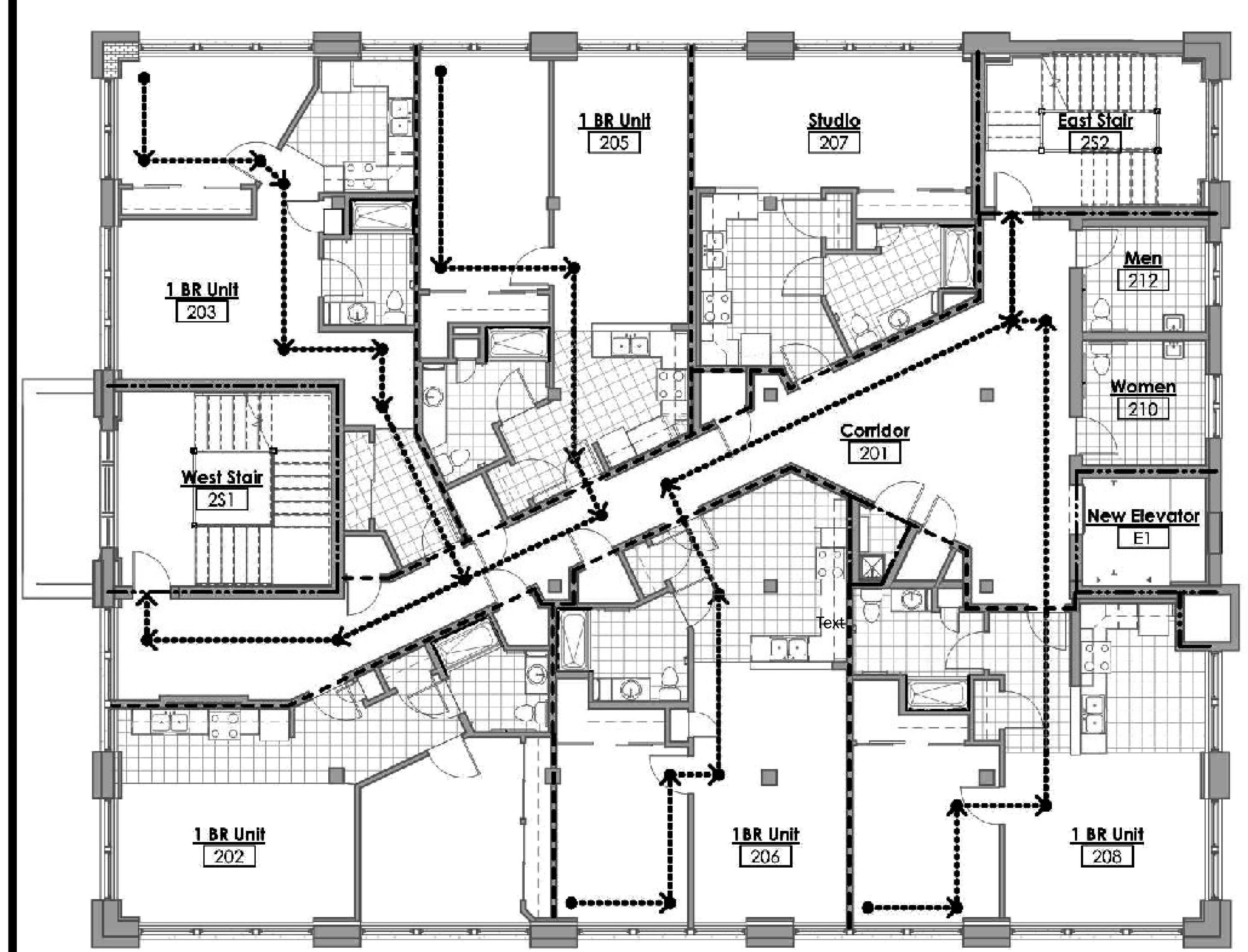
Note: Travel distances at floors 3 and 4 are similar to those at floor 2.

NOTES:

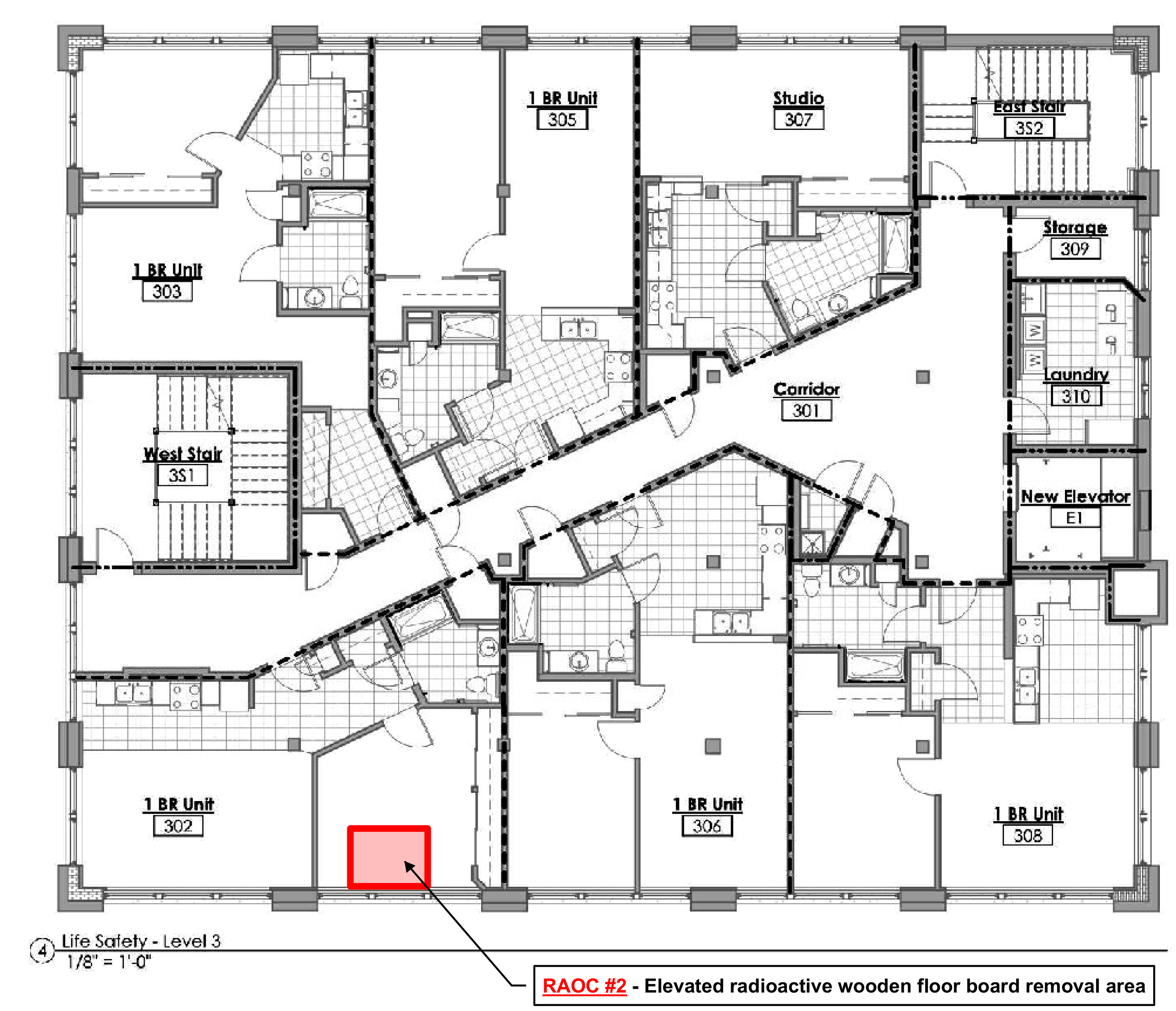
1) Drawing AO.2 from Barkstrom and LaCroix Architects dated 7/16/2018 and may not represent final layout of building.

2) All locations are considered approximate.

3) NORM denotes Naturally Occuring Radioactive Material.



3 Life Safety - Level 2
1/8" = 1'-0"



4 Life Safety - Level 3
1/8" = 1'-0"

Wall Rating Legend

Draftstopping	● ● ● ● ● ●	One Hour Fire Barrier	— - — - —
Two Hour Fire Barrier	—— ● ● ——	One Hour Fire Partition	▬ ▬ ▬ ▬

1. Fire barriers shall extend from the top of the floor/ceiling assembly below to the underside of floor or roof deck above and shall be securely attached thereto. Fire barriers shall be continuous through concealed spaces (ie: space above suspended ceiling). Constuction supporting fire barriers shall carry a matching fire resistance rating. Shafts may terminate at the underside of a rated roof/ceiling assembly. Fire barriers shall be fire blocked at every floor.

2. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. If the partitions are not continuous to the sheathing, deck or slab, and where constructed of combustible construction, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with 2015 International Building Code at the partition line. Construction supporting fire partitions shall carry a matching fire-resistance rating. Where the room-side fire-resistance-rated membrane of the corridor is carried through to the underside of the floor or roof sheathing, deck or slab of a fire-resistance-rated floor or roof above, the ceiling of the corridor shall be permitted to be protected by the use of ceiling materials as required for a 1-hour fire-resistance-rated floor or roof system.

Revision Schedule

Revision Number	Revision Date	Revision Description

NOT FOR CONSTRUCTION PURPOSES

Rochester, New York

Jefferson Wollensak

872 Hudson Avenue
Rochester, New York

Wollensack Optical Conversion

drawn	checked	date	project
-	-	07-06-18	#1625

Codes and Life Safety

75% Set

A0.2

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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project:
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

RAOC #2
BUILDING MATERIAL REMOVAL AREAS

ISSUED FOR: FINAL
Monday, August 24, 2020

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 6B]

INTENDED TO PRINT AS: 22" X 24"

N
W E
S

0 10 20 Feet

1 inch = 10 feet

RIBW-C (open rock interval 25.0-35.0 ft)
8/14/2019

Benzene	7 J ppb
cis-1,2-Dichloroethene	1,200 J ppb
trans-1,2-Dichloroethene	15 J ppb
Vinyl chloride	22 J ppb

RIMW-14 (screened 8.6-23.6 ft)
7/8/2019

benzene	1.1 ppb
trichloroethene	22 J ppb

RIMW-12 (screened 6.8-21.8 ft)
7/8/2019

		Duplicate
trichloroethene	15 J ppb	14 J ppb

RIBW-B (open rock interval 27.5-37.5 ft)
8/14/2019

Benzene	1.4 J ppb
cis-1,2-Dichloroethene	920 J ppb
trans-1,2-Dichloroethene	14 J ppb
Trichloroethene	220 J ppb
Vinyl chloride	48 J ppb

RIMW-11 (screened 11-21 ft)
7/16/2019

		Duplicate
1,2,4-trimethylbenzene	19 ppb	32 ppb
ethylbenzene	--	8.1 ppb
naphthalene	14 J ppb	23 ppb
n-propylbenzene	5.8 J ppb	8.4 ppb
p-m-xylene	--	6.5 J ppb

RIMW-05 (screened 9-24 ft)
8/14/2019

cis-1,2-dichloroethene	21 J ppb

SB-MW-11 (screened 9.8-19.8 ft)
7/17/2018

m,p-xylenes	9.26 ppb

RIMW-15 (screened 7.3-22.3 ft)
7/9/2019

		Duplicate
benzene	2.3 J ppb	2.2 J ppb
trichloroethene	16 J ppb	6.6 ppb

RIMW-16R (screened 6-21 ft)
12/10/2020

cis-1,2-duchloroethene	40 J ppn
tetrachloroethene	98 ppb
trichloroethene	8,900 J ppb

RIMW-16 (screened 7.3-22.3 ft)
7/9/2019

tetrachloroethene	66 ppb
trichloroethene	13,000 J ppb

BW-03 (open rock interval 23.2-29.4 ft)
12/11/2020

1,1-dichloroethene	29 J ppb
acetone	220 J ppb
cis-1,2-dichloroethene	8,700 J ppb
trichloroethene	220 J ppb
vinyl chloride	120 J ppb

SB-MW-07 (screened 7.5-17.5 ft)
12/11/2020

tetrachloroethene	130 J ppb
trichloroethene	22,000 ppb

RIMW-19S (screened 5.7-20.7 ft)
12/10/2020

acetone	140 J ppb
benzene	2.5 J ppb
cis-1,2-dichloroethene	44 J ppb
tetrachlorotehene	750 J ppb

RIMW-19D (screened 22.3-30.8 ft)
12/10/2020

1,1-dichloroethene	71 J ppb
acetone	87 J ppb
benzene	8 J ppb
cis-1,2-dichloroethene	1,700 J ppb
tetrachlorotehene	68 J ppb
trans-1,2-dichloroethene	150 J ppb
trichloroethene	5,700 J ppb
vinyl chloride	10 J ppb

SB-MW-15 (screened 10-20 ft)
12/11/2020

cis-1,2-dichloroethene	260 ppb
trans-1,2-dichloroethene	120 J ppb
tetrachloroethene	16 J ppb
trichloroethene	6,600 J ppb

RIMW-17 (screened 8-23 ft)
7/5/2019

cis-1,2-duchloroethene	300 J ppn
tetrachloroethene	460 ppb
trichloroethene	20,000 J ppb

RIBW-A (open rock interval 22.2-32.2 ft)
8/14/2019

cis-1,2-dichloroethene	180 J ppb
tetrachloroethene	310 J ppb
trichloroethene	17,000 J ppb

Blind-Dup-01
8/14/2019

cis-1,2-dichloroethene	280 J ppb
tetrachloroethene	360 J ppb
trichloroethene	26,000 J ppb

RIMW-18 (screened 7.5-22.5 ft)
7/3/2019

tetrachloroethene	1,800 ppb
trichloroethene	46,000 ppb

Blind-Dup-01
7/3/2019

tetrachloroethene	2,100 ppb
trichloroethene	42,000 ppb

SB-MW-14 (screened 10-20 ft)
12/11/2020

tetrachloroethene	6,300 J ppb
trichloroethene	120,000 J ppb

BW-01 (open rock interval 23.5-33.5 ft)
12/11/2020

cis-1,2-dichloroethene	410 J ppb
tetrachloroethene	36 J ppb
trichloroethene	16,000 J ppb

RIMW-02 (screened 1-6 ft)
12/10/2020

cis-1,2-dichloroethene	190 J ppb
tetrachloroethene	9.1 J ppb
trichloroethene	1,400 J ppb
vinyl chloride	24 J ppm

SB-MW-10 (screened 7-12 ft)
6/26/2018

chloroform	20.6 ppb

SB-MW-12 (screened 10-20 ft)
7/17/2018

cis-1,2-dichloroethene	19.2 ppb
2-butanone	68.7 ppb
trichloroethene	7.63 ppb

SB-MW-02 (screened 10-20 ft)
6/26/2018
No Exceedances

SB-MW-13 (screened 10-20 ft)
7/17/2018

tetrachloroethene	15.6 ppb
trichloroethene	275 ppb

BW-02 (open rock interval 25.0-35.0 ft)
8/14/2018

acetone	63 ppb
benzene	2.3 ppb
cis-1,2-dichloroethene	190 ppb

SB-MW-16 (screened 3-8 ft)
12/10/2020

cis-1,2-Dichloroethene	27 ppb
tetrachloroethene	375 ppb
trichloroethene	480 ppb

RIBW-D (open rock interval 23.0-33.0 ft)
8/14/2019

Chloroform	42 ppb

RIMW-08 (screened 7-22 ft)
7/16/2019
No Exceedances

SB-MW-04 (screened 5-15 ft)
6/26/2018

1,2,4-trimethylbenzene	67.8 ppb
1,3,5-trimethylbenzene	37.4 ppb
p-isopropyltoluene	14.9 ppb
sec-butylbenzene	7.65 ppb

RIMW-04 (screened 2-7 ft)
12/10/2020

cis-1,2-Dichloroethene	260 ppb
trans-1,2-dichloroethene	5.4 J ppb
trichloroethene	30 J ppb
vinyl chloride	3.8 J ppb

CVOC impacts to groundwater within and in close proximity to the overburden treatment area have likely declined in concentration since the application of sodium permanganate in March 2020.

RIBW-C
RIMW-05
RIMW-11
SB-MW-11
RIBW-B
SB-MW-12
SB-MW-02
RIMW-15
RIMW-14
RIMW-12
SB-MW-13
BW-02
BW-03
RIMW-16R
RIMW-16
SB-MW-07
SB-MW-16
RIMW-17
RIBW-D
RIMW-08
RIMW-19S/19D
RIBW-A
RIMW-02
RIMW-04
SB-MW-04
RIMW-18
SB-MW-15
SB-MW-10
BW-01
SB-MW-14

Hudson Ave

Legend

- Well Decommissioned or Destroyed
- RI Bedrock well
- RI Monitoring Well/Soil Boring
- Pre-BCP Overburden Monitoring Well
- Pre-BCP Bedrock Wells
- Approximate Overburden Treatment Area
- Basement (Approx.)
- BCP / IC Site Boundary

NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.
4) Only groundwater concentrations that exceed NYCRR Part 703 Groundwater Quality Standards are shown.
5) Groundwater concentrations in micrograms per liter (ug/L) or parts per billion (ppb). J denotes result is estimated.
6) Most recent data for each well is displayed, some wells were decommissioned as indicated by a red X.
7) Overburden groundwater treament area is estimated using a 10 foot radius from each overburden treatment well.

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 7A - VOC Remaining GW Contamination updated with Dec 2020 data.mxd

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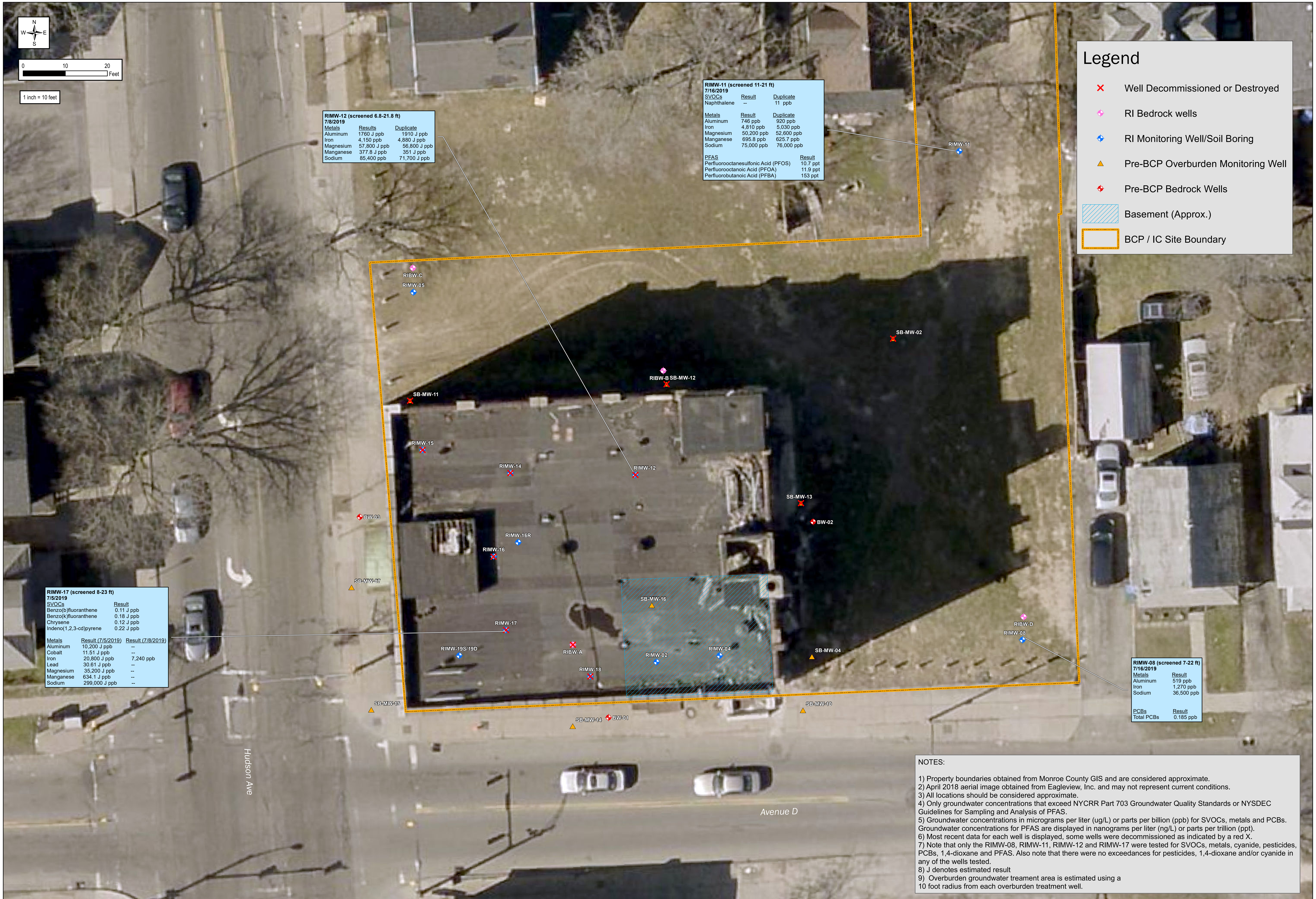
Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE
REMAINING CONTAMINATION:
VOCS IN GROUNDWATER
EXCEEDING STANDARDS

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Friday, February 19, 2021

PROJECT/DRAWING NUMBER
[2182207]
[FIGURE 7A]
INTENDED TO PRINT AS: 22" X 24"



RIMW-12 (screened 6.8-21.8 ft)
7/8/2019

Metals	Results	Duplicate
Aluminum	1760 J ppb	1910 J ppb
Iron	4,150 ppb	4,880 J ppb
Magnesium	57,800 J ppb	56,800 J ppb
Manganese	377.8 J ppb	351 J ppb
Sodium	85,400 ppb	71,700 J ppb

RIMW-11 (screened 11-21 ft)
7/16/2019

SVOCs	Result	Duplicate
Naphthalene	--	11 ppb

Metals	Result	Duplicate
Aluminum	746 ppb	920 ppb
Iron	4,810 ppb	5,030 ppb
Magnesium	50,200 ppb	52,600 ppb
Manganese	695.8 ppb	625.7 ppb
Sodium	75,000 ppb	76,000 ppb

PFAS	Result
Perfluorooctanesulfonic Acid (PFOS)	10.7 ppt
Perfluorooctanoic Acid (PFOA)	11.9 ppt
Perfluorobutanoic Acid (PFBA)	153 ppt

RIMW-17 (screened 8-23 ft)
7/5/2019

SVOCs	Result
Benzo(b)fluoranthene	0.11 J ppb
Benzo(k)fluoranthene	0.18 J ppb
Chrysene	0.12 J ppb
Indeno(1,2,3-cd)pyrene	0.22 J ppb

Metals	Result (7/5/2019)	Result (7/8/2019)
Aluminum	10,200 J ppb	--
Cobalt	11.51 J ppb	--
Iron	20,800 J ppb	7,240 ppb
Lead	30.61 J ppb	--
Magnesium	35,200 J ppb	--
Manganese	634.1 J ppb	--
Sodium	299,000 J ppb	--

RIMW-08 (screened 7-22 ft)
7/16/2019

Metals	Result
Aluminum	519 ppb
Iron	1,270 ppb
Sodium	36,500 ppb

PCBs	Result
Total PCBs	0.185 ppb

Legend

- Well Decommissioned or Destroyed
- RI Bedrock wells
- RI Monitoring Well/Soil Boring
- Pre-BCP Overburden Monitoring Well
- Pre-BCP Bedrock Wells
- Basement (Approx.)
- BCP / IC Site Boundary

NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.
4) Only groundwater concentrations that exceed NYCRR Part 703 Groundwater Quality Standards or NYSDEC Guidelines for Sampling and Analysis of PFAS.
5) Groundwater concentrations in micrograms per liter (ug/L) or parts per billion (ppb) for SVOCs, metals and PCBs. Groundwater concentrations for PFAS are displayed in nanograms per liter (ng/L) or parts per trillion (ppt).
6) Most recent data for each well is displayed, some wells were decommissioned as indicated by a red X.
7) Note that only the RIMW-08, RIMW-11, RIMW-12 and RIMW-17 were tested for SVOCs, metals, cyanide, pesticides, PCBs, 1,4-dioxane and PFAS. Also note that there were no exceedances for pesticides, 1,4-dioxane and/or cyanide in any of the wells tested.
8) J denotes estimated result
9) Overburden groundwater treatment area is estimated using a 10 foot radius from each overburden treatment well.

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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

REMAINING CONTAMINATION:
SVOCS, METALS, PCBS AND PFAS
IN GROUNDWATER EXCEEDING STANDARDS

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 7B]

INTENDED TO PRINT AS: 22" X 24"

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 7B - Remaining GW Contamination.mxd

Sample ID	RISG-04	
Date	6/25/2019	
Analyte	Results	Qual
Volatile Organic Compounds (VOCs)		
1,2,4-Trimethylbenzene	3.4	
1,3,5-Trimethylbenzene	3	
4-ethyltoluene	1.2	
Acetone	200	
Benzene	12	
Carbon disulfide	13	
Chloroethane	0.7	
Chloroform	4.9	
cis-1,2-Dichloroehene	1.3	
Cyclohexane	22	
Ethyl acetate	26	
Ethylbenzene	2.3	
Freon 11	31	
Freon 113	16	
Hexane	130	
Xylene (m,p)	4.6	
Methyl Ethyl Ketone	93	
Methyl Isobutyl Ketone	7.2	
Methylene chloride	16	
Xylene (o)	1.3	
Styrene	3.1	
Tetrachloroethylene	1.6	
Toluene	88	
Trichloroethene	8.5	
Total VOCs	*690.11*	

Sample ID	RISG-02		DUPE-01	
Date	6/25/2019		6/25/2019	
Analyte	Results	Qual	Results	Qual
Volatile Organic Compounds (VOCs)				
1,2,4-Trimethylbenzene	3.9		3.8	
1,2-Dichloroethane	0.77		0.77	
1,3,5-Trimethylbenzene	4.6		4	
2,2,4-Trimethylpentane	1.7		1.80	
4-ethyltoluene	1.7		1.6	
Acetone	220		180	
Benzene	5.8		5.7	
Carbon disulfide	22		19	
Chloroform	59		58	
Cyclohexane	0.86		2.3	
Ethyl acetate	9.1		<0.54	U
Ethylbenzene	5.9		5.8	
Freon 11	2.1		21	
Freon 12	<0.74	U	2.2	
Heptane	<0.61	U	20	
Hexane	22		17	
Xylene (m,p)	16		16	
Methyl Ethyl Ketone	72	J	51	
Methyl Isobutyl Ketone	4.2		4	
Methylene chloride	3.1		3	
Xylene (o)	4.7		4.6	
Styrene	5.9		6	
Tetrachloroethylene	43		36	
Toluene	44		38	
Trichloroethene	3.8		3.8	
Total VOCs	*556.13*		*505.07*	

Sample ID	RISG-01	
Date	6/25/2019	
Analyte	Results	Qual
Volatile Organic Compounds (VOCs)		
1,2,4-Trimethylbenzene	2.7	
1,2-Dichloroethane	2.3	
1,3,5-Trimethylbenzene	2.0	
4-ethyltoluene	1.3	
Acetone	210	
Benzene	9.8	
Bromodichloromethane	38	
Carbon disulfide	6.1	
Carbon tetrachloride	0.88	
Chloroethane	0.71	
Chloroform	1300	
cis-1,2-Dichloroehene	0.48	
Cyclohexane	9	
Ethyl acetate	21	
Ethylbenzene	6.7	
Freon 11	6.5	
Heptane	29	
Hexane	56	
Xylene (m,p)	33	
Methyl Ethyl Ketone	120	J
Methyl Isobutyl Ketone	11	
Methylene chloride	16	
Xylene (o)	9	
Styrene	5.2	
Tetrachloroethylene	3.9	
Toluene	62	
Trichloroethene	4.9	
Total VOCs	*1967.47*	

NOTES:
1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3) Investigation locations were measured with an EOS Arrow Gold GPS capable of cm accuracy or using a optical level and survey rod.
4) RISG-03 was not sampled due to water in the soil gas point.
5) RISG-05 was sampled on June 25, 2019 however data was rejected during validation.

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FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

SOIL GAS SAMPLE RESULTS

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, February 10, 2021

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 7C]

INTENDED TO PRINT AS: 22" X 24"

SITE SOIL COVER SYSTEMS [SEE FIGURE FOR LOCATIONS]

TYPICAL COVER SYSTEM FOR ASPHALT PAVED AREA

ASPHALT	4"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

TYPICAL COVER SYSTEM FOR CONCRETE SIDEWALK, AND DUMPSTER PAD

CONCRETE	4"-6"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

ROYCROFT DRIVE AREA (SAMPLE SS-01)

IMPORTED TOPSOIL*	4"
RECYCLED CONCRETE*	3"-4"
SOIL/FILL	

TYPICAL COVER SYSTEM FOR VEGETATIVE/LANDSCAPE AREA

SOIL VEGETATIVE LAYER/ LANDSCAPE AREA*	MIN. 6"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

CONCRETE OR STONE CURB

CURB	16"
GRAVEL SUB-BASE*	
SOIL/FILL	

TYPICAL COVER SYSTEM FOR BUILDING

CONCRETE	~6"
PEA GRAVEL*	18"
SOIL/FILL	

PEA GRAVEL USED TO FILL TREATMENT PIPING AND SSDS TRENCHES

NOTE:

(1) COVER SYSTEM CROSS-SECTIONS ARE NOT TO SCALE AND COVER SYSTEM LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

(2) PROPERTY BOUNDARIES OBTAINED FROM MONROE COUNTY GIS AND ARE CONSIDERED APPROXIMATE.

(3) APRIL 2018 IMAGE OBTAINED FROM EAGLEVIEW INC. AND MAY NOT REPRESENT CURRENT SITE CONDITIONS.

(4) * DENOTES MATERIAL WAS APPROVED BY THE NYSDEC FOR IMPORTATION AND USE AT THE SITE.

N
W E
S

0 5 10 Feet

1 inch = 10 feet

SAMPLE SS-COMP-01
-SURFACE SOIL SAMPLE MET RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES

CURB

DUMPSTER PAD

VEGETATIVE LAYER / LANDSCAPE AREA

SIDEWALK

VEGETATIVE LAYER / LANDSCAPE AREA

VEGETATIVE LAYER / LANDSCAPE AREA

Legend

- Concrete Curb
- Roycroft Drive Area - Sample: SS-COMP-01
- Building Area
- Landscape Green Area
- Concrete
- Asphalt
- BCP / IC Site Boundary

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 8 - Site Cover System.mxd

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FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

SITE COVER SYSTEM

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

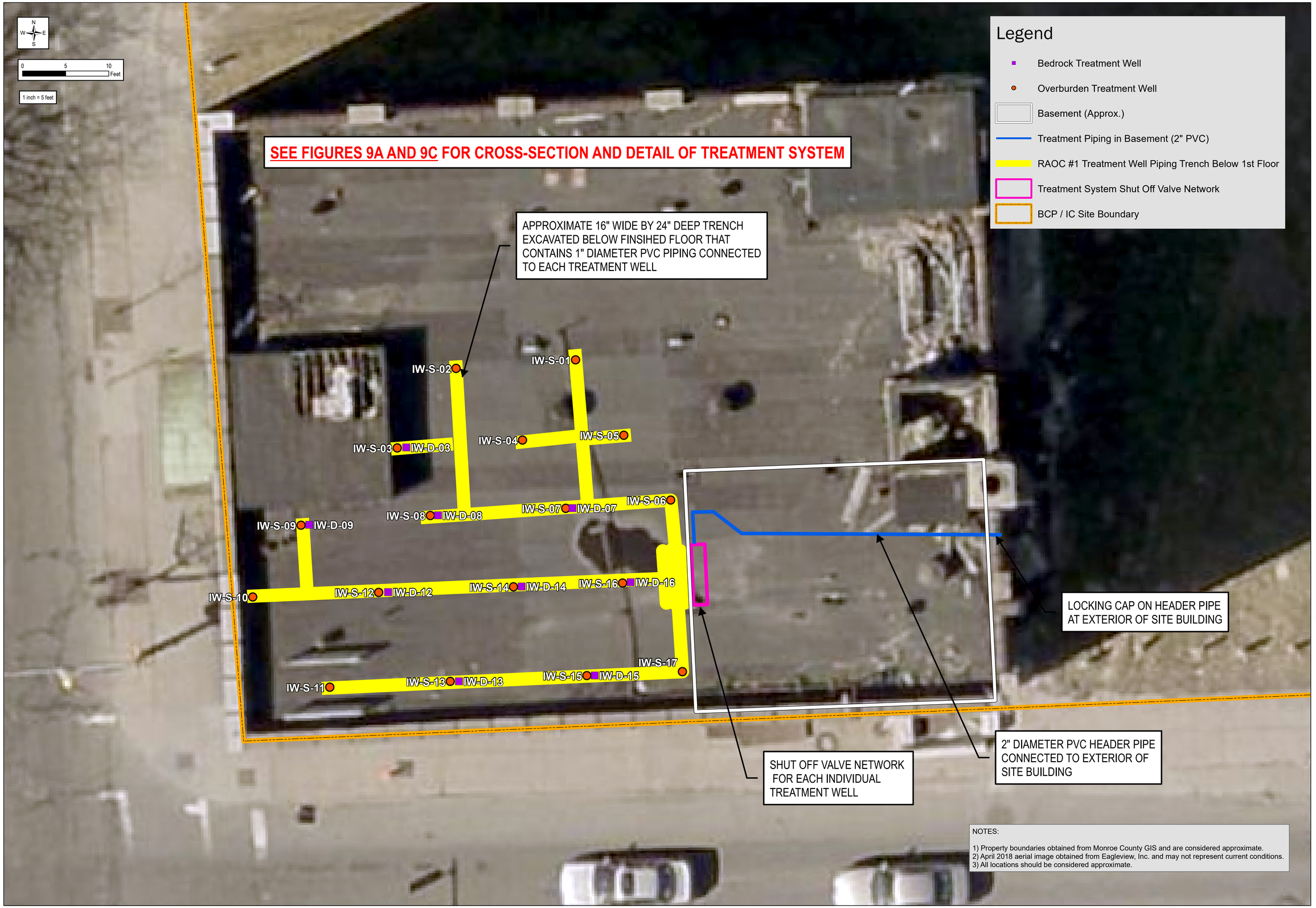
ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 8]

INTENDED TO PRINT AS: 22" X 24"



NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.

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NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

RAOC #1 TREATMENT WELL AND PIPING LOCATION AS-BUILT LAYOUT

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, August 26, 2020

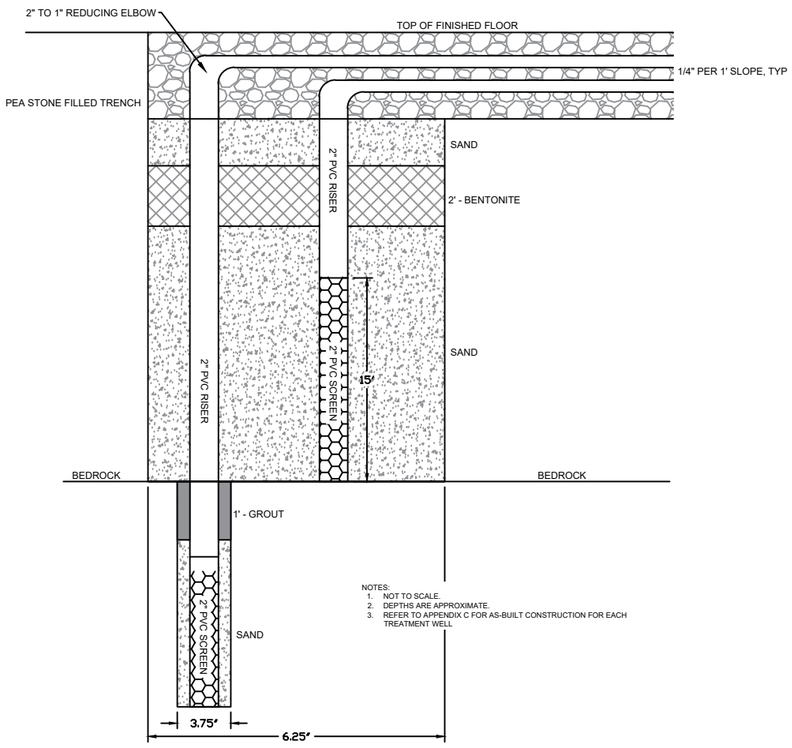
PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 9A]

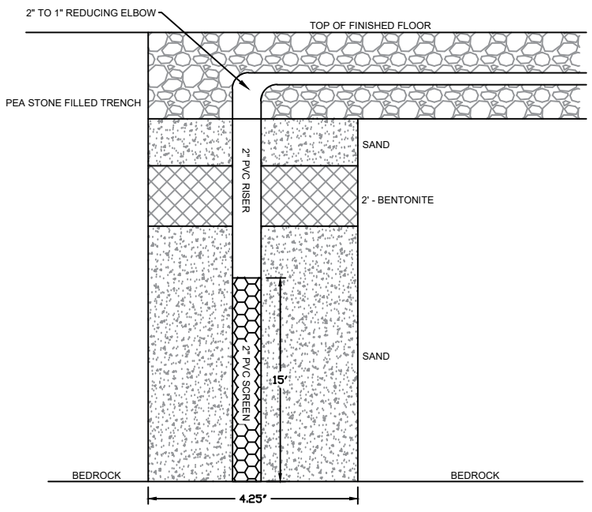
INTENDED TO PRINT AS: 22" X 24"

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 9A - Treatment Well and Piping.mxd



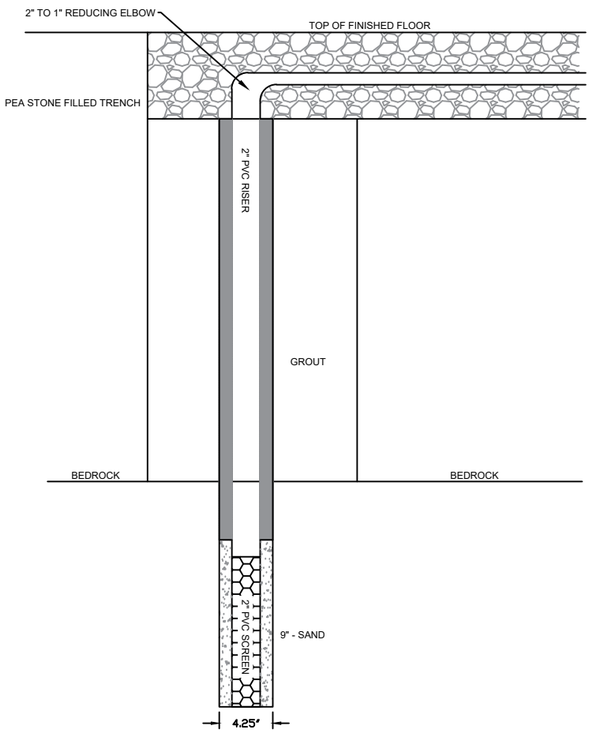
NOTES:
1. NOT TO SCALE.
2. DEPTHS ARE APPROXIMATE.
3. REFER TO APPENDIX C FOR AS-BUILT CONSTRUCTION FOR EACH TREATMENT WELL

NESTED PAIR OVERBURDEN AND BEDROCK TREATMENT WELL



NOTES:
1. NOT TO SCALE.
2. DEPTHS ARE APPROXIMATE.
3. REFER TO APPENDIX C FOR AS-BUILT CONSTRUCTION FOR EACH TREATMENT WELL

OVERBURDEN TREATMENT WELL



NOTES:
1. NOT TO SCALE.
2. DEPTHS ARE APPROXIMATE.
3. REFER TO APPENDIX C FOR AS-BUILT CONSTRUCTION FOR EACH TREATMENT WELL

BEDROCK TREATMENT WELL

NO	REVISION	BY	DATE
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

STATE OF NEW YORK
DANIEL P. NOLL
No. 081998
LICENSED PROFESSIONAL ENGINEER

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FORMER WOLLENSACK OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

SITE MANAGEMENT PLAN

DRAWING TITLE
RAOC #1TREATMENT WELL
DETAILS

ISSUED FOR:
FINAL

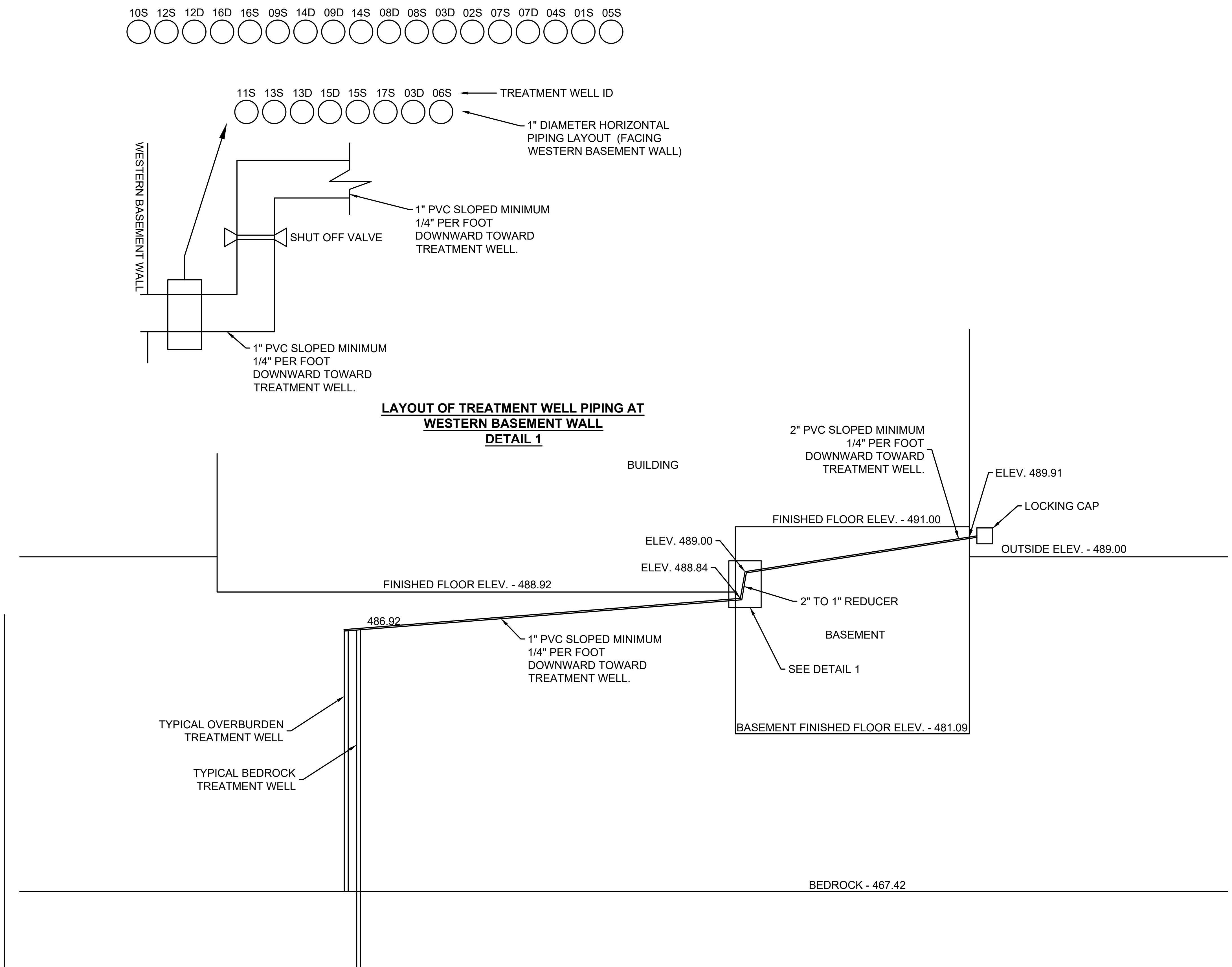
DATE: 1-3-2020

DESIGNED BY: AA
DRAWN BY: DRP
REVIEWED BY: AA

SCALE: NTS

PROJECT/DRAWING NUMBER
2182207

FIG 9B



LAYOUT OF TREATMENT WELL PIPING AT WESTERN BASEMENT WALL
DETAIL 1

NOTES:
1. REFER TO FIGURE 5A FOR LAYOUT OF TREATMENT SYSTEM
2. NOT TO SCALE
3. CROSS SECTION LOOKING NORTH

NO.	REVISION	BY	DATE
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No. 081698
LICENSED PROFESSIONAL ENGINEER

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FORMER WOLLENSACK OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

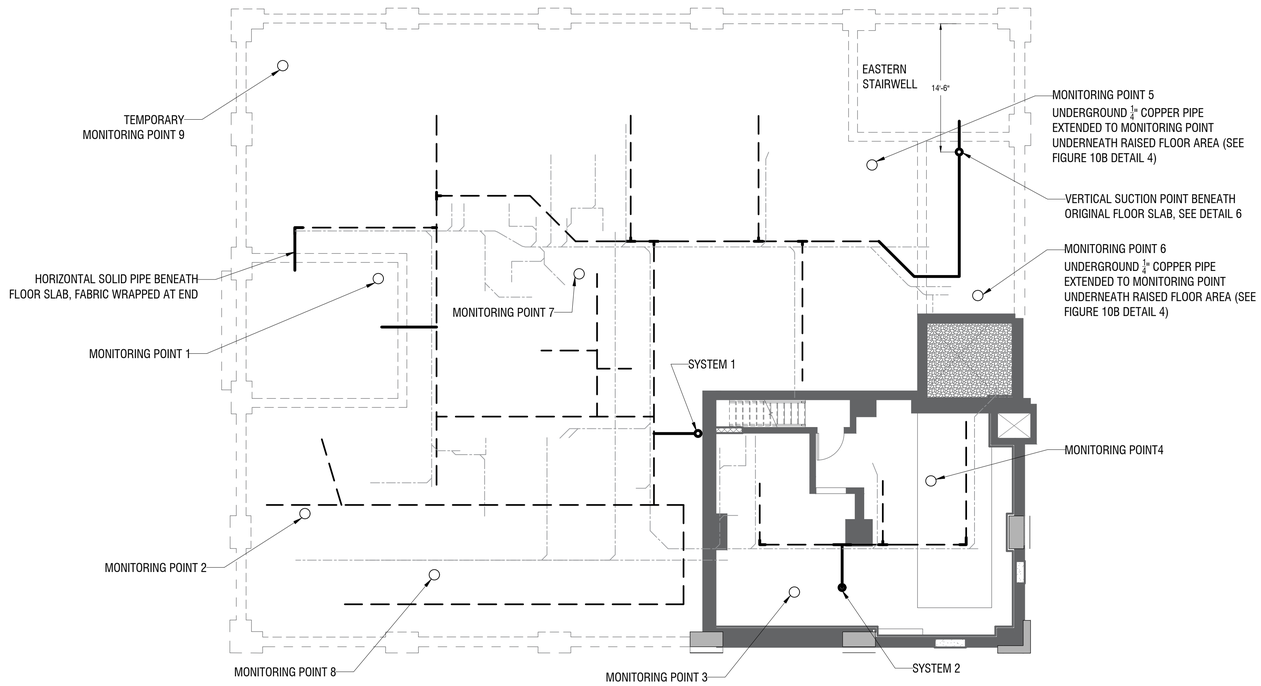
SITE MANAGEMENT PLAN

DRAWING TITLE
RAOC 1 TREATMENT SYSTEM
CROSS SECTION

ISSUED FOR: FINAL
DATE: 1-3-2020
DESIGNED BY: AA
DRAWN BY: DRP
REVIEWED BY: AA
SCALE: NTS

PROJECT/DRAWING NUMBER
2182207

FIG 9C



R-100 SUB-SLAB DEPRESSURIZATION SYSTEM
1/8" = 1'

NOTES:

1. THIS PLAN NOT INTENDED TO PROVIDE PLUMBING DETAILS. REFER TO PLUMBING DRAWINGS.
2. VERTICAL PIPES ARE 4 INCH SCHEDULE 40 PVC. CONTRACTOR TO VENT UP THROUGH THE ROOF.
3. ALL SUB-SLAB VAPOR COLLECTION PIPING IS GEOTEXTILE-WRAPPED 4 INCH PERFORATED DUAL-WALLED CORRUGATED EXTERIOR SMOOTH INTERIOR HDPE.
4. 4 INCH SCHEDULE 40 PVC VERTICAL RISERS ROUTED TO STORAGE ROOM/ PIPE CHASE AND VENTED UP THROUGH THE ROOF.
5. ALARM AND MANOMETER ON EACH RISER PIPE INSIDE BUILDING IN ACCESSIBLE LOCATIONS AS SHOWN OF FIGURE.
6. SUB-SLAB DEPRESSURIZATION SYSTEM PERFORATED PIPING TO BE INSTALLED WITHIN PLUMBING TRENCH, ABOVE OR THE SIDE OF PLUMBING, WITH MINIMUM 3 INCHES OF STONE BETWEEN PIPES. MOVE SUB-SLAB DEPRESSURIZATION PIPING WITHIN TRENCH AS NEEDED TO ACCOMMODATE PLUMBING. LOCATIONS WHERE PIPING CROSSES, THE SSDS PIPING SHALL BE PLACED ABOVE PLUMBING PIPING.
7. 4" CAP AT EACH VAPOR COLLECTION PIPE TERMINATION.
8. TRENCH BACKFILLED WITH PEA STONE.
9. SEAL ALL PENETRATIONS INCLUDING SUMPS AND GAPS IN THE FLOOR SLAB WITH AN ELASTOMERIC JOINT SEALANT.
10. RADON AWAY GP-501 FAN (OR EQUIVALENT) ON EACH VERTICAL RISER ABOVE ROOF. TERMINATE VENT STACK MINIMUM 12 INCHES ABOVE ROOF AND MINIMUM 25 FEET FROM ANY AIR INTAKE.

LEGEND

- FABRIC WRAPPED 4 INCH HDPE PERFORATED PIPE PLACED WITHIN PEA STONE TRENCH
- PRESSURE MONITORING POINT
- APPROXIMATE LOCATION OF NEW PLUMING
- 4" SOLID PVC

NO.	REVISION	BY	DATE
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

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DANIEL P. NOLL
No. 081596
LICENSED PROFESSIONAL ENGINEER

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872-886 HUDSON AVE,
ROCHESTER NY

DRAWING TITLE
SUB-SLAB DEPRESSURIZATION
SYSTEM LAYOUT

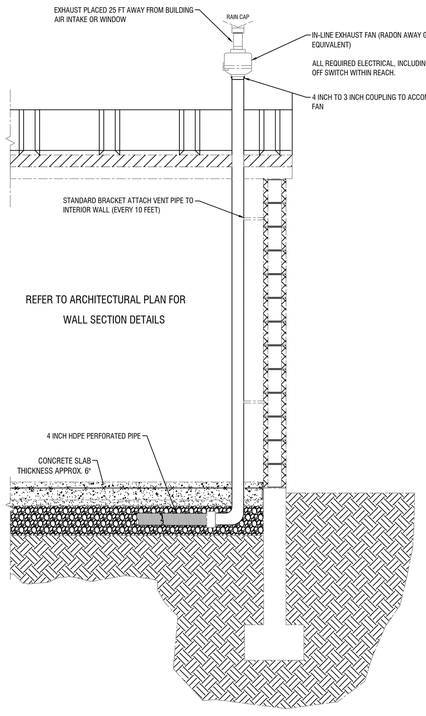
ISSUED FOR:
REVISION 1
DATE: 8/24/2020

DESIGNED BY: AA
DRAWN BY: DRP
REVIEWED BY: AA
SCALE: 1/8" = 1'

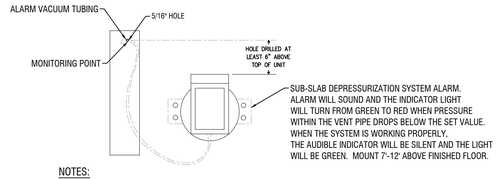
C:\Users\dnoll\Documents\LB Projects\2182207 - 872 & 886 Hudson\Drawings\2182207-SSDS.dwg

PROJECT/DRAWING NUMBER
2182207

FIG 10A



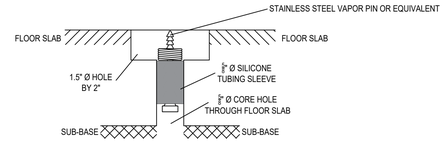
1 REAR END WALL
SCALE: NONE



NOTES:

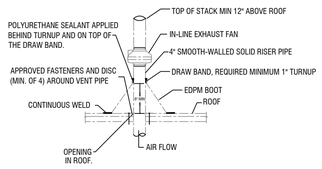
1. ALARM ON SEPARATE CIRCUIT.
2. U-TUBE MANOMETER IN VERTICAL PIPING

2 SUB-SLAB DEPRESSURIZATION SYSTEM ALARM
SCALE: NONE

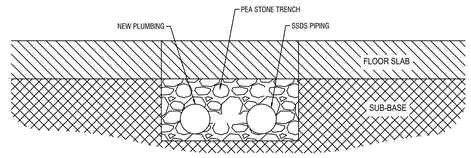


PERMANENT MONITORING LOCATION

4 SUB-SLAB MONITORING POINT
SCALE: NONE

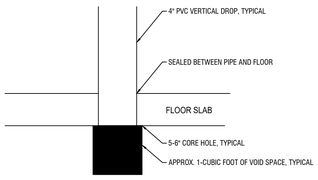


3 DETAIL AT ROOF
SCALE: NONE

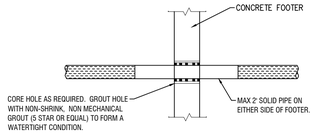


THIS DETAIL NOT INTENDED TO PROVIDE TRENCHING DETAILS

5 TRENCH DETAIL
SCALE: NONE



6 VERTICAL SUCTION POINT
SCALE: NONE



7 PROFILE AT HORIZONTAL PENETRATION (WESTERN STAIRWELL)
SCALE: NONE

NO.	REVISION	BY	DATE
1			
2			
3			
4			
5			
6			

STATE OF NEW YORK
DANIEL P. NOLL
No. 081998
LICENSED PROFESSIONAL ENGINEER

LaBella
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PROJECT/CLIENT
FORMER WOLLENSACK OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

DRAWING TITLE
SUB-SLAB DEPRESSURIZATION SYSTEM DETAILS

ISSUED FOR:
REVISION 1

DATE: 01/20/2020

DESIGNED BY:	AA
DRAWN BY:	DRP
REVIEWED BY:	AA

File Name: Revision 1 01/17/2020 - 872 & 886 Hudson Submitted Drawings\2020-0000.dwg

PROJECT/DRAWING NUMBER
2182207

FIG 10B

NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.

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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

Groundwater Monitoring Wells

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, February 10, 2021

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 11]

INTENDED TO PRINT AS: 22" X 24"

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 11 - Monitoring Well Locations.mxd

TABLES

Table 2.5.1A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	SB-08		SB-16		RIGP-02		BLIND DUPLICATE-01 (RIGP-02)		RIGP-06		RIGP-07		RIGP-11	
Sample Depth (ft bgs)				13		8		6-6.5		6-6.5		19.5		18.5		12.5	
Sample Date				6/26/2018		7/16/2018		6/5/2019		6/5/2019		6/19/2019		6/19/2019		6/19/2019	
Volatile organic compounds																	
1,2,4-Trimethylbenzene	3.6	52	3.6	0.00559	U	0.00557	U	0.015	U	0.014	U	0.016	U	0.014	U	78	
1,3,5-Trimethylbenzene	8.4	52	8.4	0.00559	U	0.00557	U	0.0085	U	0.0083	U	0.0091	U	0.0079	U	20	
cis-1,2-Dichloroethene	0.25	100	0.25	0.00279	U	**0.00896**		0.34		0.320		**0.016**	J	**0.026**	J	0.19	U
Ethylbenzene	1	41	1	0.00279	U	0.00279	U	0.0062	U	0.0061	U	0.0066	U	0.0058	U	4.5	
n-Propylbenzene	3.9	100	3.9	0.00559	U	0.00557	U	0.0075	U	0.0074	U	0.0081	U	0.007	U	5.7	
p/m-Xylene	0.26	100	1.6	0.00447	U	0.00446	U	0.025	U	0.024	U	0.026	U	0.023	U	22	
Trichloroethene	0.47	21	0.47	0.495		0.605		3.4	J	3.100	J	0.820	J	2.000	J	0.15	UJ

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

U indicates compound not detected above the indicated laboratory Method Detection Limit (MDL)

ND indicates not detected above laboratory MDL

Italic Font indicates the MDL exceeds NYSDEC SCOs but compound was not detected

Bold font indicates that the compound was detected above its respective laboratory MDL.

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential Use SCO

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater SCO

J indicates an estimated value

VOCs analyzed by USEPA Method 8260

Table 2.5.1A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	RIGP-15		BLIND DUPLICATE-02 (RIGP-15)		RIGP-16		RIGP-17		RIGP-18		RIGP-19		TANK-NORTH-122019		SW-NORTH-G-071420	
Sample Depth (ft bgs)				22		22		14		15		14		12		8		8.5	
Sample Date				6/21/2019		6/21/2019		6/21/2019		6/21/2019		6/21/2019		6/21/2019		12/20/2019		7/14/2020	
Volatile organic compounds																			
1,2,4-Trimethylbenzene	3.6	52	3.6	0.016	UJ	0.016	U	0.032	U	0.054	U	0.041	U	0.017	U	0.0017	UJ	130	
1,3,5-Trimethylbenzene	8.4	52	8.4	0.0094	UJ	0.0095	U	0.018	U	0.031	U	0.024	U	0.0098	U	0.0017	UJ	31	
Acetone	0.05	100	0.05	0.24	U	*0.24*	U	*0.45*	U	*0.78*	U	*0.59*	U	*0.24*	U	0.064	J	*1.5*	U
Benzene	0.06	4.8	0.06	0.0081	U	0.0082	U	0.016	U	0.027	U	0.02	U	0.0085	U	0.00042	U	0.12	J
Ethylbenzene	1	41	1	0.0069	UJ	0.0069	U	0.013	U	0.023	U	0.017	U	0.0072	U	0.00083	UJ	6.1	
n-Propylbenzene	3.9	100	3.9	0.0084	UJ	0.0084	U	0.016	U	0.028	U	0.021	U	0.0087	U	0.00083	UJ	6.2	
Naphthalene	12	100	12	0.032	U	0.032	U	0.061	U	0.11	U	0.08	U	0.033	U	0.0033	UJ	170	
Tetrachloroethene	1.3	19	1.3	0.0096	U	0.0096	U	**0.900**		5.4		2.7		**0.02**	J	0.00042	U	0.06	U
Toluene	0.7	100	1	0.026	U	0.027	U	0.051	U	0.088	U	0.067	U	0.028	U	0.00083	U	2.8	
Trichloroethene	0.47	21	0.47	0.86	J	1.3	J	20	J	25	J	16	J	1.9	J	0.00082	J	0.042	U

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

U indicates compound not detected above the indicated laboratory Method Detection Limit (MDL)

ND indicates not detected above laboratory MDL

Italic Font indicates the MDL exceeds NYSDEC SCOs but compound was not detected

Bold font indicates that the compound was detected above its respective laboratory MDL.

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential Use SCO

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater SCO

J indicates an estimated value

VOCs analyzed by USEPA Method 8260

Table 2.5.1A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	RIBW-A	RIBW-A	RIBW-A	RIBW-A	RIBW-A	RIBW-A	BLIND-DUP-072519 (RIBW-A)	RIBW-B	DUPE (RIBW-B)	RIBW-C
Sample Depth (ft bgs)				**6.5**	**10.5**	**13.5**	**16.5**	**19.5**	**21.5**	**21.5**	**26.2**	**26.2**	**26.7-26.9**
Sample Date				**7/24/2019**	**7/24/2019**	**7/24/2019**	**7/24/2019**	**7/24/2019**	**7/25/2019**	**7/25/2019**	**7/29/2019**	**7/29/2019**	**7/31/2019**
Volatile organic compounds													
cis-1,2-Dichloroethene	0.25	100	0.25	0.0092 U	*0.14* U	*0.016* U	**0.14**	**0.064**	0.38	0.48	1.4	1.0	3.8
Tetrachloroethene	1.3	19	1.3	**0.05**	4.4	2.5	**0.53**	**0.110**	0.026 UJ	0.026 U	0.011 U	0.01 U	0.012 U
Trichloroethene	0.47	21	0.47	1.3 J	98 J	16 J	7.9	13	27 J	32 J	4.3 J	1.3 J	5.5

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

U indicates compound not detected above the indicated laboratory Method Detection Limit (MDL)

ND indicates not detected above laboratory MDL

Italic Font indicates the MDL exceeds NYSDEC SCOs but compound was not detected

Bold font indicates that the compound was detected above its respective laboratory MDL.

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential Use SCO

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater SCO

J indicates an estimated value

VOCs analyzed by USEPA Method 8260

Table 2.5.1B
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: SVOCs
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	SW-NORTH-G-071420
Sample Depth (ft bgs)				8.5
Sample Date				7/14/2020
Semi-Volatile organic compounds				
Naphthalene	12	100	12	34

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

U indicates compound not detected above the indicated laboratory Method Detection Limit (MDL)

Bold font indicates that the compound was detected above its respective laboratory MDL.

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundw

J indicates an estimated value

SVOCs analyzed by USEPA Method 8270

Table 2.5.1C
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: Metals
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	RIGP-06
Sample Depth (ft bgs)				2-5
Sample Date				6/26/2019
Metals				
Lead, Total	63	400	450	118 J

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

Bold font indicates that the compound was detected above its respective laboratory MDL.

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater SCO

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential Use SCO

Metals analyzed by USEPA Method 6010/7471

NL indicates Not Listed

U indicates compound not detected above indicated laboratory Method Detection Limit (MDL)

J indicates an estimated value

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Table 2.5.1D
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: Pesticides
LaBella Project #2182207

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Restricted Residential Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	RIGP-06	BLIND DUPLICATE - 03 (RIGP-06)	SS-COMP-01
Sample Depth (ft bgs)				2-5	2-5	0-2
Sample Date				6/26/2019	6/26/2019	8/7/2019
Pesticides						
4,4'-DDT	0.0033	7.9	136	0.00464	**0.00714**	**0.00156** J
Dieldrin	0.005	0.2	0.1	0.000518 U	**0.000686** JIP	0.00622

NOTES:
All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)
Bold font indicates that the compound was detected above its respective laboratory MDL.
Italic Font indicates the MDL exceeds NYSDEC SCOs but compound was not detected
Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)
Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Restricted Residential Use SCO
Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater SCO
Pesticides analyzed by USEPA Method 8081
NL indicates Not Listed
U indicates compound not detected above indicated laboratory Method Detection Limit (MDL)
J indicates an estimated value

Table 2.5.1E
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Soil Contamination: PFAS
LaBella Project #2182207

Sample ID	NYSDEC Guidelines for Sampling and Analysis of PFAS	SS-COMP-01	SS-COMP-01
Sample Depth (inches bgs)		0-2	0-2
Sample Date		8/7/2019	8/7/2019
PFAS Via Modified USEPA Method 537			
Perfluorooctanesulfonic Acid (PFOS)	1 ppb	**2 ppb**	–
SPLP PFAS			
Perfluorooctanesulfonic Acid (PFOS)	10 ppt	–	**15.1 ppt**

NOTES:
PFAS values displayed in micrograms per kilograms (ug/kg) or parts per billion (ppb). SPLP PFAS values displayed in nanograms per Liter (ng/L) or parts per trillion (ppt).
NYSDEC Guidelines for Sample and Analysis of PFAS state that if soil is above 1 ppb then it should be analyzed via synthetic precipitation leaching procedure (SPLP).
U indicates compound not detected above laboratory Method Detection Limit (MDL)
Bold font indicates that the compound was detected above its respective laboratory MDL.
Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO)
J indicates an estimated value
PFAS analyzed by USEPA Method 537 modified
SPLP via USEPA Method 1312
"--" indicates not analyzed

Table 2.5.2A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	SB-MW-04	SB-MW-07	SB-MW-10	SB-MW-11	SB-MW-12	SB-MW-13	SB-MW-14	SB-MW-15	SB-MW-16
Screened Interval (ft bgs)		5 - 15	7.5 - 17.5	5 - 15	9.8 - 19.8	8.5 - 18.5	10 - 20	10 - 20	10 - 20	3 - 8
Sample Date		6/26/2018	12/11/2020	6/26/2018	7/17/2018	7/17/2018	7/17/2018	12/11/2020	12/11/2020	12/10/2020
Volatile organic compounds										
1,2,4-Trimethylbenzene	5	**67.8**	--	1 U	1 U	2 U	1 U	--	--	--
1,3,5-Trimethylbenzene	5	**37.4**	--	1 U	1 U	2 U	1 U	--	--	--
2-Butanone	NL	10 U	480 U	10 U	10 U	**68.7**	10 U	1900 U	97 U	7.8 U
Chloroform	7	**5.95**	180 U	**20.6**	5 U	10 U	5 U	700 U	35 U	2.8 U
cis-1,2-Dichloroethene	5	1 U	180 U	1 U	**2.62**	**19.2**	1 U	700 U	**260**	**27** J
p/m-Xylene	5	2 U	180 U	2 U	**9.26**	4 U	**2.39**	700 U	35 U	2.8 U
p-Isopropyltoluene	5	**14.9**	--	1 U	1 U	2 U	1 U	--	--	--
sec-Butylbenzene	5	**7.65**	--	1 U	1 U	2 U	1 U	--	--	--
Tetrachloroethene	5	1 U	**130** J	1 U	1 U	2 U	**15.6**	**6300** J	**16** J	**37** J
trans-1,2-Dichloroethene	5	1 U	180 U	1 U	1 U	2 U	1 U	700 U	**120** J	2.8 U
Trichloroethene	5	1 U	**22000** J	1 U	**2.95**	**7.63**	**275**	**120000** J	**6600** J	**480**

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

* indicates no Part 703 Standard, TOGS 1.1.1 Guidance Value is listed

VOCs analyzed by USEPA Method 8260

NL Indicates Not Listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

D indicates concentration after dilution

"--" indicates compound not analyzed

Light green shade denotes well has been destroyed or decommissioned

Table 2.5.2A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	RIMW-02		RIMW-04		RIMW-05		RIMW-11		DUPE-071619 (RIMW-11)		RIMW-12		BLIND-DUP-02 (RIMW-12)		RIMW-14	
Screened Interval (ft bgs)		1 - 6		2 - 7		9 - 24		11 - 21		11 - 21		6.8 - 21.8		6.8 - 21.8		8.6 - 23.6	
Sample Date		12/10/2020		12/10/2020		8/14/2019		7/16/2019		7/16/2019		7/8/2019		7/8/2019		7/8/2019	
Volatile organic compounds																	
1,2,4-Trimethylbenzene	5	7	U	1.4	U	-	-	**19**		**32**		0.7	U	0.7	U	0.7	U
Benzene	1	1.6	U	0.32	U	0.16	U	0.16	U	0.16	U	0.16	U	0.16	U	**1.1**	
cis-1,2-Dichloroethene	5	**190**	J	**260**	J	**21**	J	0.7	U	0.7	U	**2.5**		**2.8**	J	0.7	U
Ethylbenzene	5	7	U	1.4	U	0.7		**4.1**		**8.1**		0.7	U	0.7	U	0.7	U
Naphthalene	10*	--		--		-	-	**14**	J	**23**	J	0.7	U	0.7	U	0.7	U
n-Propylbenzene	5	--		--		-	-	**5.8**	J	**8.4**		0.7	U	0.7	U	0.7	U
p/m-Xylene	5	7	U	1.4	U	0.7		**3.2**	J	**6.5**	J	0.7	U	0.7	U	0.7	U
Tetrachloroethene	5	**9.1**	J	0.36	U	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U	**0.18**	J
trans-1,2-Dichloroethene	5	7	U	**5.4**	J	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
Trichloroethene	5	**1400**	J	**30**	J	**0.57**	J	0.18	U	0.18	U	**15**	J	**14**	J	**22**	J
Vinyl chloride	2	**24**	J	**3.8**	J	**0.31**	J	0.07	U	0.07	U	0.07	U	120000	U	0.07	U

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

* indicates no Part 703 Standard, TOGS 1.1.1 Guidance Value is listed

VOCs analyzed by USEPA Method 8260

NL Indicates Not Listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

D indicates concentration after dilution

"–" indicates compound not analyzed

Light green shade denotes well has been destroyed or decommissioned

Table 2.5.2A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	RIMW-15		Blind-Dup-03 (RIMW-15)		RIMW-16		RIMW-17		RIMW-18		BLIND-DUP-01 (RIMW-18)		RIMW-16R		RIMW-19S	
Screened Interval (ft bgs)		**7.3 - 22.3**		**7.3 - 22.3**		**8.4 - 23.4**		**8 - 23**		**7.5 - 22.5**		**7.5 - 22.5**		**6 '- 21'**		**5.7 - 20.7'**	
Sample Date		**7/9/19**		**7/9/2019**		**7/9/2019**		**7/5/2019**		**7/3/2019**		**7/3/2019**		**12/10/2020**		**12/10/2020**	
Volatile organic compounds																	
Acetone	50*	**6.9**	J	**6.7**	J	150	U	360	U	580	U	580	U	73	U	**140**	**J**
Benzene	1	**2.3**	J	**2.2**	J	16	U	40	U	64	U	64	U	8	U	**2.5**	**J**
cis-1,2-Dichloroethene	5	**2.1**	J	**2.3**	J	70	U	**300**	J	280	U	280	U	**40**	**J**	**44**	**J**
Tetrachloroethene	5	0.18	U	0.18	U	**66**		**460**		**1,800**		**2,100**		**96**	**J**	**750**	**J**
Trichloroethene	5	**16**	J	**6.6**		**13000**	J	**20,000**	J	**46,000**	J	**42,000**		**8900**	**J**	0.36	U

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

* indicates no Part 703 Standard, TOGS 1.1.1 Guidance Value is listed

120000

VOCs analyzed by USEPA Method 8260

NL Indicates Not Listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

D indicates concentration after dilution

"–" indicates compound not analyzed

Light green shade denotes well has been destroyed or decommissioned

Table 2.5.2A
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: VOCs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	RIBW-A		BLIND-DUP-01 (RIBW-A)		RIBW-B		RIBW-C		RIBW-D		BW-01		QA/QC (BW-01)		BW-02		BW-03		RIMW-19D	
Screened Interval (ft bgs)		22.2 - 32.2		22.2 - 32.2		27.5 - 37.5		25 - 35		23 - 33		23.5 - 33.5		23.5 - 33.5		25 - 35		23.2 - 29.4		22.3 - 30.8	
Sample Date		8/14/2019		8/14/2019		8/14/2019		8/14/2019		8/14/2019		12/11/2020		6/30/2020		8/14/2019		12/11/2020		12/10/2020	
Volatile organic compounds																					
1,1-Dichloroethene	5	17	U	42	U	0.84	U	**2.2**	J	0.17	U	17	U	8.4	U	1	U	**29**	**J**	**71**	**J**
Acetone	50*	150	U	360	UJ	7.3	UJ	50	UJ	16	UJ	150	U	73	U	**63**		**220**	**J**	**87**	**J**
Benzene	1	16	U	40	U	**1.4**	J	**7**	J	0.16	U	16	U	8	U	**2.3**		16	U	**8**	**J**
cis-1,2-Dichloroethene	5	**180**	J	**280**	J	**920**	J	**1,200**	J	0.7	U	**410**	**J**	**230**		**190**		**8700**	**J**	**1700**	**J**
Tetrachloroethene	5	**310**	J	**360**	J	**2.5**	J	1.8	U	0.18	U	**36**	**J**	**15**	**J**	1	U	18	U	**68**	**J**
trans-1,2-Dichloroethene	5	70	U	180	U	**14**	J	**15**	J	0.7		70	U	35	U	**4.3**	J	70	U	**150**	**J**
Trichloroethene	5	**17,000**	DJ	**26,000**	J	**220**	J	**4.9**	J	**0.22**	J	**16000**	**J**	**6000**		**2.9**		**220**	**J**	**5700**	**J**
Vinyl chloride	2	7.1	U	18	U	**48**	J	**22**	J	0.07		7.1	U	3.6	U	1	U	**120**	**J**	**10**	**J**

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

120000

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

* indicates no Part 703 Standard, TOGS 1.1.1 Guidance Value is listed

VOCs analyzed by USEPA Method 8260

NL Indicates Not Listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

D indicates concentration after dilution

"–" indicates compound not analyzed

Light green shade denotes well has been destroyed or decommissioned

Table 2.5.2B
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: SVOCs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	DUPE-071619 (RIMW-11)		RIMW-17	
Screened Interval (ft bgs)		11 -21		8 - 23	
Sample Date		7/16/2019		7/5/2019	
Semivolatile organic compounds					
Benzo(a)pyrene	0	0.02	U	**0.04**	J
Benzo(b)fluoranthene	0.002	0.01	U	**0.11**	J
Benzo(k)fluoranthene	0.002	0.01	U	**0.18**	J
Indeno(1,2,3-cd)pyrene	0.002	0.01	U	**0.22**	J
Naphthalene	10	**11**		0.05	U

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

SVOCs analyzed by USEPA Method 8270

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

Light green shade denotes well has been destroyed or decommissioned

LaBella
Powered by partnership.

Table 2.5.2C
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: Metals
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	RIMW-08	RIMW-11	DUPE-071619 (RIMW-11)	RIMW-12	BLIND-DUP-02 (RIMW-12)	RIMW-17	RIMW-17
Screened Interval (ft bgs)		7 - 24	11 -21	11 -21	6.8 - 21.8	6.8 - 21.8	8 - 23	8 - 23
Sample Date		7/16/2019	7/16/2019	7/16/2019	7/8/2019	7/8/2019	7/8/2019	7/5/2019
Metals								
Aluminum, Total	100*	519	746	920	1,760 J	1,910 J	NL	10,200 J
Cobalt, Total	5*	0.98	1.45	1.43	4.03	3.79 J	NL	11.51 J
Copper, Total	200	9.43	3.65	3.85	8.51	8.02 J	NL	25.6 J
Iron, Total	300	1,270	4,810	5,030	4,150	4,880 J	7,240	20,800 J
Lead, Total	25	2.95	3.21	2.24	12.06	13.78 J	NL	30.61 J
Magnesium, Total	35,000*	31,000	50,200	52,600	57,800 J	56,800 J	NL	35,200 J
Manganese, Total	300	89.33	695.8	625.7	377.8 J	351 J	278	634.1 J
Sodium, Total	20,000	36,500	75,000	76,000	85,400	71,700 J	NL	299,000 J

NOTES:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb) 120000

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

* indicates no Part 703 Standard, TOGS 1.1.1 Guidance Value is listed

Metals analyzed by USEPA Method 6010/7471

NL Indicates Not Listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

Light green shade denotes well has been destroyed or decommissioned

Table 2.5.2D
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: PCBs
LaBella Project #2182207

Sample ID	NYCRR Part 703 Groundwater Quality Standards	RIMW-08	
Screened Interval (ft bgs)		7 - 24	
Sample Date		7/16/2019	
PCBs			
Aroclor 1016	NL	0.034	U
Aroclor 1221	NL	0.067	U
Aroclor 1232	NL	0.046	U
Aroclor 1242	NL	0.039	U
Aroclor 1248	NL	0.049	U
Aroclor 1254	NL	**0.128**	
Aroclor 1260	NL	**0.057**	JP
Aroclor 1262	NL	0.035	U
Aroclor 1268	NL	0.034	U
Total PCBs	0.09	**0.185**	

Notes:

All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)

Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)

Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard

P - The RPD between the results for the two columns exceeds the method-specified criteria.

PCBs analyzed by USEPA Method 8082

NL Indicates not listed

U denotes not detected above laboratory method detection limit (MDL)

J denotes the result is estimated

LaBella
Powered by partnership.

Table 2.5.2E
Site Management Plan
Former Wollensack Optical - C828209
872 & 886 Hudson Avenue, Rochester, New York
Remaining Groundwater Contamination: PFAS
LaBella Project #2182207

Sample ID	NYSDEC Guidelines for Sampling and Analysis of PFAS	RIMW-11
Screened Interval (ft bgs)		11 -21
Sample Date		7/17/2019
Perfluorobutanoic Acid (PFBA)	100	**153**
Perfluorooctanesulfonic Acid (PFOS)	10	**10.7**
Perfluorooctanoic Acid (PFOA)	10	**11.9**

Notes:
All values displayed in nanograms per liter (ng/L) or parts per trillion (ppt)
Bold font indicates that the compound was detected above its respective laboratory method detection limit (MDL)
Yellow highlight indicates that the compound was detected above the NYSDEC Guidelines for Sampling and Analysis of PFAS Water Sample Result Values
P - The RPD between the results for the two columns exceeds the method-specified criteria.
U denotes not detected above laboratory method detection limit (MDL)
J denotes the result is estimated
PFAS analyzed by USEPA Method 537 modified

120000

Table 2.5.3
Volatile Organic Compounds (VOCs) in Soil Gas
Site Management Plan Report
Former Wollensack Optical
872 & 886 Hudson Avenue, Rochester, New York
LaBella Project Number 2182207

Sample Type	Soil Gas Samples										Guidance Values
Sample ID	RISG-01		DUPE-01		RISG-02		RISG-04		RISG-05		
Date	6/25/2019		6/25/2019		6/25/2019		6/25/2019		6/25/2019		
Analyte	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	<0.82	U	<0.82	U	<0.82	U	<0.82	U	<0.82	R	
1,1,2,2-Tetrachloroethane	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	R	
1,1,2-Trichloroethane	<0.82	U	<0.82	U	<0.82	U	<0.82	U	<0.82	R	
1,1-Dichloroethane	<0.61	U	<0.61	U	<0.61	U	<0.61	U	<0.61	R	
1,1-Dichloroethene	<0.16	U	<0.16	U	<0.16	U	<0.16	U	<0.16	R	
1,2,4-Trichlorobenzene	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	R	
1,2,4-Trimethylbenzene	**2.7**		**3.8**		**3.9**		**3.4**		**3.6**	R	
1,2-Dibromoethane	<1.2	U	<1.2	U	<1.2	U	<1.2	U	<1.2	R	
1,2-Dichlorobenzene	<0.90	U	<0.90	U	<0.90	U	<0.90	U	<0.90	R	
1,2-Dichloroethane	**2.3**		0.77		0.77		2.8	U	**1.7**	R	
1,2-Dichloropropane	<0.69	U	<0.69	U	<0.69	U	<0.69	U	<0.69	R	
1,3,5-Trimethylbenzene	**2.0**		**4**		**4.6**		**3**		**3.5**	R	
1,3-butadiene	<0.33	U	<0.33	U	<0.33	U	<0.33	U	<0.33	R	
1,3-Dicholorobenzene	<0.90	U	<0.90	U	<0.90	U	<0.90	U	<0.90	R	
1,4-Dichlorobenzene	<0.90	U	<0.90	U	<0.90	U	<0.90	U	<0.90	R	
1,4-Dioxane	<1.1	U	<1.1	U	<1.1	U	<1.1	U	<1.1	R	
2,2,4-Trimethylpentane	<0.70	U	**1.80**		**1.7**		<0.70	U	**2.4**	R	
4-ethyltoluene	**1.3**		**1.6**		**1.7**		**1.2**		**1.2**	R	
Acetone	**210**		**180**		**220**		**200**		**270**	R	
Allyl chloride	<0.47	U	<0.47	U	<0.47	U	<0.47	U	**0.44**	R	
Benzene	**9.8**		**5.7**		**5.8**		**12**		**9.3**	R	
Benzyl chloride	<0.86	U	<0.86	U	<0.86	U	<0.86	U	<0.86	R	
Bromodichloromethane	**38**		<1.0	U	<1.0	U	<1.0	U	<1.0	R	
Bromoform	<1.6	U	<1.6	U	<1.6	U	<1.6	U	<1.6	R	
Bromomethane	<0.58	U	<0.58	U	<0.58	U	<0.58	U	<0.58	R	
Carbon disulfide	**6.1**		**19**		**22**		**13**		**11**	R	
Carbon tetrachloride	**0.88**		<0.19	U	<0.19	U	<0.19	U	<0.19	R	
Chlorobenzene	<0.69	U	<0.69	U	<0.69	U	<0.69	U	<0.69	R	
Chloroethane	**0.71**		<0.40	U	<0.40	U	**0.7**		**0.45**	R	
Chloroform	**1300**		**58**		**59**		**4.9**		**3.1**	R	
Chloromethane	<0.31	U	<0.31	U	<0.31	U	**<0.31**	U	**0.8**	R	
cis-1,2-Dichloroehene	**0.48**		<0.16	U	<0.16	U	**1.3**		0.44	R	
cis-1,3-Dichloropropene	<0.68	U	<0.68	U	<0.68	U	<0.68	U	<0.68	R	
Cyclohexane	**9**		**2.3**		**0.86**		**22**		**5.4**	R	
Dibromochloromethane	<1.3	U	<1.3	U	<1.3	U	<1.3	U	<1.3	R	
Ethyl acetate	**21**		<0.54	U	**9.1**		**26**		**20**	R	
Ethylbenzene	**6.7**		**5.8**		**5.9**		**2.3**		**2.8**	R	
Freon 11	**6.5**		**21**		**2.1**		**31**		**1.5**	R	
Freon 113	<1.1	U	<1.1	U	<1.1	U	**16**		<1.1	R	
Freon 114	<1.0	U	<1.0	U	<1.0	U	<1.0	U	<1.0	R	
Freon 12	<0.74	U	**2.2**		<0.74	U	<0.74	U	**2.6**	R	
Heptane	**29**		**20**		<0.61	U	<0.61	U	**<0.61**	R	
Hexachloro-1,3-butadiene	<1.6	U	<1.6	U	<1.6	U	<1.6	U	<1.6	R	
Hexane	**56**		4.9	U	4.9	U	**130**		**44**	R	
Isopropyl alcohol	<0.37	U	<0.37	U	<0.37	U	<0.37	U	<0.37	R	
Xylene (m,p)	**33**		**16**		**16**		**4.6**		**5.8**	R	
Methyl Butyl Ketone	<1.2	U	<1.2	U	<1.2	U	<1.2	U	<1.2	R	
Methyl Ethyl Ketone	**120**	J	**51**		**72**	J	**93**		**130**	R	
Methyl Isobutyl Ketone	**11**		**4**		**4.2**		**7.2**		**6.7**	R	
Methyl tert-butyl ether	<0.54	U	<0.54	U	<0.54	U	<0.54	U	<0.54	R	
Methylene chloride	**16**		**3**		**3.1**		**16**		**4.3**	R	
Xylene (o)	**9**		**4.6**		**4.7**		**1.3**		**1.3**	R	
Propylene	<0.26	U	<0.26	U	<0.26	U	<0.26	U	<0.26	R	
Styrene	**5.2**		**6**		**5.9**		**3.1**		**4.3**	R	
Tetrachloroethylene	**3.9**		**36**		**43**		**1.6**		**13**	R	
Tetrahydrofuran	<0.44	U	<0.44	U	<0.44	U	<0.44	U	<0.44	R	
Toluene	**62**		**38**		**44**		**88**		**48**	R	
trans-1,2-Dichloroethene	<0.59	U	<0.59	U	<0.59	U	<0.59	U	<0.59	R	
trans-1,3-Dichloropropene	<0.68	U	<0.68	U	<0.68	U	<0.68	U	<0.68	R	
Trichloroethene	**4.9**		**3.8**		**3.8**		**8.5**		**4.9**	R	
Vinyl acetate	<0.53	U	<0.53	U	<0.53	U	<0.53	U	<0.53	R	
Vinyl bromide	<0.66	U	<0.66	U	<0.66	U	<0.66	U	<0.66	R	
Vinyl chloride	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	R	
Total VOCs	*1967.47*		*492.97*		*539.03*		*692.91*		*602.56*	*R*	
Total Chlorinated VOCs	*9.51*		*100.80*		*65.90*		*31.71*		*26.58*	*R*	

There are currently (as of the date of this Report) no regulatory (NYSDEC or NYSDOH) guidance values for soil gas.

NOTES:
All values are displayed in micrograms per cubic meter (μ/m^3)
BOLD values indicate compound was detected above the method detection limit (MDL).
Volatile Organic Compounds (VOCs) were analyzed via USEPA Method TO-15.
"J" indicates the value is considered estimated
"U" and "<" indicate the compond was not detected above the quantitation limit shown
R indicates data was rejected during validation

APPENDIX A

Environmental Easement

Jefferson Wollensack Housing Development Fund Corporation
312 State Street, Rochester NY14608

October 26, 2020

Mayor Lovely A. Warren
City of Rochester
City Hall, Room 307A
30 Church St.
Rochester NY 14614

Re: Environmental Easement Municipal Notification

Dear Sir or Madam:

Attached please find a copy of an Environmental Easement granted to the New York State Department of Environmental Conservation ("DEC") on October 20, 2020 and recorded in the Monroe County Clerk's Office on October 26, 2020 at Liber 12411, Page 641, by Jefferson Wollensack Housing Development Fund Corp., as nominee for Jefferson Wollensack LLC for property located at 872 & 886 Hudson Avenue, Rochester, New York – Tax Parcel Numbers 091.81-2-59 & 091.81-2-58, DEC Site Number C828209.

This Environmental Easement restricts future use of the above-referenced property to restricted residential use. Any on-site activity must be done in accordance with the Environmental Easement and the Site Management Plan which is incorporated into the Environmental Easement. Department approval is also required prior to any groundwater use.

Article 71, Section 71-3607 of the New York State Environmental Conservation Law requires that:

> 1. Whenever the department is granted an environmental easement, it shall provide each affected local government with a copy of such easement and shall also provide a copy of any documents modifying or terminating such environmental easement.
> 2. Whenever an affected local government receives an application for a building permit or any other application affecting land use or development of land that is subject to an environmental easement and that may relate to or impact such easement, the affected local government shall notify the department and refer such application to the department. The department shall evaluate whether the application is consistent with the environmental easement and shall notify the affected local government of its determination in a timely fashion, considering the time frame for the local government's review of the application. The affected local government shall not approve the application until it receives approval from the department.

An electronic version of every environmental easement that has been accepted by the Department is available to the public at: http://www.dec.ny.gov/chemical/36045.html. Please

forward this notice to your building and/or planning departments, as applicable, to ensure your compliance with these provisions of New York State Environmental Conservation Law. If you have any questions or comments regarding this matter, please do not hesitate to contact me.

Very truly yours,

Carolyn Vitale, Vice President/COO

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT.

Receipt # 2527988

Book Page D 12411 0641

No. Pages: 12

Instrument: EASEMENT AGREEMENT

Control #: 202010260737

Ref #: TT0000006368

Date: 10/26/2020

Time: 1:35:43 PM

Return To:
Nixon Peabody LLP
100 Summer St
Boston, MA 02110

JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP,
JEFFERSON WOLLENSACK LLC,

PEOPLE OF THE STATE OF NEW YORK,

Recording Fee	$26.00
Pages Fee	$55.00
State Fee Cultural Education	$14.25
State Fee Records Management	$4.75
TP-584 Form Fee	$5.00
Total Fees Paid:	$105.00

Employee: CT

State of New York

MONROE COUNTY CLERK'S OFFICE
WARNING – THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

Consideration: $1.00

JAMIE ROMEO

MONROE COUNTY CLERK

County: Monroe Site No: C828209 Brownfield Cleanup Agreement Index : C828209-11-18

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 20th day of October, 2020 between Owner(s), Jefferson Wollensack Housing Development Fund Corp., (the "Grantor Fee Owner") having an office at 312 State Street, Rochester, New York 14608, County of Monroe, State of New York, and Jefferson Wollensack LLC, (the "Grantor Beneficial Owner), having an office at 312 State Street, Rochester, New York 14608, County of Monroe, State of New York (collectively, the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor Fee Owner, is the owner of real property located at the address of 872 Hudson Avenue in the City of Rochester, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel number: Section 091.81 Block 2 Lot 59, being a portion of the property conveyed to Grantor by deed dated May 10, 2019 and recorded in the Monroe County Clerk's Office in Liber and Page 12185/0393.

WHEREAS, Grantor Fee Owner, is the owner of real property located at the address of 886 Hudson Avenue in the City of Rochester, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel number: Section 091.81 Block 2 Lot 58, being a portion of the property conveyed to Grantor by deed dated May 10, 2019 and recorded in the Monroe County Clerk's Office in Liber and Page 12185/0393.

WHEREAS, the property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.491 +/- acres, and is hereinafter more fully described in the Land Title Survey dated September 15, 2020 and last revised September 22, 2020 prepared by Michael W. Haley, P.L.S. of LaBella Associates, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, Grantor Beneficial Owner, is the owner of the beneficial interest in the Controlled Property being the same as a portion of that beneficial interest conveyed to Grantor Beneficial Owner by means of a Declaration of Interest and Nominee Agreement dated May 10, 2019 and recorded in the Monroe County Clerk's Office in Liber and Page 12185/397; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C828209-11-18, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a

manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled

Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C828209
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

County: Monroe Site No: C828209 Brownfield Cleanup Agreement Index : C828209-11-18

IN WITNESS WHEREOF, Grantor Beneficial Owner has caused this instrument to be signed in its name.

Jefferson Wollensack LLC:

By: _____

Print Name: Carolyn Vitale

Title: Vice President Date: 10/8/2020

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 8th day of October, in the year 2020 before me, the undersigned, personally appeared Carolyn Vitale, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

BRIAN F. CURRAN
Notary Public, State of New York
No. 4802864
Qualified in Monroe County
Commission Expires March 30, 2023

County: Monroe Site No: C828209 Brownfield Cleanup Agreement Index : C828209-11-18

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Jefferson Wollensack Housing Development Fund Corp.:

By: _____

Print Name: Carolyn Vitale

Title: Vice President Date: 10/8/2020

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 8th day of October, in the year 2020, before me, the undersigned, personally appeared Carolyn Vitale, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

BRIAN F. CURRAN
Notary Public, State of New York
No. 4802864
Qualified in Monroe County
Commission Expires March 30, 2023

BRIAN F. CURRAN
Notary Public, State of New York
No. 4802864
Qualified in Monroe County
Commission Expires March 30, 2023

County: Monroe Site No: C828209 Brownfield Cleanup Agreement Index : C828209-11-18

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 26th day of October, in the year 2020 before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

LAWRENCE H. WEINTRAUB
Notary Public, State of New York
Registration No. 02WE6408234
Qualified in Schenectady County
Commission Expires August 17, 2024

SCHEDULE "A" PROPERTY DESCRIPTION

ENVIRONMENTAL EASEMENT: (EE1)

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN THE CITY OF ROCHESTER, COUNTY OF MONROE AND STATE OF NEW YORK DESCRIBED AS:

THAT PART OF LOTS 48 AND 49 OF THE WATERSTRAAT AND WUNDER TRACT, BEING A SUBDIVISION OF PART OF TOWN LOT #45, TOWNSHIP #14, RANGE 7 AND FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 10 OF MAPS AT PAGE 119 DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT A POINT IN THE SOUTHWEST CORNER OF SAID LOT NO. 48, BEING A POINT AT THE INTERSECTION BETWEEN THE NORTHERLY RIGHT-OF-WAY FOR AVENUE "D" AND THE EASTERLY RIGHT-OF-WAY FOR HUDSON AVENUE, ALSO BEING THE SOUTHWEST CORNER FOR THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59; THENCE

1. N 03°22'48" W ALONG SAID EASTERLY RIGHT-OF-WAY OF HUDSON AVENUE FOR A DISTANCE OF 112.27 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF THE CITY OF ROCHESTER TA# 91.81-02-12 ON THE NORTH/EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE SOUTH/WEST; THENCE

2. N 87°43'42" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 134.00 FEET PASSING ALONG THE SOUTH LINE FOR THE LANDS NOW FOR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 TO A POINT IN SOUTHEAST CORNER OF SAID LANDS; THENCE

3. N 02°16'18" W ALONG THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE EAST AND THE LANDS NOW OR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 ON THE WEST FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE; THENCE

4. N 87°43'42" E ALONG SAID SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE FOR A DISTANCE OF 35.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF HENRY BAKER JR. & MARY TURNER TA# 91.81-02-14 ON THE EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE WEST; THENCE

5. S 02°16'18" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE NORTH/WEST AND THE LANDS NOW FOR FORMERLY OF LUZ A. WILD NUNEZ TA# 91.81-02-57 ON THE SOUTH/EAST; THENCE

6. S 87°43'42" W ALONG SAID DIVISION LINE FOR A DISTANCE OF 0.35 FEET TO AN ANGLE POINT; THENCE

7. S 02°16'18" E CONTINUING ALONG SAID DIVISION LINE FOR A DISTANCE OF 112.25 FEET TO A POINT IN THE NORTHERLY RIGHT-OF-WAY OF AVENUE "D"; THENCE

8. S 87°43'42" W ALONG SAID NORTHERLY RIGHT-OF-WAY OF AVENUE "D" FOR A DISTANCE OF 166.48 FEET PASSING ALONG THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59 ON THE NORTH TO THE POINT AND PLACE OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 0.491 ACRES (21,400 SQ FT.)

In the Matter of Jefferson Wollensack Housing Development Fund Corp., as nominee for Jefferson Wollensack LLC for Property Located at 872 & 886 Hudson Avenue, Rochester, New York – Tax Parcel Numbers 091.81-2-59 & 091.81-2-58, DEC Site Number C828209

AFFIRMATION OF MAILING

STATE OF NEW YORK)
COUNTY OF MONROE) ss.:

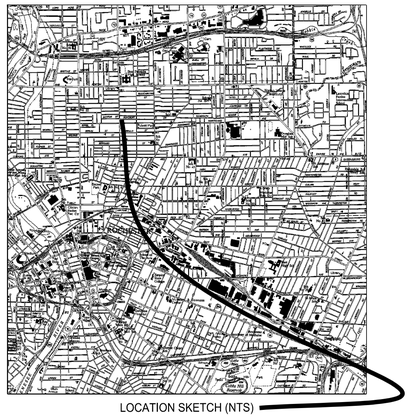
AMY L. REICHHART, an attorney duly admitted to practice before the Courts of the State of New York, affirms as follows:

1. I am an attorney and counselor at law, duly licensed to practice in the State of New York, and a member of the firm of Nixon Peabody, LLP, counsel to Jefferson Wollensack Housing Development Fund Corp., as nominee for Jefferson Wollensack LLC.

2. On October 27, 2020, I caused a copy of the attached correspondence to be sent by First Class Mail by depositing it in a receptacle properly maintained by the United States Postal Service on the first floor of 1300 Clinton Square, Rochester, NY 14604, addressed to: Mayor Lovely A. Warren, City of Rochester, City Hall, Room 307A, 30 Church St., Rochester NY 14614.

Dated: October 27, 2020

AMY L. REICHHART

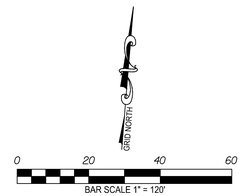


LOCATION SKETCH (NTS)

THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL EASEMENT HELD BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE NEW YORK ENVIRONMENTAL CONSERVATION LAW. THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN MORE DETAIL IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION, SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NY 12233 OR AT derweb@dec.ny.gov.

SCHEDULE "B" EXCEPTIONS - PARCELS A(1) & A(2) (PER SURVEY REFERENCE #6)

1. EASEMENT AGREEMENT MADE BETWEEN VIRGINVILLE LENS COMPANY AND UNISON SITE MANAGEMENT, LLC BY INSTRUMENT DEED DATED JUNE 30, 2006 AND RECORDED AUGUST 17, 2006, IN LIBER 10343 OF DEEDS, PAGE 151. (NOT PLOTTABLE - COMMUNICATION EASEMENT ON ROOFTOP - BLANKET EASEMENT)
2. ASSIGNMENT AND ASSUMPTION OF LEASE AGREEMENT MADE BETWEEN VIRGINVILLE LENS COMPANY AND UNISON SITE MANAGEMENT, LLC BY INSTRUMENT DEED DATED JUNE 30, 2006 AND RECORDED AUGUST 17, 2006, IN LIBER 10343 OF DEEDS, PAGE 164. (NOT PLOTTABLE - ROOFTOP LEASE WITH TOWER OPTION)
3. ALTA/NSPS SURVEY MADE BY MAGDE LAND SURVEYING, P.C. DATED OCTOBER 29, 2019, LAST REVISED NOBEMBER 21, 2019, SHOWS PREMISES HERIN AND SUBJECT TO THE FOLLOWING EXCEPTIONS:
   - A) VARIATIONS BETWEEN THE LINES OF FENCES AND THE LINES OF RECORD TITLE.
   - B) OVERHEAD WIRES CROSS PREMISES.
   - C) VARIATIONS BETWEEN THE LINES OF WALLS AND THE LINES OF RECORD TITLE.
   - F) ROOF OVERHANG ON 4 STORY MASONRY BUILDING ENCROACHES ONTO HUDSON AVENUE.
   - G) DRIVEWAY ON THE PREMISES NEXT EASTERLY ENCROACHES UP TO 3.4 FEET ONTO INSURED PREMISES.
   - H) DRIVEWAY ON THE PREMISES NEXT EASTERLY ENCROACHES UP TO 0.8 FEET ONTO INSURED PREMISES.
   - J) CONCRETE SIDEWALK ALONG HUDSON AVENUE ROAD RIGHT OF WAY ENCROACHES UP TO 1.5 FEET ONTO THE INSURED PREMISES.
   - K) CONCRETE SIDEWALK ALONG AVENUE D ROAD RIGHT OF WAY ENCROACHES UP TO 3.1 FEET ONTO THE INSURED PREMISES.
   - L) CONCRETE SIDEWALK ALONG AVENUE D ROAD RIGHT OF WAY ENCROACHES UP TO 2.5 FEET ONTO THE INSURED PREMISES.
   - M) IT APPEARS THE OWNER IS OUT OF POSSESSION OF A STRIP OF LAND ALONG THE WESTERLY MOST NORTHERLY LINE OF PREMISES HAVING A MAXIMUM WIDTH OF 2.0 FEET. TITLE OF SAID STRIP OF LAND IS NOT INSURED.
   - N) IT APPEARS THE OWNER OUT OF POSSESSION OF A STRIP OF LAND ALONG THE MOST EASTERLY LINE OF PREMISES HAVING A MAXIMUM WIDTH OF 2.6 FEET. TITLE TO SAID STRIP OF LAND IS NOT INSURED.

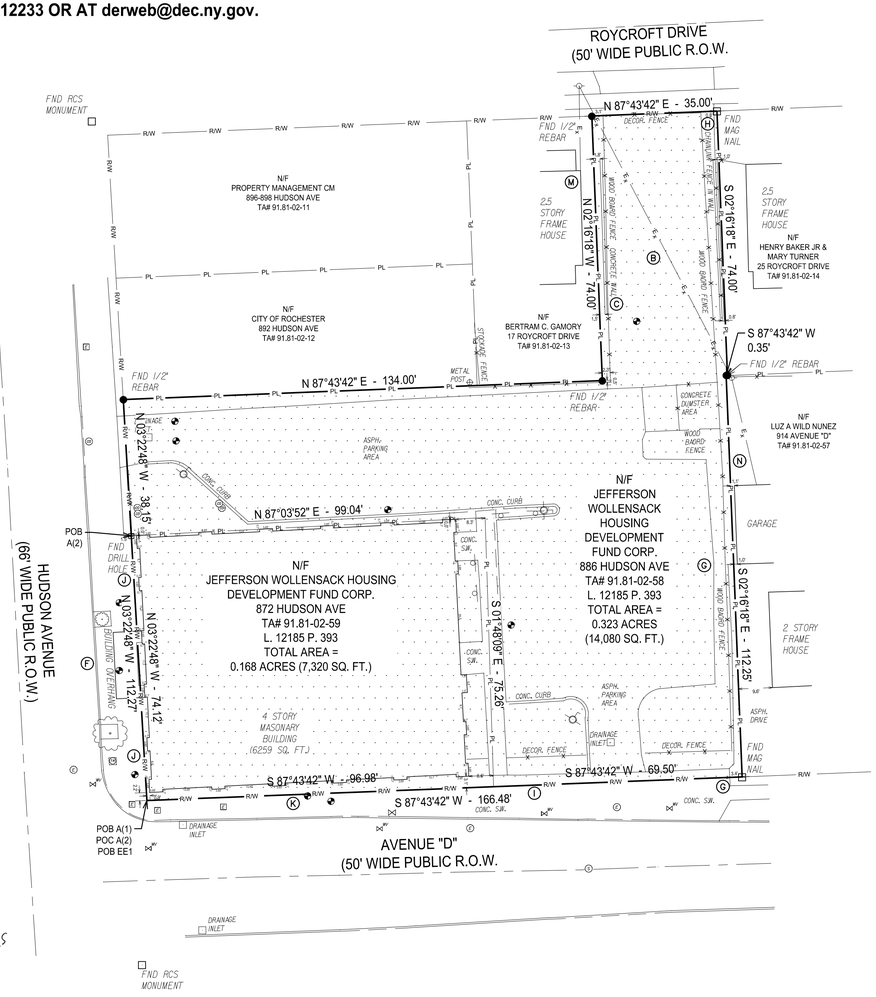


LEGEND

THESE STANDARD SYMBOL AND LINE STYLES WILL BE FOUND IN THE DRAWING.

- DRILL HOLE
- IRON PIN
- MAG NAIL
- WATER VALVE
- DECIDUOUS TREE
- SIGN
- UTILITY POLE
- LIGHT POLE
- FENCE LINE
- RIGHT-OF-WAY
- PROPERTY LINE
- PERM. EASEMENT LINE
- OVERHEAD ELECTRIC LINE

ENVIRONMENTAL EASEMENT



SURVEY REFERENCES:

1. COUNTY OF MONROE, CITY OF ROCHESTER - TAX MAP NO. 91.81.
2. DEED BETWEEN JEFFERSON WOLLENSACK LLC AND JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. DATED MAY 10, 2019 AND RECORDED IN THE MONROE COUNTY CLERK'S OFFICE MAY 20, 2019 AS LIBER 12185 OF DEEDS, PAGE 394.
3. DEED BETWEEN LINDA S. KINGSLEY AND CITY OF ROCHESTER DATED OCTOBER 24, 1997 AND RECORDED IN THE MONROE COUNTY CLERK'S OFFICE OCTOBER 24, 1997 AS LIBER 8932 OF DEEDS, PAGE 603.
4. DEED BETWEEN ALFREDO ACOSTA AND LUZ AWILDA NUNEZ DATED JANUARY 12, 2012 AND RECORDED IN THE MONROE COUNTY CLERK'S OFFICE FEBRUARY 3, 2012 AS LIBER 11087 OF DEEDS, PAGE 613.
5. SURVEY ALTA MAP REFERENCE TITLED, "ALTA/NSPS SURVEY PREPARED FOR 872/886 HUDSON AVENUE" DATED NOVEMBER 21, 2019 AND PREPARED BY MAGDE LAND SURVEYING P.C.
6. ABSTRACT OF TITLE BY CHICAGO TITLE INSURANCE COMPANY NO. 1913-6120EC WITH A POLICY DATE OF NOVEMBER 21, 2019.

UTILITY NOTE:

INFORMATION FROM PLANS AND MARKINGS WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811, OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND /OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.

SURVEY NOTES:

1. CONTROL FOR THIS PROJECT IS BASED ON CONTROL POINTS ESTABLISHED UTILIZING THE NYSNET GPS SYSTEM. THE HORIZONTAL DATUM IS REFERENCED TO THE N.Y.S. PLANE COORDINATE SYSTEM, WESTERN ZONE, TRANSVERSE MERCATOR PROJECTION. NAD83 (2011). FIELD WORK WAS COMPLETED WITH AN ACCURACY OF 1:10,000 OR BETTER.
2. BEARINGS SHOWN ARE REFERENCED TO GRID BEARINGS. DISTANCES SHOWN ARE GROUND DISTANCES.
3. MAP PREPARED FROM AN INSTRUMENT SURVEY DATED AUGUST 20, 2020.

WE, LABELLA ASSOCIATES, DPC, CERTIFY THAT THIS MAP WAS PREPARED USING REFERENCE MATERIALAS LISTED HEREON AND FROM FIELD NOTES OF AN INSTRUMENT SURVEY COMPLETED AUGUST 20, 2020. THIS PARCEL IS SUBJECT TO ANY EASEMENTS OR ENCUMBRANCES OF RECORD.

MICHAEL W. HALEY PLS — SEPTEMBER 15, 2020
NYS PLS NO. 049788

STATE OF NEW YORK — MICHAEL W. HALEY — 049788 — LICENSED LAND SURVEYOR

ENVIRONMENTAL EASEMENT: (EE1)

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN THE CITY OF ROCHESTER, COUNTY OF MONROE AND STATE OF NEW YORK DESCRIBED AS:

THAT PART OF LOTS 48 AND 49 OF THE WATERSTRAAT AND WUNDER TRACT, BEING A SUBDIVISION OF PART OF TOWN LOT #45, TOWNSHIP #14, RANGE 7 AND FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 10 OF MAPS AT PAGE 119 DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT A POINT IN THE SOUTHWEST CORNER OF SAID LOT NO. 48, BEING A POINT AT THE INTERSECTION BETWEEN THE NORTHERLY RIGHT-OF-WAY FOR AVENUE "D" AND THE EASTERLY RIGHT-OF-WAY FOR HUDSON AVENUE, ALSO BEING THE SOUTHWEST CORNER FOR THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59; THENCE

1. N 03°22'48" W ALONG SAID EASTERLY RIGHT-OF-WAY OF HUDSON AVENUE FOR A DISTANCE OF 112.27 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF THE CITY OF ROCHESTER TA# 91.81-02-12 ON THE NORTH/EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE SOUTH/WEST; THENCE
2. N 87°43'42" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 134.00 FEET PASSING ALONG THE SOUTH LINE FOR THE LANDS NOW FOR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 TO A POINT IN SOUTHEAST CORNER OF SAID LANDS; THENCE
3. N 02°16'18" W ALONG THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE EAST AND THE LANDS NOW OR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 ON THE WEST FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE; THENCE
4. N 87°43'42" E ALONG SAID SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE FOR A DISTANCE OF 35.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF HENRY BAKER JR. & MARY TURNER TA# 91.81-02-14 ON THE EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE WEST; THENCE
5. S 02°16'18" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE NORTH/WEST AND THE LANDS NOW FOR FORMERLY OF LUZ A. WILD NUNEZ TA# 91.81-02-57 ON THE SOUTH/EAST; THENCE
6. S 87°43'42" W ALONG SAID DIVISION LINE FOR A DISTANCE OF 0.35 FEET TO AN ANGLE POINT; THENCE
7. S 02°16'18" E CONTINUING ALONG SAID DIVISION LINE FOR A DISTANCE OF 112.25 FEET TO A POINT IN THE NORTHERLY RIGHT-OF-WAY OF AVENUE "D"; THENCE
8. S 87°43'42" W ALONG SAID NORTHERLY RIGHT-OF-WAY OF AVENUE "D" FOR A DISTANCE OF 166.48 FEET PASSING ALONG THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59 ON THE NORTH TO THE POINT AND PLACE OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 0.491 ACRES (21,400 SQ.FT.)

SURVEYOR'S PARCEL DESCRIPTION - 872 HUDSON AVE - TA# 91.81-02-59 A(1)

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN THE CITY OF ROCHESTER, COUNTY OF MONROE AND STATE OF NEW YORK DESCRIBED AS:

THAT PART OF LOTS 48 AND 49 OF THE WATERSTRAAT AND WUNDER TRACT, BEING A SUBDIVISION OF PART OF TOWN LOT #45, TOWNSHIP #14, RANGE 7 AND FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 10 OF MAPS AT PAGE 119 DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT A POINT IN THE SOUTHWEST CORNER OF SAID LOT NO. 48, BEING A POINT AT THE INTERSECTION BETWEEN THE NORTHERLY RIGHT-OF-WAY FOR AVENUE "D" AND THE EASTERLY RIGHT-OF-WAY FOR HUDSON AVENUE, ALSO BEING THE SOUTHWEST CORNER FOR THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59; THENCE

1. N 03°22'48" W ALONG SAID EASTERLY RIGHT-OF-WAY OF HUDSON AVENUE FOR A DISTANCE OF 74.12 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE NORTH/EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59 ON THE SOUTH/WEST; THENCE
2. N 87°03'52" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 99.04 FEET TO AN ANGLE POINT; THENCE
3. S 01°48'09" E CONTINUING ALONG SAID DIVISION LINE FOR A DISTANCE OF 75.26 FEET TO A POINT IN THE NORTHERLY RIGHT-OF-WAY OF AVENUE "D"; THENCE
4. S 87°43'42" W ALONG SAID NORTHERLY RIGHT-OF-WAY FOR AVENUE "D" FOR A DISTANCE OF 96.98 FEET TO THE POINT AND PLACE OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AND AREA OF 0.168 ACRES (7,320 SQ. FT.)

SURVEYOR'S PARCEL DESCRIPTION - 886 HUDSON AVE - TA# 91.81-02-58 A(2)

ALL THAT TRACT OF PARCEL OF LAND SITUATE IN THE CITY OF ROCHESTER, COUNTY OF MONROE AND STATE OF NEW YORK DESCRIBED AS:

DISTINGUISHED AS LOTS 44 AND 50 AND PARTS OF LOTS 48 AND 49 OF THE WATERSTRAAT AND WUNDER TRACT AS SHOWN ON A MAP THEREOF FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 10 OF MAPS AT PAGE 119; AND ALSO LOT 47 OF WEDDALE TRACT, AS SHOWN ON A MAP THEREOF FILED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 9 OF MAPS, AT PAGE 102 DESCRIBED AS FOLLOWS, TO WIT:

COMMENCING AT A POINT IN THE SOUTHWEST CORNER OF SAID LOT NO. 48, BEING A POINT AT THE INTERSECTION BETWEEN THE NORTHERLY RIGHT-OF-WAY FOR AVENUE "D" AND THE EASTERLY RIGHT-OF-WAY FOR HUDSON AVENUE, ALSO BEING THE SOUTHWEST CORNER FOR THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59; THENCE N 03°33'48" W ALONG SAID EASTERLY RIGHT-OF-WAY OF HUDSON AVENUE FOR A DISTANCE OF 74.12 FEET TO THE PLACE OF BEGINNING; THENCE

1. N 03°22'48" W CONTINUING ALONG SAID RIGHT-OF-WAY FOR A DISTANCE OF 38.15 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF THE CITY OF ROCHESTER TA# 91.81-02-12 ON THE NORTH AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE SOUTH; THENCE
2. N 87°43'42" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 134.00 FEET PASSING ALONG THE SOUTH LINE FOR THE LANDS NOW FOR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 TO A POINT IN SOUTHEAST CORNER OF SAID LANDS; THENCE
3. N 02°16'18" W ALONG THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE EAST AND THE LANDS NOW OR FORMERLY OF BERTRAM C. GAMORY TA# 91.81-02-13 ON THE WEST FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE; THENCE
4. N 87°43'42" E ALONG SAID SOUTHERLY RIGHT-OF-WAY OF ROYCROFT DRIVE FOR A DISTANCE OF 35.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF HENRY BAKER JR. & MARY TURNER TA# 91.81-02-14 ON THE EAST AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE WEST; THENCE
5. S 02°16'18" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 74.00 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE NORTH/WEST AND THE LANDS NOW FOR FORMERLY OF LUZ A. WILD NUNEZ TA# 91.81-02-57 ON THE SOUTH/EAST; THENCE
6. S 87°43'42" W ALONG SAID DIVISION LINE FOR A DISTANCE OF 0.35 FEET TO AN ANGLE POINT; THENCE
7. S 02°16'18" E CONTINUING ALONG SAID DIVISION LINE FOR A DISTANCE OF 112.25 FEET TO A POINT IN THE NORTHERLY RIGHT-OF-WAY OF AVENUE "D"; THENCE
8. S 87°43'42" W ALONG SAID NORTHERLY RIGHT-OF-WAY OF AVENUE "D" FOR A DISTANCE OF 69.50 FEET TO A POINT IN THE DIVISION LINE BETWEEN THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-58 ON THE EAST/NORTH AND THE LANDS NOW OR FORMERLY OF JEFFERSON WOLLENSACK HOUSING DEVELOPMENT FUND CORP. TA# 91.81-02-59 ON THE WEST/SOUTH; THENCE
9. N 01°48'09" E ALONG SAID DIVISION LINE FOR A DISTANCE OF 75.26 FEET TO AN ANGLE POINT; THENCE
10. S 87°03'52" W CONTINUING ALONG SAID DIVISION LINE FOR A DISTANCE OF 99.04 FEET TO THE POINT AND PLACE OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AND AREA OF 0.323 ACRES (14,080 SQ. FT.)

LaBella
Powered by partnership.

300 State Street, Suite 201
Rochester, NY 14614
585-454-6110

labellapc.com

NOT FOR CONSTRUCTION

JEFFERSON WOLLENSACK LLC.
312 STATE STREET
ROCHESTER, NY 14608

872 & 886 HUDSON BROWNFIELD
872-886 HUDSON AVENUE
ROCHESTER, NY 14621

NO:	DATE:	DESCRIPTION:
6	##/##/##	Comment
5	##/##/##	Comment
4	##/##/##	Comment
3	##/##/##	Comment
2	##/##/##	Comment
1	09/22/2020	Misc. Comment

Revisions

PROJECT NUMBER: 2182207
DRAWN BY:
REVIEWED BY:
ISSUED FOR: FINAL
DATE: SEPTEMBER 15, 2020
DRAWING NAME:

INSTRUMENT SURVEY ENVIRONMENTAL EASEMENT

DRAWING NUMBER:

V-1

VERSION 19.0
6/3/2010 8:47:56 AM

APPENDIX B

List of Site Contacts

APPENDIX B – LIST OF SITE CONTACTS

Name	Phone/Email Address
Site Owner and Remedial Party; Jefferson Wollensack, LLC (Urban League of Rochester) Carolyn Vitale	585-454-5710 cvitale@ulr.org
Professional Engineer; Dan Noll, PE (LaBella Associates, DPC)	585-295-6611 dnoll@labellapc.com
Qualified Environmental Professional; Michael Pelychaty, PG (LaBella Associates, DPC)	585-295-6253 mpelychaty@labellapc.com
NYSDEC Project Manager; Charlotte B. Theobald	585-226-5354 charlotte.theobald@dec.ny.gov
NYSDEC Project Manager's Supervisor; David Pratt	585-226-5315 david.pratt@dec.ny.gov
NYSDOH Project Manager; Arunesh Ghosh	518-486-1443 Arunesh.ghosh@health.ny.gov
NYSDEC Site Control; Kelly Lewandowski	518-402-8553 Kelly.lewandowski@dec.ny.us
Remedial Party Attorney; Amy L. Reichhart (Nixon Peabody, LLP)	585-263-1322 areichhart@nixonpeabody.com

APPENDIX C

Field Logs

Boring Logs

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-01
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: A. Mincer
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: Basement
GROUND SURFACE ELEVATION NA
START DATE: 6/5/19 END DATE: 6/5/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackjammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/4	S1 0-4'	0'	Concrete		
			0.5'	Dark brown c-f sand and gravel, moist, no odor.	0.449	
1			0.8'	Light brown sitly sand, trace gravel, moist, no odor.		
					0.5	
2						
					0.051	
3						
					0.025	
4	2.0/2.0	S2 4-6'	4'	Similar to above.	0.132	
5					0.156	
6				6' - Boring Terminated	0.02	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				6'	Shallow

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-02
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: A. Mincer
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: Basement
GROUND SURFACE ELEVATION NA
START DATE: 6/5/19 END DATE: 6/5/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackjammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/4	S1 0-4'	0'	Concrete		
			0.5'	Light brown, tightly packed silty sand, little c-f gravel, wet, no odor	0.862	
1						
					1.098	
2						
					1.431	
3					2.245	
					4.411	
4	2.5/3.0	S2 4-7'	4'	Similar to above.		
					4.433	
5						
					10.062	
6					14.13	
					15.82	
7				7' - Boring Terminated	16.07	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring terminated due to difficulty in removing macrocore from subsurface.
				7'	Shallow	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-03
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: A. Mincer
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: Basement - Vault
GROUND SURFACE ELEVATION NA
START DATE: 6/5/19 END DATE: 6/5/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackjammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/4	S1 0-4'	0'	Concrete		
			0.5'	Brown c-f sand, little silt, little gravel, slight gray staining, wet, petro odor.	40.96	
1					37.89	
2					25.81	
3					15.21	
4	1.0/1.0	S2 4-5'	4'	Similar to above, slight odor, no staining.	10.89	
					1.52	
5				5' - Boring Terminated	2.082	
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring within vault under sidewalk were fuel oil tanks were previously stored
				5'	Shallow	Tanks were removed prior to boring, and the vault was filled in with flowable fill after the boring was completed. New sidewalk over top.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-04
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: A. Mincer
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION: Basement
GROUND SURFACE ELEVATION NA
START DATE: 6/5/19 END DATE: 6/5/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Jackjammer
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.2/4	S1 0-4'	0'	Concrete		
			0.5'	Brown tightly packed silty sand, little c-f gravel, moist to wet, no odor.	1.682	
1						
2					7.082	
3					1.862	
4	3.0/3.0	S2 4-7'	4'	Similar to above, wet.	1.681	
5					0.303	
6					0.362	
7				7' - Boring Terminated	0.341	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring terminated due to difficulty in removing macrocore from subsurface.
				7'	Shallow	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-05
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE: SAMPLE RECOVERY (FEET)	SAMPLE: SAMPLE NO. AND DEPTH	SAMPLE: STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.5/5	S1 0-5	0'	Brown F-M sand, little fine SA gravel, dry to moist, no odor	0	
1						
2					0.395	
3					0.182	
4			4'	Similar to above, tightly packed, trace clay	0.005	
5	5.0/5.0	S2 5-10	5'	Brown C-F sand, some C-F GR-SA gravel, trace silt, moist, no odor.		
6					0.025	
7					0.175	
8					0.104	
9					0.5	
10	5.0/5.0	S3 10-15			2.441	
11					0.618	
12					0.393	
13			12.5'	Brown sand, little silt, trace gravel, wet, no odor.	0.101	
14			14'	Tightly packed brown sand, trace gravel, moist, no odor	0	
15	4.5/4.5	S4 15-19.5	15'	Similar to above, wet.	0	
16					0	
17					0	
18					0	
19					0	
20				19.5 - Boring refusal	0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				19.5'	~12.5

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-06
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.7/5	S1 0-5	0'	Gray c-f SA gravel and sand, trace glass, wood, brickand slag		
1					0.271	
2					0.333	
3					0.078	
4						
5	5.0/5.0	S2 5-10	4.5'	Brown c-f sand and SR to SA gravel, dry, no odor		
6					0.981	
7					0.246	
8			7.5'	Brown f sand, little silt, little cf SR gravel, moist, no odor.	0.069	
9					0.039	
10	5.0/5.0	S3 10-15				
11			10.5'	Similar ro above, trace brick.	0.04	
12					0	
13			13'	Similar to above, moist to wet	0	
14					0	
15	5.0/5.0	S4 15-20			0	
16					0.101	
17						
18			18'	Similar to above, rust staining	0.484	
19			18.5'	Similar to above, gray.	1.654	
20				20' - Boring refusal	2.681	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				20'	~13'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-07
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.2/5	S1 0-5	0'	Gray-brown cf sand, little silt, some cmf gravel, moist, no odor		
1					0.218	
2					0.255	
3			4.5'	Brick(red), dry, no odor	0.205	
4					0.63	
5	3.1/5.0	S2 5-10	5'	Tightly packed brown c-ssand and cmf SR gravel, little silt, moist, no odor		
6					0.308	
7					0.206	
8					0.211	
9					0.292	
10	5.0/5.0	S3 10-15				
11					0.549	
12					0.466	
13			12.5'	Similar to above, wet.	0.232	
14					0.146	
15	5.0/5.0	S4 15-20	15'	Gray f-m sand, some c-f SR gravel, trace silt, wet		
16					1.56	
17					1.922	
18					4.606	
19					4.205	
20	3.0/3.0	S5 20-23			3.821	
21					0.695	
22						
23				23' - Boring refusal	0.244	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				23'	~12.5

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-08
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.7/5	S1 0-5	0'	Brown c-f sand and A to SA gravel, trace silt, moist, no odor	0	
1						
2					0.303	
3					0.49	
4			4	Asphalt		
			4.2	Brown c-f sand and A to SA gravel, trace silt, moist, no odor	0.018	
5	5.0/5.0	S2 5-10	5'	Light brown f-m sand, some grave, trace sitl, moist to wet, no odor.		
6					0.083	
7					0.328	
8						
9					0.111	
10	5.0/5.0	S3 10-15			0.078	
11			11'	Similar to above, wet.	0.071	
12					0.082	
13						
14					0.056	
15	5.0/5.0	S4 15-20	15'	Similar to above, brown to gray.	0.048	
16					0.082	
17						
18					0.11	
19						
20	2.7/2.7	S5 20-22.7			0.138	
21					0.133	
22						
				22.7' - Boring refusal	0.134	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				22.7'	~11

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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little = 10 - 20%
trace = 1 - 10%

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M = Medium
F = Fine
VF = Very Fine

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-09
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE: SAMPLE RECOVERY (FEET)	SAMPLE: SAMPLE NO. AND DEPTH	SAMPLE: STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.8/5	S1 0-5	0'	Brown cmf sand, little silt, some SA gravel, moist, no odor	0.034	
1					0.086	
2					0.005	
3			3.5'	Layer of asphalt		
			3.6'	Brown cmf sand, little silt, some SA gravel, moist, no odor	0.01	
4					0.034	
5	2.9/5	S2 5-10	5'	Light brown silt and sand, little cmf gravel, moist to wet, no oder	0.044	
6					0.047	
7					0.038	
8					0.039	
9						
10	5.0/5.0	S3 10-15	10'	Light brown sand, some SA gravel, little to trace silt, wet, no odor	0.022	
11						
12					0.032	
13						
14					0.028	
15	5.0/5.0	S4 15-20	20'	similar to above, grav, trace silt	0.022	
16						
17						
18					0.005	
19						
20				20' - Boring Terminated	0.009	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				20'	~8'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
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trace = 1 - 10%

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M = Medium
F = Fine
VF = Very Fine

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-10
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.1/5	S1 0-5		Brown and gray silt and sand, little gravel, moist, no odor	0.36	
1					0.29	
2						
3					0.27	
4					0.26	
5	5.0/5.0	S2 5-10		Brown sand cmf, trace silt, some c-f SA gravel, moist to wet.		
6					0.094	
7					0.03	
8						
9					0.01	
10	5.0/5.0	S3 10-15		Similar to above, wet	0.01 0.912	
11					0.512	
12						
13					0.089	
14	5.0/5.0	S4 15-20		Similar to above, gray		
15					0.103	
16					0.201	
17						
18					0.324	
19						
20				20' - Boring Terminated	0.322	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				20'	~10'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-11
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/19/19 END DATE: 6/19/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE: SAMPLE RECOVERY (FEET)	SAMPLE: SAMPLE NO. AND DEPTH	SAMPLE: STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.8/5	S1 0-5	0	Dark brown silt, sand, some gravel, trace organics, moist, organic odor	1.8	
1						
2			1.8	Light brown cmf sand and c-f gravel SR-SA, moist, trace silt, no odor	3.6	
3						
4					26	
5	3.5/5.0	S2 5-10	5.0'	Similar to above, tightly packed, petro odor	67.8	
6						
7					62.9	
8						
9					179.6	
10	2.5/5.0	S3 10-15		Similar to above, black/gray staining, petro odor, sheen on soil	10000	ppbRae immediately jumping up to 10K
11					10000	however intermittent readings around
12					10000	5k - 6k
13						
14				Similar to above, gray staining	10000	
15	0/5	S4 15-18.9		No recovery, soil falling out of macrocore and screening-petro odor, sheen on soils Similar composition to above.	90.9	
16						
17					80.9	
18						
19				18.9' - Boring Refusal		
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				18.9'	~14

NOTES:
In vicinity of known UST location

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-12
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/20/19 END DATE: 6/20/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.0/5	S1 0-5	0-0.5	Concrete		
1			0.5	Brown silt, trace sand and gravel, moist, no odor		
2					0.312	
3						
4						
5	4.2/5.0	S2 5-10			0.3	
6					0.816	
7					0.918	
8			7.5	Brown silty sand, little gravel, wet, no odor	1.5	
9					1.563	
10	5.0/5.0	S3 10-15				
11					0.606	
12					0.512	
13						
14			14	Similar to above, gray	0.716	
15	4.8/4.8	S4 15-19.8			0.3	
16					0.358	
17						
18					0.331	
19					0.25	
20				19.8' - Boring Refusal	0.296	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				19.8'	~7.5'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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little = 10 - 20%
trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-13
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/20/19 END DATE: 6/20/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	0.3/5	S1 0-5	0-0.5	Concrete		
			0.5	Brick	0.5	
1			0.7	Brown cmf sand, little silt, moist, no odor	0	
2					0	
3						
4					0	
5	2.5/5.0	S2 5-10	5	Brown silt, little c-f sand, little c-f SA-SR gravel, moist, no odor	0	
6					0.716	
7					0.503	
8					0.493	
9					1.107	
10	3.1/5.0	S3 10-15	10	Brown silt and sand, little cmf SR to SA gravel, wet, no odor	0.453	
11					1.423	
12					1.981 3.361 5.582	
			12.5	Gray c-f sand and gravel, crushed stone	7.723	
13			13	Gray silty sand and gravel, moist to wet, no odor	0.667	
14					0.398	
15		S4 15-20	15	grey tightly packed fine sand and c-f gravel, moist, no odor	0.648	
16					0.398	
17					0.223	
18					0.248	
19						
20	2.0/2.0	S5 20-22			0.248	
21					0.2	
22				22' - Boring Refusal		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				22'	~10'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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some = 20 - 35%
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trace = 1 - 10%

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M = Medium
F = Fine
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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-14
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION: 6/21
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.1/5	S1 0-5	0-0.5	Concrete		
			0.5-5'	Brown silt, trace sand, moist, no odor	0.11	
1					0	
2					0	
3					0	
4					0	
5	5.0/5.0	S2 5-10		Similar to above, little to trace gravel, moist to wet	0	
6					0	
7					0	
8					0	
9					0	
10	5.0/5.0	S3 10-15		Similar to above, wet	0.396	
11					0	
12					0	
			12.5	Brown silty sand, little c-f gravel, wet, no odor.		
13					0	
14					0	
			14.5	Similar to above, gray.		
15	5.0/5.0	S4 15-20	15	Gray tightly packed fine sand and gravel, moist, no odor	0	
16					0	
17					0	
18					0	
19					0	
20	3.0/3.0	S5 20-23		Similar to above	0	
21					0	
22					0	
23				23' - Boring Refusal	0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				23'	~10.5

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-15
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/5	S1 0-5	0.0'	Concrete		
			0.5'	Brown silt, little sand, trace gravel, moist no odor	0	
1						
					0	
2						
					0	
3						
					0	
4						
					0	
5	5.0/5.0	S2 5-10			0.256	
6					0.205	
7						
					0.191	
8						
9			9	Brown sand, trace silt, little gravel, moist to wet, no odor	0.191	
10	4.5/5.0	S3 10-15	10	Similar to above, wet	0.307	
11					0.291	
12					0.317	
13					0.423	
14					0.33	
			14.5'	Similar to above, gray		
15	5.0/5.0	S4 15-20			0.239	
16					0.202	
17					0.212	
18						
					1.096	
19						
20	2.1/2.1	S5 20-22.1			1.586	
				22.1' - Boring Refusal	1.384	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				22.1'	~9.0

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-16
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.9/5	S1 0-5	0-0.5	Concrete		
			0.5	Dark brown to brown silt, trace sand, moist, no odor.	2.2065	
1					1.813	
2					0.324	
3						
4			4	Similar to above, little to trace sand	0.183	
5	4.1/5.0	S2 5-10	5	Brown silt, little sand, moist, no odor.	2.739	
6					1.989	
7					0.667	
8					0.423	
9			9	Brown sand, little silt, little gravel, moist, no odor		
10	5.0/5.0	S3 10-15			14.11	
11					52.8	
12						
13					158.8	
14			14	Simlar to above, gray	172.06	
15	5.0/5.0	S4 15-20			80.69	
16					75.13	
17					43.93	
18					26.52	
19					4.312	
20				20' - Boring Terminated		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	macrocore overpacked
				20'	~12	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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little = 10 - 20%
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VF = Very Fine

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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-17
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.4/5	S1 0-5	0-0.5	Concrete		
			0.5	Brown silt, little sand (c-f), trace gravel, moist, no odor	4.744	
1					2.808	
2					0.686	
3					0.602	
4						
5	5.0/5.0	S2 5-10	5	Similar to above, trace clay, moist to wet	6.609	
6					28.04	
7					36.51	
8					40.51	
9						
10	5.0/5.0	S3 10-15	10	Brown tightly packed silty sand, little gravel, moist, no odor	48.92	
11					93.7	
12					214	
13				Similar to above, gray.	268	
14					308	
15	5.0/5.0	S4 15-20	15	Gray sand, some SR to SA gravel, trace silt, wet, no odor.	372	
16					218	
17					132.8	
18					76.08	
19					291.1	
20				20' - Boring Terminated		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Macrocore overpacked
				20'	~12	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-18
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	0.2/5.0	S1 0-5	0	Concrete		
			0.5	Dark brown Silt, little C-F sand, moist, no odor	0.671	
1						
2						
3						
4						
5	3.7/5.0	S2 5-10		Brown Silty Sand and Gravel, wet, no odor	7.227	
6					28	
7					77.69	
			7.5	Gray-brown Silty Sand and C-F SA-A Gravel, moist, no odor.		
8					94.64	
9					118.6	
					145.7	
10	5.0/5.0	S3 10-15		Brown Silty Sand, some C-F SR-SA gravel, wet, no odor.	93.86	
11					86.11	
12					248.6	
				Similar to above, gray.		
13					374.8	
					412.6	
14					250	
					112	
15	5.0/5.0	S4 15-20		Gray C-F Sand and SR-SA Gravel, moist to wet, no odor.	52.3	
16					23.88	
17					51.64	
18					61.49	
19					58.33	
20				20' - Boring Terminated		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	A. Martino of the City of Rochester stopped by Site.
				20'	~10'	Macrocore overpacked

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-19
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/21/19 END DATE: 6/21/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	1.7/5.0	S1 0-5		Brown Silt, little sand, moist, no odor.	0.693	
1						
2					0.553	
3						
4					0.767	
5	2.8/5.0	S2 5-10		Similar to above		
6					5.763	
7					5	
8					7.768	
9				Gray Gravel, moist to dry, no odor. Brown Silty Sand, trace clay, trace gravel, moist, no odor.	11.57	
10	5.0/5.0	S3 10-15		Similar to above		
11					12.11	
12					26.12	
13				Wet at 12.5 Brown Sand, some C-F SA to SR gravel, trace silt, moist, no odor	6.716	
14					4.661	
15	0/5.0	S4 15-20		No recovery, macrocore overpacked and poured out, still screened soils but depth unkown.	2.661	
16					0.601	
17					0	
18					0	
19					0	
20				20' - Boring Terminated	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Macrocore overpacked
NA	NA	NA		20'	~12.5	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-20
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/26/19 END DATE: 6/26/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.5/5.0	S1 0-5	0.0'	Brown c-f sand and SA gravel, moist, no odor.	0.158	
1					0.221	
2						
3					0.2	
4			4.0'	Asphalt	0.181	
			4.5'	Crushed Asphalt		
5	4.7/5.0	S2 5-10	5.0'	Brown silt, trace to little sand, trave gravel, trace clay, moist, no odor.	0.418	
6					0.172	
7						
8					0.101	
9					0.112	
10	5.0/5.0	S3 10-15	10.0'	Brown sand, little silt and gravel, moist to wet, no odor.		
11					0.121	
12					0.142	
13						
14					0.138	
15	5.0/5.0	S4 15-20	15.0'	Gray tightly packed sand, some SR gravel, wet, no odor	0.103	
16						
17					0.04	
18					0	
19					0	
20	4.7/4.7	S5 20-24.7				
21						
22					0.322	
23					0.466	
24				24.7 - Boring Refusal		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA		24.7'	~15	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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little = 10 - 20%
trace = 1 - 10%

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VF = Very Fine

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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-21
SHEET 1 of 1
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/26/19 END DATE: 6/26/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/5.0	S1 0-5	0.0'	Brown f-m sand, little to some c-f SA-SR gravel, trace silt, moist, no odor.	0.289	
1						
2					0.195	
3						
4						
5	3.6/5.0	S2 5-10			0.625	
6						
7						
8					0.626	
9						
10	2.9/5.0	S3 10-15			0.499	
11						
12						
13			12.5'	Similar to above, wet.	0.504	
14						
15	4.8/4.8	S4 15-19.8			0.62	
16						
17						
18					0.36	
19						
20				19.8 - Boring Refusal		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
NA	NA	NA		19.8'	~12.5'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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trace = 1 - 10%

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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIGP-22
SHEET _1_ of _1_
JOB:
CHKD BY:
DATE:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 6/26/19 END DATE: 6/26/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.0/5.0	S1 0-5	0.0'	Brown Silty sand and c-f SA-A gravel, trace asphalt/coke, moist, no odor.	0	
1					0	
2					0	
3					0	
4					0	
5	5.0/5.0	S2 5-10	5.0'	Brown c-f sand, some c-f SR-SA gravel, trace silt, moist, no odor.	0	
6					0	
7					0	
8					0	
9					0	
10	4.0/5.0	S3 10-15			0	
11					0.027	
12					0.499	
13					0.245	
14			14'	Gray c-f gravel, little c-f sand, dry, no odor.	0	
15	4.5/5.0	S4 15-20	15.0'	Brown silty sand, some c-f gavel, wet, no odor.	0	
16					0	
17					0	
18					0	
19			19'	Gray c-f sand and gravel, wet, no odor.	0	
20	3.2/3.7	S5 20-24.7			0	
21					0	
22					0	
23					0	
				23.7 - Boring Refusal		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA		24.7'	~15	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIBW-A
SHEET _1_ of _1_
JOB:
CHKD BY:
DATE:

CONTRACTOR: Nothnagle
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/24/19 END DATE: 7/25/2019

TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Diedrich 25
AUGER SIZE AND TYPE: 6.25 hollow stem augers
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.9/4.0	S1 0-4	0.0'	Concrete Floor Slab		
			0.5	Brown c-f sand and silt, moist, no odor.	0	
1			1	Brown silt, some sand and SR-SA gravel, trace to little clay, moist, no odor.		
2					0	
3					0	
4	4.0/4.0	S2 4-8	4	Brown silt and sand, some to little gravel, tightly packed, trace clay, moist, no odor.	0 0.147	
5					1.564	
6					9.123	
7					10.44	
8	4.0/4.0	S3 8-12			16.6 44.05	
9					52.6 59.78	
10			10'	Very tightly packed brown silty sand, little c-f SR-SA gravel, moist, no odor.		
			10.5'	Gray c-f sand and gravel, dry, no odor.	474.9	
11			11.5'	Gray-brown silty sand, some c-f SR-SA gravel, moist, no odor.	357.8	
12	4.0/4.0	S4 12-16	12'	Brown to gray-brown silty fine sand, moist to wet.	213.8	
13			13'	Similar to above, wet.	419.73	
14					218.9	
15					198 55.12	
16	4.0/4.0	S5 16-20	16'	Gray tightly packed fine sand, little c sand/f gravel, trace silt, wet, no odor.	51.7	
17					48.66	
18					35.98	
19					63.4 95.84	
20	1.2/1.2	S6 20-21.2			102.9 317.6 103.8 - 261.1	
21					275	
			21.5	Weathered bedrock. Sampling terminated		
22			22.2	Auger into rock 1-ft boring augering terminated.		
23						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Steel casing set to 22.2 Soils very tight, macrocore got stuck down hole multiple times when sampling.
NA	NA	NA		21.2'	~12	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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trace = 1 - 10%

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M = Medium
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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIBW-B
SHEET _1_ of _1_
JOB:
CHKD BY:
DATE:

CONTRACTOR: Nothnagle
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/29/19 END DATE: 7/29/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Brainard-Kilmen 81
AUGER SIZE AND TYPE: 6.25 hollow stem augers
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.5/4.0	S1 0-4	0	Dark brown c-f silt, little sand, moist, no odor	0	
			0.5	Brown silt, trace c-f sand and SR gravel, moist, no odor.		
1					0	
2					0	
3					0	
4	4.0/4.0	S2 4-8			0	
5					0	
6			6'	Brown f-m sand and silt, trace SR gravel, moist, no odor.	0	
7					0	
8	4.0/4.0	S3 8-12	8'	Brown fine-medium silty sand, some c-f gravel, moist, no odor	0	
9					0	
10					0	
11					0	
			11.7'	Brown c0f sand and SR-SA gravel, trace silt, moist, no odor.		
12	4.0/4.0	S4 12-16			0	
13			13'	Similar to above, wet.	0	
14					0	
15					0	
16	4.0/4.0	S5 16-20	16'	Gray silt, some sand ang c-ft gravel, wet, no odor.	0	
17					0	
18					0	
19					0	
20	2.0/4.0	S6 20-24	20'	Gray c-f sand and gravel, trace silt, moist, no odor.	0	
21					0	
22					0	
23					0	
			23.5'	Weathered rock.		
24	1.7/2.5	S7 24-26.5	24.0'	Gray weather rock and silty sand, little clay between layers of rock.	0	
25					0	
26					0.887	
				26.5' Sampling terminated, augered into rock to 27.5' and augering terminated		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Steel casing set to 27.5
NA	NA	NA		26.5'	~13	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIBW-C
SHEET _1_ of _1_
JOB:
CHKD BY:
DATE:

CONTRACTOR: Nothnagle
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. Brett
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/30/19 END DATE: 7/30/2019
TIME: ___ TO ___
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Brainard-Kilmen 81
AUGER SIZE AND TYPE: 6.25 hollow stem augers
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)			
0				Overbuden not sampled during well installation. Bedrock reached at 24' bgs Auger into bedrock to 25 and set casing.		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA		26.5'	~13	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Remedial Investigation
Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, NY

BORING: RIBW-D
SHEET _1_ of _1_
JOB:
CHKD BY:
DATE:

CONTRACTOR:	Nothnagle	BORING LOCATION:		TIME:	___ TO ___
DRILLER:	K. Busch	GROUND SURFACE ELEVATION	NA	DATUM:	NA
LABELLA REPRESENTATIVE:	A. Brett	START DATE: 8/1/19	END DATE: 8/1/2019	WEATHER:	

TYPE OF DRILL RIG: Brainard-Kilmen 81 — DRIVE SAMPLER TYPE: Macrocore
AUGER SIZE AND TYPE: 6.25 hollow stem augers — INSIDE DIAMETER: 2"
OVERBURDEN SAMPLING METHOD: Direct Push — OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Overbuden not sampled during well installation. Bedrock reached at 22.5' bgs Auger into bedrock to 23 and set casing.		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
NA	NA	NA		22.5'	--	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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ROCK CORE LOGS

Former Wollensack Optical
872-886 Hudson Ave
Rochester, NY
NYSDEC BCP #C828209

MONITORING WELL RIBW-A
SHEET 1 OF 1
JOB # 2182207
CHKD. BY:

CONTRACTOR: Nothnagle Drilling
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 7/26/2019 END DATE: 7/26/2019

TYPE OF DRILL RIG: Deidrich 25
AUGER SIZE AND TYPE: 6.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA			
DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
22.2	NA	22.2 - 27.2	57/60 inches	76.3				DOLOSTONE
					22.64' Fracture nat			
					23' Fracture mech		0 ppm	15 Gallons lost 0-5'
23.2								
					23.45' Facture nat			
					23.78' Facture nat			
24.2					23.82 Facture nat			
					23.9' Fracture nat			
							0 ppm	
					24.65' Fracture			Rock appear to have spun
25.2								during coring
					25.65' Fracture nat, mineral deposit			
					26.1' Fracture nat			
26.2								
							0 ppm	
27.2	NA	27.2-32.2	58/60 inches	73.3				
					27.57' Fracture nat			
					27.76' Fracture nat			
					27.95' Fracture nat			
28.2					28.2' Fracture mech			
					28.53' Facture mech			
					28.86' Fracure nat		0 ppm	
29.2					29.1' Fracture nat			
					29.45' Fracture mech			
					29.91' Fracture nat			
30.2					29.95' Fracture nat			
					30.2' Fracture nat			
					30.28' Fracture nat			15 more gallons lost 5-10'
					30.6' Fracture nat			
31.2					30.7' Fracture nat			
					31.3' Fracture nat		0 ppm	
					31.7' Fracture nat			
32.2								

NOTES: End of core run 33.2 ft.

Coring ended at 32.2'.

GENERAL NOTES:

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ROCK CORE LOGS

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872-886 Hudson Ave
Rochester, NY
NYSDEC BCP #C828209

MONITORING WELL RIBW-B
SHEET 1 OF 1
JOB # 2182207
CHKD. BY:

CONTRACTOR: Nothnagle Drilling
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 7/30/2019 END DATE: 7/30/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA			
DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
27.5	NA	27.5-32.5	56/60 inches	79.2				DOLOSTONE
					27.75' Fracture nat			
					28.25' Fracture mech			40 Gallons lost 0-5'
28.5					28.54' Fracture mech			mainly between 4-5'
					28.62' Fracture			
					28.93' Fracture			
29.5								
					29.91' Fracture nat		0 ppm	
30.5								
					30.83' Fracture nat			
					31.16' Fracture nat			
31.5								
					31.64' - 32.16' Fractured/broken rock natural/sediment			
							3.876 ppm in sediment	water loss
32.5	NA	32.5-37.5	60/60 inches	70				
					32.91' Fracture .5" Calcite minerl deposites natural			
					33.3' Fracture mech			
33.5					33.6' Fracture mech			
					34' Fracture nat			
					34.18' Fracture nat		0 ppm	
34.5					34.37' Facture mech			
					34.91' Fracture mech			
					35' Fracture mech			
					35.08' Fracture nat			
35.5					35.25' Fracture mech 3"			
					35.91' Fracture mech			50 more gallons lost 5-10'
					36.08' Fracture mech			
36.5					36.5' Fracture nat			
					36.58' Fracture nat		0 ppm	
					36.69' Fracture nat			
					37' Fractue nat			
37.5					37.41' Fracture mech			

NOTES: End of core run 37.5 ft.

Coring ended at 37.5'.

GENERAL NOTES:

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ROCK CORE LOGS

Former Wollensack Optical
872-886 Hudson Ave
Rochester, NY
NYSDEC BCP #C828209

MONITORING WELL RIBW-C
SHEET 1 OF 1
JOB # 2182207
CHKD. BY:

CONTRACTOR: Nothnagle Drilling
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 7/31/2019 END DATE: 7/31/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA			
DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
25	NA	25-30	44/60 inches	10.3	25-26.5' broken rock			DOLOSTONE
								10 Gallons lost 0-5'
26								
					26.5'-26.9' Four inches of sediment		21.01 ppm	
27					27' Fracture 0.25 inches of sediument			
					27.3' Fracture 6 inches of sediment and broken rock			
					27.8' - 28.3' Vertical and Horizontal Fractures			
28					28.3' to end of Run Pulverized Rock			
29								
30	NA	30-33	32/36 inches	56.9	30' Fracture 1'inch of sediment (6" fractured rock)		14.81 ppm	Potential fall in
					30.5' Broken fractured rock and sediment (11")			
31								
					31.5' - 31.75' Angled fracture			
					31.75'- 32.3' Natural Fractures, mineral deposits (calcite), 1/4"		0 ppm	
32					of sediment, large vug			
					32.3' - 32.8' Mech fract			
					32.8'-33 Natural fractures			
33	NA	33-35	12/12 inches	75				
					33.5' Mech fracture			30 more gallons lost 5-10'
					33.8' Vug, mineralization calcite			
34								
					34' Nature fracture with mineralization (calcite), 1/4" sediment		0 ppm	
					34.5' Mech Fracture			
35								

NOTES: End of core run 35 ft.
Roller bit ran down hole to make sure hole will stay open.

Coring ended at 35'.

GENERAL NOTES:

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ENVIRONMENTAL ENGINEERING CONSULTANTS

ROCK CORE LOGS

Former Wollensack Optical
872-886 Hudson Ave
Rochester, NY
NYSDEC BCP #C828209

MONITORING WELL RIBW-D
SHEET 1 OF 1
JOB # 2182207
CHKD. BY:

CONTRACTOR: Nothnagle Drilling
DRILLER: K. Busch
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/2/2019 END DATE: 8/2/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA			
DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
23	NA	23-28	60/60 inches	89.1	23.1' Fracture			DOLOSTONE
					23.7' Fracturej			10 Gallons lost 0-5'
24					23.77' Fracture			
					23.93' Fracture			
					24.56' Fracture			
25					24.75' Fracture			
					25.125' Fracture			
					25.25' Nat Frac		0 ppm	
					25.5' Fracture			
26					26.125' Nat Fract			
					26.41' Fracture			
					26.58' Fracture			
					26.7' Fracture			
27					27.35' Nat Fract			
					27.29 Nat Frac		0 ppm	
					27.47' Fracture			
					27.79 Fracture			
28	NA	28-33	59.75/60 inches	91.6				
					28.45' Fracture			
29					29.02' Fracture			
					29.56' Fracture			
					29.79' Fracture		0 ppm	
30					30' Nat Frac			
					30.5' Nat Frac			
					30.54' Nat Frac			
31								
					31.5' Nat Frac			30 more gallons lost 5-10'
					31.75' Fracture			
32					31.91' Fracture			
							0 ppm	
					32.33' Fracture			
33					32.85' Fracture			

NOTES: End of core run 33 ft.

Coring ended at 33'.

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-01
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 0930 TO 1000
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.5		0	Fill, urban fill, dry. No odor, dark brown. Medium subangular gravel.	0	
1			1	Trace cinders, minor ash. Asphalt debris, dry. Mild odor, dark brown, some silt.	11.8	
2						
3			2.5	Moist, cinder, urban fill w/ debris. Dark brown, mild odor, some staining. Some silt, minor subangular gravel.	12.3	
4						
5				As above.	9.8	Sample
6				End of boring 5' refusal.	8.7	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Samples collected from 4.5 feet bgs.
N/A	N/A	N/A	5	5.0	NO	

GENERAL NOTES

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BORING: SB-01

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-02
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1015 TO 1050
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4		0	Silt, dry. No odor, brown. Medium subangular gravel. No staining.	0	
1						
2			2	Darker brown, no odor, no stainnig, damp. Minor subangular gravel.	0	
3			3	Dark, damp. Subangular gravel, mild staining, some larger gravel. Silt.	0.3	Sample
4						
5	4.5		5	Silt, brown, damp. No odor, no staining, gravel.	0	
6			6	Larger gravel, dry, no odor, some silt. No staining.	0	
7						
8			8	Tightly packed silt, no odor, no gravel. Trace clay. Less gravel. Brown.	0	
9			9	Some clay, silt, moist, no odor, no staining, no gravel.	0	
10	5					
11				As above.	0	
12						
13					0	
14						
15	5			As above, GW encountered.	0	
16						
17						
18						Sample
19						
20				Refusal 19.5 end of boring.	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	VOC/SVOC collected at 18' bgs Metals/PCB collected at 3'
N/A	N/A	N/A	15	19.5	YES	Monitoring Well Installed MW-02

GENERAL NOTES

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BORING: SB-02

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-03
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 11105 TO 1130
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3.5		0	Silt, dry. No odor, gray. Medium subangular gravel. No staining.	0	
1			1	Urban fill, cinders, black. No odor, no staining, minor subrounded gravel.	0	
2						
3				As above.	0	Sample
4						
5	2		5	Dry, less gravel, some silt.	0	
6			6	No odor, no staining, silt. Dry, less gravel.	0	
7				Refusal 7.2 end of boring.	0	Sample
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	VOC/SVOC collected from 7.2' bgs. Metals/PCB collected from 3' bgs.
N/A	N/A	N/A	5	7.2	NO	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BORING: SB-03

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-04
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 11145 TO 1230
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2.5		0	Silt, dry. No odor, gray. Medium subangular gravel. No staining.	0	
1						
2			2	Urban fill, ash, silt. No odor, dry, medium subangular gravel.	0	
3						
4			4	Moist, staining, mild odor, petroleum odor. Silt, minor gravel.	0	Visible impacts but no VOC detected with PID.
5	5		5	As above. Mild staining, wet, mild odor.	0	Sample
6			6	Silt, wet, odor. Black, minor gravel. Mild staining.	1.2	
7						
8			7.5	Silt, no staining, odor. Moist, tightly packed silt, no gravel.	176.6	Sample
9					113 72	
10	0		10	No odor, no staining, tightly packed silt. No gravel.	0	
11						
12						10-15 couldn't be recovered.
13						
14						
15			15	End of boring 15'	0	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	VOC/SVOC collected from 7.5 bgs. Metals/PCB collected from 4 bgs.
N/A	N/A	N/A	10	15.0	YES	Monitoring Well Installed MW-04.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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BORING: SB-04

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-05
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1235 TO 1315
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.5		0	Silt, dry. No odor, gray. Trace subangular gravel. No staining.	0	
1						
2						
3			3	Silt, dry. No gravel, no odor, no staining. Tightly packed.	0	
4				As above.	0	
5	5		5	Damp, tightly packed silt. Trace, subangular gravel. No odor, no staining.	0	
6						
7				As above.	0	
8						
9						
10	5		10	Wet, silt, tightlly packed, no odor, no staining. No gravel.	0	
11						
12						
13						
14						
15			15	End of boring 15'	0	Sample
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	All samples collected from 15' bgs.
N/A	N/A	N/A	10	15.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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SA = Subangular

BORING: SB-05

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-06
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1325 TO 1405
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.5		0	Urban fill, cinders, ash, black, no odor, no staining.	0	
1			1	Dry, silt, minor subangular gravel, no odor. Tightly packed.	0	
2						
3						
4						
5	5		5	As above.	0	
6			6	Minor gravel, silt, no odor, damp, some fill. No staining.	0	
7						
8			8	Tightly packed silt, moist, no odor, no staining, light brown. No gravel.	0	
9						
10	5		10	Silt, moist, trace clay, no gravel. No staining, no odor.	0	
11						
12				As above.	0	
13						
14						
15			15	End of boring 15'	0	Sample
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	All samples collected from 15' bgs.
N/A	N/A	N/A	10	15.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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SA = Subangular

BORING: SB-06

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-07
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1410 TO 1445
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3		0	Gravel, minor subrounded, no odor, dry, silt.	0	
1			1	Silt, tightly packed, less gravel, light brown, no odor, no stainnig. Trace clay, no fill.	0	
2						
3						
4						
5	4		5	As above.	0	
6			6	Damp, silt, no odor, no gravel, no staining, no fill. Light brown.	0	
7						
8				As above.	0	
9						
10	5		10	Damp, tightly packed silt. Trace clay, no gravel.	0.6	
11						
12			12	Very tightly packed silt, trace clay, mild staining, no odor, damp.	10.6	
13						
14				As above.	3.7	
15	2.5		15	Silt, wet, no odor. Mild staining, silt. No gravel.	11.5	
16						
17			17	Tightly packed silt, gray, moist, no gravel. No odor, mild staining.	62.5	No odors associated w/ elevated PID readings.
18						
19				Refusal 17.5' end of boring.		
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
N/A	N/A	N/A	12.5	17.5	YES

NOTES:
All samples collected from 16.5' bgs.
Monitoring Well Installed MW-07

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BORING: SB-07

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-08
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1455 TO 1540
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4		0	Silt, tightly packed, dry. Minor subangular gravel. No odor, no staining. Light brown.	0	
1						
2						
3				As above.	0	
4						
5	5		5	Tightly packed silt, dry, minor subrounded gravel. No odor, no staining.	0	
6						
7						
8			7.5	Moist, silt, no odor, less gravel. No staining.	0	
9						
10	5		10	Moist and minor subanglular gravel. No odor, no staining, silt.	0	
11						
12						
13			13	Gray, staining, mild odor. Silt, no gravel, moist.	163.5	Sample
14						
15	3		15	As above.	79.5	
16					63	
17				As above.	29.5	
18				Refusal 18'. End of boring.	19.1	
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	All samples collected from 13' bgs.
N/A	N/A	N/A	13	18.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-09
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018
TIME: 1550 TO 1630
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	1		0	Silt, dry, minor subrounded gravel. No odor, no staining.	0	
1						
2				As above.	0	
3						
4						
5	5		5	Moist, tightly packed silt, minor gravel. Light brown, no odor, no staining.	0	
6						
7				As above.	0	
8						
9						
10	5		10	As above. No odor.	0	
11						
12				As above.	0	
13						
14						
15			15	End of boring 15'	0	Sample
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	All samples collected from 15' bgs.
N/A	N/A	N/A	10	15.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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SA = Subangular

BORING: SB-09

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Phase II Environmental Site Assessment

Location:

872 & 886 Hudson Avenue, Rochester, NY 14621

Client:

Urban League of Rochester Economic Development Corporation

BORING: SB-10
SHEET 1 OF 1
JOB: 2181794
CHKD BY: JG
DATE: 6/26/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: PW
LABELLA REPRESENTATIVE: MM

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 6/26/2018 END DATE: 6/26/2018

TIME: 1640 TO 1725
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3		0	Silt, dry, minor subrounded gravel. No odor, no staining.	0	
1						
2						
3			3	Tightly packed silt, damp, no gravel, brown. No odor, no staining.	0	
4						
5	4		5	Tightly packed moist silt, no odor, minor subangular gravel, no staining.	0	
6						
7				As above.	0	
8						
9						
10	5			GW observed. As above.	0	
11						
12				As above.	0	
13						
14						
15			15	End of boring 15' bgs.	0	Sample
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	All samples collected from 15' bgs.
N/A	N/A	N/A	10	15.0	YES	Monitoring Well Installed

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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SA = Subangular

BORING: SB-10

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-11
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018
TIME: 0930 TO 1020
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.5		0	Silt, dry, minor subrounded gravel. No odor, no staining. Minor ash.	0	
1						
2			1.5	Packed silt, chemical odor, no gravel, no staining. Dry, minor gravel.	4.1	
3			3	Strong odor, silt, no staining, no gravel. Dry.	13.6	
4						
5	5		5	Gray, dry, silt, no staining, strong odor, no gravel.	128.6	Sample collected.
6						
7				As above.	114	
8				As above.	17	
9						
10	3		10	Silt, minor gravel, no odor, no staining. Moist, light brown.	1.8	
11			11	Silt, minor gravel, no odor, no staining, Moist.	0	
12						
13			13	Moist, no odor, gray, silt, no gravel. No staining.	0	
14						
15	5		15	Sandy, silt, moist, no gravel, gray, no odor, no staining.	0	
16						
17						
18						
19						
20				19.8 Refusal	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-11 Installed
N/A	N/A	N/A	11.8	19.8	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
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M = Medium
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VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BORING: SB-11

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-12
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018
TIME: 1030 TO 1100
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4.5		0	Silt, dry, minor subrounded gravel. No odor, no staining. Minor ash.	0	
1						
2			2	No gravel, silt, some sand, dry, no odor, no staining.	0	
3						
4						
5	2.5		5	Silt, dry, tightly packed. No odor, no staining, minor gravel.	0	
6						
7						
8				As above.	0	
9						
10	5		10	Moist, tightly packed silt. Some sand. No odor, no staining.	0	
11						
12				As above	0	
13						
14						
15	5		15	As above	0	
16						
17						
18				18.5 refusal.	0	Sample Collected 18.5'
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-12 Installed
N/A	N/A	N/A	8.5	18.5	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BORING: SB-12

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Phase II Environmental Site Assessment

Location:

872 & 886 Hudson Avenue, Rochester, NY 14621

Client:

Urban League of Rochester Economic Development Corporation

BORING: SB-13
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018

TIME: 1120 TO 1210
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	3		0	Silt, dry, minor subrounded gravel. No odor, no staining.	0	
1						
2			2	Sandy silt, no gravel, no odor, no staining.	0	
3						
4						
5	4		5	Sand, no odor, no gravel, no staining. Dry.	0	
6						
7				As above.	0	
8						
9						
10	5		10	Silt, moist, some sand. No gravel, no odor, no staining.	0	
11						
12						
13						
14						
15	5		15	As above.	0	
16						
17						
18						
19						
20			20	End of Boring 20'	0	Sample Collected 20'

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-13 Installed
N/A	N/A	N/A	10	20.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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some = 20 - 35%
little = 10 - 20%
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SA = Subangular

BORING: SB-13

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-14
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018
TIME: 1120 TO 1210
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	4		0	Silt, dry, minor subrounded gravel. No odor, no staining.	0	
1						
2						
3						
4			4	Tightly packed silt, no odor, no staining. Dry, minor gravel.	0	
5	4.5		5	Dry, silt, very minor gravel. No odor, no staining,	0	
6						
7						
8			8	As above, moist.	0	
9						
10	4.5		10	Dry, no odor, no staining, minor gravel. Moist.	13.1	
11						
12			12	As above, minor odor.	29.1	
13			13	Odor, visible impact, no staining, no gravel, silt.	292.7	Sample 13'
14						
15	5		15	Moist, no odor, no staining, silt. No visible impact.	31.7	
16			16	Wet, groundwater, silt, no odor, no staining. Minor gravel.	2.7	
17						
18				As above.	1.6	
19						
20				End of Boring 20'		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-14 Installed
N/A	N/A	N/A	10	20.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

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SA = Subangular

BORING: SB-14

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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-15
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018
TIME: 1235 TO 1340
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2		0	Silt, dry, minor subrounded gravel. No odor, no staining.	0	
1						
2						
3						
4						
5	4.5		5	Light brown, tightly packed silt. No gravel, dry. No odor.	0	
6						
7						
8				As above.	0	
9						
10	5		10	Damp/moist silt, no gravel, minor odor, no staining, light brown.	21.7	
11						
12					45.1	
13			13	No odor, no staining, light brown tightly packed silt.	69.1	Sample collected.
14					3.1	
15	5		15	Silt, moist, no gravel, gray. No odor, no staining.	0.8	
16						
17				tightly packed silt, moist.	0	
18						
19					0	
20				20' end of boring.		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-15 Installed
N/A	N/A	N/A	10	20.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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some = 20 - 35%
little = 10 - 20%
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SR = Subrounded
SA = Subangular

BORING: SB-15

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Phase II Environmental Site Assessment

Location:

872 & 886 Hudson Avenue, Rochester, NY 14621

Client:

Urban League of Rochester Economic Development Corporation

BORING: SB-16
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018

TIME: 1355 TO 1505
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push

DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	0		0	Silt, gravel, medium sub-angular, no staining, no odor, wet.	0	
1			1	Silt, less gravel, no staining, no odor, light brown.	0	
2	0.5					
3			3.5	No odor, no staining, wet. No gravel.	0	
4	1					
5						
6	2			as above	0	
7						
8	2			8' end of boring.	0	Sample collected 8'
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MWSB-16 Installed
N/A	N/A	N/A	8	8.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

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some = 20 - 35%
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trace = 1 - 10%

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SA = Subangular

BORING: SB-16

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ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
Location:
872 & 886 Hudson Avenue, Rochester, NY 14621
Client:
Urban League of Rochester Economic Development Corporation

BORING: SB-17
SHEET 1 OF 1
JOB: 2181763
CHKD BY: JG
DATE: 7/16/2018

CONTRACTOR: LaBella Env. LLC
DRILLER: MP
LABELLA REPRESENTATIVE: MM
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 7/16/2018 END DATE: 7/16/2018
TIME: 1510 TO 1620
DATUM: NA
WEATHER: 80 F/Sunny

TYPE OF DRILL RIG: Geoprobe 6610DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	0		0	Silt, gravel, medium sub-angular, no staining, no odor, wet.	0	
1						
2	2		1.5	No odor, no staining, no gravel. Light brown. Wet.	0	
3						
4	1.5		4	Wet, silt, no gravel, no odor, no staining. Light brown.	0	
5						
6	0.5					
7				7' end of boring.	0	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
N/A	N/A	N/A	7	7.0	YES	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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A = Angular
SR = Subrounded
SA = Subangular

BORING: SB-17

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
872-886 Hudson Ave
Rochester, NY
Client: Urban League of Rochester

BORING: BW-01
SHEET 1 OF 1
JOB: 2181763
CHKD BY:
DATE:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 8/8/18 END DATE: 8/9/18
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	1.0/2.0'	S1 0-2	0.0'	Gray-brown silt, moist, trace subrounded gravel, trace clay, moist, no odor.	0	
1					0.028	
2	2.0/2.0'	S2 2-4		Similar to above, little gravel, trace sand.	0	
3					0	
4	2.0/2.0'	S3 4-6			0	
5					0.229	
6	0.9/2.0'	S4 6-8	6'	Brown silt, some coarse to fine gravel, little sand, moist, no odor.	0	
7					0	
8	1.6/2.0'	S5 8-10	8'	Brown silt and sand, some coarse to fine subangular to subrounded gravel, moist no odor.	0.041	
9					0.025	
10	1.2/2.0'	S6 10-12			0.014	
11					0.025	
			11.5'	Cobble at 11.5'		
12	2.0/2.0'	S7 12-14	12'	Brown silt and sand, some coarse to fine subangular to subrounded gravel, moist no odor.	1.418	
13					0.86	
14	2.0/2.0'	S8 14-16			7	
15					9	
16	2.0/2.0'	S9 16-18			10	
17					10	
18	2.0/2.0'	S10 18-20	18'	Gray-brown sand, little silt, some coarse to fine angular gravel, moist, tightly packed.	25	
19					25	
20	2.0/2.0'	S11 20-22			30	
21					44	
22	0.5/0.5	S12 22-22.5			43	
23				Bedrock at 22.5'		
24				Auguered in bedrock to 23.5'		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Splitspoon refusal at 22.2'
NA	NA	NA	~23.2 ft	23.2 ft	~14'	Overburden portion of bedrock well, well to be drilled into bedrock, see rock logs and well construction logs for more information.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%
C = Coarse
M = Medium
F = Fine
VF = Very Fine
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SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
872-886 Hudson Ave
Rochester, NY
Client: Urban League of Rochester

BORING: BW-02
SHEET 1 OF 1
JOB: 2181763
CHKD BY:
DATE:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 8/8/18 END DATE: 8/9/18
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	0.2/2.0'	S1 0-2	0.0'	Brown silty sand, little gravel, moist, no odor.	0	
1					0	
2	No Recovery	S2 2-4		No recovery.	0	
3					0	
4	0.2/2.0'	S3 4-6	4'	Brown silty sand and coarse to fine angular gravel, little brick pieces, little concrete, trace clay, moist, no odor.	0	
5					0	
6	1.5/2.0'	S4 6-8			0	
			6.2'	Gray coarse to fine sand, moist, no odor		
7			6.4'	Brown silt, trace coarse to fine sand, trace coarse to fine subrounded gravel, moist, no odor.	0	
8	1.8/2.0'	S5 8-10	8'	Gray to brown silt and sand, little subrounded gravel, moist, odor.	1.843	
9					0.145	
10	1.7/2.0'	S6 10-12		Similar, tightly packed.	0.062 0	
11					0	
12	1.4/2.0'	S7 12-14	12'	Gray silty sand, some gravel, moist, no odor.	0.131	
13					0.075	
14	1.8/2.0'	S8 14-16		Similar to above, subangular to angular gravel, moist to wet.	0.171	
15					0.457	
16	2.0/2.0'	S9 16-18	16'	Gray fine sand, little coarse to fine gravel, wet, no odor.	0.375	
17					0.228	
18	2.0/2.0'	S10 18-20			1.018	
19					0	
20	2.0/2.0'	S11 20-22	20'	Gray-brown silty fine sand, little coarse to fine subrounded gravel, wet, tightly packed, no odor.	0	
21					0	
22	2.0/2.0'	S12 22-24	22'	Gray-brown coarse to fine subangular to subrounded gravel, little sand, little silt, wet, no odor.	0	
23					0	
24	0.2/0.2'	S13 24-24.2		Splitspoon refusal at 24.2, Bed Rock at 24 Augered to 25.2 feet into bedrock.	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Splitspoon refusal at 24.2', weathered bedrock in splitspoon Overburden portion of bedrock well, well to be drilled into bedrock, see rock logs and well construction logs for more information.
NA	NA	NA	~25 ft	25.2 ft	~14'	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
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some = 20 - 35%
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trace = 1 - 10%
C = Coarse
M = Medium
F = Fine
VF = Very Fine
R = Rounded
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SR = Subrounded
SA = Subangular

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Phase II Environmental Site Assessment
872-886 Hudson Ave
Rochester, NY
Client: Urban League of Rochester

BORING: BW-03
SHEET 1 OF 1
JOB: 2181763
CHKD BY:
DATE:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT
BORING LOCATION: See Figure
GROUND SURFACE ELEVATION NA
START DATE: 8/8/18 END DATE: 8/9/18
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 6620DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	1.0/2.0'	S1 0-2	0.0'	Gray-brown sand and gravel, moist, no odor.	0	
			0.4'	Brown silt, little sand, little clay, moist, no odor.		
1					0	
2	1.5/2.0'	S2 2-4			0	
3					0	
4	0.8/2.0'	S3 4-6			13	
5					0	
6	0.6/2.0'	S4 6-8			0	
7					0	
8	1.7/2.0'	S5 8-10	8'	Brown fine sand, little coarse to fine subrounded to subangular gravel, little silt, moist, no odor.	0	
9					0	
10	2.0/2.0'	S6 10-12		Similar to above, some silt, trace clay.	0	
11					0	
12	1.3/2.0'	S7 12-14	12'	Brown fine to medium sand, trace gravel, trace silt, wet, no odor.	0	
13					0	
14	1.9/2.0'	S8 14-16	14'	Gray coarse to fine sand, little coarse to fine subangular to angular gravel, trace silt, little green sand, moist, to wet.	5.427	
15					1.274	
16	1.8/2.0'	S9 16-18	16'	Gray coarse to fine sand, some subrounded to subangular gravel, wet, no odor.	0.539	
17					1.159	
18	1.6/2.0'	S10 18-20	18'	Dark gray gravel and silt, some sand, moist, chem odor.	1.048	
19					20.61	
20	2.0/2.0'	S11 20-22			23.81	
21					57.16	
22	0.2/0.2	S12 22-22.2			73.89	
23				Bedrock at 22.2'		
24				Augered to 23.2'		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Splitspoon refusal at 22.2'
NA	NA	NA	~23.2 ft	23.2 ft	~12'	Overburden portion of bedrock well, well to be drilled into bedrock, see rock logs and well construction logs for more information.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface
NA = Not Applicable
and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%
C = Coarse
M = Medium
F = Fine
VF = Very Fine
R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

LaBella
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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

ROCK CORE LOGS

872-886 Hudson Ave
Rochester, NY

Urban League of Rochester

MONITORING WELL BW-01
SHEET 1 OF 1
JOB # 2181763
CHKD. BY:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/10/18 END DATE: 8/10/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: 4.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA

DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS		WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
23.5	NA	23.5 - 28.5'	5 ft	72.5	23.5-23.7' Broken rock	Dolomite		12	
					24.3" Fracture (1/8 in)			57	
					24.65' Fracture (1/8 in)			85	
					24.85" Fracture (1/8 in)			60	
24.5					24.90' Fracture (1/8 in)			0	
					25.25' Fracture (1/8 in)			70	
					25.6' Fracture (1/4 in) little sediment)			49	
					25.7" Fracture (1/8 in)			118	
25.5					26.0' Fracture (1/8 in)			0	
					26.1' Fracture (1/4 in)			67	
					26.35" Fracture (1/16 in)				
26.5									
					26.9' Fracture (1/8 in)			26	
					27.3' Fracture (1/8 in)			105	
27.5									
					27.7' Fracture (1/4 in)			6	
					28.0' Fracture (1/4 in) little sediment			227	
28.5	NA	28.5-33.5'	5 ft	50	28.85' Fracture (1/8 in)	Dolomite		0	
					28.9' Fracture (1/8 in)			0	
					29.05' Fracture (1/8 in)			67	
					29.30' Fracture (1/4 in)			152	
29.5					29.7' Fracture (1/16 in)			0	
					29.85' Fracture (1/8 in)			0	
					30.05' Fracture (1/4 in)			17	
					30.35' Fracture (1/2 in)			0	
30.5					30.65' Fracture (1/8 in)			62	
					30.7' Fracture (1/8 in)			192	
					31.0' Fracture (1/8 in)			131	
					31.25' Fracture (1/16 in)			123	
31.5					31.3' Fracture (1/16 in)			19	
					31.8' Fracture (1/8 in)			27	
					31.9' Fracture (1/8 in)			80	
					32.05' Fracture (1/8 in)			6	
32.5					32.2' Fracture (1/8 in)			25	
					32.35' Fracture (1/8 in)			41	
					32.55' Fracture (1/2 in)			17	
					32.80' Fracture (1/16 in)			18	
33.5					33.1' Fracture (1/4 in)			106	
					33.3' Fracture (1/4 in)			47	

NOTES:
Rock Coring eneded at 33.5'

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

and = 35 - 50%	C = Coarse	R = Rounded	BGS = Below Ground Surface
some = 20 - 35%	M = Medium	A = Angular	NA = Not Applicable
little = 10 - 20%	F = Fine	SR = Subrounded	
trace = 1 - 10%	VF = Very Fine	SA = Subangular	

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

ROCK CORE LOGS

872-886 Hudson Ave
Rochester, NY

Urban League of Rochester

MONITORING WELL BW-02
SHEET 1 OF 1
JOB # 2181763
CHKD. BY:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/10/18 END DATE: 8/10/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: 4.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA

DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppb)	NOTES
23	NA	23-28	5 ft	97.5	23-27' broken rock Dolomite		160	
					23.75' Fracture (1/8 in)			
24								
					24.15' Fracture (1/8 in)		170	
25					25' Fracture (1/4 in)		101	
								25.4' sample.
					25.5' Fracture (1/8 in)			
26					26' Fracture (1/8 in)			
					26.4' Fracture (1/4 in)		312	
27					Compentent rock begins			
							36	
28	NA	28-33	5 ft	92.5				
					28.25' Fracture (1/8 in)			
					28.75' Fracture (1/8 in)			
29								29' sample.
					29.85' Fracture (1/4 in)		207	
30								
31								
					31.20' Fracture (1/4 in)		20	
32								
					32.85' Fracture (1/8 in)		0	
33								

NOTES: end of core hold 33 ft.

Coring ended at 33'.

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

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some = 20 - 35%	M = Medium	A = Angular	NA = Not Applicable
little = 10 - 20%	F = Fine	SR = Subrounded	
trace = 1 - 10%	VF = Very Fine	SA = Subangular	

LaBella Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

ROCK CORE LOGS

872-886 Hudson Ave
Rochester, NY

Urban League of Rochester

MONITORING WELL BW-03
SHEET 1 OF 1
JOB # 2181763
CHKD. BY:

CONTRACTOR: NYEG
DRILLER: TOM
LABELLA REPRESENTATIVE: A. BRETT

BORING LOCATION: SEE FIGURE
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/10/18 END DATE: 8/10/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: 4.25-inch HAS
OVERBURDEN SAMPLING METHOD: Split spoon
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA

DATE	TIME	WATER	REMARKS

DEPTH	BLOW COUNT / 6"	SAMPLE INTERVAL (FT)	RECOVERY	RQD (%)	VISUAL OBSERVATIONS	WELL INSTALLATION INFORMATION	PID (ppm)	NOTES
23.2	NA	23.2-28.2	5 ft	30	23.2-23.35 Broken rock Dolomite		0	
					23.5' Fracture (1/8 in)		0	
					23.55' Fracture (1/8 in)		0	
					23.7' Fracture (1/8 in)		0	
					23.75' Fracture (1/8 in)		0	
					23.85' Fracture (1/4 in)		0	
					23.95' Fracture (1/4 in)		0	
24.2					24.25' Fracture (1/8 in)		0	
					24.4' Fracture (1/8 in)		0	
					24.65' Fracture (1/4 in)		0	
					24.9' Fracture (1/16 in)		0	
25.2					25.2' Fracture (1/8 in)		0	
					25.3' Fracture (1/8 in)		0	
					25.4' Fracture (1/16 in)		0	
					25.6' Fracture (1/16 in)		0	
					25.75' Fracture (1/8 in)		0	
					26.0' Fracture (1/8 in)		0	
26.2					26.25' Fracture (1/8 in)		0	
					26.45' Fracture (1/8 in)		0	
					26.8' Fracture (1/8 in)		0	
					26.95' Fracture (1/8 in)		0	
27.2					27.25' Fracture (1/8 in)		0	
					27.5' Fracture (1/8 in)		0	
					27.75' Fracture (1/8 in)		0	
					27.90' Fracture (1/8 in)		0	
					28.05' Fracture (1/8 in)		0	
28.2	NA	28.2-29.4	No recovery	NA				
29.2								
30.2								
31.2								

NOTES: Core bit teeth braking during coring, core barrel shaking a lot during coring likely due to core bit problems. Very fractureed rock seen may be a result of the shaking of the core barrel. In addition during second run the core barrel would not advance further, all teeth on bit had fallen off and rock from 28.2-29.4 ft bgs was not recovered because nothing to hold it in barrel. Rock remains downhole.

Coring ended at 29.4'.

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

and = 35 - 50%
some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%

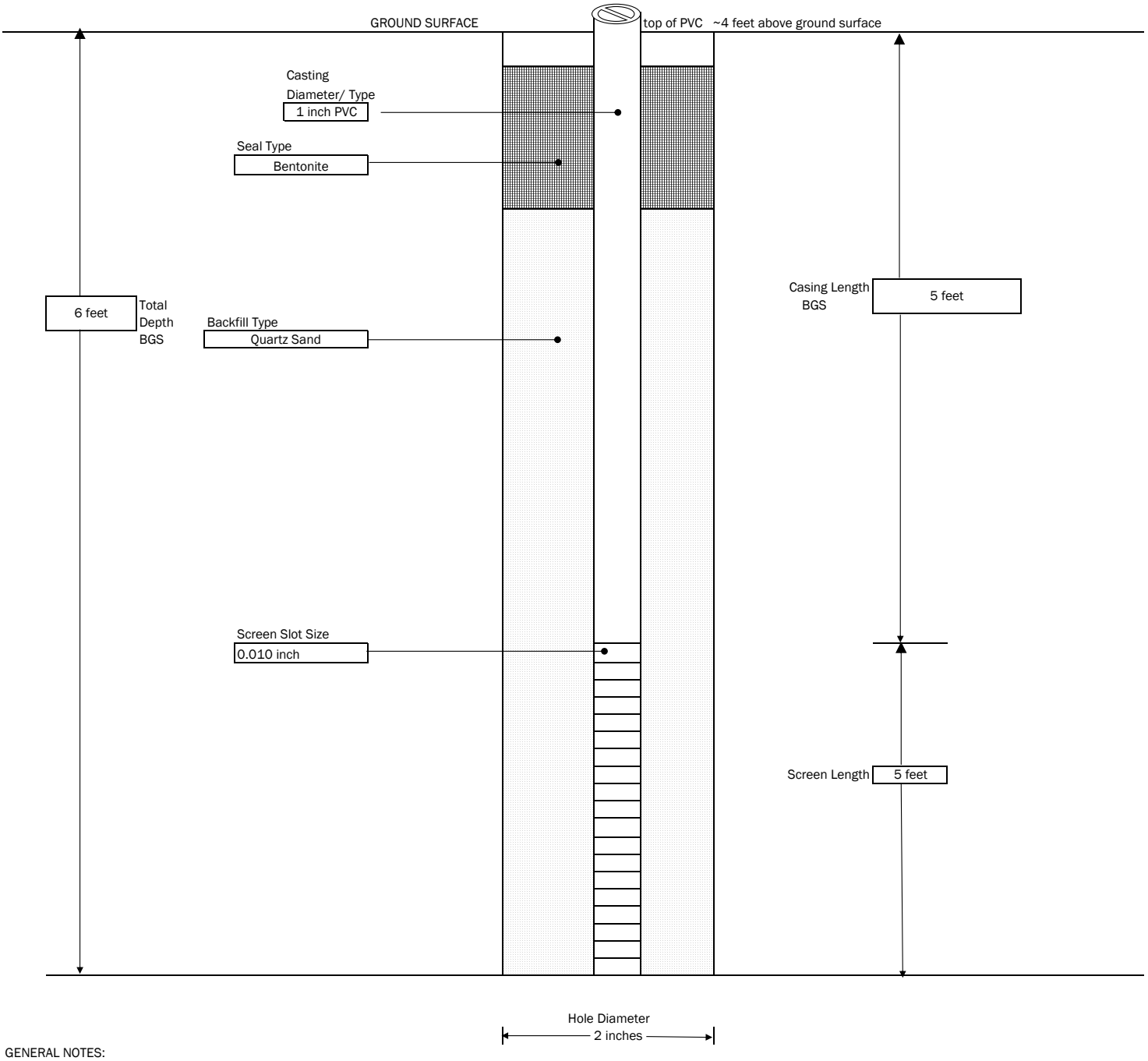
C = Coarse
M = Medium
F = Fine
VF = Very Fine

R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BGS = Below Ground Surface
NA = Not Applicable

Well Construction Logs

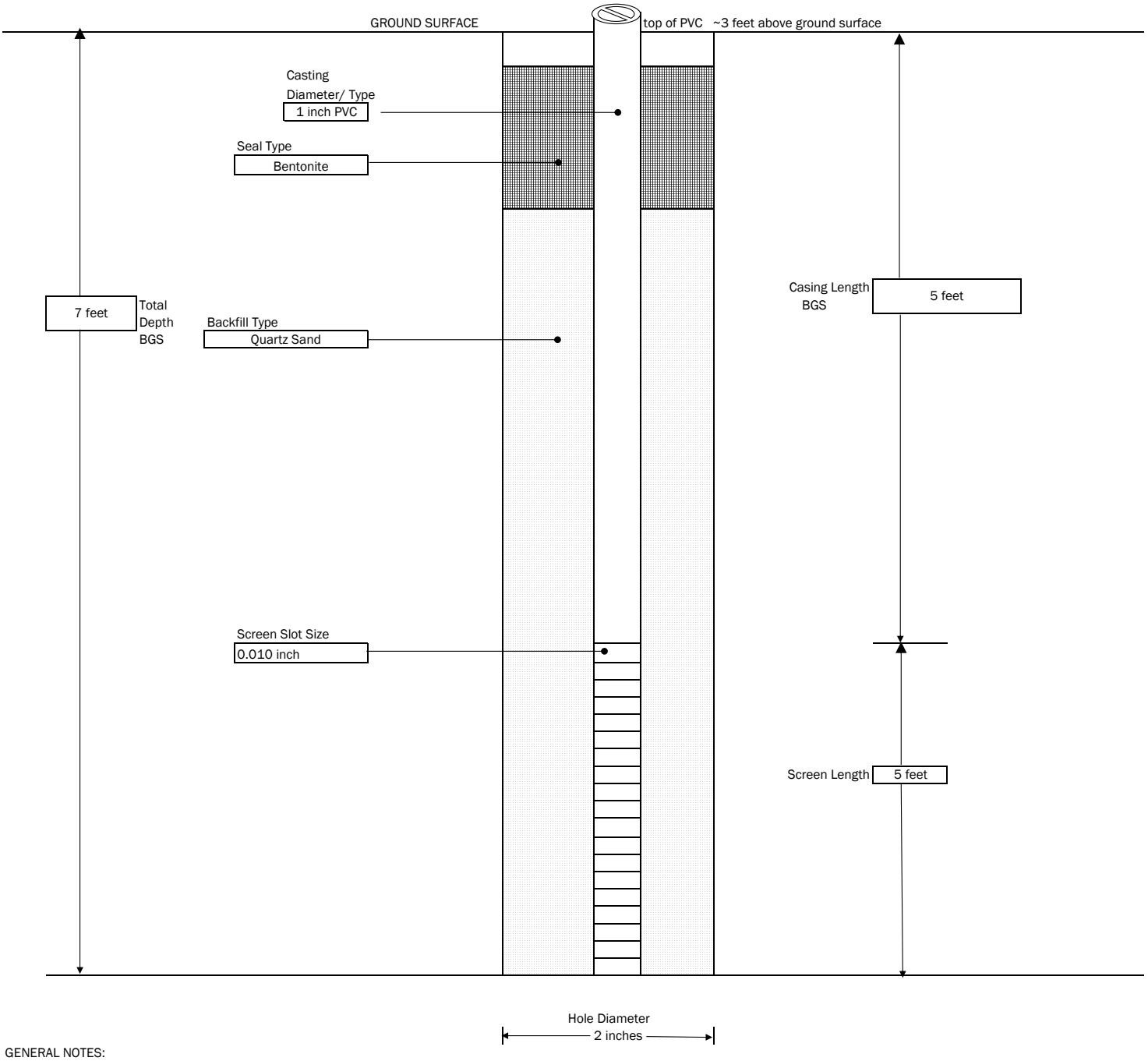
LaBella Powered by partnership 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-02** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: A. Mincer LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: Basement GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/5/2019 END DATE: 6/5/2019	TYPE OF DRILL RIG: Jackhammer AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

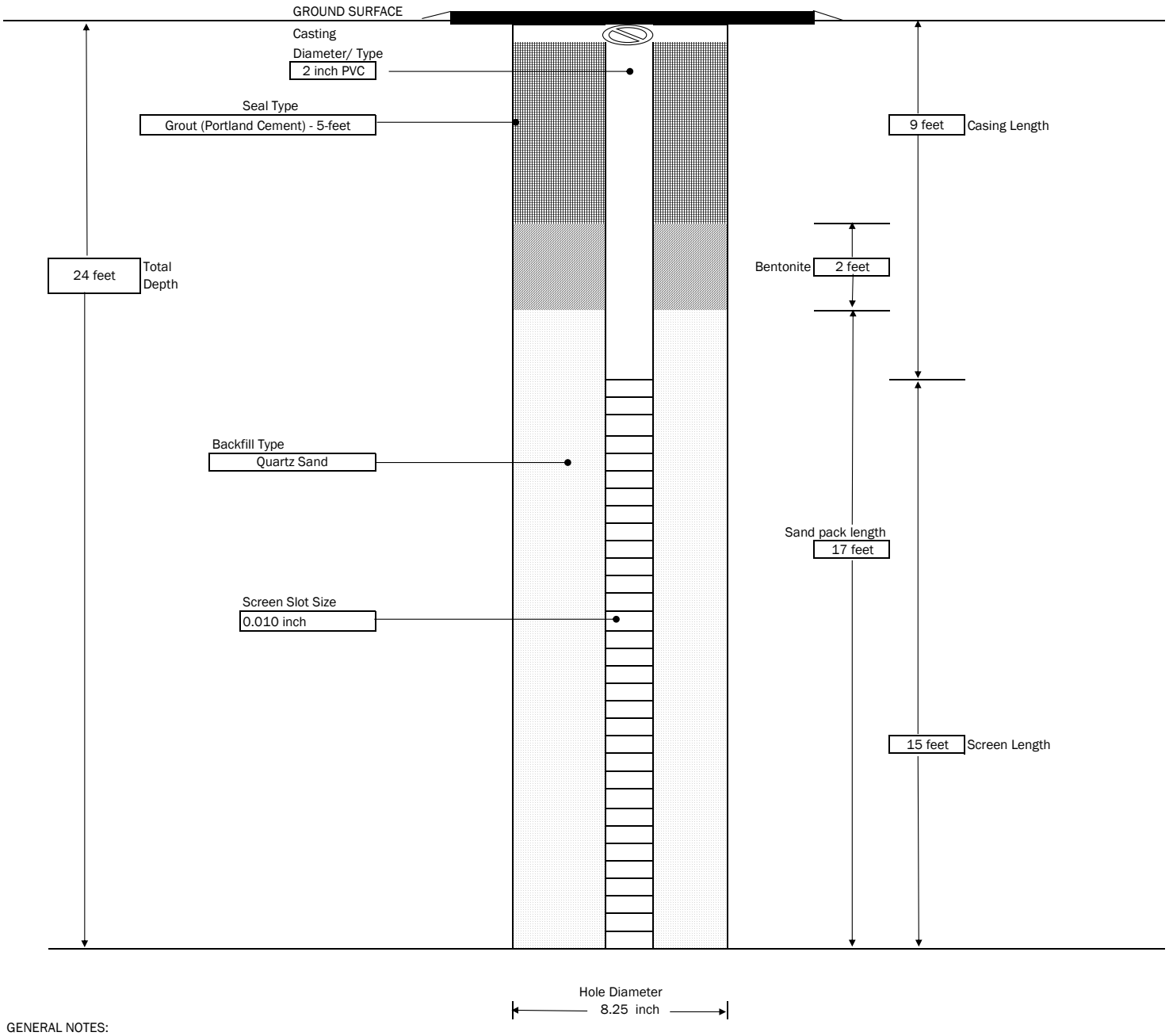
LaBella Powered by partnership 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-04** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: A. Mincer LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: Basement GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/5/2019 END DATE: 6/5/2019	TYPE OF DRILL RIG: Jackhammer AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

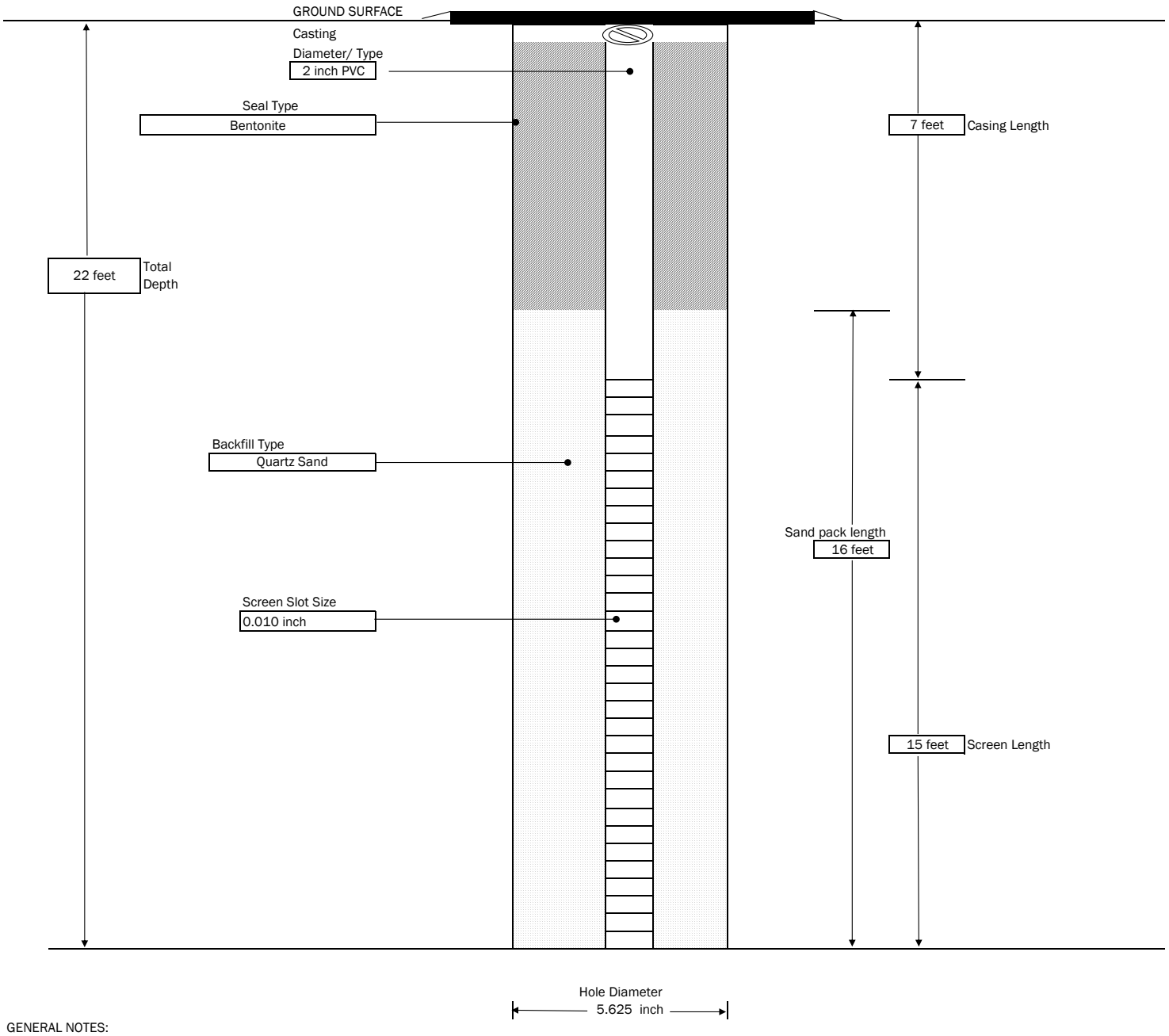
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** RIMW-05 **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: K. Busch LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 7/31/2019 END DATE: 7/31/2019	TYPE OF DRILL RIG: BK-81 AUGER SIZE AND TYPE: 4.25" Hollow Stem OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

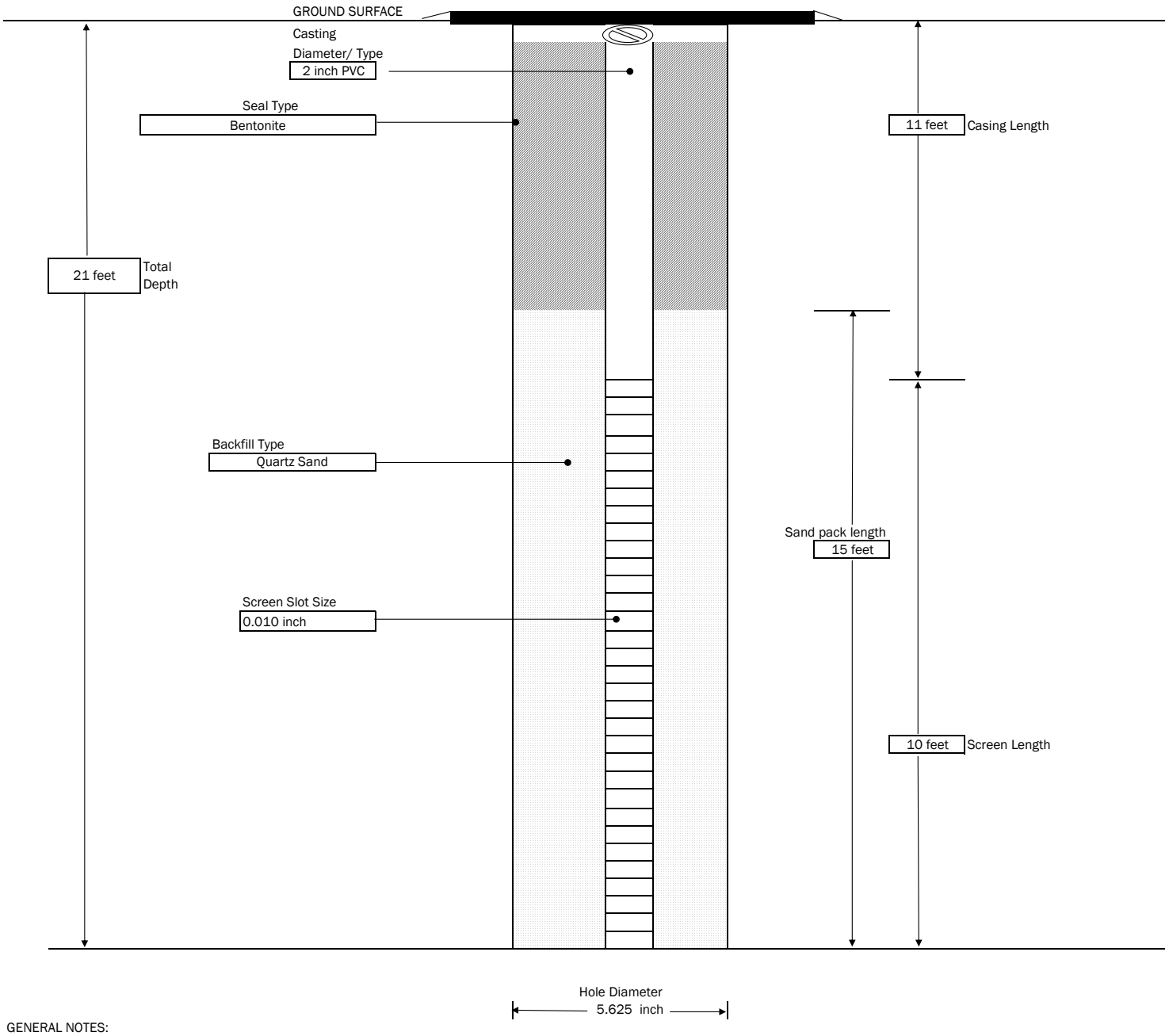
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** RIMW-08 **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: Dylan Hitchcock LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 7/3/2019 END DATE: 7/3/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: 2.25" Hollow Stem OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

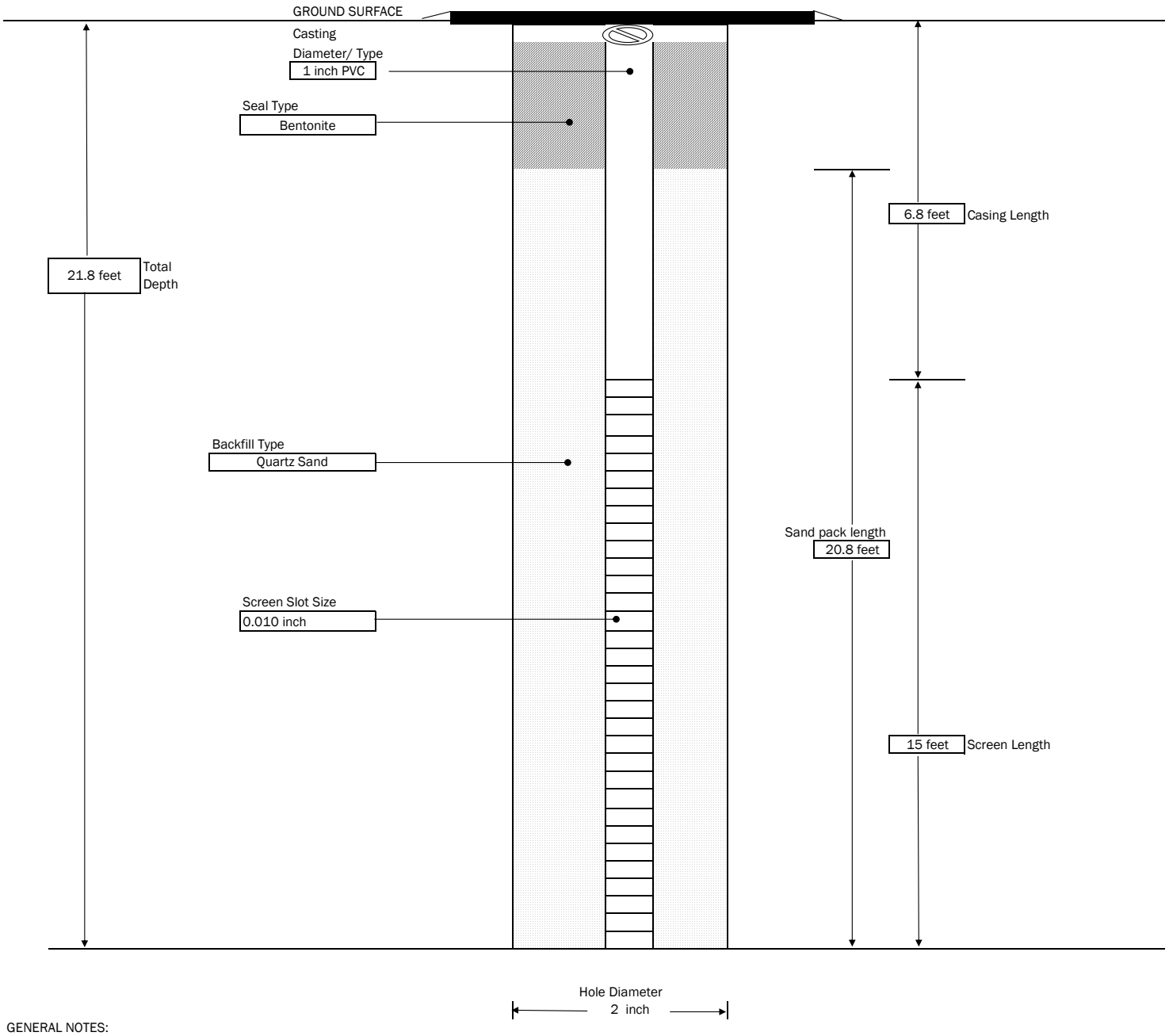
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-11** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: Dylan Hitchcock LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 7/3/2019 END DATE: 7/3/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: 2.25" Hollow Stem OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

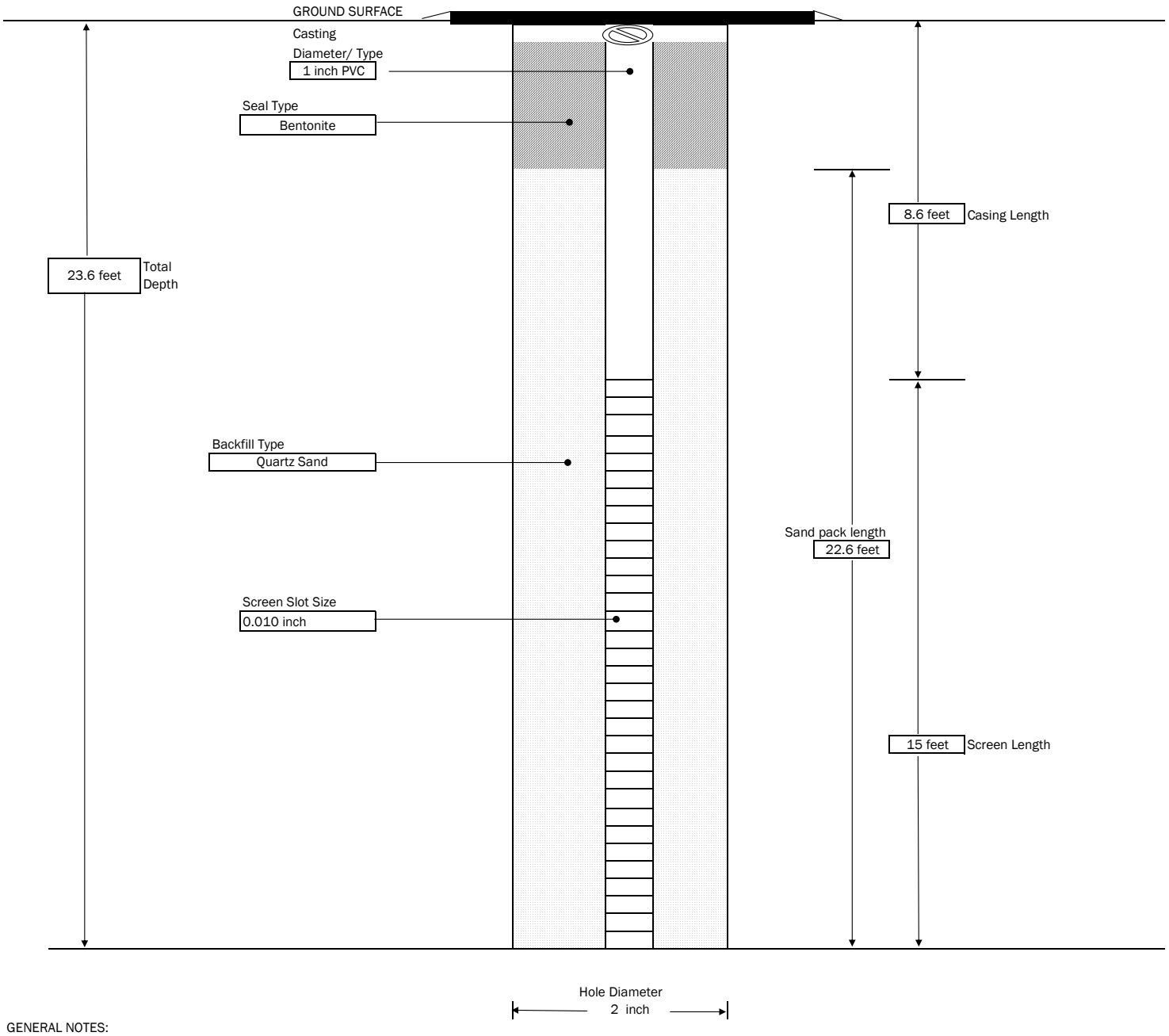
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-12** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/25/2019 END DATE: 6/25/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

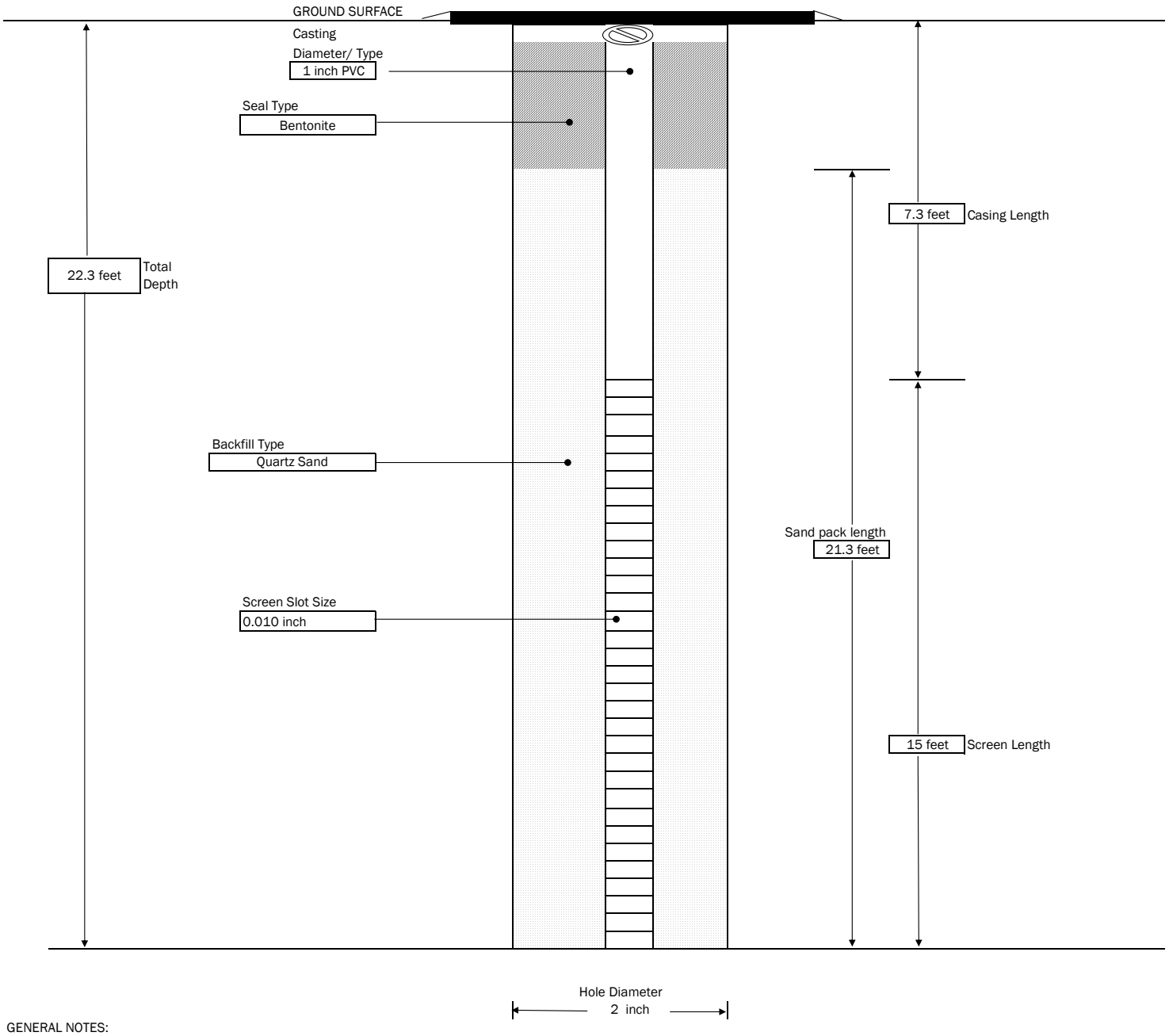
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-14** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/25/2019 END DATE: 6/25/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) Approximately 2-ft of soil collapse in bottom of borehole, well installed into soil in bottom 2-ft.

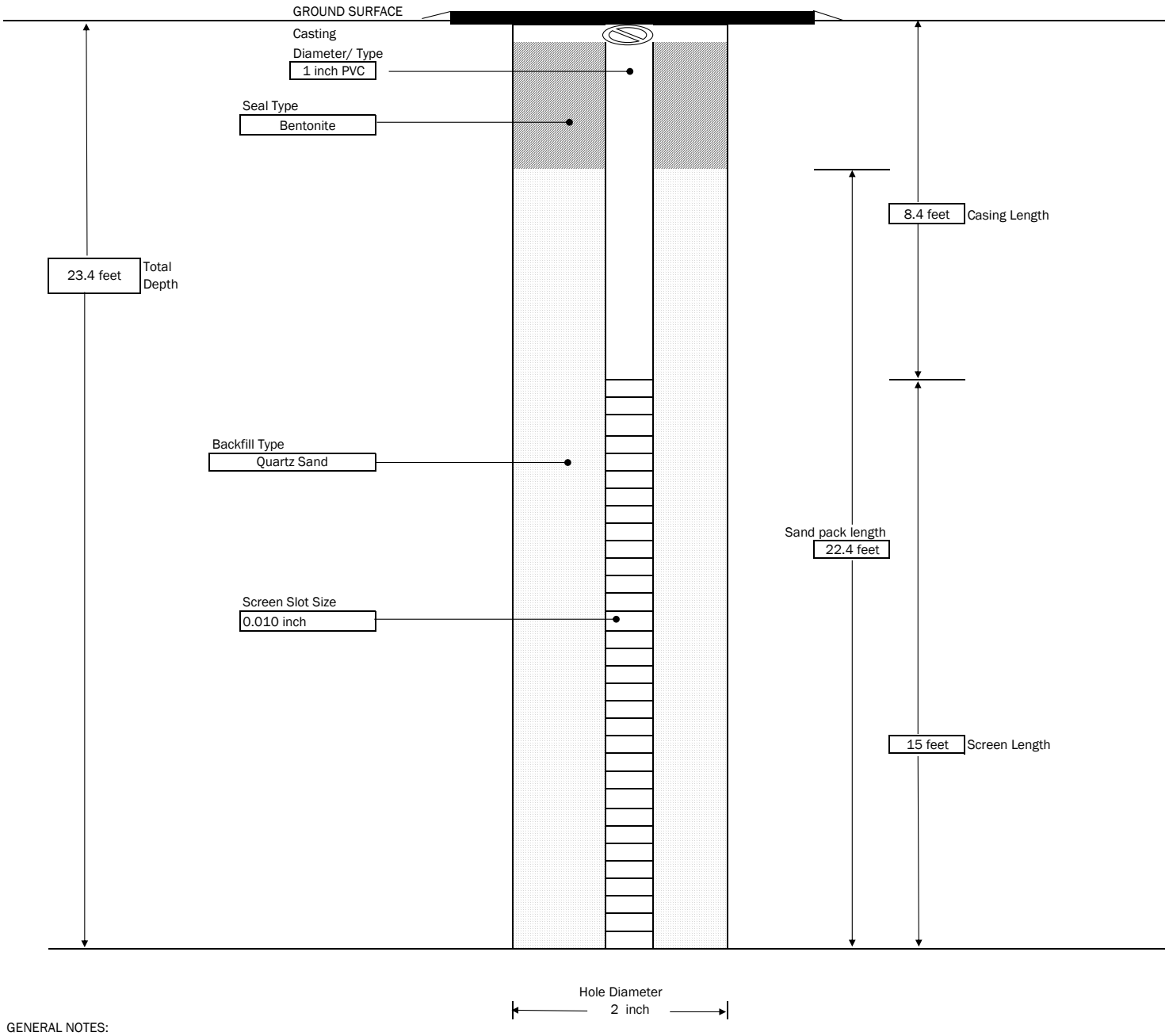
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-15** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/25/2019 END DATE: 6/25/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

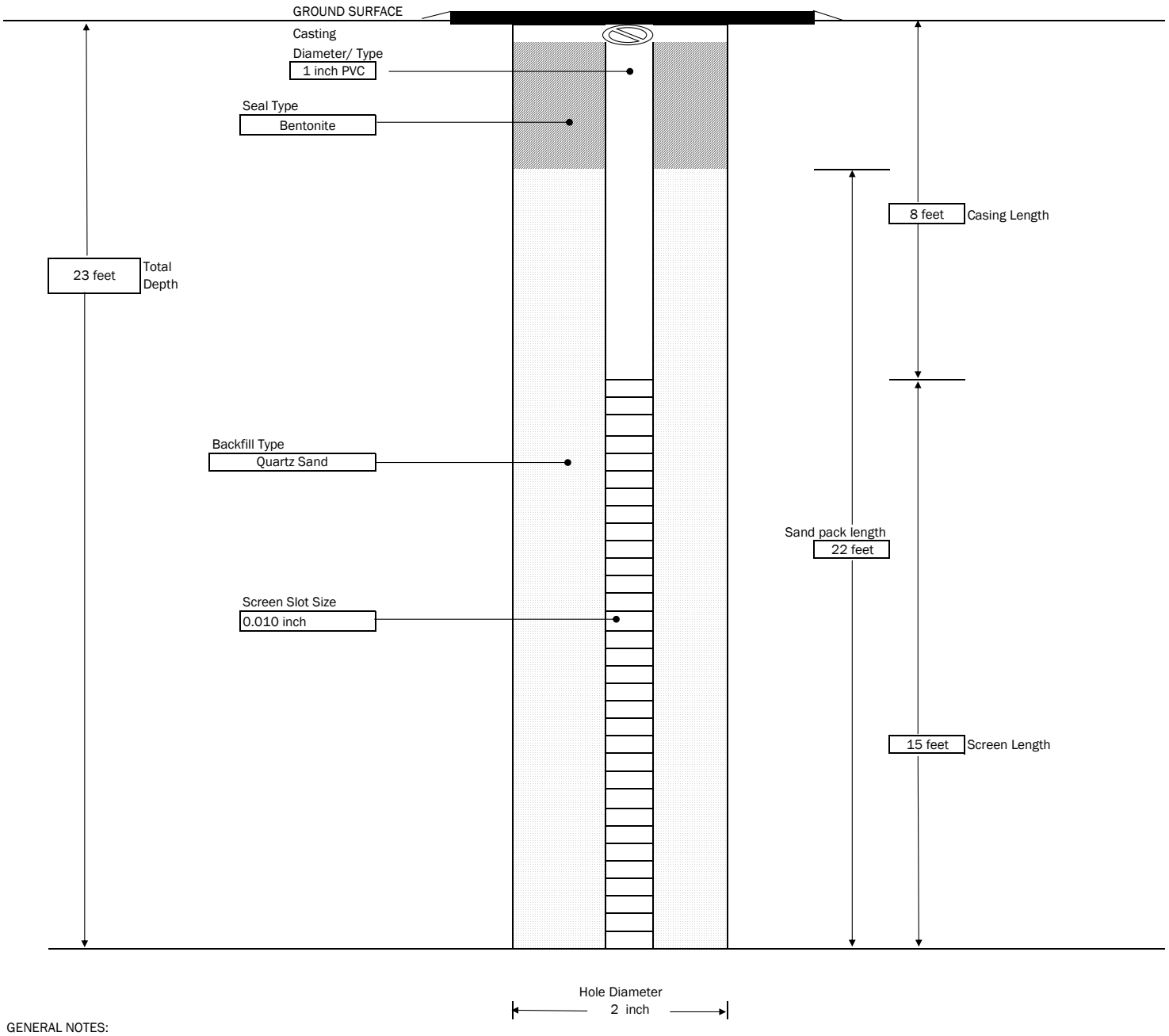
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-16** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/25/2019 END DATE: 6/25/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

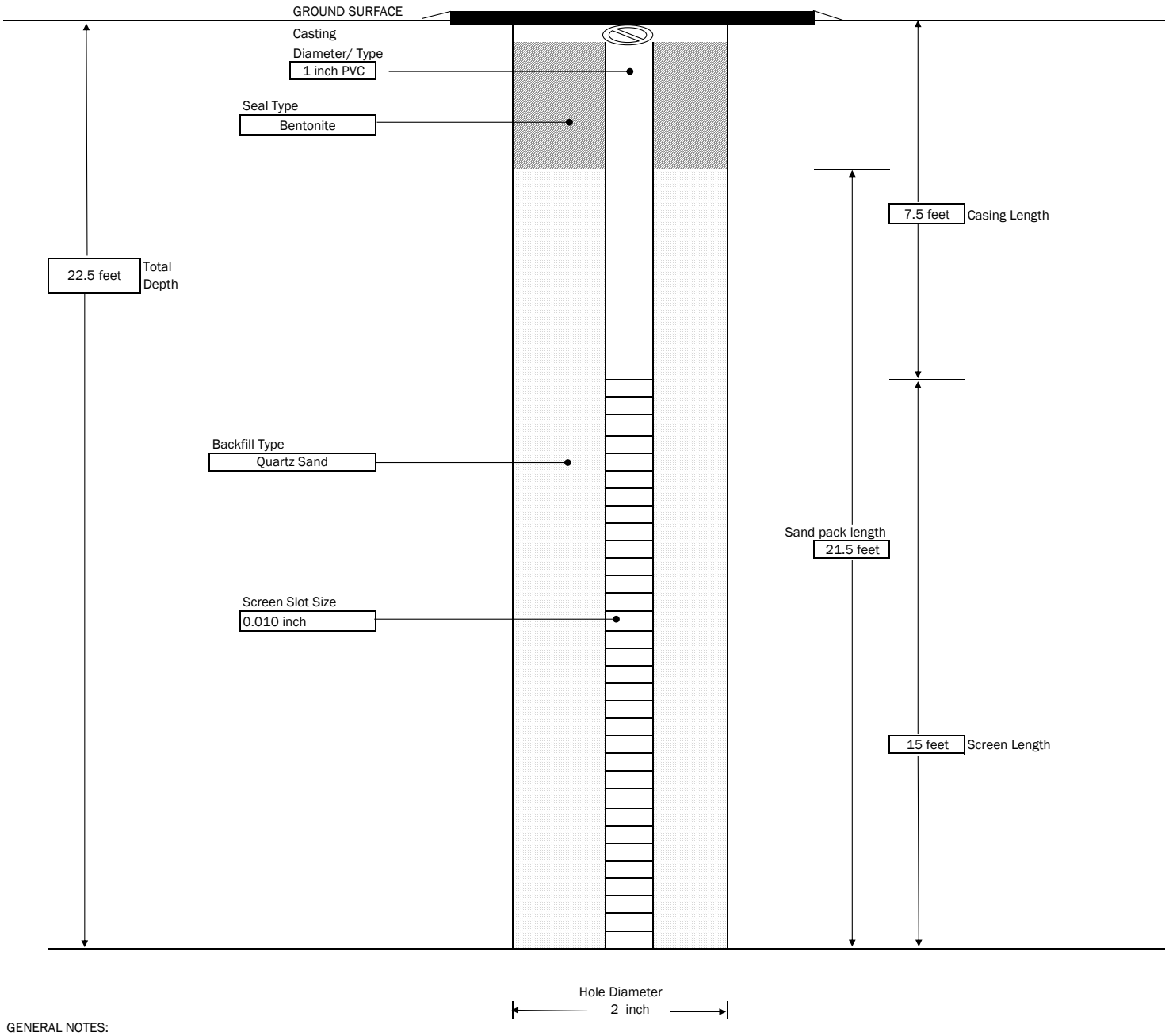
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-17** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/24/2019 END DATE: 6/24/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** FORMER WOLLENSACK OPTICAL 872 & 886 HUDSON AVE ROCHESTER, NEW YORK NYSDEC BCP #C828209	**MONITORING WELL :** **RIMW-18** **SHEET** 1 OF 1 **JOB # 2182207**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: A. DaSilva	BORING LOCATION: GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 6/24/2019 END DATE: 6/24/2019	TYPE OF DRILL RIG: Geoprobe 6610 AUGER SIZE AND TYPE: NA OVERBURDEN SAMPLING METHOD: Macrocore



GENERAL NOTES:

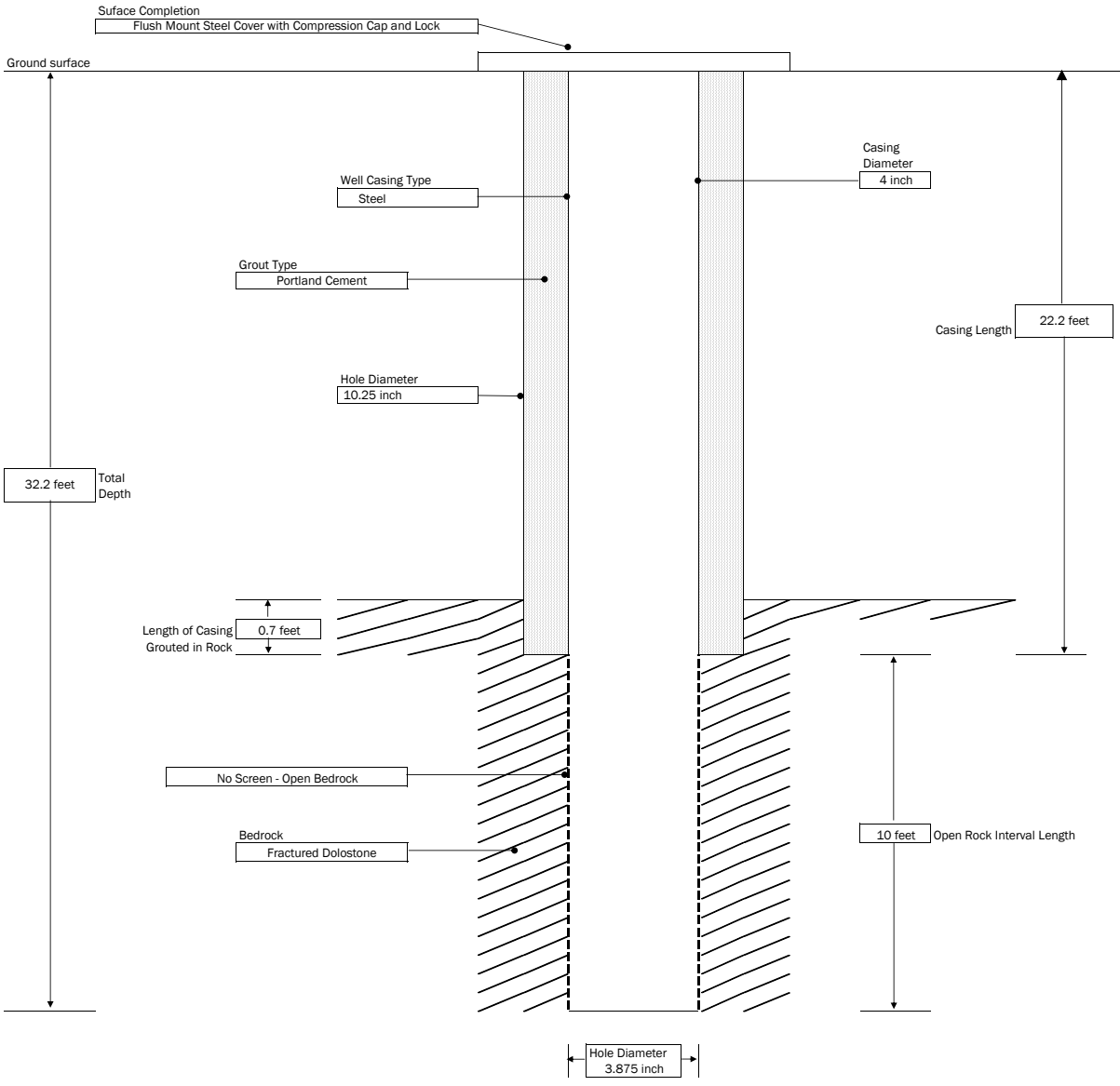
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Former Wollensack Optical 872 & 886 Hudson Ave, Rochester, NY NYSDEC BCP #C828209	BORING: RIBW-A SHEET 1 OF 1 JOB # 2182207 CHKD. BY:

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: See Figure	
DRILLER: K. Busch	GROUND SURFACE ELEVATION: -	DATUM:
LABELLA REPRESENTATIVE: A. Brett	START DATE: 7/24/2019	END DATE: 7/26/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

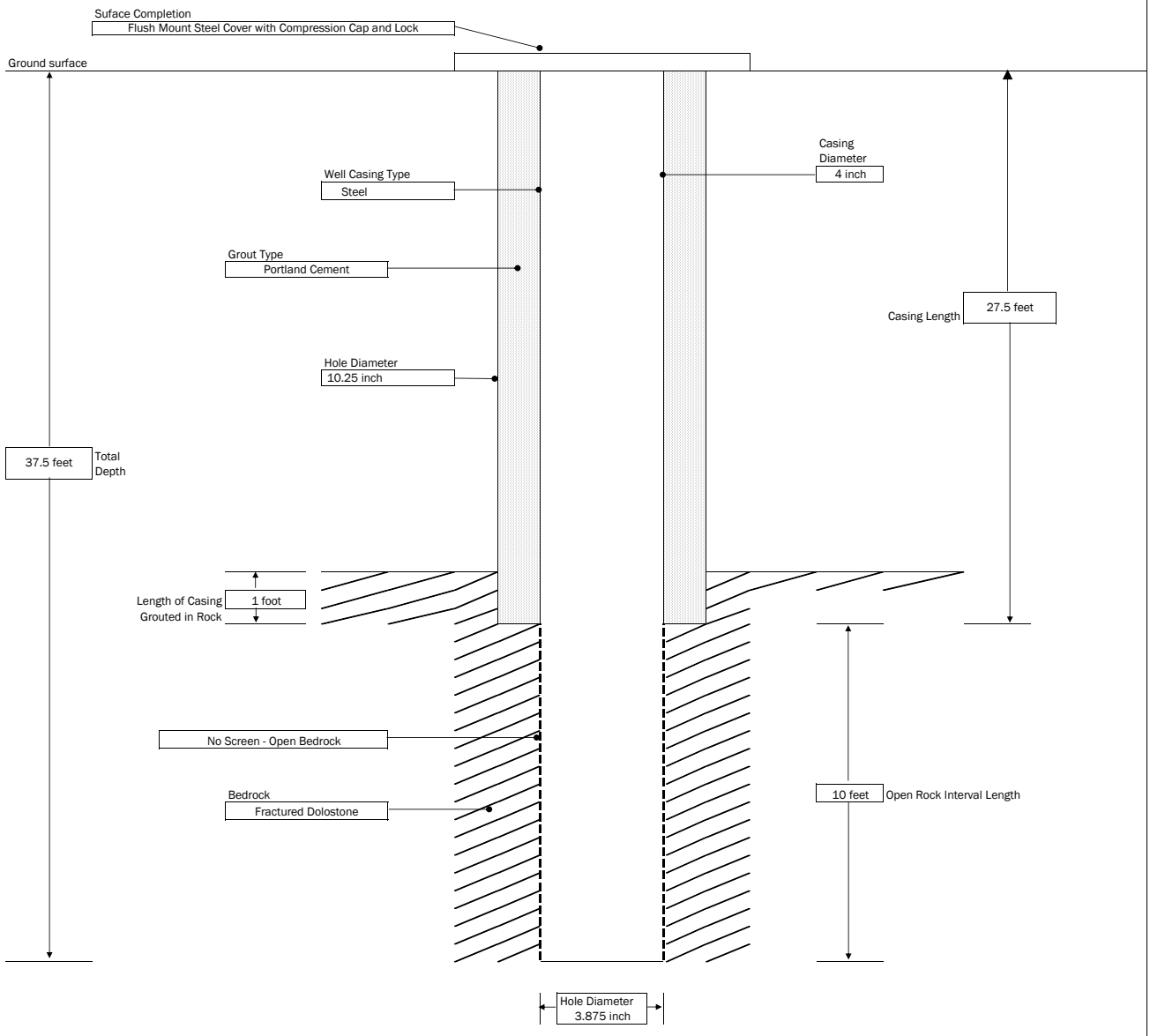
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Former Wollensack Optical 872 & 886 Hudson Ave, Rochester, NY NYSDEC BCP #C828209	BORING: RIBW-B SHEET 1 OF 1 JOB # 2182207 CHKD. BY:

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: See Figure	
DRILLER: K. Busch	GROUND SURFACE ELEVATION: -	DATUM:
LABELLA REPRESENTATIVE: A. Brett	START DATE: 7/29/2019	END DATE: 7/30/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



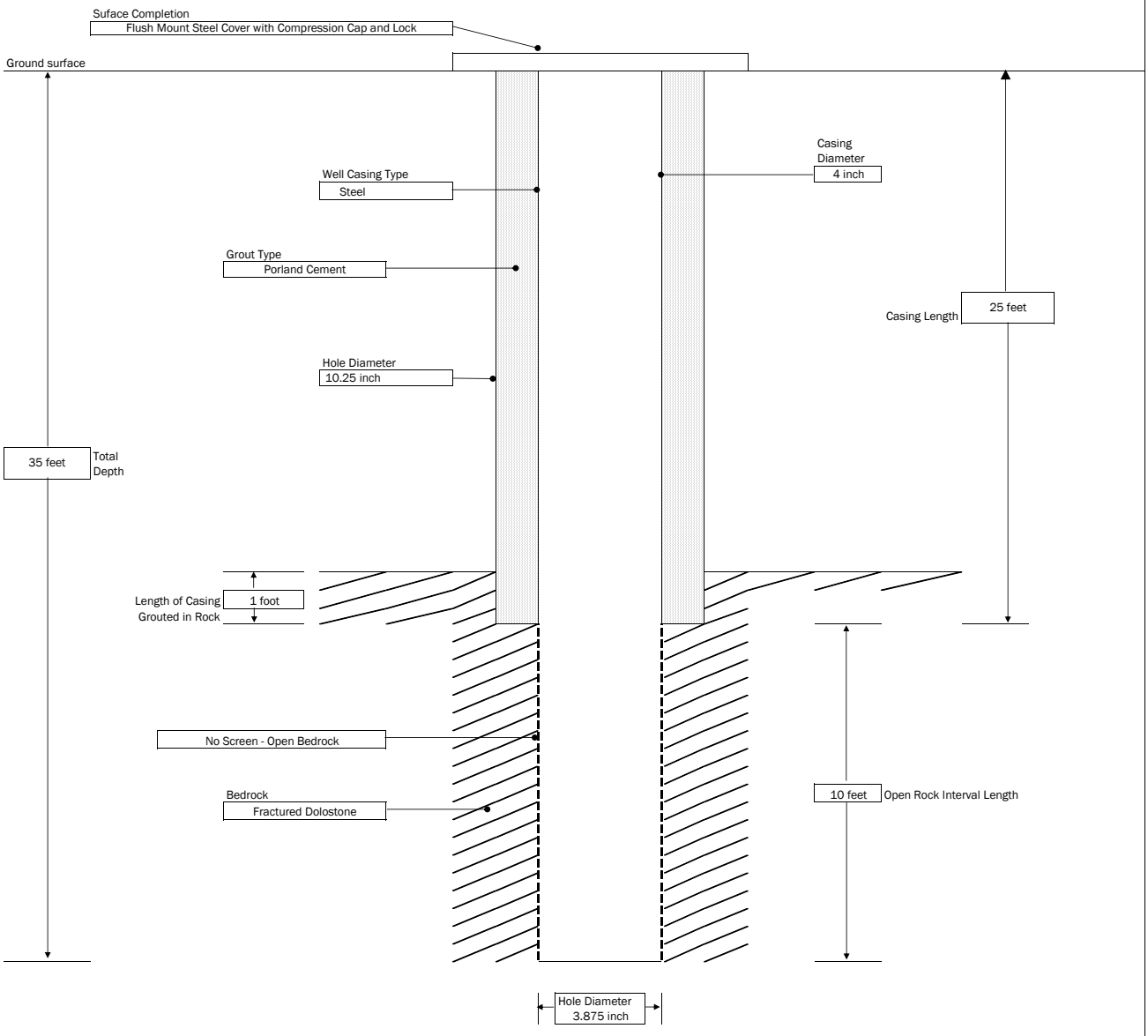
GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Former Wollensack Optical 872 & 886 Hudson Ave, Rochester, NY NYSDEC BCP #C828209	BORING: RIBW-C SHEET 1 OF 1 JOB # 2182207 CHKD. BY:
CONTRACTOR: Nothnagle Drilling DRILLER: K. Busch LABELLA REPRESENTATIVE: A. Brett	BORING LOCATION: See Figure GROUND SURFACE ELEVATION: - START DATE: 7/30/2019	DATUM: END DATE: 7/31/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

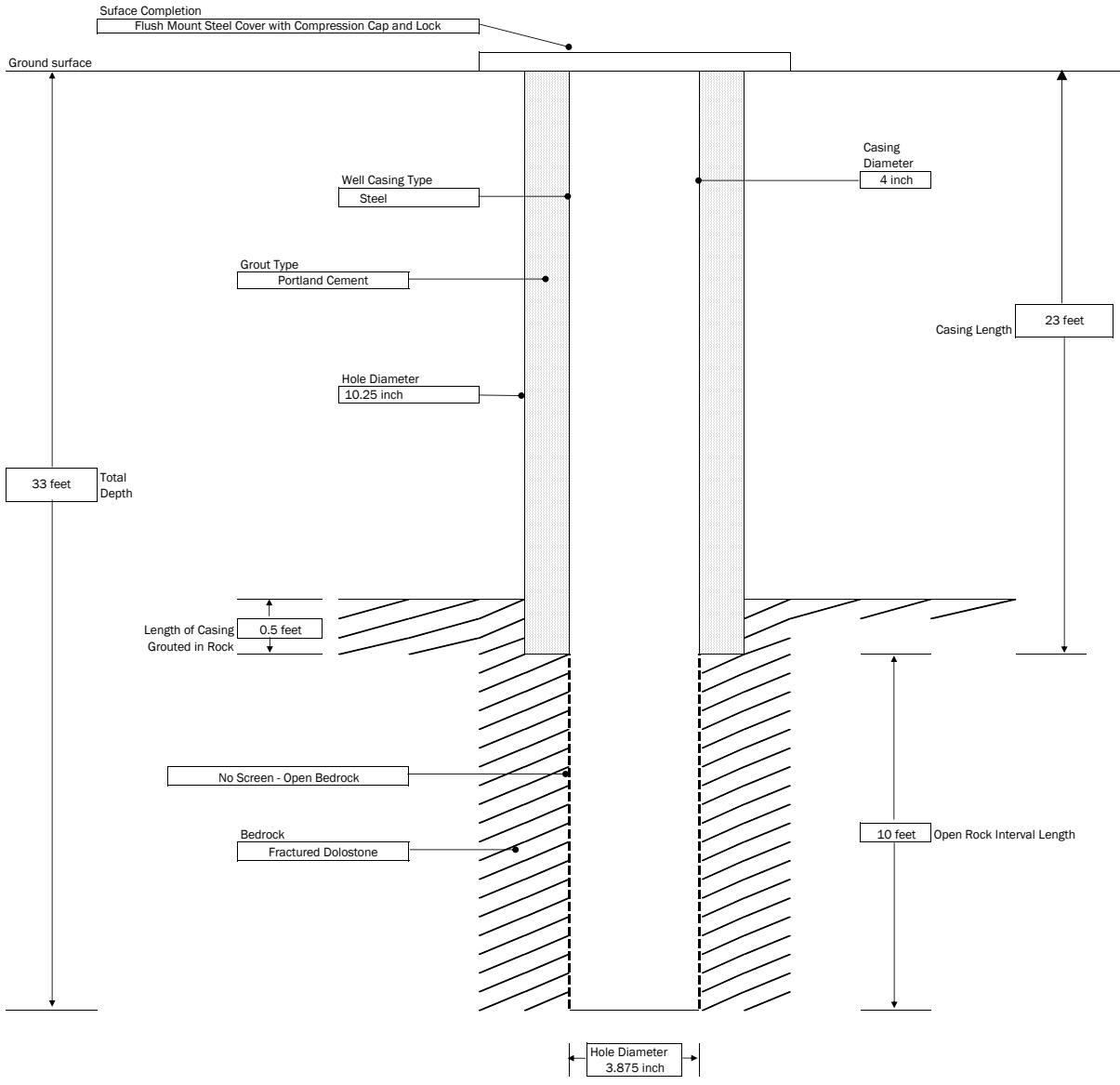
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Former Wollensack Optical 872 & 886 Hudson Ave, Rochester, NY NYSDEC BCP #C828209	BORING: RIBW-D SHEET 1 OF 1 JOB # 2182207 CHKD. BY:

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: See Figure	
DRILLER: K. Busch	GROUND SURFACE ELEVATION: -	DATUM:
LABELLA REPRESENTATIVE: A. Brett	START DATE: 8/1/2019	END DATE: 8/8/2019

TYPE OF DRILL RIG: BK 81
AUGER SIZE AND TYPE: 6.25-inch Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: HX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella
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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

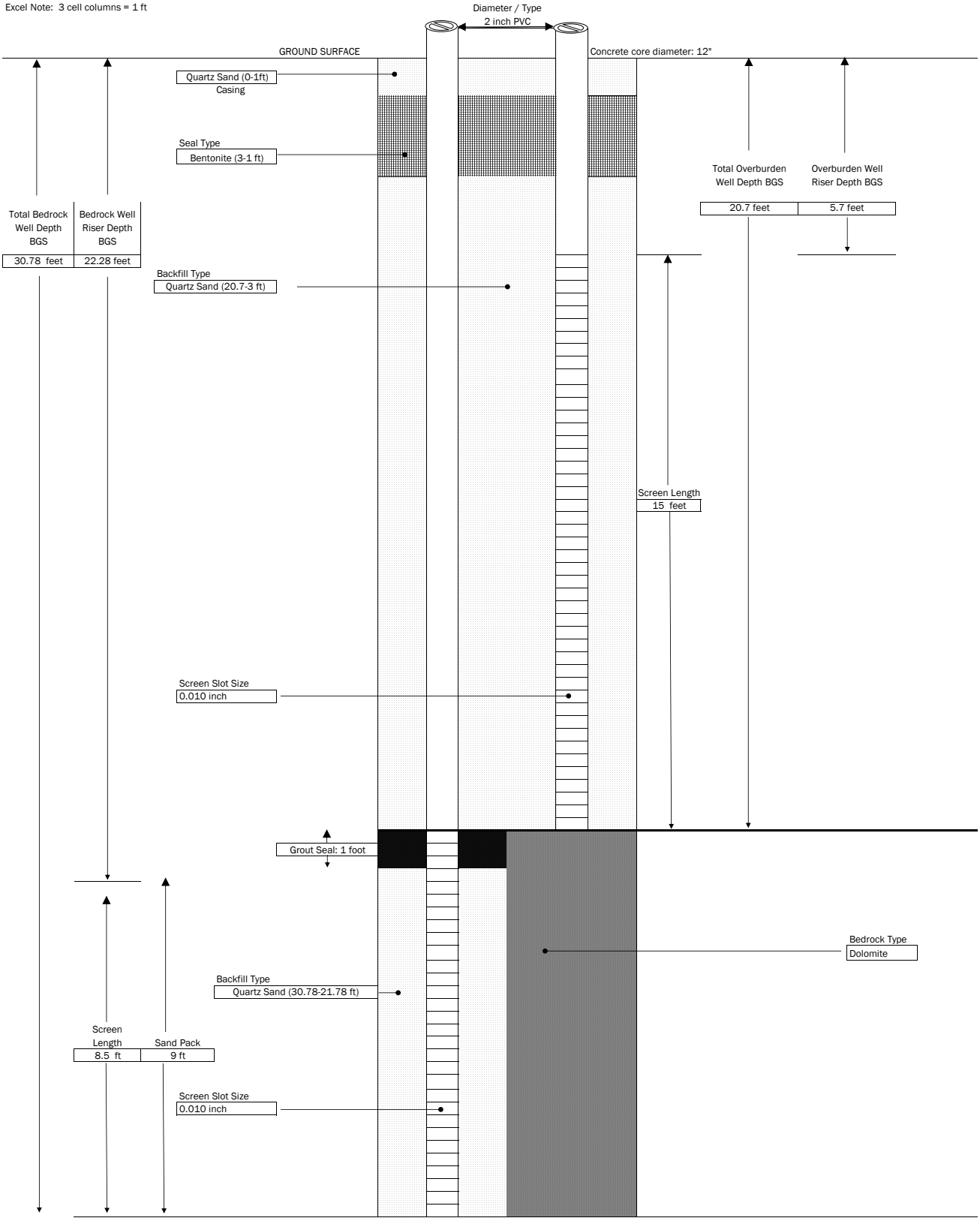
Injection Well: RIMW-19S/RIMW-19D

SHEET: 1 of 1

JOB # 2182207

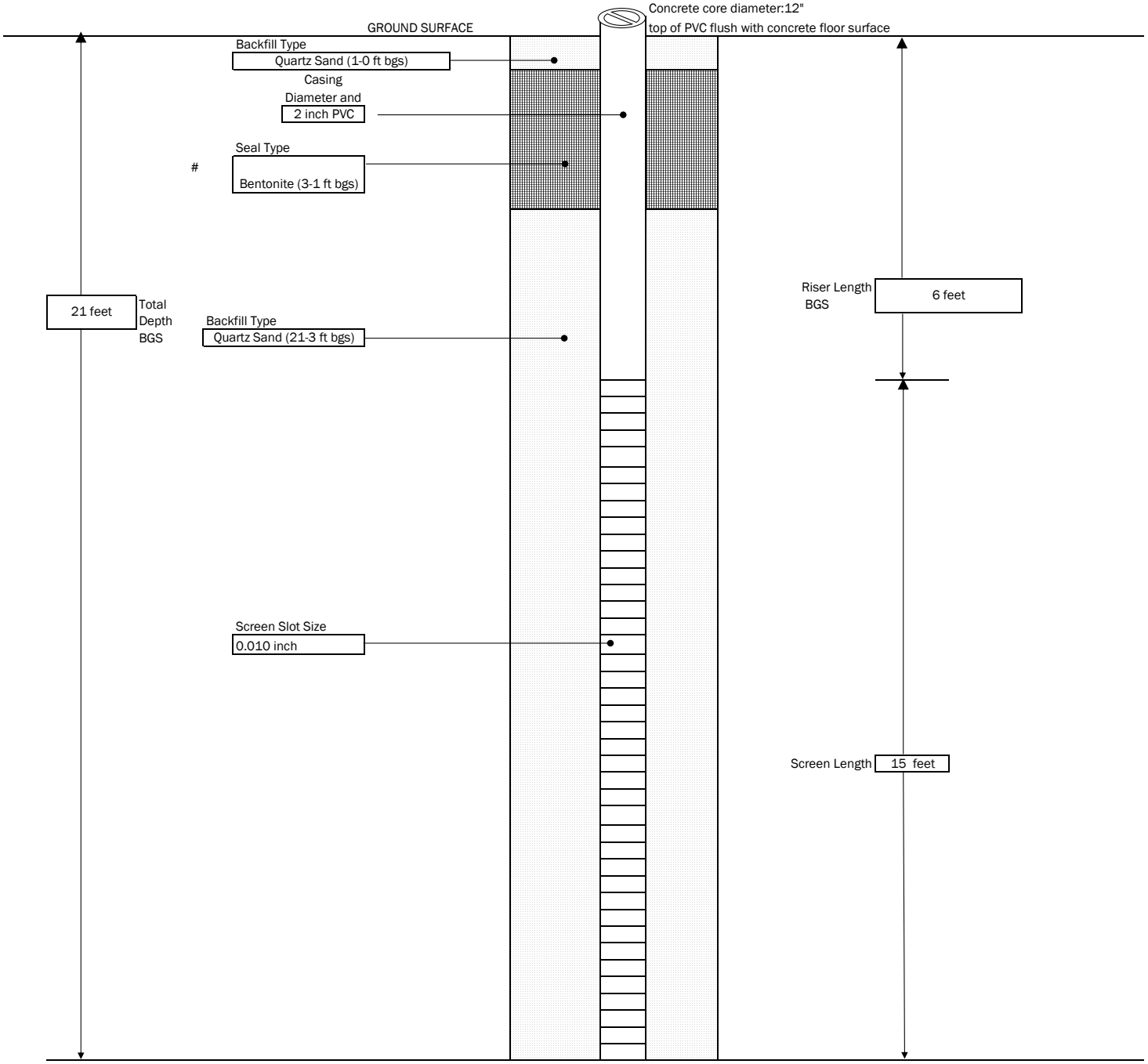
CONTRACTOR: Nothnagle Drilling	BORING LOCATION: ~ 2ft west of south western most column : This is a monitoring well.	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/26/2020 END DATE: 2/28/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** RIMW-16R **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: ~4 ft East of IW-D-03 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 3/5/2020 END DATE: 3/5/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA

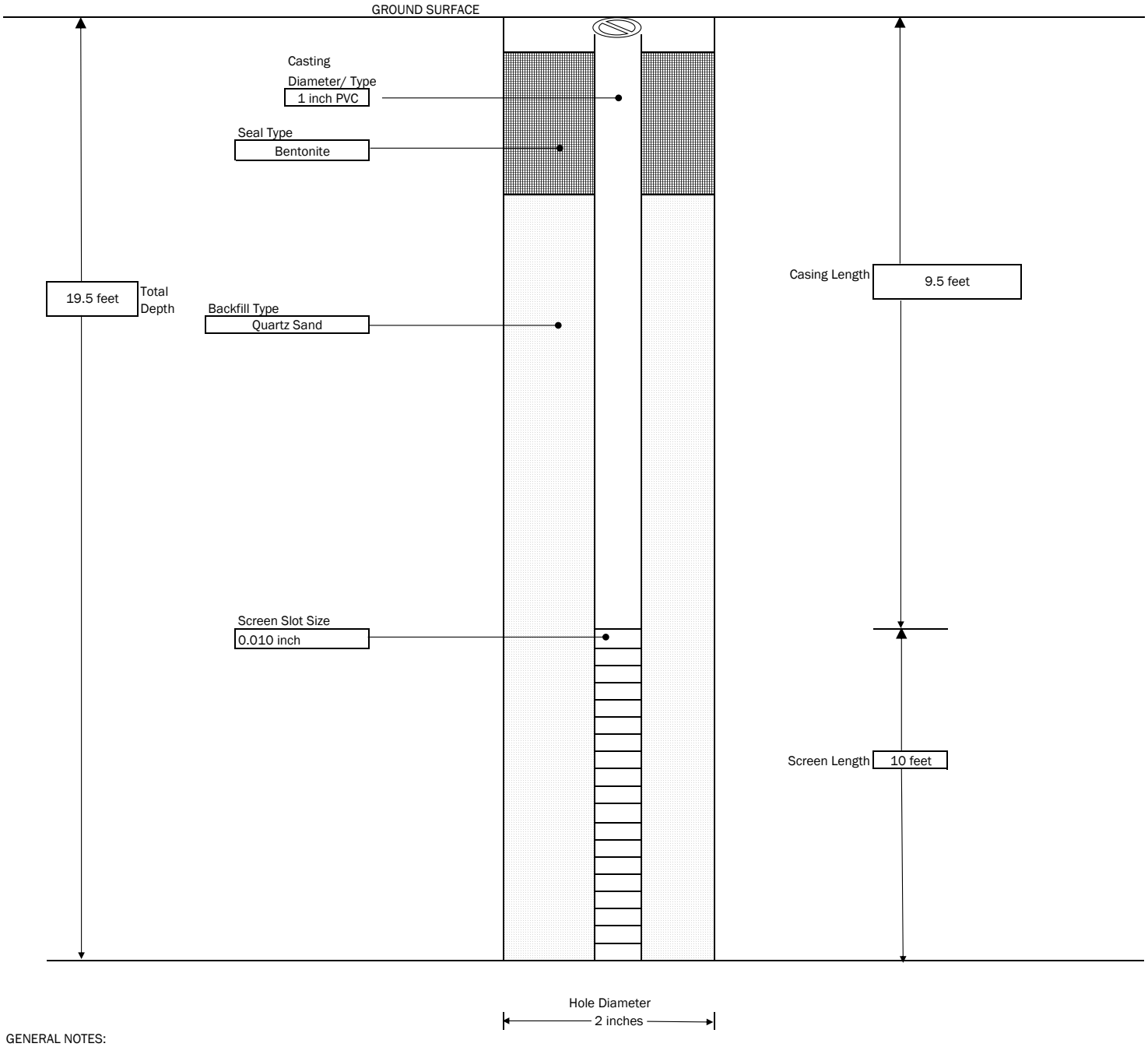


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-02** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	6/26/2018	END DATE:	6/26/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

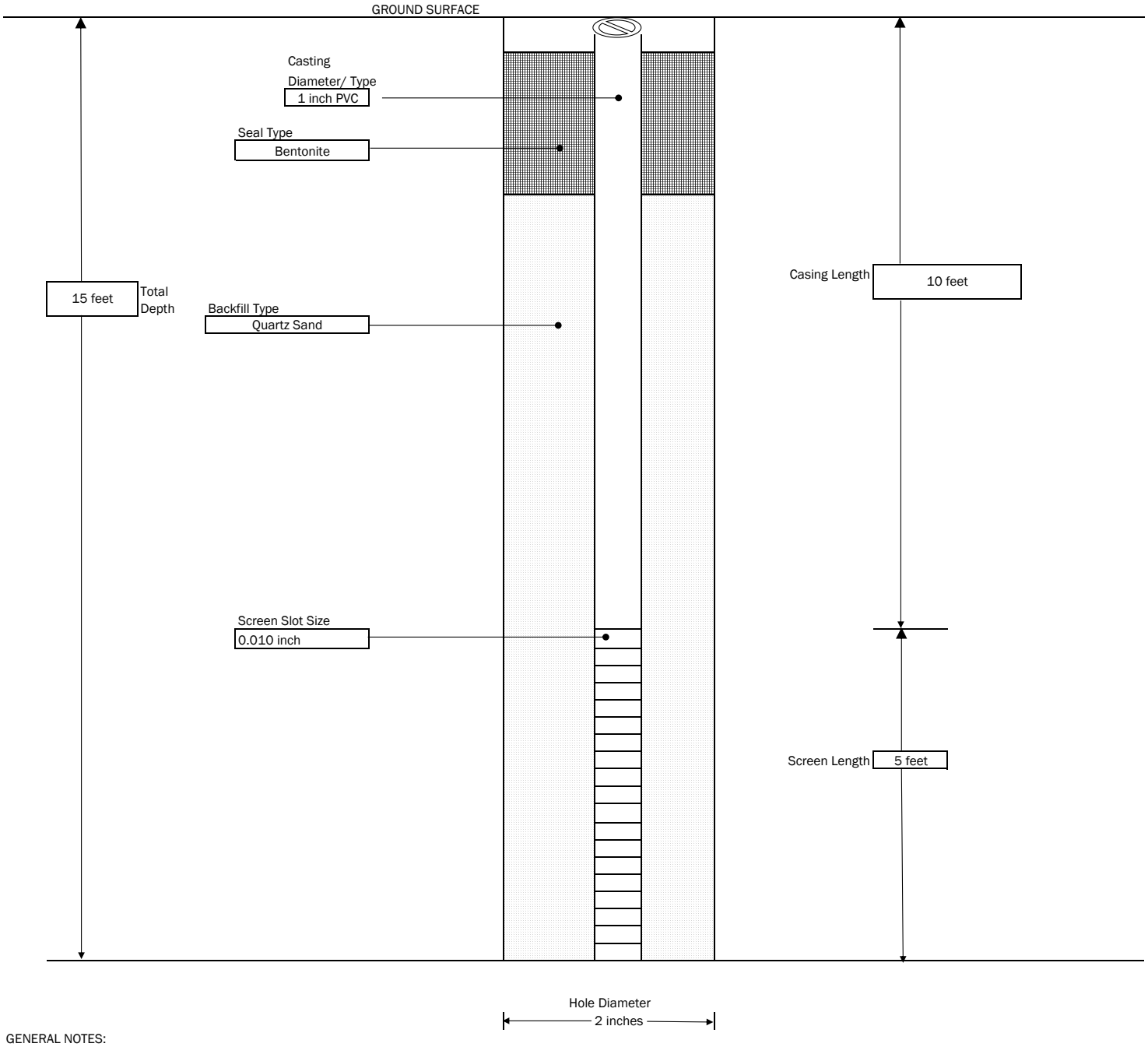


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** SBMW-04 **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	6/26/2018	END DATE:	6/26/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

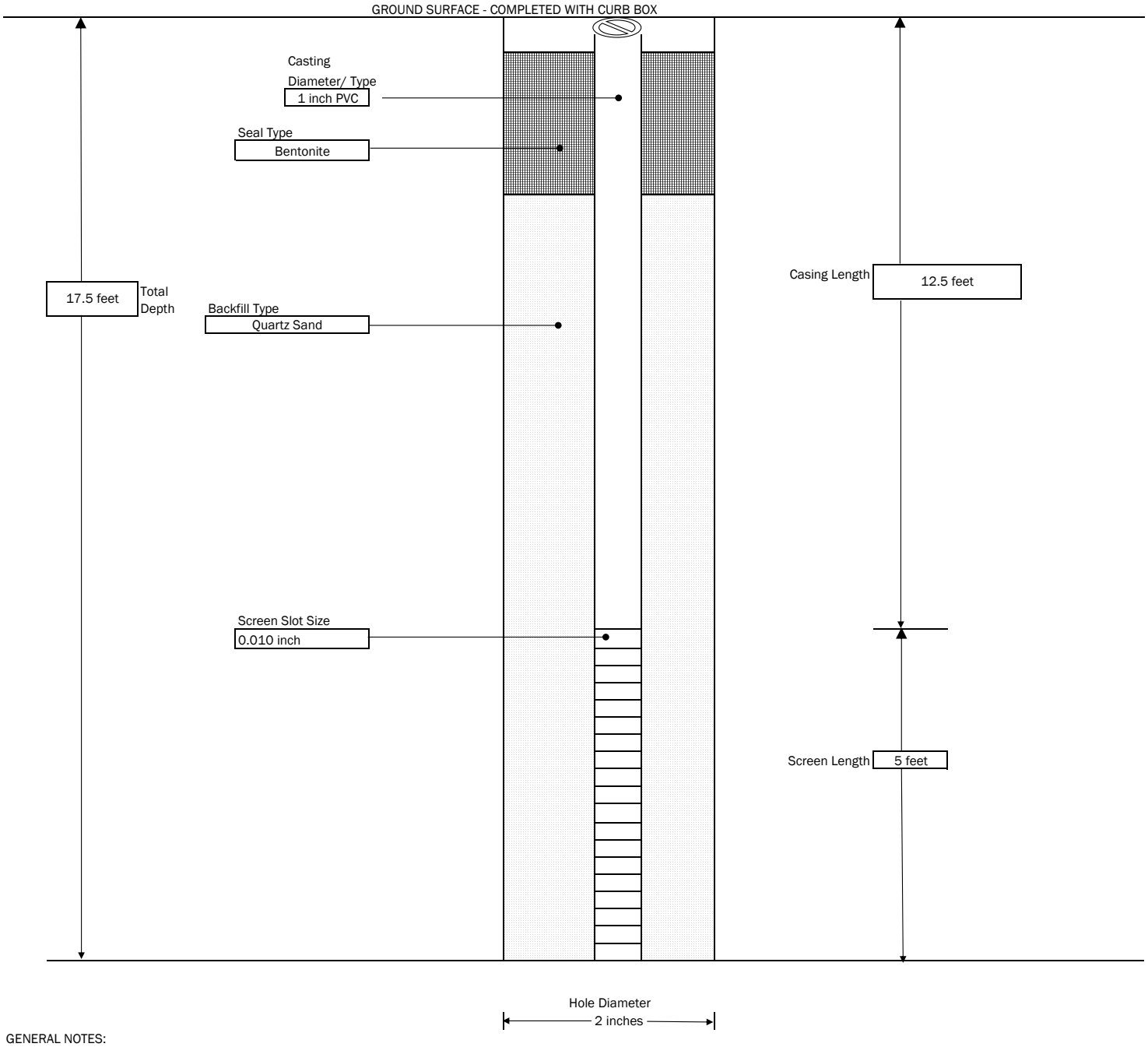


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** SBMW-07 **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	6/26/2018	END DATE:	6/26/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

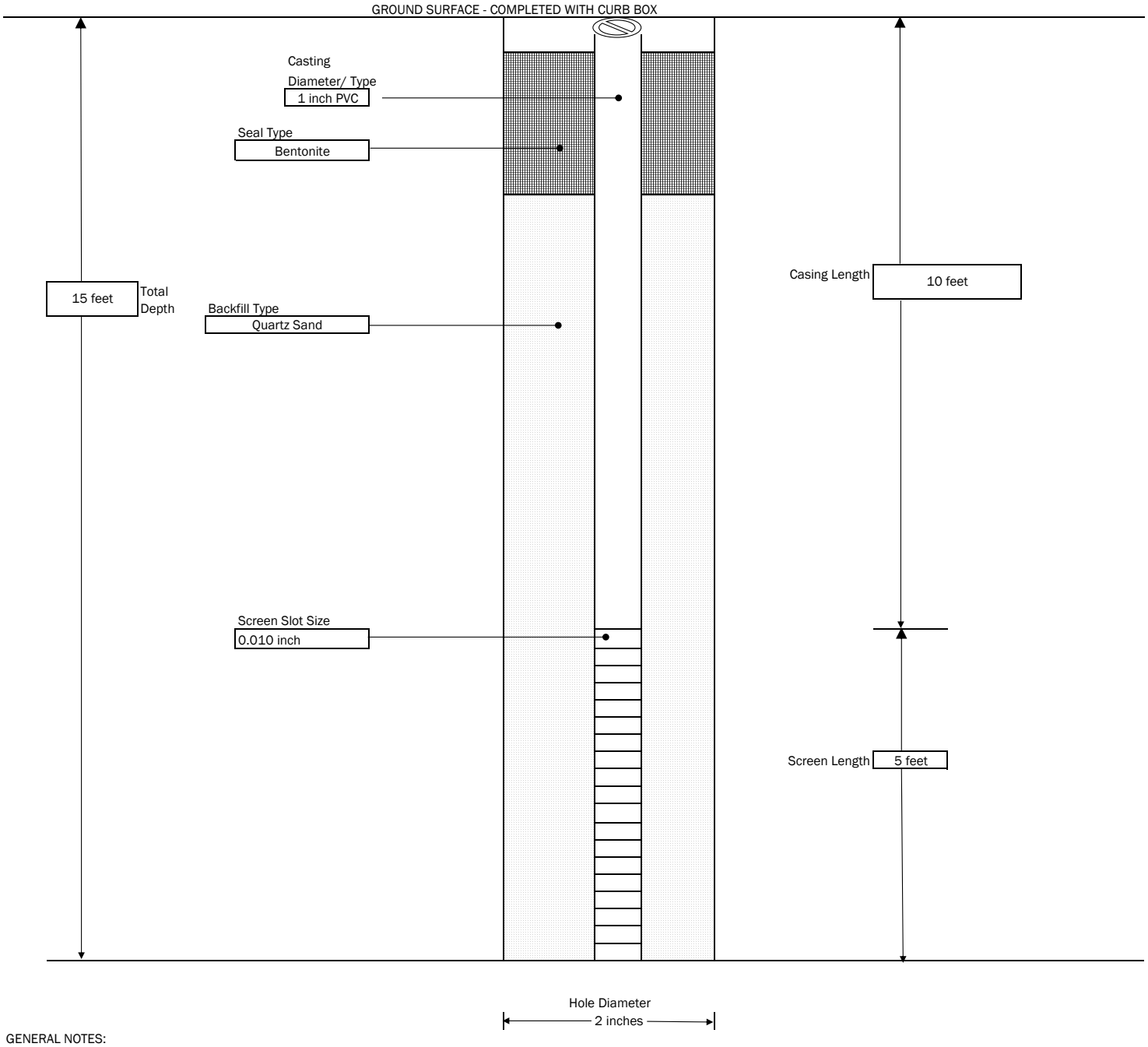


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** SBMW-10 **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	6/26/2018	END DATE:	6/26/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

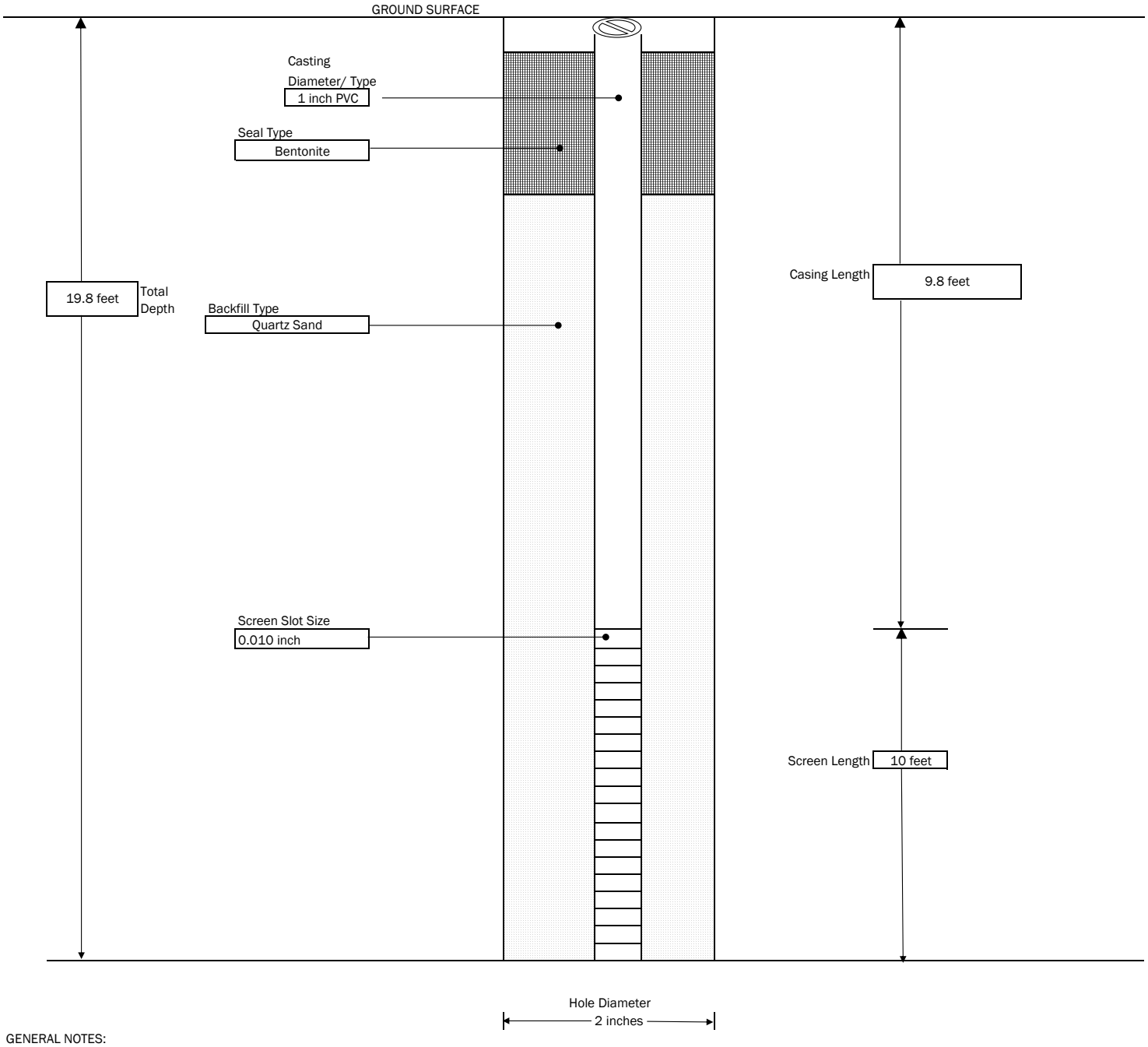


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-11** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/16/2018	END DATE:	7/16/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

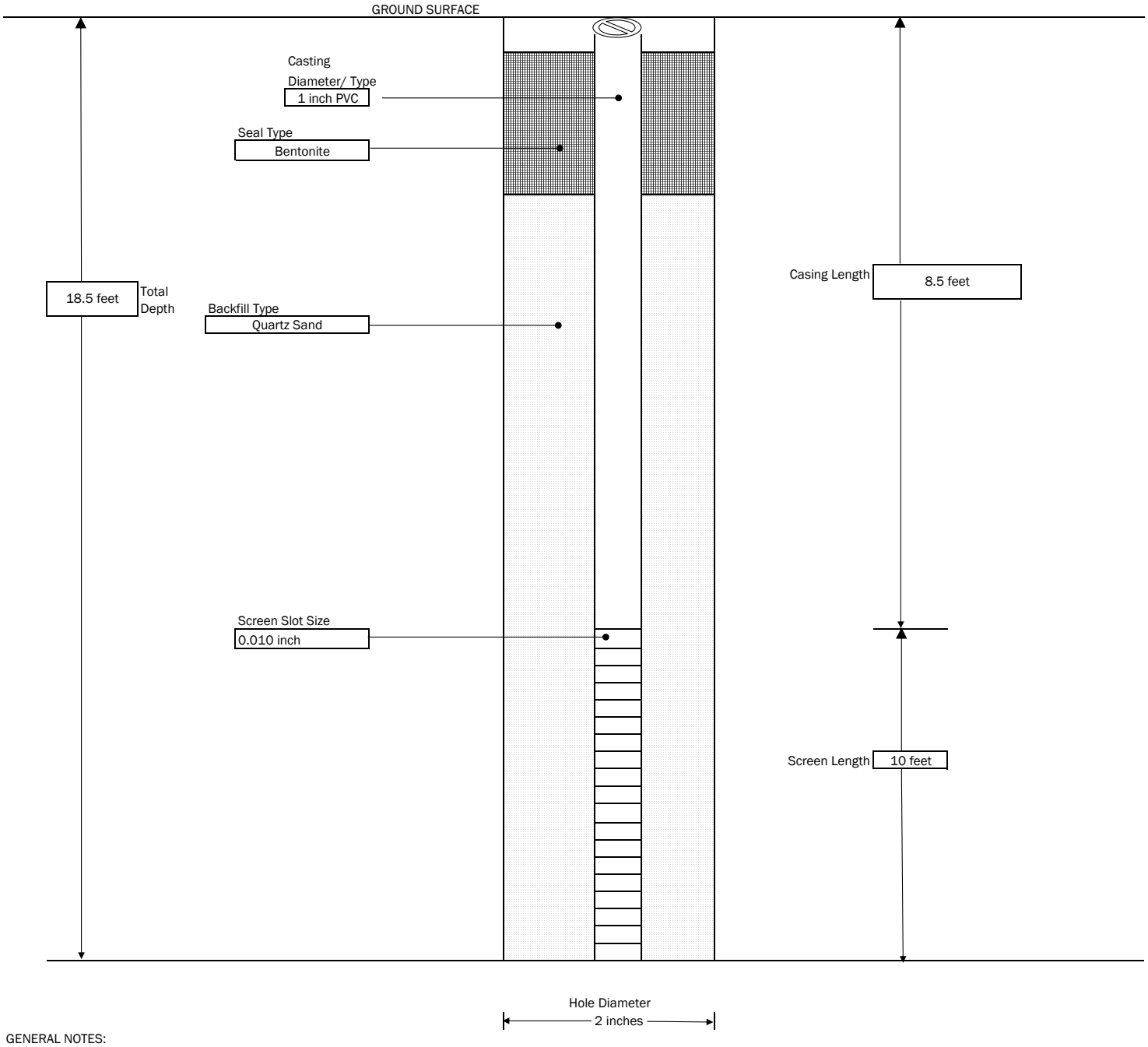


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-12** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/16/2018	END DATE:	7/16/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

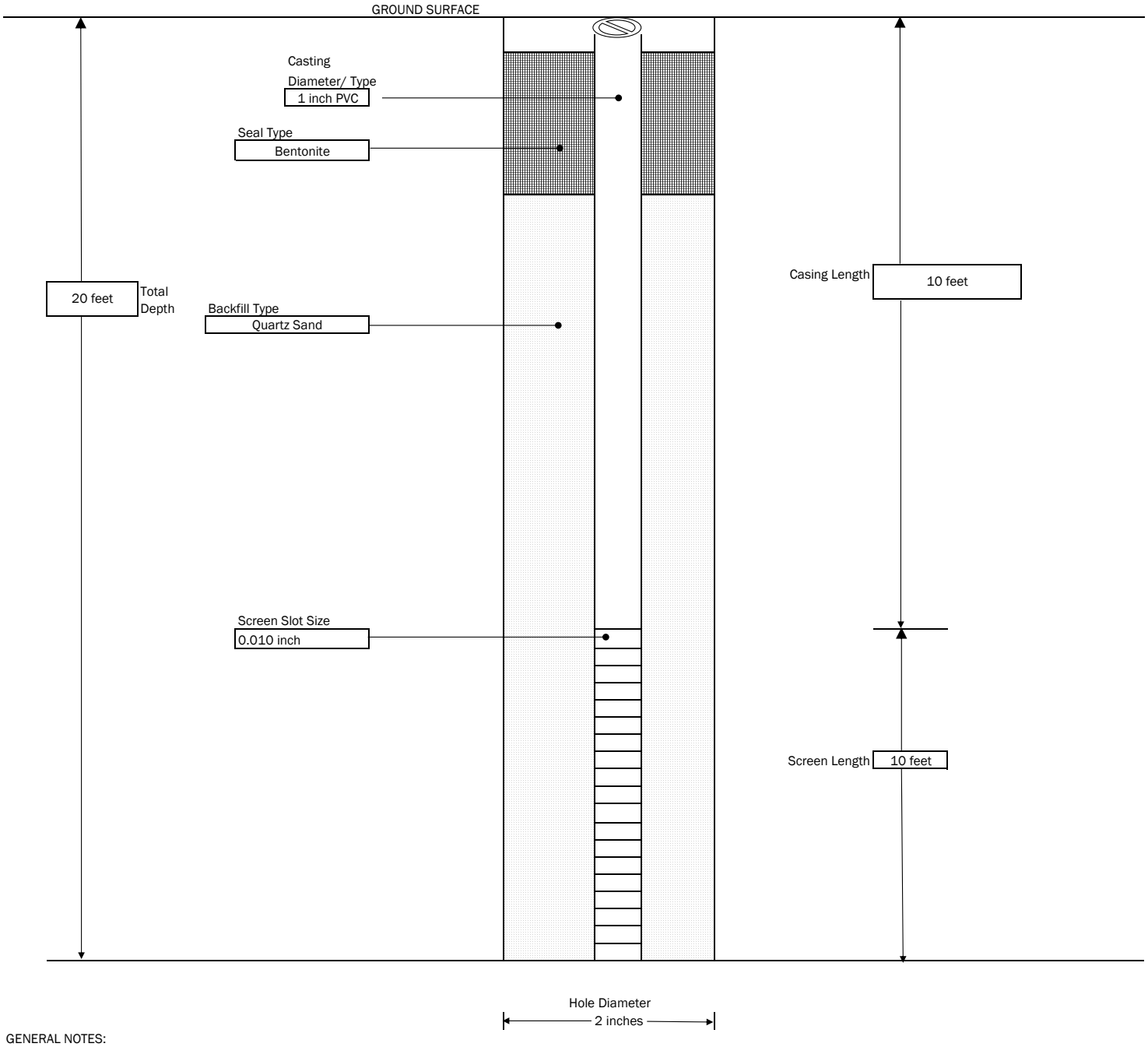


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-13** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/16/2018	END DATE:	7/16/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

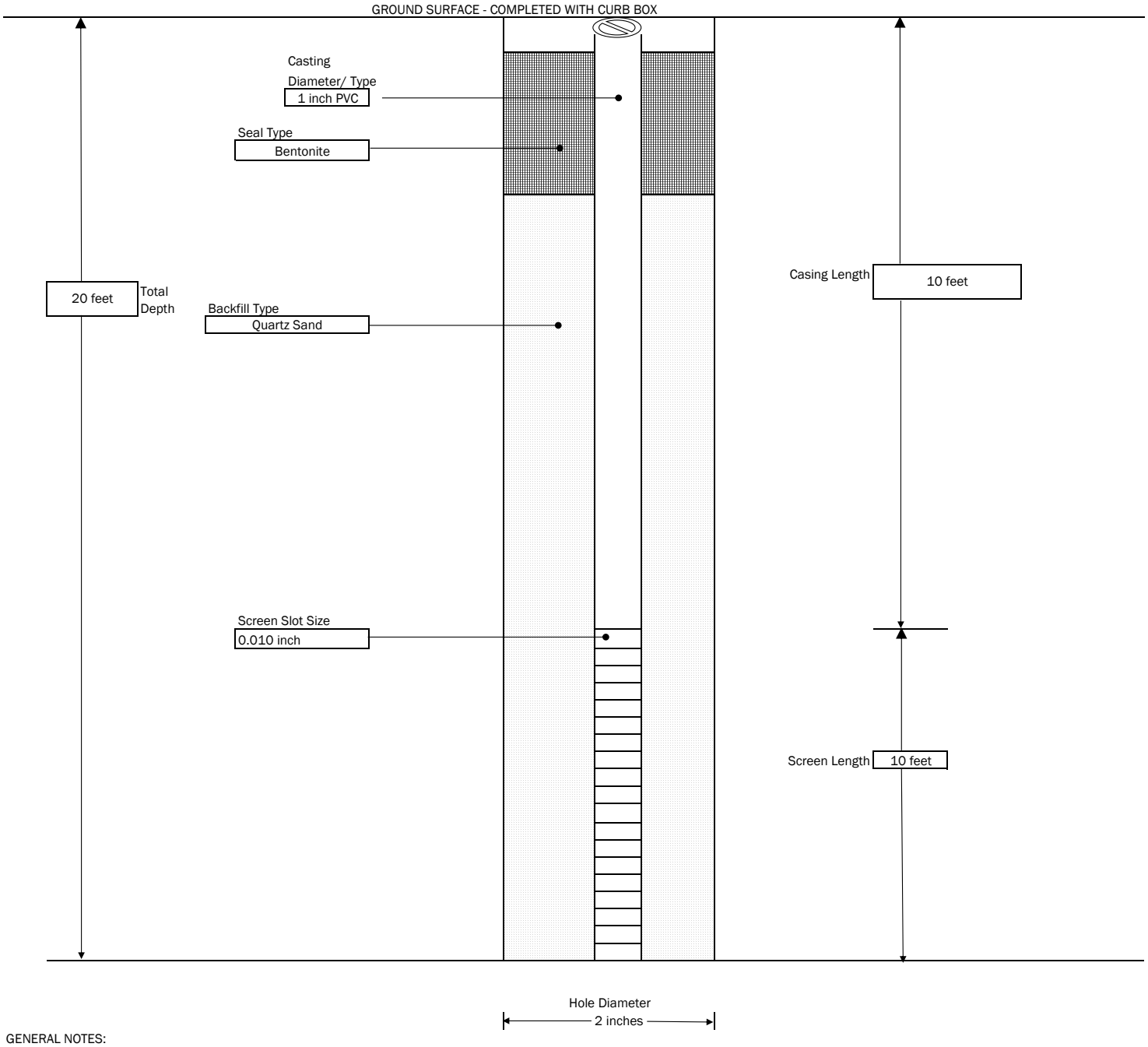


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-14** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/16/2018	END DATE:	7/16/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

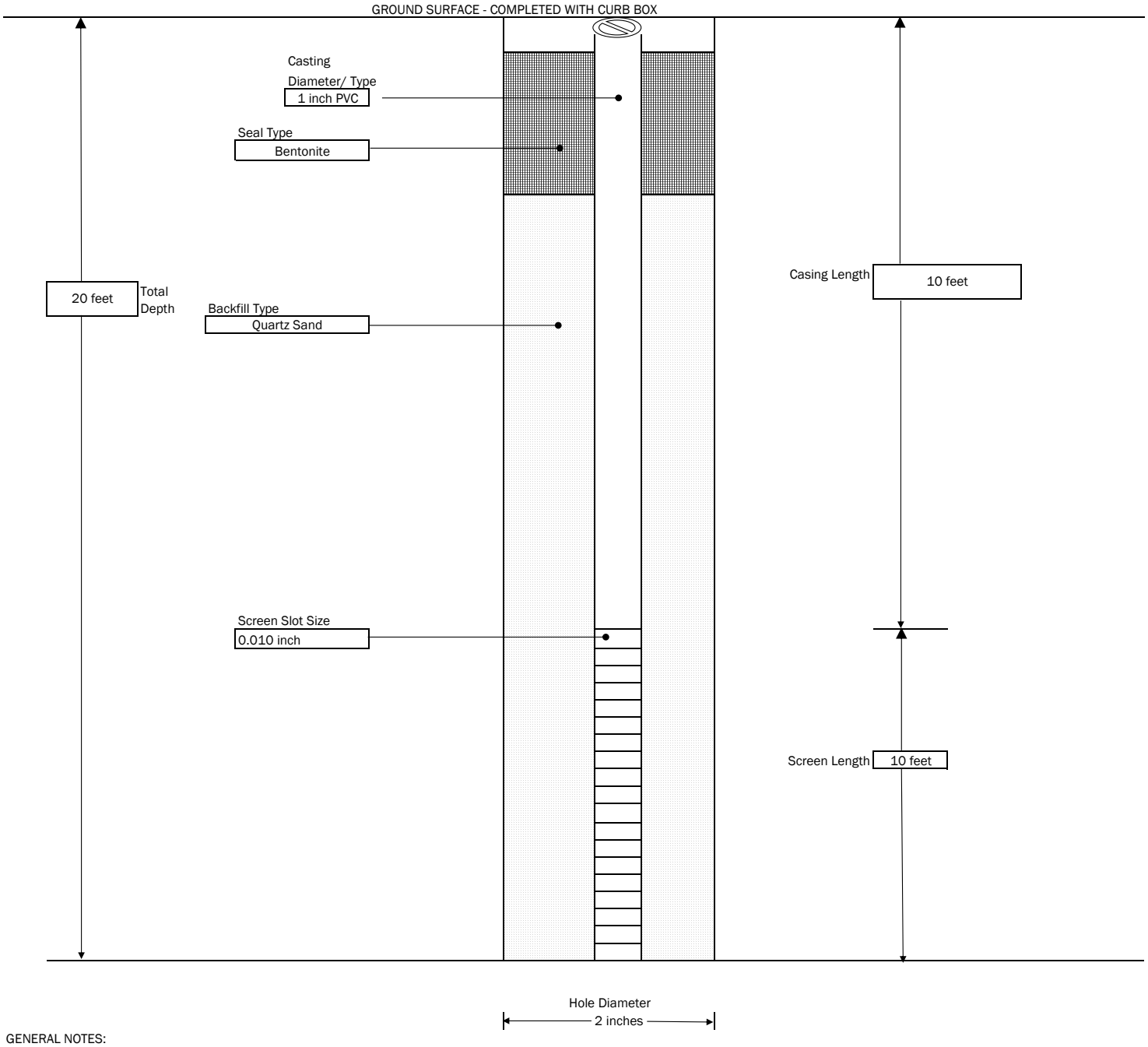


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-15** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:				TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/16/2018	END DATE:	7/16/2018	OVERBURDEN SAMPLING METHOD:	Macrocore

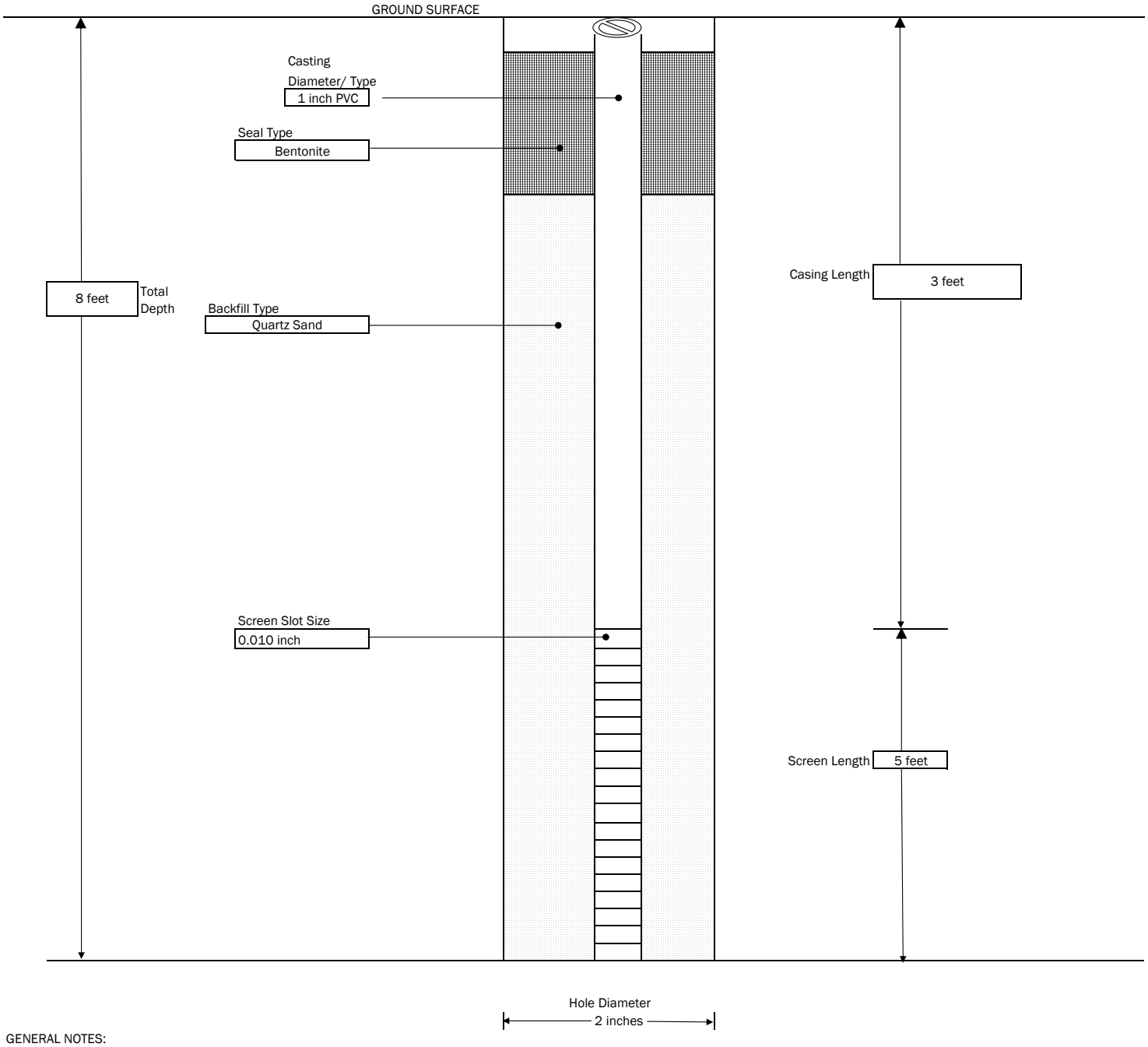


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Jefferson Wollensack LLC 872 & 886 Hudson Avenue, Rochester, NY	**MONITORING WELL :** **SBMW-16** **SHEET** 1 OF 1 **JOB #** 2181763

CONTRACTOR:	LaBella Environmental LLC	BORING LOCATION:	Interior - basement		TYPE OF DRILL RIG:	Geoprobe 6620
DRILLER:		GROUND SURFACE ELEVATION:		NA DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE:	MM	START DATE:	7/13/2018	END DATE: 7/13/2018	OVERBURDEN SAMPLING METHOD:	Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
872-886 Hudson Ave
Rochester, NY
Urban League of Rochester

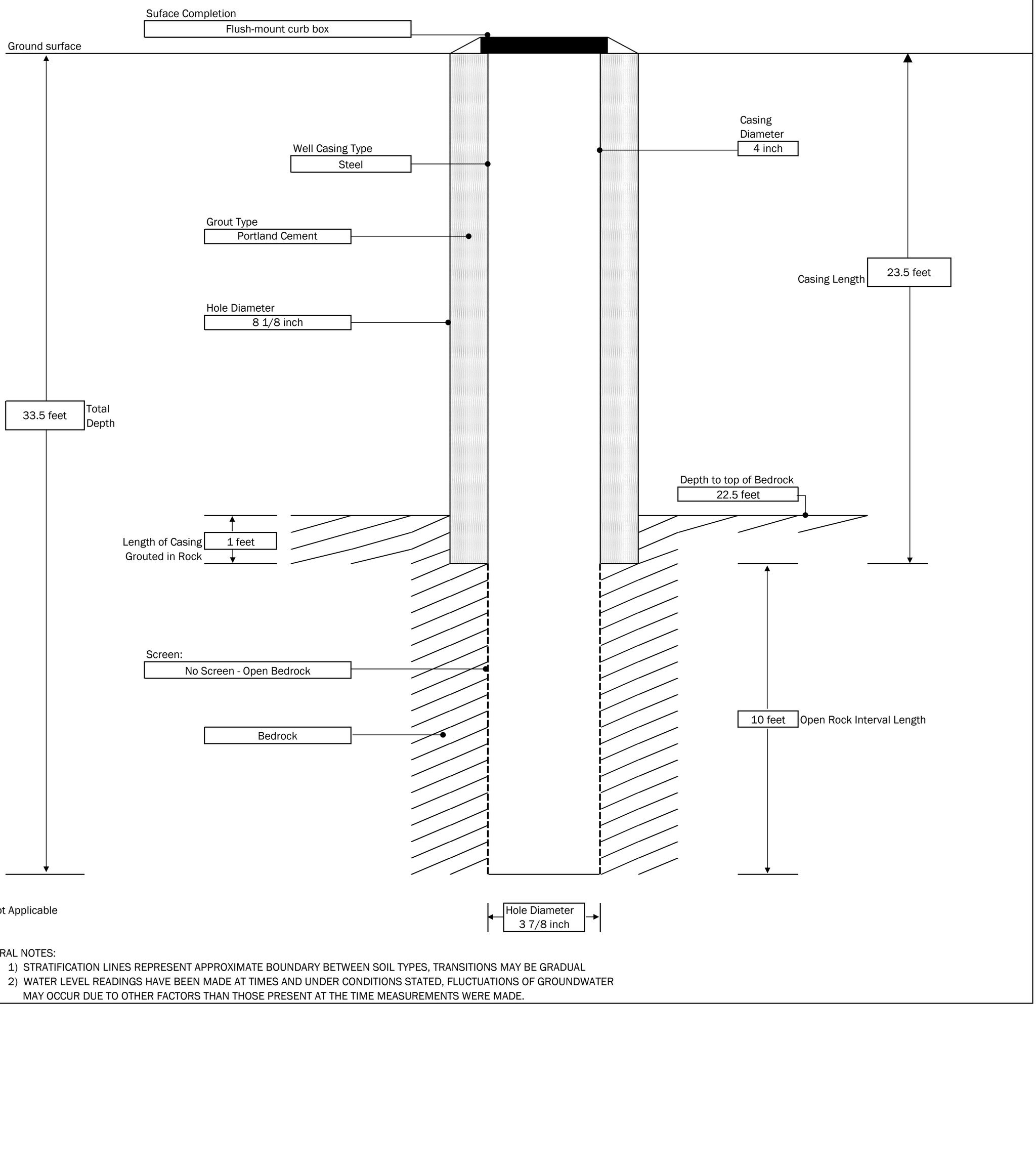
BORING: BW-01
SHEET 1 OF 1
JOB # 2181763
CHKD. BY:

CONTRACTOR: NYEG Drilling
DRILLER: Tom
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/8/18 END DATE: 8/10/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



NA-Not Applicable

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
872-886 Hudson Ave
Rochester, NY
Urban League of Rochester

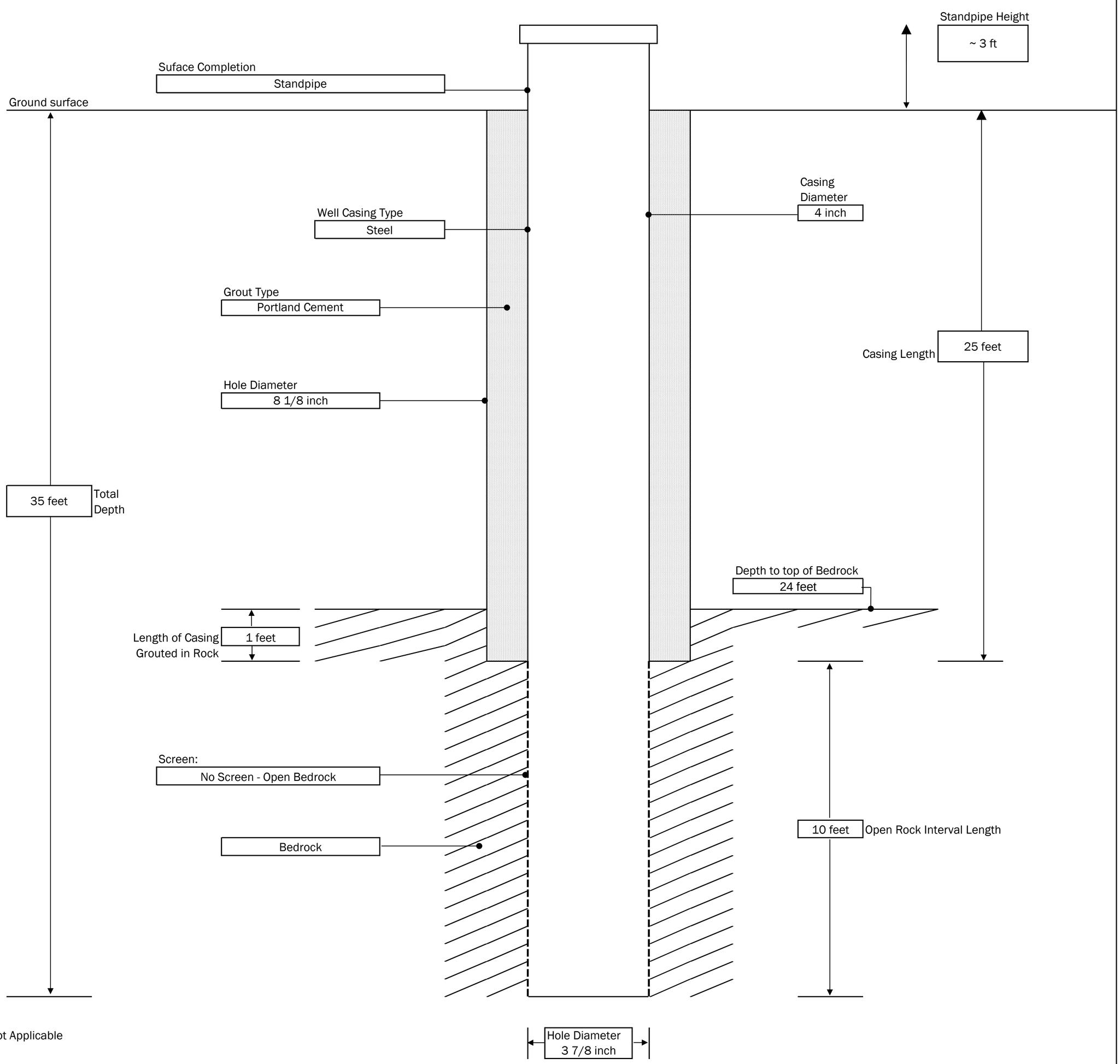
BORING: BW-02
SHEET 1 OF 1
JOB # 2181763
CHKD. BY:

CONTRACTOR: NYEG Drilling
DRILLER: Tom
LABELLA REPRESENTATIVE: A. Brett & Mike Marrash

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/8/18 END DATE: 8/13/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



NA-Not Applicable

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

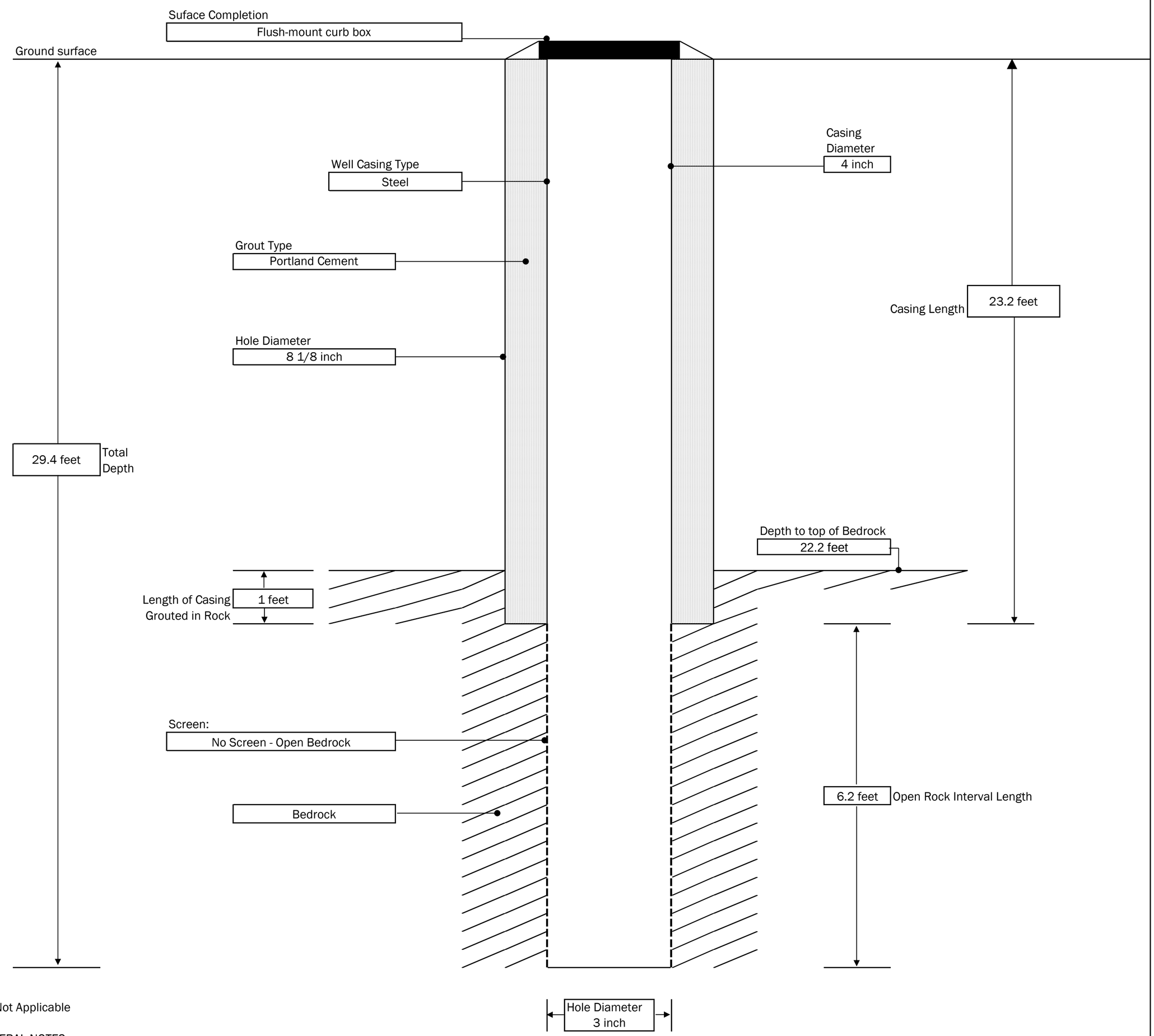
PROJECT	BORING: BW-03
872-886 Hudson Ave	SHEET 1 OF 1
Rochester, NY	JOB # 2181763
Urban League of Rochester	CHKD. BY:

CONTRACTOR: NYEG Drilling
DRILLER: Tom
LABELLA REPRESENTATIVE: A. Brett

BORING LOCATION: See Figure
GROUND SURFACE ELEVATION: NA DATUM: NA
START DATE: 8/9/18 END DATE: 8/10/18

TYPE OF DRILL RIG: CME 55
AUGER SIZE AND TYPE: Hollow-Stem Auger
OVERBURDEN SAMPLING METHOD: NA
ROCK DRILLING METHOD: NX Core Barrel

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



NA-Not Applicable

GENERAL NOTES:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
3) Rock in last 1.2 feet was not recovered during drilling do to damage to the core barrel and appear to have fallen in reducing the measured depth of the well compared to the drilled depth.

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

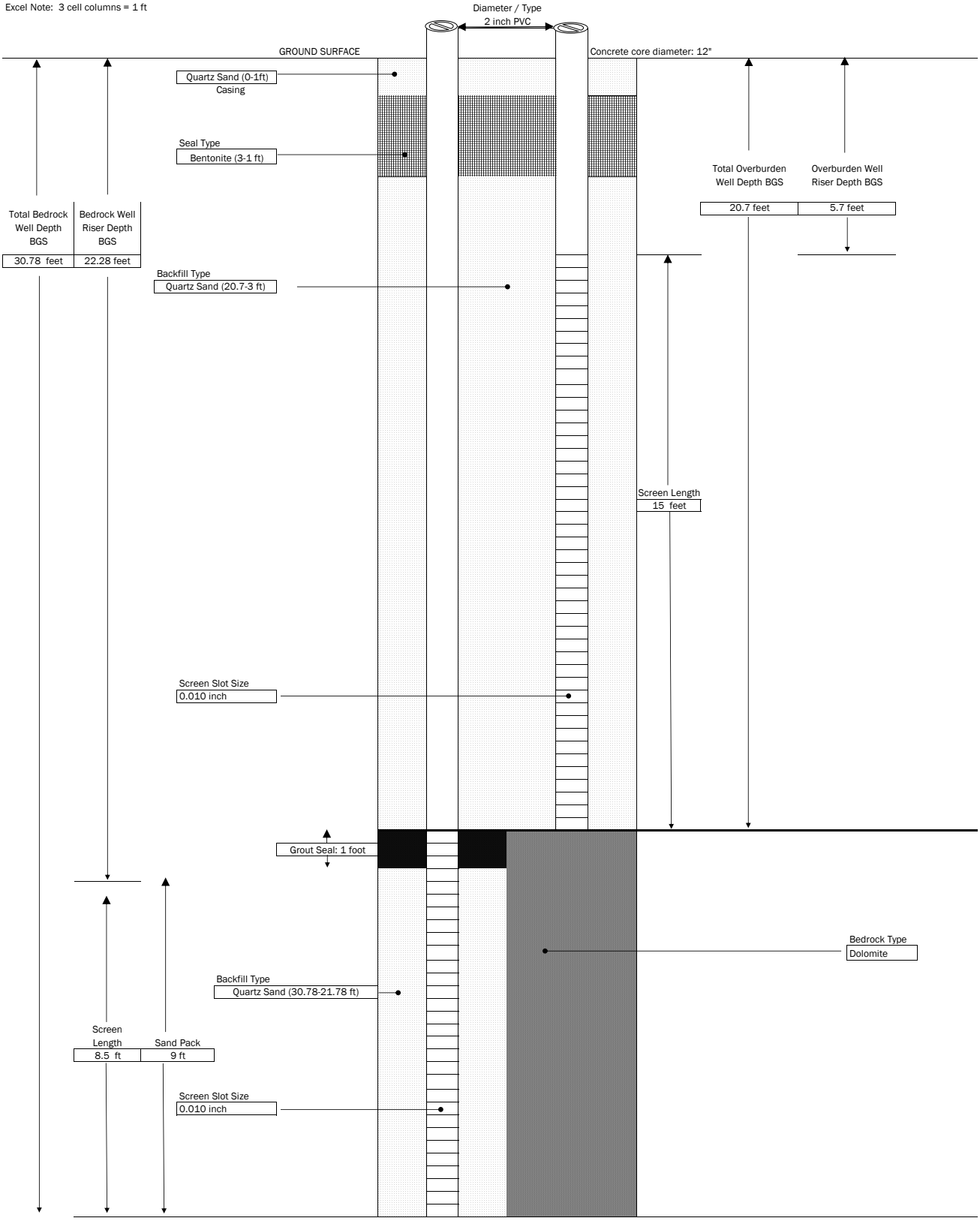
Injection Well: RIMW-19S/RIMW-19D

SHEET: 1 of 1

JOB # 2182207

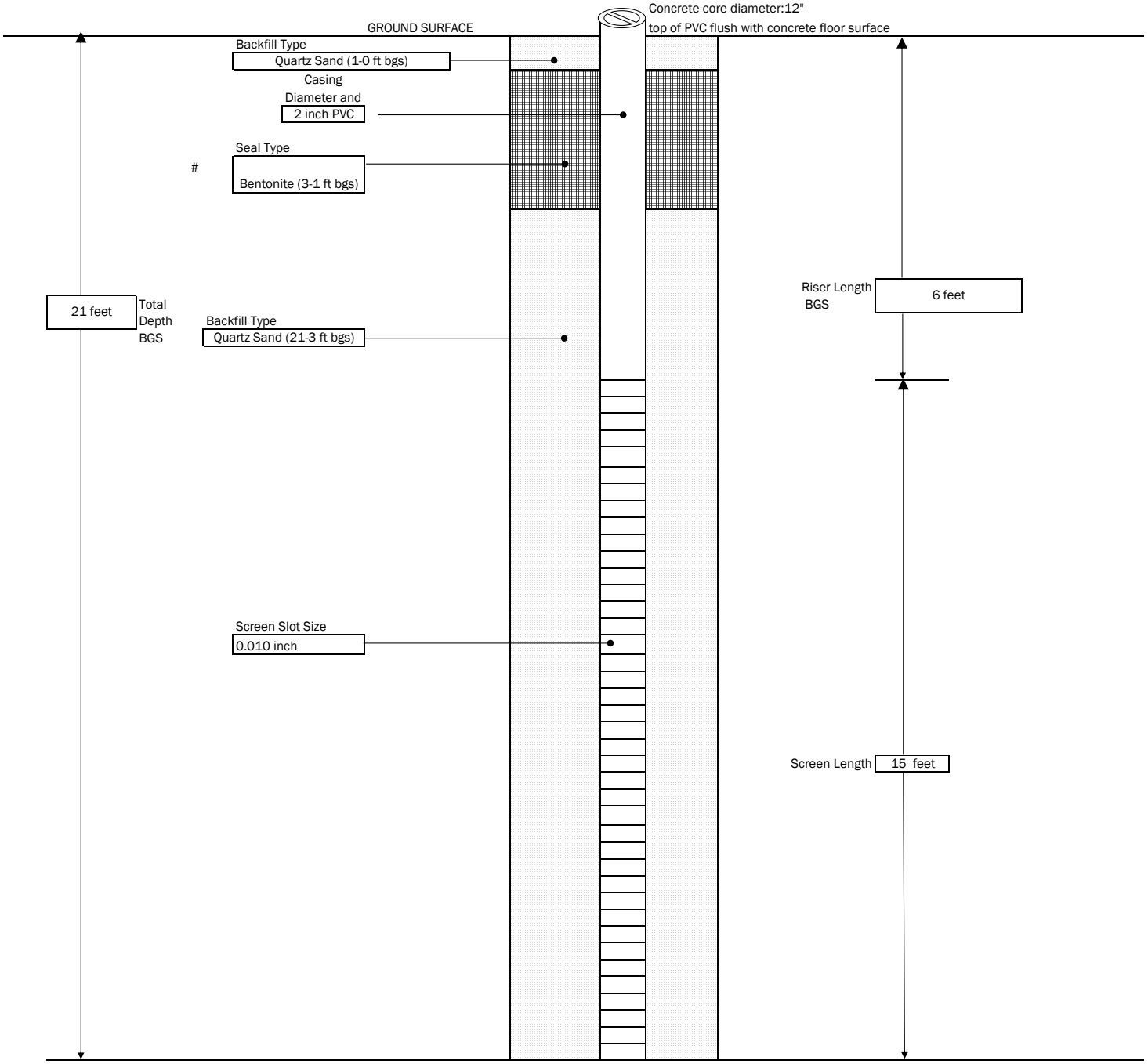
CONTRACTOR: Nothnagle Drilling	BORING LOCATION: ~ 2ft west of south western most column : This is a monitoring well.	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/26/2020 END DATE: 2/28/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** RIMW-16R **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: ~4 ft East of IW-D-03 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 3/5/2020 END DATE: 3/5/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA

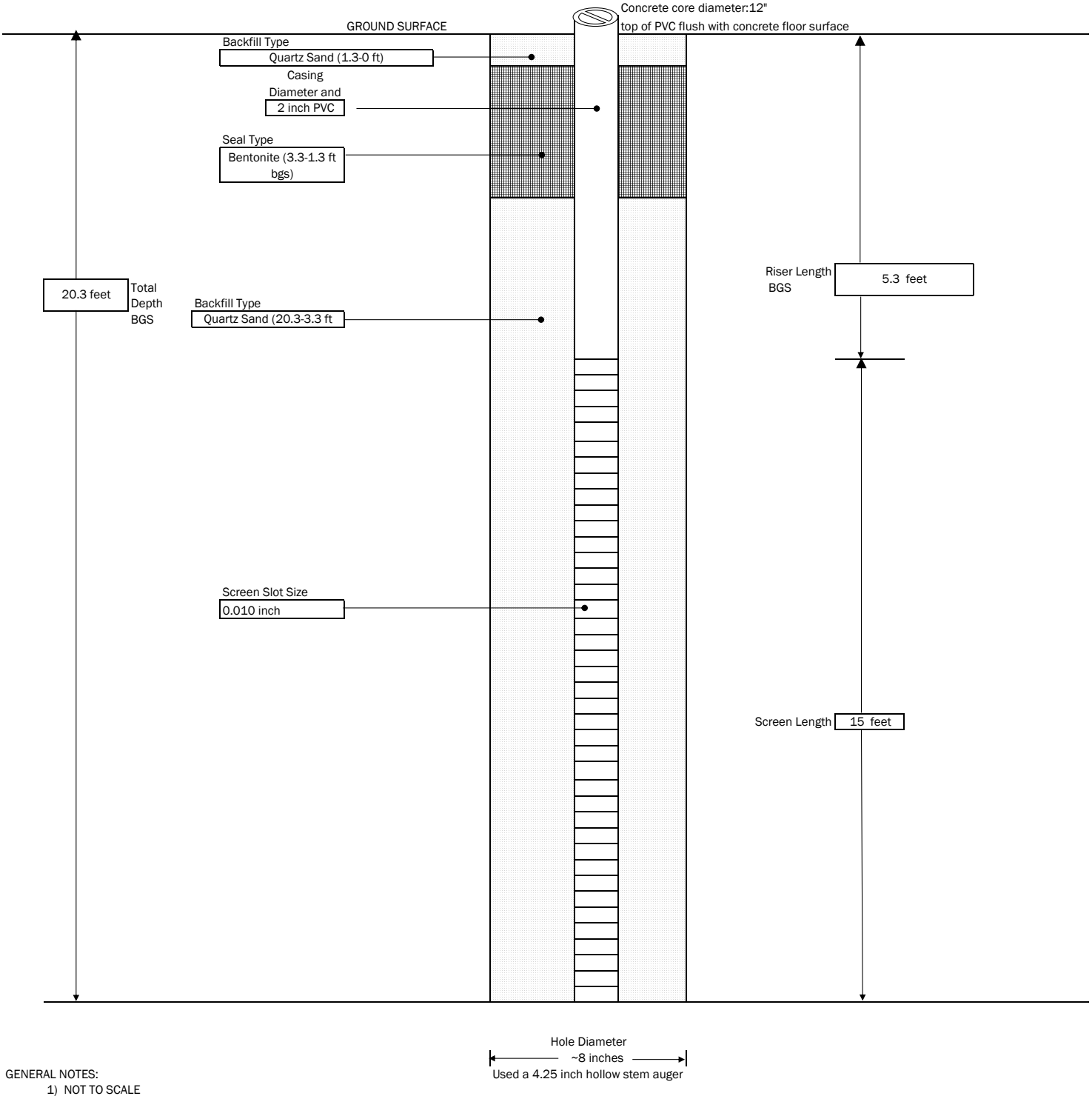


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

Treatment Well Construction Logs

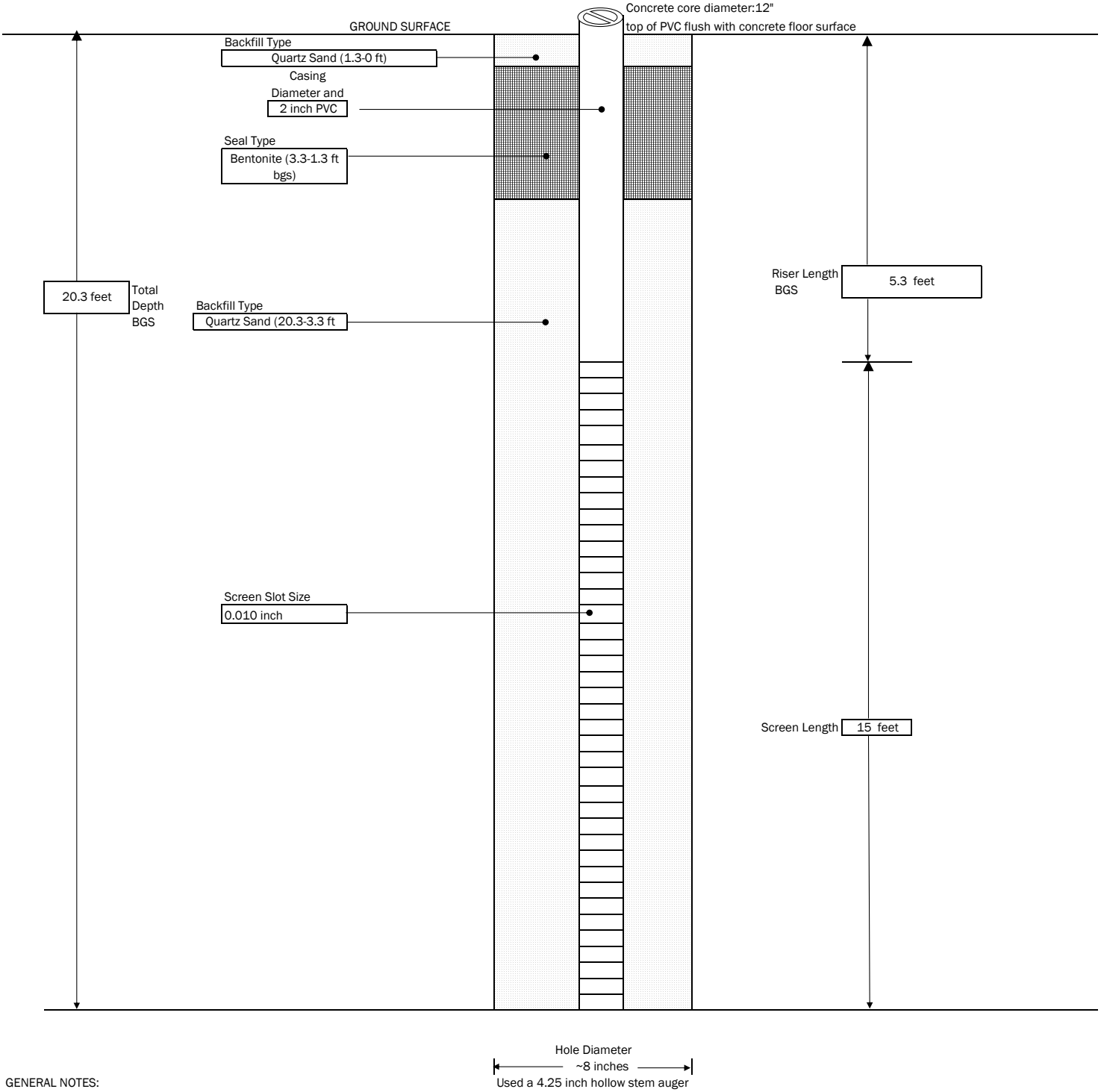
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-01 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: North Eastern most well GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/21/2020 END DATE: 1/21/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

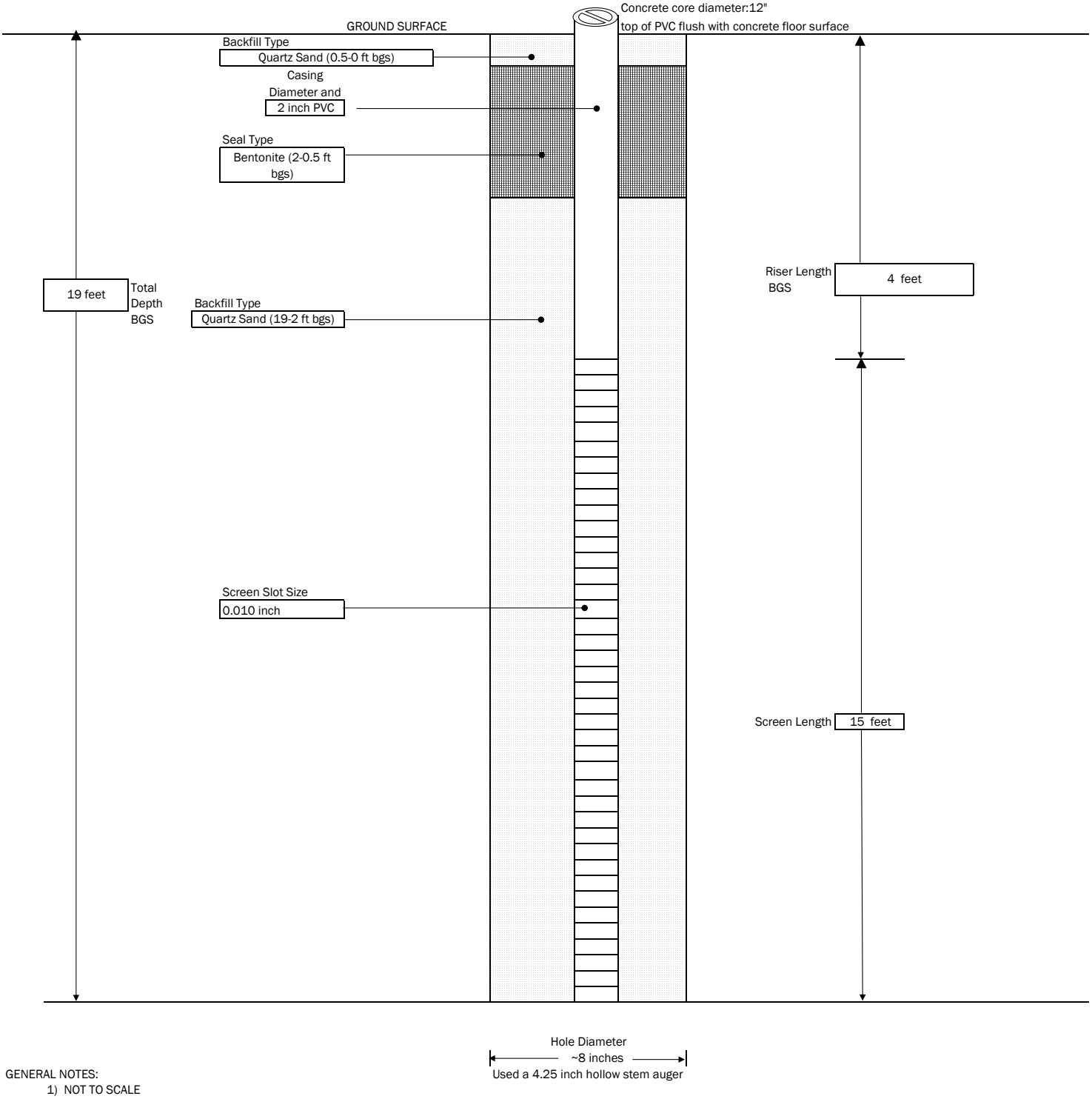
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-02 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: North Western most well GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/22/2020 END DATE: 1/22/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-03 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: about 5 ft east of staircase door. GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/23/2020 END DATE: 1/23/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

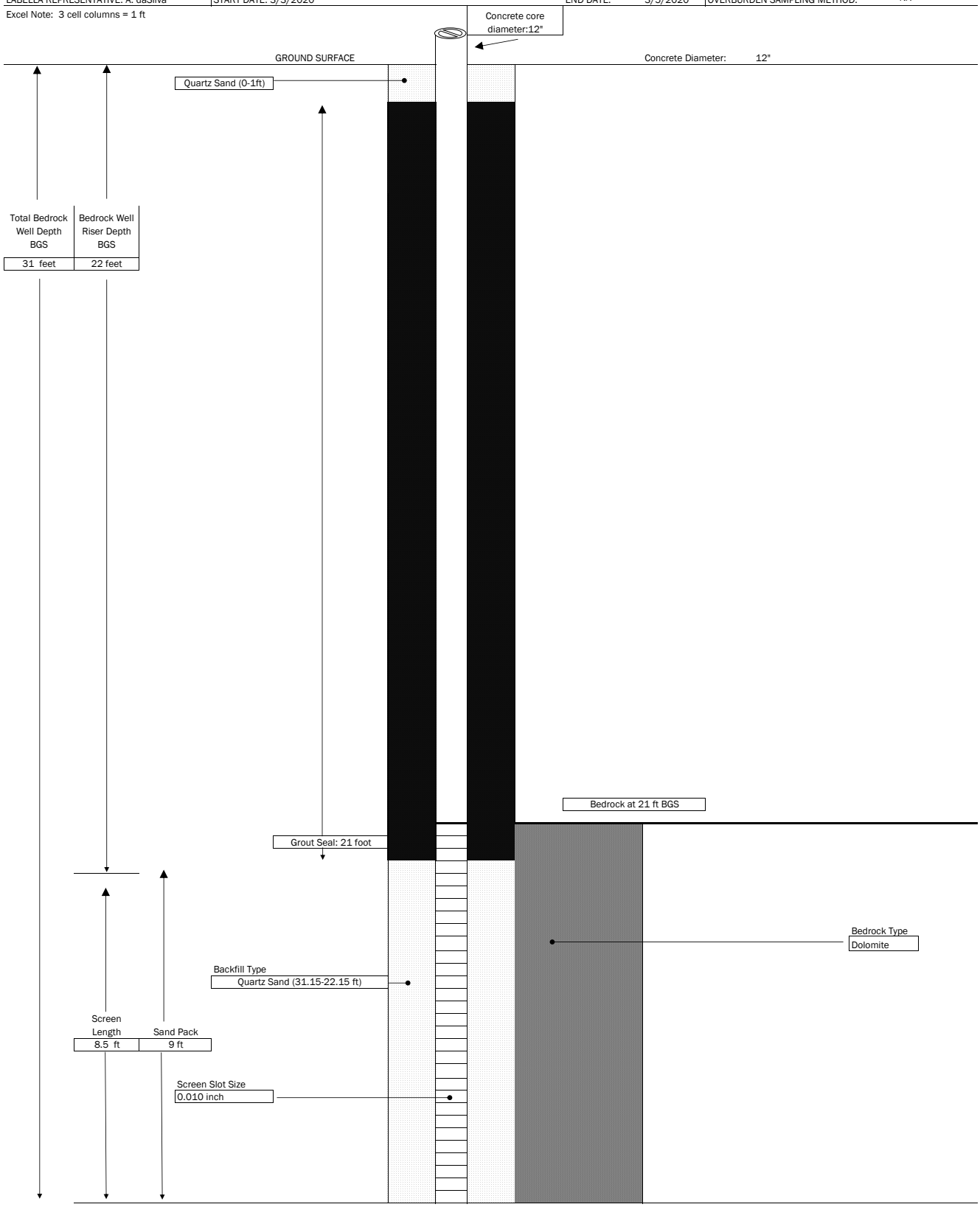
Injection Well: IW-D-03

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: 2 feet North of IW-S-03	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 3/3/2020 END DATE: 3/5/2020	OVERBURDEN SAMPLING METHOD: NA

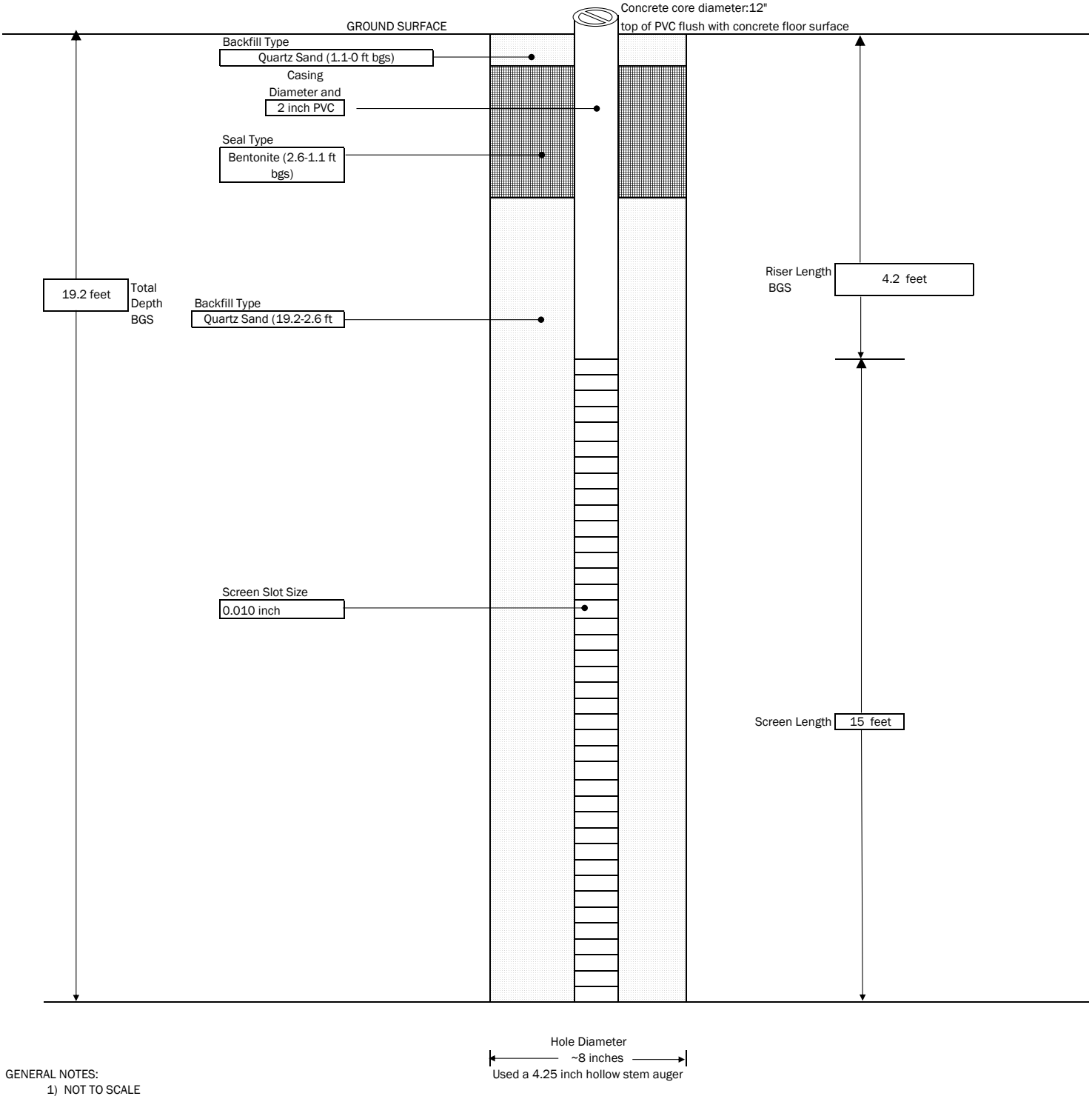
Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

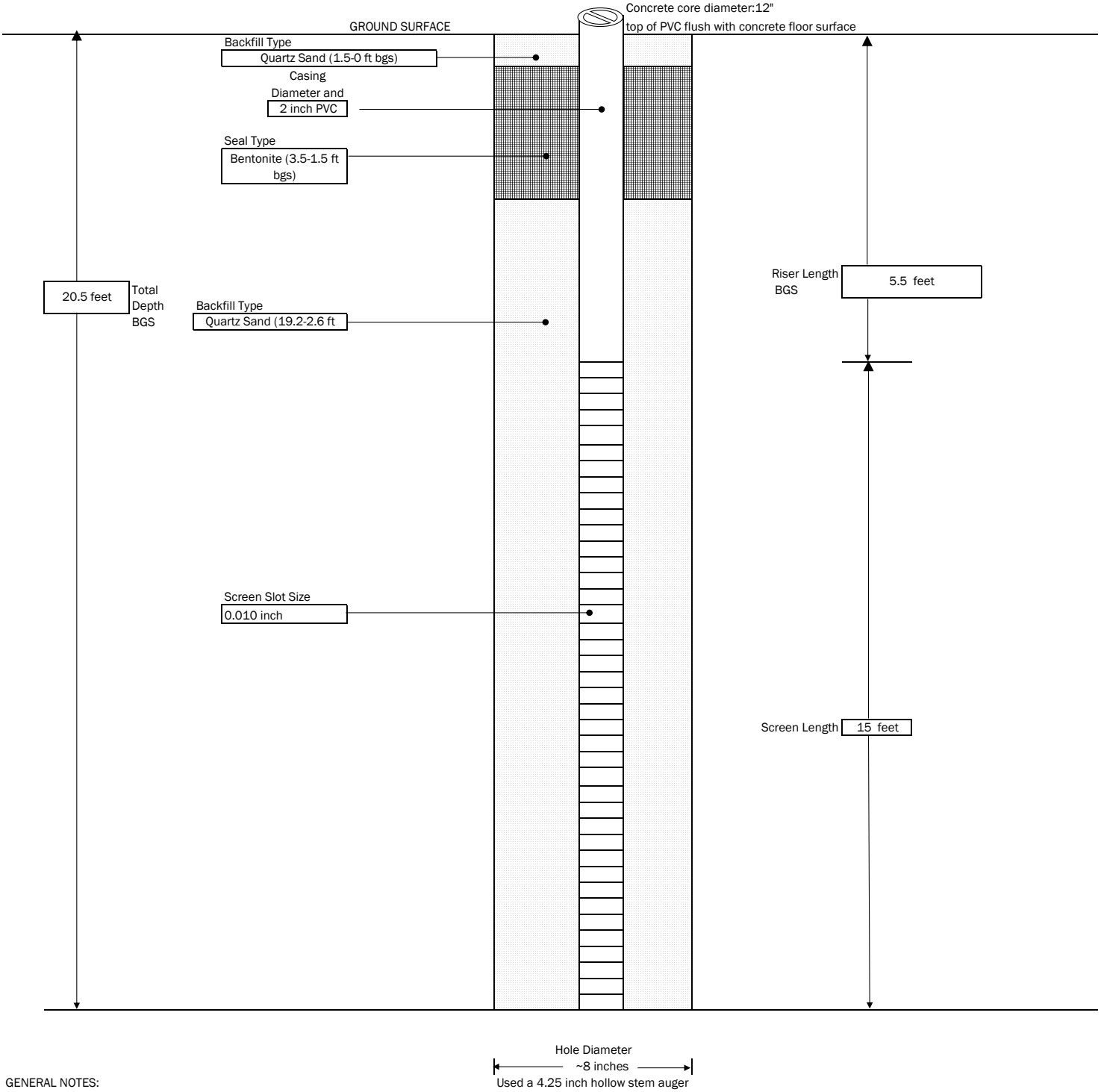
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-04 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: East of IW-S-03 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/24/2020 END DATE: 1/24/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

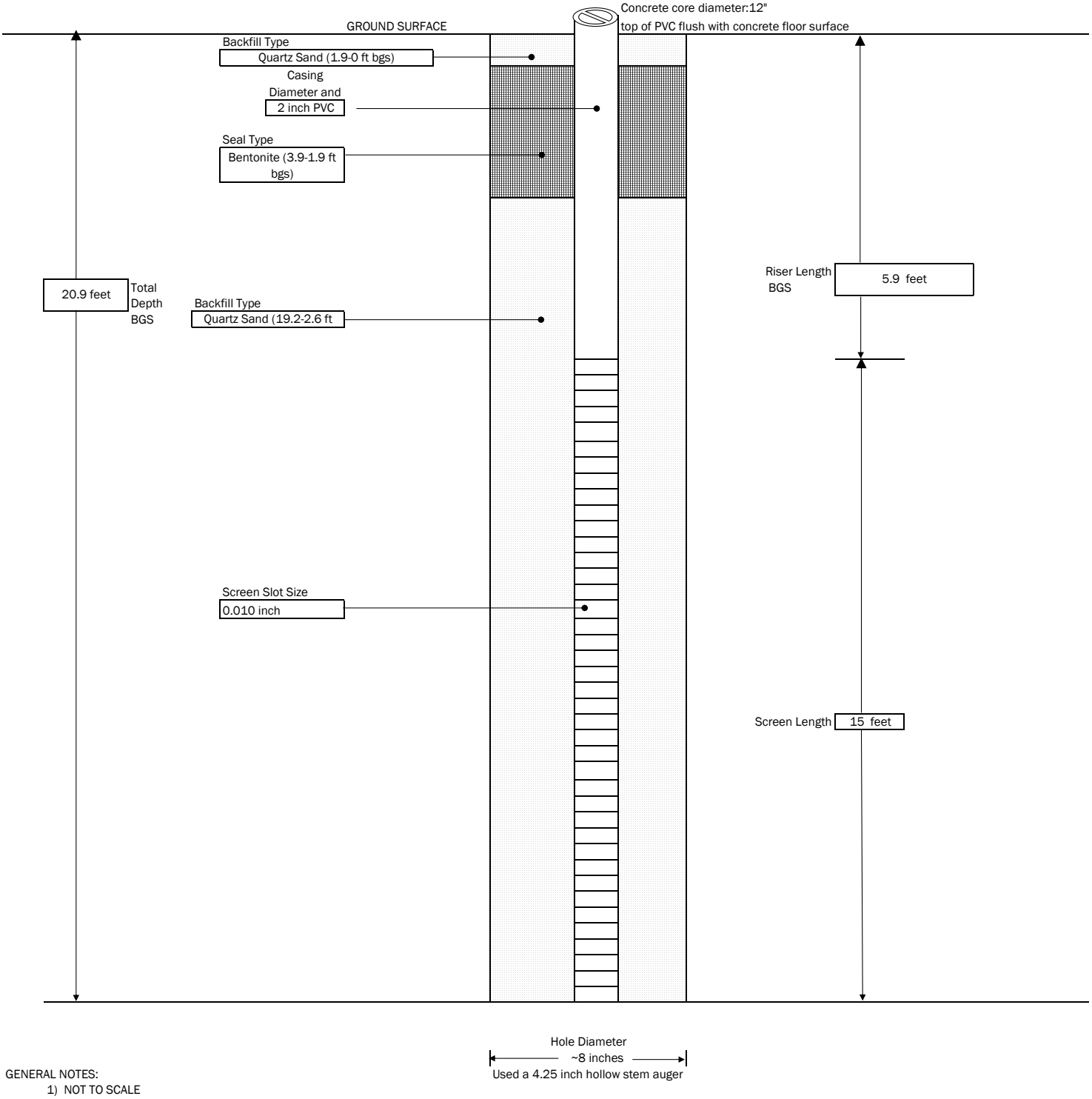
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-05 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: East of IW-S-04 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/24/2020 END DATE: 1/24/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-06 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: South of IW-S-05 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 1/27/2020 END DATE: 1/27/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

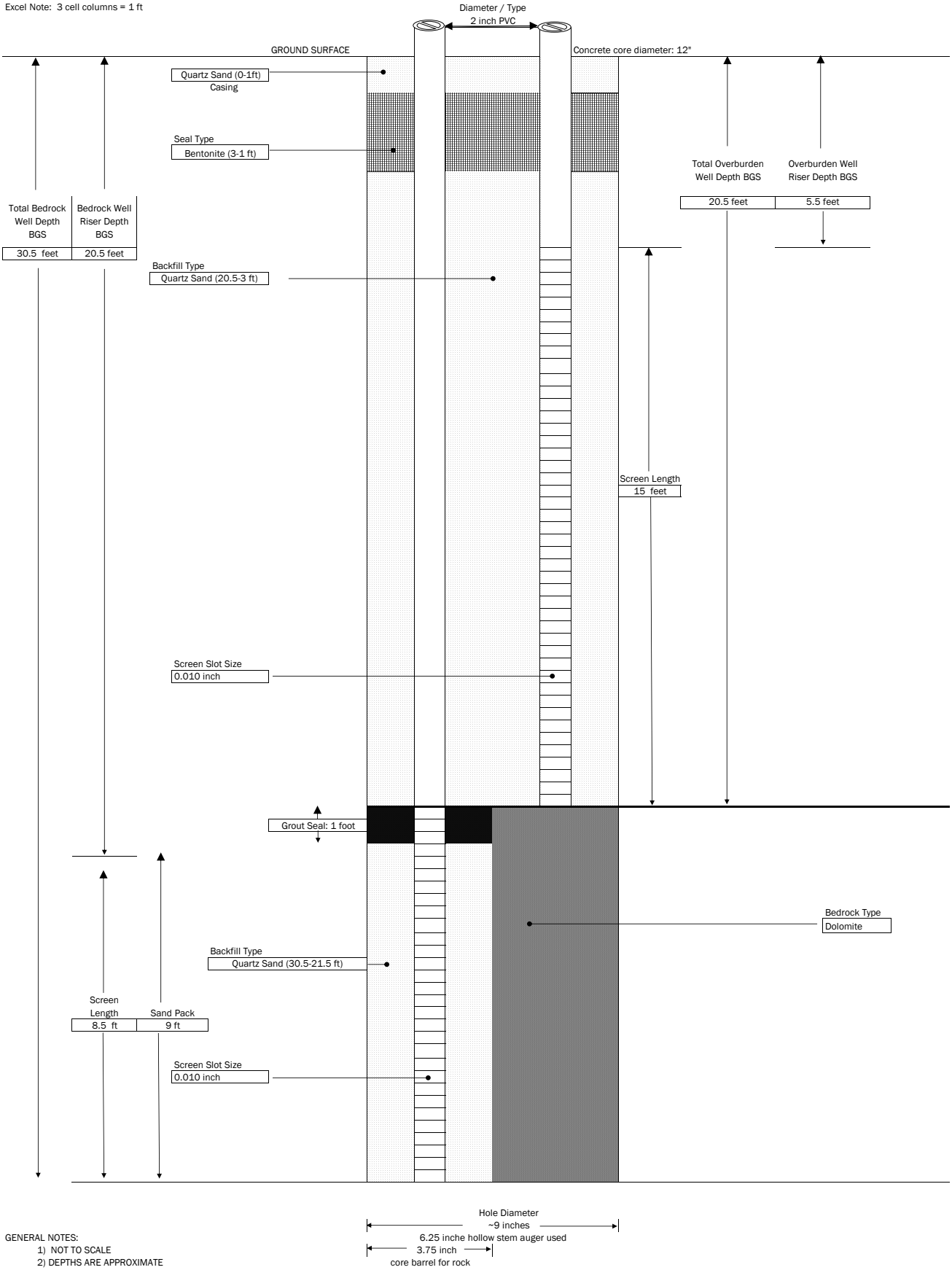
Injection Well: IW-S-07/IW-D-07

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: West of IW-S-06	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 1/29/2020 END DATE: 1/29/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

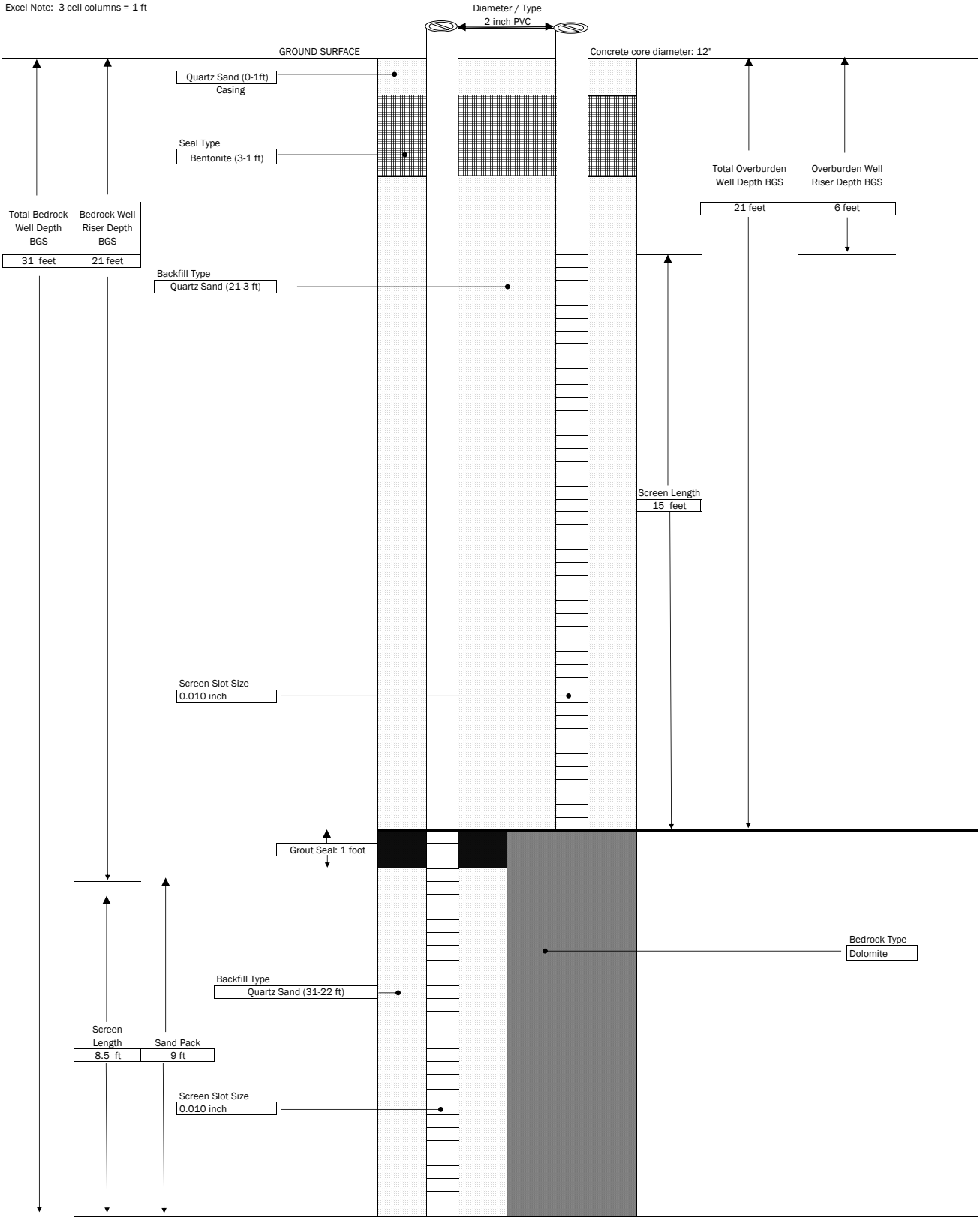
Injection Well: IW-S-08/IW-D-08

SHEET: 1 of 1

JOB # 2182207

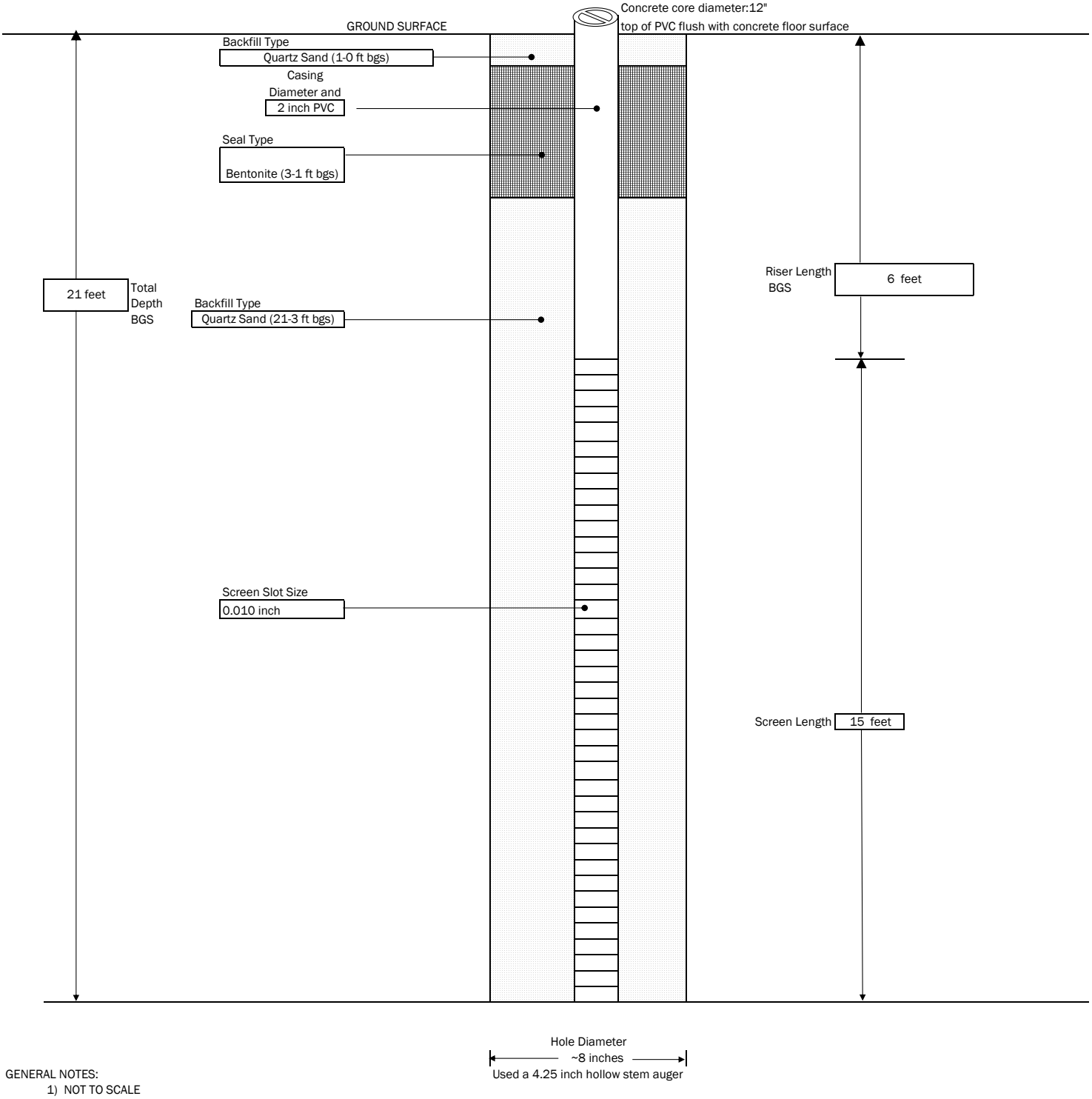
CONTRACTOR: Nothnagle Drilling	BORING LOCATION: West of IW-S-07/IW-D-07	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 1/30/2020 END DATE: 1/31/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-09 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: 2ft south of staircase room GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 2/3/2020 END DATE: 2/4/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

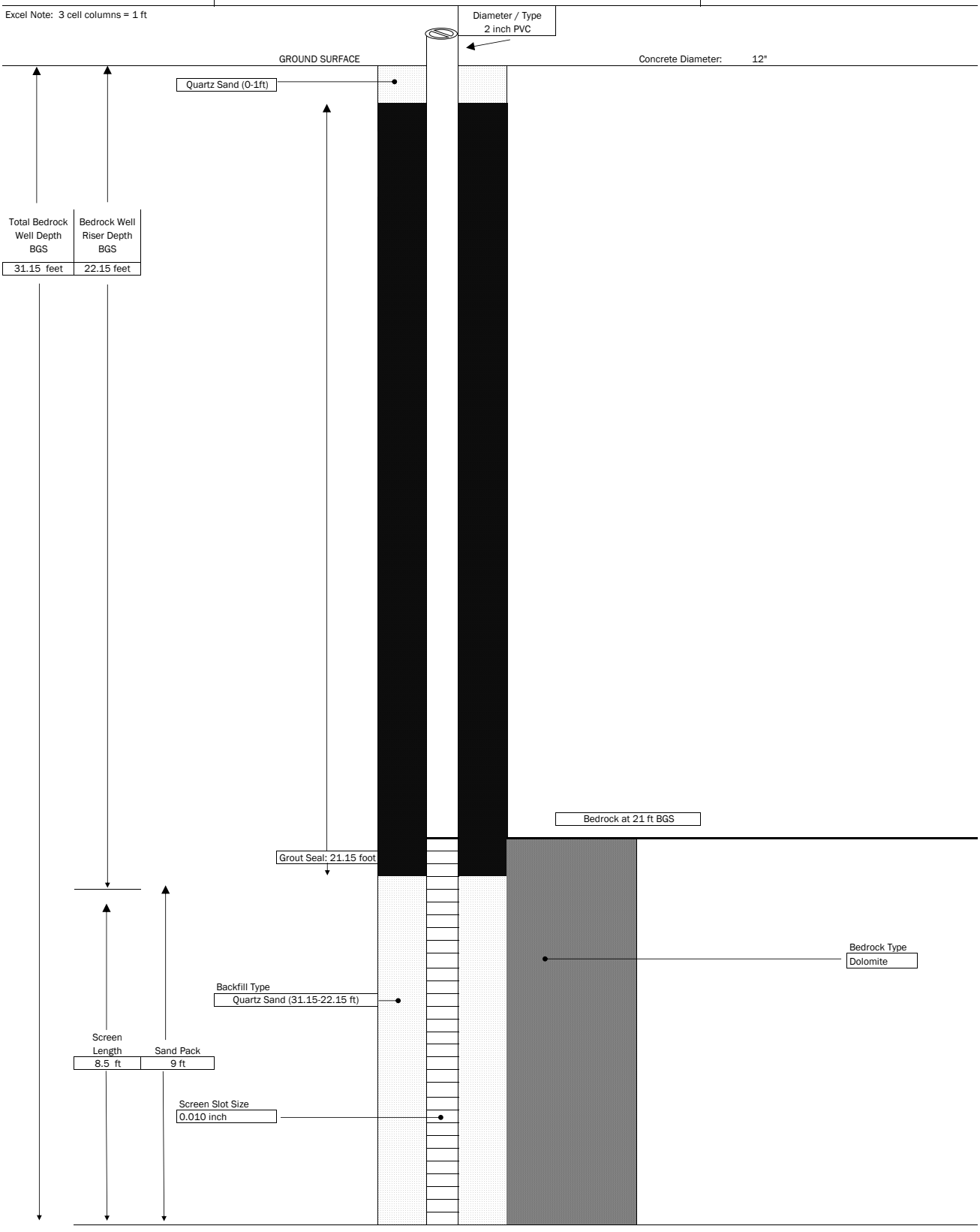
Injection Well: IW-D-09

SHEET: 1 of 1

JOB # 2182207

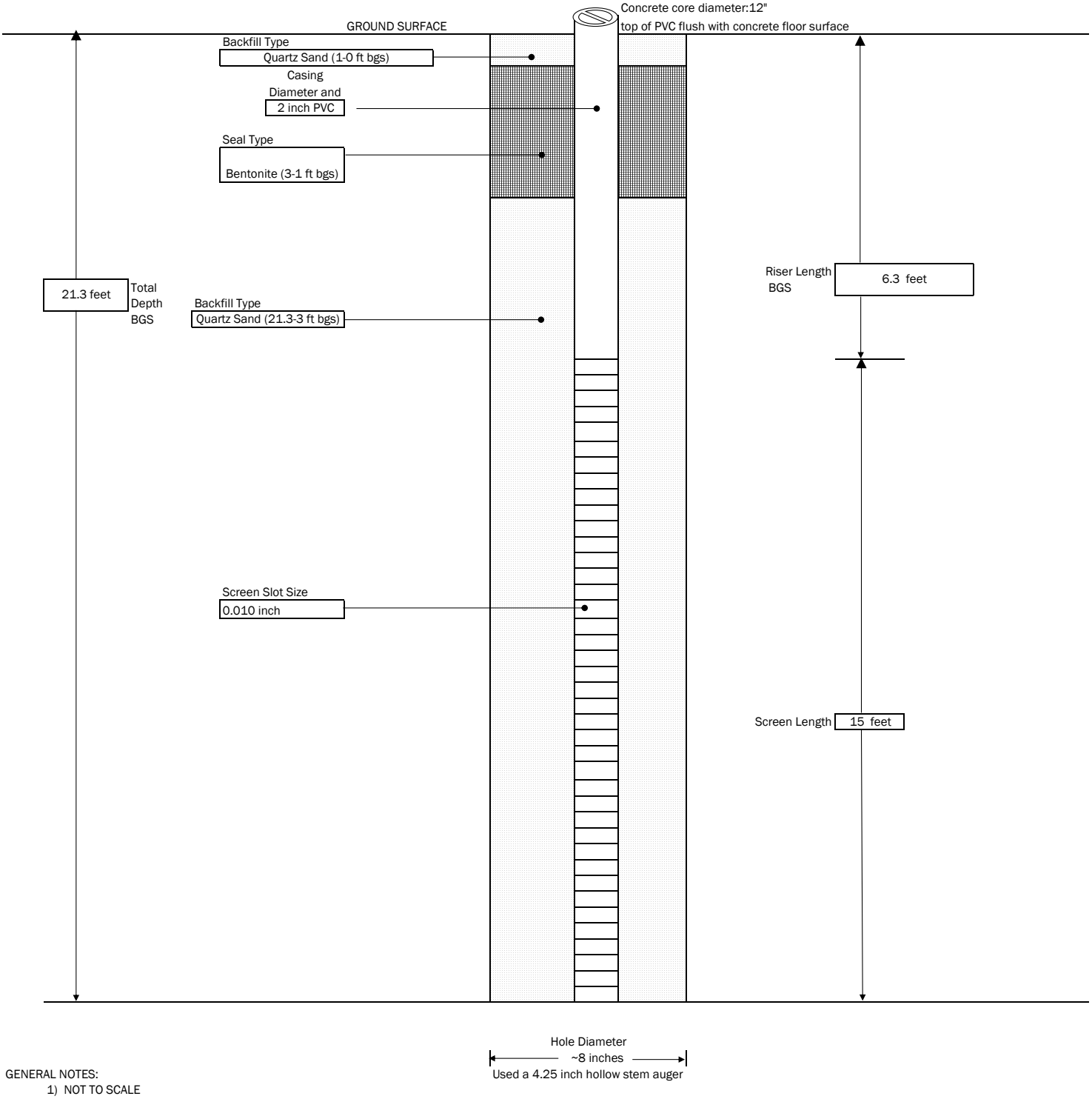
CONTRACTOR: Nothnagle Drilling	BORING LOCATION: 2 feet south of IW-S-09	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/28/2020 END DATE: 3/2/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

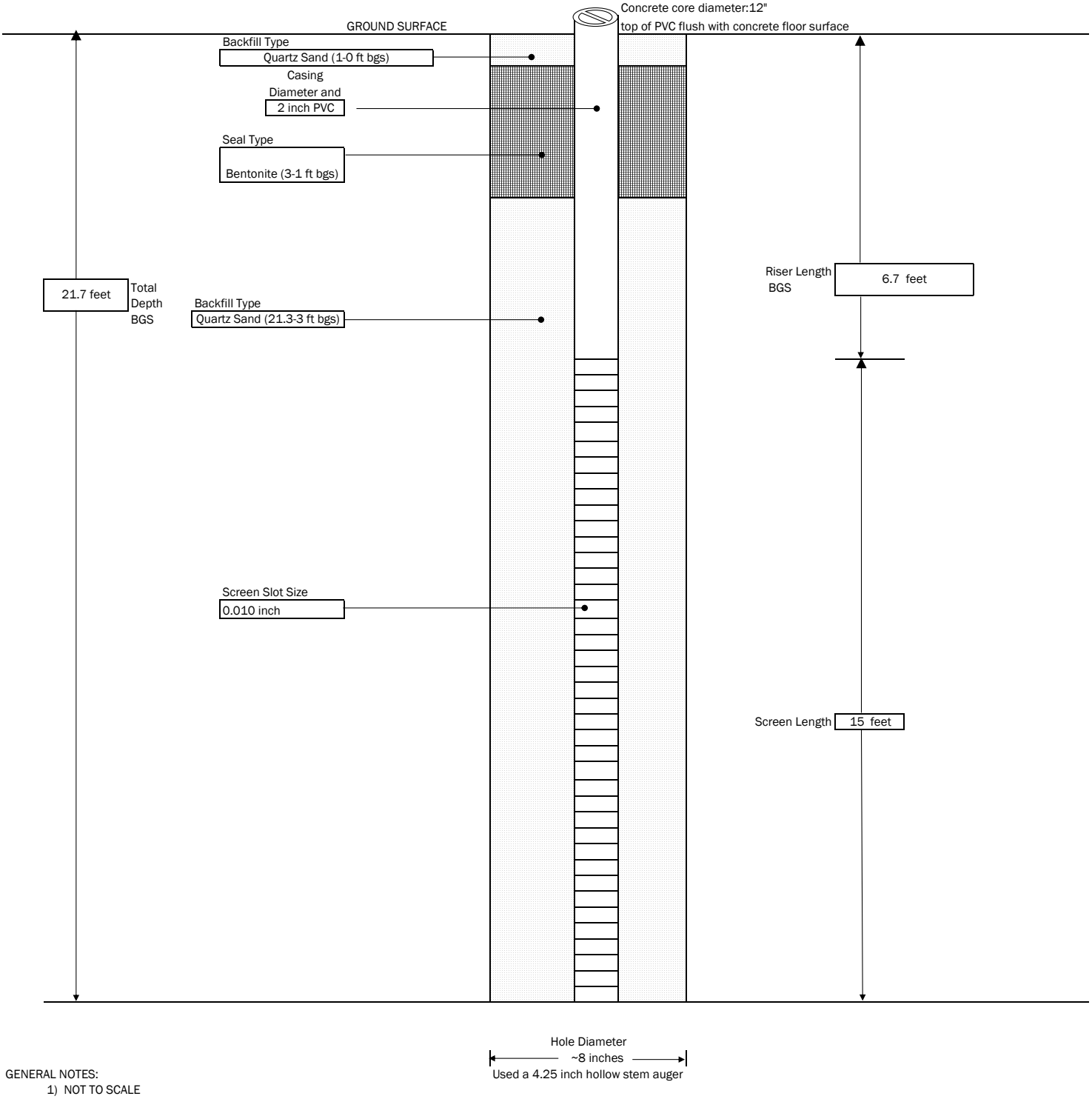
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-10 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: South of IW-S-09 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 2/4/2020 END DATE: 2/5/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-11 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: South of IW-S-10 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 2/4/2020 END DATE: 2/5/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

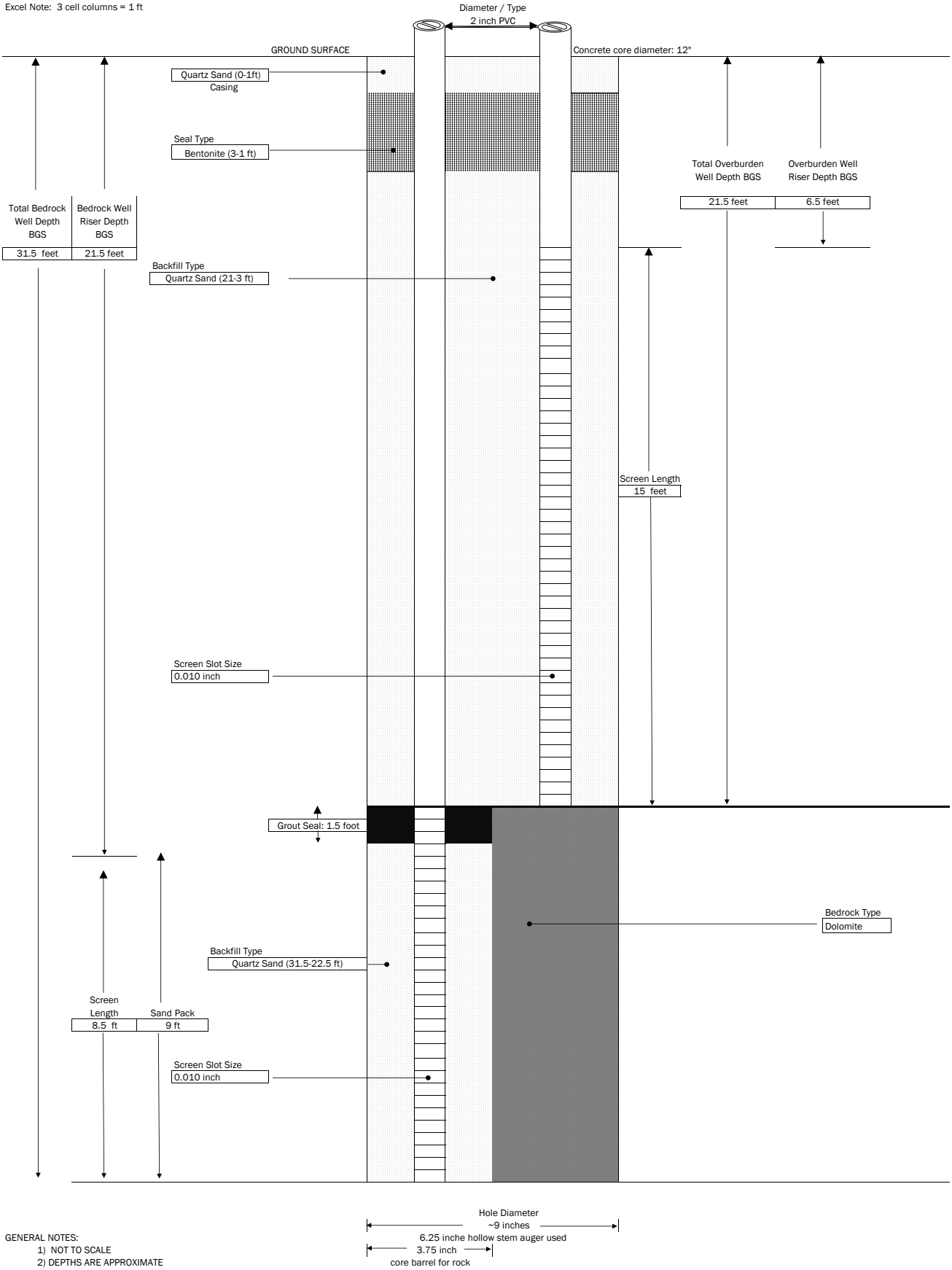
Injection Well: IW-S-12/IW-D-12

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: East of IW-S-10	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/6/2020 END DATE: 2/11/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

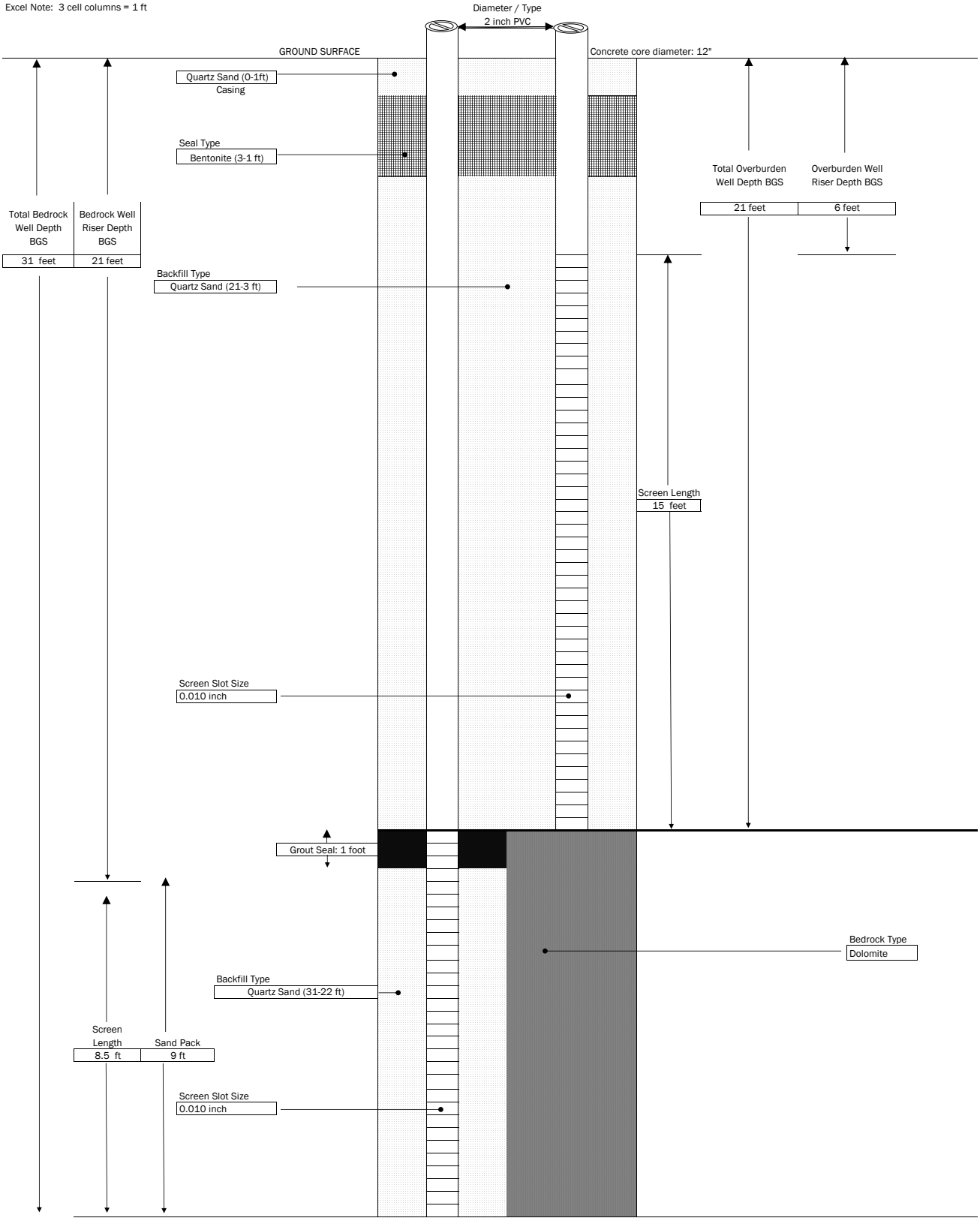
Injection Well: IW-S-13/IW-D-13

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: South of IW-S-12/IW-D-12	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/11/2020 END DATE: 2/13/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

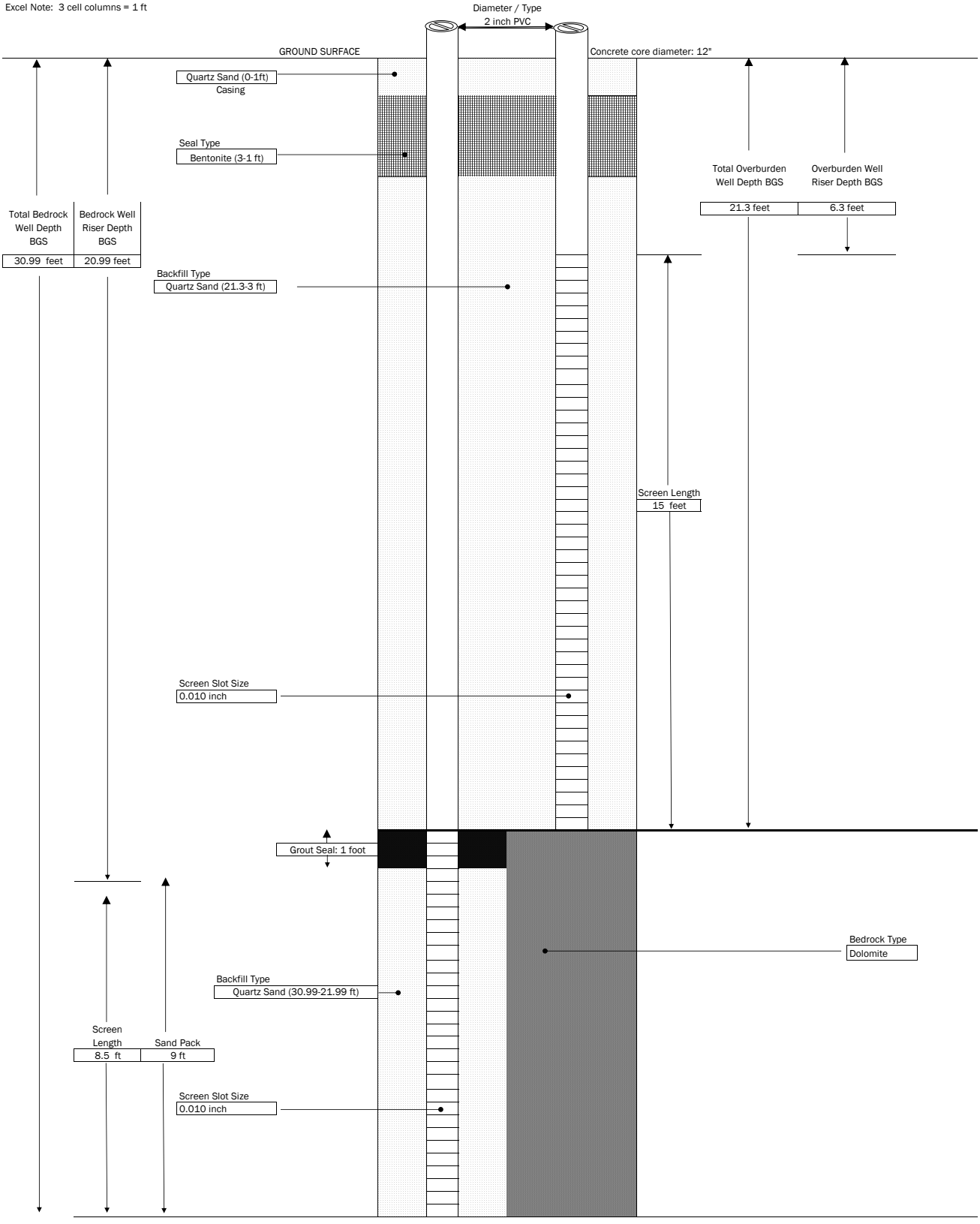
Injection Well: IW-S-14/IW-D-14

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: North East of IW-S-13/IW-D-13	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/17/2020 END DATE: 2/18/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

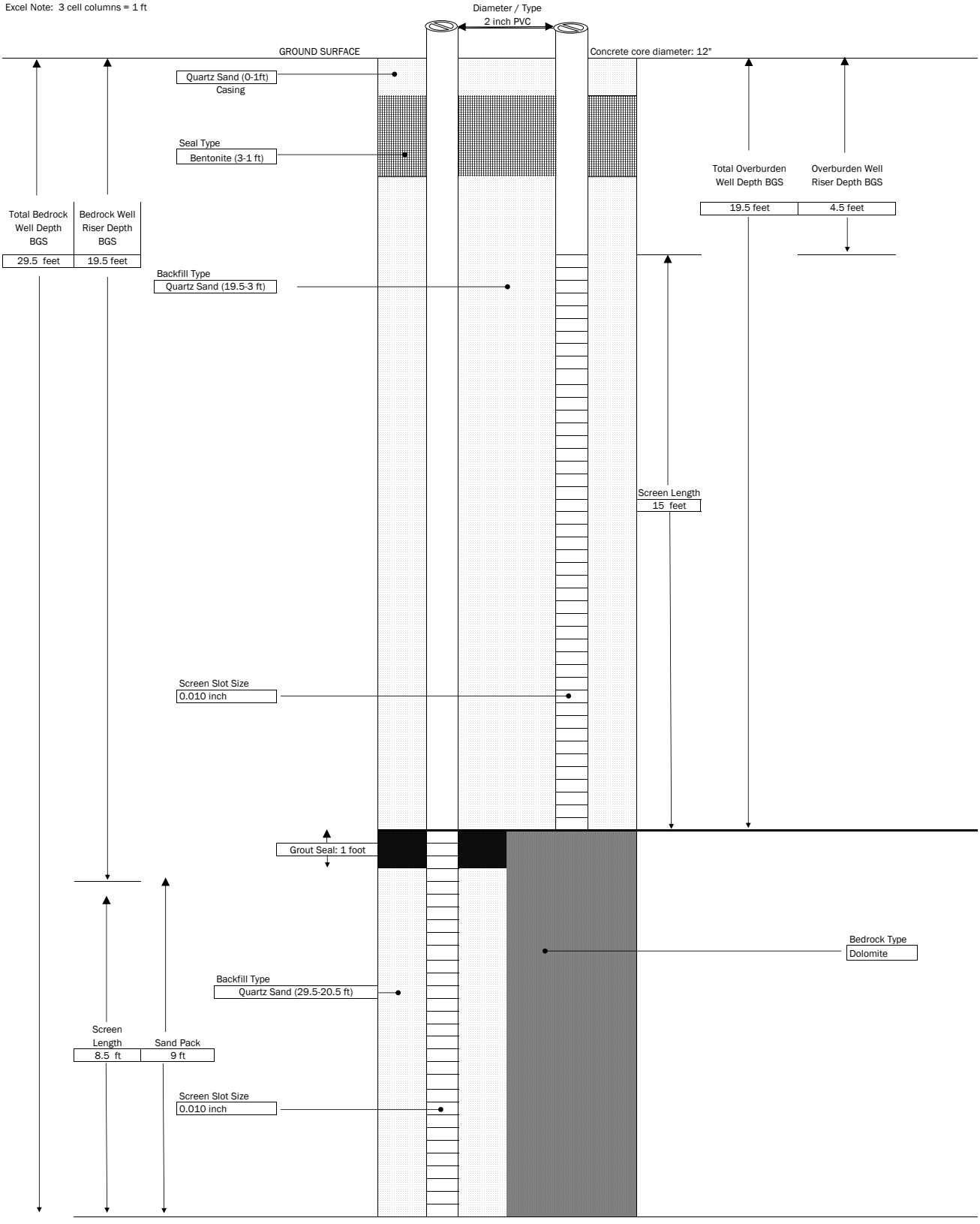
Injection Well: IW-S-15/IW-D-15

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: South central wall	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/18/2020 END DATE: 2/19/2020	OVERBURDEN SAMPLING METHOD: NA

Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

PROJECT NAME: Former Jefferson Wollensack Optical
LOCATION: 872 and 886 Hudson Avenue, Rochester NY

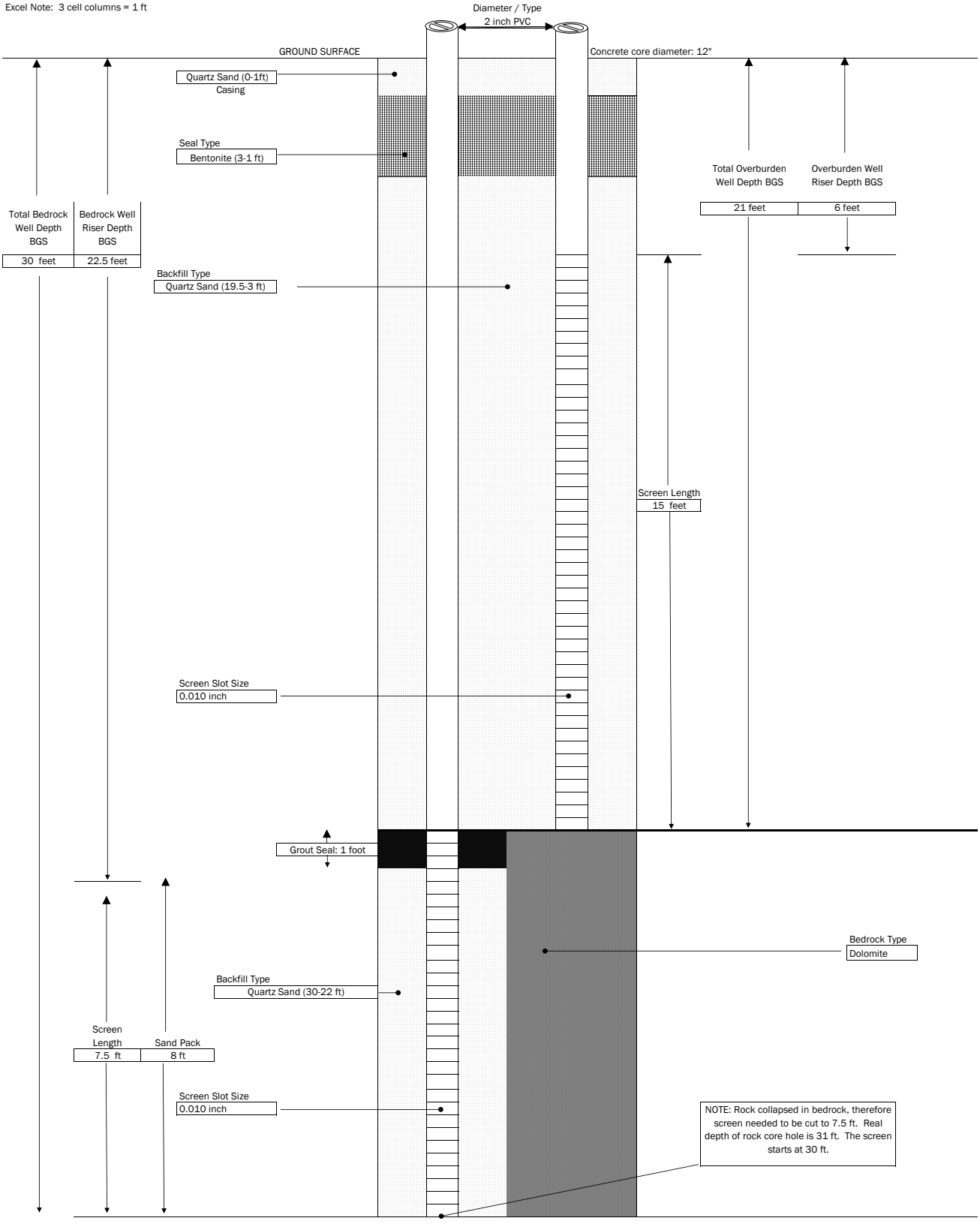
Injection Well: IW-S-16/IW-D-16

SHEET: 1 of 1

JOB # 2182207

CONTRACTOR: Nothnagle Drilling	BORING LOCATION: North East of IW-S-15/IW-D-15	TYPE OF DRILL RIG: Diedrich D25
DRILLER: Kevin	GROUND SURFACE ELEVATION: NA DATUM: NA	AUGER SIZE AND TYPE: 6.25 " Hollow Stem Auger
LABELLA REPRESENTATIVE: A. daSilva	START DATE: 2/20/2020 END DATE: 2/24/2020	OVERBURDEN SAMPLING METHOD: NA

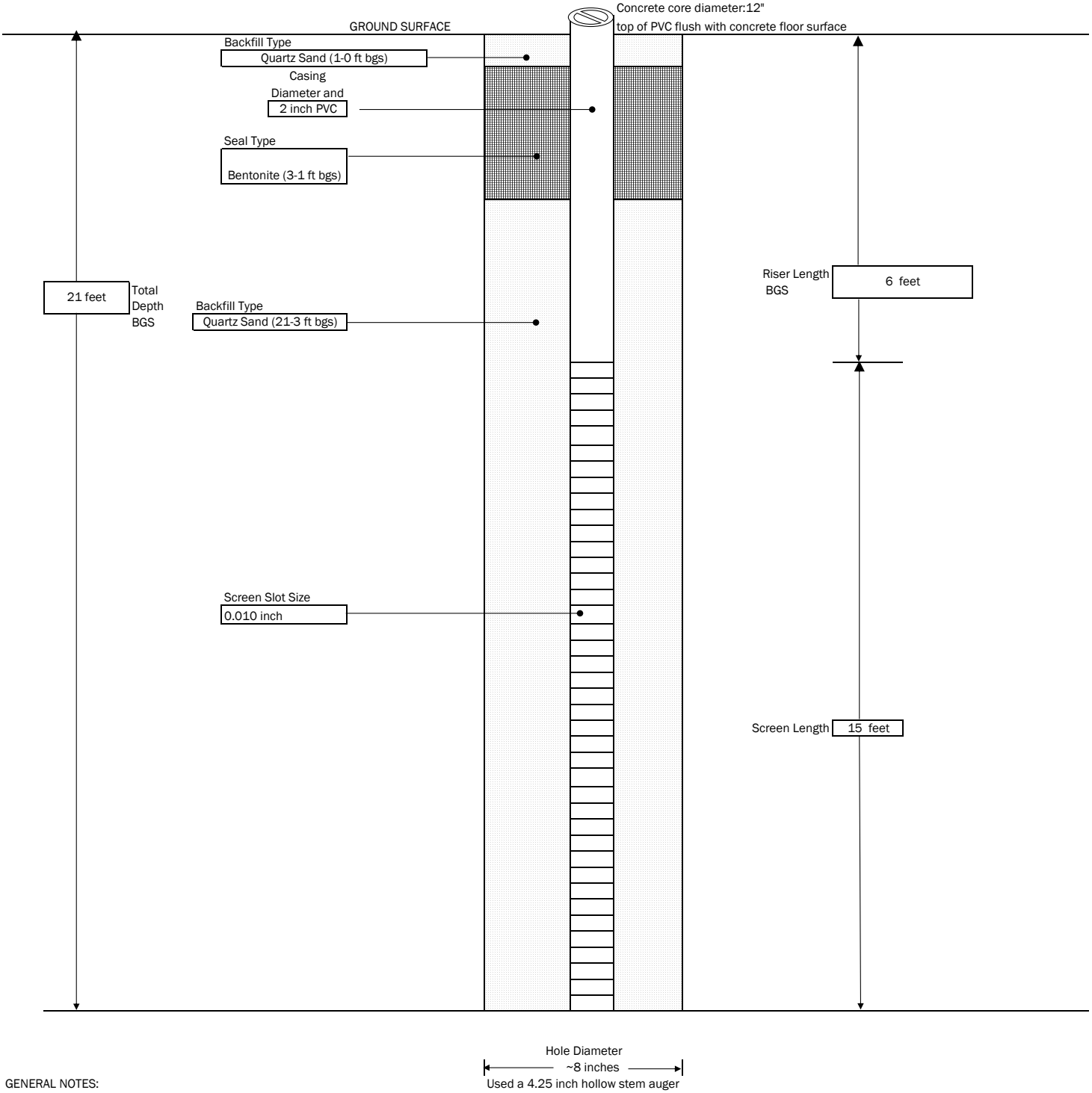
Excel Note: 3 cell columns = 1 ft



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** PROJECT NAME: Former Jefferson Wollensack Optical LOCATION: 872 and 886 Hudson Avenue, Rochester NY	**Injection Well:** IW-S-17 **SHEET: 1 of 1** **JOB # 2182207**
CONTRACTOR: Nothnagle Drilling DRILLER: Kevin LABELLA REPRESENTATIVE: A. daSilva	BORING LOCATION: South East corner of southern wall GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 2/25/2020 END DATE: 2/25/2020	TYPE OF DRILL RIG: Diedrich D25 AUGER SIZE AND TYPE: 4.25" Hollow Stem Auger OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

APPENDIX D

Excavation Work Plan

APPENDIX D – EXCAVATION WORK PLAN (EWP)

D-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination or breach or alter the site's cover system, the site owner or their representative will notify the NYSDEC contacts listed in the table below. Table D-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A related contact information is provided in Appendix B.

Table D-1: Notifications*

NYSDEC Project Manager; Charlotte B Theobald	585-226-5354 charlotte.theobald@dec.ny.gov
NYSDEC Regional HW Engineer; David Pratt	585-226-5315 david.pratt@dec.ny.gov
NYSDEC Site Control – Kelly Lewandowski	518-402-8553 / Kelly.lewandowski@dec.ny.us

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated, any modifications of truck routes, and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;

- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix E of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with the required request to import form and all supporting documentation including, but not limited to, chemical testing results.

D-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed during all excavations into known or potentially contaminated material (remaining contamination) or a breach of the cover system. A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will perform the screening. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils exhibiting any indication of contamination such as odors, staining or PID readings above 5ppm would be placed in a separate pile and tested for reuse or disposal. Soils exhibiting no indications of contamination and PID readings below 5ppm can be reused on Site below the cover system without analytical testing. Further discussion of offsite disposal of materials and on-site reuse is provided in Sections D-6 and D-7 of this Appendix.

D-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

D-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site. A site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

Decontamination will be completed on all trucks and equipment exiting the Site. A truck wash, if warranted, will be operated on-site. Truck wash waters will be collected and disposed of off-site in an appropriate manner in accordance with all applicable local, State and Federal regulations. If a truck wash is not warranted, trucks and equipment will be decontaminated with hand tools such as shovels or brushes to remove soils or other materials from the Site. Truck decontamination material will be collected and disposed of off-Site in an appropriate manner in accordance with all applicable local, State and Federal regulation. The qualified environmental professional or personnel under direct supervision of the PE of record will be responsible for ensuring that all outbound trucks will be washed at the truck wash or decontaminated by hand tools before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials. Material accumulated from the street cleaning and egress cleaning activities will be disposed off-site at a permitted landfill facility in accordance with all applicable local, State, and Federal regulations.

D-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows: Hudson Avenue north to NYS Route 104. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; (f) overall safety in transport and (g) community input (where necessary).

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

D-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed off-site in a permitted facility in accordance with all local, State and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC project manager. Unregulated off-site management of materials from this site will not occur without formal NYSDEC project manager approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include but will not be limited to: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled consistent with 6 NYCRR Parts 360, 361, 362, 363, 364 and 365. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State C&D debris recovery facility (6 NYCRR Subpart 360-15 registered or permitted facility).

D-7 MATERIALS REUSE ON-SITE

The qualified environmental professional as defined in 6 NYCRR part 375 will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material (i.e. contaminated) does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency. The analytical results of soil/fill material testing must meet the site use criteria presented in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for all constituents listed, and the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances October 2020 guidance values. The NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil is included in Appendix K of the SMP. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on-site will be segregated and staged as described in Sections D-2 and D-3 of this EWP. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of site excavation activities and proximity to nearby site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC project manager approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

D-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed off-site at a permitted facility in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC project manager.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

D-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the decision document. The existing cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete covered sidewalks and concrete building, etc. The demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, etc. will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

D-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional, as defined in 6 NYCRR Part 375, and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review. A copy of the form is presented in Appendix L.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 6NYCRR 375-6.7(d) – Restricted Residential Use SCOs. Soils that meet 'general' fill requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC project manager. Soil material will be sampled for the full suite of analytical parameters, including PFAS and 1, 4-dioxane. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

D-11 STORMWATER POLLUTION PREVENTION

For construction project exceeding 1 acre, a Stormwater Pollution Prevention Plan that conforms to the requirements of the NYSDEC Division of Water guidelines and NYSD regulations will be submitted with the notifications as detailed in D-1.

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. Sediments will be managed as per D-6 of this Excavation Work Plan.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

D-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition. The NYSDEC project manager will be promptly notified within two (2) hours of the discovery.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes [TAL metals, TCL volatiles and semi-volatiles (including 1,4-dioxane), TCL pesticides and PCBs, and PFAS], unless the site history and previous sampling results provide sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC project manager for approval prior to sampling. Any tanks will be closed as per NYSDEC regulations and guidance.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone within two hours to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

D-13 COMMUNITY AIR MONITORING PLAN

A figure showing the location of air sampling stations based on generally prevailing wind conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

Continuous air monitoring for VOCs and particulate levels at the perimeter of the property/Site will be required during any ground intrusive work including but not limited to soil excavation, test pitting, trenching and installation of soil borings and monitoring wells. The following action levels will be employed for VOC and particulate monitoring:

- If ambient air concentrations of total organic vapors at the downwind perimeter of work exceed 5 ppm above background for a 15-minute time average, work activities must be halted and monitoring continued, if readings decrease, work can continue. If reading are sustained, corrective actions must be taken. If organic vapor levels exceed 25 ppm at the perimeter, activities must be shut down.

- If downwind particulate concentrations greater than 100 mcg/m^3 above background levels are observed or visible dust is observed leaving the work area, then dust suppression must be employed. If particulate levels exceed 150 mcg/m^3 then work must be stopped and dust suppression techniques should be reevaluated.

The location of air sampling stations will be based on generally prevailing wind conditions and the locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. If a sensitive receptor, such as a school, day care or residential area are located adjacent to the site, a fixed monitoring station will be located at that site perimeter, regardless of wind direction. The details associated with the sensitive receptor monitoring are provided in Appendix E of the SMP.

Given that the Site is developed with an occupied residential building, special CAMP requirements will be employed for work within 20-ft of potentially exposed individuals or structures. Special requirements include continuous VOC and particulate monitoring to reflect the nearest potentially exposed individuals and ventilation system intakes for nearby structures. If indoor work is required, the sample considerations apply however individuals not directly involved in the work must be absent from the room and nearby/occupied structures would be considered adjacent occupied rooms. The following action levels will be employed for special CAMP requirements:

- If total VOC concentrations opposite the walls of occupied structures or next to intake vent exceed 1 ppm, monitoring should occur within the occupied structure(s). Background readings in the occupied spaced must be taken prior to commencement of the planned work and background readings should be discussed with NYSDOH prior to commencement of the work.
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m_3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m_3 or less a the monitoring point.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

D-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site, if there are residents or tenants on the property. Specific odor control methods to be used on a routine basis will include limiting size of excavation, ventilation, covering nuisance with plastic, etc. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. The NYSDEC project manager and NYSDOH project manager will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Qualified Environmental Professional as defined in 6 NYCRR Part 375 or personnel that are a direct report to the PE of record for the Site, Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

D-15 DUST CONTROL PLAN

Particulate monitoring must be conducted according to the Community Air Monitoring Plan (CAMP) provided in Section D-13. If particulate levels at the site exceed the thresholds listed in the CAMP or if airborne dust is observed on the site or leaving the site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the site.

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

D-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX E

Health and Safety Plan and Community Air Monitoring Plan

Health and Safety Plan

Health and Safety Plan
NYSDEC BCP Site #C828209

Location:

Former Wollensack Optical
872 and 886 Hudson Avenue
Rochester, New York

LaBella Project No. 2182207

February 11, 2021

Table of Contents

TABLE OF CONTENT

Continued

Appendices

1.0 INTRODUCTION

The purpose of this Health and Safety Plan (HASP) is to provide guidelines for responding to potential health and safety issues that may be encountered during work associated with construction and remedial activities located at the Former Wollensack Optical site located at 872 and 886 Hudson Avenue, City of Rochester, Monroe County, New York. This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. This document's project specifications are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP were developed in general accordance with 29 CFR 1910 and 29 CFR 1926 and do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or and other regulatory body.

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

It should be noted that Trichloroethene (TCE) and Tetrachloroethene (PCE) are the primary contaminants at the Site. As such, these VOCs should be taken into consideration during implementation of the HASP.

The HASP was developed utilizing previous environmental information that has been generated at the Site that are summarized in environmental reports. These environmental reports and documents are listed in Section 14.0.

1.1 Site Location and Description

The site is located in the City of Rochester, Monroe County, New York and is identified as Block 2 Lot 58 and Block 2 Lot 59 on the City of Rochester Tax Map # 091.81-2-59 and #091.81-2-58. The site is an approximately 0.491-acre area and is bounded by Roycroft Drive and residential properties to the north, Avenue D and a convenience store to the south, residential properties to the east, and Hudson Avenue and residential properties to the west.

The Site consists of the following: a 26,000 square (sq) foot (ft) four story former manufacturing facility that has undergone renovation/rehabilitation into residential apartment units and is currently occupied by tenants.

2.0 ACTIVITIES COVERED

This HASP addresses all general activities listed below:

- Mobilization/Demobilization
  - Mobilization/demobilization of equipment and supplies
  - Establishment of work zone
- Investigation Activities

- Subsurface soil boring installation
- Soil sample collection

- Construction Activities
  - Subsurface excavations or any other activities that disturb the site surface

3.0 PROJECT ORGANIZATION

This section includes the project organization and structures and establishes specific chain of command responsibilities and communications. The organizational structure shall be reviewed and updated as necessary to reflect the status of project operations.

The LaBella Site Safety Officer will provide general health and safety oversight of the work and conduct work area air monitoring during the soil boring and sampling activities. The health and safety roles for this project include:

- Project Manager
- Site Safety Officer
- Environmental Safety Manager

LaBella's health and safety roles and responsibilities are presented below in Section 3.1.

3.1 Roles and Responsibilities

LaBella is responsible for all work detailed in the project work plan and is also responsible for the health and safety of LaBella employees and will conduct work zone monitoring. Sub-contractors are not anticipated to be utilized for this project. However, specific health and safety roles include:

Project Manager (PM) – responsibilities include the following:

- Ensures implementation of this program
- Conducts periodic inspections
- Participates in incident investigations
- Ensures the HASP has all of the required approvals before any site work is conducted
- Ensures that the Site Safety Officer (SSO) is informed of project changes which require modifications of the site health and safety plan
- Has overall project responsibility for Project Health and Safety.

Site Safety Officer (SSO) - responsibilities include the following:

- Ensures that the HASP is implemented and that all health-and-safety activities identified in site safety plans are conducted and/or implemented
- Ensures that field work is conducted safely and enforces site health and safety rules
- Ensures that adequate communication between field crews and emergency response personnel is maintained
- Ensures that field site personnel have and use proper personal protective equipment
- Investigate and report all accidents/incidents to the PM and to the Environmental Safety Manager (ESM)
- Conducts and documents daily safety briefings
- Stops work if necessary

- Identifies operational changes which require modifications to health-and safety procedures and site safety plans, and ensures that the procedure modifications are implemented and documented through changes to the HASP, with ESM approval.
- Directs and coordinates health-and-safety monitoring activities
- Evaluates air monitoring data relative to site and activity-specific action levels
- Ensures that monitoring instruments are calibrated
- Reports to the ESM to provide summaries of field operations and progress
- Conducts routine safety inspections of the work areas
- Maintains files on all personal monitoring results, laboratory reports, calculations, and air sampling data sheets
- Ensure that all necessary information including emergency phone numbers, hospital directions, and warning signs are kept posted in an area accessible to all site employees
- Maintain a daily list of LaBella workers present on the site

Environmental and Safety Manager (ESM) - responsibilities include the following:

- Provides for the development and approval of the HASP
- Serves as the primary contact to review health and safety matters that may arise
- Approves revised or new safety protocols for field operations
- Coordinates revisions of this HASP with field personnel
- Coordinates upgrading or downgrading of personal protective equipment with the SSO
- Assists in the investigation of all accidents/incidents.

Site Personnel - responsibilities include the following:

- Reports any unsafe or potentially hazardous conditions to the SSO
- Maintains knowledge of the information, instructions and emergency response actions contained in the HASP
- Complies with rules, regulations and procedures as set forth in the HASP and any revisions
- Prevents admittance to work sites by unauthorized personnel
- Inspect all tools and equipment, including personal protective equipment (PPE), prior to use.

A copy of the Site Contact List and Emergency Contacts is provided in Appendix 1.

4.0 PROJECT DESCRIPTION

The purpose of the investigation program is to preliminary evaluate the nature and extent of polychlorinated biphenyls (PCBs) within soils that were identified during a previous geotechnical investigation completed by others. A summary of the investigation will include the following tasks:

- Site Mobilization/Demobilization
- Subsurface Soil Boring Installation and Soil Sample Collection
- Subsurface excavation and decontamination of equipment

5.0 POTENTIAL HAZARDS

This section presents an assessment of potential chemical, physical, and biological hazards that may be encountered during the project work tasks.

Nitrile line gloves (or equivalent) and safety glasses should be worn by workers at all times when they are expected to come into contact with subsurface soil.

5.1 Chemical Hazards

The characteristics of compounds that may be encountered at the Site are discussed below in the following subsections for informational purposes. Adherence to the safety and health guidelines in this HASP should reduce the potential for exposure to the compounds discussed below.

5.1.1 Volatile Organic Compounds

**It should be noted that Trichloroethene (TCE) and Tetrachloroethene (PCE) are the primary contaminants at the Site. As such, these VOCs should be taken into consideration during implementation of the HASP.

These include aromatic compounds such as benzene, toluene, ethylbenzene, and xylenes, which are found in petroleum products, and chlorinated VOCs such as trichloroethene and tetrachloroethene, which are common ingredients in solvents and commercial cleaners. Naturally produced VOCs may also be present including methane and hydrogen sulfide, which are breakdown products of organic materials. Inhaling toxic VOC vapors can be a health hazard, and some VOCs can be flammable if the circumstances are suitable for combustion. In contrast to contaminants such as metals, PAHs, and PCBs, VOCs generate soil gas vapors that may be a source of exposure even if the source (e.g., VOC-impacted soil or groundwater) is not directly exposed. During construction, soil disturbance, or disturbance of VOC containing materials may release VOCs into the air and produce toxic or oxygen-deficient atmospheres.

5.1.2 Semi-Volatile Organic Compounds

These include PAHs, which are common constituents of partially combusted coal or petroleum-derived products, such as waste oils, creosote, coal and coal ash, wood ash, and asphalt. SVOCs and PAHs can pose a risk to human health.

5.1.3 Heavy Metals

These are used in metal works, and can be present in paint, ink, petroleum products, coal ash, waste water, and mechanical waste fluids. Certain heavy metals can be toxic to humans at elevated concentrations and are often found in historic urban fill material (e.g. cinders and ash).

5.1.4 Polychlorinated Biphenyls

PCBs have historically been used from a number of sources including, but not limited to; electrical systems, hydraulic oils, lubricants, cutting oils, printer's ink, and asphalt. Exposure to PCBs can occur through unbroken skin without immediate pain or irritation. Acute effects of PCB exposure can include eye, skin, nose, and throat irritation. Chronic effects of PCB exposure can include skin swelling and redness, gastro-intestinal disturbances, and neurological effects such as headache, dizziness, nervousness and numbness of extremities. PCBs are suspected human carcinogens that can cause liver cancer. PCBs can accumulate in fatty tissues and result in health effects after the initial exposure has occurred. The primary route of exposure for PCBs is inhalation, dermal contact, and ingestion.

5.2 Physical Hazards

5.2.1 Heavy Equipment Operation

Heavy/drilling equipment operation will be operated under the following conditions:

- The operation of heavy equipment will be limited to authorized personnel specifically trained in its operation.
- Equipment shall be inspected daily to ensure that there are no exposed belts, fans, etc.
- When not in use, hydraulic and pneumatic components shall be left in down or “dead” position.
- Maintain all emergency shut-offs in sound working condition.
- The operator will use the safety devices provided with the equipment, including seat belts. Backup warning indicators and horns will be operable at all times.
- While in operation, all personnel not directly required in the area will keep a safe distance from the equipment.
- Personnel directly involved in activity will avoid moving in the path of operating equipment or any portion thereof. Areas blinded from the operator's vision will be avoided. Spotters will be used when personnel may be in areas where the operator’s view is obstructed.
- Additional riders will not be allowed on equipment unless it is specifically designed for that purpose.
- Construction tape or fence should be placed around the equipment/work area during operation.

5.2.2 Excavation and Trenching

This program outlines procedures and guidelines for the protection of LaBella employees working in and around excavations and trenches. One of the reasons LaBella requires a competent person on-site during excavation and trenching are the numerous potential hazardous that may be encountered or created. Hazards include:

- Electrocution
- Gas Explosion
- Entrapment
- Struck by equipment
- Suffocation

Before any work is performed and before any employees enter the excavation, a number of items must be checked and insured:

1. Before any excavation, underground installations must be determined. This can be accomplished by either contacting the local utility companies or the local "one-call' center for the area. All underground utility locations must be documented on the proper forms. All overhead hazards (surface encumbrances) that create a hazard to employees must be removed or supported to eliminate the hazard.
2. If the excavation is to be over 20 feet deep, it must be designed by a registered professional engineer who is registered in the state where work will be performed.
3. Adequate protective systems will be utilized to protect employees. This can be accomplished through sloping, shoring, or shielding.

4. The worksite must be analyzed in order to design adequate protection systems and prevent cave-ins.
5. Workers must be supplied with and wear any personal protective equipment deemed necessary to assure their protection.
6. All spoil piles will be stored a minimum of four (4) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.
7. If a trench or excavation is 4 feet or deeper, stairways, ramps, or ladders will be used as a safe means of access and egress. For trenches, the employee must not have to travel any more than 25 feet of lateral travel to reach the stairway, ramp, or ladder.
8. No employee will work in an excavation where water is accumulating unless adequate measures are used to protect the employees.
9. A competent person will inspect all excavations and trenches daily, prior to employee exposure or entry, and after any rainfall, soil change, or any other time needed during the shift. The competent person must take prompt measures to eliminate any and all hazards.
10. Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres will be tested at least daily. If the atmosphere is inadequate, protective systems will be utilized.
11. If work is in or around traffic, employees must be supplied with and wear orange reflective vests. Signs and barricades must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.

Competent Person Responsibilities

The OSHA Standards require that the competent person must be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authorization to take prompt corrective measures to eliminate them and, if necessary, to stop the work.

A competent person is required to:

- Have a complete understanding of the applicable safety standards and any other data provided.
- Assure the proper locations of underground installations or utilities, and that the proper utility companies have been contacted.
- Conduct soil classification tests and reclassify soil after any condition changes.
- Determine adequate protective systems (sloping, shoring, or shielding systems) for employee protection.
- Conduct all air monitoring for potential hazardous atmospheres.
- Conduct daily and periodic inspections of excavations and trenches.

Approve design of structural ramps, if used.

Excavation Safety Plan Factors

- Utilization of the local one-call system
- Determination of locations of all underground utilities
- Consideration of confined space atmosphere potential
- Proper soil protection systems and personal protective equipment and clothing
- Determination of soil composition and classification
- Determination of surface and subsurface water
- Depth of excavation and length of time it will remain open

- Proper adherence to all OSHA Standards, this excavation and trenching safety program, and any other coinciding safety programs.

Excavation Protection Systems

- The three basic protective systems for excavations and trenches are sloping and benching systems, shoring, and shields.
- The protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied to or transmitted to the system. Every employee in an excavation shall be protected from cave-ins by an adequate protective system.
- Exceptions to using protective system:
- Excavations are made entirely in stable rock
- Excavations are less than 5 feet deep and declared safe by a competent person

Sloping and Benching Systems

- Slope to the angle required by the Standard for Type C, which is the most unstable soil type.
- The table provided in Appendix B of the Standard may be used to determine the maximum allowable angle (after determining the soil type).
- Tabulated data prepared by a registered professional engineer can be utilized.
- A registered professional engineer can design a sloping plan for a specific job.
- Sloping and benching systems for excavations five (5) to twenty (20) feet in depth must be constructed under the instruction of a designated competent person.
- Sloping and benching systems for excavations greater than twenty (20) feet must be designed and stamped by a registered professional engineer.
- Sloping and benching specifications can be found in Appendix B of the OSHA Standard (Subpart P).

Shield Systems (Trench Boxes)

- Shielding is the third method of providing a safe workplace.
- Unlike sloping and shoring, shielding does not prevent a cave-in.
- Shields are designed to withstand the soil forces caused by a cave-in and protect the employees inside the structure.
- Most shields consist of two flat, parallel metal walls that are held apart by metal cross braces.
- Shielding design and construction is not covered in the OSHA Standards.
- Shields must be certified in design by a registered professional engineer and must have either a registration plate on the shield or registration papers from the manufacturer on file at the jobsite office.
- Repairs & modifications must be approved by manufacturer.

Safety Precautions for Shield Systems

- Shields must not have any lateral movement when installed.
- Employees will be protected from cave-ins when entering and exiting the shield (examples - ladder within the shield or a properly sloped ramp at the end).
- Employees are not allowed in the shield during installation, removal, or during any vertical movement.
- Shields can be 2 ft. above the bottom of an excavation if they are designed to resist loads at the full depth and if there are no indications of caving under or behind the shield.

- The shield must extend at least 18 inches above the point where proper sloping begins (the height of the shield must be greater than the depth of the excavation).
- The open end of the shield must be protected from the exposed excavation wall. The wall must be sloped, shored, or shielded. Engineer designed end plates can be mounted on the ends of the shield to prevent cave-ins.

Inspections

- Daily inspection of excavations, the adjacent areas and protective systems shall be made by the competent person for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.
- All inspections shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- Inspections will be made after every rainstorm or any other increasing hazard.
- All documented inspections will be kept on file in the jobsite safety files and forwarded to the Manager weekly.
- A copy of the Daily Trenching Inspection Form, refer to Appendix 3 of this HASP, can be used for this purpose.

5.2.3 *Extreme Hot or Cold Weather Conditions*

Extreme weather conditions can cause hypothermia or hyperthermia. To reduce these risks, precautionary measures shall be taken such as dressing appropriately, drinking plenty of fluid, and taking time to warm up or cool down as needed. Personnel are trained to recognize and report symptoms of either condition. Should symptoms persist or worsen, victim(s) shall be transported to a medical facility.

5.2.4 *Underground Utilities*

Various forms of underground utility lines or pipes may be encountered during site activities. Prior to the start of intrusive operations, utility clearance is mandated, as well as obtaining authorization from all concerned public utility department offices. If sufficient data is unavailable to accurately determine the location of the utility lines, LaBella will hand clear or use soft dig techniques to a depth of at least 1 foot below the proposed limit of the excavation. Should intrusive operations cause equipment to come into contact with utility lines, the SSO will be notified immediately. Work will be suspended until the applicable utility agency is contacted and the appropriate actions for the particular situations can be taken.

The excavation equipment operators, truck drivers, etc. and signal person should be aware of overhead power lines when working around overhead power lines. Overhead power and utility lines are not anticipated to be present on, or adjacent to, the site work area. If any overhead utilities are present, a spotter will assist equipment operators to maintain a minimum of 10 feet between overhead power lines and drill rig mast.

5.2.5 *Loading of Soil and Truck Traffic Control*

During certain work tasks, the establishment of traffic control to adequately protect workers and the public may be required on-site. Site specific requirements will be determined by the site supervisor/SSO on a case-by-case basis. When using cones or other devices to modify traffic flow, ensure use of the proper taper length and device spacing to provide adequate warning distance to other vehicles. In addition, proper PPE is to be worn during traffic operations, to include hardhat and high-visibility vests.

Loading of soil shall not be done over the heads of workers. If deemed necessary, a SSO shall utilize a spotter when loading soil to prevent personnel from entering the loading area. Truck drivers will remain in the truck during loading or a safe distance away from the loading area. Truck drivers should don high visibility vests, hard hats, and safety boots when on-site and outside of their vehicle.

5.2.6 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps and generators. Site workers who will perform suspected high noise tasks shall wear hearing protection. If deemed necessary by the SSO, the ESM will be consulted on the need for additional hearing protection and the need to monitor sound levels for site activities. Other workers who do not need to be in proximity of the noise should distance themselves from the equipment generating the noise.

5.2.7 Hand and Power Tools

In order to complete the various tasks for the project, personnel may utilize hand and power tools. The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut or struck by the tool, fire, and electrocution. Work gloves, safety glasses, and hard hats will be worn by the operating personnel at all times when utilizing hand and power tools and Ground Fault Circuit Interrupter GFCI-equipped circuits will be used for all power tools.

5.2.8 Slips, Trips, and Falls

Working in and around the Site will pose slip, trip, and fall hazards due to rain, snow, oil or ice. Excavations (if present) at the Site will cause uneven footing in the trenches and around the spoil piles. Workers shall employ good work practice and housekeeping procedures to reduce risk.

5.2.9 Manual Lifting

Manual lifting of heavy objects such as drilling rods or other equipment may be required. Failure to follow proper lifting technique can result in back injuries and strains. Site workers should evaluate loads before trying to lift them (i.e., they should be able to easily tip the load and then return it to its original position). Carrying heavy loads with a buddy and proper lifting techniques include: 1) make sure footing is solid, 2) make back straight with no curving or slouching, 3) center body over feet, 4) grasp the object firmly and as close to your body as possible, 5) lift with legs, and 6) turn with your feet, don't twist. In addition, hand digging may present lifting/ergonomic hazards.

5.2.10 Confined Space Entry Program

Confined space entries are managed and implemented only by LaBella employees trained as such, and therefore shall be completed in accordance with OSHA standards for Confined Space Entry CFR 1910.146. **This Confined Space Entry Program only applies to entering and cleaning Frac tanks.**

Pre-Entry Hazard Assessment
A pre-entry hazard assessment will determine whether the entry will be a confined space entry or a permit required confined space entry.

The hazard assessment should include:

1. The scope of work to be performed in the confined space;
2. Air testing (4 gas meter)
3. Hazards created as a result of the scope of work
4. The control measures to be implemented to eliminate or reduce each of the hazards to an acceptable level for entry

In addition, an entry permit included in Appendix 4 should be completed as part of safe practices for each entry regardless if the space is not considered a Permit Confined Space.

No entry shall be permitted until the hazard assessment has been reviewed and discussed by all workers engaged in the activity.

All entries shall be performed by workers trained in accordance with OSHA standards CFR 1910.146

If applicable, all Permit Confined Space entry should adhere to the following procedures as outlined below.

PERMIT SPACE ALTERNATE ENTRY PROCEDURES

General

Unlike a space that contains only physical hazards, a space containing an atmospheric hazard cannot be reclassified as a non-permit space. However, if the atmospheric hazard in a permit space can be controlled by forced air ventilation, less stringent procedures instead of full permit space procedures when workers enter the space. The alternate procedures may be used if:

- All physical hazards are eliminated or isolated
- The only hazard is an actual or potential hazardous atmosphere that can be and is made safe for entry using continuous forced air ventilation
- In the event the ventilation system stops working, entrants can exit the space safely.

Alternate procedures must document the reasons, and the supporting data, for concluding that these criteria are met. The documentation must be made available to each worker who enters the space or to that worker's authorized representative.

Procedure

Alternate entry procedures may be used to enter a permit required confined space if specific criteria are met as outlined under OSHA 1926.1203(e). Your manager must be informed of the intent to enter a permit space under alternate procedures. Alternate entry relieves the employer of performing a permit entry.

1. Before an alternate entry can be performed the complete requirements listed in OSHA 1926.1203(e) must be reviewed.
2. Your manager must be informed of the intent to enter a permit space under alternate procedures.
3. Alternate entry must be documented on the Alternate Entry Form, see Appendix 4 of this manual. The form must be available to employees entering the space and be located at the space for the duration of entry.

4. Alternate Entry must be documented and updated on the confined space evaluation & inventory form, see Appendix 4 of this manual. Documentation must be available to employees entering the space and be located at the space for the duration of entry.

PERMIT SPACE RECLASSIFICATION PROCEDURES

General

A permit space that contains only physical hazards may be reclassified as a non-permit space if (1) the physical hazards are eliminated or isolated without entering the space; or (2) the physical hazards are eliminated or isolated by entering the space using permit space procedures. Physical hazards include all hazards that are not atmospheric hazards, including: explosives (other than explosive atmospheres); mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; inwardly converging surfaces; and chemicals that can cause death or serious physical harm through skin or eye contact (rather than through inhalation).

Procedure

A permit required confined space may be reclassified to a non-permit confined space if specific criteria are met as outlined under OSHA 1926.1203(g). Your Manager must be informed of the intent to reclassify a space. Reclassification relieves the employer of performing a permit entry.

1. Before a reclassification can be performed the complete requirements listed in OSHA 1926.1203(g) must be reviewed.
2. Your Manager must be informed of the intent to reclassify a space.
3. Reclassification must be documented on the Permit Space Reclassification form confined space evaluation & inventory form, see Appendix 4 of this manual. Documentation must be available to employees entering the space and be located at the space for the duration of entry.

Permit Space Entry Process

The following procedures will be followed when entry into a Permit Required Confined Space is required:

Issuing an Entry Permit

1. No employee or other authorized entity will be allowed to enter a permit required confined space without first obtaining and completing an entry permit.
2. The entry permit must be completed in its entirety before entry is authorized.
3. The entry permit may be issued only for the duration of the work involved.
4. The permit must be completed in its entirety.
5. The permit must be reviewed with all entrants, attendants, and other affected employees.
6. The entry supervisor must authorize (sign) the permit to authorize entry. No entry is to occur before authorization.
7. Additional permits and/or SDS should be attached to the permit as necessary.

Canceling an Entry Permit

1. The entry supervisor must cancel the entry permit when an assignment is completed or when new condition arises. The permit should not be canceled until the space is once again secure and entry has completely ceased.
2. Once a permit is cancelled, entry under the permit is no longer permitted.

3. New conditions must be noted on the canceled permit and used in revising the permit space program.

Suspending an Entry Permit

1. An entry supervisor may suspend an entry permit instead of cancelling it if a temporary condition has occurred in or near the space that, once corrected, is not expected to reoccur.
2. The permit may be reinstated and entry may occur under the permit if the entry supervisor has determined that the conditions in the space match the allowable conditions listed on the permit.

Retaining Canceled Entry Permits

1. Completed permits must be sent to your Manager for review and file at the termination of the entry.
2. Permits will be reviewed annually by the safety committee to determine if program changes are required.
3. Canceled entry permits must be kept of file for a minimum of 1 year per OSHA recordkeeping requirements.

Permit Space Entry Preparation

Preparing to enter a permit space involves meeting all the conditions and requirements of the Entry Permit. The following are general procedures and may be performed in another order or multiple times before entry to meet the requirements of a specific permit entry.

1. Collect information: Collect all of the information you need to enter the space from the Host, Controlling, and other contractors. Determine if the work in the space is going to create additional hazards. Arrange coordination meetings. Collect materials.
2. Isolate the confined space: Isolate the space to eliminate hazards. When applicable:
   a. ***Identify all energy sources*** and hazards. Determine isolation controls related to the hazards.
   b. ***Isolate energy sources*** - Pipelines and other accessories must be either disconnected, misaligned or removed, blanked, or by double block and bleed the
   c. system (closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves);
   d. ***Utilize lockout/tagout*** procedures to isolate all potentially hazardous energy sources;
   e. ***Block or disconnect*** all mechanical linkages;
   f. ***Establish early warning systems*** and controls to monitor engulfment hazards;
   g. Placement of barriers to eliminate the potential for employees contact with a physical hazard.
3. Clean the space: If the confined space contained a hazardous liquid or solid, it must be thoroughly purged, cleaned, flushed and/or rinsed. Make sure all sludge's and residue have been effectively removed. This is especially important if "hot work" is to be done.
4. Eliminate: any conditions that could make it unsafe to remove an entrance cover.
5. Test the atmosphere: See air monitoring section of this program.
6. Purge, inert, flush or ventilate: If the confined space contains a hazardous atmosphere, it must be properly purged, inerted, flushed and/or ventilated. Inerting may result in an Immediately Dangerous to Life and Health (IDLH) oxygen-deficient atmosphere.

WARNING Purging or inerting a space may create an IDLH atmosphere.

7. Ventilate the Space: See ventilation section of this program.
8. Safe Access and Egress: A ladder or other suitable equipment must be used and remain in place or be readily available for entering and exiting the confined space. If a ladder or hoist system is provided, it must be inspected for defects and secured or anchored in place. If a ladder is a permanent part of the space, check for defects, especially in manholes and vaults. If vertical entry is necessary, entrant is to wear a full body harness with retrieval/life line to arrest a fall or perform non-entry rescue.
9. Barricading and Traffic Control: When the opening to a confined space is located in a floor, street or other location subject to vehicular or pedestrian traffic, adequate protective barricades and, if necessary, warning signs, lights or cones, must be provided. The opening is to be barricaded or guarded to protect against a fall into the confined space opening and to protect the entrant from external hazards.
10. Personal Protective Equipment (PPE): The PPE either required by the entry permit or appropriate for the hazard must be provided and used by all entrants. When entrants are required to use respiratory protection or escape respirators, they must receive respirator training including proper fit testing. All entrants are required to wear a full body or chest harness. Appropriate retrieval equipment must be provided which may include a tripod, hoist or equivalent, and/or a retrieval line.
11. Tools and Equipment: The tools and equipment brought into confined space should be kept to a minimum. Under no circumstances will compressed gas cylinders be taken into a confined space except as follows: self-contained breathing apparatus, 5 minute escape cylinder, air horn or small pressurized cans for testing purposes. Under no circumstances will gasoline powered equipment be brought into or used in a confined space. Explosion proof or other special equipment will be required if flammable/combustible gases, vapors or dusts are present. If “hot work” is involved, or flammable/combustible materials are present, have a fire extinguisher readily available. Obtain a “hot work” permit if “hot work” will be performed.
12. Communications: Positive communication between the entrants and the attendant must be maintained. Communication may be in the form of audible or visual. A portable radio, intercom or other suitable equipment must be used when entrants are out of voice range or line of sight. An entrant may be staged in the confined space to provide positive communication between other entrants and the attendant. A means of communication between attendant and rescue services must be available and maintained.
13. Complete Permit: Complete permit in entirety, review with attendants/entrants, entry supervisor authorizes permit, and then entry is authorized to begin.

Permit Space Entry – Pre-Entry Briefing

1. Before allowing any worker to enter a permit required confined space, a pre-entry briefing must be conducted by the entry supervisor issuing the permit. This briefing is a conference between affected employees, entrants, attendants, safety staff, and the entry supervisor.
2. The briefing will review the nature of the work, hazards of the space, hazard controls, safe work practices, non-entry rescue procedures and emergency rescue procedures, use of personal protective equipment, use of other safety equipment, and any other appropriate information.
3. The briefing will include a review of pre-entry air monitoring results.

Permit Space Entry – Attendant Duties

When an employee is assigned to enter a permit-required confined space, a trained attendant must be assigned to remain at the opening to the confined space for the entire entry operation. The attendant must have no other duties that would require him to leave his position. The attendant must be trained in the use of non-entry rescue procedures and equipment. The attendant must never enter the confined space to affect a rescue. If an emergency situation arises the entrant must be removed by non-entry means; that is, with the use of emergency retrieval systems. The attend duties are but not limited to:

1. Participate in the pre-entry briefing.
2. Is familiar with and understands the hazards that may be faced during entry into the confined space.
3. Is aware of possible behavioral changes and effects of hazard exposures to entrants.
4. Continuously maintains an accurate count of entrants.
5. Remains outside the space until relieved by another attendant or all entrants have exited the confined space.
6. Assists and communicates with entrants.
7. Assesses activities inside and outside the space to determine if it is safe for entrants to remain in the space.
8. Alerts entrants of the need to evacuate the space.
9. Summons rescue and other emergency services as soon as the attendant determines that the entrants may need assistants to escape the confined space.
10. Performs non-entry rescue when possible using the tripod and retrieval systems.
11. Prevents unauthorized entry into the confined space while entry is underway.
12. Performs no duties that might interfere with the attendant's primary duty to assess and protect the entrants.
13. Under no circumstances enter into a confined space to perform a rescue unless properly trained to perform confined space rescue and until properly relieved by another authorized attendant.
14. Performs non-entry rescue of entrants from the confined space using the confined space retrieval system.

Permit Space Entry – Entrant Duties

Only trained and authorized entrants are allowed to enter a permit required confined space. The entrant must be trained in entry techniques. Entrants perform the work in the space. The entrant duties are but not limited to:

1. Participate in the pre-entry briefing.
2. Be familiar with and understand the hazards they may face during entry into a confined space.
3. Know how to properly use the safety equipment provided for entry into the space.
4. Communicate with the attendant on a regular and as needed basis to allow the attendant to assess the entrant's status and to alert the entrant of the need to evacuate the space if needed.
5. Alert the attendant of any hazardous conditions or situations identified within the space.
6. Evacuate the space immediately when ordered by the attendant or entry supervisor, or if the entrant detects a prohibited condition.
7. Report any deficiencies or malfunctions of equipment to the attendant or entry supervisor.

8. Understand emergency procedures in case of an accident in a confined space.
9. Wear appropriate PPE and non-entry rescue retrieval equipment

Permit Space Entry – Entry Supervisor Duties

Only trained and authorized entry supervisors are allowed to supervise an entry. The entry supervisor's duties are but not limited to:

1. Lead the pre-entry briefing.
2. Identify and evaluate the hazards of permit spaces before employees enter them.
3. Classify confined spaces as "permit required", "alternate procedure", or "non-permit required."
4. Take the necessary measures to prevent unauthorized entry into confined spaces by posting danger signs, notifying other employers and employees onsite or their authorized representative of the existence, location, and hazards of the confined spaces.
5. Check that the permit has been completed properly and that gas monitoring and other tests have been conducted before permitting entry and signing the permit.
6. Identify personnel who are authorized to enter the confined space.
7. Identify the employees under their supervision who are required to wear respirators.
8. Implement isolation/lockout program procedures for the confined space hazards.
9. Verify all permit-required and alternative entry confined spaces are continuously monitoring utilizing a gas monitor.
10. Verify forced air ventilation is continuously used in all permit-required and alternative entry confined spaces.
11. Provide instructions and necessary additional training to employees who may enter confined spaces if conditions or hazards exist for which employees have not been trained.
12. Provide instruction to personnel on the proper use of equipment required for confined space entry.
13. Inform personnel about respiratory hazards in confined spaces.
14. Verify a rescue plan has been prepared and rescue services are available for all permit-required confined space(s).
15. Conduct a pre-entry briefing to inform attendants and entrants of possible hazards that may be encountered.
16. Maintain equipment that is used to enter confined spaces.
17. Maintain records of equipment maintenance and employee training.
18. Conduct work site inspections to verify compliance with confined space entry procedures.
19. Removes unauthorized individuals who enter or attempt to enter the confined space.
20. Issue and cancel entry permits.

AIR MONITORING

General

1 The air within the confined space and permit space should be tested from outside of the confined space before entry into the confined space. All confined space testing procedures must begin by inserting the instrument probe into the area through a vent hole or some other opening. Where no openings exist, the entrance cover should be pried open on the downwind side just enough to allow insertion of the probe.

3. The atmosphere in a confined space and permit space must be checked with a suitable detector before entry is permitted and continuously during the work.
4. The air must be checked at minimum for oxygen content, flammable or combustible gases explosive limits, and toxic gases. At minimum the two toxic gases that must always be monitored for are hydrogen sulfide and carbon monoxide.
5. Atmospheric testing should be conducted at all levels of the confined space and permit space. This is necessary because air contaminants may be at different concentrations at various levels in the tank.
6. The results of all testing must be recorded on the entry permit or if used alternate entry form(s).

Order of Testing

1. A test for oxygen is performed first because most combustible gas meters are oxygen dependent and will not provide reliable readings in an oxygen deficient atmosphere. Combustible gases are tested for next because the threat of fire or explosion is both more immediate and more life threatening, in most cases, than exposure to toxic gases and vapors. If tests for toxic gases and vapors are necessary, they are performed last.

Air Monitor Devices

1. The instrument used for air monitoring must be calibrated, designed for confined space air monitoring, and in good working order.
2. The instrument used for air monitoring must be calibrated per manufacture specifications.
3. The instrument used for air monitoring must be “bumped” before use to ensure proper operation.
4. The instrument used for air monitoring must be zeroed in fresh air prior to conducting tests in the confined space.
5. Persons using the air monitor must be trained in its use and interpretation of results.

Allowable Atmospheric Limits

1. Oxygen (O2) - Oxygen content must be at least 19.5% and no greater than 23.5% in the confined space to perform work. Measurements must be taken at all levels in the confined space. No entry may be allowed into a space containing less than 19.5% oxygen. No entry may be authorized into a space containing greater than 23.5% oxygen due to the serious risk of fire or explosion.
2. Lower Explosive Limit (LEL) – Lower Explosion Limit must be 10% or less in the confined space to permit work. Gas readings are measured in terms of the lower explosive limit, (LEL). This is the smallest concentration of a gas in air that will explode when it contacts a spark or open flame. Measurements must be taken at all level in the confined space. Entrants must stop all activities, immediately evacuate the space, and identify the source of the problem if the reading exceeds 10% of the LEL.
3. Carbon Monoxide (CO) – Carbon monoxide content must be 35 (STEL) or 25 PPM (ACGIH) or less in the confined space to perform work. Measurements must be taken at all level in the confined space. Entrants must stop all activities, immediately evacuate the space, and identify the source of the problem if the CO reading exceeds 25 PPM.
4. Hydrogen Sulfide (H2S) – Hydrogen sulfide content must be 10 PPM or less in the confined space to permit entry. Measurements must be taken at all levels in the confined space.

Entrants must stop all activities, immediately evacuate the space, and identify the source of the problem if the H2S reading exceeds 10 PPM.

5. Other Toxics - The atmosphere also must be tested for toxic gases that are immediately dangerous to life and health (IDLH) before entry into a confined space may be authorized. If the space previously contained a known toxic gas, (i.e., chlorine), the atmosphere must be tested for the specific gas involved. This testing will usually involve additional air monitors. Entry limits should be established through the use of SDS, OSHA PEL, and AGCIH TLV data.

Ventilation

1. Confined space ventilation blowers and ducting shall be used for space ventilation.
2. Alternate entry procedures require the use of constant ventilation.
3. Where applicable air ducting saddles will be used at manhole openings to maintain safe access and egress.
4. In general, ventilation should produce approximately 10 air exchanges per hour. The amount of time required for one exchange can be determined by dividing the volume of the space by the flow rate of the blower, (flow rate is stated on the blower's label). Note that turns in blower duct reduce CFM flow rates. These reduced rates must be used in the calculation for air exchange.
5. Mechanical ventilation may be required to maintain a safe working environment inside a permit required confined space. The requirements for maintaining proper ventilation are based on many factors involving theoretical air velocity parameters. Therefore, ventilation requirements will usually be determined by qualified industrial hygienists, engineers, or other highly trained individuals.

Basic Procedure

1. Select a blower with enough capacity to quickly replace the volume of air in the space.
2. Use only blowers in good working order.
3. Observe safety and warning labels on blower.
4. Position blower where it will take in clean, fresh air. Be very careful about automobile and generator exhaust fumes.
5. Use a flexible duct to deliver air into all areas of the space. (Generally, the duct must be at least 3 feet into the space.)
6. Ventilate for a minimum of 5 minutes before verifying, through air monitoring, acceptable entry conditions are present and entering.
7. Continue to ventilate throughout the entry operation.

SAFETY EQUIPMENT CONSIDERATIONS

General

1. Non-entry rescue equipment and air monitoring equipment (at minimum) are required for permit space entry. This equipment might include a full body harnesses, lifeline(s), ladders, retrieval equipment, tri-pods, ventilation equipment, and fall protection equipment.
2. Subcontractors are required to provide their own safety equipment.
3. Our safety equipment should not be used by the subcontractor.

Equipment Inspection
All entry equipment must be inspected per manufactures requirements before use and must be in good working order.

Lighting Considerations

1. When natural lighting in the work area is insufficient for safe operations, auxiliary lighting must be provided. This lighting must be intrinsically safe (non-sparking) if a potential for flammable gases or vapors or combustible dusts in the atmosphere exists.
2. If auxiliary lighting is used workers should be provided with approved flash lights or other approved portable lighting so they can safely exit the confined space in an emergency or lighting outage

Special Tools and Equipment Considerations

1. Only approved, low-voltage electric tools, air tools, and hand tools that are intrinsically safe (non-sparking) may be used if the atmosphere in the confined space contain or have the potential for containing flammable gases or vapors or combustible dusts. In these situations all electric circuits must be provided with ground fault circuit protection.
2. All tools and power cords must be visually inspected before use to assure that cords with frayed or damaged insulation, broken wires, or other defects are not used. In spaces confirmed as containing flammable gases or vapors or combustible dusts non-sparking hand tools should be used.
3. GFCI protection must be used for all electrical tools.

RESCUE AND EMERGENCY CONSIDERATIONS

General
Whenever an entrant is in a permit space, the attendant must remain outside the space and must maintain communication with all entrants and keep track of their condition. If one or more entrants suffers an injury or illness and is unable to exit the space without help, the attendant must initiate a non-entry rescue.

Non Entry Rescue

1. The entrant(s) entering a permit-required confined space must (at minimum) be equipped with and use non entry rescue equipment. Emergency assistance (rescue team) availability must be confirmed in the event that non-entry rescue fails.
2. Each entrant must wear a chest or full body harness, with a retrieval line attached at the D-ring in the center of the back or another point which positions the entrant so that he or she is small enough to be pulled out of the space. The other end of the retrieval line must be attached to a mechanical device or a fixed point outside the permit space. In cases were the use of a harness is infeasible or more hazardous wristlets or anklets may be used in lieu of a harness.
3. In those cases where an employee must enter a confined space through a top opening 5 feet or more in depth, the entrants harness must be attached to a mechanical retrieval system designed and rated for entrant rescue.
4. If mechanical retrieval equipment cannot be used, as in the case of a side entry to a confined space, an adequate number of additional employees must be on hand to assist the attendant in the removal of the worker without entering the space.

5. When the use of non-entry rescue equipment becomes infeasible due to specific hazards then alternate entry rescue provisions must be made. This may include the use of a rescue service located onsite.

Entry Rescue

OSHA requires that the entry employer must make sure that the rescue service is able to respond in time to enable the injured worker to receive needed medical attention in light of the hazards present in the permit space.

- The permit space hazards, the work being performed, and whether non entry rescue is employed will be used to determine the level of entry rescue assigned to the permit entry.
- In some cases, entry may require an on-site standby rescue team, such as when the entrant is working in an atmosphere that is immediately dangerous to life or health and is wearing an airline respirator or a self-contained breathing apparatus. Another example is when a rescue service could not respond in a timely manner. Consult the LABELLA Safety Manager for rescue team information.
- For entry rescue, pre-planning will be required to determine who and how of the entry rescue. Provided rescue services must meet specific OSHA training requirements outlined in OSHA 1926.1211(a).

Options for entry rescue teams include:

- LaBella employees specifically trained and equipped to perform rescue. Our company does not currently maintain an entry rescue team and this option currently is not available.
- A host employers team (facility team) who has agreed to perform the service, is available during the entry, and can respond timely
- A qualified contracted trained stand by rescue service located on site. This team is pre-arranged to be on site.
- An emergency service agency (fire department) that provides confined space rescue and can respond timely. The department must be able to respond timely and be trained in permit required confined space rescue.

If the entry employer designates an off-site rescue service, it must determine that the service has the ability and equipment to carry out a rescue in the particular permit space or type of permit space in which the entrant is working. It must contact the rescue service and make sure that it will be able to respond in a timely manner whenever an entrant is in the permit space.

Specific Rescue Procedure

- Procedures for summoning rescue services will be developed for each permit space entry, reviewed with authorized entrants and attendants, and posted at the permit entry site.

Basic Procedure

1. Attendant notifies rescue services
2. Under no circumstances is the attendant to enter the confined space
3. If appropriate, emergency service back-up is notified
4. Attendant takes the following actions:

5. Use rescue equipment for non-entry rescue
6. Activate ventilation system to help clear confined space atmosphere
7. Do not allow anyone except rescue team in confined space
8. Advise rescue team of all information known
9. Barricade off area around confined space for staging rescue
10. Assist rescue team
11. Rescue team tests atmosphere before and during rescue.

Responsibilities
Safety Representatives along with Safety Committee

1. Prepare and maintain the LaBella Confined Space Program.
2. Coordinate training programs for initial and refresher training.
3. Perform an annual review of the program using cancelled entry permits and other information.
4. Maintain cancelled permits for a period of 3 years.

Mangers
1. Be knowledgeable about the requirements of the Confined Space in Construction Program.
2. Perform and/or coordinate the identification and inventory of confined spaces and permit spaces on a project as outlined in the information & evaluation coordination section of this program.
3. Debrief entry employers and communication hazard information to host employers as outlined in the information & evaluation coordination section of this program.
4. Ensure that employees in their area(s) of concern participate in training programs related to the Confined Space Program.
5. Ensure that appropriate Confined Space Program related work practices are followed.

Employees
1. Be knowledgeable about the requirements of the Confined Space in Construction Program.
2. Assist in the identification and inventory of confined spaces and permit spaces on a project as outlined in the information & evaluation coordination section of this program.
3. Understand your responsibility on the team.

Training
1. Confined Space Awareness Training will be provided for LaBella affected employees.
2. Confined Space Evaluation Training will be provided for all employees required to evaluate and inventory confined spaces.
3. Confined Space Entrant, Attendant, and Entry Supervisor training meeting OSHA requirements is required for all employees who perform permit entries.
4. Confined Space Rescue training is required for all persons who make up a confined space rescue team. Annual retraining and drills are required for rescue personnel.

Annual Review
The safety committee will review the program and permits annually. Revisions shall be made on determination of annual review

5.3 Biological Hazards

During the course of the project, there is a potential for workers to come into contact with biological hazards such as insects, plants, and sewage. Workers should be aware of these potential hazards that are discussed below.

5.3.1 Insects

Insects, including bees, wasps, hornets, mosquitoes, ticks, and spiders, may be present at the Site making the chance of a bite possible. Some individuals may have a severe allergic reaction to an insect bite or sting that can result in a life threatening condition. Some insect bites can transmit diseases such as Lyme disease or a virus such as West Nile; any individuals who have been bitten or stung by an insect should notify the SSO. The following is a list of preventive measures:

- Apply insect repellent prior to performing any field work and as often as needed throughout the work shift
- Wear proper protective clothing (work boots, socks and light colored pants)
- When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible
- Field personnel who may have insect allergies shall have bee sting allergy medication on site and should provide this information to the SSO prior to commencing work.

<u>Lyme Disease</u>
Lyme disease is caused by infection from a deer tick that carries a spirochete. During the painless tick bite, the spirochete may be transmitted into the bloodstream often after feeding on the host for 2 to 24 hours. The ticks that cause the disease are often no bigger than a poppy seed or a comma in newsprint. The peak months for human infection are from May to September.

Symptoms appear in three stages. First symptoms usually appear from 2 days to a few weeks after a person is bitten by an infected tick. Symptoms usually consist of a ring-like red rash on the skin where the tick was attached. The rash is often bulls-eye like with red on the outside and clear in the center. The rash may be warm, itchy, tender, and/or "doughy." Unfortunately, this rash appears in only 60 to 80% of infected persons. An infected person also has flu-like symptoms of a stiff neck, chills, fever, sore throat, headache, fatigue and joint pain. These symptoms often disappear after a few weeks. The second stage symptoms, which occur weeks to months later include meningitis, severe headache, drooping of the muscles on the face, called Bell's Palsy, encephalitis, numbness, withdrawal and lethargy. These symptoms may last for several weeks to several months. Third stage symptoms, which occur months or years later include arthritis, heart problems, and loss of memory. The third stage symptoms may mimic multiple sclerosis and Alzheimer's disease.

It is recommended that personnel check themselves when in areas that could harbor deer ticks, wear light color clothing and visually check themselves and their buddy when coming from wooded or vegetated areas. If a tick is found biting an individual, the SSO should be contacted immediately. The tick can be removed by pulling gently at the head with tweezers. If tweezers are not available, cover your fingers (e.g., tissue paper) and use to grasp the tick. It is important to grasp the tick as close to the site of attachment and use a firm steady pull to remove it. Wash hands immediately after with soap and water. The affected area should then be disinfected with an antiseptic wipe. All mouth parts must be removed from the skin. If the tick is removed with breaking off the mouth parts, an irritation or infection may occur. Also, the organism that is causing the disease can still enter the body through the skin. The employee will be offered the option for medical treatment by a physician, which typically involves antibiotics.

If personnel feel sick or have signs similar to those above, they should notify the SSO immediately. Treatment with antibiotics is effective and recovery is usually complete. In the first stage antibiotics are usually given orally. Second and third stage treatment, however is prolonged and recovery may take longer. Antibiotic treatment is usually provided intravenously for second and third stage Lyme disease.

West Nile Virus

West Nile Virus (WNV) is a mosquito-borne infection transmitted through the bite of an infected mosquito. The symptoms of WNV can be asymptomatic (no symptoms) or in more serious cases can lead to West Nile fever. West Nile Fever can include fever, headache, tiredness, body ache, an occasional rash on the trunk of the body, and swollen lymph glands. In severe cases, people have developed West Nile encephalitis or meningitis which symptoms include fever, headache, neck stiffness, tremors, coma and in some cases death. The incubation period for the disease is usually 2 to 15 days. The symptoms can range from a few days to several weeks. Since the initial outbreak in 1999, the virus has spread rapidly throughout New York State. There are about 65 different species of mosquitoes in New York State, but only a small percentage has been associated with the WNV. Most mosquitoes are not infected and the chance of infection from a mosquito bite of an on-site worker is very small. All residents of areas where virus activity has been identified are at risk of getting WNV, but those of the highest risk for becoming seriously ill from WNV are people over 50 and individuals with some immunocompromised condition (transplant patients).

The following precautions will be used to help reduce the risk of mosquito bites:

- Reduce mosquito-breeding areas by making sure wheelbarrows, buckets, and other containers are turned upside down when not used so that they do not collect standing water.
- Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many mosquitoes are most active (between dawn and dusk).
- Use mosquito repellant according to the manufacturer's directions when outdoors for long periods of time and when mosquitoes are most active.

5.3.2 Plants

The potential for contact with poisonous plants exists when performing fieldwork in undeveloped and wooded areas. Poison ivy, sumac, and oak may be present on site. Poison ivy can be found as vines on tree trunks or as upright bushes. Poison ivy consists of three leaflets with notched edges. Two leaflets form a pair on opposite sides of the stalk, and the third leaflet stands by itself at the tip. Poison ivy is red in the early spring and turns shiny green later in the spring. Poison sumac can be present in the form of a flat-topped shrub or tree. It has fern-like leaves, which are velvet "down." Poison sumac has white, "hairy" berry clusters. Poison oak can be present as a sparingly branched shrub. Poison oak is similar to poison ivy in that it has the same leaflet configuration; however, the leaves have slightly deeper notches. Prophylactic application of Tecnu® may prevent the occurrence of exposure symptoms. Post exposure over the counter products are available and should be identified at the local pharmacist. Susceptible individuals should identify themselves to the SSO.

Contact with poison ivy, sumac, or oak may lead to a skin rash, characterized by reddened, itchy, blistering skin which needs first aid treatment. If you believe you have contacted one of these plants, immediately wash skin thoroughly with soap and water, taking care not to touch your face or other body parts.

5.4 Hazard Analysis

This section includes an active hazard analysis (AHA) to assess and control potential site hazards for each general project task.

WORK TASK	POTENTIAL HAZARDS	CONTROLS
Activity: Site Mobilization/Demobilization		
Site Mobilization/Demobilization	Biological hazards	Proper clothes, body inspection, repellant
	Slip, Trip, and Fall Hazards	Identify and repair potential tripping hazards. Maintain safe and orderly work area.
	Adverse Weather	Monitor weather daily. Discontinue work as necessary based on lightning, limited visibility, impaired mobility, etc.
	Noise	Distance from noise, hearing protection.
	Heat/Cold Stress	Acclimatization, work/rest regimes, drinking warm/cold fluids.
Activity: Excavation, Remediation, Disposal of Waste, and Sample Collection		
Excavation, Remediation, Disposal of Waste, and Sample Collection	Proximity to heavy/drilling equipment	Distancing, safe work practices, inspections, wear hearing protection.
	Trenching and Excavation	Place soil stockpiles away from edge of excavation. Identify depth of excavation and slope of excavation sidewalls to determine potential hazards.
	Slip, Trip, and Fall Hazards	Identify and repair potential tripping hazards. Maintain safe and orderly work area.
	Adverse Weather	Monitor weather daily. Discontinue work as necessary based on lightning, limited visibility, impaired mobility, etc.
	Noise	Distance from noise, hearing protection.
	Heat/Cold Stress	Acclimatization, work/rest regimes, drinking warm/cold fluids.
	Contaminant contact	Wear protective coveralls (e.g., Tyvek®) (only if deemed needed by SSO) with shoe covers, nitrile gloves, and safety glasses when handling samples. Dispose of gloves after sampling.
	Exposure to PCBs	Avoid direct contact by use of PPE. If dust generation is anticipated, specific controls will be in place to prevent dust generation. Dust control measures (water spray, soil covers, slower work pace, or change in work activities) will be deployed prior to resuming work.
	Underground Utilities	Call in *Dig Safely* utility mark-out, conduct private utility mark-out, review utility layout prior to digging, hand clear utilities, hand dig soil near electric, use GPS to mark out utilities.
	Loading of Soil and Truck Traffic Control	Use spotter to keep loading area clear, wear high visibility vest, place cones around loading area, direct traffic flow.
	Subsurface hazards	Call in Dig Safely Stakeout, review available utility plans.
	Contact with equipment, especially moving parts. Overhead hazard (rods).	Stay alert and maintain suitable clearance from moving and overhead equipment and power lines. Do not wear loose clothing, jewelry, or equipment,

WORK TASK	POTENTIAL HAZARDS	CONTROLS
		which could get caught by moving equipment. Inspect equipment daily. Train all personnel on use of emergency shutoff switches
	Manual lifting	Use proper lifting technique.
	Biological hazards	Proper clothes, body inspection, repellant
	Confined Space	Review potential hazards and complete entry permit included in Appendix 4.

6.0 TRAINING

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the remedial investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

Prior to commencement of field activities, the SSO will ensure all field personnel assigned to the project will have completed training that will specifically address the activities, procedures, monitoring, and equipment used in the site operations. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity. LaBella personnel that have not received site-specific training will not be allowed on site.

Project personnel and visitors will be given health and safety briefings daily by the SSO to assist site personnel in safely conducting work activities. The briefings will include information on new operations to be conducted, changes in work practices or changes in the site's environmental conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. The meetings will also be an opportunity to periodically update the crews on monitoring results.

7.0 PERSONAL PROTECTIVE EQUIPMENT

Generally, site conditions at this work site require protection Level D PPE, or modified Level D PPE. However, air monitoring will be conducted to determine if up-grading to Level C PPE is required (refer to Section 8.0). Descriptions of the personal protective equipment associated with Level D and Level C, are provided below:

Level D:
Hard hat, safety glasses, rubber nitrile sampling gloves, steel toe construction grade boots, etc.

Level C:
Includes Level D PPE and also full or ½-face respirator and Tyvek suit (if necessary). [*Note: Organic vapor and HEPA filter cartridges are to be changed after each 8-hours of use or more frequently.*]

8.0 AIR MONITORING

According to 29 CFR 1910.120(h), air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection required for personnel working onsite. Air monitoring will consist at a minimum of the procedure listed below. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications.

The Air Monitor will utilize a photoionization detector (PID) to screen the ambient air in the work areas (drilling, excavation, soil staging, and soil grading areas) for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Work area ambient air will generally be monitored in the work area and downwind of the work area. Air monitoring of the work areas and downwind of the work areas will be performed at least every 60 minutes using a PID and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone, either personnel are to leave the work area until satisfactory readings are obtained or approved personnel may re-enter the work areas wearing at a minimum a ½ face respirator with organic vapor cartridges for an 8-hour duration (i.e., upgrade to Level C PPE). Organic vapor cartridges are to be changed after each 8-hour use or more frequently, if necessary. If PID readings are sustained, in the work area, at levels above 50 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

If downwind PID measurements reach or exceed 25 ppm consistently for a 5 minute period downwind of the work area, PID readings will be taken within the buildings (if occupied) on Site to ensure that the vapors are not penetrating any occupied building and effecting the personnel working within. If the PID measurements reach or exceed 25 ppm within the nearby buildings, the personnel should be evacuated via a route in which they would not encounter the work area. The building should then be ventilated until the PID measurements within the building are at or below background levels. It should be noted that the site buildings are currently vacant.

In addition, a Special CAMP is included in Appendix E of the Site Management Plan. The Special CAMP must be implemented within 20 feet of potentially exposed individuals or structures. A copy of the Special CAMP is also included in Appendix 5 of this HASP.

9.0 EQUIPMENT DECONTAMINATION

PPE helps prevent the wearer from becoming contaminated or inhaling contaminants, and good work practices help reduce contamination on protective clothing, instruments, and equipment. Even with these safeguards, contamination may occur. Harmful materials can be transferred to clean areas, exposing unprotected personnel. To prevent such occurrences, the following contamination reduction and decontamination procedures have been developed.

9.1 Minimization of Contact with Contaminants

During completion of all site activities, personnel should attempt to minimize the degree of contact with contaminated materials. This involves a conscientious effort to keep "clean" during site activities. All personnel should minimize kneeling, splash generation, and other physical contact with contamination. This may ultimately minimize the degree of decontamination required and the generation of waste materials from site operations.

9.2 Personnel Decontamination

Personnel hygiene, coupled with diligent decontamination, will significantly reduce the potential for exposure. Consideration will be given to prevailing wind directions so that the decontamination line, the support zone, and contamination reduction zone exit is upwind from the exclusion zone and the first station of the decontamination line. Decontamination will be performed by removing all PPE used in EZ and placing in drums/trash cans at CRZ. Disinfecting hand wipes shall be available for wiping hands and face. For Level D Decontamination, personnel should wash and rinse gloves, and use anti-bacterial wipes/gel and wash and rinse hands and face with potable water. For Level C Decontamination, personnel should wash and rinse gloves and over boots, remove boot covers, remove outer gloves, remove Tyvek® splash-resistant suit or chemical resistant clothing, wash inner gloves, remove respirator, rinse inner gloves, remove inner gloves and wash and rinse hands and face.

If exposed to subsurface soils, wash with soap and water.

9.3 Hand Held Equipment Decontamination

Hand held equipment includes all monitoring instruments, samples, hand tools, and notebooks. The hand held equipment is dropped at the first decontamination station to be decontaminated by one of the decontamination team members. These items must be decontaminated or discarded as waste prior to removal from the exclusion zone.

To aid in decontamination, monitoring instruments can be sealed in plastic bags or wrapped in polyethylene. This will also protect the instruments against contaminants. The instruments will be wiped clean using antibacterial wipes and paper towels if contamination is visually evident.

Decontamination procedures for sampling equipment, hand tools, etc., shall include the use of steam cleaning or a detergent wash, as appropriate for the site conditions. All liquids generated in the decontamination will be stored at the Site in drums and then disposed of at an approved facility in accordance with federal, state and local regulations. Personnel performing this task will wear the proper PPE.

9.4 Heavy Equipment Decontamination

Decontamination of chemically contaminated heavy equipment will be accomplished using high - pressure steam or dry decontaminated with brushes and shovels. Decontamination shall take place on a decontamination pad and all liquids used in the decontamination procedure will be collected. Vehicles or equipment brought into an exclusion zone will be treated as contaminated, and will be decontaminated prior to removal. All liquids used in the decontamination procedure will be stored at the Site in drums and then disposed of at an approved facility in accordance with federal, state and local regulations. Personnel performing this task will wear the proper PPE.

10.0 EMERGENCY ACTION PLAN

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible and wait at the assigned 'safe area'. Follow the instructions of the Site Safety Officer.

Employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

11.0 MEDICAL SURVEILLANCE

Medical surveillance will be provided to all employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

12.0 EMPLOYEE TRAINING

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the remedial investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

13.0 COVID 19

Please refer to the attached COVID 19 protocols in Attachment 6.

14.0 REFERENCE DOCUMENTS FOR ENVIRONMENTAL INFORMATION

The following reports below may be referenced to understand site subsurface conditions. It is recommended when possible, to review the applicable documents below prior to subsurface work to understand potential site subsurface conditions that may be encountered.

- *Phase I Environmental Site Assessment (ESA), 872 and 886 Hudson Avenue, Rochester, New York* completed by Seeler Engineering, P.C. ("Seeler"), September 2017
- *Phase II Environmental Site Assessment, 872 and 886 Hudson Avenue, Rochester, New York 14621*, by LaBella, August 2018
- *Preliminary Shallow Bedrock Groundwater Study Summary Letter*, *872 and 886 Hudson Avenue, Rochester, New York,* completed by LaBella, October 11, 2018
- *Remedial Investigation Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester New York,* by LaBella dated December 26, 2018 (Revised April 4, 2018)
- *Remedial Investigation Report, NYSDEC BCP Site #C828209, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella, September 2019

- *Interim Remedial Measures Work Plan (IRMWP) for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by Labella dated August 2019
- *Interim Remedial Measure RAOC#1 Design Document*, *Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 7, 2020
- *Sub-Slab Depressurization Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* completed by LaBella, dated June 18, 2019 and *Sub-Slab Depressurization Work Plan Addendum #1,* by LaBella, dated January 20, 2020
- *Construction Completion Report for Tank Removals and Construction Related Activities, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 2020
- *Construction Completion Report for RAOC #1 and RAOC #2, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* by LaBella dated January 2020
- *Remedial Alternatives Analysis and Remedial Action Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York* dated August 17, 2020, Last Revised September 17, 2020 by LaBella
- *Final Engineering Report, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York* by LaBella dated February 2021

APPENDIX 1

Site Contact List

SITE CONTACTS AND EMERGENCY CONTACTS LIST

LaBella Associates, DPC Personnel		
Environmental BCP and Phase II Manager	Dan Noll, PE	Office: 585-295-6611
Project Manager	Michael Pelychaty, PG	Office: 585-295-6253
Site Safety Officer	To Be Determined	Office: Cell:
Environmental Safety Manager	Rick Rote, CIH	Office: 704-941-2123
Safety Coordinator	Steve Szymanski	Office: 585-295-6633
Emergency Contacts		
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Rochester General Hospital Emergency Department	585-922-2000
Poison Control Center:	Finger Lakes Poison Control	585-273-4621
Police (local, state):	City of Rochester Police	911
Fire Department:	City of Rochester Fire Department	911
NYSDEC and NYSDOH Contacts		
NYSDEC	NYSDEC Project Manager; Charlotte B. Theobald	585-226-5354 charlotte.theobald@dec.ny.gov
NYSDEC	NYSDEC Project Manager's Supervisor; David Pratt	585-226-5315 david.pratt@dec.ny.gov
NYSDOH	NYSDOH Project Manager; Arunesh Ghosh	518-486-1443 Arunesh.ghosh@health.ny.gov
Site Owner and Operator Contact Information		
Urban League of Rochester	Carolyn Vitale	585-325-6530
Home Leasing	--	877-457-3783

* Note: Notifications are subject to change and will be updated as necessary.

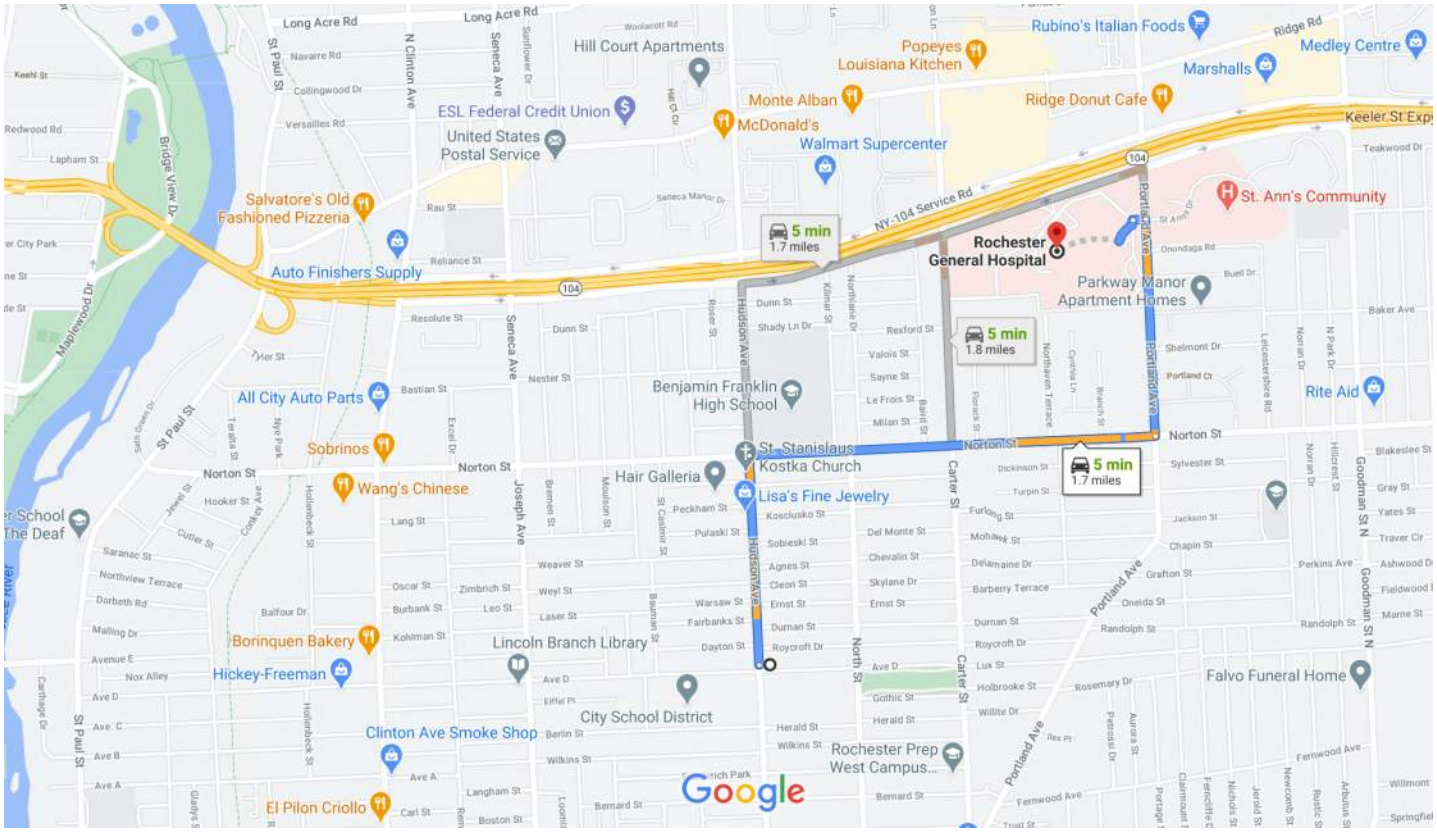
APPENDIX 2

Directions to Hospital

Google Maps

872 Hudson Avenue, Rochester, NY to Rochester General Hospital

Drive 1.7 miles, 5 min



Map data ©2021 1000 ft

via Norton St — 5 min
Best route — 1.7 miles

via Hudson Ave and NY-104 Service Rd E — 5 min
1.7 miles

via NY-104 Service Rd E — 5 min
1.8 miles

Explore Rochester General Hospital

Restaurants Hotels Gas stations Parking Lots More

APPENDIX 3

Daily Trench Inspection Form

DAILY TRENCHING INSPECTION FORM

LOCATION:	DATE:
TIME OF INSPECTION(S)	
WEATHER CONDITIONS:	APPROX. TEMP.:
SUPERVISOR/FOREMAN:	SUPERVISOR:

DIMENSIONS:	DEPTH =		
	TOP =	W	L
	BOTTOM =	W	L

SOIL TYPE:	TESTED:
❑ Solid rock (most stable)	❑ Yes
❑ Average soil	❑ No
❑ Fill material	
❑ Loose sand	

PROTECTION METHODS:

(Walls MUST be vertical—NO voids)

SHORING

- ❑ Timber
- ❑ Pneumatic
- ❑ Hydraulic
- ❑ Screw Jacks
- ❑ Trench Shield

UNEVEN, IRREGULAR WALLS

- ❑ Trench Box
- Sloping: q 1:1 (45˚) q 1 ½:1 (34˚)

Yes	No	HAZARDOUS CONDITIONS
❑	❑	Saturated soil / standing or seeping water
❑	❑	Cracked or fissured wall(s)
❑	❑	Bulging wall(s)
❑	❑	Floor heaving
❑	❑	Frozen soil
❑	❑	Super-imposed loads
❑	❑	Vibration
❑	❑	Depth greater than 5'

PLACEMENT OF SPOILS & EQUIPMENT

❑	❑	Spoils at least 2 feet from edge of trench
❑	❑	Equipment at least 2 feet from edge
❑	❑	Backhoe at end of trench
❑	❑	Compressor, etc. at remote location

LADDER LOCATION

❑	❑	Located in protected area
❑	❑	Within 25 feet of safe travel
❑	❑	Secured
❑	❑	Extends 36 inches above the landing
❑	❑	Leads to safe landing

Yes	No	ENVIRONMENTAL CONDITIONS:
❑	❑	Potential hazardous atmosphere?
❑	❑	Gas detector used?

Yes	No	OTHER:
❑	❑	Shoring equip.& materials inspected prior to use?
❑	❑	Is trench SAFE to enter?

COMMENTS:

NOTE All unsafe conditions must be corrected prior to trench entry. If any hazardous conditions are observed, the trench must be immediately evacuated and no one allowed to re-enter until corrective action has been taken.

To be completed prior to each shift and after each rain storm.

TO BE FILLED OUT BY SUPERVISOR/FOREMAN

Excavation Entry Authorized By:

_____

Supervisor/Foreman

APPENDIX 4

Confined Space Entry Permit

11.05 CONFINED SPACE ENTRY PERMIT

Project Name:			
Permit Confined Space Description:			
Location of Permit Required Confined Space:			
Purpose of Entry:			
Date of Entry:		Permit Expiration Time:	
Entry Time:		Exit Time:	

Permit Space Hazards
(Indicate specific hazards with checkmark)

_____Oxygen deficiency (less than 19.5 %)
_____Oxygen enrichment (greater than 23.5 %)
_____Flammable gases/vapors (greater than 10 % of LEL)
_____Carbon Monoxide greater or = to 25 ppm
_____Hydrogen Sulfide greater or = to 10ppm
_____Mechanical hazards
_____Electrical hazards
_____Engulfment hazards
_____Other hazards: _____

Equipment Required For Entry and Work
(Specify as required)

{ } Hardhat
{ } Safety Glasses
{ } Goggles
{ } Face Shield
{ } Gloves
{ } Other _____

Respiratory protection: _____
Atmospheric testing/monitoring: _____
Communication: _____
Non Entry/Rescue Equipment: _____

Preparation for Entry
(Check after steps have been taken)

_____Notification of affected departments of service interruption

_____Isolation methods

{ } Lockout/tagout
{ } Blank/blind
{ } Purge/clean
{ } Inert
{ } Barriers
{ } Ventilate
{ } Atmospheric Test
{ } Other _____

_____Personal awareness

{ } Pre-entry briefing on specific hazards & control methods
{ } Notify contractors of permit & hazard conditions
{ } Other Permits:_____
{ } Hot work
{ } Line breaking
{ } Other: _____

Communication/Alarm Procedures
(To be used by attendants and entrants)

Entry Supervisor
(List by name)

Authorized Entrants
(List by name or attach roster)

Rescue Services

Name of Service	Phone Number	Method of Contact

Authorized Attendants
(List by name)

Testing Record

PRE-ENTRY

	Acceptable Conditions	Result ___: ___ AM/PM	Result ___: ___ AM/PM	Result ___: ___ AM/PM	Result ___: ___ AM/PM	Result ___: ___ AM/PM	Result ___: ___ AM/PM
Oxygen-min.	> 19.5% - < 23.5%						
Flammability	<10% LEL/LFL						
CO	<25ppm						
H2S	<10ppm						
Other (list below)							
Tester Initials							

Monitor Make/Model:_____

Monitor Serial Number:_____ Monitor Calibration Date:_____

Additional Comments:_____

_____

_____

Authorization By Entry Supervisor: Authorization below indicates that the appropriate steps have been taken to minimize the risk associated with confined space entry and all persons related to this entry have been trained on the nature of the hazards and controls involved with this entry.

_____ _____ _____

Printed Name Signature Date/Time

Permit Terminated: Date/Time: _____

Note:

1. Permit must be completed before entry.
2. Permit must be posted at location of entry.
3. Permit valid for 8 hours only.
4. Return permit to project file and your manager when terminated.

APPENDIX 5

Special CAMP

CAMP Special Requirements

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work With Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g., weekends or evenings) when building occupancy is at a minimum.

APPENDIX 6

COVID 19 Protocols

1.10 COVID-19 HEALTH AND SAFETY PLAN

Name of Business:	**LaBella Associates**	
Industry:	**Professional Services and Construction**	
Chief Executive Officer:	**Steve Metzger**	**(585) 295-6223**
President:	**Jeff Roloson**	**(585) 295-6224**
Senior VP Operations:	**Sue Matzat**	**(585) 295-6617**
HR Director:	**Michele Ebenhoch**	**(585) 402-7085**
Safety Coordinator:	**Steven Szymanski**	**(585) 295-6633**
General Counsel:	**Bob Attardo**	**(585) 770-2555**

Background and Purpose

This safety plan details how LaBella Associates will minimize COVID-19 health risks for employees, contractors and visitors. It shall be made available to all employees, and also shall be used as a training guide. This document will be updated as necessary to reflect new developments and/or information related to COVID-19, and shall be conveyed to all affected employees upon update.

About COVID-19
The coronavirus disease 2019, commonly referred to as COVID-19, is a respiratory illness that can spread from person to person. Infection with COVID-19 can cause mild to severe illness and, in some cases, death. Typical symptoms include fever, cough and shortness of breath, but other non-respiratory symptoms have been reported. Asymptomatic cases, or cases with no symptoms at all, have also been documented. According to the U.S. Department of Health and Human Services' Centers for Disease Control and Prevention (CDC), symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.

Information posted by the CDC indicates that COVID-19 is a new disease and, therefore, we are still learning about how it spreads and the severity of illness it causes. Per the CDC, the virus is

thought to spread mainly from person-to-person:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs, sneezes or talks.
- These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- Some recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms.

Contact with surfaces or objects that have been contaminated by the virus followed by touching of the mouth, nose or possibly eyes is another potential means of contracting the virus. Consequently, the CDC recommends that people practice frequent hand washing or disinfection, and that frequently touched surfaces/objects be regularly cleaned and disinfected.

The CDC has determined that older adults and people of any age that have underlying medical conditions, such as asthma, autoimmune deficiencies, chronic lung disease, serious heart conditions etc., might be at a higher risk for severe illness from COVID-19.

It recently was reported that the best safety measure to take to avoid contracting COVID-19 is to maintain more than six (6) feet of distance from other people, followed by wearing a mask/face covering, and then washing your hands frequently/using hand sanitizer. Doing all of the above provides the greatest protection.

More information concerning COVID-19 is available at the CDC website: www.cdc.gov/coronavirus/2019-ncov.

I. PEOPLE

A. Calling Employees Back to the Office

As states and counties ease stay-at-home restrictions, the process for returning to the office in those regions may begin. However, for reasons of safety and efficiency, the process may not occur as soon as restrictions are lifted. The process also may be done in phases and may require changes to work schedules.

- An office may not reopen unless and until all applicable CDC, State and LaBella guidelines and requirements are met.
- Employees who can work from home are encouraged to continue working from home, provided they are getting their work done effectively and efficiently and billing their best 40 hours each week.
- Anyone who is in a high risk health category shall be strongly encouraged to continue to work from home at all times. Those at higher risk of COVID-19 are:
    - People 65 years old and older
    - People who live in a nursing home or long-term care facility
    - People of all ages with the following underlying medical conditions:
        - chronic lung disease or moderate to severe asthma
        - serious heart conditions
        - immunocompromised, including from cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications
        - severe obesity (body mass index [BMI] of 40 or higher)
        - diabetes
        - chronic kidney disease undergoing dialysis
        - liver disease.

- Consider that if schools/day cares remain closed, a certain percentage of employees may have to continue to work from home.
- In order to reduce the number of employees in the office at the same time, or to separate employees who otherwise work in close proximity to each other, it may be necessary to assign certain employees to work different shifts or days.

If community spread of the virus worsens in a region as a result of restrictions being lifted, work from home procedures may immediately be re-implemented.

B. Physical Distancing

All employees shall maintain a distance of more than 6 feet of separation among individuals at all times, both in the office and in the field, unless safety of the core function of the work activity requires a shorter distance.

Work Stations

- Employees in the office will be seated at workstations so they are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). When distancing is not feasible between workstations, physical barriers (e.g., cubicle walls, Plexiglas, strip curtains, or other impermeable dividers or partitions) must exist or be erected, provided they do not affect air flow, heating, cooling or ventilation.
- Unacceptable workstation spacing may result in staggering days or shifts for some employees.
- When visiting other workstations, offices and reception areas, individuals must maintain at least 6 feet of separation at all times.

Where practicable, measures should be put in place to reduce bi-directional foot traffic using tape or signs with arrows in narrow aisles, hallways or spaces, and to denote 6 feet of spacing in commonly used areas and any areas in which lines are commonly formed or people may congregate (e.g., copy rooms, kitchens/break rooms, reception areas).

C. Personal Protective Equipment (PPE)

All LaBella employees who work in an office or at a jobsite will wear masks/face coverings. You must wear a mask/face covering, which covers both your nose and mouth, when entering and leaving; anytime you are away from your desk, workstation or private office; while in jobsite trailers; or when it is not possible to maintain 6 feet of physical distancing from other people.

Examples of when masks/face coverings must be worn:

- When entering and exiting an office or jobsite.
- In conference rooms, break rooms, bathrooms, etc.
- When walking around the office, on elevators, and in stairwells.
- When a colleague meets with you at your desk or in your private office, even while maintaining 6 feet of physical distancing.

Masks/face coverings may be removed when:

- Working alone in segregated spaces (e.g., cubicles, private offices), provided no other person is less than 6 feet away in all directions.

- Eating or drinking, while maintaining more than 6 feet of distance from all other people.

This policy is consistent with the CDC guidance for offices, and the requirements of most of the states where LaBella has offices or projects. However, two states – Ohio and Pennsylvania – require that masks/face coverings must be worn at all times. Those state orders govern over this policy. Employees working in Ohio and Pennsylvania, or visiting offices and jobsites in those states, must wear a mask/face covering at all times.

Continuing to work productively from home is the best thing you can do. Individuals infected with the coronavirus can be contagious before displaying symptoms or without ever displaying symptoms. Wearing a mask/face covering primarily protects your colleagues from catching the coronavirus from you, either before you may develop symptoms or if you are asymptomatic, but it provides you with some protection too. Physical distancing and wearing masks/face coverings might mitigate the risk of infection in office workplaces.

LaBella may mandate that all employees must wear a mask/face covering at all times in a particular office or at jobsites in a particular county, when there is worrisome community spread of the virus in that county, and/or if the number of employees in an office or on a floor reaches a higher density.

LaBella shall provide disposable masks/face coverings at no cost to employees, and shall maintain an adequate supply of masks/face coverings for replacement. However, employees are encouraged to purchase their own masks/face coverings for improved comfort, durability and aesthetics. All masks/face coverings must provide full coverage of the nose and mouth. Employees should provide their own masks/face coverings to be worn off duty from work.

Masks/face coverings must be cleaned or replaced after use or when damaged or soiled, may not be shared, and should be properly stored or discarded.

Guidelines for wearing masks/face coverings:

- Before putting on a mask/face covering, clean your hands with alcohol-based hand sanitizer or soap and water.
- Cover mouth and nose with mask/face covering and make sure there are no gaps between your face and the mask/face covering.
- Avoid touching the mask/face covering while using it; if you do, clean your hands with alcohol-based hand sanitizer or soap and water.
- Avoid pulling the entire mask/face covering down or tucking it under your chin - it shall either be fully on or taken off.
- Replace the mask/face covering with a new one as soon as it is damp. If using a homemade cloth mask/face covering, it shall be routinely washed, depending on frequency of use.
- To remove the mask/face covering: remove it from behind your ears (do not touch the front of the mask/face covering); discard immediately in a closed bin; or if it is not soiled, place it into a closed paper bag for storage; then immediately clean hands with alcohol-based hand sanitizer or soap and water.

D. Personal Hygiene

Employees shall practice good personal hygiene while in the office or on the jobsite. This shall include the following safe practices:

- Wash hands frequently with soap and water for at least 20 seconds.

- Use hand sanitizer containing at least 60% alcohol when hand washing is not practical.
- Avoid touching your mouth, nose or eyes prior to washing or sanitizing your hands.
- Wash or sanitize hands prior to, and after removal of face masks.

Soap and water, or hand sanitizer, shall be provided and maintained at each office and jobsite, and in LaBella "pool" vehicles.

E. Travel

Business and Personal Travel

- Non-essential business travel is prohibited.
- Essential business travel is discouraged. The preference is for using Skype, Zoom, Teams, WebEx or conference calls as much as practicable.
- Employees must have Division Director approval for any type of air travel or hotel stays.
- Travel by public transportation (planes/trains/buses) and hotel stays will require a 14 day quarantine upon return from travel. During quarantine, employees cannot report to a LaBella office or a client's office, but may report to a jobsite, provided they strictly follow all guidelines in this document.

LaBella "Pool" Vehicles

- Drivers shall clean/disinfect all commonly touched surfaces of the vehicle prior to, and after, each use.
- Cleaning supplies can be obtained through Steven Szymanski or your local office.
- Drivers shall ensure there are ample supplies left in the vehicle for the next user. This includes wipes, gloves and trash bags.
- Drivers shall properly dispose of all used/soiled materials prior to returning the vehicle.

II. PLACES

A. Preparing the Workplace

To prepare for a full working staff again, supplies must be available, to include:

- Paper towels
- Hand soap
- Hand sanitizer
- Disinfectant Wipes
- Rubber Gloves
- Masks/Face Coverings
- Additional wastebaskets

- ➢ Inventories of these items shall increase as they become available.
- ➢ Additional hand sanitizer stations should be installed in common areas, such as entry/exit areas, reception areas, restroom areas, coffee/snack areas, and conference rooms.

- Hygiene posters shall be installed at elevators and stairwells, reception areas, break rooms, restrooms, and conference rooms.

B. Cleaning and Disinfection

Regular Office Cleaning

- Janitorial/cleaning services shall be increased however, hand hygiene, safe distancing and masks/face coverings will continue to be our best defense during the pandemic until further notice.
- Regular cleaning and disinfection of offices shall occur, with more frequent cleaning and disinfection for high risk areas used by many individuals and for frequently touched surfaces, such as elevator and door keypads, doorknobs, handles, light switches, tables, countertops, desks, phones, keyboards, toilets, faucets and sinks. In New York, logs must be maintained that include the date, time, and scope of cleaning and disinfection.
- Cleaning and disinfection shall be performed in areas, on surfaces, and pursuant to schedules, in accordance with CDC and State guidelines and requirements.
- If surfaces are dirty, they shall be cleaned by janitorial services using a detergent or soap and water prior to disinfection. To disinfect, they shall use products that meet the CDC's criteria for use against COVID-19.
- For disinfection, most common EPA-registered household disinfectants shall be effective. Follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, etc.).
- Appropriate cleaning/disinfection supplies, such as disposable wipes, shall be provided so that shared and frequently touched surfaces (e.g., doorknobs, conference room touchscreens, remote controls, copiers, plotters, scanners, and other work tools and equipment) can be wiped down by employees before and after each use.
- All items you touch should be considered contaminated, unless you are in your personally cleaned and maintained work space. It will be important for you to wash with soap and water/sanitize your hands after use of all common items such as tools, copiers, printers, machines, vehicles, elevators, door knobs, security keypads, faucets, coffee machines, etc. The use of gloves may seem like a good idea, but they are not recommended as a replacement for proper hand hygiene.
- Employees shall clean and disinfect their own personal work spaces to his or her standards. This shall include performing routine cleaning and disinfection of workstations, keyboards, telephones, and other related surfaces.

C. Communication

Signs must be posted throughout the office to remind individuals to:

- Cover their nose and mouth with a mask or cloth face-covering.
- Properly store and, when necessary, discard Personal Protective Equipment (PPE).
- Adhere to physical distancing instructions.
- Report symptoms of or exposure to COVID-19, and how employees should do so.
- Follow hand hygiene and cleaning and disinfection guidelines.

D. Gatherings in Enclosed Spaces

In-person gatherings (e.g., meetings, conferences) must be limited to the greatest extent possible, and other methods, such as video and telephone conference calls, should be used whenever possible. In-person meetings should be held in open, well-ventilated spaces, and individuals must maintain more than 6 feet of distance between one another.

Tightly confined spaces (e.g., elevators) will be occupied by only one individual at a time, unless all occupants are wearing masks/face coverings. If a space is occupied by more than one person, the total number of occupants shall be limited to no more than 50% of the maximum occupancy as set by the certificate of occupancy. Ventilation with outdoor air should be increased to the greatest extent possible (e.g., opening windows and doors in individual offices and conference rooms).

Collaboration areas/ Break Rooms/ Conference Rooms

- Consider closing and prohibiting use of common areas, such as collaboration areas, conference rooms, and break rooms, including food marts, vending machines and coffee machines.
- To the extent such spaces remain open, seating arrangements must be modified to ensure that individuals are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). Where possible, chairs shall be removed from conference rooms to the point of facilitating safe distancing and stored in a secure location.
- Conference room scheduling software shall be updated to reflect that the rooms hold fewer occupants. If not possible, then signs shall be installed reminding occupants to maintain safe, physical distancing. (*Conference calls shall continue to replace in-person meetings wherever possible and should be promoted as a first option.)*
- The recommended best practice is that employees should refrain from eating lunch together for the time-being. If employees eat lunch together, they must maintain more than 6 feet of separation both side-to-side and when facing one another.

Reception Areas

- Temporary Plexiglas "sneeze guard" screens shall be installed at reception desks or check-in points.
- Seating arrangements must be modified to ensure that individuals are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). Where possible, chairs shall be removed from reception areas to the point of facilitating safe distancing and stored in a secure location.
- To maintain hygiene, magazines, corporate swag, and pens should be removed from the reception areas.
- Visitors must sign-in on a visitor log which will be provided to each office.
- Hand sanitizer dispensers should be installed and located in plain view.

E. Workplace Activity

Measures must be taken to reduce interpersonal contact and congregation, through methods such as:

- Adjusting workplace hours.
- Reducing in-office workforce to accommodate social distancing guidelines.

- Shifting design (e.g., A/B teams).
- Avoiding multiple teams working in one area by staggering scheduled tasks and using signs to indicate occupied areas.

The sharing of objects, such as laptops, notebooks, touchscreens, and writing utensils, shall be limited, and employees are discouraged from touching shared surfaces, such as conference tables, door knobs, keypads, elevator buttons and coffee machines. When in contact with shared objects or frequently touched areas, employees are encouraged to wash hands with soap and water, or to use hand sanitizer, before and after contact.

Vehicles, Tools, Field Offices and Other Equipment

- Staff shall be minimized to only those required to complete the work.
- All employees shall commute to the site in separate vehicles.
- To the extent possible, vehicles, hand tools and power equipment shall be dedicated for use by one individual on the jobsite. In the event this is not possible, time shall be allowed for disinfection of all items prior to, and after, each use.
- Similarly, heavy equipment shall be dedicated to one operator to the extent possible. All project staff shall be informed each day of the operator designated for each piece of equipment during the morning tailgate meeting. Should project conditions dictate the use of heavy equipment by multiple operators, commonly used surfaces of the equipment shall be disinfected prior to, and after, each use.
- Offices, portable or otherwise, shall be disinfected at least once each day.

Interactions with Members of the General Public

Jobsites may restrict public access, however, in the event there may be minimal interaction with the general public, the following procedures shall be applied:

- A sign shall be posted at the perimeter of the work area indicating that, due to COVID-19 considerations, all questions or comments regarding the project should be communicated via telephone or e-mail using the contacts listed.
- Project staff is to minimize interaction with the public.
- One person shall be designated to handle all interactions with members of the public and shall utilize remote communications if possible.
- Social distancing and face covering guidelines shall be observed during any interaction with the general public.

Office and Jobsite Visitors

All visitors shall be instructed by their host on the following procedures prior to their visit:

- Visitors who are feeling ill shall not visit our offices or jobsites.
- Visitors must wear a mask/face covering immediately prior to entering our offices and jobsites, and at all times while in our offices and at our jobsites.
- Visitors shall report to reception or jobsite trailers upon arrival, sanitize their hands, and complete a visitor log. All visitors must provide contact information. In the event we subsequently learn of an employee, contractor or another visitor who tests positive for COVID-19 or develops symptoms of COVID-19, this information may then be used by LaBella and/or local health departments to contact the visitor regarding potential exposure to the coronavirus.
- Visitors must sign in and sign out.

- Visitors must be escorted at all times.
- Wherever possible, meetings with visitors in our offices should occur in conference rooms closest to entrances and reception areas in order to minimize visitors traveling through our offices.
- In New York, all visitors must complete a health screening questionnaire immediately prior to visiting our offices and jobsites. If the visitor answers "Yes" to any of the questions regarding COVID-19 symptoms, positive test results, or close contact with a person confirmed or suspected of having COVID-19, the visitor shall be prohibited from entering our office or jobsite.

III. PROCESS

A. Screening

All Employees

- All employees are expected to monitor their health conditions daily, and must stay home if they are not feeling well.
- All employees are strongly encouraged each workday to take their temperature at home immediately before leaving for the office or jobsite. If you have a fever (a temperature of 100.4 degrees or higher), you must stay home and continue to monitor your health.

New York Offices and Jobsites

- All employees who will be or who are working in a New York office location or at a New York project site must complete a health screening questionnaire immediately before leaving home or entering any office or project site in NY. This questionnaire must be completed every day prior to reporting to an office or project site for any length of time.
- The questionnaire must ask whether individuals have (1) experienced any COVID-19 symptoms in the past 14 days, (2) tested positive for COVID-19 in the past 14 days, and/or (3) had close contact with any confirmed or suspected COVID-19 cases in the past 14 days.
- The questionnaire does not have to be completed - and should not be completed - on any day that you are working from home, not working (like PTO) or will not be in NY. However, you must fill out the questionnaire if you will be stopping into an office or a project site even for just a brief time.
- If you answer "YES" to any of the health questions, you must not report to the office or project site. Instead, contact HR for further direction.
- Assessment responses shall be reviewed every day, and such review must be documented.

Pennsylvania Offices and Jobsites

- All employees who will be or who are working in a Pennsylvania office location or at a Pennsylvania project site must take their temperature daily before entering the office or jobsite.
- If you have a fever (a temperature of 100.4 degrees or higher), you must not enter the office or project site. Instead, contact HR for further direction.

- LaBella is prohibited by law from keeping records of employee temperatures.

Reporting Illness
If an employee experiences symptoms of COVID-19, or someone observes that another employee is exhibiting symptoms of COVID-19, it must be reported to the Director of HR, Michele Ebenhoch, immediately. If COVID-19 is suspected, the employee will be sent home and asked to contact a healthcare professional.

- Symptoms of COVID-19 are:
    - Fever or chills
    - Cough
    - Shortness of breath or difficulty breathing
    - Fatigue
    - Muscle or body aches
    - Headache
    - New loss of taste or smell
    - Sore throat
    - Congestion or runny nose
    - Nausea or vomiting
    - Diarrhea
- If a COVID-19 test is warranted by the healthcare professional, the employee shall complete the test and remain home awaiting the results.
- If COVID-19 is suspected by a healthcare professional, but testing is unavailable, this shall be treated as a positive test result.

Positive Test or Symptoms of COVID-19
An employee who tests positive for COVID-19 or experiences symptoms of COVID-19 shall not return to work until:

- Completing at least 10 days of isolation since the positive test/onset of symptoms, and
- He or she has received 2 negative tests in a row, at least 24 hours apart (pending test availability), or
- If he or she is not tested again, then only when:
    - Symptoms have improved and the employee is capable of working; and
    - The employee is free of fever for at least 72 hours, without the use of fever reducing medications.

COVID-19 Exposure (close contact)

- Close contact is defined as being within 6 feet of an infected person for at least 10 minutes at any time during the period beginning 48 hours before the infected person first developed symptoms of COVID-19 or took a test that returned positive and continuing until the time the infected person was isolated.
- If an employee has had close contact with a person (e.g., another employee or a member of your household) with COVID-19 and the employee does <u>not</u> have symptoms of COVID-19 him or herself, the employee must self-quarantine for 14 days.
- If an employee has had close contact with a person with COVID-19 and the employee is or becomes symptomatic, the employee should notify HR and follow the above

protocols for a positive case. Even if the symptoms are deemed not related to COVID-19, the employee must complete at least 10 days of isolation from the onset of symptoms.

B. Contact Tracing and Disinfection of Contaminated Areas

Each office and jobsite must maintain a continuous log of every person, including workers and visitors, who may have close contact with other individuals at the work site or area, excluding deliveries that are performed with appropriate PPE or through contactless means. For each location, an employee shall be designated to be in charge of maintaining the log of each person that enters the site.

If an employee tests positive for COVID-19, LaBella shall immediately notify state and local health departments, and cooperate with contact tracing efforts, including notification of potential contacts, such as workers or visitors who had close contact with the infected individual, while maintaining confidentiality required by state and federal law and regulations.

In the event of a confirmed case of COVID-19 in the workplace, all employees in that office shall be notified and advised to self-monitor for symptoms for at least 14 days from the date of possible exposure. Employees who were in close contact with the infected employee may be instructed to self-quarantine/work from home for 14 days while self-monitoring for symptoms. During that time, if any employee experiences symptoms of COVID-19, it must be reported to the Director of HR, Michele Ebenhoch.

All confirmed cases of COVID-19 that occur in the workplace, and meet the criteria for OSHA reporting, shall be so reported, but shall otherwise be handled in the strictest confidence. Employee health information, including contracting COVID-19, is confidential medical information, and LaBella is prohibited by law from disclosing that a particular employee has COVID-19. We will only be able to inform employees that a "co-worker" in their office or with whom they were in close contact has tested positive or has symptoms of COVID-19.

Cleaning and disinfection if someone is suspected or confirmed to have COVID-19

- Janitorial/cleaning services shall perform enhanced cleaning and disinfection after persons suspected/confirmed to have COVID-19 have been in the facility.
- If more than seven days have passed since the person who is suspected or confirmed to have COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary, but routine cleaning and disinfection will continue.
- Close off areas used by the person who is suspected or confirmed to have COVID-19. The entire office or project site does not have to be closed, if it is possible to just close off the affected area(s).
- Common areas (e.g., elevators, lobbies, building entrances) must be closed and cleaned and disinfected.
- Where possible, open outside doors and windows or use ventilation fans to increase air circulation in the area.
- Wait 24 hours before cleaning and disinfection. If 24 hours is not feasible, wait as long as possible.

- Clean and disinfect all areas used by the person suspected or confirmed to have COVID-19, such as workstations, bathrooms, common areas, and shared equipment.
- Once the area has been appropriately cleaned and disinfected, it can be reopened for use.
    - Employees who did not have close contact with the person suspected or confirmed to have COVID-19 can return to the work area immediately after cleaning and disinfection.
    - Employees who did have close contact will undergo a 14-day quarantine.

IV. OTHER

The aforementioned policies and procedures are subject to change in order to meet or exceed CDC recommendations, as well as to remain compliant with federal and local governments and health officials.

Employees failing to follow the aforementioned procedures shall be subject to disciplinary measures, as described in the Disciplinary Policy 1.09 of the LaBella Safety Manual.

Community Air Monitoring Plan

CAMP Special Requirements

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work With Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g., weekends or evenings) when building occupancy is at a minimum.

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX F

Operations and Maintenance Manual

Operation & Maintenance Manual
Former Wollensack Optical Site
NYSDEC BCP Site #C828209

Location:

Former Wollensack Optical Site
872 and 886 Hudson Avenue
Rochester, New York

Prepared for:

Jefferson Wollensack, LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 2182207

February 11, 2021

LaBella
Powered by partnership.

300 State Street, Suite 201 | Rochester, NY 14614 | p 585-454-6110 | f 585-454-3066

Table of Contents

APPENDICES

1.0 INTRODUCTION

This Operation and Maintenance Manual (O&MM) is designed to assist the system operators in operating, maintaining and monitoring the 1) Sub-Slab Depressurization System (SSDS) 2) Groundwater Treatment System (GTS), 3) Site Cover System. These systems are at the Former Wollensack Optical property located at 872 and 886 Hudson Avenue, City of Rochester, Monroe County, New York. This plan was developed in accordance with the requirements of the Site Management Plan (SMP) that is currently in the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C828209 which is administered by the New York State Department of Environmental Conservation (NYSDEC).

1.1 Systems Overview

The three (3) remedial systems at the Site were constructed and operated to address groundwater contamination of chlorinated solvents, prevent direct contact with residual contaminated soil (i.e. soil cover system), and soil vapors containing chemicals of concern in the Site building (i.e. SSDS). Each remedial system is summarized below:

- GTS – The GTS consists of seventeen (17) overburden and nine (9) bedrock treatment wells within the southwestern portion of the Site Building on the ground level (i.e., first floor). The treatment wells and piping under the first floor have been permanently sealed with concrete and are not accessible. Piping and valves that connect to the treatment system are located in the building basement and an access location is situated outside of the east side of the building that is intended to be used to inject treatment chemicals while the building is occupied.
- SSDS – The SSDS depressurizes the sub-slab in the Site building, thus mitigating potential soil vapor intrusion.
- Soil Cover System – The soil cover system is monitored annually at the Site, and is designed to prevent direct contact exposure to contaminated soil. The soil cover system consists of vegetated areas as well as permanent paved areas.

1.2 Plan Organization

The O&MM is divided into four sections:

- Section 2 provides a general description of each remedial system;
- Section 3 includes recommended preventative maintenance and checks; and
- Section 4 includes a summary of operational monitoring of each remedial system.

Appendices for this O&MM are attached to this document and include the manufacture's equipment manuals for the remedial systems, as applicable.

2.0 SYSTEM DESCRIPTIONS

The descriptions of each remedial system is described below.

2.1 Groundwater Treatment System (GTS) Description

The GTS location and detail of this system is shown in Appendix A. The GTS consists of seventeen (17) overburden and nine (9) bedrock 2 inch diameter treatments wells. Each treatment well is connected to 1 inch diameter horizontal piping located beneath the first floor that extends into the basement to a series of valves then to a header pipe that exits outside the eastern exterior building wall. The GTS is designed to allow a treatment chemical to be injected from outside of the building to a series of valves that will allow the treatment chemical to be targeted to a specific area/well.

2.2 Sub Slab Depressurization System (SSDS)

The SSDS was installed in substantial accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 (and associated amendments). The majority of the system was constructed of Schedule 40 polyvinyl chloride (PVC) piping and fittings.

The SSDS was designed to provide negative pressure beneath the first floor and basement sub slab of the Site building that effectively minimizes the potential for vapor intrusion for VOCs from sub slab soils to indoor air. The locations of the system features are depicted on Figures 10A and 10B of the Site Management Plan are also included in Appendix B of this report.

A series of pressure field extension (PFE) points have been installed within the first floor and basement to confirm the SSDS has depressurized the slab a minimum of 0.004 inches of water column lower than indoor air pressure. In addition, an audible alarm and pressure gauge were installed on each SSDS system to confirm the system is operating and to warn of any system failures.

Please note the following information to assist with the monitoring, maintenance, or repair of the following SSDS components:

Table 2.2 SSDS Information

Item	Note:
Basement SSDS	- Fan Model: RadonAway RP265 - Fan Connected to Circuit: House Panel (HP) #2 circuit/breaker 36. The circuit board is located on the 4th floor in an unoccupied room adjacent to and north of the elevator. - The basement fan on the roof is the easternmost fan. - Manometer gauge is located on pipe riser within basement space that is located against the center wall in the room on the western side. - Audible alarm is located adjacent to the manometer and connected to HP #1 located within the basement (on the eastern wall) and connected to circuit/breaker 11.
First Floor SSDS	- Fan Model: RadonAway GP501 - Fan Connected to Circuit: House Panel (HP) #2 circuit/breaker 36. The circuit board is located on the 4th floor in an unoccupied room adjacent to and north of the elevator. - The first floor fan on the roof is the westernmost fan. - Manometer gauge is located in a closet that can be accessed on the 1st floor in a locked door that is immediately adjacent to the basement door/stairs. The pipe riser within this space that is located against the northern wall in the room on the western site. - Audible alarm is located adjacent to the manometer and is connected to HP #1 located within the basement (on the eastern wall) and on circuit/breaker 2.

Layout and specifications for the SSDS including are included in Appendix B.

2.3 Soil Cover System

The soil cover system consists of a vegetative layer, concrete, or asphalt paved layer over contaminated soil areas. The cover system is to remain intact to prevent direct contact with the contaminated soil. Vegetative cover areas consist of a 2 foot (ft) thick layer of clean soil over contaminated soil as shown on the figure included in Appendix C. These cover systems will be monitored for overall conditions to determine of weathering and deterioration has occurred that would require maintenance.

3.0 PREVENTIVE MAINTENANCE

It is important that the systems be checked frequently so that any operating problems can be identified and corrected in a timely manner. Operational monitoring, discussed in Section 4.0 should also be performed as part of this inspection, when necessary.

3.1 GTS Preventive Maintenance

Routine maintenance of the system is not anticipated due to its limited use. The GTS visible piping will be inspected for integrity and leaks using potable water prior to the application of a treatment chemical. Potable water will be obtained from the City of Rochester municipal water supply. Annual inspection forms will be included in the Periodic Review Report.

3.2 SSDS Preventive Maintenance

Preventive maintenance of the SSDS will include system checks to ensure the system is operating to the design requirements, and will include the following:

- Inspection of the area of concern, including all visible components of the venting systems;
- Monitoring of designated PFE monitoring points to ensure there are no potentially significant changes in subsurface gas concentrations or pressure,
- Inspection of the blower/fan system and alarms to ensure all component parts are functioning;
- Monitoring of vent risers for flow rates to confirm that the venting systems are functioning as intended; and
- Other appropriate requirements such as routine maintenance, testing of functioning components of the venting systems in accordance with the manufacturers' schedule and recommendations, if appropriate.

3.3 Soil Cover System Preventive Maintenance

3.3.1 Vegetated Soil Cover

Vegetated soil covers should maintain a grass layer, with no bare spots or erosion. Top layers of gravel or landscaped cover materials will be maintained to minimize vegetation growth and deterioration by promptly replacing the material when those problems are noted.

3.3.2 Pavement and Concrete Soil Cover

Maintain pavement and concrete to repair significant cracks and deterioration promptly. Repairs can include an appropriate sealant, and, if necessary replacement of portions of the pavement or concrete.

4.0 OPERATIONAL MONITORING

Operational monitoring allows for measuring the performance of the remedial system and identifies potential problems is the system operation. Site management forms are included in Appendix D.

4.1 GTS Operational Monitoring and Storage of Treatment Chemical

Monitoring of the GTS is summarized in Table 4.1 below:

Table 4.1 GTS Monitoring

Component	Inspection Frequency	Maintenance Frequency
Visible General System Piping	Annual	As Needed

Prior to the application of a treatment chemical, potable water may be applied within the treatment system to observe if there are any visible leaks or malfunctioning valves. It is anticipated future applications of a treatment chemical will not take place during winter months which may result in freezing of the treatment chemical.

Secondary containment will be setup prior to delivery of sodium permanganate or other treatment chemical. When the delivery of sodium permanganate arrives, it will be placed directly into the secondary containment. The treatment chemical and mixing tank/ totes will be stored within the secondary containment at all times. Treatment chemical will be mixed in a 275 gallon tote or equivalent. Extension pipes/ hoses will be connected to the individual injection pipes on the exterior of the building or in the basement and the chemical will be injected from within the secondary containment area.

The secondary containment will consist of a spill containment berm or pad with capacity to contain 110% of the volume of solution that may be present at one time. A neutralizing agent (e.g., sodium thiosulfate) will be made readily available in the event that a spill of the sodium permanganate occurs. The neutralizing agent will only be applied in a diluted form. The neutralizing agent will be stored in a separate secondary containment berm.

A security fence (chain link fence) or Conex box (or equivalent) will be used to store the treatment chemical when on Site. The fence or Conex box will be locked when no one is working in the area of the treatment chemical. Caution signs will be attached to the fence or Conex box indicating to keep out.

4.2 SSDS Monitoring

The monitoring of the SSDS will include the following:

Table 4.2 – SSDS Monitoring

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
Fans	Pressure	Operation	Quarterly for the first year then annually or as-needed
Fan Gauge/ Manometer	Should be within typical operating range	-0 to 0.25 inches of water columns	Quarterly for the first year then annually or as-needed
Fans	Pressure at PFE points	0.004 inches of water column/negative pressure	Quarterly for the first year then annually or as-needed
Alarms and piping	Operational/condition	None.	Quarterly for the first year then annually or as-needed

*Annual monitoring for the SSDS will be contingent upon the results of the quarterly monitoring

4.3 Soil Cover System Monitoring

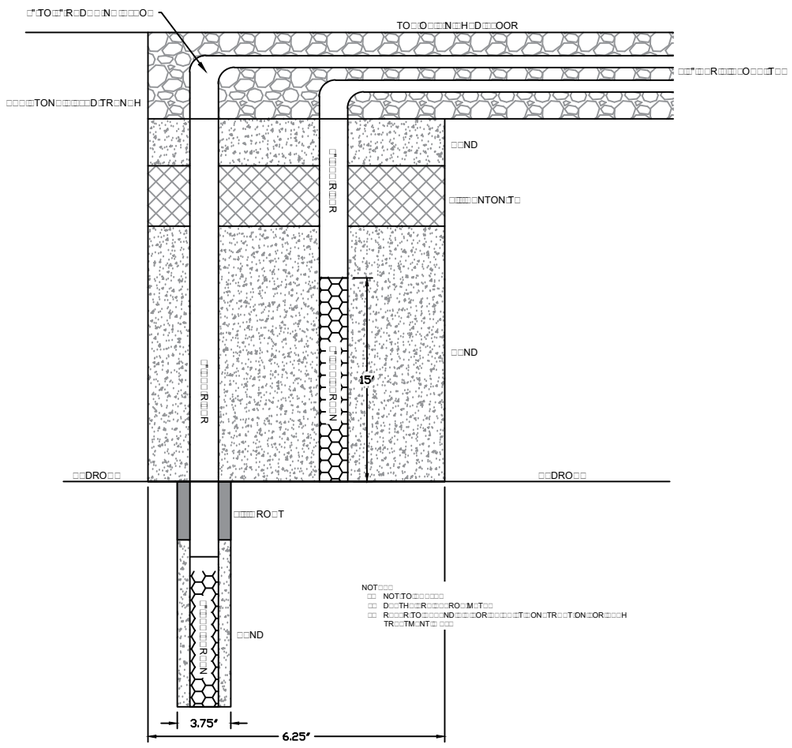
All cover systems should be inspected at least annually in the spring one the snow cover is gone. Photographs and notes of the condition, and whether preventative maintenance is required of the soil cover system shall be recorded in the annual site inspection form included in Appendix D. The monitoring should include the following:

TABLE 4.3 Soil Cover System Monitoring

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
Building slab	Condition of Cover	NA	Annually
Concrete Surface	Condition of Cover	NA	Annually
Asphalt Surface	Condition of Cover	NA	Annually
Soil Cover	Condition of Cover	NA	Annually

APPENDIX A

GTS Information



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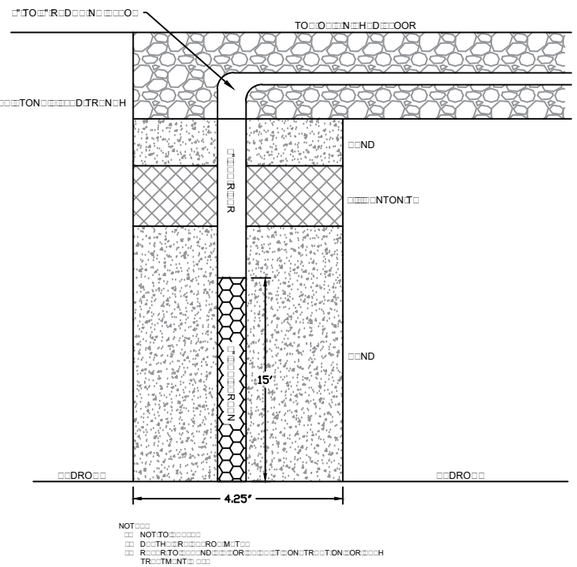
NESTED PAIR OVERBURDEN AND BEDROCK TREATMENT WELL



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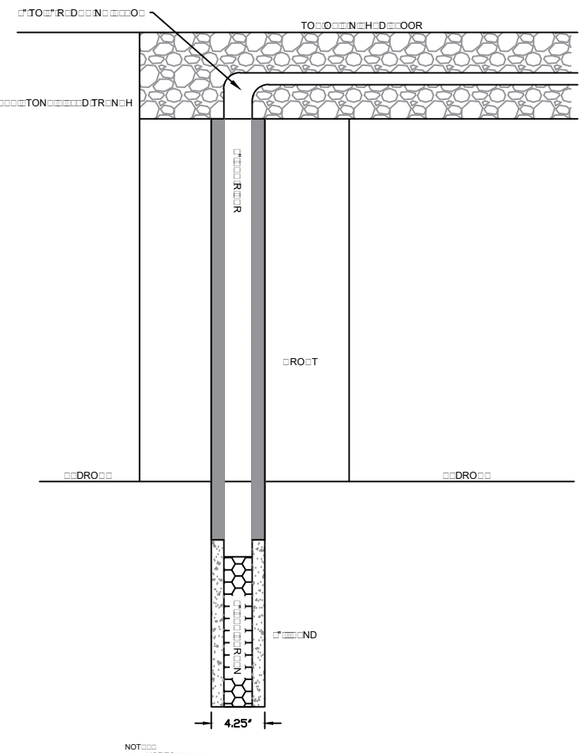
OVERBURDEN TREATMENT WELL



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BEDROCK TREATMENT WELL

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:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:

STATE OF NEW YORK
SAMUEL P. NOLL
No. 081998
LICENSED PROFESSIONAL ENGINEER

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PROJECT/CLIENT
FORMER WOLLENSAC□ OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

SITE MANAGEMENT PLAN

DRAWING TITLE
RAOC □ 1TREATMENT WELL
DETAILS

ISSUED FOR:
FINAL

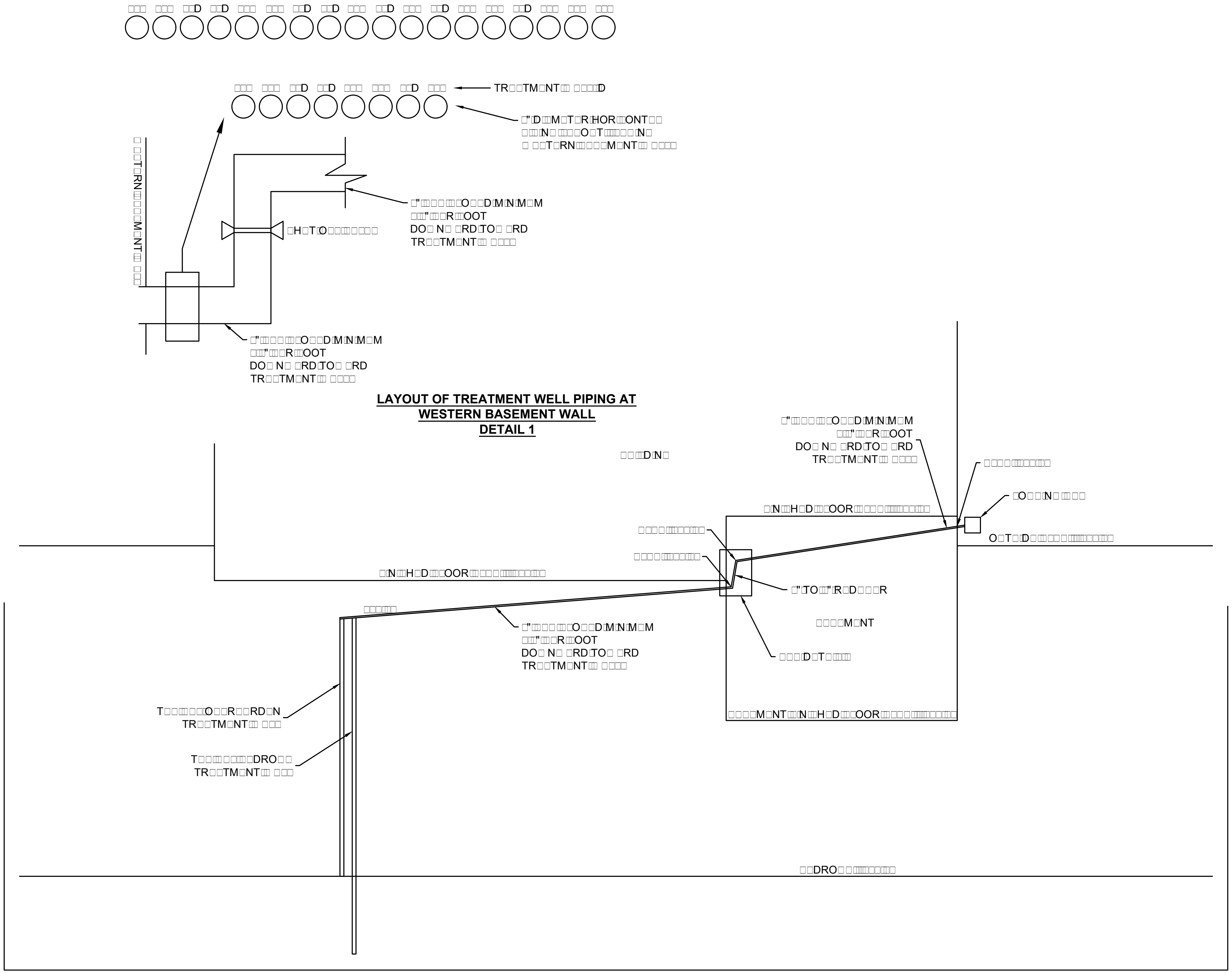
DATE:
1-3-2020

DESIGNED □□ AA
DRAWN □□ DRP
REVIEWED □□ AA

SCALE: NTS

PROJECT/DRAWING NUMBER
2182207

FIG □B



LAYOUT OF TREATMENT WELL PIPING AT WESTERN BASEMENT WALL
DETAIL 1

NOT

STATE OF NEW YORK
DANIEL P. NOLL
No. 081698
LICENSED PROFESSIONAL ENGINEER

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PROJECT/CLIENT
FORMER WOLLENSAC OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY
SITE MANAGEMENT PLAN

DRAWING TITLE
RAOC 1 TREATMENT SYSTEM
CROSS SECTION

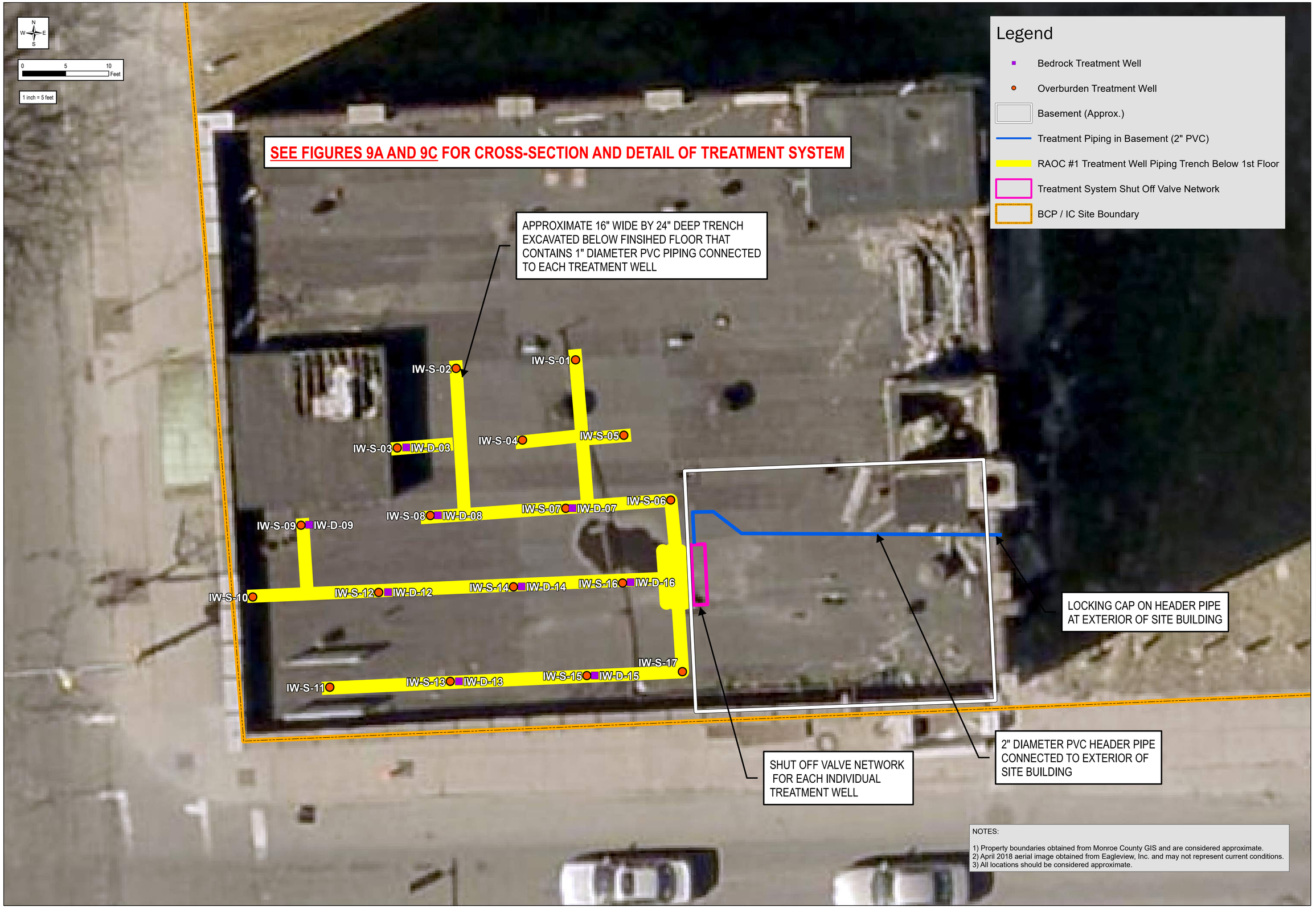
ISSUED FOR
FINAL

DATE: 1-3-2020

SCALE: NTS

PROJECT/DRAWING NUMBER
2182207

FIG



NOTES:

1) Property boundaries obtained from Monroe County GIS and are considered approximate.
2) April 2018 aerial image obtained from Eagleview, Inc. and may not represent current conditions.
3) All locations should be considered approximate.

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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

RAOC #1 TREATMENT WELL AND PIPING LOCATION AS-BUILT LAYOUT

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 9A]

INTENDED TO PRINT AS: 22" X 24"

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 9A - Treatment Well and Piping.mxd

APPENDIX B

SSDS Information

RadonAway®

The world's leading radon fan manufacturer.

2018 / 2019 Radon Professional's Pull-Out Fan Guide

Fan Selection Specifications and Guidelines

With Fan Replacement Guide

This handy 4-page guide is intended to make it easier for you to have RadonAway® fan specifications and our fan replacement chart at your fingertips where you need them, when you need them – on a job site, in your truck, at your desk, or anywhere else you might want to quickly check for fan specs or replacements.

As always, we are committed to providing you with not only the highest quality radon mitigation products but also information to help you provide expert, effective professional radon services.

To remove this guide, firmly hold this 4-page section, then fold back the rest of the catalog and gently pull the guide from the staples.

RP Pro Series

Use RP fans for quiet operation, energy efficiency and high air flow in porous sub-slab or sub-membrane materials consisting of about 4 inches of clean, size 4-6 gravel.

XP/XR Pro Series

Use XP/XR fans for compact size, lower pressure and average flow in very porous sub-slab/membrane materials consisting of 4 inches of clean, size 4-6 gravel.

GP Pro Series

Use GP fans for versatility and a broad performance range in moderate to tight sub-slab/sub-membrane conditions. Ideal choice when multiple suction points are necessary.

MODEL	P/N	FAN DUCT DIAMETER	RRNC 2.0 RADON FAN TYPE	WATTS	RECOM. MAX OP. PRESSURE "WC* Alt.>1,000ft. see NOTE	MAX. PRESSURE"WC	
RP140	28460	4"	RF1	15-21	0.7	0.8	
RP145	28461	4"	RF1, RF2	41-72	1.7	2.1	
RP260	28462	6"	-	47-65	1.3	1.4	
RP265	28463	6"	-	91-129	2.2	2.3	
RP380	28464	8"	-	96-138	2.0	2.3	
XP151	28469	4"	RF1	45-60	1.3	1.4	
XP201	28470	4"	RF1	38-74	1.6	1.7	
XR261	23019-1	6"	-	67-117	1.6	1.7	
GP201	28465	3"	-	31-67	1.8	2.1	
GP301	28466	3"	-	56-100	2.3	2.5	
GP401	28467	3"	-	62-128	3.0	3.2	
GP501	28468	3"	-	68-146	3.8	4.1	
SF180	28317	3" or 4"	-	53-71	1.7	2.1	
GP500	23003-1	3"	-	85-153	3.8	4.0	

	MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX OP. PRESSURE "WC*	MAX. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC						FAN WEIGHT	SHIPPING WEIGHT
							0"	10"	15"	20"	25"	35"		
With Cord	HS2000	23004-1	3"in / 2"out	153-314	14	16	62	40	23	-	-	-	17	20
	HS3000	23004-2	3"in / 2"out	120-250	21	24	39	30	25	19	-	-	18	21
	HS5000	23004-3	3"in / 2"out	349-381	35	41	43	35	32	28	24	18	18	21
With Switch Box	HS2000E	23004-4	3"in / 2"out	153-314	14	16	62	40	23	-	-	-	17	20
	HS3000E	23004-5	3"in / 2"out	120-250	21	24	39	30	25	19	-	-	18	21
	HS5000E	23004-6	3"in / 2"out	349-381	35	41	43	35	32	28	24	18	18	21

SF180

Use the SF180 for its low-profile design and moderate to good air flow in porous sub-slab or sub-membrane conditions ranging from about 4 inches of clean, size 4-6 gravel to very loose soil.

GP500 Series

Use the GP500 in situations that require a high-performance box fan as an effective alternative to more commonly used inline tube fans. It can provide coverage up to 1000 square feet per slab penetration.

HS Series

Use HS fans in sand, clay or tight soil conditions when you need up to 25 times the suction of inline radon fans.

	TYPICAL CFM vs. STATIC PRESSURE WC									FAN WEIGHT (lbs)	SHIPPING WEIGHT (lbs)
	0"	.5"	1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"		
	135	70	-	-	-	-	-	-	-	3.9	5
	166	126	82	41	3	-	-	-	-	5.5	7
	251	157	70	-	-	-	-	-	-	5.6	8
	334	247	176	116	52	-	-	-	-	6.5	9
	531	415	268	139	41	-	-	-	-	9.1	12
	150	115	69	-	-	-	-	-	-	4.9	6
	126	98	66	26	-	-	-	-	-	5	6
	217	149	87	27	-	-	-	-	-	5.7	8
	-	-	54	42	-	-	-	-	-	9.1	11
	-	-	64	54	41	-	-	-	-	9.8	12
	-	-	-	61	52	44	22	-	-	10	12
	-	-	-	-	66	58	50	27	-	10	12
	149	127	96	61	-	-	-	-	-	12.8	15
	-	-	-	-	51	45	35	18	-	18	20

RRNC 2.0 ANSI/AARST Standard

Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses

This chart displays the designated radon fan types recommended in the new standard.

*Radon Fan Types RF1 & RF2 minimum flow and pressure ratings are manufacturer specifications.

PIPE SIZE Nominal (I.D.)	TOTAL FOUNDATION AREA		
	< 1600 sq. feet < 149 sq. meters	1600 to 2500 sq. feet 149 to 232 sq. meters	> 2500 sq. feet > 232 sq. meters
(3 inch) [7.6 cm]	Use Radon Fan Type: **RF1** RF1 Minimum rating:* 50 cfm @ 0.5" WC [85m³/hr @ 125 Pa]	Use Radon Fan Type: **RF2** RF2 Minimum rating:* 75 cfm @ 1.0" WC [127m³/hr @ 250 Pa]	Radon fan to be sized by a certified/licensed radon mitigator.
(4 inch) [10 cm]	Use Radon Fan Type: **RF1** RF1 Minimum rating:* 50 cfm @ 0.5" WC [85m³/hr @ 125 Pa]	Use Radon Fan Type: **RF1** RF1 Minimum rating:* 50 cfm @ 0.5" WC [85m³/hr @ 125 Pa]	Radon fan to be sized by a certified/licensed radon mitigator.

***NOTE: This chart is based on airflow through the ducting of the fan. Every time you reduce the duct size, there is a 20% degradation of airflow. Airflow drops 4% every 1000 feet alt. You can calculate adjusted recommended maximum operating pressure based on the following formula:**

$$\left(\textit{Recommended}\ \text{Fan Operating Pressure}\right) - \left(\textit{Recommended}\ \text{Fan Operating Pressure} \times \frac{\text{Altitude}}{1{,}000\ \text{ft}} \times 4\%\right) = \textit{Actual}\ \text{Maximum Fan Operating Pressure}\ (\textit{Adjusted for altitude})$$

EXAMPLE:
GP501 Fan Operating in Denver, CO at Elevation of 5280 ft

$$\left(3.8\text{"}\ \textit{Recommended}\ \text{WC}\right) - \left(3.8\text{"} \times \frac{5{,}280\ \text{ft}}{1{,}000\ \text{ft}} \times 4\%\right) = 3.0\text{"}\ \textit{Actual}\ \text{WC}$$

Using Denver, CO as an example, RP145 actual WC reduces to 1.3, and RP265 reduces to 1.7 at 5,280 ft.

Need a replacement for other brands?
We've got you covered.

The RadonAway® replacement fans listed below provide superior performance and durability. In many cases, they use the same flexible pipe couplings and require little or no change to the system piping.This guide is intended to help you select a replacement fan for most brands. Included are many of the older fans with their current replacements.

Don't see the fan you need to replace? Give us a call and we will gladly help you find the best replacement fan for your requirements. 1-(800) 767-3703

ORIGINALLY INSTALLED FAN		RadonAway® REPLACEMENT FAN
Fantech	R100, F100, FR100, HP2133	RP140
	R150, F150, FR150	XR261 or RP260
	R160, F160, FR160	RP260 or RP265
	R175, F175, FR175	RP265
	HP190, HP2190	RP145
	HP190SL	SF180
	HP220	RP265
AMG/FESTA	Maverick	RP145, XP151, or XP201
	Hawk	RP260 or XR261
	Prowler	GP301
	Legend	RP265
	Eagle	GP401
	Goliath	RP260 or GP501**
	Force	RP260 or GP501**
Kanalflakt/ FanAmerica	T1 Turbo 5 (Fiberglass)	XP201* or XP151*
	T2 Turbo 6 (Fiberglass)	XR261 or RP260
	K4 (Metal Kanalflakt)	RP140*
	K4XL (Metal Kanalflakt)	XP201* or XP151*
	K6 (Metal Kanalflakt)	XR261 or RP260
Rosenberg	R100	RP140*
	R150	XR261 or RP260

*** Slightly different duct diameter requires different flexible couplings. ** Depends on site needs: Airflow vs. static pressure**

RadonAway
The world's leading radon fan manufacturer

RP PRO SERIES

INSTALLS WHITE, STAYS WHITE

Radon Mitigation Fan

All RadonAway® fans are specifically designed for radon mitigation. RP Series Fans provide superb performance, run ultra-quiet and are attractive. They are ideal for most sub-slab radon mitigation systems.

Features

- NEW Stay-White™ housing
- Energy efficient
- RP140 - ENERGY STAR Most Efficient 2019
- Ultra-quiet operation
- Meets all electrical code requirements
- Water-hardened motorized impeller
- Seams sealed to inhibit radon leakage (RP140 & RP145 double snap sealed)
- ETL Listed - for indoor or outdoor use
- Thermally protected motor
- Rated for commercial and residential use

MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC				
					0"	.5"	1.0"	1.5"	2.0"
RP140	28460	4"	15-21	0.7	135	70	-	-	-
RP145	28461	4"	41-72	1.7	166	126	82	41	3
RP260	28462	6"	47-65	1.3	251	157	90	-	-
RP265	28463	6"	95-139	2.3	375	282	204	140	70
RP380	28208	8"	96-138	2.0	531	415	268	139	41

Model	A	B	C
RP140	4.5"	9.7"	8.5"
RP145	4.5"	9.7"	8.5"
RP260	6"	11.75"	8.6"
RP265	6"	11.75"	8.6"
RP380	8"	13.41"	10.53"

MADE IN USA with U.S. and imported parts.

ETL Listed

All RadonAway® inline radon fans are covered by our 5-year, hassle-free warranty.

Most Efficient 2019 RP140 Only

For Further Information, Contact Your Radon Professional:

Rev C 0719
P/N 02047

RadonAway
The world's leading radon fan manufacturer

GP PRO SERIES

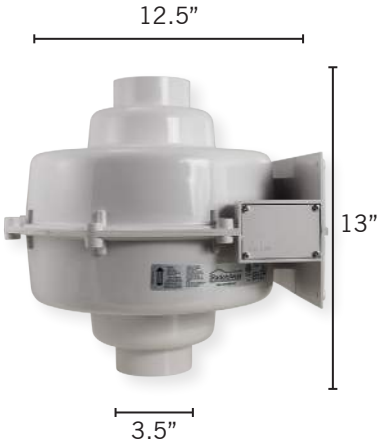
INSTALLS WHITE, STAYS WHITE

Radon Mitigation Fan

All RadonAway® fans are specifically designed for radon mitigation. GP Series Fans offer a wide range of performance options that make them ideal for most sub-slab radon mitigation systems.

Features

- NEW Stay-White™ housing
- Quiet operation
- Water-hardened motor
- Seams sealed under negative pressure (to inhibit radon leakage)
- Mounts on duct pipe or with integral flange
- 3" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed - for indoor or outdoor use
- 4 interchangeable GP models



MODEL	P/N	FAN DUCT DIAMETER	WATTS	RECOM. MAX. OP. PRESSURE "WC	TYPICAL CFM vs. STATIC PRESSURE WC						
					1.0"	1.5"	2.0"	2.5"	3.0"	3.5"	4.0"
GP201	28465	3"	31-65	1.8	54	42	11	-	-	-	-
GP301	28466	3"	56-100	2.3	64	54	41	4	-	-	-
GP401	28467	3"	62-128	3.0	-	61	52	44	22	-	-
GP501	28468	3"	68-146	3.8	-	-	66	58	50	27	4

Made in USA with U.S. and imported parts.

ETL Listed

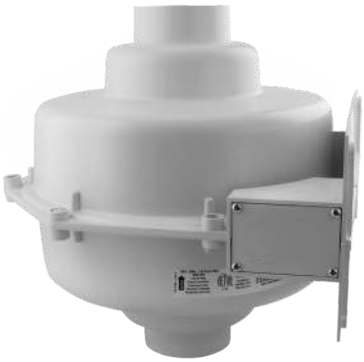
All RadonAway® inline radon fans are covered by our 5-year, hassle-free warranty.

For Further Information, Contact Your Radon Professional:

Rev D 0517
P/N 02045

RadonAway®

The world's leading radon fan manufacturer



RP, GP, XP Pro Series Installation Instructions

Fan Installation & Operating Instructions
RP, GP, XP Pro Series Fans
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION. DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** For General Ventilating Use Only. Do Not Use to Exhaust Hazardous, Corrosive or Explosive Materials, Gases or Vapors. See Vapor Intrusion Application Note #AN001 for important information on VI Applications. RadonAway.com/vapor-intrusion

2. **NOTE:** Fan is suitable for use with solid state speed controls; however, use of speed controls is not generally recommended.

2. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.

3. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.

4. **NOTICE!** There are no user serviceable parts located inside the fan unit.
Do NOT attempt to open. Return unit to the factory. (See Warranty, p. 8, for details.)

5. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.

6. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

   a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer. (See p. 8.)

   b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

   c) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire rated construction.

   d) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturers' guidelines and safety standards such as those published by any National Fire Protection Association, and the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and the local code authorities.

   e) When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.

   f) Ducted fans must always be vented to outdoors.

   g) If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) protected branch circuit.

Fan Installation & Operating Instructions

RP Pro Series	GP Pro Series	XP Pro Series
RP140 | P/N 28460	GP201 | P/N 28465	XP151 | P/N 28469
RP145 | P/N 28461	GP301 | P/N 28466	XP201 | P/N 28470
RP260 | P/N 28462	GP401 | P/N 28467	
RP265 | P/N 28463	GP501 | P/N 28468	
RP380 | P/N 28464		

1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP, GP and XP Pro Series Radon Fans are intended for use by trained, professional, certified/licensed radon mitigators. The purpose of these instructions is to provide additional guidance for the most effective use of RP, GP and XP Series Fans. These instructions should be considered supplemental to EPA/radon industry standard practices, state and local building codes and regulations. In the event of a conflict, those codes, practices and regulations take precedence over these instructions.

1.2 FAN SEALING

The RP, GP and XP Pro Series Fans are factory sealed; no additional caulk or other materials are required to inhibit air leakage.

1.3 ENVIRONMENTALS

The RP, GP and XP Pro Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F or more than 100 degrees F.

1.4 ACOUSTICS

The RP, GP and XP Pro Series Fans, when installed properly, operate with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan(s). RP, GP and XP Pro Series Fans are not suitable for kitchen range hood remote ventilation applications.)

1.5 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes, thus blocking air flow to the RP, GP and XP Pro Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes, allowing for return to normal operation.

1.6 SLAB COVERAGE

The RP, GP and XP Pro Series Fans can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP, GP and XP Pro Series Fan best suited for the sub-slab material can improve the slab coverage. The RP, GP and XP Pro Series have a wide range of models to choose from to cover a wide range of sub-slab materials. The RP140 and 145 are best suited for general purpose use. The RP 260 can be used where additional airflow is required, and the RP265 and RP 380 are best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.7 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP, GP and XP Pro Series Fan MUST be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP, GP and XP Pro Series Fans are NOT suitable for underground burial.

For RP, GP and XP Pro Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Diameter	Minimum Rise per Ft of Run*		
	@25 CFM	@50 CFM	@100 CFM
4”	1/8”	1/4”	3/8”
3”	1/4”	3/8”	1 1/2”

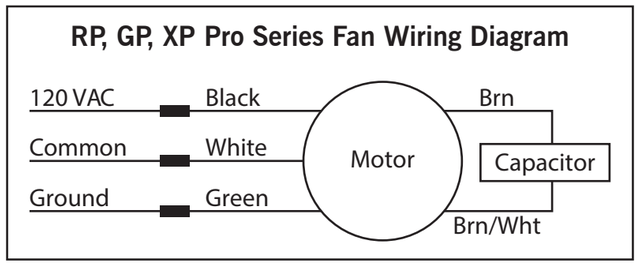
See p. 7 for detailed specifications.

1.8 SYSTEM MONITOR & LABEL

A System Monitor, such as a manometer (P/N 50017) or audible alarm (P/N 28001-2, 28001-4 or 28421), is required to notify the occupants of a fan system malfunction. A System Label (provided with Manometer P/N 50017) with instructions for contacting the installing contractor for service and identifying the necessity for regular radon tests to be conducted by the building occupants must be conspicuously placed in a location where the occupants frequent and can see the label.

1.9 ELECTRICAL WIRING

The RP, GP and XP Pro Series Fans operate on standard 120V, 60Hz AC. All wiring must be performed in accordance with National Fire Protection (NFPA) National Electrical Code, Standard #70, current edition, for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a UL Listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.



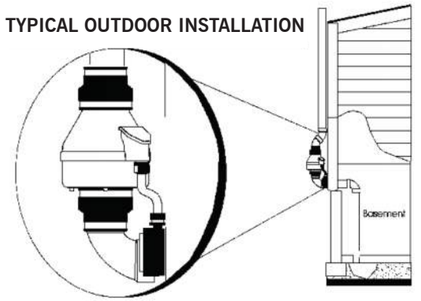
1.10 SPEED CONTROLS

The RP, GP and XP Pro Series Fans are rated for use with electronic speed controls; however, speed controls are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control (Cat. No. 94601-1).

2.0 INSTALLATION

The RP, GP and XP Pro Series Fans can be mounted indoors or outdoors. (It is suggested that EPA and radon mitigation standards recommendations be followed in choosing the fan location.) The GP fans have an integrated mounting bracket; RP and XP Pro Series Fans may be mounted directly on the system piping or fastened to a supporting structure by means of an optional mounting bracket.
The ducting from the fan to the outside of the building has a strong effect on noise and fan energy use. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.

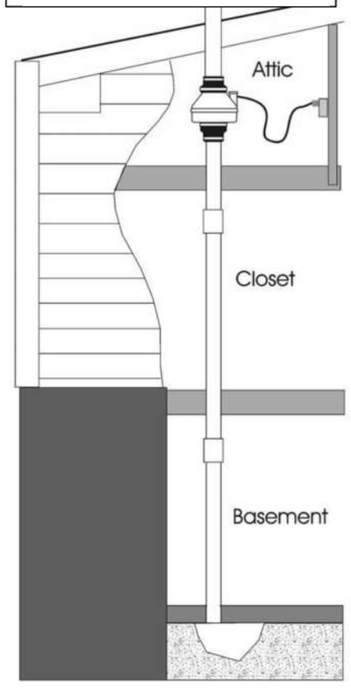
TYPICAL OUTDOOR INSTALLATION



2.1 MOUNTING

Mount the RP, GP and XP Pro Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.

TYPICAL INDOOR INSTALLATION



2.2 MOUNTING BRACKET (optional)

The RP and XP Pro Series Fans may be optionally secured with the RadonAway P/N 25007 mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as a means of disconnect for servicing the unit and for vibration isolation. As the fan is typically outside of the building thermal boundary and is venting to the outside, installation of insulation around the fan is not required.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.9). Note that the fan is not intended for connection to rigid metal conduit.

2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS & ANNUAL SYSTEM MAINTENANCE

_____ **Verify** all connections are tight and **leak-free**.

_____ **Ensure** the RP, GP and XP Pro Series Fan and all ducting are **secure and vibration-free**.

_____ **Verify system vacuum pressure** with manometer. **Insure** vacuum pressure is within normal operating range and **less than** the maximum recommended operating pressure.
(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 feet)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments.)
See Product Specifications. If this is exceeded, increase the number of suction points.

_____ **Verify Radon levels** by testing to EPA Protocol and applicable testing standards.

THE FOLLOWING CHARTS SHOW THE PERFORMANCE OF THE RP, GP and XP PRO SERIES FANS

RP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC									
Model	**0"**	**.25"**	**.5"**	**.75"**	**1.0"**	**1.25"**	**1.5"**	**1.75"**	**2.0"**
RP140	135	103	70	14	-	-	-	-	
RP145	166	146	126	104	82	61	41	21	3
RP260	251	209	157	117	70	26	-	-	-
RP265	375	330	282	238	204	170	140	108	70
RP380	531	490	415	340	268	200	139	84	41

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
RP140	15 - 21 watts	0.7" WC
RP145	41 - 72 watts	1.7" WC
RP260	47-65 watts	1.3" WC
RP265	95 - 139 watts	2.3" WC
RP380	96 - 138 watts	2.0" WC

**Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.*

Model	Size	Weight	Inlet/Outlet	L.2
RP140	8.5"H x 9.7" Dia.	5.5 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)	25
RP145	8.5"H x 9.7" Dia.	5.5 lbs	4,5" OD	15
RP260	8.6"H x 11.75" Dia.	5.5 lbs	6.0" OD	48
RP265	8.6"H x 11.75" Dia.	6.5 lbs	6.0" OD	30
RP380	10.53"H x 13.41" Dia.	11.5 lbs	8.0" OD	57

L.2 = Estimated Equivalent Length of Rigid Metal Ducting resulting in .2" WC pressure loss for Duct Size listed. Longer Equivalent Lengths can be accommodated at Flows Lower than that at .2" WC pressure loss (see CFM Vs Static Pressure "WC Table).

XP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC						
	0"	**.5"**	**1.0"**	**1.5"**	**1.75"**	**2.0"**
XP151	167	127	77	-	-	-
XP201	126	98	66	26	-	-

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
XP151	53-70 watts	1.4" WC
XP201	38-74 watts	1.6" WC

**Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.*

Model	Size	Weight	Inlet/Outlet
XP151	9.5"H x 8.5" Dia.	6 lbs	4.5"OD (4.0" PVC Sched 40 size compatible)
XP201	9.5"H x 8.5" Dia.	6 lbs	4.5" OD

GP Pro Series Product Specifications

Typical CFM Vs. Static Pressure "WC							
	1.0"	**1.5"**	**2.0"**	**2.5"**	**3.0"**	**3.5"**	**4.0"**
GP201	54	42	11	-	-	-	-
GP301	64	54	41	4	-	-	-
GP401	-	61	52	44	22	-	-
GP501	-	-	66	58	50	27	4

Model	Power Consumption 120VAC, 60Hz, 1.5 Amp Maximum	Maximum Recommended Operation Pressure* (Sea Level Operation)**
GP201	31-65 watts	1.8" WC
GP301	56-100 watts	2.3" WC
GP401	62-128 watts	3.0" WC
GP501	68 - 146 watts	3.8" WC

**Reduce by 10% for High Temperature Operation **Reduce by 4% per 1000 ft. of altitude.*

Model	Size	Weight	Inlet/Outlet
GP201	13"H x 12.5" Dia.	12 lbs	3.5"OD (3.0" PVC Sched 40 size compatible)
GP301	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP401	13"H x 12.5" Dia.	12 lbs	3.5" OD
GP501	13"H x 12.5" Dia.	12 lbs	3.5" OD

RP, XP and GP Pro Series Additional Specifications

Model	Recommended Duct	PVC Pipe Mounting	Thermal Cutout	Insulation Class
RP140	3" or 4" Schedule 20/40 PVC	Mount on the duct pipe or with optional mounting bracket. For Ventilation: 4", 6" or 8" Rigid or Flexible Ducting.	130°C/266°F	Class B Insulation
RP145			130°C/266°F	Class F Insulation
RP260			150°C/302°F	
RP265			150°C/302°F	
RP380	6" Schedule 20/40 PVC Pipe		150°C/302°F	
XP151	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
XP201				
GP201	3" or 4" Schedule 20/40 PVC	Fan may be mounted on the duct pipe or with integral flanges.	120°C/248°F	Class B Insulation
GP301				
GP401				
GP501				

Continuous Duty
3000 RPM
Thermally Protected
RP, GP Residential and Commercial
XP Residential Only
Rated for Indoor or Outdoor Use

Most Efficient 2019 ENERGY STAR www.energystar.gov
RP140 Only

LISTED Electric Fan

Intertek 77728

Conforms to UL STD. 507
Certified to CAN/CSA STD. C22.2 No.113

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the RadonAway® RP, GP and XP Pro Series Fan for shipping damage within 15 days of receipt. **Notify RadonAway of any damages immediately.** RadonAway is not responsible for damages incurred during shipping. However, for your benefit, RadonAway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open the housing.** Return unit to factory. (See Warranty below).

Install the RP, GP and XP Pro Series Fan in accordance with all EPA, ANSI/AARST standard practices, and state and local building codes and regulations.

Provide a copy of this instruction or comparable radon system and testing information to the building occupants after completing system installation.

Warranty

RadonAway® warrants that the RP, GP (excluding GP500) and XP Pro Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 12 months from the date of purchase or 18 months from the date of manufacture, whichever is sooner (the "Warranty Term").

RadonAway® will replace any fan which fails due to defects in materials or workmanship during the Warranty Term. This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway®.

The Fan must be returned (at Owner's cost) to the RadonAway® factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

5-YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway® will extend the Warranty Term of the fan to 60 months (5 years) from date of purchase or 66 months from date of manufacture, whichever is sooner, provided that the fan is installed by a professional radon mitigation contractor. Proof of purchase and/or proof of professional installation may be required for service under this warranty. No extended warranty is offered outside the Continental United States and Canada beyond the standard 12 months from the date of purchase or18 months from the date of manufacture, whichever is sooner.

RadonAway® is not responsible for installation, removal or delivery costs associated with this Warranty.

LIMITATION OF WARRANTY

EXCEPT AS STATED ABOVE, THE RP, GP (excluding GP500) and XP PRO SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULARPURPOSE.

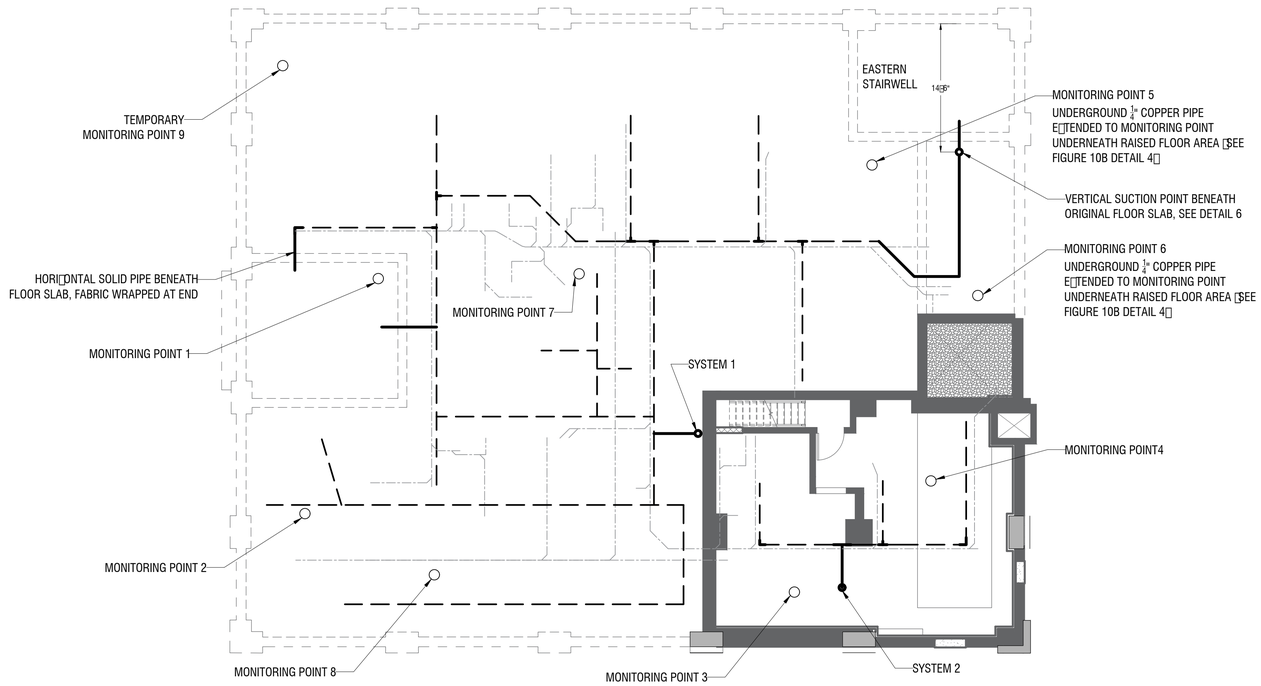
IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping costs, including insurance, to and from factory.

RadonAway® 3 Saber Way
Ward Hill, MA 01835 USA TEL (978) 521-3703
FAX (978) 521-3964
Email to: Returns@RadonAway.com

Record the following information for your records:

Serial Number: _____ Purchase Date: _____



R-100 SUB-SLAB DEPRESSURIZATION SYSTEM
1/8" = 1'

NOTES:

1. THIS PLAN NOT INTENDED TO PROVIDE PLUMBING DETAILS. REFER TO PLUMBING DRAWINGS.
2. VERTICAL PIPES ARE 4 INCH SCHEDULE 40 PVC. CONTRACTOR TO VENT UP THROUGH THE ROOF.
3. ALL SUB-SLAB VAPOR COLLECTION PIPING IS GEOTEXTILE-WRAPPED 4 INCH PERFORATED DUAL-WALLED CORRUGATED EXTERIOR SMOOTH INTERIOR HDPE.
4. 4 INCH SCHEDULE 40 PVC VERTICAL RISERS ROUTED TO STORAGE ROOM/ PIPE CHASE AND VENTED UP THROUGH THE ROOF.
5. ALARM AND MANOMETER ON EACH RISER PIPE INSIDE BUILDING IN ACCESSIBLE LOCATIONS AS SHOWN OF FIGURE.
6. SUB-SLAB DEPRESSURIZATION SYSTEM PERFORATED PIPING TO BE INSTALLED WITHIN PLUMBING TRENCH, ABOVE OR THE SIDE OF PLUMBING, WITH MINIMUM 3 INCHES OF STONE BETWEEN PIPES. MOVE SUB-SLAB DEPRESSURIZATION PIPING WITHIN TRENCH AS NEEDED TO ACCOMMODATE PLUMBING. LOCATIONS WHERE PIPING CROSSES, THE SSDS PIPING SHALL BE PLACED ABOVE PLUMBING PIPING.
7. 4" CAP AT EACH VAPOR COLLECTION PIPE TERMINATION.
8. TRENCH BACKFILLED WITH PEA STONE.
9. SEAL ALL PENETRATIONS INCLUDING SUMPS AND GAPS IN THE FLOOR SLAB WITH AN ELASTOMERIC JOINT SEALANT.
10. RADON AWAY GP-501 FAN OR EQUIVALENT ON EACH VERTICAL RISER ABOVE ROOF. TERMINATE VENT STACK MINIMUM 12 INCHES ABOVE ROOF AND MINIMUM 25 FEET FROM ANY AIR INTAKE.

LEGEND

- FABRIC WRAPPED 4 INCH HDPE PERFORATED PIPE PLACED WITHIN PEA STONE TRENCH
- PRESSURE MONITORING POINT
- APPROXIMATE LOCATION OF NEW PLUMING
- 4" SOLID PVC

NO.	REVISION	BY	DATE
1			
2			
3			
4			
5			
6			

STATE OF NEW YORK
DANIEL P. NOLL
No. 081598
LICENSED PROFESSIONAL ENGINEER

LaBella
Powered by partnership.

PROJECT/CLIENT
FORMER WOLLENSAC OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

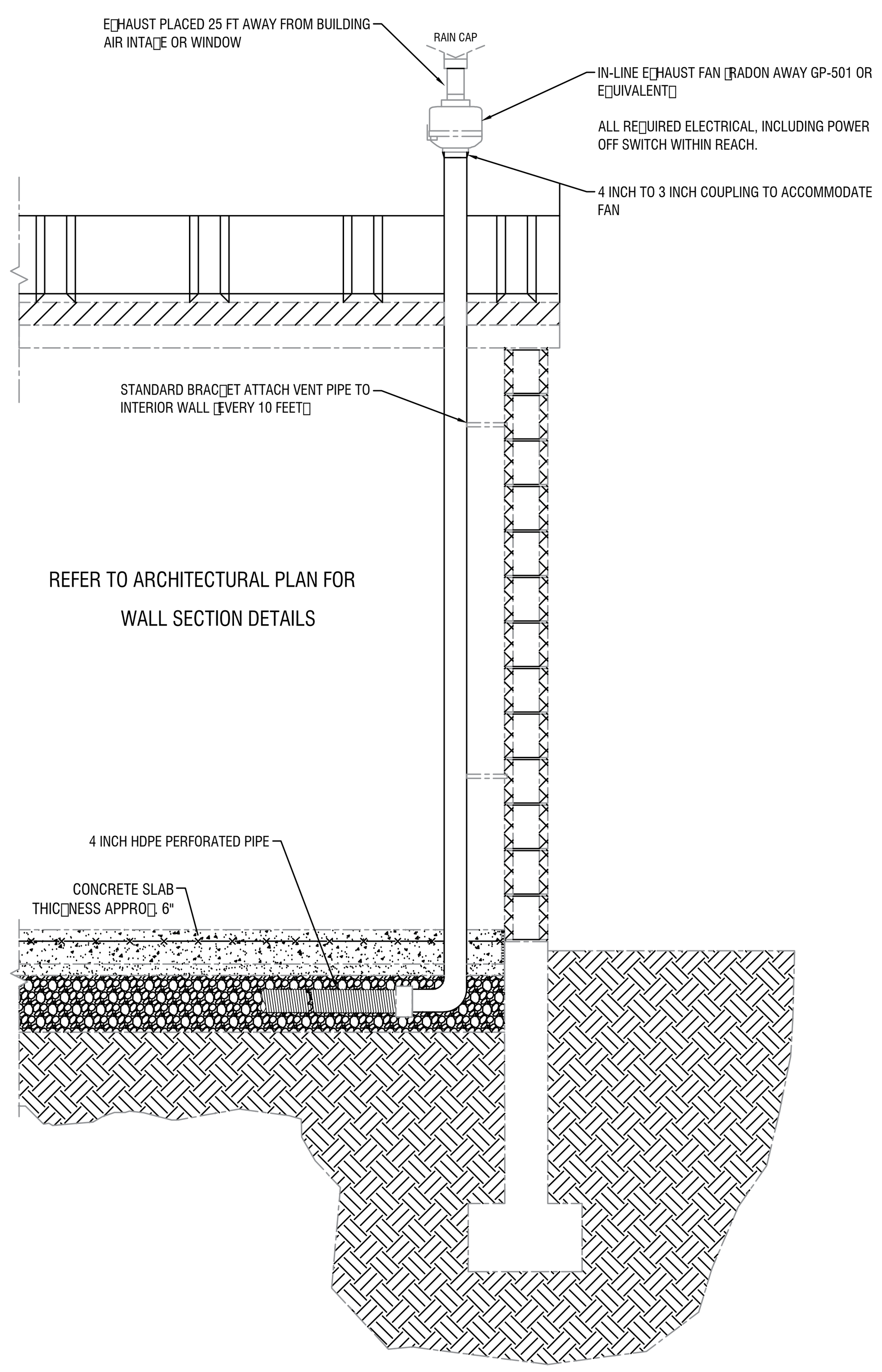
DRAWING TITLE
SUB-SLAB DEPRESSURIZATION
SYSTEM LAYOUT

ISSUED FOR
REVISION 1
DATE: 8/24/2020

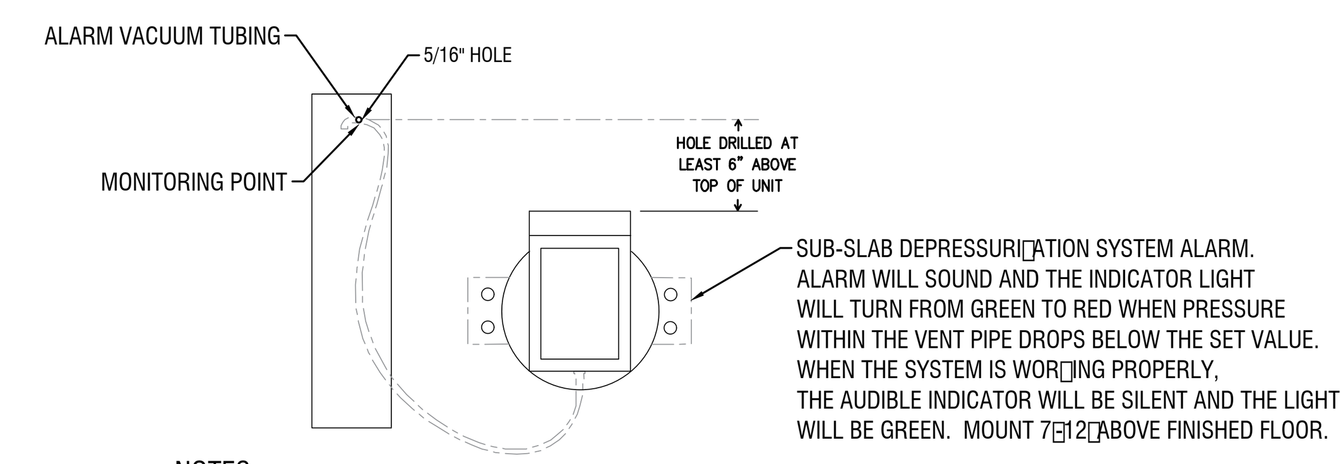
DESIGNED: AA
DRAWN: DRP
REVIEWED: AA
SCALE: 1/8" = 1'

PROJECT/DRAWING NUMBER
2182207

FIG 10



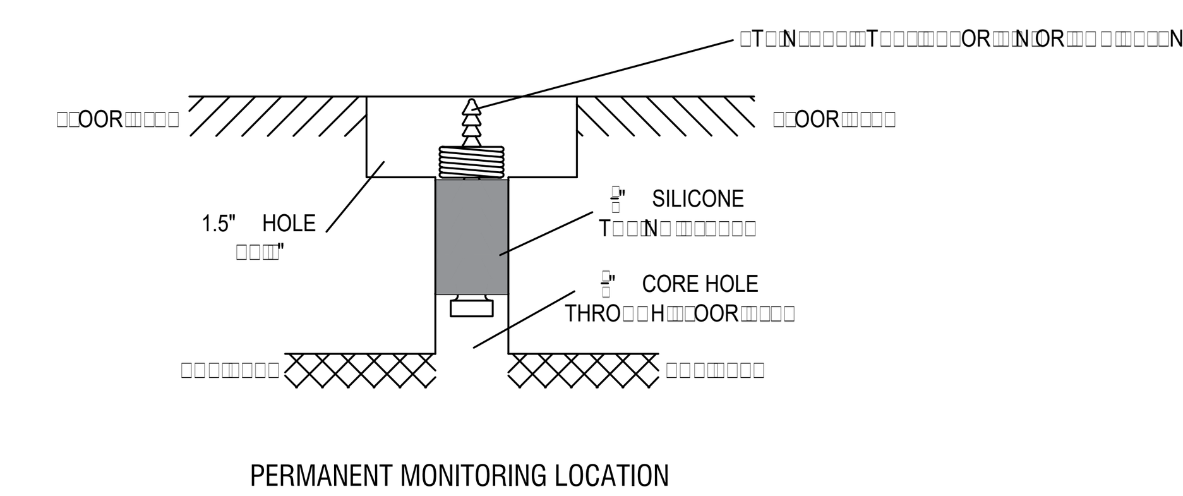
1 REAR END WALL
SCALE: NONE



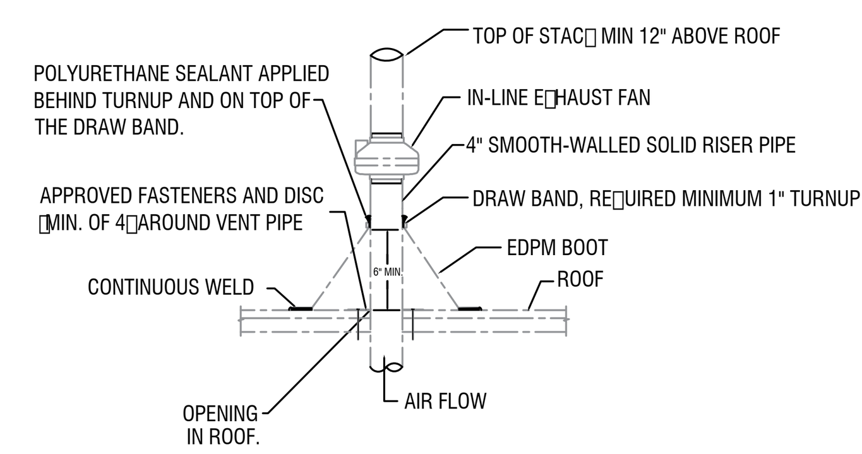
NOTES:

1. ALARM ON SEPARATE CIRCUIT.
2. U-TUBE MANOMETER IN VERTICAL PIPING

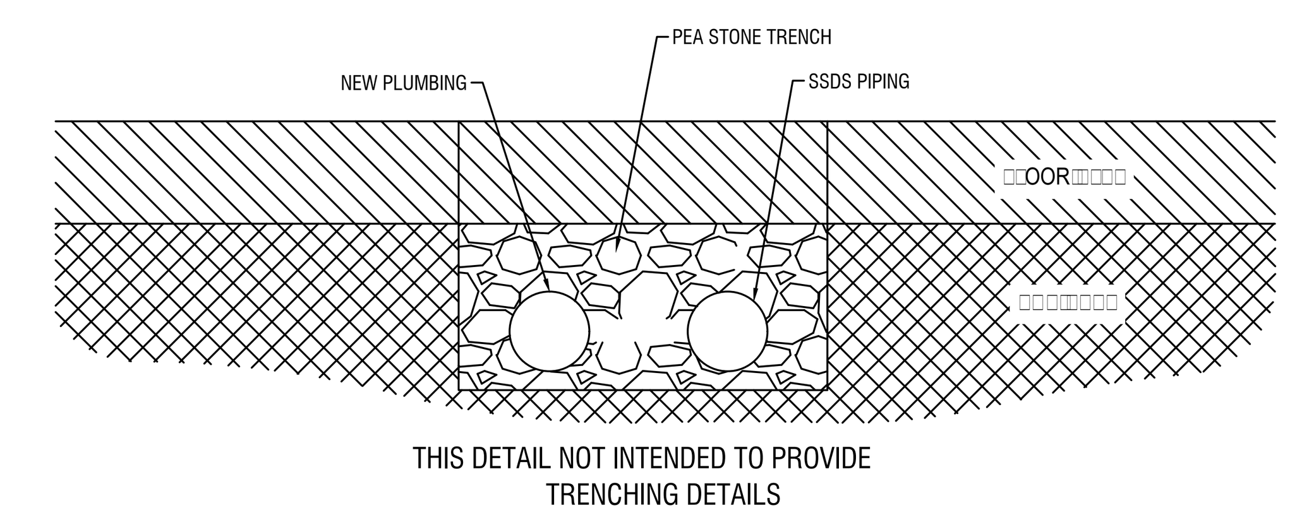
2 SUB-SLAB DEPRESSURIZATION SYSTEM ALARM
SCALE: NONE



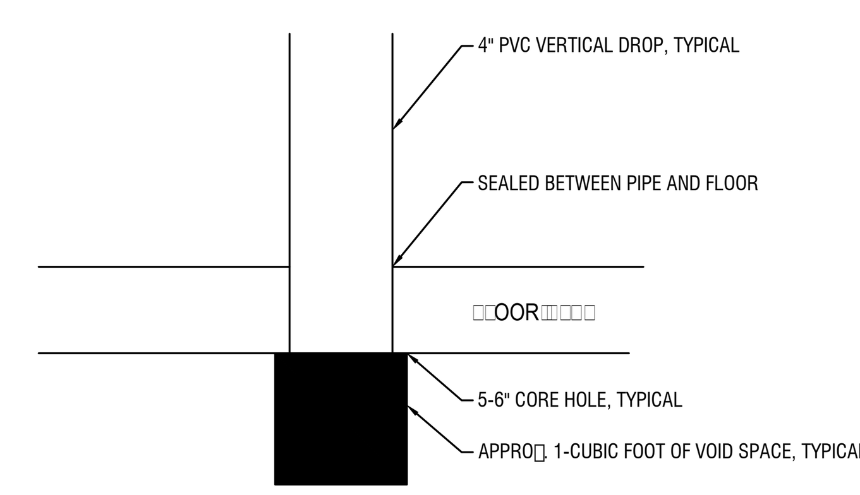
4 SUB-SLAB MONITORING POINT
SCALE: NONE



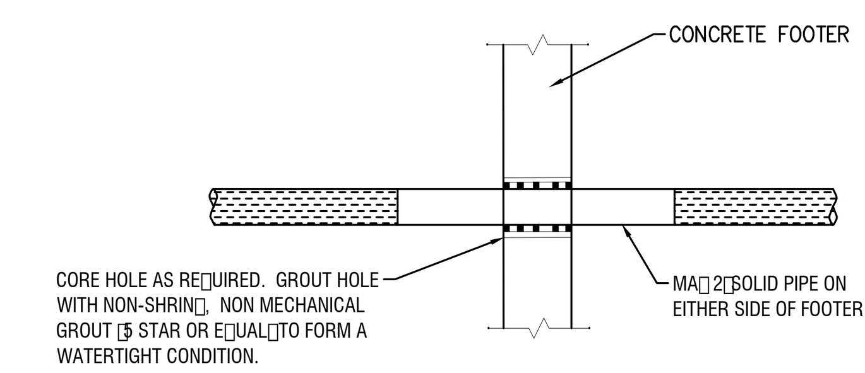
3 DETAIL AT ROOF
SCALE: NONE



5 TRENCH DETAIL
SCALE: NONE



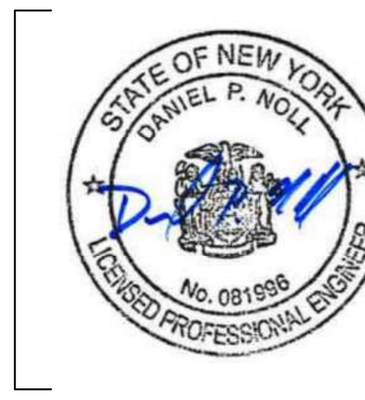
6 VERTICAL SUCTION POINT
SCALE: NONE



7 PROFILE AT HORIZONTAL PENETRATION (WESTERN STAIRWELL)
SCALE: NONE

NO.	REVISION	BY	DATE

It is a violation of New York Education Law Article 145 Sec.7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered, the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.



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PROJECT/CLIENT
FORMER WOLLENSAC□ OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

DRAWING TITLE
SUB-SLAB DEPRESSURI□ATION SYSTEM DETAILS

ISSUED FOR
REVISION 1

DATE: 01/20/2020

DESI□NED BY: AA
DRA□N BY: DRP
RE□IE□ED BY: AA

PROJECT/DRAWING NUMBER
2182207

FIG 10B

APPENDIX C

Site Cover Information

SITE SOIL COVER SYSTEMS [SEE FIGURE FOR LOCATIONS]

TYPICAL COVER SYSTEM FOR ASPHALT PAVED AREA

ASPHALT	4"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

TYPICAL COVER SYSTEM FOR CONCRETE SIDEWALK, AND DUMPSTER PAD

CONCRETE	4"-6"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

ROYCROFT DRIVE AREA (SAMPLE SS-01)

IMPORTED TOPSOIL*	4"
RECYCLED CONCRETE*	3"-4"
SOIL/FILL	

TYPICAL COVER SYSTEM FOR VEGETATIVE/LANDSCAPE AREA

SOIL VEGETATIVE LAYER/ LANDSCAPE AREA*	MIN. 6"
GRAVEL SUB-BASE*	24"
SOIL/FILL	

CONCRETE OR STONE CURB

CURB	16"
GRAVEL SUB-BASE*	
SOIL/FILL	

TYPICAL COVER SYSTEM FOR BUILDING

CONCRETE	~6"
PEA GRAVEL*	18"
SOIL/FILL	

PEA GRAVEL USED TO FILL TREATMENT PIPING AND SSDS TRENCHES

NOTE:

(1) COVER SYSTEM CROSS-SECTIONS ARE NOT TO SCALE AND COVER SYSTEM LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

(2) PROPERTY BOUNDARIES OBTAINED FROM MONROE COUNTY GIS AND ARE CONSIDERED APPROXIMATE.

(3) APRIL 2018 IMAGE OBTAINED FROM EAGLEVIEW INC. AND MAY NOT REPRESENT CURRENT SITE CONDITIONS.

(4) * DENOTES MATERIAL WAS APPROVED BY THE NYSDEC FOR IMPORTATION AND USE AT THE SITE.

SAMPLE SS-COMP-01
-SURFACE SOIL SAMPLE MET RESTRICTED RESIDENTIAL SOIL CLEANUP OBJECTIVES

CURB

DUMPSTER PAD

VEGETATIVE LAYER / LANDSCAPE AREA

SIDEWALK

VEGETATIVE LAYER / LANDSCAPE AREA

VEGETATIVE LAYER / LANDSCAPE AREA

N
W E
S

0 5 10 Feet

1 inch = 10 feet

Legend

- Concrete Curb
- Roycroft Drive Area - Sample: SS-COMP-01
- Building Area
- Landscape Green Area
- Concrete
- Asphalt
- BCP / IC Site Boundary

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\SMP Figures\Figure 8 - Site Cover System.mxd

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300 STATE STREET
ROCHESTER, NY 14614
P: (585)454-3260
F: (585)454-3066
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PROJECT / CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project:
SITE MANAGEMENT PLAN
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

SITE COVER SYSTEM

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, August 26, 2020

PROJECT/DRAWING NUMBER

[2182207]

[FIGURE 8]

INTENDED TO PRINT AS: 22" X 24"

APPENDIX D

Site Monitoring Forms

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300 STATE STREET, SUITE 201
ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

SOIL COVER SYSTEM (OR CAP) INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

COVER TYPE	OVERALL CONDITION	ANY LOCATIONS REQUIRE REPAIR OR MAINTENANCE	PHOTOS TAKEN	COMMENTS
SOIL OR VEGETATIVE COVER		YES / NO	YES / NO	
ASPHALT SURFACE		YES / NO	YES / NO	
CONCRETE SURFACE		YES / NO	YES / NO	
BUILDING SLAB		YES / NO	YES / NO	

SUB SLAB DEPRESSURIZATION SYSTEM INSPECTION FORM

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300 STATE STREET, SUITE 201
ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

INSPECTION EVENT		COMPONENT	SITE BUILDING		COMMENTS
ANNUALLY	OTHER		SSDS FAN #1	SSDS FAN #2	
		OPERATIONAL	YES / NO	YES / NO	
		VACUUM GAUGE READING (IN. H20)			
		ALARM CHECK	YES / NO	YES / NO	
		SSDS PIPING CHECK	YES / NO	YES / NO	
		SSDS FAN CHECK	YES / NO	YES / NO	

PRESSURE FIELD EXTENSION MONITORING POINT INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209

LOCATION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK

LABELLA PROJECT #

LABELLA REP:

DATE:

WEATHER:

LOCATION	VACUUM READING (INCHES OF WATER)	NOTES
#1		
#2		
#3		
#4		
#5		
#6		
#7		
#8		
#9		
#10		

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300 STATE STREET, SUITE 201
ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

GROUNDWATER TREATMENT SYSTEM INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

INSPECTION EVENT		GROUNDWATER TREATMENT SYSTEM COMPONENT	OBSERVATION	COMMENTS
ANNUALLY	OTHER			
		PIPING, VALVES, FITTINGS INSPECTED	YES / NO	
		WATER CHECK / ANY VISIBLE LEAKS	YES / NO	
		LOCKING CAP PRESENT	YES / NO	

MONITORING WELL INSPECTION FORM

300 STATE STREET, SUITE 201
ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

WELL ID	STATIC WATER LEVEL	EVIDENCE OF DAMAGE	EVIDENCE OF FROST HEAVING	EVIDENCE OF CASING DAMAGE OR WEAR	LOCK IN PLACE	EVIDENCE OF WELL SUBSIDENCE	STANDING OR PONDING WATER	CORRECTIVE ACTION MEASURES TAKEN	COMMENTS
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	

APPENDIX G

Quality Control Program

Quality Control Program
Former Wollensack Optical Site
NYSDEC BCP Site #C828209

Location:

Former Wollensack Optical Site
872 and 886 Hudson Avenue
Rochester, New York

LaBella Project No. 2182207

February 11, 2021

LaBella
Powered by partnership.

300 State Street, Suite 201 | Rochester, NY 14614 | p 585-454-6110 | f 585-454-3066

Table of Contents

TABLE OF CONTENTS
Continued

1.0 INTRODUCTION

LaBella's Quality Control Program (QCP) is an integral part of its approach to environmental investigations. By maintaining a rigorous QC program, our firm is able to provide accurate and reliable data. This QCP should be followed during implementation of environmental investigation and remediation projects and should serve as a basis for quality control methods to be implemented during field programs. Project-specific requirements may apply.

The QC program contains procedures which allow for the proper collection and evaluation of data and documents that QC procedures have been followed during field investigations. The QC program presents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling procedures.

Procedures used in the firm's QC program are compatible with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QC program includes the following:

- QC Objectives and Checks
- Field Equipment, Handling, and Calibration
- Sampling and Logging Techniques
- Sample Handling, Packaging, and Shipping
- Laboratory Requirements and Deliverables

It should be noted that project-specific work plans (e.g., Remedial Investigation Work Plans) may have project specific details that will differ from the procedures in this QC program. In such cases, the project-specific work plan should be followed (subsequent to regulatory approval).

The characteristics of major importance for the assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. Application of these characteristics to specific projects is addressed later in this document. The characteristics are defined below.

1.1 Accuracy

Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

1.2 Precision

Precision is the degree of mutual agreement among individual measurements of a given parameter.

1.3 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

1.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition

Careful choice and use of appropriate methods in the field will ensure that samples are representative. This is relatively easy with water or air samples since these components are homogeneously dispersed. In soil and sediment, contaminants are unlikely to be evenly distributed, and thus it is important for the sampler and analyst to exercise good judgment when removing a sample.

1.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. The data sets may be inter- or intra- laboratory.

2.0 MEASUREMENT OF DATA QUALITY

2.1 Accuracy

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" take the form of EPA standard reference materials, or laboratory prepared solutions of target analytes spiked into a pure water or sample matrix. In the case of gas chromatography (GC) or GC/MS (mass spectrometry) analyses, solutions of surrogate compounds are used. These solutions can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination.

In each case the recovery of the analyte is measured as a percentage, correcting for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA supplied known solutions, this recovery is compared to the published data that accompany the solution.

For the firm's prepared solutions, the recovery is compared to EPA-developed data or the firm's historical data as available. For surrogate compounds, recoveries are compared to EPA CLP acceptable recovery tables.

If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate. The analyst or his supervisor must initiate an investigation of the cause of the problem and take corrective action. This can include recalibration of the instrument, reanalysis of the QC sample, reanalysis of the samples in the batch, or flagging the data as suspect if the problems cannot be resolved. For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

2.2 Precision

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is typically not known to the laboratory. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantitation of precision is impossible. For EPA CLP analyses, replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD).

- Where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.
- RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample reanalysis or flagging of the data as suspect if problems cannot be resolved.
- During the data review and validation process, field duplicate RPDs are assessed as a measure of the total variability of both field sampling and laboratory analysis.

2.3 Completeness

Completeness for each parameter is calculated as follows:

- The firm's target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the site managers. In planning the field sample collection, the site manager will plan to collect field duplicates from identified critical areas. This procedure should assure 100% completeness for these areas.

2.4 Representativeness

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area. Within the laboratory, precautions are taken to extract from the sample bottle an aliquot representative of the whole sample. This includes premixing the sample and discarding pebbles from soil samples.

2.5 Comparability

Comparability of laboratory tests is ensured by utilizing only New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)- certified laboratories. This certification is the basis for demonstrating proficiency in testing requirements. Using ELAP certified laboratories will result in consistency amongst analytical data within a specific project and across projects.

3.0 QUALITY CONTROL TARGETS

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are included in the QCP, Analytical Procedures. Note that tabulated values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the firm will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

4.0 SOIL BORING ADVANCEMENT & MONITORING WELL INSTALLATION PROCEDURES

Soil and groundwater sampling shall be conducted in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation dated May 3, 2010 and any Site-specific work plans.

Prior to drilling, all drill sites will be cleared with appropriate utility companies to avoid potential accidents relating to underground utilities. Utility drawings will be reviewed, if available.

4.1 Drilling Equipment and Techniques

Direct Push Geoprobe Advanced Borings:

Soil borings and monitoring wells will be advanced with a Geoprobe direct push sampling system. The use of direct push technology allows for rapid sampling, observation, and characterization of relatively shallow overburden soils. The Geoprobe utilizes a four to five-foot macrocore sampler, with disposable polyethylene sleeves. Soil cores will be retrieved in four or five-foot sections, and can be easily cut from the polyethylene sleeves for observation and sampling. The macrocore sampler will be decontaminated between boring locations using an alconox and water solution.

Prior to initiating drilling activities, the Macrocores, drive rods, and pertinent equipment, will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.

Test borings will be advanced with 2-inch (or larger) inside diameter (ID) direct push Macrocore through overburden soils. Drilling fluids, other than potable water will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

During the drilling, a properly calibrated photoionization detector (PID) will be used to screen soil cores retrieved from the Macrocores.

Direct Push Geoprobe advanced groundwater-monitoring wells typically utilize minimum 1.25-inch threaded flush joint PVC pipe with 0.010-in. slotted screen or pre-packed well screens. PVC piping used for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe.. All materials used to construct the wells will be NSF/ASTM approved. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well. Stainless steel wells or pre-packed PVC wells may be used if specified in the work plan and approved by the NYSDEC.

Hollow-Stem Auger Advanced Borings:

The drilling and installation of soil borings and monitoring wells will be performed using a rotary drill rig which will have sufficient capacity to perform 4 1/4-inch inside diameter (ID) hollow-stem auger drilling in the overburden, retrieve Macrocore or split-spoon samples, and perform necessary rock coring using NX, NQ, HQ or core barrel size as specified in the project-specific work plan. The borehole may be reamed up to 5 1/2-inch diameter prior to monitoring well installation as cased hole in the bedrock, or may be left as open bedrock hole, with regulatory concurrence. Equipment sizes and diameters may vary based on project-specific criteria. Any investigative derived waste generated during the advancement of soil borings and monitoring well installations will be containerized and characterized for proper disposal.

Prior to initiating drilling activities, the augers, rods, Macrocore, split spoons, and other pertinent equipment will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Steam cleaning activities will be performed in a designated on-site decontamination area. During and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.
Test borings will be advanced with 4 1/4-inch (ID) hollow stem augers through overburden, and cored with a NX, NQ, HQ or core barrel size as specified in the project-specific work plan sized diamond core barrels in competent rock, driven by truck-, track-, or trailer-mounted drilling equipment. Alternative methods of drilling or equipment may be allowed or requested for project-specific criteria, but must be approved by the NYSDEC. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

During the drilling, a (PID) will be used to screen soils retrieved from the split spoons or Macrocores. In the event that headspace field screening is required to determine the presence of VOCs in soil samples, the following procedure will be utilized:

- Soils from core will be inserted into an airtight glass jar and/or disposable polyethylene bag, and the container will be sealed immediately
- After sealing the container, the soils will be shaken or kneaded for 10-15 seconds to release volatiles into the headspace of the sealed container
- The PID inlet will be inserted into the headspace of the airtight container to screen soil samples for VOCs

During the drilling, visual screening will be utilized to identify any Non-Aqueous Phase Liquid (NAPL) in the soil cores.

Where bedrock wells are required, test borings shall be advanced into rock with NX, NQ, HR (or similar) coring tools. Only water from an approved source shall be used in rock coring. The consultant shall monitor and record the petrology, core recovery, fractures, rate of advance, and water lost or produced in each test boring. The Rock Quality Determination (RQD) value shall be calculated for each 5-foot core. Each core shall be screened with a PID upon extraction. All core samples shall be retained and stored by the consultant in an approved wooden core box for a period of not less than one year.

The method selected may be percussion or rotary drilling. The method and equipment selected must be capable of penetrating the bedrock at each well location to a depth required by the work plan.

Bedrock well installation will involve construction of a rock socket in the weathered bedrock. The socket will be drilled into the top of rock (typically 1-ft. to 5-ft. into the top of rock) at each bedrock well location to allow a permanent steel casing to be grouted securely in place prior to completion of the well. The purpose for this is to provide a seal at the overburden/bedrock interface and into the upper bedrock surface, to prevent the entrance of overburden water into the bedrock. After the grout and casing have set up for a minimum of 12 hours, the remaining bedrock can be NX (or similar) cored through the steel casing to a depth determined by the project-specific work plan.

Bedrock wells will either be open coreholes in the rock or consist of threaded, flush-joint PVC piping. Construction will vary depending on the project and as such, specific construction of the wells will be detailed in the project-specific work plan. Bedrock wells which do utilized PVC piping for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe. All materials used to construct the wells will be NSF/ASTM approved.

Screen and riser sections shall be joined by flush-threaded coupling to form watertight unions that retain 100% of the strength of the casing. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well.

4.1.1 *Artificial Sand Pack*

When utilized, granular backfill will be chemically and texturally clean, inert, siliceous, and of appropriate grain size for the screen slot size and the host environment The sand pack will be installed using a tremie pipe, when possible (i.e., a tremie pipe may not fit into smaller, 2-in. diameter boreholes). When utilized, the well screen and casing will be installed, and the sand pack placed around the screen and casing to a depth extending at least 2-ft.. A pre-packed well screen may be used if pre-approved by the NYSDEC.

An artificial sand pack will not be utilized in bedrock wells without screens (i.e., open borehole wells).

4.1.2 *Bentonite Seal*

A minimum 2-ft. thick seal will be placed directly on top of the sand pack, and care will be taken to avoid bridging. In the event that Site geology does not allow for a 2-ft. seal (e.g., only 1-ft. of space remains between the top of the sand pack and ground surface), the remaining space in the annulus will be filled with bentonite.

4.1.3 *Grout Mixture*

Upon completion of the bentonite seal, the well may be grouted with a non-shrinking cement grout (e.g., Volclay®) mix to be placed from the top of the bentonite seal to the ground surface. The cement grout shall consist of a mixture of Portland cement (ASTM C 150) and water, in the proportion of not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds). Additionally, 3% by weight of bentonite powder may be added.

4.1.4 *Surface Protection*

At all times during the progress of the work, precautions shall be used to prevent tampering with or the entrance of foreign material into the well. Upon completion of the well, a suitable cap shall be installed to prevent material from entering the well. Where permanent wells are to be installed, the well riser shall be protected by a flush mounted road box set into a concrete pad or locking well cap for stick-up wells. A concrete pad, sloped away from the well, shall be constructed around the flush mount road box or stick-up casing at ground level.

Any well that is to be temporarily removed from service or left incomplete due to delay in construction shall be capped with a watertight cap.

4.2 Surveying

Coordinates and elevations will be established for each monitoring well and sampling location. Elevations to the closest 0.01 foot shall be used for the survey. These elevations shall be referenced to a regional, local, or project-specific datum. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site.

4.3 Well Development

After completion of the well, but not sooner than 24 hours after grouting is completed, development will be accomplished using pumping, bailing, or surge blocking. No dispersing agents, acids, disinfectants, or other additives will be used during development or introduced into the well at any other time. During development, water will be removed throughout the entire water column by periodically lowering and raising the pump intake (or bailer stopping point).

Development water will be either properly contained and treated as waste until the results of chemical analysis of samples are obtained or discharged on Site as determined by the Site-specific work plans and/or consultation with the NYSDEC representatives on Site.

The development process will continue until removal of a minimum of 110% of the water lost during drilling, three well volumes; whichever is greater, or as specified in the work plan. In the event that limited recharge does not allow for the recovery of all drilling water lost in the well or three (3) well volumes, the well will be allowed to stabilize to conditions deemed representative of groundwater conditions. Stabilization periods will vary by project but will be confirmed with the NYSDEC prior to sampling.

4.4 PFAS Soil Sampling Procedure

Soil samples for PFAS analysis will be collected using PFAS-Free equipment. Samples will be collected in bottleware provided by the laboratory. Because PFAS are found in numerous everyday items, the following special precautions will be taken during sampling activities:

- No use of Teflon®-containing materials (e.g., Teflon® tubing, bailers, tape, sample jar lid liners, plumbing paste).
- No use of low density polyethylene (LDPE)-containing materials.
- No Tyvek® clothing will be worn by samplers.
- Clothes treated with stain-resistant or rain-resistant coatings (e.g., Gortex®) will be not be worn by samplers.
- All clothing worn by sampling personnel must have been laundered multiple times.
- No fast food wrappers, disposable cups or microwave popcorn will be within the vicinity of the wells/ samples.
- There will be no use of chemical (blue) ice packs, aluminum foil, or Sharpies® within the vicinity of the wells/ samples.
- No use of sunscreen, insect repellants, cosmetic, lotions or moisturizers will be allowed by sampling personnel the day of sampling.
- If any of the above items are handled by the field personnel prior to sampling activities, field personnel will wash their hands thoroughly with soap and water prior to any sampling activities.
- Powder-free nitrile gloves will be worn during all sample collection activities.

Quality assurance/ quality control (QA/QC) samples for PFAS sampling will include one (1) field duplicate, one (1) matrix spike / matrix spike duplicates (MS/MSD) and one (1) equipment blank. The procedures and rationale for collecting these samples are described below.

- **Field duplicate** – Sample will be used to assess the variability in concentrations of samples from the same well due to the combined effects of sample processing in the field and laboratory as well as chemical analysis.

- **Matrix spike/matrix spike duplicate** – Sample will be used to provide information about the effect of the sample matrix on the design and measurement methodology used by the laboratory.

- **Equipment blank** – Sample will be collected to help identify possible contamination from sampling equipment (i.e., shovel, soil core, etc.).

PFAS samples will be submitted to an Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis using USEPA Method 537.1 PFAS samples will include the list included in the NYSDEC October 2020 PFAS guidance document. Reporting limit for solid samples will be 0.5 ug/kg. **Note, the laboratory utilized will be ELAP certified for PFOA and PFOS in drinking water by EPA method 537 or ISO 25101 as ELAP does not currently offer certification for PFAS compounds in matrices other than finished drinking water.**

5.0 GEOLOGIC LOGGING AND SAMPLING

At each investigative location, borings will be advanced through overburden using either a drill rig and hollow-stem auger or direct push technology (split spoons or Macrocore). Soils will be evaluated for visual and olfactory evidence of impairment (i.e., staining, odors, and elevated PID readings) by a qualified individual. Sampling devices will be decontaminated according to procedures outlined in the Decontamination section of this document. When utilized, split-spoon samplers will be driven into the soil using a minimum 140-pound safety hammer and allowed to free-fall 30-inches, in accordance with ASTM-D 1586-84 specifications. The number of blows required to drive the sampler each 6-inches of penetration will be recorded. When required, samples will be stored in the appropriate bottleware (refer to Section 10) until analysis or deemed unnecessary.

In the event that maximum design depth of investigation is reached and hydrogeologic conditions are not suitable for well installation, the maximum drilling depth may be revised.

Boulders and bedrock encountered during well installation may be cored by standard diamond-core drilling methods using an NX, NQ, HQ size core barrel or other if specified in the project-specific work plan. All rock cores recovered will be logged by a qualified individual, and stored in labeled wooden core boxes. The cores will be stored by the firm until the project is completed or for at least one year. Drilling logs will be prepared by a qualified individual who will be present during drilling operations. One copy of each field boring and well construction log and groundwater data, will typically be submitted as part of the investigation summary report (e.g., Remedial Investigation Report). The RQD value shall be calculated for each 5-foot section. Information provided in the logs shall include, but not be limited to, the following:

- Date(s), test hole identification, and project identification;
- Name of individual developing the log;
- Name of driller and assistant(s);
- Drill, make and model, auger size;
- Identification of alternative drilling methods used and justification thereof (e.g., rotary drilling with a specific bit type to remove material from within the hollow stem augers);
- Standard penetration test (ASTM D-1586) blow counts;
- Field diagram of each monitoring well installed with the depth to bottom of well/ screen, top of screen, length of riser, depth of steel casing, depths of sand pack, bentonite seal, grout, type of well completion etc.;
- Depth of each change of stratum;
- Identification of the material of which each stratum is composed, according to the USCS system or standard rock nomenclature, as appropriate;
- Depth interval from which each sample was taken, sample identification, and sample time;
- Depth at which hole diameters (bit sizes) change;
- Depth at which groundwater is encountered;
- Drilling fluid and quantity of water lost during drilling;
- Depth or location of any loss of tools or equipment;
- Depths of any fractures, joints, faults, cavities, or weathered zones

6.0 GROUNDWATER SAMPLING PROCEDURES

The groundwater in all new monitoring wells will be allowed to stabilize for at least 1week following development prior to sampling. Water levels will be measured to within 0.01 feet prior to purging and sampling. Sampling of each well will typically be accomplished in one of two ways; active or passive.

Active Sampling:

Active sampling includes bailing or pumping. Purging will be completed prior to active sampling if specified in the project-specific work plan. During purging, the following will be recorded in field books or groundwater sampling logs:

- date
- purge start time
- weather conditions
- presence of NAPL, if any, and approximate thickness

- pump rate
- pH
- dissolved oxygen
- temperature
- conductivity
- redox
- turbidity
- depth of well
- depth to water
- depth to pump intake
- purge end time
- volume of water purged

During low flow sampling, the water quality parameters including pH, conductivity, temperature, dissolved oxygen, redox, water level drawdown, and turbidity will be recorded at five (5) minute intervals. Samples will be collected after the parameters have stabilized for three (3) consecutive 5-minute intervals to within the specified ranges below:

- Water level drawdown (<0.3')
- Turbidity (+/- 10%, < 50-NTU for Metals Samples)
- pH (+/-0.1)
- Temperature (+/- 3%)
- Specific conductivity (+/- 3%)
- Dissolved Oxygen (+/- 10%)
- Oxidation reduction potential (+/- 10 millivolts)

Passive Sampling:

Groundwater samples will be collected via passive methods (i.e., no-purge) according to the following procedures and in the volumes specified in Table 10-1:

- Samples will be collected via passive diffusion bag (PDB) samplers. PDB samplers are made of low-density polyethylene plastic tubing (typically 4 mil), filled with laboratory grade (ASTM Type II) deionized water and sealed at both ends.
- Pre-filled PDBs will not be stored for longer than 30 days and will be kept stored at room temperature in a sealed plastic bag until ready to use.
- PDBs filled in the field will be used immediately and not stored for future use.
- PDB samplers will only be used to collect groundwater samples which will be analyzed for VOCs.
- Mesh covers will be utilized for open rock holes as to not puncture the PDB and will be secured to the bag using zip-ties.
- PDB samplers will be deployed by hanging in the well at the depth(s) specified in the project-specific work plan. The depth at which the PDB is deployed will be recorded on the groundwater sampling form. The PDB samplers will be deployed at least 14 days prior to sampling;
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Gloves will be changed between collection of each PDB and tools used to open the PDB

will be decontaminated with an alconox and potable water solution between each PDB;

- Any volume not used will be treated as investigation derived waste;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions (i.e., air temperature, sky condition, recent heavy rainfall, drought conditions) at the time of sampling will be recorded.

6.1 PFAS Groundwater Sampling Procedure

Samples for PFAS analysis will be collected using PFAS-Free equipment, specifically a dedicated disposable high density polyethylene (HDPE) or PVC bailers, and/or low-flow sampling equipment with PFAS-Free components. Samples will be collected in bottleware provided by the laboratory. Because PFAS are found in numerous everyday items, the following special precautions will be taken during sampling activities:

- No use of Teflon®-containing materials (e.g., Teflon® tubing, bailers, tape, sample jar lid liners, plumbing paste).
- No use of low density polyethylene (LDPE)-containing materials.
- No Tyvek® clothing will be worn by samplers.
- Clothes treated with stain-resistant or rain-resistant coatings (e.g., Gortex®) will be not be worn by samplers.
- All clothing worn by sampling personnel must have been laundered multiple times.
- No fast food wrappers, disposable cups or microwave popcorn will be within the vicinity of the wells/ samples.
- There will be no use of chemical (blue) ice packs, aluminum foil, or Sharpies® within the vicinity of the wells/ samples.
- No use of sunscreen, insect repellants, cosmetic, lotions or moisturizers will be allowed by sampling personnel the day of sampling.
- If any of the above items are handled by the field personnel prior to sampling activities, field personnel will wash their hands thoroughly with soap and water prior to any sampling activities.
- Powder-free nitrile gloves will be worn during all sample collection activities.

Quality assurance/ quality control (QA/QC) samples for PFAS sampling will include one (1) field duplicate, one (1) matrix spike / matrix spike duplicates (MS/MSD) and one (1) equipment blank. The procedures and rationale for collecting these samples are described below.

- Field duplicate – Sample will be used to assess the variability in concentrations of samples from the same well due to the combined effects of sample processing in the field and laboratory as well as chemical analysis.

- Matrix spike/matrix spike duplicate – Sample will be used to provide information about the effect of the sample matrix on the design and measurement methodology used by the laboratory.

- Equipment blank – Sample will be collected to help identify possible contamination from sampling equipment (i.e., bailer). One equipment blank will be collected by pouring laboratory certified analyte-free deionized water over a bailer into the sample container.

PFAS samples will be submitted to an Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis using USEPA Method 537.1 PFAS samples will include the list included in the NYSDEC October 2020 PFAS guidance document. Reporting limit for aqueous samples will be 2 ng/l. **Note, the laboratory utilized will be ELAP certified for PFOA and PFOS in drinking water by EPA method 537 or ISO 25101 as ELAP does not currently offer certification for PFAS compounds in matrices other than finished drinking water.**

7.0 SOIL VAPOR INTRUSION SAMPLING PROCEDURES

Soil vapor intrusion (SVI) sampling is to be conducted in accordance with the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates. Tracer gas testing is to be conducted for sub-slab sampling points to ensure concentrations of the tracer gas are not detected in the sub-slab at greater than 10% of the concentration detected in the atmosphere. An outdoor air sample is to be collected at an upwind direction as a control. A building inventory should be completed to document building construction information and identify products that may be contributing to the levels in indoor air.

8.0 RADIATION SCREENING PROCEDURES

A building and soil cover walkover survey will be completed by a NYSDEC Radioactive Materials Licensed (RML) Contractor.

The RML Contractor will also provide training and oversight to LaBella personnel during implementation of the overburden soil and groundwater and shallow bedrock groundwater evaluations.

Based on the project-specific aspects of the radiation screening, detailed procedures are included in Section 6.1.1 of the RIWP.

9.0 FIELD DOCUMENTATION

9.1 Daily Logs/ Field Notebook

Daily logs are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. Daily logs may be kept in a project-specific notebook labelled with the project name/ number and contact information.

The daily log is the responsibility of the field personnel and will include:

- Name of person making entry;
- Start and end time of work;
- Names of team members on-site;
- Changes in required levels of personnel protection:
  - Level of protection originally used;
  - Changes in protection, if required; and
  - Reasons for changes.
- Air monitoring locations, start and end times, and equipment identification numbers;
- Summary of tasks completed;

- Summary of samples collected including location, matrix, etc.;
- Field observations and remarks;
- Weather conditions, wind direction, etc.;
- Any deviations from the work plan;
- Initials/ signature of person recording the information.

As with any data logbooks, no pages will be removed for any reason. If corrections are necessary, these must be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction must be initialed and dated. Corrected errors may require a footnote explaining the correction.

Sample documents, forms, or field notebooks are not to be destroyed or thrown away, even if they are illegible or contain inaccuracies that require a replacement document. If an error is made on a document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the corrected information. The incorrect information should not be obliterated. Any subsequent error discovered on a document should be corrected by the person who made the entry. All corrections must be initialed and dated.

9.2 Photographs

Photographs will be taken to document the work. Documentation of a photograph is crucial to its validity as a representation of an existing situation. Photographs should be documented with date, location, and description of the photograph.

10.0 INVESTIGATION DERIVED WASTE

Purpose:

The purposes of these guidelines are to ensure the proper holding, storage, transportation, and disposal of materials that may contain hazardous wastes. Investigation-derived waste (IDW) included the following:

- Drill cuttings, drilling mud solids;
- Water produced during drilling;
- Well development and purge waters, unused PDB waters;
- Decontamination waters and associated solids;

IDW will be managed in substantial accordance with DER-10 and all applicable local, State and Federal regulations.

Procedure:

1. Contain all investigation-derived wastes in Department of Transportation (DOT)-approved 55-gallon drums, roll-off boxes, or other containers suitable for the wastes.
2. Place different media in separate drums (i.e., do not combine solids and liquids).
3. To the extent practicable, separate solids from drilling muds, decontamination waters, and similar liquids. Place solids within separate containers.
4. Transfer all waste containers to a staging area. Access to this area will be controlled. Waste containers must be transferred to the staging area as soon as practicable after

the generating activity is complete.

5. Label all containers with regard to contents, origin, and date of generation. Use indelible ink for all labeling.
6. Collect samples for waste characterization purposes, use boring/well sample analytical data for characterization.
7. For wastes determined to be hazardous in character, be aware on accumulation time limitations. Coordinate the disposal of these wastes with the Owner and NYSDEC.
8. Dispose of investigation-derived wastes as follows;
    - Soil, water, and other environmental media for which analysis does not detect organic constituents, and for which inorganic constituents are at levels consistent with background, may be spread on-site (pending NYSDEC approval) or otherwise treated as a non-waste material.
    - Soils, water, and other environmental media in which organic compounds are detected or metals are present above background will be disposed as industrial waste or hazardous waste, as appropriate. Alternate disposition must be consistent with applicable State and Federal laws.
    - Personal protective equipment, disposable bailers, and similar equipment may be disposed as municipal waste, unless waste characterization results mandate disposal as industrial wastes
9. If waste is determined to be listed hazardous waste, it must be handled as hazardous waste as described above, unless a contained-in determination is accepted by the NYSDEC.

11.0 DECONTAMINATION PROCEDURES

Sampling methods and equipment have been chosen to minimize decontamination requirements and to prevent the possibility of cross-contamination. Decontamination of equipment will be performed between discrete sampling locations. Equipment used to collect samples between composite sample locations will not require decontamination between collection of samples. All drilling equipment will be decontaminated after the completion of each drilling location. Special attention will be given to the drilling assembly and augers.

Split spoons and other non-disposable equipment will be decontaminated between each sampling location. The sampler will be cleaned prior to each use, by one of the following procedures:

- Initially cleaned of all foreign matter;
- Sanitized with a steam cleaner;

OR

- Initially cleaned of all foreign matter;
- Scrubbed with brushes in alconox solution;
- Triple rinsed; and
- Allowed to air dry.

Other sampling equipment including but not limited to low-flow sampling pumps, surface soil sampling trowel, water level meters, etc. will be decontaminated between sample location using an alconox solution. Consumables including gloves, tubing, bailers, string, etc. will be dedicated to one sample location and will not be reused.

12.0 SAMPLE CONTAINERS

The containers required for sampling activities are pre-washed and ordered directly from a laboratory, which has the containers prepared in accordance with USEPA bottle washing procedures. The following tables detail sample volumes, containers, preservation and holding time for typical analytes.

Table 12-1
Groundwater Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	40-ml glass vial with Teflon-backed septum	Two (2); fill completely, no headspace	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	14 days
Semi-volatile Organic Compounds (SVOCs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Polychlorinated biphenyls (PCBs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Metals	250-ml HDPE	One (1); fill completely	Cool to 4° C (ice in cooler) Nitric acid to pH <2	180 days (28 for mercury)
Cyanide	1,000-mL HDPE		Cool to 4° C (ice in cooler) Nitric acid to pH <2	14 days
1,4-Dioxane	40-ml glass vial with Teflon-backed septum	Three (3); fill completely, no headspace	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	14 days
PFAS	250-mL HDPE, no Teflon	Two (2); fill completely	Cool to 4° C (ice in cooler), Trizma	14 days

Note:
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

TABLE 12-2
Soil Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days
VOCs via EPA 5035	40 mL vials with sodium bisulfate, methanol, and/or DI water	Three (3), 5 grams each	Cool to 4° C (ice in cooler)	2 days*
SVOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
PCBs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14/40 days
Metals	4-oz. glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	180 days (28 for mercury)
Cyanide	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days
1,4-Dioxane	40 mL vials with sodium bisulfate, methanol, and/or DI water	Three (3), 5 grams each	Cool to 4° C (ice in cooler)	2 days*
PFAS	8-oz HDPE, no Teflon	One (1); fill as completely as possible	Cool to 4° C (ice in cooler)	28 days

Note:
**Or freeze within holding time.*
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

Table 12-3
Air Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	1 – Liter Summa® Canister	One (1) 1-Liter 1.4- Liter for MS/MSD	N/A	14 days

Note:
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

13.0 SAMPLE CUSTODY AND SHIPMENT

13.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container:

AA-BB-CC-DD-EE

AA: This set of initials indicates an abbreviation for the Site from which the sample was collected.
BB This set of initials represents the type of sample (e.g., SB for soil boring and MW for monitoring well)
CC: These initials identify the unique sample location number.
DD: These initials identify the sample start depth (if soil sample)
EE These initials identify the sample end depth (if soil sample)

Each sample will be labeled, chemically preserved (if required) and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection when possible. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Date and time of collection
- Sample identification
- Analysis required
- Project name/number
- Preservation

Sample tags attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample tags are to be placed on the bottles so as not to obscure any QC lot numbers on the bottles; sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

13.2 Chain of Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be utilized for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during their collection, transportation, and storage through analysis. All chain-of-custody requirements comply with standard operating procedures indicated in USEPA sample handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field notebooks;
- Sample label; and
- Chain-of-custody records.

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secured area that is restricted to authorized personnel.

As few persons as possible should handle samples. Sample bottles will be obtained pre-cleaned from the a laboratory. Sample containers should only be opened immediately prior to sample collection. The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules. The sample collector will record sample data in the field notebook and/or field logs.

The chain-of-custody record must be fully completed in duplicate, using black carbon paper where possible, by the field technician who has been designated by the project manager as responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints on the chain of custody.

13.3 Transfer of Custody and Shipment

The coolers in which the samples are packed must be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time on the chain-of-custody record. This record documents sample custody transfer.

Shipping containers must be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information are entered on the chain-of-custody.

All shipments must be accompanied by the chain-of-custody record identifying their contents. The original record accompanies the shipment. The other copies are distributed appropriately to the site manager.

13.4 Custody Seals

Custody seals are preprinted adhesive-backed seals. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before shipment. On receipt at the laboratory, the custodian must check (and certify, by completing the package receipt log and LABMIS entries) that seals on boxes and bottles are intact. Strapping tape should be placed over the seals to ensure that seals are not accidentally broken during shipment.

13.5 Sample Packaging

Samples must be packaged carefully to avoid breakage or contamination and must be shipped to the laboratory at proper temperatures. The following sample packaging requirements will be followed:

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The label should not cover any bottle preparation QC lot numbers.
- All sample bottles are placed in a plastic bag and/or individual bubble wrap sleeves to minimize the potential for cross-contamination and breaking.
- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not directly come in contact with other samples. Ice will be added to the cooler to ensure that the samples reach the laboratory at temperatures no greater than 4°C.
- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A chain of custody record must be placed in a plastic bag inside the cooler. Custody seals must be affixed to the sample cooler.

13.6 Sample Shipment

Shipping containers are to be custody-sealed for shipment as appropriate. The container custody seal will consist of tape wrapped around the package and custody seals affixed in such a way that access to the container can be gained only by cutting the filament tape and breaking the seal. Chain of custody seals shall be placed on the container, signed, and dated prior to taping the container to ensure the chain of custody seals will not be destroyed during shipment. In addition, the coolers must also be labeled and placarded in accordance with DOT regulations if shipping medium and high hazard samples.

Field personnel will make arrangements for transportation of samples to the lab. The lab must be notified as early as possible regarding samples intended for Saturday delivery. The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States DOT in the Code of Federal Regulation, 49 CFR 171 through 177. All samples will be delivered to the laboratory and analyzed within the holding times specified by the analytical method for that particular analyte.

All chain-of-custody requirements must comply with standard operating procedures in the USEPA sample handling protocol.

13.7 Laboratory Custody Procedures

A designated sample custodian accepts custody of the shipped samples and verifies that the sample identification number matches that on the chain-of-custody record and traffic reports, if required. Pertinent information as to shipment, pickup, and courier is entered on the chain of custody or attached forms.

14.0 DELIVERABLES

This section will describe laboratory requirement and procedures to be followed for laboratory analysis. Samples collected in New York State will be analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified laboratory. When required, analyses will be conducted in accordance with the most current NYSDEC Analytical Services Protocol (ASP). For example, ASP Category B reports will be completed by the laboratory for samples representing the final delineation of the Remedial Investigation, confirmation samples, samples to determine closure of a system, and correlation samples taken using field testing technologies analyzed by an ELAP-certified laboratory to determine correlation to field results. Data Usability Summary Reports will be completed by a third party for samples requiring ASP Category B format reports. Electronic data deliverables (EDDs) will also be generated by the laboratory in EQUIS format for samples requiring ASP Category B format reports.

NYSDEC DER-10 DUSR requirements are as follows:

a) Background. The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.

    1. The development of the DUSR must be carried out by an experienced environmental scientists, such as the project Quality Assurance Officer, who is fully capable of conducting a full data validation. The DUSR is developed from:

        i. A DEC ASP Category B Data Deliverable; or
        ii. The *USEPA Contract Laboratory Program National Functional Data Validation Standard Operating Procedures for Data Evaluation and Validation.*

    2. The DUSR and the data deliverables package will be reviewed by DER staff. If full third party data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later data on the same data package used for the development of the DUSR.

b) Personnel Requirements. The person preparing the DUSR must be pre-approved by DER. The person must submit their qualifications to DER documenting experience in analysis and data validation. Data validator qualifications are available on DEC's website identified in the table of contents.
c) Preparation of a DUSR. The DUSR is developed by reviewing and evaluating the analytical data package. In order for the DUSR to be acceptable, during the course of this review the following questions applicable to the analysis being reviewed must be answered in the affirmative.

1. Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?
2. Have all holding times been met?
3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?
4. Have all of the data been generated using established and agreed upon analytical protocols?
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
6. Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?
7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

d) Documenting the validation process in the DUSR. Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters, including data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.

15.0 EQUIPMENT CALIBRATION

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references. Operation, calibration, and maintenance will be performed by personnel properly trained in these procedures. Section 11 lists the major instruments to be used for sampling and analysis. In addition, brief descriptions of calibration procedures for major field and laboratory instruments follow.

15.1 Photovac/MiniRae Photoionization Detector (PID)

Standard operating procedures for the PID require that routine maintenance and calibration be performed every six months. Field calibration will be performed on a daily basis. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers. All calibration procedures will follow the manufacturer recommendations.

15.2 Conductance, Temperature, and pH Tester

Temperature and conductance instruments are factory calibrated. Temperature accuracy can be checked against an NBS certified thermometer prior to field use if necessary. Conductance accuracy may be checked with a solution of known conductance and recalibration can be instituted, if necessary.

15.3 O_2/Explosimeter

The specific meter used at the time of work shall be calibrated in accordance with manufacturer recommendations. The model 260 O_2/ Explosimeter is described below.

The primary maintenance item of the Model 260 is the rechargeable 2.4 volt (V) nickel cadmium battery. The battery is recharged by removing the screw cap covering receptacle and connecting one end of the charging cable to the instrument and the other end to a 115V AC outlet.

The battery can also be recharged using a 12V DC source. An accessory battery charging cable is available, one end of which plugs into the Model 260 while the other end is fitted with an automobile cigarette lighter plug.

Recommended charging time is 16 hours.

Before the calibration of the combustible gas indicator can be checked, the Model 260 must be in operating condition. Calibration check-adjustment is made as follows:

1. Attach the flow control to the recommended calibration gas tank.
2. Connect the adapter-hose to the flow control.
3. Open flow control valve.
4. Connect the adapter-hose fitting to the inlet of the instrument; after about 15 seconds the LEL meter pointer should be stable and within the range specified on the calibration sheet accompanying the calibration equipment. If the meter pointer is not in the correct range, stop the flow; remove the right hand side cover. Turn on the flow and adjust the "S" control with a small screwdriver to obtain a reading as specified on the calibration sheet.
5. Disconnect the adapter-hose fitting from the instrument.
6. Close the flow control valve.
7. Remove the adapter-hose from the flow control.
8. Remove the flow control from the calibration gas tank.
9. Replace the side cover on the Model 260.

CAUTION: Calibration gas tank contents are under pressure. Use no oil, grease, or flammable solvents on the flow control or the calibration gas tank. Do not store calibration gas tank near heat or fire or in rooms used for habitation. Do not throw in fire, incinerate, or puncture. Keep out of reach of children. It is illegal and hazardous to refill this tank. Do not attach the calibration gas tank to any other apparatus than described above. Do not attach any gas tank other than MSA calibration tanks to the regulator.

15.4 Nephelometer (Turbidity Meter)

LaMotte 2020WE Turbidity Meter is calibrated before each use. The default units are set to NTU and the default calibration curve is formazin. A 0 NTU Standard (Code 1480) is included with the meter. To calibrate, rinse a clean tube three times with the blank. Fill the tube to the fill line with the blank. Insert the tube into the chamber, close the lid, and select “scan blank”.

TABLE 15-4
List of Major Instruments
for Sampling and Analysis

- MSA 360 0_2 /Explosimeter
- Geotech Geopump II AC/DC Peristaltic Pump
- QED MP50 Controller and QED Sample Pro MicroPurge Bladder Pimp
- Horiba U-53 Multi-Parameter Water Quality Meter
- LaMotte 2020WE Turbidity Meter
- EM-31 Geomics Electromagnetic Induction Device
- Mini Rae Photoionization Detectors (3,000, ppbRAE, etc.)

16.0 INTERNAL QUALITY CONTROL CHECKS

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of field equipment. Field-based QC will comprise at least 10% of each data set generated and will consist of standards, replicates, spikes, and blanks. Field duplicates and field blanks will be analyzed by the laboratory as samples and will not necessarily be identified to the laboratory as duplicates or blanks. For each matrix, field duplicates will be provided at a rate of one per 10 samples collected or one per shipment, whichever is greater. Field blanks which may consist of trip, routine field, and/or rinsate blanks will be provided at a rate of one per 20 samples collected for each media, or one per shipment, whichever is greater. Frequency of QC data may vary from project to project; refer to the project-specific work plan for QC requirements.

Calculations will be performed for recoveries and standard deviations along with review of retention times, response factors, chromatograms, calibration, tuning, and all other QC information generated. All QC data, including split samples, will be documented in the site logbook and/or appropriate field logs. QC records will be retained and results reported with sample data.

16.1 Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

- Routine Field Blanks or bottle blanks are blank samples prepared in the field to access ambient field conditions. They will be prepared by filling empty sample containers with deionized water and any necessary preservatives. They will be handled like a sample and shipped to the laboratory for analysis.
-

- **Trip Blanks** are similar to routine field blanks with the exception that they are **not** exposed to field conditions. Their analytical results give the overall level of contamination from everything except ambient field conditions. For the RI/FS, one trip blank will be collected with every shipment of water samples for VOC analysis. Each trip blank will be prepared by filling a 40-ml vial with deionized water prior to the sampling trip, transported to the site, handled like a sample, and returned to the laboratory for analysis without being opened in the field. Trip blanks may be provided by the laboratory, shipped with the bottleware, and kept with the sampling containers until analysis.
- **Field Equipment Blanks** are blank samples (sometimes called transfer blanks or rinsate blanks) designed to demonstrate that sampling equipment has been properly prepared and cleaned before field use, and that cleaning procedures between samples are sufficient to minimize cross contamination. If a sampling team is familiar with a particular site, they may be able to predict which areas or samples are likely to have the highest concentration of contaminants. Unless other constraints apply, these samples should be taken last to avoid excessive contamination of sampling equipment.

16.2 Duplicates

Duplicate samples are collected to check the consistency of sampling and analysis procedures. The following types of duplicates may be collected.

- **Blind duplicate** samples consist of a set of two samples collected independently at a sampling location during a single sampling event. Blind duplicates are designed to assess the consistency of the overall sampling and analytical system. Blind duplicate samples should not be distinguishable by the person performing the analysis.
- **Matrix Spike and Matrix Spike Duplicates (MS/MSDs)** consist of a set of three samples collected independently at a sampling location during a single sampling event. These samples are for laboratory quality control checks.

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300 STATE STREET, ROCHESTER, NY
PH: (585) 454-6110 FAX: (585) 454-3066

GROUNDWATER DEVELOPMENT FORM

WELL I.D. _____

Project Name: _____ Project No.: _____
Location: _____
Development By: _____ Date: _____
Weather: _____

PURGE VOLUME CALCULATION

Well Diameter: _____ -Inch Static Water Level: _____ -Feet
Depth of Well: _____ -Feet Single Well Volume: _____ -Gallons

PURGE & SAMPLING METHOD

☐ Bailer - Type: _____ ☐ Pump - Type _____
Sampling Device: _____ Pump Rate: _____

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	pH	Temp (oC)	Conductivity (mS/cm)	Turbidity (NTU)		Comments
							Color =
							LNAPL or DNAPL observed = No
							Odor: YES / NO
							Sheen: YES / NO

Total _____ Gallons Purged Purge Start Time: Purge End Time:

OBSERVATIONS:

Well Volume (1" well) = 0.0408-gal/ft.	Well Volume (4" well) = 0.65-gal/ft.
Well Volume (2" well) = 0.163-gal/ft.	

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300 State Street
Rochester, New York 14614

WELL I.D.: _____

Project Name: Former Wollensack Optical, BCP Site #C828209
Location: 872 & 886 Hudson Ave, Rochester, NY
Project No.:
Sampled By:
Date:
Weather:

WELL SAMPLING INFORMATION

Well Diameter:
Depth of Well:
Measuring Point: TOC
Pump Type:
Static Water Level:
Length of Well Screen:
Depth to Top of Pump:
Tubing Type:

FIELD PARAMETER MEASUREMENT

Time	Pump Rate (mL/min)	Gallons Purged	Temp °C	Dissolved O_2 (mg/L) + 10%	Conductivity (mS/cm) +/- 3%	pH +/- 0.1	Redox (mV) +/- 10 mV	Turbidity (NTU) + 10%	Depth to Water Ft. BGS		Comments

Total _____ Gallons Purged

Purge Time Start: _____ Purge Time End: _____ Final Static Water Level: --

OBSERVATIONS

NAPL Observed: Yes / No
Treatment Chemical Observed: Yes / No
MS/MSD Collected: Yes / No
Duplicate Sample Collected: Yes / No

APPENDIX H

Site Management Forms

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300 State Street
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WELL I.D.: _____

Project Name: Former Wollensack Optical, BCP Site #C828209
Location: 872 & 886 Hudson Ave, Rochester, NY
Project No.:
Sampled By:
Date:
Weather:

WELL SAMPLING INFORMATION

Well Diameter:
Depth of Well:
Measuring Point: TOC
Pump Type:
Static Water Level:
Length of Well Screen:
Depth to Top of Pump:
Tubing Type:

FIELD PARAMETER MEASUREMENT

Time	Pump Rate (mL/min)	Gallons Purged	Temp °C	Dissolved O_2 (mg/L) + 10%	Conductivity (mS/cm) +/- 3%	pH +/- 0.1	Redox (mV) +/- 10 mV	Turbidity (NTU) + 10%	Depth to Water Ft. BGS		Comments

Total _____ Gallons Purged

Purge Time Start: _____ Purge Time End: _____ Final Static Water Level: --

OBSERVATIONS

NAPL Observed: Yes / No
Treatment Chemical Observed: Yes / No
MS/MSD Collected: Yes / No
Duplicate Sample Collected: Yes / No

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ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

SOIL COVER SYSTEM (OR CAP) INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

COVER TYPE	OVERALL CONDITION	ANY LOCATIONS REQUIRE REPAIR OR MAINTENANCE	PHOTOS TAKEN	COMMENTS
SOIL OR VEGETATIVE COVER		YES / NO	YES / NO	
ASPHALT SURFACE		YES / NO	YES / NO	
CONCRETE SURFACE		YES / NO	YES / NO	
BUILDING SLAB		YES / NO	YES / NO	

SUB SLAB DEPRESSURIZATION SYSTEM INSPECTION FORM

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ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

INSPECTION EVENT		COMPONENT	SITE BUILDING		COMMENTS
ANNUALLY	OTHER		SSDS FAN #1	SSDS FAN #2	
		OPERATIONAL	YES / NO	YES / NO	
		VACUUM GAUGE READING (IN. H20)			
		ALARM CHECK	YES / NO	YES / NO	
		SSDS PIPING CHECK	YES / NO	YES / NO	
		SSDS FAN CHECK	YES / NO	YES / NO	

PRESSURE FIELD EXTENSION MONITORING POINT INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209

LOCATION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK

LABELLA PROJECT #

LABELLA REP:

DATE:

WEATHER:

LOCATION	VACUUM READING (INCHES OF WATER)	NOTES
#1		
#2		
#3		
#4		
#5		
#6		
#7		
#8		
#9		
#10		

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ROCHESTER, NEW YORK 14614
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FAX: (585-454-3066

GROUNDWATER TREATMENT SYSTEM INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.:
INSPECTED BY:
DATE:
WEATHER:

INSPECTION EVENT		GROUNDWATER TREATMENT SYSTEM COMPONENT	OBSERVATION	COMMENTS
ANNUALLY	OTHER			
		PIPING, VALVES, FITTINGS INSPECTED	YES / NO	
		WATER CHECK / ANY VISIBLE LEAKS	YES / NO	
		LOCKING CAP PRESENT	YES / NO	

300 STATE STREET, SUITE 201
ROCHESTER, NEW YORK 14614
PHONE: (585) 454-6110
FAX: (585-454-3066

MONITORING WELL INSPECTION FORM

PROJECT NAME: FORMER WOLLENSACK OPTCAL, NYSDEC BCP SITE NO. C828209
LOCTION: 872 AND 886 HUDSON AVE, ROCHESTER, NEW YORK
PROJECT NO.: ______
INSPECTED BY: ______
DATE: ______
WEATHER: ______

WELL ID	STATIC WATER LEVEL	EVIDENCE OF DAMAGE	EVIDENCE OF FROST HEAVING	EVIDENCE OF CASING DAMAGE OR WEAR	LOCK IN PLACE	EVIDENCE OF WELL SUBSIDENCE	STANDING OR PONDING WATER	CORRECTIVE ACTION MEASURES TAKEN	COMMENTS
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	
		YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	YES / NO	

APPENDIX I

Remedial Site Optimization

REMEDIAL SYSTEM OPTIMIZATION FOR FORMER WOLLENSACK OPTICAL

TABLE OF CONTENTS

APPENDIX J

Responsibilities of Owner and Remedial Party

Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the Former Wollensack Optical site (the "site"), number C828209, are divided between the site owner(s) and a Remedial Party, as defined below. The owner is currently listed as: Jefferson Wollensack Housing Development Fund Corp, 312 State Street, Rochester, New York 14614 (attention Carolyn Vitale, (585) 325-6530) (the "owner").

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is: Jefferson Wollensack LLC.

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in an Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. If damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3-Notifications.

6) If some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3-Notifications and coordinate the performance of necessary corrective actions with the RP.

7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site properties. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 1.3 of the SMP. A change of use includes, but is not limited to, any activity that may increase direct human or environmental exposure (e.g., day care, school or park). A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8) Until such time as the NYSDEC deems the vapor mitigation system unnecessary, the owner shall operate the system, pay for the utilities for the system's operation, and report any maintenance issues to the RP and the NYSDEC.

9) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3- Notifications of the SMP.

7) The RP is responsible for the proper maintenance of any installed vapor intrusion mitigation systems associated with the site, as required in Section 5.0 or Appendix E (Operation, Monitoring and Maintenance Manual) of the SMP.

8) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

9) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the NYSDEC project manager to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.

APPENDIX K

NYSDEC DER-10 Appendix 5

Appendix 5
Allowable Constituent Levels for Imported Fill or Soil
Subdivision 5.4(e)

Source: This table is derived from soil cleanup objective (SCO) tables in 6 NYCRR 375. Table 375-6.8(a) is the source for unrestricted use and Table 375-6.8(b) is the source for restricted use.

Note: For constituents not included in this table, refer to the contaminant for supplemental soil cleanup objectives (SSCOs) in the Commissioner Policy on *Soil Cleanup Guidance*. If an SSCO is not provided for a constituent, contact the DER PM to determine a site-specific level.

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Metals					
Arsenic	13	16	16	16	13
Barium	350	350	400	400	433
Beryllium	7.2	14	47	47	10
Cadmium	2.5	2.5	4.3	7.5	4
Chromium, Hexavalent[1]	1 [3]	19	19	19	1 [3]
Chromium, Trivalent[1]	30	36	180	1500	41
Copper	50	270	270	270	50
Cyanide	27	27	27	27	NS
Lead	63	400	400	450	63
Manganese	1600	2000	2000	2000	1600
Mercury (total)	0.18	0.73	0.73	0.73	0.18
Nickel	30	130	130	130	30
Selenium	3.9	4	4	4	3.9
Silver	2	8.3	8.3	8.3	2
Zinc	109	2200	2480	2480	109
PCBs/Pesticides					
2,4,5-TP Acid (Silvex)	3.8	3.8	3.8	3.8	NS
4,4'-DDE	0.0033 [3]	1.8	8.9	17	0.0033 [3]
4,4'-DDT	0.0033 [3]	1.7	7.9	47	0.0033 [3]
4,4'-DDD	0.0033 [3]	2.6	13	14	0.0033 [3]
Aldrin	0.005	0.019	0.097	0.19	0.14
Alpha-BHC	0.02	0.02	0.02	0.02	0.04 [4]
Beta-BHC	0.036	0.072	0.09	0.09	0.6
Chlordane (alpha)	0.094	0.91	2.9	2.9	1.3
Delta-BHC	0.04	0.25	0.25	0.25	0.04 [4]
Dibenzofuran	7	14	59	210	NS
Dieldrin	0.005	0.039	0.1	0.1	0.006
Endosulfan I	2.4[2]	4.8	24	102	NS
Endosulfan II	2.4[2]	4.8	24	102	NS
Endosulfan sulfate	2.4[2]	4.8	24	200	NS
Endrin	0.014	0.06	0.06	0.06	0.014
Heptachlor	0.042	0.38	0.38	0.38	0.14
Lindane	0.1	0.1	0.1	0.1	6
Polychlorinated biphenyls	0.1	1	1	1	1

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Semi-volatile Organic Compounds					
Acenaphthene	20	98	98	98	20
Acenaphthylene	100	100	100	107	NS
Anthracene	100	100	100	500	NS
Benzo(a)anthracene	1	1	1	1	NS
Benzo(a)pyrene	1	1	1	1	2.6
Benzo(b)fluoranthene	1	1	1	1.7	NS
Benzo(g,h,i)perylene	100	100	100	500	NS
Benzo(k)fluoranthene	0.8	1	1.7	1.7	NS
Chrysene	1	1	1	1	NS
Dibenz(a,h)anthracene	0.33 [3]	0.33 [3]	0.33 [3]	0.56	NS
Fluoranthene	100	100	100	500	NS
Fluorene	30	100	100	386	30
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	NS
m-Cresol(s)	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	NS
Naphthalene	12	12	12	12	NS
o-Cresol(s)	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	NS
p-Cresol(s)	0.33	0.33	0.33	0.33	NS
Pentachlorophenol	0.8 [3]	0.8 [3]	0.8 [3]	0.8 [3]	0.8 [3]
Phenanthrene	100	100	100	500	NS
Phenol	0.33 [3]	0.33 [3]	0.33 [3]	0.33 [3]	30
Pyrene	100	100	100	500	NS
Volatile Organic Compounds					
1,1,1-Trichloroethane	0.68	0.68	0.68	0.68	NS
1,1-Dichloroethane	0.27	0.27	0.27	0.27	NS
1,1-Dichloroethene	0.33	0.33	0.33	0.33	NS
1,2-Dichlorobenzene	1.1	1.1	1.1	1.1	NS
1,2-Dichloroethane	0.02	0.02	0.02	0.02	10
1,2-Dichloroethene(cis)	0.25	0.25	0.25	0.25	NS
1,2-Dichloroethene(trans)	0.19	0.19	0.19	0.19	NS
1,3-Dichlorobenzene	2.4	2.4	2.4	2.4	NS
1,4-Dichlorobenzene	1.8	1.8	1.8	1.8	20
1,4-Dioxane	0.1 [3]	0.1 [3]	0.1 [3]	0.1 [3]	0.1
Acetone	0.05	0.05	0.05	0.05	2.2
Benzene	0.06	0.06	0.06	0.06	70
Butylbenzene	12	12	12	12	NS
Carbon tetrachloride	0.76	0.76	0.76	0.76	NS
Chlorobenzene	1.1	1.1	1.1	1.1	40
Chloroform	0.37	0.37	0.37	0.37	12
Ethylbenzene	1	1	1	1	NS
Hexachlorobenzene	0.33 [3]	0.33 [3]	1.2	3.2	NS
Methyl ethyl ketone	0.12	0.12	0.12	0.12	100
Methyl tert-butyl ether	0.93	0.93	0.93	0.93	NS
Methylene chloride	0.05	0.05	0.05	0.05	12

Volatile Organic Compounds (continued)					
Propylbenzene-n	3.9	3.9	3.9	3.9	NS
Sec-Butylbenzene	11	11	11	11	NS
Tert-Butylbenzene	5.9	5.9	5.9	5.9	NS
Tetrachloroethene	1.3	1.3	1.3	1.3	2
Toluene	0.7	0.7	0.7	0.7	36
Trichloroethene	0.47	0.47	0.47	0.47	2
Trimethylbenzene-1,2,4	3.6	3.6	3.6	3.6	NS
Trimethylbenzene-1,3,5	8.4	8.4	8.4	8.4	NS
Vinyl chloride	0.02	0.02	0.02	0.02	NS
Xylene (mixed)	0.26	1.6	1.6	1.6	0.26

All concentrations are in parts per million (ppm)
NS = Not Specified

Footnotes:
[1] The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminant is below the specific SCO for Hexavalent Chromium.
[2] The SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.
[3] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.
[4] This SCO is derived from data on mixed isomers of BHC.

APPENDIX L

NYSDEC DER-10 Request to Import/Reuse Soil or Fill Form

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e). Use of this form is not a substitute for reading the applicable Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that would pass a size 80 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

Revised August 2014

APPENDIX M

September 2020 Indoor Air Sampling Work Plan

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
P: (585) 226-5353 I F: (585) 226-8139
www.dec.ny.gov

September 30, 2020

Carolyn Vitale
Jefferson Wollensack LLC
312 State Street
Rochester, New York 14608

Re: Indoor Air Sampling Work Plan
Former Wollensack Optical Site
Site No.: C828209
City of Rochester, Monroe (C)

Dear Ms. Vitale:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) (collectively known as the State) have completed their review of the September 14, 2020 Indoor Air Sampling Work Plan (Work Plan) for the Former Wollensack Optical site (Site) located at 872 and 886 Hudson Avenue, City of Rochester. Based on the information presented in the Work Plan, the Work Plan is approved with the following modifications and clarifications.

1. The State understands that indoor sampling will be completed in accordance with the New York State Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006 and all subsequent updates.

2. The State understands that the indoor air samples will be analyzed for the analytical parameters using Method TO-15.

3. The State understands that there will be a qualified environmental professional as defined in 6 NYCRR Part 375-1.2(ak) or an individual who is a direct report to the QEP on the site to supervise the indoor air sampling activities undertaken as per the approved Work Plan.

4. The State understands that the indoor air sampling activities and all associated supporting documentation will be included in the Final Engineering report as per DER-10 Section 5.8. The FER will include all NYS licensed PE stamped and signed as-built drawings and the appropriate certification language as presented in DER-10 Section 1.5.

5. The State understands that the indoor air sampling data will be submitted to EQuIS.

6. The State understands that this indoor air sampling event is being undertaken outside the defined heating season and the sub-slab depressurization system had not operated for at least 30 days. Subsequent indoor air sampling event(s) may need to be undertaken to ensure the sub-slab depressurization system is operating as designed and mitigating exposures to soil vapor intrusion.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
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7. As indicated in e-mail correspondence dated September 17, 2020, the Department was not given 7 days advance notice of fieldwork activities as required by the Brownfield Cleanup Agreement and 6 NYCRR Part 375-1.6(a)4. In the future this requirement needs to be met in order for the Department to provide oversight of fieldwork activities.

The approved Indoor Air Sampling Work Plan along with this letter attached must be placed in the document repository within 1 week of the date of this letter. Please provide notification to the Department that the approved Indoor Air Sampling Work Plan and a copy of this letter have been placed in the document repository (electronic notification is acceptable).

If you have any questions or concerns regarding this letter, the BCP requirements, or need further assistance with the Site, please feel free to contact me at 585-226-5354 or via e-mail at charlotte.theobald@dec.ny.gov.

Sincerely,

Charlotte B. Theobald
Assistant Engineer

ec:
Chris Roland (Edgemere Development)
Stephanie Benson (Edgemere Development)
Michael Pelychaty (LaBella)
Jennifer Gillen (LaBella)
Dan Noll (LaBella)
Amy Reichhart (Nixon Peabody, LLC)
Joseph Biondolillo (City of Rochester)
Carlos Barbosa (NYSHCR)
Melissa Doroski (NYS. Dept. of Health – Albany)
Arunesh Ghosh (NYS Dept. of Health - Albany)
John Frazer (MCHD)
Kieran McCarthy (NYSDEC)
David Pratt (NYSDEC)
Todd Caffoe (NYSDEC)

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Todd Caffoe (NYSDEC)

September 14, 2020

Ms. Charlotte Theobald
New York State Department of Environmental Conservation
Region 8 Division of Environmental Remediation
6274 East Avon-Lima Road Avon, New York 14414

Re: Indoor Air Sampling Work Plan
NYSDEC BCP Site C828209
Former Wollensack Optical, 827 and 886 Hudson Avenue, Rochester, New York
LaBella Project No. 2182207

Dear Ms. Theobald:

LaBella Associates D.P.C. (LaBella) is pleased to submit this Indoor Air Sampling Work Plan for the Former Wollensack Optical Brownfield Cleanup Program Site (BCP ID No. C828209) located at 872 and 886 Hudson Avenue, City of Rochester, Monroe County, New York.

INTRODUCTION

A Sub-Slab Depressurization System (SSDS) has been installed at the site in accordance with the NYSDEC approved *Sub-Slab Depressurization Work Plan, Former Wollensack Optical, 872 and 886 Hudson Avenue, Rochester, New York,* completed by LaBella, dated June 18, 2019 and *Sub-Slab Depressurization Work Plan Addendum #1,* completed by LaBella, dated January 20, 2020. A modification to the to the work plan, approved in an email from the NYSDEC, which noted a change of location to some of the permanent and temporary pressure field extension (PFE) monitoring points is included in Attachment 1.

The SSDS was started on August 21, 2020 and monitoring of the PFE locations were conducted on August 24, 2020. All PFE readings indicated there was sufficient negative pressure (i.e. a minimum of -0.004 inches of water column) at each monitoring location that are shown on the figure included in Attachment 2. The PFE measurements are provided in the table below.

Monitoring Point Number	Inches of Water Column
1	-0.021
2	-0.058
3	-0.035
4	-0.010
5	-0.010
6	-0.023
7	-0.053
8	-0.077
9	-0.019

The PFE readings will be documented in the Final Engineering Report.

The PFE readings appear to show that the SSDS is mitigating the whole footprint of the existing site building. As such, LaBella has provided the Indoor Air Sampling Work Plan in accordance with SSDS Work Plan noted above.

INDOOR AIR SAMPLING WORK PLAN

Indoor air samples will be collected from the locations as shown on Figure 1. Specifically, one (1) indoor air sample will be collected from the basement, five (5) indoor air samples will be collected from the first floor, and one (1) outdoor air sample will be collected as part of this sampling event.

The proposed time (i.e. September 2020) of sampling will be conducted outside of the normal heating season or during the winter months. Based on this, the heating units on the first floor will be turned on to operate at least 24 hours prior to and during the sampling event. If the basement space contains a heater, it will be operated in the same manner as the first floor space.

Air samples will be collected utilizing individually certified-clean 1 liter or 1.6 Liter Summa® canisters (or equivalent) equipped with laboratory calibrated flow controllers. The samples will be collected over an approximate twenty-four (24) hour time period. The indoor and outdoor air samples will be collected at a height of approximately 3 to 5 ft above the floor or ground surface to simulate the breathing zone. The outdoor air sample will be collected at an upwind location of the site building or on the building roof. Immediately after opening each Summa® canister, the initial vacuum (inches of mercury) and time will be noted and recorded on the laboratory chain-of-custody. After approximately twenty-four (24) hours, final vacuum readings (inches of mercury) will be noted and the Summa® canisters will be closed. All samples will be collected over the same general time period and in the same manner at all locations to minimize possible discrepancies.

Samples will be sent under chain of custody control to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program certified laboratory for testing. The samples will be tested for VOCs using United States Environmental Protection Agency Method TO-15.

Activities completed at the site will be managed under LaBella's Quality Control Program (QCP), which is included in Attachment 3. Sampling will include the collection of a sample duplicate and a matrix spike/matrix spike duplicate (MS/MSD) as part of the QCP. In addition, a NYSDEC Analytical Services Protocol (ASP) Category B–like data deliverable will be generated by the laboratory and a data usability summary report (DUSR) will be developed. The DUSRs will include the laboratory data summary pages showing corrections made by the data validator and each page will be initialed by the data validator.

HEALTH AND SAFETY PLAN

A site-specific Health and Safety Plan (HASP) has been prepared for the field work described in this Work Plan. This HASP is included in Attachment 4. All LaBella personnel will be required to follow the procedures in the HASP. This HASP is intended for use by LaBella personnel only.

REPORTING

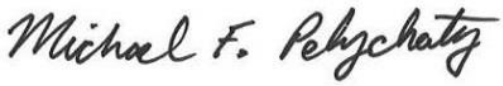
The completed sampling associated with the work plan will be provided in the Final Engineering Report for the site. The report will include field documentation and observations, and summary tables for the analytical data obtained from the sampling work. Supporting documentation will include sampling logs, laboratory reports and chains of custody, the DUSR, and figure showing sampling locations. In addition, an electronic data deliverable will be provided subsequent to the validation of the data.

I Michael F. Pelychaty certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Indoor Air Sampling Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

If you have any questions or require additional information, please do not hesitate to call me at (585) 295-6253.

Respectfully submitted,

LaBella Associates



Michael F. Pelychaty, PG
Sr. Environmental Geologist

Attachments
Figure 1 – Indoor Air Sample Locations
Attachment 1 – NYSDEC Approved Modification to PFE Points
Attachment 2 – PFE Monitoring Locations
Attachment 3 – Quality Control Plan
Attachment 4 – HASP

cc. Chris Roland; Edgemere
Stephanie Benson; Edgemere
Carolyn Vitale; Urban League of Rochester
Todd Caffoe, PE; NYSDEC
Arunesh Ghosh; NYSDOH
Melissa Doroski; NYSDOH

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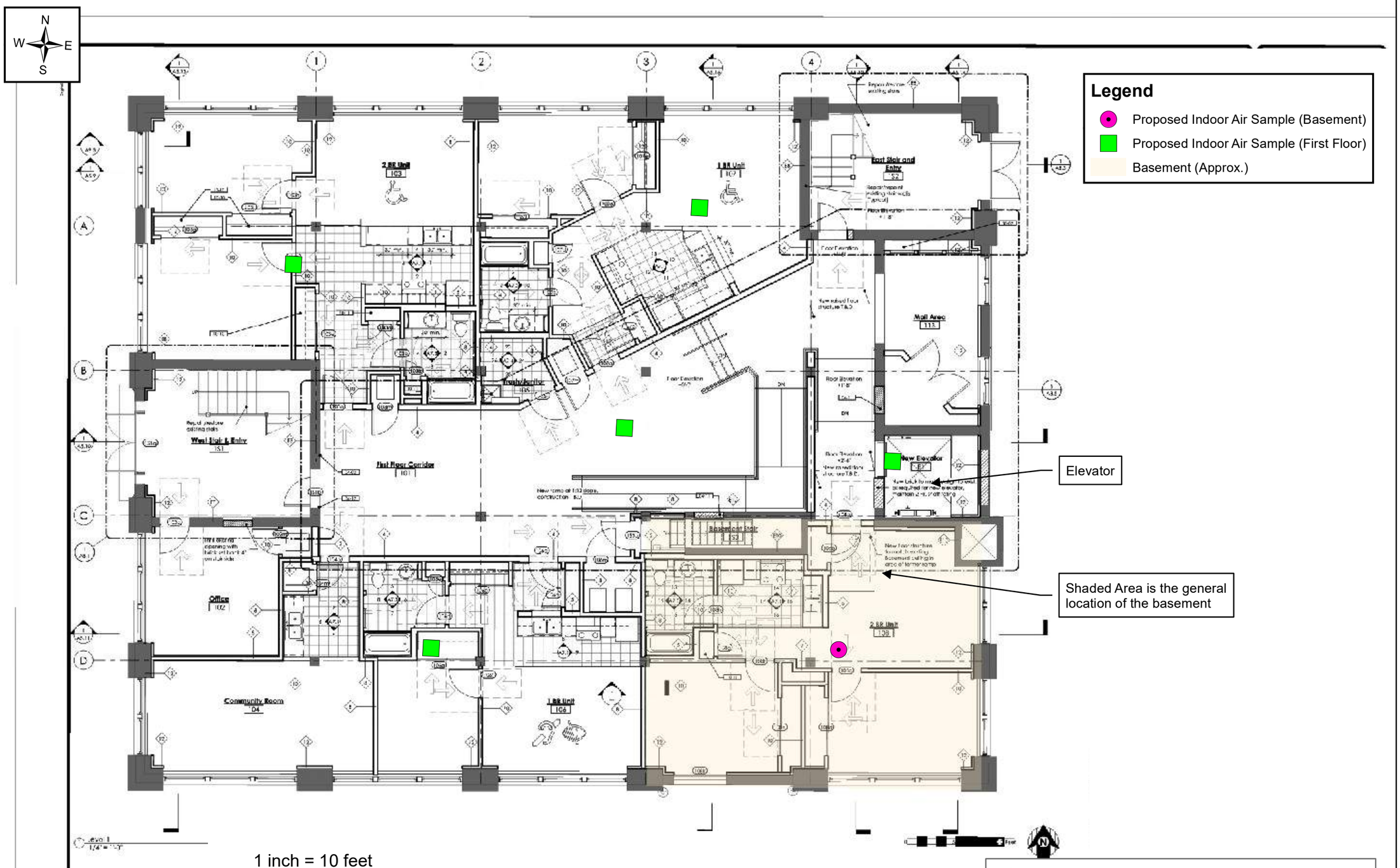
FIGURES



Notes:

1. Building layout provided by Barkstrom and LaCroix Architects dated 7/16/2018 and may not represent final layout of building.

2. All locations should be considered approximate.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066
ellipc.com
IGHT2003

LaBella
Powered by partnership.

PROJECT/CLIENT

Client:
JEFFERSON WOLLENSACK, LLC

Project:
FORMER WOLLENSACK OPTICAL
NYSDEC BCP SITE #C828209
872 AND 886 HUDOSN AVENUE
ROCHESTER, NEW YORK

DRAWING TITLE

INDOOR AIR TESTING
LOCATIONS

ISSUED FOR: DRAFT
DESIGNED BY: MFP
DRAWN BY: SMR
REVIEWED BY: MM
DATE: 9/14/2020
INTENDED TO PRINT AS: 11" X 17"

PROJECT/DRAWING NUMBER

2182207

FIGURE 1

I:\Jefferson Wollensack LLC\2182207 - 872 & 886 Hudson Brownfield\Drawings\Indoor Air Sampling Work Plan\Figure 1 - Indoor Air Sampling Locations.mxd

ATTACHMENT 1

NYSDEC Approved Modifications to the PFE Locations

Pelychaty,Mike

From: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Sent: Thursday, February 20, 2020 2:48 PM
To: Pelychaty,Mike
Subject: RE: C828209, Jefferson-Wollensack - PFE Monitoring Points

Mike:

The State is agreeable with the locations.

Charlotte

From: Pelychaty,Mike <mpelychaty@LaBellaPC.com>
Sent: Monday, February 17, 2020 4:34 PM
To: Theobald, Charlotte B (DEC) <charlotte.theobald@dec.ny.gov>
Cc: Caffoe, Todd (DEC) <todd.caffoe@dec.ny.gov>
Subject: C828209, Jefferson-Wollensack - PFE Monitoring Points

Charlotte,

I reviewed the location of the pressure field extension (PFE) monitoring points and two of the locations were located within a residential apartment as shown on the attached figure. One of the points I propose to move to an adjacent office area, and the other is located at the northwest area of the building. The location at the northwest area of the building is requested to be made temporary; meaning we will collection PFE readings when the SSDS is fully operational to confirm a minimum reading of -0.004 inches of water, then permanently seal the location.

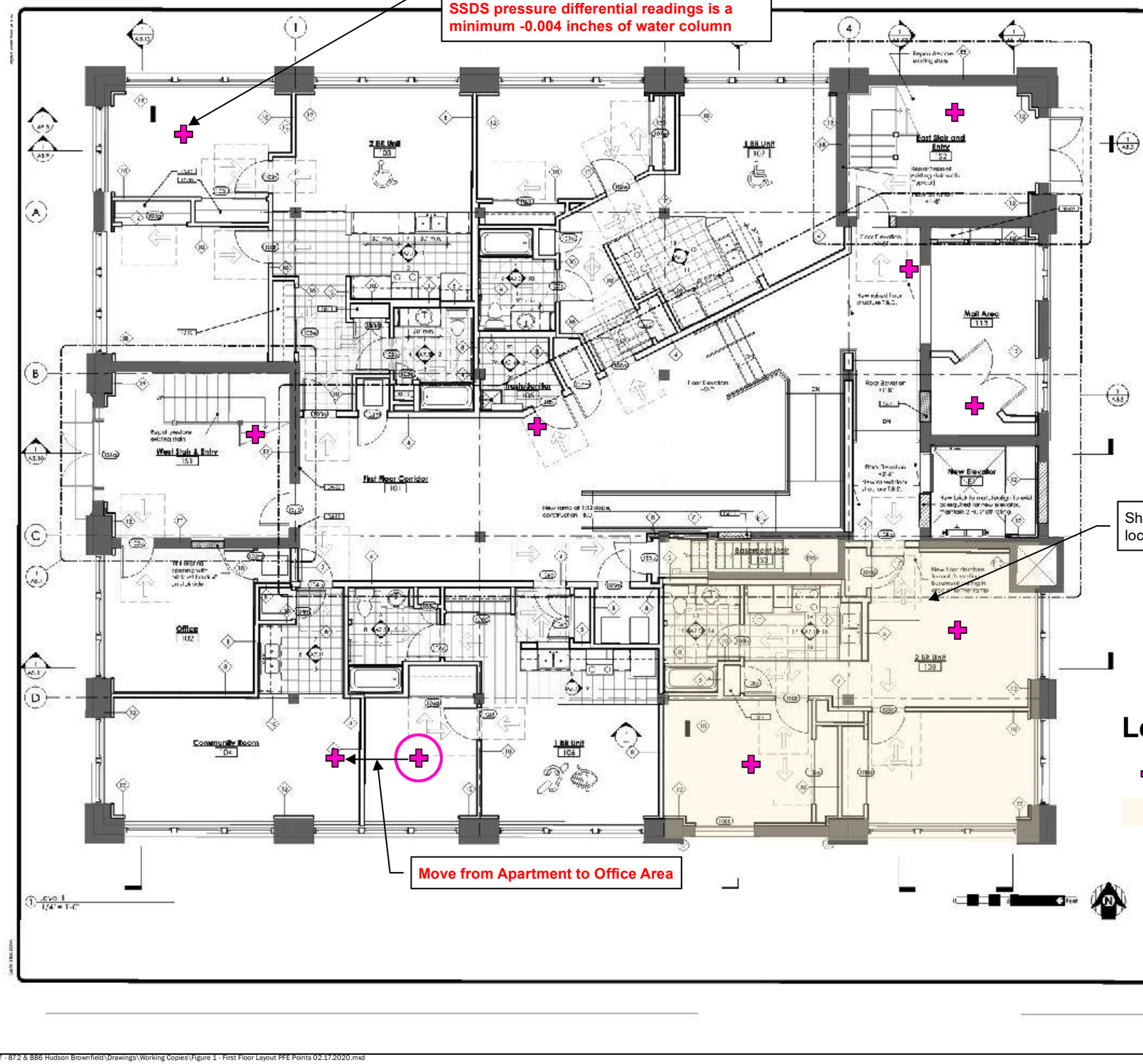
Please let me know if you accept the proposed change or would like to discuss further.

Regards,

Mike Pelychaty

Michael Pelychaty, PG
LaBella Associates | Sr. Environmental Geologist

585-295-6253 **direct**
585-454-6110 **office**
300 State Street, Suite 201
Rochester, NY 14614
labellapc.com



LaBella
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N
W E
S

0 10
Feet
1 inch = 10 feet
INTENDED TO PRINT AS: 11" X 17"

PROJECT:
SUB-SLAB DEPRESSURIZATION
WORK PLAN
DESIGN DOCUMENT

FORMER WOLLENSACK OPTICAL
NYSDEC BCP C828209
872 & 886 HUDSON AVENUE
ROCHESTER, NEW YORK

DRAFT

DRAWING NAME:
PRESSURE FIELD EXTENSION
MONITORING POINT LOCATIONS

PROJECT #/DRAWING #/ DATE

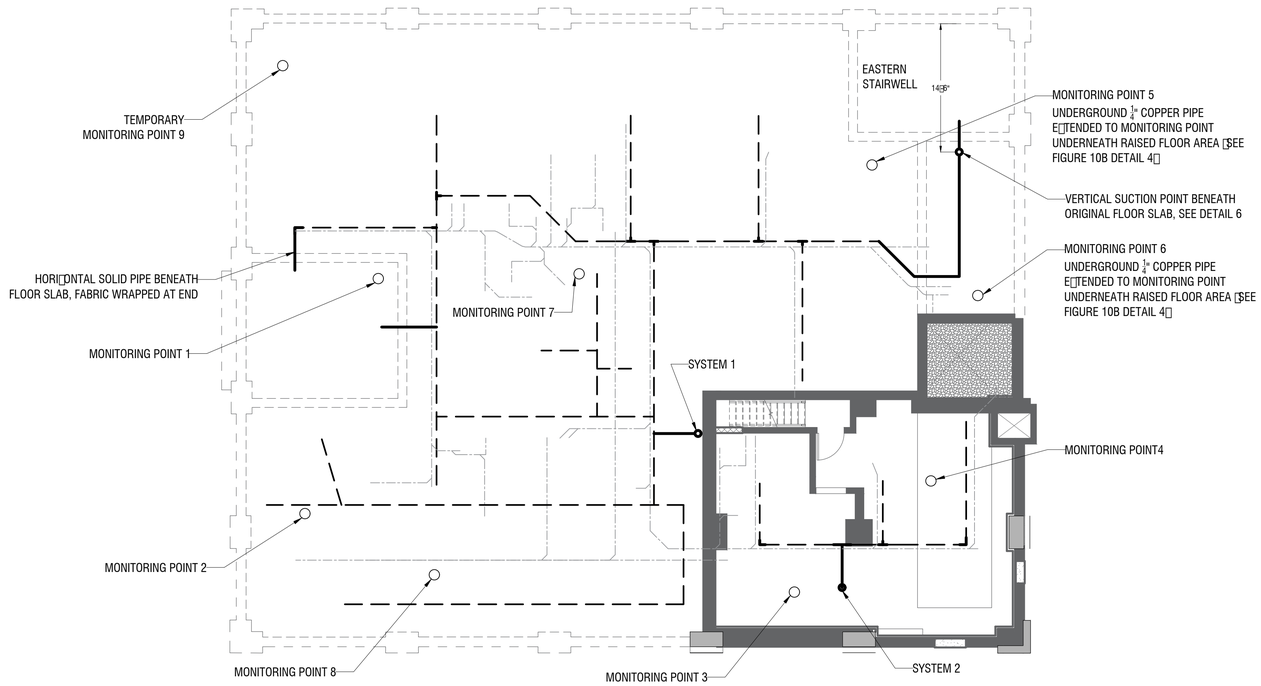
2182207

FIGURE 1

2/17/2020

ATTACHMENT 2

PFE Monitoring Locations



R-100 SUB-SLAB DEPRESSURIZATION SYSTEM
1/8" = 1'

NOTES:

1. THIS PLAN NOT INTENDED TO PROVIDE PLUMBING DETAILS. REFER TO PLUMBING DRAWINGS.
2. VERTICAL PIPES ARE 4 INCH SCHEDULE 40 PVC. CONTRACTOR TO VENT UP THROUGH THE ROOF.
3. ALL SUB-SLAB VAPOR COLLECTION PIPING IS GEOTEXTILE-WRAPPED 4 INCH PERFORATED DUAL-WALLED CORRUGATED EXTERIOR SMOOTH INTERIOR HDPE.
4. 4 INCH SCHEDULE 40 PVC VERTICAL RISERS ROUTED TO STORAGE ROOM/ PIPE CHASE AND VENTED UP THROUGH THE ROOF.
5. ALARM AND MANOMETER ON EACH RISER PIPE INSIDE BUILDING IN ACCESSIBLE LOCATIONS AS SHOWN OF FIGURE.
6. SUB-SLAB DEPRESSURIZATION SYSTEM PERFORATED PIPING TO BE INSTALLED WITHIN PLUMBING TRENCH, ABOVE OR THE SIDE OF PLUMBING, WITH MINIMUM 3 INCHES OF STONE BETWEEN PIPES. MOVE SUB-SLAB DEPRESSURIZATION PIPING WITHIN TRENCH AS NEEDED TO ACCOMMODATE PLUMBING. LOCATIONS WHERE PIPING CROSSES, THE SSDS PIPING SHALL BE PLACED ABOVE PLUMBING PIPING.
7. 4" CAP AT EACH VAPOR COLLECTION PIPE TERMINATION.
8. TRENCH BACKFILLED WITH PEA STONE.
9. SEAL ALL PENETRATIONS INCLUDING SUMPS AND GAPS IN THE FLOOR SLAB WITH AN ELASTOMERIC JOINT SEALANT.
10. RADON AWAY GP-501 FAN OR EQUIVALENT ON EACH VERTICAL RISER ABOVE ROOF. TERMINATE VENT STACK MINIMUM 12 INCHES ABOVE ROOF AND MINIMUM 25 FEET FROM ANY AIR INTAKE.

LEGEND

- FABRIC WRAPPED 4 INCH HDPE PERFORATED PIPE PLACED WITHIN PEA STONE TRENCH
- PRESSURE MONITORING POINT
- APPROXIMATE LOCATION OF NEW PLUMING
- 4" SOLID PVC

NO.	REVISION	BY	DATE
1			
2			
3			
4			
5			
6			

STATE OF NEW YORK
DANIEL P. NOLL
No. 081598
LICENSED PROFESSIONAL ENGINEER

LaBella
Powered by partnership.

PROJECT/CLIENT
FORMER WOLLENSAC OPTICAL
872-886 HUDSON AVE,
ROCHESTER NY

DRAWING TITLE
SUB-SLAB DEPRESSURIZATION
SYSTEM LAYOUT

ISSUED FOR
REVISION 1
DATE: 8/24/2020

DESIGNED: AA
DRAWN: DRP
REVIEWED: AA
SCALE: 1/8" = 1'

PROJECT/DRAWING NUMBER
2182207

FIG 10

ATTACHMENT 3

Quality Control Program

Quality Control Plan (QCP)
NYSDEC Site #828209

Location:

Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, New York

LaBella Project No. 2182207

August 31, 2020

LaBella
Powered by partnership.

300 State Street, Suite 201 | Rochester, NY 14614 | p 585-454-6110 | f 585-454-3066

Table of Contents

TABLE OF CONTENTS

Continued

1.0 INTRODUCTION

LaBella's Quality Control (QC) Program is an integral part of its approach to environmental investigations. By maintaining a rigorous QC program, our firm is able to provide accurate and reliable data. QC also provides safe working conditions for all on-site workers.

The Quality Control program contains procedures, which provide for collected data to be properly evaluated, and which document that quality control procedures have been followed in the collection of samples. The quality control program represents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling practices.

Procedures used in the firm's Quality Control program are compatible with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QC program has been organized into the following areas:

- QC Objectives and Checks
- Field Equipment, Handling, and Calibration
- Sampling Techniques
- Sample Handling and Packaging

It should be noted that the Soil Gas Sampling Work Plan (SGS) Work Plan may have project specific details that will differ from the procedures in this QC program. In such cases, the SGS Work Plan should be followed (subsequent to regulatory approval).

2.0 QUALITY CONTROL OBJECTIVES

The United States Environmental Protection Agency (EPA) has identified five general levels of analytical data quality as being potentially applicable to site investigations conducted under CERCLA. These levels are summarized below:

- **Level I** - Field screening. This level is characterized by the use of portable instruments, which can provide real-time data to assist in the optimization of sampling point locations and for health and safety support. Data can be generated regarding the presence or absence of certain contaminants (especially volatiles) at sampling locations.
- **Level II** - Field analysis. This level is characterized by the use of portable analytical instruments, which can be used on site or in mobile laboratories stationed near a site (close-support labs). Depending upon the types of contaminants, sample matrix, and personnel skills, qualitative and quantitative data can be obtained.
-

- **Level III** - Laboratory analysis using methods other than the Contract Laboratory Program (CLP) Routine Analytical Services (RAS). This level is used primarily in support of engineering studies using standard EPA-approved procedures. Some procedures may be equivalent to CLP RAS, without the CLP requirements for documentation.

- **Level IV** - CLP Routine Analytical Services. This level is characterized by rigorous QC protocols and documentation and provides qualitative and quantitative analytical data. Some regions have obtained similar support via their own regional laboratories, university laboratories, or other commercial laboratories.
- **Level V** - Non-standard methods. Analyses, which may require method modification and/or development. CLP Special Analytical Services (SAS) are considered Level V.

Unless stated otherwise, all data will be generated in accordance with Level IV. When CLP methodology is not available, federal and state approved methods will be utilized. Level III will be utilized, as necessary, for non-CLP RAS work which may include ignitability, corrosivity, reactivity, EP toxicity, and other state approved parameters for characterization. Level I will be used throughout the SGS for health and safety monitoring activities.

All measurements will be made to provide that analytical results are representative of the media and conditions measured. Unless otherwise specified, all data will be calculated and reported in units consistent with other organizations reporting similar data to allow comparability of data bases among organizations. Data will be reported in µg/L and mg/L for aqueous samples, and µg/kg and mg/kg (dry weight) for soils, or otherwise as applicable.

The characteristics of major importance for the assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. Application of these characteristics to specific projects is addressed later in this document. The characteristics are defined below.

2.1 Accuracy

Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

2.2 Precision

Precision is the degree of mutual agreement among individual measurements of a given parameter.

2.3 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

2.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Careful choice and use of appropriate methods in the field will ensure that samples are representative. This is relatively easy with water or air samples since these components are homogeneously dispersed. In soil and sediment, contaminants are unlikely to be evenly distributed, and thus it is important for the sampler and analyst to exercise good judgment when removing a sample.

2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. The data sets may be inter- or intra- laboratory.

3.0 MEASUREMENT OF DATA QUALITY

3.1. Accuracy

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" take the form of EPA standard reference materials, or laboratory prepared solutions of target analytes spiked into a pure water or sample matrix. In the case of GC or GC/MS analyses, solutions of surrogate compounds, which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination, are used.

In each case the recovery of the analyte is measured as a percentage, correcting for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA supplied known solutions, this recovery is compared to the published data that accompany the solution.

For the firm's prepared solutions, the recovery is compared to EPA-developed data or the firm's historical data as available. For surrogate compounds, recoveries are compared to EPA CLP acceptable recovery tables.

If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate. The analyst or his supervisor must initiate an investigation of the cause of the problem and take corrective action. This can include recalibration of the instrument, reanalysis of the QC sample, reanalysis of the samples in the batch, or flagging the data as suspect if the problems cannot be resolved. For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

3.2. Precision

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is sometimes not known to ASC and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantitation of precision is impossible.

For EPA CLP analyses, replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD).

- Where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.
- RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non homogeneity, analysis of check samples, etc. Follow-up action may include sample reanalysis or flagging of the data as suspect if problems cannot be resolved.
- During the data review and validation process (see Section 9), field duplicate RPDs are assessed as a measure of the total variability of both field sampling and laboratory analysis.

3.3. Completeness

Completeness for each parameter is calculated as follows:

- The firm's target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the site managers. In planning the field sample collection, the site manager will plan to collect field duplicates from identified critical areas. This procedure should assure 100% completeness for these areas.

3.4. Representativeness

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area. Within the laboratory, precautions are taken to extract from the sample bottle an aliquot representative of the whole sample. This includes premixing the sample and discarding pebbles from soil samples.

4.0 QC TARGETS

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are included in the QCP, Analytical Procedures. Note that tabulated values are not always attainable. Instances may arise where high sample concentrations, non homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the firm will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

5.0 SAMPLING PROCEDURES

5.1 Ambient Air Sampling

This section describes the sampling procedures to be utilized for each environmental medium that will be collected and analyzed in accordance with appropriate state and federal requirements. All procedures described are consistent with EPA sampling procedures as described in SW-846, Update V, dated August
2015 and New York State Department of Health's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006*.

To obtain representative samples and to minimize possible discrepancies, air samples should be collected in the following manner at all locations:

- The protective brass plug from each canister will be removed and the pre-calibrated flow controller will be connected to the canister. The canister will be connected to the soil gas sampling probe via inert tubing (e.g., polyethylene, stainless steel, or Teflon®).
- The identification numbers for the canisters and flow controllers will be recorded along with the. initial canister pressures on the vacuum gauge. Canisters with a significantly different pressure than originally recorded by the testing laboratory should not be used for sampling.
- The flow controller valve will be completely opened and the time that the valve was opened (beginning of sampling) will be recorded.
- Sample collection will be stopped after the scheduled duration of sample collection (approximately 24 hours) and care will be taken to make sure that the canister still has a minimum amount of vacuum remaining. If there is no vacuum remaining, the sample will be rejected and should be collected again in a new canister.
- The final vacuum pressure will be recorded and the flow controller valve will be closed completely. The date and time sample collection was stopped will be recorded.
- The flow controller from the canister will be removed and the protective brass plugs will be replaced.
- Labels/tags (sample name, time/date of sampling, etc.) will be attached to the canisters as directed by the laboratory and placed in the packaging provided by the laboratory.
- The information required for each sample will be entered on the chain of custody form. Copies of the chain-of-custody form will be included in the shipping packaging, as directed by the laboratory. The field manager will retain a copy of the chain of custody for the project file.
- The samples will be shipped to the laboratory within one business day of sample collection via overnight delivery.
- In addition to the indoor air samples, one exterior ambient air sample will also be collected from the apparent upwind location. The ambient air sample will be collected from about 3 to 5ft above the ground using a Summa Canister over the same approximate sampling period.

In some cases, weather conditions may present certain limitations for the sampling. When soil vapor samples are collected, the following actions will be taken to document local conditions during sampling that may influence interpretation of the results:

- Weather conditions (e.g., precipitation and outdoor temperature) should be noted for the past 24 to 48 hours; and
- Any pertinent observations should be recorded, such as odors and readings from field instrumentation.

6.0 SURVEYING

Coordinates and elevations will be established for each soil gas sampling point. Elevations to the closest 0.01 foot shall be used for the survey. These elevations shall be referenced to a regional, local, or project-specific datum. USGS benchmarks will be used whenever available. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site. Interior locations will be located via tape measure and elevations based on tape measure from exterior grade, to the extent practicable.

7.0 GEOLOGIC LOGGING AND SAMPLING

At each investigative location, the boring will be advanced through overburden using either a drill rig and hollow-stem auger or direct push technology; soils will be visually inspected for stains and monitored with a PID to help determine potential for vertical migration of contaminants. Soil samples will be collected continuously. The sampling device will be decontaminated according to procedures outlined in the Decontamination section of this document. Recovered soil will be screened in the field for volatile organic vapors using a PID, classified in accordance with Unified Soil Classification System (USCS) specifications, and logged.

All samples will be screened with a PID during collection. The headspace of all samples taken in the field will be screened using USEPA method 3810.

8.0 MANAGEMENT OF INVESTIGATIVE DERIVED WASTE

Purpose:

The purposes of these guidelines are to ensure the proper holding, storage, transportation, and disposal of materials that may contain hazardous wastes. Investigation-derived waste (IDW) included the following:

- Drill cuttings, discarded soil samples, drilling mud solids, and used sample containers;
- Soiled disposable personal protective equipment (PPE);
- Used disposable sampling equipment;
- Used plastic sheeting and aluminum foil;
- Other equipment or materials that either contain or have been in contact with potentially-impacted environmental media.
- Because these materials may contain regulated chemical constituents, they must be managed as a solid waste. This management may be terminated id characterization analytical results indicate the absence of these constituents.

Procedure:

1. Contain all investigation-derived wastes in Department of Transpiration (DOT)-approved 55-gallon drums, roll-off boxes, or other containers suitable for the wastes.
2. Contain wastes from separate borings or wells in separate containers (i.e. do not combine wastes from several borings/wells in a single container, unless it is a container used specifically for transfer purposes, or unless specific permission to do so has been provided by the LaBella Project Manager. Unused samples from surface sample locations within a given area may be combined.

3. To the extent practicable, separate solids from drilling muds, decontamination waters, and similar liquids. Place solids within separate containers.
4. Transfer all waste containers to a staging area. Access to this area will be controlled. Waste containers must be transferred to the staging area as soon as practicable after the generating activity is complete.
5. Pending transfer, all containers will be covered and secured when not immediately attended,
6. Label all containers with regard to contents, origin, and date of generation. Use indelible ink for all labeling.
7. Collect samples for waste characterization purposes, use boring/well sample analytical data for characterization.
8. For wastes determined to be hazardous in character, be aware on accumulation time limitations. Coordinate the disposal of these wastes with the Owner and NYSDEC.
9. Dispose of investigation-derived wastes as follows;
    - Soil, water, and other environmental media for which analysis does not detect organic constituents, and for which inorganic constituents are at levels consistent with background, may be spread on-site or otherwise treated as a non0-waste material.
    - Soils, water, and other environmental media in which organic compounds are detected or metals are present above background will be disposed as industrial waste. Alternate disposition must be consistent with applicable State and Federal laws.
    - Personal protective equipment, disposable bailers, and similar equipment may be disposed as municipal waste, unless waste characterization results mandate disposal as industrial wastes

9.0 DECONTAMINATION

Sampling methods and equipment have been chosen to minimize decontamination requirements and to prevent the possibility of cross-contamination. Decontamination of equipment will be performed between discrete sampling locations. Equipment used to collect samples between composite sample locations will not require decontamination between collection of samples. All drilling equipment will be decontaminated prior to drilling, after drilling each monitoring well, and after the completion of all drilling. Special attention will be given to the drilling assembly, augers, and PVC casing and screens.

Drilling decontamination will consist of:

- Steam cleaning;
- Scrubbing with brushes, if soil remains on equipment; and
- Steam rinse.

Split spoons and other non-disposable equipment will be decontaminated between each sampling event. The sampler will be cleaned prior to each use, by one of the following procedures:

- Initially cleaned of all foreign matter;

- Sanitized with a steam cleaner;

OR

- Initially cleaned of all foreign matter;
- Scrubbed with brushes in trisodium phosphate or alconox solution;
- Rinsed with deionized water;
- Rinsed with pesticide grade methanol;
- Triple rinsed with deionized water; and
- Allowed to air dry.

10.0 SAMPLE CONTAINERS

The volumes and containers required for the sampling activities are included in pre-washed sample containers will be ordered directly from a firm, which prepares the containers in accordance with EPA bottle washing procedures.

TABLE 1
Air Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Volatile Organics via USEPA Method TO-15	Summa Canister, 1 to 6 Liter	One (1), fill as regulator allows	Keep away from sunlight	30 days

* Holding time is based on the times from verified time of sample receipt at the laboratory.

11.0 SAMPLE CUSTODY

This section describes standard operating procedures for sample identification and chain-of-custody to be utilized for all Phase II field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during their collection, transportation, and storage through analysis. All chain-of-custody requirements comply with standard operating procedures indicated in EPA sample handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field notebooks,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

12.0 CHAIN OF CUSTODY

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secured area that is restricted to authorized personnel.

12.1 Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained precleaned from a source such as I-Chem. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in the notebook.
- The site manager will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

12.2 Sample Tags

Sample tags attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample tags are to be placed on the bottles so as not to obscure any QC lot numbers on the bottles; sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

12.3 Transfer of Custody and Shipment

- The coolers in which the samples are packed must be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time on the chain-of-custody record. This record documents sample custody transfer
- Shipping containers must be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information are entered in the "Remarks" section of the chain-of-custody record and traffic reports.
- All shipments must be accompanied by the chain-of-custody record identifying their contents. The original record accompanies the shipment. The other copies are distributed appropriately to the site manage.
- If sent by mail, the package is registered with return receipt requested. If sent by common carrier, a bill of lading is used. Freight bills, Postal Service receipts, and bill of lading are retained as part of the permanent documentation.

12.4 Chain-of-Custody Record

The chain-of-custody record must be fully completed in duplicate, using black carbon paper where possible, by the field technician who has been designated by the project manager as responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints in the "Remarks" section of the record.

12.5 Laboratory Custody Procedures

A designated sample custodian accepts custody of the shipped samples and verifies that the sample identification number matches that on the chain-of-custody record and traffic reports, if required. Pertinent information as to shipment, pickup, and courier is entered in the "Remarks" section.

12.6 Custody Seals

Custody seals are preprinted adhesive-backed seals with security slots designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing the package receipt log and LABMIS entries) that seals on boxes and bottles are intact. Strapping tape should be placed over the seals to ensure that seals are not accidentally broken during shipment.

13.0 DOCUMENTATION

13.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container (labels are to be covered with Mylar tape):

XX-YY-O/D

- XX This set of initials indicates the specific Phase II sampling project
- YY These initials identify the sample location. Actual sample locations will be recorded in the task log.
- O/D An "O" designates an original sample; "D" identifies it as a duplicate.

Each sample will be labeled, chemically preserved, if required and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers and protected with Mylar tape. The sample label will give the following information:

- Name of sampler,
- Date and time of collection,
- Sample number,
- Analysis required,
- pH, and
- Preservation.

13.2 Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct event that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. All daily logs will be kept in a bound waterproof notebook containing numbered pages. All entries will be made in waterproof ink, dated, and signed. No pages will be removed for any reason. Corrections will be made according to the procedures given at the end of this section. The daily logs will include a site log and task log.

The site log is the responsibility of the site manager and will include a complete summary of the day's activity at the site.

The **Task Log** will include:

- Name of person making entry (signature).
- Names of team members on-site.
- Levels of personnel protection:
  - Level of protection originally used;
  - Changes in protection, if required; and
  - Reasons for changes.
- Time spent collecting samples.
- Documentation on samples taken, including:
  - Sampling location and depth station numbers;
  - Sampling date and time, sampling personnel;
  - Type of sample (grab, composite, etc.); and
  - Sample matrix.
- On-site measurement data.
- Field observations and remarks.
- Weather conditions, wind direction, etc.
- Unusual circumstances or difficulties.
- Initials of person recording the information.

14.0 CORRECTIONS TO DOCUMENTATION

14.1 Notebook

As with any data logbooks, no pages will be removed for any reason. If corrections are necessary, these must be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction must be initialed and dated. Most corrected errors will require a footnote explaining the correction.

14.2 Sampling Forms

As previously stated, all sample identification tags, chain-of-custody records, and other forms must be written in waterproof ink. None of these documents are to be destroyed or thrown away, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on a document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the corrected information. The incorrect information should not be obliterated. Any subsequent error discovered on a document should be corrected by the person who made the entry. All corrections must be initialed and dated.

14.3 Photographs

Photographs will be taken as directed by the site manager. Documentation of a photograph is crucial to its validity as a representation of an existing situation. The following information will be noted in the task log concerning photographs:

- Date, time, location photograph was taken;
- Photographer (signature);
- Weather conditions;
- Description of photograph taken;
- Reasons why photograph was taken;
- Sequential number of the photograph and the film roll number; and
- Camera lens system used.

After the photographs have been developed, the information recorded in the field notebook should be transferred to the back of the photographs

15.0 SAMPLE HANDLING, PACKAGING, AND SHIPPING

The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States Department of Transportation (DOT) in the Code of Federal Regulation, 49 CFR 171 through 177. All samples will be delivered to the laboratory with 24 to 48 hours from the day of collection.

All chain-of-custody requirements must comply with standard operating procedures in the EPA sample handling protocol. All sample control and chain-of-custody procedures applicable to the Consultant are presented in the Field Personnel Chain-of-Custody Documentation and Quality Control Procedures Manual, January 1992.

15.1 Sample Packaging

Samples must be packaged carefully to avoid breakage or contamination and must be shipped to the laboratory at proper temperatures. The following sample packaging requirements will be followed:

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The sample volume level can be marked by placing the top of the label at the appropriate sample height, or with a grease pencil. This procedure will help the laboratory to determine if any leakage occurred during shipment. The label should not cover any bottle preparation QC lot numbers.
- All sample bottles are placed in a plastic bag to minimize the potential for vermiculite contamination.
- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not touch one another.

- The environmental samples are to be cooled. The use of "blue ice" or some other artificial icing material is preferred. If necessary, ice may be used, provided that it is placed in plastic bags. Ice is not to be used as a substitute for packing materials.
- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A duplicate custody record and traffic reports, if required must be placed in a plastic bag and taped to the bottom of the cooler lid. Custody seals are affixed to the sample cooler.

15.2 Shipping Containers

Shipping containers are to be custody-sealed for shipment as appropriate. The container custody seal will consist of filament tape wrapped around the package at least twice and custody seals affixed in such a way that access to the container can be gained only by cutting the filament tape and breaking a seal.

Field personnel will make arrangements for transportation of samples to the lab. When custody is relinquished to a shipper, field personnel will telephone the lab custodian to inform him of the expected time of arrival of the sample shipment and to advise him of any time constraints on sample analysis. The lab must be notified as early in the week as possible, and in no case later than 3 p.m. (EST) on Thursday, regarding samples intended for Saturday delivery.

15.3 Marking and Labeling

- Use abbreviations only where specified.
- The words "This End Up" or "This Side Up" must be clearly printed on the top of the outer package. Upward pointing arrows should be placed on the sides of the package. The words "Laboratory Samples" should also be printed on the top of the package.
- After a sample container has been sealed, two chain-of-custody seals are placed on the container, one on the front and one on the back. The seals are protected from accidental damage by placing strapping tape over then.
- If samples are designated as medium or high hazard, they must be sealed in metal paint cans, placed in the cooler with vermiculite and labeled and placarded in accordance with DOT regulations.
- In addition, the coolers must also be labeled and placarded in accordance with DOT regulations if shipping medium and high hazard samples.

16.0 CALIBRATION PROCEDURES AND FREQUENCY

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references. Operation, calibration, and maintenance will be performed by personnel properly trained in these procedures. Documentation of all routine and special maintenance and calibration information will be maintained in an appropriate logbook or reference file, and will be available on request. Table 7-1 lists the major instruments to be used for sampling and analysis. Brief descriptions of calibration procedures for major field and laboratory instruments follow.

17.0 FIELD INSTRUMENTATION

17.1 Photovac/MiniRae Photoionization Detector (PID)

Standard operating procedures for the PID require that routine maintenance and calibration be performed every six months. Field calibration will be performed on a daily basis. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers.

17.2 Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of field equipment. Field-based QC will comprise at least 10% of each data set generated and will consist of standards, replicates, spikes, and blanks. Field duplicates and field blanks will be analyzed by the laboratory as samples and will not necessarily be identified to the laboratory as duplicates or blanks. For each matrix, field duplicates will be provided at a rate of one per 10 samples collected or one per shipment, whichever is greater. Field blanks which consist of trip, routine field, and rinsate blanks will be provided at a rate of one per 20 samples collected for each parameter group, or one per shipment, whichever is greater.

Calculations will be performed for recoveries and standard deviations along with review of retention times, response factors, chromatograms, calibration, tuning, and all other QC information generated. All QC data, including split samples, will be documented in the site logbook. QC records will be retained and results reported with sample data.

17.3 Blank Samples

Blank samples are analyzed in order to assess possible contamination from the field and/or laboratory so that corrective measures may be taken, if necessary. Field samples are discussed in the following subsection:

17.4 Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

- **Routine Field Blanks** or bottle blanks are blank samples prepared in the field to access ambient field conditions. They will be prepared by filling empty sample containers with deionized water and any necessary preservatives. They will be handled like a sample and shipped to the laboratory for analysis.
- **Trip Blanks** are similar to routine field blanks with the exception that they are **not** exposed to field conditions. Their analytical results give the overall level of contamination from everything except ambient field conditions. For the SGS, one trip blank will be collected with every batch of water samples for volatile organic analysis. Each trip blank will be prepared by filling a 40-ml vial with deionized water prior to the sampling trip, transported to the site, handled like a sample, and returned to the laboratory for analysis without being opened in the field.

- **Field Equipment Blanks** are blank samples (sometimes called transfer blanks or rinsate blanks) designed to demonstrate that sampling equipment has been properly prepared and cleaned before field use, and that cleaning procedures between samples are sufficient to minimize cross contamination. If a sampling team is familiar with a particular site, they may be able to predict which areas or samples are likely to have the highest concentration of contaminants. Unless other constraints apply, these samples should be taken last to avoid excessive contamination of sampling equipment.

17.5 Field Duplicates

Field duplicate samples consist of a set of two samples collected independently at a sampling location during a single sampling event. In some instances the field duplicate can be a blind duplicate, i.e., indistinguishable from other analytical samples so that personnel performing the analyses are not able to determine which samples are field duplicates. Field duplicates are designed to assess the consistency of the overall sampling and analytical system.

17.6 Quality Control Check Samples

Inorganic and organic control check samples are available from EPA free of charge and are used as a means of evaluating analytical techniques of the analyst. Control check samples are subjected to the entire sample procedure, including extraction, digestion, etc., as appropriate for the analytical method utilized.

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FIGURES

LABELLA Associates, D.P.C. | Engineering Architecture Environmental Planning

APPENDIX A

QUALITY CONTROL PLAN

LABELLA Associates, D.P.C. | Engineering Architecture Environmental Planning

APPENDIX B

HEALTH AND SAFETY PLAN

LABELLA Associates, P.C. | Engineering Architecture Environmental Planning

APPENDIX C

COMMUNITY AIR MONITORING PLAN

ATTACHMENT 4

Health and Safety Plan

Site Health and Safety Plan

Location:

Former Wollensack Optical
872 & 886 Hudson Avenue
Rochester, New York

Prepared For:

Jefferson Wollensack LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 2182207

October 2018

Table of Contents

SITE HEALTH AND SAFETY PLAN

Project Title:	Former Wollensack Optical - Brownfield Cleanup Program
Project Number:	2182207
Project Location (Site):	872 & 886 Hudson Avenue, Rochester, NY
Environmental Director:	To Be Determined
Project Manager:	To Be Determined
Site Safety Supervisor:	To Be Determined
Site Contact:	Ms. Carolyn Vitale
Safety Director:	To Be Determined
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	0.48± acres; Site is currently developed with one (1) building.
Site Environmental Information Provided By:	❑ *Phase I Environmental Site Assessment (ESA),* completed by Seeler Engineering, PC, September 2017; ❑ *Phase II ESA*, completed by LaBella, August 2018 ❑ *Preliminary Shallow Bedrock Groundwater Study*, completed by LaBella, October 2018
Air Monitoring Provided By:	To Be Determined
Site Control Provided By:	Contractor(s)

EMERGENCY CONTACTS

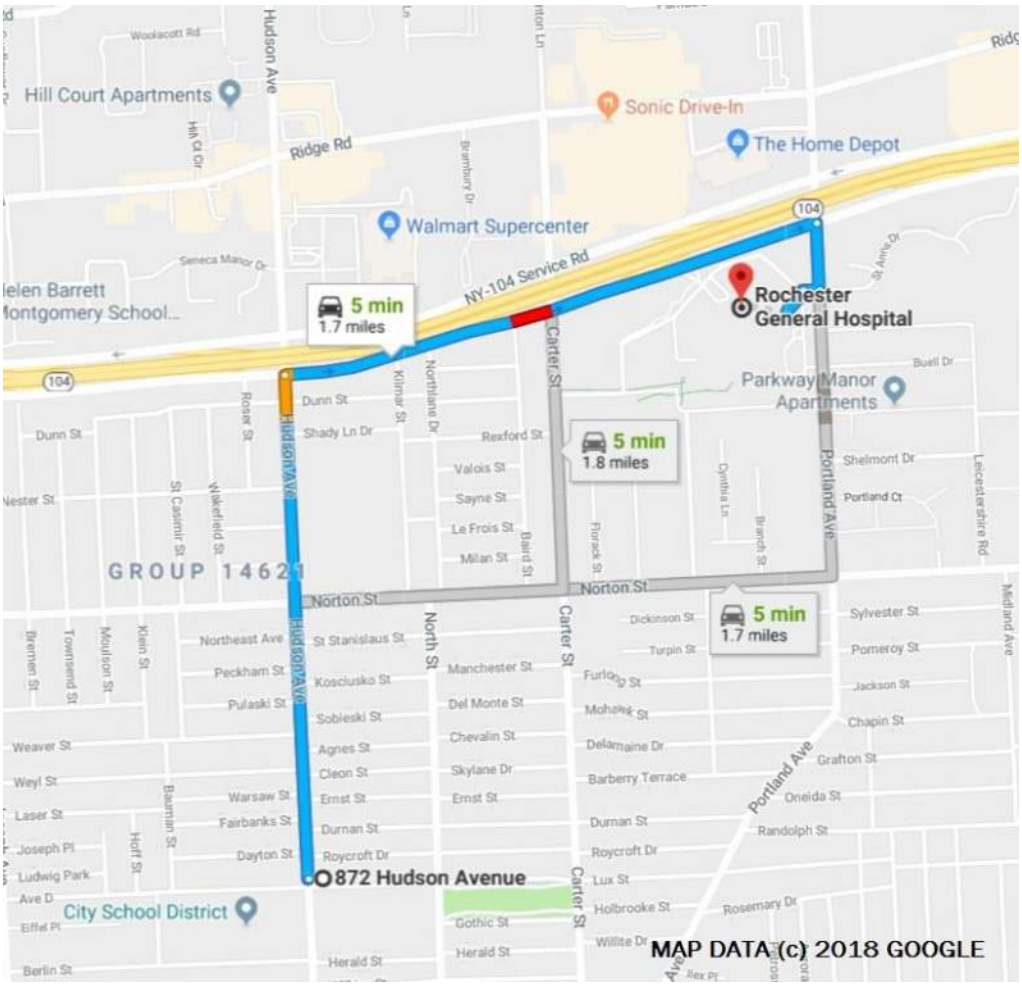
	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Rochester General Hospital	585-922-4000
Poison Control Center:	Finger Lakes Poison Control	716-275-5151
Police (local, state):	Rochester Police Department	911
Fire Department:	Rochester Fire Department	911
Site Contact:	Ms. Carolyn Vitale	585-325-6530
Agency Contact:	NYSDEC – Mr. Michael Barber NYSDOH – To Be Determined	585-226-5459 To Be Determined
Environmental Director:	To Be Determined	To Be Determined
Project Manager:	To Be Determined	To Be Determined
Site Safety Supervisor:	To Be Determined	To Be Determined
Safety Director	To Be Determined	To Be Determined

MAP AND DIRECTIONS TO THE MEDICAL FACILITY - ROCHESTER GENERAL HOSPITAL

Total Est. Time: 5 minutes **Total Est. Distance:** 1.7 miles

1:	Start out going NORTH on HUDSON AVENUE toward ROYCROFT DRIVE	0.7 miles
2:	Turn RIGHT onto NY-104 SERVICE ROAD EAST	0.8 miles
3:	Turn RIGHT onto PORTLAND AVENUE	0.1 miles
4:	Turn RIGHT onto ROCHESTER GENERAL HOSPITAL DRIVE	0.1 miles

End at **1425 Portland Avenue**
Rochester, NY 14621



1.0 Introduction

The purpose of this Health and Safety Plan (HASP) is to provide guidelines for responding to potential health and safety issues that may be encountered during the Remedial Investigation (RI) at the Former Wollensack Optical, 872 & 886 Hudson Avenue in the City of Rochester, Monroe County, New York (Site). This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. This document's project specifications, and the Community Air Monitoring Plan (CAMP), are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or other regulatory bodies.

2.0 Responsibilities

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

3.0 Activities Covered

The activities covered under this HASP are limited to the following:

- Management of environmental investigation and remediation activities
- Environmental Monitoring
- Collection of samples
- Management of excavated soil and fill

4.0 Work Area Access and Site Control

The contractor(s) will have primary responsibility for work area access and site control.

5.0 Potential Health and Safety Hazards

This section lists some potential health and safety hazards that project personnel may encounter at the project site and some actions to be implemented by approved personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times, the Site Safety Officer has responsibility for site safety and his instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:
Heavy machinery including trucks, drilling rigs, trailers, etc. will be in operation at the site. The presence of such equipment presents the danger of being struck or crushed. Use caution when working near heavy machinery.

Protective Action:
Make sure that operators are aware of your activities, and heed operator's instructions and warnings. Wear bright colored clothing and walk safe distances from heavy equipment. A hard hat, safety glasses and steel toe shoes are required.

5.2 Excavation Hazards

Potential Hazard:
Excavations and trenches can collapse, causing injury or death. Edges of excavations can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches. Excavations that require working within the excavation will require air monitoring in the breathing zone (refer to Section 9.0).

Excavations left open create a fall hazard which can cause injury or death.

Protective Action:
Personnel must receive approval from the Project Manager to enter an excavation for any reason. Subsequently, approved personnel are to receive authorization for entry from the Site Safety Officer. Approved personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped. Additional personal protective equipment may be required based on the air monitoring.

Personnel should exercise caution near all excavations at the site as it is expected that excavation sidewalls will be unstable. Do not proceed closer than 3 feet to an unsupported or non-sloped excavation side wall.

Fencing and/or barriers accompanied by "no trespassing" signs should be placed around all excavations when left open for any period of time when work is not being conducted.

5.3 Cuts, Punctures and Other Injuries

Potential Hazard:
In any excavation and construction work site there is the potential for the presence of sharp or jagged edges on rock, metal materials, and other sharp objects. Serious cuts and punctures can result in loss of blood and infection.

Protective Action:
The Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. The Site Safety Officer is responsible for arranging the transportation of authorized on-site personnel to medical facilities when First Aid treatment in not sufficient. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the Project Manager. Serious injuries are to be reported immediately to the Site Safety Officer

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:
Contaminants identified in testing locations at the Site include various petroleum-related volatile organic compounds (VOCs). Volatile organic vapors, chlorinated solvents or other chemicals may be encountered during subsurface activities at the project work site. Inhalation of high concentrations of volatile organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis.

Protective Action:
The presence of organic vapors may be detected by their odor and by monitoring instrumentation. Approved employees will not work in environments where hazardous concentrations of organic vapors are present. Air monitoring (refer to Section 9.0) of the work area will be performed at least every 60 minutes or more often using a Photoionization Detector (PID). Personnel are to leave the work area whenever PID measurements of ambient air exceed 25 ppm consistently for a 5 minute period. In the event that sustained total volatile organic compound (VOC) readings of 25 ppm are encountered personnel should upgrade personal protective equipment to Level C (refer to Section 8.0) and an Exclusion Zone should be established around the work area to limit and monitor access to this area (refer to Section 6.0).

5.5 Injuries due to extreme hot or cold weather conditions

Potential Hazards:
Extreme hot weather conditions can cause heat exhaustion, heat stress and heat stroke or extreme cold weather conditions can cause hypothermia.

Protective Action:
Precaution measures should be taken such as dress appropriately for the weather conditions and drink plenty of fluid. If personnel should suffer from any of the above conditions, proper techniques should be taken to cool down or heat up the body and taken to the nearest hospital if needed.

6.0 Work Zones

In the event that conditions warrant establishing various work zones (i.e., based on hazards - Section 5.0), the following work zones should be established:

Exclusion Zone (EZ):
The EZ will be established in the immediate vicinity and adjacent downwind direction of site activities that elevate breathing zone VOC concentrations to unacceptable levels based on field screening. These site activities include contaminated soil excavation and soil sampling activities. If access to the site is required to accommodate non-project related personnel then an EZ will be established by constructing a barrier around the work area (yellow caution tape and/or construction fencing). The EZ barrier shall encompass the work area and any equipment staging/soil staging areas necessary to perform the associated work. The contractor(s) will be responsible for establishing the EZ and limiting access to approved

personnel. Depending on the condition for establishing the EZ, access to the EZ may require adequate PPE (e.g., Level C).

Contaminant Reduction Zone (CRZ):
The CRZ will be the area where personnel entering the EZ will don proper PPE prior to entering the EZ and the area where PPE may be removed. The CRZ will also be the area where decontamination of equipment and personnel will be conducted as necessary.

7.0 Decontamination Procedures

Upon leaving the work area, approved personnel shall decontaminate footwear as needed. Under normal work conditions, detailed personal decontamination procedures will not be necessary. Work clothing may become contaminated in the event of an unexpected splash or spill or contact with a contaminated substance. Minor splashes on clothing and footwear can be rinsed with clean water. Heavily contaminated clothing should be removed if it cannot be rinsed with water. Personnel assigned to this project should be prepared with a change of clothing whenever on site.

Personnel will use the contractor's disposal container for disposal of PPE.

8.0 Personal Protective Equipment

Generally, site conditions at this work site require level of protection of Level D or modified Level D; however, air monitoring will be conducted to determine if up-grading to Level C PPE is required (refer to Section 9.0). Descriptions of the typical safety equipment associated with Level D and Level C are provided below:

Level D:
Hard hat, safety glasses, rubber nitrile sampling gloves, steel toe construction grade boots, etc.

Level C:
Level D PPE and full or ½-face respirator and tyvek suit (if necessary). [*Note: Organic vapor cartridges are to be changed after each 8-hours of use or more frequently.*]

9.0 Air Monitoring

According to 29 CFR 1910.120(h), air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection required for personnel working onsite. Air monitoring will consist at a minimum of the procedure listed below. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications.

The Air Monitor will utilize a photoionization detector (PID) to screen the ambient air in the work areas (drilling, excavation, soil staging, and soil grading areas) for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Work area ambient air will generally be monitored in the work area and downwind of the work area. Air monitoring of the work areas and downwind of the work areas will be performed at least every 60 minutes using a PID and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone, either personnel are to leave the work area until satisfactory readings are obtained or approved personnel may re-enter the work areas wearing at a minimum a ½ face respirator with organic vapor cartridges for an 8-hour duration (i.e., upgrade to Level C PPE). Organic vapor cartridges are to be changed after each 8-hour use or more frequently, if necessary. If PID readings are sustained, in the work area, at levels above 50 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

If downwind PID measurements reach or exceed 25 ppm consistently for a 5 minute period downwind of the work area, PID readings will be taken within the buildings (if occupied) on Site to ensure that the vapors are not penetrating any occupied building and effecting the personnel working within. If the PID measurements reach or exceed 25 ppm within the nearby buildings, the personnel should be evacuated via a route in which they would not encounter the work area. The building should then be ventilated until the PID measurements within the building are at or below background levels. It should be noted that the site buildings are currently vacant.

10.0 Emergency Action Plan

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible, wait at the assigned 'safe area' and follow the instructions of the Site Safety Officer.

Employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

11.0 Medical Surveillance

Medical surveillance will be provided to all employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

12.0 Employee Training

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the remedial investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

Table 1
Exposure Limits and Recognition Qualities

Compound	PEL-TWA (ppm)(b)(d)	TLV-TWA (ppm)(c)(d)	STEL (ppm)(b)	LEL (%)(e)	UEL (%)(f)	IDLH (ppm)(g)(d)	Odor	Odor Threshold (ppm)	Ionization Potential
Acetone	750	500	NA	2.15	13.2	20,000	Sweet	4.58	9.69
Anthracene	.2	.2	NA	NA	NA	NA	Faint aromatic	NA	NA
Benzene	1	0.5	5	1.3	7.9	3000	Pleasant	8.65	9.24
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.1	NA	NA	NA	700	NA	NA	NA
Benzo (a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (k) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	10.88
Carbon Disulfide	20	1	NA	1.3	50	500	Odorless or strong garlic type	.096	10.07
Chlorobenzene	75	10	NA	1.3	9.6	2,400	Faint almond	0.741	9.07
Chloroform	50	2	NA	NA	NA	1,000	ethereal odor	11.7	11.42
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethylene	200	200	NA	9.7	12.8	400	Acrid	NA	9.65
1,2-Dichlorobenzene	50	25	NA	2.2	9.2		Pleasant		9.07
Ethyl Alcohol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100	100	NA	1.0	6.7	2,000	Ether	2.3	8.76
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	400	200	500	2.0	12.7	2,000	Rubbing alcohol	3	10.10
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	500	50	NA	12	23	5,000	Chloroform-like	10.2	11.35
Naphthalene	10, Skin	10	NA	0.9	5.9	250	Moth Balls	0.3	8.12
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphoric Acid	1	1	3	NA	NA	10,000	NA	NA	NA
Polychlorinated Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium Hydroxide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane	NA	NA	NA	NA	NA	NA	Sweet	NA	NA
Toluene	100	100	NA	0.9	9.5	2,000	Sweet	2.1	8.82
Trichloroethylene	100	50	NA	8	12.5	1,000	Chloroform	1.36	9.45
1,2,4-Trimethylbenzene	NA	25	NA	0.9	6.4	NA	Distinct	2.4	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	NA	Distinct	2.4	NA
Vinyl Chloride	1	1	NA	NA	NA	NA	NA	NA	NA
Xylenes (o,m,p)	100	100	NA	1	7	1,000	Sweet	1.1	8.56
Metals									
Arsenic	0.01	0.2	NA	NA	NA	100, Ca	NA	NA	NA
Cadmium	0.2	0.5	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	1	0.5	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.05	0.15	NA	NA	NA	700	NA	NA	NA
Mercury	0.05	0.05	NA	NA	NA	28	NA	NA	NA
Selenium	0.2	0.02	NA	NA	NA	Unknown	NA	NA	NA

(a) Skin = Skin Absorption
(b) OSHA-PEL Permissible Exposure Limit (flame weighted average, 8-hour): NIOSH Guide, June 1990
(c) ACGIH – 8 hour time weighted average from Threshold Limit Values and Biological Exposure Indices for 2003.
(d) Metal compounds in mg/m3
(e) Lower Exposure Limit (%)
(f) Upper Exposure Limit (%)
(g) Immediately Dangerous to Life or Health Level: NIOSH Guide, June 1990.

Notes:
1. All values are given in parts per million (PPM) unless otherwise indicated.
2. Ca = Possible Human Carcinogen, no IDLH information.

1.10 COVID-19 HEALTH AND SAFETY PLAN

Name of Business:	**LaBella Associates**	
Industry:	**Professional Services and Construction**	
Chief Executive Officer:	**Steve Metzger**	**(585) 295-6223**
President:	**Jeff Roloson**	**(585) 295-6224**
Senior VP Operations:	**Sue Matzat**	**(585) 295-6617**
HR Director:	**Michele Ebenhoch**	**(585) 402-7085**
Safety Coordinator:	**Steven Szymanski**	**(585) 295-6633**
General Counsel:	**Bob Attardo**	**(585) 770-2555**

Background and Purpose

This safety plan details how LaBella Associates will minimize COVID-19 health risks for employees, contractors and visitors. It shall be made available to all employees, and also shall be used as a training guide. This document will be updated as necessary to reflect new developments and/or information related to COVID-19, and shall be conveyed to all affected employees upon update.

About COVID-19
The coronavirus disease 2019, commonly referred to as COVID-19, is a respiratory illness that can spread from person to person. Infection with COVID-19 can cause mild to severe illness and, in some cases, death. Typical symptoms include fever, cough and shortness of breath, but other non-respiratory symptoms have been reported. Asymptomatic cases, or cases with no symptoms at all, have also been documented. According to the U.S. Department of Health and Human Services' Centers for Disease Control and Prevention (CDC), symptoms of COVID-19 may appear in as few as 2 days or as long as 14 days after exposure.

Information posted by the CDC indicates that COVID-19 is a new disease and, therefore, we are still learning about how it spreads and the severity of illness it causes. Per the CDC, the virus is

thought to spread mainly from person-to-person:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs, sneezes or talks.
- These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- Some recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms.

Contact with surfaces or objects that have been contaminated by the virus followed by touching of the mouth, nose or possibly eyes is another potential means of contracting the virus. Consequently, the CDC recommends that people practice frequent hand washing or disinfection, and that frequently touched surfaces/objects be regularly cleaned and disinfected.

The CDC has determined that older adults and people of any age that have underlying medical conditions, such as asthma, autoimmune deficiencies, chronic lung disease, serious heart conditions etc., might be at a higher risk for severe illness from COVID-19.

It recently was reported that the best safety measure to take to avoid contracting COVID-19 is to maintain more than six (6) feet of distance from other people, followed by wearing a mask/face covering, and then washing your hands frequently/using hand sanitizer. Doing all of the above provides the greatest protection.

More information concerning COVID-19 is available at the CDC website: www.cdc.gov/coronavirus/2019-ncov.

I. PEOPLE

A. Calling Employees Back to the Office

As states and counties ease stay-at-home restrictions, the process for returning to the office in those regions may begin. However, for reasons of safety and efficiency, the process may not occur as soon as restrictions are lifted. The process also may be done in phases and may require changes to work schedules.

- An office may not reopen unless and until all applicable CDC, State and LaBella guidelines and requirements are met.
- Employees who can work from home are encouraged to continue working from home, provided they are getting their work done effectively and efficiently and billing their best 40 hours each week.
- Anyone who is in a high risk health category shall be strongly encouraged to continue to work from home at all times. Those at higher risk of COVID-19 are:
    - People 65 years old and older
    - People who live in a nursing home or long-term care facility
    - People of all ages with the following underlying medical conditions:
        - chronic lung disease or moderate to severe asthma
        - serious heart conditions
        - immunocompromised, including from cancer treatment, smoking, bone marrow or organ transplantation, immune deficiencies, poorly controlled HIV or AIDS, and prolonged use of corticosteroids and other immune weakening medications
        - severe obesity (body mass index [BMI] of 40 or higher)
        - diabetes
        - chronic kidney disease undergoing dialysis
        - liver disease.

- Consider that if schools/day cares remain closed, a certain percentage of employees may have to continue to work from home.
- In order to reduce the number of employees in the office at the same time, or to separate employees who otherwise work in close proximity to each other, it may be necessary to assign certain employees to work different shifts or days.

If community spread of the virus worsens in a region as a result of restrictions being lifted, work from home procedures may immediately be re-implemented.

B. Physical Distancing

All employees shall maintain a distance of more than 6 feet of separation among individuals at all times, both in the office and in the field, unless safety of the core function of the work activity requires a shorter distance.

Work Stations

- Employees in the office will be seated at workstations so they are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). When distancing is not feasible between workstations, physical barriers (e.g., cubicle walls, Plexiglas, strip curtains, or other impermeable dividers or partitions) must exist or be erected, provided they do not affect air flow, heating, cooling or ventilation.
- Unacceptable workstation spacing may result in staggering days or shifts for some employees.
- When visiting other workstations, offices and reception areas, individuals must maintain at least 6 feet of separation at all times.

Where practicable, measures should be put in place to reduce bi-directional foot traffic using tape or signs with arrows in narrow aisles, hallways or spaces, and to denote 6 feet of spacing in commonly used areas and any areas in which lines are commonly formed or people may congregate (e.g., copy rooms, kitchens/break rooms, reception areas).

C. Personal Protective Equipment (PPE)

All LaBella employees who work in an office or at a jobsite will wear masks/face coverings. You must wear a mask/face covering, which covers both your nose and mouth, when entering and leaving; anytime you are away from your desk, workstation or private office; while in jobsite trailers; or when it is not possible to maintain 6 feet of physical distancing from other people.

Examples of when masks/face coverings must be worn:

- When entering and exiting an office or jobsite.
- In conference rooms, break rooms, bathrooms, etc.
- When walking around the office, on elevators, and in stairwells.
- When a colleague meets with you at your desk or in your private office, even while maintaining 6 feet of physical distancing.

Masks/face coverings may be removed when:

- Working alone in segregated spaces (e.g., cubicles, private offices), provided no other person is less than 6 feet away in all directions.

- Eating or drinking, while maintaining more than 6 feet of distance from all other people.

This policy is consistent with the CDC guidance for offices, and the requirements of most of the states where LaBella has offices or projects. However, two states – Ohio and Pennsylvania – require that masks/face coverings must be worn at all times. Those state orders govern over this policy. Employees working in Ohio and Pennsylvania, or visiting offices and jobsites in those states, must wear a mask/face covering at all times.

Continuing to work productively from home is the best thing you can do. Individuals infected with the coronavirus can be contagious before displaying symptoms or without ever displaying symptoms. Wearing a mask/face covering primarily protects your colleagues from catching the coronavirus from you, either before you may develop symptoms or if you are asymptomatic, but it provides you with some protection too. Physical distancing and wearing masks/face coverings might mitigate the risk of infection in office workplaces.

LaBella may mandate that all employees must wear a mask/face covering at all times in a particular office or at jobsites in a particular county, when there is worrisome community spread of the virus in that county, and/or if the number of employees in an office or on a floor reaches a higher density.

LaBella shall provide disposable masks/face coverings at no cost to employees, and shall maintain an adequate supply of masks/face coverings for replacement. However, employees are encouraged to purchase their own masks/face coverings for improved comfort, durability and aesthetics. All masks/face coverings must provide full coverage of the nose and mouth. Employees should provide their own masks/face coverings to be worn off duty from work.

Masks/face coverings must be cleaned or replaced after use or when damaged or soiled, may not be shared, and should be properly stored or discarded.

Guidelines for wearing masks/face coverings:

- Before putting on a mask/face covering, clean your hands with alcohol-based hand sanitizer or soap and water.
- Cover mouth and nose with mask/face covering and make sure there are no gaps between your face and the mask/face covering.
- Avoid touching the mask/face covering while using it; if you do, clean your hands with alcohol-based hand sanitizer or soap and water.
- Avoid pulling the entire mask/face covering down or tucking it under your chin - it shall either be fully on or taken off.
- Replace the mask/face covering with a new one as soon as it is damp. If using a homemade cloth mask/face covering, it shall be routinely washed, depending on frequency of use.
- To remove the mask/face covering: remove it from behind your ears (do not touch the front of the mask/face covering); discard immediately in a closed bin; or if it is not soiled, place it into a closed paper bag for storage; then immediately clean hands with alcohol-based hand sanitizer or soap and water.

D. Personal Hygiene

Employees shall practice good personal hygiene while in the office or on the jobsite. This shall include the following safe practices:

- Wash hands frequently with soap and water for at least 20 seconds.

- Use hand sanitizer containing at least 60% alcohol when hand washing is not practical.
- Avoid touching your mouth, nose or eyes prior to washing or sanitizing your hands.
- Wash or sanitize hands prior to, and after removal of face masks.

Soap and water, or hand sanitizer, shall be provided and maintained at each office and jobsite, and in LaBella "pool" vehicles.

E. Travel

Business and Personal Travel

- Non-essential business travel is prohibited.
- Essential business travel is discouraged. The preference is for using Skype, Zoom, Teams, WebEx or conference calls as much as practicable.
- Employees must have Division Director approval for any type of air travel or hotel stays.
- Travel by public transportation (planes/trains/buses) and hotel stays will require a 14 day quarantine upon return from travel. During quarantine, employees cannot report to a LaBella office or a client's office, but may report to a jobsite, provided they strictly follow all guidelines in this document.

LaBella "Pool" Vehicles

- Drivers shall clean/disinfect all commonly touched surfaces of the vehicle prior to, and after, each use.
- Cleaning supplies can be obtained through Steven Szymanski or your local office.
- Drivers shall ensure there are ample supplies left in the vehicle for the next user. This includes wipes, gloves and trash bags.
- Drivers shall properly dispose of all used/soiled materials prior to returning the vehicle.

II. PLACES

A. Preparing the Workplace

To prepare for a full working staff again, supplies must be available, to include:

- Paper towels
- Hand soap
- Hand sanitizer
- Disinfectant Wipes
- Rubber Gloves
- Masks/Face Coverings
- Additional wastebaskets

- ➢ Inventories of these items shall increase as they become available.
- ➢ Additional hand sanitizer stations should be installed in common areas, such as entry/exit areas, reception areas, restroom areas, coffee/snack areas, and conference rooms.

- Hygiene posters shall be installed at elevators and stairwells, reception areas, break rooms, restrooms, and conference rooms.

B. Cleaning and Disinfection

Regular Office Cleaning

- Janitorial/cleaning services shall be increased however, hand hygiene, safe distancing and masks/face coverings will continue to be our best defense during the pandemic until further notice.
- Regular cleaning and disinfection of offices shall occur, with more frequent cleaning and disinfection for high risk areas used by many individuals and for frequently touched surfaces, such as elevator and door keypads, doorknobs, handles, light switches, tables, countertops, desks, phones, keyboards, toilets, faucets and sinks. In New York, logs must be maintained that include the date, time, and scope of cleaning and disinfection.
- Cleaning and disinfection shall be performed in areas, on surfaces, and pursuant to schedules, in accordance with CDC and State guidelines and requirements.
- If surfaces are dirty, they shall be cleaned by janitorial services using a detergent or soap and water prior to disinfection. To disinfect, they shall use products that meet the CDC's criteria for use against COVID-19.
- For disinfection, most common EPA-registered household disinfectants shall be effective. Follow the manufacturer's instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, etc.).
- Appropriate cleaning/disinfection supplies, such as disposable wipes, shall be provided so that shared and frequently touched surfaces (e.g., doorknobs, conference room touchscreens, remote controls, copiers, plotters, scanners, and other work tools and equipment) can be wiped down by employees before and after each use.
- All items you touch should be considered contaminated, unless you are in your personally cleaned and maintained work space. It will be important for you to wash with soap and water/sanitize your hands after use of all common items such as tools, copiers, printers, machines, vehicles, elevators, door knobs, security keypads, faucets, coffee machines, etc. The use of gloves may seem like a good idea, but they are not recommended as a replacement for proper hand hygiene.
- Employees shall clean and disinfect their own personal work spaces to his or her standards. This shall include performing routine cleaning and disinfection of workstations, keyboards, telephones, and other related surfaces.

C. Communication

Signs must be posted throughout the office to remind individuals to:

- Cover their nose and mouth with a mask or cloth face-covering.
- Properly store and, when necessary, discard Personal Protective Equipment (PPE).
- Adhere to physical distancing instructions.
- Report symptoms of or exposure to COVID-19, and how employees should do so.
- Follow hand hygiene and cleaning and disinfection guidelines.

D. Gatherings in Enclosed Spaces

In-person gatherings (e.g., meetings, conferences) must be limited to the greatest extent possible, and other methods, such as video and telephone conference calls, should be used whenever possible. In-person meetings should be held in open, well-ventilated spaces, and individuals must maintain more than 6 feet of distance between one another.

Tightly confined spaces (e.g., elevators) will be occupied by only one individual at a time, unless all occupants are wearing masks/face coverings. If a space is occupied by more than one person, the total number of occupants shall be limited to no more than 50% of the maximum occupancy as set by the certificate of occupancy. Ventilation with outdoor air should be increased to the greatest extent possible (e.g., opening windows and doors in individual offices and conference rooms).

Collaboration areas/ Break Rooms/ Conference Rooms

- Consider closing and prohibiting use of common areas, such as collaboration areas, conference rooms, and break rooms, including food marts, vending machines and coffee machines.
- To the extent such spaces remain open, seating arrangements must be modified to ensure that individuals are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). Where possible, chairs shall be removed from conference rooms to the point of facilitating safe distancing and stored in a secure location.
- Conference room scheduling software shall be updated to reflect that the rooms hold fewer occupants. If not possible, then signs shall be installed reminding occupants to maintain safe, physical distancing. (*Conference calls shall continue to replace in-person meetings wherever possible and should be promoted as a first option.)*
- The recommended best practice is that employees should refrain from eating lunch together for the time-being. If employees eat lunch together, they must maintain more than 6 feet of separation both side-to-side and when facing one another.

Reception Areas

- Temporary Plexiglas "sneeze guard" screens shall be installed at reception desks or check-in points.
- Seating arrangements must be modified to ensure that individuals are at least 6 feet apart in all directions (e.g., side-to-side and when facing one another). Where possible, chairs shall be removed from reception areas to the point of facilitating safe distancing and stored in a secure location.
- To maintain hygiene, magazines, corporate swag, and pens should be removed from the reception areas.
- Visitors must sign-in on a visitor log which will be provided to each office.
- Hand sanitizer dispensers should be installed and located in plain view.

E. Workplace Activity

Measures must be taken to reduce interpersonal contact and congregation, through methods such as:

- Adjusting workplace hours.
- Reducing in-office workforce to accommodate social distancing guidelines.

- Shifting design (e.g., A/B teams).
- Avoiding multiple teams working in one area by staggering scheduled tasks and using signs to indicate occupied areas.

The sharing of objects, such as laptops, notebooks, touchscreens, and writing utensils, shall be limited, and employees are discouraged from touching shared surfaces, such as conference tables, door knobs, keypads, elevator buttons and coffee machines. When in contact with shared objects or frequently touched areas, employees are encouraged to wash hands with soap and water, or to use hand sanitizer, before and after contact.

Vehicles, Tools, Field Offices and Other Equipment

- Staff shall be minimized to only those required to complete the work.
- All employees shall commute to the site in separate vehicles.
- To the extent possible, vehicles, hand tools and power equipment shall be dedicated for use by one individual on the jobsite. In the event this is not possible, time shall be allowed for disinfection of all items prior to, and after, each use.
- Similarly, heavy equipment shall be dedicated to one operator to the extent possible. All project staff shall be informed each day of the operator designated for each piece of equipment during the morning tailgate meeting. Should project conditions dictate the use of heavy equipment by multiple operators, commonly used surfaces of the equipment shall be disinfected prior to, and after, each use.
- Offices, portable or otherwise, shall be disinfected at least once each day.

Interactions with Members of the General Public

Jobsites may restrict public access, however, in the event there may be minimal interaction with the general public, the following procedures shall be applied:

- A sign shall be posted at the perimeter of the work area indicating that, due to COVID-19 considerations, all questions or comments regarding the project should be communicated via telephone or e-mail using the contacts listed.
- Project staff is to minimize interaction with the public.
- One person shall be designated to handle all interactions with members of the public and shall utilize remote communications if possible.
- Social distancing and face covering guidelines shall be observed during any interaction with the general public.

Office and Jobsite Visitors

All visitors shall be instructed by their host on the following procedures prior to their visit:

- Visitors who are feeling ill shall not visit our offices or jobsites.
- Visitors must wear a mask/face covering immediately prior to entering our offices and jobsites, and at all times while in our offices and at our jobsites.
- Visitors shall report to reception or jobsite trailers upon arrival, sanitize their hands, and complete a visitor log. All visitors must provide contact information. In the event we subsequently learn of an employee, contractor or another visitor who tests positive for COVID-19 or develops symptoms of COVID-19, this information may then be used by LaBella and/or local health departments to contact the visitor regarding potential exposure to the coronavirus.
- Visitors must sign in and sign out.

- Visitors must be escorted at all times.
- Wherever possible, meetings with visitors in our offices should occur in conference rooms closest to entrances and reception areas in order to minimize visitors traveling through our offices.
- In New York, all visitors must complete a health screening questionnaire immediately prior to visiting our offices and jobsites. If the visitor answers "Yes" to any of the questions regarding COVID-19 symptoms, positive test results, or close contact with a person confirmed or suspected of having COVID-19, the visitor shall be prohibited from entering our office or jobsite.

III. PROCESS

A. Screening

All Employees

- All employees are expected to monitor their health conditions daily, and must stay home if they are not feeling well.
- All employees are strongly encouraged each workday to take their temperature at home immediately before leaving for the office or jobsite. If you have a fever (a temperature of 100.4 degrees or higher), you must stay home and continue to monitor your health.

New York Offices and Jobsites

- All employees who will be or who are working in a New York office location or at a New York project site must complete a health screening questionnaire immediately before leaving home or entering any office or project site in NY. This questionnaire must be completed every day prior to reporting to an office or project site for any length of time.
- The questionnaire must ask whether individuals have (1) experienced any COVID-19 symptoms in the past 14 days, (2) tested positive for COVID-19 in the past 14 days, and/or (3) had close contact with any confirmed or suspected COVID-19 cases in the past 14 days.
- The questionnaire does not have to be completed - and should not be completed - on any day that you are working from home, not working (like PTO) or will not be in NY. However, you must fill out the questionnaire if you will be stopping into an office or a project site even for just a brief time.
- If you answer "YES" to any of the health questions, you must not report to the office or project site. Instead, contact HR for further direction.
- Assessment responses shall be reviewed every day, and such review must be documented.

Pennsylvania Offices and Jobsites

- All employees who will be or who are working in a Pennsylvania office location or at a Pennsylvania project site must take their temperature daily before entering the office or jobsite.
- If you have a fever (a temperature of 100.4 degrees or higher), you must not enter the office or project site. Instead, contact HR for further direction.

- LaBella is prohibited by law from keeping records of employee temperatures.

Reporting Illness
If an employee experiences symptoms of COVID-19, or someone observes that another employee is exhibiting symptoms of COVID-19, it must be reported to the Director of HR, Michele Ebenhoch, immediately. If COVID-19 is suspected, the employee will be sent home and asked to contact a healthcare professional.

- Symptoms of COVID-19 are:
    - Fever or chills
    - Cough
    - Shortness of breath or difficulty breathing
    - Fatigue
    - Muscle or body aches
    - Headache
    - New loss of taste or smell
    - Sore throat
    - Congestion or runny nose
    - Nausea or vomiting
    - Diarrhea
- If a COVID-19 test is warranted by the healthcare professional, the employee shall complete the test and remain home awaiting the results.
- If COVID-19 is suspected by a healthcare professional, but testing is unavailable, this shall be treated as a positive test result.

Positive Test or Symptoms of COVID-19
An employee who tests positive for COVID-19 or experiences symptoms of COVID-19 shall not return to work until:

- Completing at least 10 days of isolation since the positive test/onset of symptoms, and
- He or she has received 2 negative tests in a row, at least 24 hours apart (pending test availability), or
- If he or she is not tested again, then only when:
    - Symptoms have improved and the employee is capable of working; and
    - The employee is free of fever for at least 72 hours, without the use of fever reducing medications.

COVID-19 Exposure (close contact)

- Close contact is defined as being within 6 feet of an infected person for at least 10 minutes at any time during the period beginning 48 hours before the infected person first developed symptoms of COVID-19 or took a test that returned positive and continuing until the time the infected person was isolated.
- If an employee has had close contact with a person (e.g., another employee or a member of your household) with COVID-19 and the employee does <u>not</u> have symptoms of COVID-19 him or herself, the employee must self-quarantine for 14 days.
- If an employee has had close contact with a person with COVID-19 and the employee is or becomes symptomatic, the employee should notify HR and follow the above

protocols for a positive case. Even if the symptoms are deemed not related to COVID-19, the employee must complete at least 10 days of isolation from the onset of symptoms.

B. Contact Tracing and Disinfection of Contaminated Areas

Each office and jobsite must maintain a continuous log of every person, including workers and visitors, who may have close contact with other individuals at the work site or area, excluding deliveries that are performed with appropriate PPE or through contactless means. For each location, an employee shall be designated to be in charge of maintaining the log of each person that enters the site.

If an employee tests positive for COVID-19, LaBella shall immediately notify state and local health departments, and cooperate with contact tracing efforts, including notification of potential contacts, such as workers or visitors who had close contact with the infected individual, while maintaining confidentiality required by state and federal law and regulations.

In the event of a confirmed case of COVID-19 in the workplace, all employees in that office shall be notified and advised to self-monitor for symptoms for at least 14 days from the date of possible exposure. Employees who were in close contact with the infected employee may be instructed to self-quarantine/work from home for 14 days while self-monitoring for symptoms. During that time, if any employee experiences symptoms of COVID-19, it must be reported to the Director of HR, Michele Ebenhoch.

All confirmed cases of COVID-19 that occur in the workplace, and meet the criteria for OSHA reporting, shall be so reported, but shall otherwise be handled in the strictest confidence. Employee health information, including contracting COVID-19, is confidential medical information, and LaBella is prohibited by law from disclosing that a particular employee has COVID-19. We will only be able to inform employees that a "co-worker" in their office or with whom they were in close contact has tested positive or has symptoms of COVID-19.

Cleaning and disinfection if someone is suspected or confirmed to have COVID-19

- Janitorial/cleaning services shall perform enhanced cleaning and disinfection after persons suspected/confirmed to have COVID-19 have been in the facility.
- If more than seven days have passed since the person who is suspected or confirmed to have COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary, but routine cleaning and disinfection will continue.
- Close off areas used by the person who is suspected or confirmed to have COVID-19. The entire office or project site does not have to be closed, if it is possible to just close off the affected area(s).
- Common areas (e.g., elevators, lobbies, building entrances) must be closed and cleaned and disinfected.
- Where possible, open outside doors and windows or use ventilation fans to increase air circulation in the area.
- Wait 24 hours before cleaning and disinfection. If 24 hours is not feasible, wait as long as possible.

- Clean and disinfect all areas used by the person suspected or confirmed to have COVID-19, such as workstations, bathrooms, common areas, and shared equipment.
- Once the area has been appropriately cleaned and disinfected, it can be reopened for use.
    - Employees who did not have close contact with the person suspected or confirmed to have COVID-19 can return to the work area immediately after cleaning and disinfection.
    - Employees who did have close contact will undergo a 14-day quarantine.

IV. OTHER

The aforementioned policies and procedures are subject to change in order to meet or exceed CDC recommendations, as well as to remain compliant with federal and local governments and health officials.

Employees failing to follow the aforementioned procedures shall be subject to disciplinary measures, as described in the Disciplinary Policy 1.09 of the LaBella Safety Manual.